

GOLDMAN SACHS BANK USA AND SUBSIDIARIES

Unaudited Semi-Annual Report
for the period ended June 30, 2017

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PART I. Financial Statements (Unaudited)**Condensed Consolidated Statements of Earnings
(Unaudited)**

<i>\$ in millions</i>	Six Months Ended June	
	2017	2016
Revenues		
Interest income	\$ 1,671	\$ 1,302
Interest expense	828	537
Net interest income	843	765
Gains and losses from financial instruments, net	1,001	816
Other revenues	42	85
Provision for losses on loans and lending commitments	(97)	(95)
Total non-interest revenues	946	806
Net revenues, including net interest income	1,789	1,571
Operating expenses		
Compensation and benefits	163	112
Service charges	289	250
Other expenses	223	140
Total operating expenses	675	502
Pre-tax earnings	1,114	1,069
Provision for taxes	393	357
Net earnings	\$ 721	\$ 712

The accompanying notes are an integral part of these condensed consolidated financial statements.

**Condensed Consolidated Statements of Comprehensive Income
(Unaudited)**

<i>\$ in millions</i>	Six Months Ended June	
	2017	2016
Net earnings	\$ 721	\$ 712
Other comprehensive income/(loss) adjustments, net of tax:		
Debt valuation adjustment	–	(9)
Available-for-sale securities	1	–
Comprehensive income	\$ 722	\$ 703

The accompanying notes are an integral part of these condensed consolidated financial statements.

Condensed Consolidated Statements of Financial Condition (Unaudited)

	As of	
	June 2017	December 2016
<i>\$ in millions, except per share amounts</i>		
Assets		
Cash	\$ 42,306	\$ 74,668
Collateralized agreements:		
Securities purchased under agreements to resell (includes \$18,464 and \$2,825 at fair value)	18,896	3,673
Receivables:		
Loans receivable	41,349	37,907
Customers and counterparties, brokers, dealers and clearing organizations	8,693	5,857
Financial instruments owned (at fair value and includes \$5,404 and \$2,719 pledged as collateral)	38,543	35,456
Other assets	1,426	1,551
Total assets	\$ 151,213	\$ 159,112
Liabilities and shareholder's equity		
Deposits (includes \$4,820 and \$5,301 at fair value)	\$ 106,063	\$ 114,985
Collateralized financings:		
Securities sold under agreements to repurchase (at fair value)	3,014	310
Other secured financings (includes \$1,932 and \$2,432 at fair value)	2,031	2,569
Payables to customers and counterparties, brokers, dealers and clearing organizations	4,022	3,757
Financial instruments sold, but not yet purchased (at fair value)	7,097	8,805
Unsecured borrowings (includes \$217 and \$236 at fair value)	2,220	2,253
Other liabilities and accrued expenses	1,933	1,822
Total liabilities	126,380	134,501
Commitments, contingencies and guarantees		
Shareholder's equity		
Shareholder's equity (includes common stock, \$100 par value; 80,000,000 shares authorized, issued and outstanding)	24,833	24,611
Total liabilities and shareholder's equity	\$ 151,213	\$ 159,112

The accompanying notes are an integral part of these condensed consolidated financial statements.

Condensed Consolidated Statements of Changes in Shareholder's Equity (Unaudited)

<i>\$ in millions</i>	Six Months Ended June 2017	Year Ended December 2016
Shareholder's equity		
Beginning balance	\$ 24,611	\$ 23,184
Net earnings	721	1,458
Dividends paid to The Goldman Sachs Group, Inc.	(500)	-
Other comprehensive income/(loss)	1	(31)
Ending balance	\$ 24,833	\$ 24,611

The accompanying notes are an integral part of these condensed consolidated financial statements.

Condensed Consolidated Statements of Cash Flows (Unaudited)

<i>\$ in millions</i>	Six Months Ended June	
	2017	2016
Cash flows from operating activities		
Net earnings	\$ 721	\$ 712
Adjustments to reconcile net earnings to net cash provided by/(used for) operating activities:		
Depreciation and amortization	10	4
Deferred income taxes	(37)	(91)
Share-based compensation	14	8
Provision for losses on loans and lending commitments	97	95
Changes in operating assets and liabilities:		
Loans held for sale	(729)	(1,368)
Receivables and payables (excluding loans receivable), net	(2,571)	(1,764)
Collateralized transactions (excluding other secured financings), net	(12,519)	(1,000)
Financial instruments owned	(2,841)	1,443
Financial instruments sold, but not yet purchased	(1,708)	(430)
Other, net	222	(951)
Net cash used for operating activities	(19,341)	(3,342)
Cash flows from investing activities		
Net cash acquired in business acquisition	-	16,491
Loans receivable, net (excluding loans held for sale)	(2,774)	160
Purchase of available-for-sale securities	(246)	-
Net cash provided by/(used for) investing activities	(3,020)	16,651
Cash flows from financing activities		
Deposits, net	(9,001)	9,865
Repayment of other secured financings	(503)	(491)
Unsecured borrowings, net	1	(72)
Derivative contracts with a financing element, net	2	141
Dividends paid to The Goldman Sachs Group, Inc.	(500)	-
Net cash provided by/(used for) financing activities	(10,001)	9,443
Net increase/(decrease) in cash	(32,362)	22,752
Cash, beginning balance	74,668	50,045
Cash, ending balance	\$ 42,306	\$ 72,797

SUPPLEMENTAL DISCLOSURES:

Cash payments for interest were \$812 million and \$405 million during the six months ended June 2017 and June 2016, respectively.

There were no cash payments for income taxes for both the six months ended June 2017 and June 2016.

The accompanying notes are an integral part of these condensed consolidated financial statements.

Notes to Condensed Consolidated Financial Statements (Unaudited)

Note 1.

Description of Business

Goldman Sachs Bank USA, together with its consolidated subsidiaries (collectively, the Bank), is a New York State-chartered bank and a member of the Federal Reserve System. The Bank is supervised and regulated by the Board of Governors of the Federal Reserve System (Federal Reserve Board), the New York State Department of Financial Services (NYDFS) and the U.S. Consumer Financial Protection Bureau (CFPB), and is a member of the Federal Deposit Insurance Corporation (FDIC). The Bank's deposits are insured by the FDIC up to the maximum amount provided by law. The Bank is registered with the U.S. Commodity Futures Trading Commission (CFTC) as a swap dealer and as a government securities dealer subject to the rules and regulations of the U.S. Department of the Treasury (Treasury).

The Bank's principal office is located in New York, New York. The Bank operates one domestic branch located in Salt Lake City, Utah, which is regulated by the Utah Department of Financial Institutions. The Bank also has a branch in London, United Kingdom, which is regulated by the Financial Conduct Authority and the Prudential Regulation Authority.

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

The Bank's primary activities include lending, engaging in derivatives transactions and deposit taking. The Bank is a lender to private wealth management clients of Goldman Sachs & Co. LLC (GS&Co.), to institutional and corporate clients and to retail customers. The Bank enters into interest rate, credit, currency, commodity and equity derivatives and related products for the purpose of market making and risk management. The Bank accepts deposits from private wealth management clients, online retail customers and through deposit sweep programs and issues brokered certificates of deposit.

The following describes the activities that are conducted in the Bank's significant operating subsidiaries:

Goldman Sachs Mitsui Marine Derivative Products, L.P. (MMDP), a Delaware limited partnership, acts as an intermediary in transactions involving derivative contracts. MMDP is able to provide credit rating enhancement to derivative products due to its partnership with an external party, Mitsui Sumitomo Insurance Co., Ltd. (Mitsui Sumitomo).

Goldman Sachs Mortgage Company, a New York limited partnership, originates commercial mortgage loans and purchases commercial and residential mortgage loans and other consumer loan assets for securitization and market making.

All subsidiaries of the Bank are wholly-owned by the Bank, with the exception of MMDP, in which Mitsui Sumitomo has a 50% interest.

Note 2.

Basis of Presentation

These condensed consolidated financial statements are prepared in accordance with accounting principles generally accepted in the United States (U.S. GAAP) and include the accounts of the Bank and all other entities in which the Bank has a controlling financial interest. Intercompany transactions and balances have been eliminated.

These condensed consolidated financial statements are unaudited and should be read in conjunction with the audited consolidated financial statements included in the Bank's Annual Report for the year ended December 31, 2016. References to the "2016 Annual Report" are to the Bank's Annual Report for the year ended December 31, 2016. The condensed consolidated financial information as of December 31, 2016 has been derived from audited consolidated financial statements not included herein.

These unaudited condensed consolidated financial statements reflect all adjustments that are, in the opinion of management, necessary for a fair statement of the results for the interim periods presented. These adjustments are of a normal, recurring nature. Interim period operating results may not be indicative of the operating results for a full year.

Notes to Condensed Consolidated Financial Statements (Unaudited)

All references to June 2017 and June 2016 refer to the Bank's periods ended, or the dates, as the context requires, June 30, 2017 and June 30, 2016, respectively. All references to December 2016 refer to the date December 31, 2016. Any reference to a future year refers to a year ending on December 31 of that year. Certain reclassifications have been made to previously reported amounts to conform to the current presentation.

Note 3.

Significant Accounting Policies

The Bank's significant accounting policies include accounting for loans and lending commitments at amortized cost net of allowance for loan losses, when and how to measure the fair value of assets and liabilities, accounting for deposits and when to consolidate an entity. See Note 9 for policies on accounting for loans receivable and lending commitments, Notes 5 through 8 for policies on fair value measurements, Note 13 for policies on accounting for deposits, and below and Note 11 for policies on consolidation accounting. All other significant accounting policies are either described below or included in the following footnotes:

Financial Instruments Owned and Financial Instruments Sold, But Not Yet Purchased	Note 4
Fair Value Measurements	Note 5
Cash Instruments	Note 6
Derivatives and Hedging Activities	Note 7
Fair Value Option	Note 8
Loans Receivable	Note 9
Collateralized Agreements and Financings	Note 10
Variable Interest Entities	Note 11
Other Assets	Note 12
Deposits	Note 13
Unsecured Borrowings	Note 14
Other Liabilities and Accrued Expenses	Note 15
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Consolidation

The Bank consolidates entities in which the Bank has a controlling financial interest. The Bank determines whether it has a controlling financial interest in an entity by first evaluating whether the entity is a voting interest entity or a variable interest entity (VIE).

Voting Interest Entities. Voting interest entities are entities in which (i) the total equity investment at risk is sufficient to enable the entity to finance its activities independently and (ii) the equity holders have the power to direct the activities of the entity that most significantly impact its economic performance, the obligation to absorb the losses of the entity and the right to receive the residual returns of the entity. The usual condition for a controlling financial interest in a voting interest entity is ownership of a majority voting interest. If the Bank has a controlling majority voting interest in a voting interest entity, the entity is consolidated.

Variable Interest Entities. A VIE is an entity that lacks one or more of the characteristics of a voting interest entity. The Bank has a controlling financial interest in a VIE when the Bank has a variable interest or interests that provide it with (i) the power to direct the activities of the VIE that most significantly impact the VIE's economic performance, and (ii) the obligation to absorb losses of the VIE or the right to receive benefits from the VIE that could potentially be significant to the VIE. See Note 11 for further information about VIEs.

Use of Estimates

Preparation of these condensed consolidated financial statements requires management to make certain estimates and assumptions, the most important of which relate to the allowance for losses on loans and lending commitments held for investment, fair value measurements, discretionary compensation accruals and the provisions for losses that may arise from litigation, regulatory proceedings (including governmental investigations) and tax audits. These estimates and assumptions are based on the best available information but actual results could be materially different.

Notes to Condensed Consolidated Financial Statements (Unaudited)

Revenue Recognition – Financial Assets and Financial Liabilities at Fair Value

Financial instruments owned and Financial instruments sold, but not yet purchased are recorded at fair value either under the fair value option or in accordance with other U.S. GAAP. In addition, the Bank has elected to account for certain of its other financial assets and financial liabilities at fair value by electing the fair value option. The fair value of a financial instrument is the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Financial assets are marked to bid prices and financial liabilities are marked to offer prices. Fair value measurements do not include transaction costs. Fair value gains or losses are included in “Gains and losses from financial instruments, net.” See Notes 5 through 8 for further information about fair value measurements. In addition, the Bank recognizes income related to the syndication of loans and lending commitments and other fees from affiliates in “Gains and losses from financial instruments, net.”

Transfers of Financial Assets

Transfers of financial assets are accounted for as sales when the Bank has relinquished control over the assets transferred. For transfers of financial assets accounted for as sales, any gains or losses are recognized in “Gains and losses from financial instruments, net.” Assets or liabilities that arise from the Bank’s continuing involvement with transferred financial assets are initially recognized at fair value. For transfers of financial assets that are not accounted for as sales, the assets generally remain in “Financial instruments owned” or “Loans receivable” and the transfer is accounted for as a collateralized financing, with the related interest expense recognized over the life of the transaction. See Note 10 for further information about transfers of financial assets accounted for as collateralized financings.

Securitization Activities

The Bank transfers portfolios of commercial mortgages to its affiliates for purposes of securitization. The Bank accounts for the transfer as a sale when it has relinquished control over the transferred financial assets. The Bank generally accounts for assets pending transfer at fair value and therefore does not typically recognize significant gains or losses upon the transfer of assets. The Bank generally receives cash in exchange for the transferred assets. As of June 2017, the Bank had retained interests of \$78 million related to its continuing involvement in nonconsolidated securitization entities to which the Bank sold financial assets. The outstanding principal amount of such transferred financial assets was \$2.95 billion. As of December 2016, the Bank had no continuing involvement with transferred assets.

Cash

Cash is comprised of highly liquid overnight deposits held in the ordinary course of business. As of June 2017 and December 2016, cash included \$41.96 billion and \$74.41 billion, respectively, of interest-bearing deposits with banks. Of these amounts, \$41.59 billion and \$74.24 billion were held at the Federal Reserve Bank of New York, which exceeded regulatory reserve requirements of \$162 million and \$153 million as of June 2017 and December 2016, respectively. As of June 2017 and December 2016, \$136 million and \$98 million, respectively, of “Cash” was segregated for regulatory and other purposes.

Receivables from Customers and Counterparties, Brokers, Dealers and Clearing Organizations

Receivables from customers and counterparties, brokers, dealers and clearing organizations are primarily comprised of collateral posted in connection with certain derivative transactions and receivables related to unsettled trades. Receivables from customers and counterparties, brokers, dealers and clearing organizations are accounted for at amortized cost net of estimated uncollectible amounts, which generally approximates fair value. While these receivables are carried at amounts that approximate fair value, they are not accounted for at fair value under the fair value option or at fair value in accordance with other U.S. GAAP and therefore are not included in the Bank’s fair value hierarchy in Notes 6 through 8. Had these receivables been included in the Bank’s fair value hierarchy, substantially all would have been classified in level 2 as of June 2017 and December 2016. Interest on receivables from customers and counterparties, brokers, dealers and clearing organizations is recognized over the life of the transaction and included in “Interest income.”

Notes to Condensed Consolidated Financial Statements (Unaudited)

Payables to Customers and Counterparties, Brokers, Dealers and Clearing Organizations

Payables to customers and counterparties, brokers, dealers and clearing organizations are primarily comprised of collateral received in connection with certain derivative transactions and payables related to unsettled trades. Payables to customers and counterparties, brokers, dealers and clearing organizations are accounted for at cost plus accrued interest, which generally approximates fair value. While these payables are carried at amounts that approximate fair value, they are not accounted for at fair value under the fair value option or at fair value in accordance with other U.S. GAAP and therefore are not included in the Bank's fair value hierarchy in Notes 6 through 8. Had these payables been carried at fair value and included in the Bank's fair value hierarchy, substantially all would have been classified in level 2 as of June 2017 and December 2016. Interest on payables to customers and counterparties, brokers, dealers and clearing organizations is recognized over the life of the transaction and included in "Interest expense."

Offsetting Assets and Liabilities

To reduce credit exposures on derivatives and securities financing transactions, the Bank may enter into master netting agreements or similar arrangements (collectively, netting agreements) with counterparties that permit it to offset receivables and payables with such counterparties. A netting agreement is a contract with a counterparty that permits net settlement of multiple transactions with that counterparty, including upon the exercise of termination rights by a non-defaulting party. Upon exercise of such termination rights, all transactions governed by the netting agreement are terminated and a net settlement amount is calculated. In addition, the Bank receives and posts cash and securities collateral with respect to its derivatives and securities financing transactions, subject to the terms of the related credit support agreements or similar arrangements (collectively, credit support agreements). An enforceable credit support agreement grants the non-defaulting party exercising termination rights the right to liquidate the collateral and apply the proceeds to any amounts owed. In order to assess enforceability of the Bank's right of setoff under netting and credit support agreements, the Bank evaluates various factors including applicable bankruptcy laws, local statutes and regulatory provisions in the jurisdictions of the parties to the agreement.

Derivatives are reported on a net-by-counterparty basis (i.e., the net payable or receivable for derivative assets and liabilities for a given counterparty) in the condensed consolidated statements of financial condition when a legal right of setoff exists under an enforceable netting agreement. Resale and repurchase agreements with the same term and currency are presented on a net-by-counterparty basis in the condensed consolidated statements of financial condition when such transactions meet certain settlement criteria and are subject to netting agreements.

In the condensed consolidated statements of financial condition, derivatives are reported net of cash collateral received and posted under enforceable credit support agreements, when transacted under an enforceable netting agreement. In the condensed consolidated statements of financial condition, resale and repurchase agreements are not reported net of the related cash and securities received or posted as collateral. Certain other receivables and payables with affiliate broker dealers that meet the criteria of offsetting are reported on a net basis in the condensed consolidated statements of financial condition. See Note 10 for further information about collateral received and pledged, including rights to deliver or repledge collateral. See Notes 7 and 10 for further information about offsetting.

Foreign Currency Translation

Assets and liabilities denominated in non-U.S. currencies are translated at rates of exchange prevailing on the date of the condensed consolidated statements of financial condition and revenues and expenses are translated at average rates of exchange for the period. Foreign currency remeasurement gains or losses on transactions in nonfunctional currencies are recognized in earnings.

Recent Accounting Developments

Revenue from Contracts with Customers (ASC 606).

In May 2014, the FASB issued ASU No. 2014-09, "Revenue from Contracts with Customers (Topic 606)." This ASU, as amended, provides comprehensive guidance on the recognition of revenue from customers arising from the transfer of goods and services, guidance on accounting for certain contract costs, and new disclosures.

Notes to Condensed Consolidated Financial Statements (Unaudited)

The ASU is effective for the Bank in January 2018 under a modified retrospective approach or retrospectively to all periods presented. The Bank's implementation efforts include identifying revenues and costs within the scope of the ASU, reviewing contracts, and analyzing any changes to its existing revenue recognition policies. The Bank will adopt this ASU in January 2018 using a modified retrospective approach. The Bank is still evaluating the effect of the ASU on its financial condition, results of operations and cash flows.

Amendments to the Consolidation Analysis (ASC 810). In February 2015, the FASB issued ASU No. 2015-02, "Consolidation (Topic 810) — Amendments to the Consolidation Analysis." This ASU eliminates the deferral of the requirements of ASU No. 2009-17, "Consolidations (Topic 810) — Improvements to Financial Reporting by Enterprises Involved with Variable Interest Entities" for certain interests in investment funds and provides a scope exception for certain investments in money market funds. It also makes several modifications to the consolidation guidance for VIEs and general partners' investments in limited partnerships, as well as modifications to the evaluation of whether limited partnerships are VIEs or voting interest entities.

The Bank adopted the ASU in January 2016, using a modified retrospective approach. The impact of adoption was not material to the Bank's statements of financial condition, results of operations or cash flows.

Simplifying the Accounting for Measurement-Period Adjustments (ASC 805). In September 2015, the FASB issued ASU No. 2015-16, "Business Combinations (Topic 805) — Simplifying the Accounting for Measurement-Period Adjustments." This ASU eliminates the requirement for an acquirer in a business combination to account for measurement-period adjustments retrospectively.

The Bank adopted the ASU in January 2016. Adoption of the ASU did not materially affect the Bank's financial condition, results of operations or cash flows.

Recognition and Measurement of Financial Assets and Financial Liabilities (ASC 825). In January 2016, the FASB issued ASU No. 2016-01, "Financial Instruments (Topic 825) — Recognition and Measurement of Financial Assets and Financial Liabilities." This ASU amends certain aspects of recognition, measurement, presentation and disclosure of financial instruments. It includes a requirement to present separately in other comprehensive income changes in fair value attributable to a Bank's own credit spreads (debt valuation adjustment or DVA), net of tax, on financial liabilities for which the fair value option was elected.

The ASU is effective for the Bank in January 2018. Early adoption is permitted under a modified retrospective approach for the requirements related to DVA. In January 2016, the Bank early adopted this ASU for the requirements related to DVA and reclassified the cumulative DVA, a gain of \$13 million (net of tax), from retained earnings to accumulated other comprehensive loss. The Bank does not expect the adoption of the remaining provisions of the ASU to have a material impact on its financial condition, results of operations or cash flows.

Leases (ASC 842). In February 2016, the FASB issued ASU No. 2016-02, "Leases (Topic 842)." This ASU requires that, for leases longer than one year, a lessee recognize in the statements of financial condition a right-of-use asset, representing the right to use the underlying asset for the lease term, and a lease liability, representing the liability to make lease payments. It also requires that for finance leases, a lessee recognize interest expense on the lease liability, separately from the amortization of the right-of-use asset in the statements of earnings, while for operating leases, such amounts should be recognized as a combined expense. In addition, this ASU requires expanded disclosures about the nature and terms of lease agreements.

The ASU is effective for the Bank in January 2019 under a modified retrospective approach. Early adoption is permitted. The Bank's implementation efforts include reviewing existing leases and service contracts with affiliates, which may include embedded leases. Based on implementation efforts performed to date, the Bank does not expect the amount of the potential gross up to have a material impact on its financial condition.

Notes to Condensed Consolidated Financial Statements (Unaudited)

Measurement of Credit Losses on Financial Instruments (ASC 326). In June 2016, the FASB issued ASU No. 2016-13, “Financial Instruments — Credit Losses (Topic 326) — Measurement of Credit Losses on Financial Instruments.” This ASU amends several aspects of the measurement of credit losses on financial instruments, including replacing the existing incurred credit loss model and other models with the Current Expected Credit Losses (CECL) model and amending certain aspects of accounting for purchased financial assets with deterioration in credit quality since origination.

Under CECL, the allowance for losses for financial assets that are measured at amortized cost reflects management’s estimate of credit losses over the remaining expected life of the financial assets. Expected credit losses for newly recognized financial assets, as well as changes to expected credit losses during the period, would be recognized in earnings. For certain purchased financial assets with deterioration in credit quality since origination, an initial allowance would be recorded for expected credit losses and recognized as an increase to the purchase price rather than as an expense. Expected credit losses, including losses on off-balance-sheet exposures such as lending commitments, will be measured based on historical experience, current conditions and forecasts that affect the collectability of the reported amount.

The ASU is effective for the Bank in January 2020 under a modified retrospective approach. Early adoption is permitted in January 2019. Adoption of the ASU will result in earlier recognition of credit losses and an increase in the recorded allowance for certain purchased loans with deterioration in credit quality since origination with a corresponding increase to their gross carrying value. The impact of adoption of this ASU on the Bank’s financial condition, results of operations and cash flows will depend on, among other things, the economic environment and the type of financial assets held by the Bank on the date of adoption.

Classification of Certain Cash Receipts and Cash Payments (ASC 230). In August 2016, the FASB issued ASU No. 2016-15, “Statement of Cash Flows (Topic 230) — Classification of Certain Cash Receipts and Cash Payments.” This ASU provides guidance on the disclosure and classification of certain items within the statements of cash flows.

The ASU is effective for the Bank in January 2018 under a retrospective approach. Early adoption is permitted. Since the ASU only impacts classification in the statements of cash flows, adoption will not affect the Bank’s cash.

Restricted Cash (ASC 230). In November 2016, the FASB issued ASU No. 2016-18, “Statement of Cash Flows (Topic 230) – Restricted Cash.” This ASU requires that cash segregated for regulatory and other purposes be included in cash and cash equivalents disclosed in the statements of cash flows and is required to be applied retrospectively.

The Bank early adopted the ASU in December 2016. Adoption of the ASU did not affect the Bank’s condensed consolidated statements of financial condition or cash flows.

Clarifying the Definition of a Business (ASC 805). In January 2017, the FASB issued ASU No. 2017-01, “Business Combinations (Topic 805) – Clarifying the Definition of a Business.” The ASU amends the definition of a business and provides a threshold which must be considered to determine whether a transaction is an acquisition (or disposal) of an asset or a business.

The ASU is effective for the Bank in January 2018 under a prospective approach. Early adoption is permitted. The impact of this ASU will depend on the nature of the Bank’s activities after adoption, although the Bank expects that fewer transactions will be treated as acquisitions (or disposals) of businesses.

Note 4.

Financial Instruments Owned and Financial Instruments Sold, But Not Yet Purchased

Financial instruments owned and financial instruments sold, but not yet purchased are accounted for at fair value either under the fair value option or in accordance with other U.S. GAAP. See Note 8 for further information about other financial assets and financial liabilities accounted for at fair value under the fair value option.

Notes to Condensed Consolidated Financial Statements (Unaudited)

The table below presents the Bank's financial instruments owned and financial instruments sold, but not yet purchased.

\$ in millions	Financial Instruments	
	Owned	Sold, But Not Yet Purchased
As of June 2017		
U.S. government and agency obligations	\$ 17,895	\$ 2,156
Non-U.S. government and agency obligations	10	7
Loans and securities backed by:		
Commercial real estate	1,453	5
Residential real estate	6,741	1
Corporate loans and debt securities	2,053	250
State and municipal obligations	33	-
Other debt obligations	237	-
Equity securities	251	-
Investments in funds at NAV	17	-
Subtotal	28,690	2,419
Derivatives	9,853	4,678
Total	\$ 38,543	\$ 7,097
As of December 2016		
U.S. government and agency obligations	\$ 14,026	\$ 2,497
Non-U.S. government and agency obligations	40	6
Loans and securities backed by:		
Commercial real estate	1,198	-
Residential real estate	6,511	3
Corporate loans and debt securities	2,228	261
State and municipal obligations	32	-
Other debt obligations	173	-
Equity securities	233	-
Investments in funds at NAV	17	-
Subtotal	24,458	2,767
Derivatives	10,998	6,038
Total	\$ 35,456	\$ 8,805

In the table above:

- Equity securities primarily includes equity investments made as part of the Bank's Community Reinvestment Act (CRA) activities.

- Financial instruments owned included \$296 million and \$49 million of debt securities accounted for as available-for-sale as of June 2017 and December 2016, respectively. As of June 2017, these securities were primarily comprised of U.S. government and agency obligations and other debt obligations. As of December 2016, these securities were primarily comprised of other debt obligations. As of June 2017, substantially all of these securities had maturities of five years or greater (half of which had maturities of greater than ten years). As of December 2016, these securities primarily had maturities of greater than ten years. The gross unrealized gains/(losses) included in "Other comprehensive loss" related to available-for-sale securities were not material as of both June 2017 and December 2016.

Gains and Losses from Financial Instruments, Net

The table below presents "Gains and losses from financial instruments, net."

\$ in millions	Six Months Ended June	
	2017	2016
Interest rates	\$ 2,961	\$ 304
Currencies	(2,295)	185
Credit	395	388
Equities	(43)	(55)
Other	(17)	(6)
Total	\$ 1,001	\$ 816

In the table above:

- Gains/(losses) include both realized and unrealized gains and losses, and are primarily related to the Bank's financial instruments owned and financial instruments sold, but not yet purchased, including both derivative and non-derivative financial instruments, and the syndication of loans and lending commitments.
- Gains/(losses) exclude related interest income and interest expense. See Note 19 for further information about interest income and interest expense.
- Gains/(losses) are not representative of the manner in which the Bank manages its business activities because many of the Bank's market-making, lending and other activities utilize financial instruments across various product types. Accordingly, gains or losses in one product type frequently offset gains or losses in other product types. For example, many of the Bank's interest rate derivatives are sensitive to changes in foreign currency exchange rates and may be economically hedged with foreign currency contracts.

Notes to Condensed Consolidated Financial Statements (Unaudited)

Note 5.

Fair Value Measurements

The fair value of a financial instrument is the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Financial assets are marked to bid prices and financial liabilities are marked to offer prices. Fair value measurements do not include transaction costs. The Bank measures certain financial assets and financial liabilities as a portfolio (i.e., based on its net exposure to market and/or credit risks).

The best evidence of fair value is a quoted price in an active market. If quoted prices in active markets are not available, fair value is determined by reference to prices for similar instruments, quoted prices or recent transactions in less active markets, or internally developed models that primarily use market-based or independently sourced inputs including, but not limited to, interest rates, volatilities, equity or debt prices, foreign exchange rates, commodity prices, credit spreads and funding spreads (i.e., the spread or difference between the interest rate at which a borrower could finance a given financial instrument relative to a benchmark interest rate).

U.S. GAAP has a three-level hierarchy for disclosure of fair value measurements. This hierarchy prioritizes inputs to the valuation techniques used to measure fair value, giving the highest priority to level 1 inputs and the lowest priority to level 3 inputs. A financial instrument's level in this hierarchy is based on the lowest level of input that is significant to its fair value measurement. The fair value hierarchy is as follows:

Level 1. Inputs are unadjusted quoted prices in active markets to which the Bank had access at the measurement date for identical, unrestricted assets or liabilities.

Level 2. Inputs to valuation techniques are observable, either directly or indirectly.

Level 3. One or more inputs to valuation techniques are significant and unobservable.

The fair values for substantially all of the Bank's financial assets and financial liabilities are based on observable prices and inputs and are classified in levels 1 and 2 of the fair value hierarchy. Certain level 2 and level 3 financial assets and financial liabilities may require appropriate valuation adjustments that a market participant would require to arrive at fair value for factors such as counterparty and the Bank or its affiliates' credit quality, funding risk, transfer restrictions, liquidity and bid/offer spreads. Valuation adjustments are generally based on market evidence.

See Notes 6 through 8 for further information about fair value measurements of cash instruments, derivatives and other financial assets and financial liabilities accounted for at fair value primarily under the fair value option (including information about unrealized gains and losses related to level 3 financial assets and financial liabilities, and transfers in and out of level 3), respectively.

The table below presents financial assets and financial liabilities accounted for at fair value under the fair value option or in accordance with other U.S. GAAP.

<i>\$ in millions</i>	As of	
	June 2017	December 2016
Total level 1 financial assets	\$ 5,665	\$ 3,068
Total level 2 financial assets	99,510	84,649
Total level 3 financial assets	2,313	2,903
Investments in funds at NAV	17	17
Counterparty and cash collateral netting	(50,498)	(52,356)
Total financial assets at fair value	\$ 57,007	\$ 38,281
Total assets	\$ 151,213	\$ 159,112
Total level 3 financial assets divided by:		
Total assets	1.5%	1.8%
Total financial assets at fair value	4.1%	7.6%
Total level 1 financial liabilities	\$ 2,157	\$ 2,498
Total level 2 financial liabilities	28,519	33,480
Total level 3 financial liabilities	4,598	4,307
Counterparty and cash collateral netting	(18,194)	(23,201)
Total financial liabilities at fair value	\$ 17,080	\$ 17,084
Total level 3 financial liabilities divided by:		
total financial liabilities at fair value	26.9%	25.2%

Notes to Condensed Consolidated Financial Statements (Unaudited)

In the table above:

- Counterparty netting among positions classified in the same level is included in that level.
- Counterparty and cash collateral netting represents the impact on derivatives of netting across levels of the fair value hierarchy.

Note 6.

Cash Instruments

Cash instruments include U.S. government and agency obligations, non-U.S. government and agency obligations, mortgage-backed loans and securities, corporate loans and debt securities, equity securities, investments in funds at NAV, and other non-derivative financial instruments owned and financial instruments sold, but not yet purchased. See below for the types of cash instruments included in each level of the fair value hierarchy and the valuation techniques and significant inputs used to determine their fair values. See Note 5 for an overview of the Bank's fair value measurement policies.

Level 1 Cash Instruments

Level 1 cash instruments include U.S. government and non-U.S. government obligations. These instruments are valued using quoted prices for identical unrestricted instruments in active markets.

The Bank defines active markets for debt instruments based on both the average daily trading volume and the number of days with trading activity.

Level 2 Cash Instruments

Level 2 cash instruments include U.S. government agency obligations, most mortgage-backed loans and securities, most corporate loans and debt securities, most other debt obligations and certain equity securities.

Valuations of level 2 cash instruments can be verified to quoted prices, recent trading activity for identical or similar instruments, broker or dealer quotations or alternative pricing sources with reasonable levels of price transparency. Consideration is given to the nature of the quotations (e.g., indicative or firm) and the relationship of recent market activity to the prices provided from alternative pricing sources.

Valuation adjustments are typically made to level 2 cash instruments (i) if the cash instrument is subject to transfer restrictions and/or (ii) for other premiums and liquidity discounts that a market participant would require to arrive at fair value. Valuation adjustments are generally based on market evidence.

Level 3 Cash Instruments

Level 3 cash instruments have one or more significant valuation inputs that are not observable. Absent evidence to the contrary, level 3 cash instruments are initially valued at transaction price, which is considered to be the best initial estimate of fair value. Subsequently, the Bank uses other methodologies to determine fair value, which vary based on the type of instrument. Valuation inputs and assumptions are changed when corroborated by substantive observable evidence, including values realized on sales of financial assets.

Valuation Techniques and Significant Inputs of Level 3 Cash Instruments

Valuation techniques of level 3 cash instruments vary by instrument, but are generally based on discounted cash flow techniques. The valuation techniques and the nature of significant inputs used to determine the fair values of each type of level 3 cash instrument are described below:

Loans and Securities Backed by Commercial Real Estate

Loans and securities backed by commercial real estate are directly or indirectly collateralized by a single commercial real estate property or a portfolio of properties, and may include tranches of varying levels of subordination. Significant inputs are generally determined based on relative value analyses and include:

- Transaction prices in both the underlying collateral and instruments with the same or similar underlying collateral;
- Market yields implied by transactions of similar or related assets and/or current levels and changes in market indices such as the CMBX (an index that tracks the performance of commercial mortgage bonds).

Notes to Condensed Consolidated Financial Statements (Unaudited)

Corporate Loans and Debt Securities. Corporate loans and debt securities includes bank loans and bridge loans and corporate debt securities. Significant inputs are generally determined based on relative value analyses, which incorporate comparisons both to prices of credit default swaps that reference the same or similar underlying instrument or entity and to other debt instruments for the same issuer for which observable prices or broker quotations are available. Significant inputs include:

- Market yields implied by transactions of similar or related assets and/or current levels and trends of market indices such as CDX and LCDX (indices that track the performance of corporate credit and loans, respectively);
- Current performance and recovery assumptions and, where the Bank uses credit default swaps to value the related cash instrument, the cost of borrowing the underlying reference obligation; and
- Duration.

Equity Securities. Equity securities primarily relates to equity investments made as part of the Bank's CRA activities. Recent third-party completed or pending transactions (e.g., merger proposals, tender offers, debt restructurings) are considered to be the best evidence for any change in fair value. When these are not available, the following valuation methodologies are used, as appropriate:

- Transactions in similar instruments; and
- Discounted cash flow techniques.

The Bank also considers changes in the outlook for the relevant industry and financial performance of the issuer as compared to projected performance. Significant inputs include discount rates and capitalization rates.

Other Cash Instruments. Other cash instruments consists of state and municipal obligations and other debt obligations. Significant inputs are generally determined based on relative value analyses, which incorporate comparisons both to prices of credit default swaps that reference the same or similar underlying instrument or entity and to other debt instruments for the same issuer for which observable prices or broker quotations are available. Significant inputs include:

- Market yields implied by transactions of similar or related assets and/or current levels and trends of market indices;
- Current performance and recovery assumptions and, where the Bank uses credit default swaps to value the related cash instrument, the cost of borrowing the underlying reference obligation; and
- Duration.

Fair Value of Cash Instruments by Level

The tables below present cash instrument assets and liabilities at fair value by level within the fair value hierarchy.

<i>\$ in millions</i>	As of June 2017			
	Level 1	Level 2	Level 3	Total
Assets				
U.S. government and agency obligations	\$ 5,655	\$ 12,240	\$ –	\$ 17,895
Non-U.S. government and agency obligations	10	–	–	10
Loans and securities backed by:				
Commercial real estate	–	1,348	105	1,453
Residential real estate	–	6,741	–	6,741
Corporate loans and debt securities	–	1,868	185	2,053
State and municipal obligations	–	–	33	33
Other debt obligations	–	227	10	237
Equity securities	–	31	220	251
Subtotal	\$ 5,665	\$ 22,455	\$ 553	\$ 28,673
Investments in funds at NAV				17
Total cash instrument assets				\$ 28,690
Liabilities				
U.S. government and agency obligations	\$ (2,156)	\$ –	\$ –	\$ (2,156)
Non-U.S. government and agency obligations	(1)	(6)	–	(7)
Loans and securities backed by:				
Commercial real estate	–	(5)	–	(5)
Residential real estate	–	(1)	–	(1)
Corporate loans and debt securities	–	(234)	(16)	(250)
Total cash instrument liabilities	\$ (2,157)	\$ (246)	\$ (16)	\$ (2,419)

Notes to Condensed Consolidated Financial Statements (Unaudited)

\$ in millions	As of December 2016			
	Level 1	Level 2	Level 3	Total
Assets				
U.S. government and agency obligations	\$ 3,028	\$ 10,998	\$ -	\$ 14,026
Non-U.S. government and agency obligations	40	-	-	40
Loans and securities backed by:				
Commercial real estate	-	1,027	171	1,198
Residential real estate	-	6,511	-	6,511
Corporate loans and debt securities	-	1,923	305	2,228
State and municipal obligations	-	-	32	32
Other debt obligations	-	91	82	173
Equity securities	-	41	192	233
Subtotal	\$ 3,068	\$ 20,591	\$ 782	\$ 24,441
Investments in funds at NAV				17
Total cash instrument assets				\$ 24,458
Liabilities				
U.S. government and agency obligations	\$(2,497)	\$ -	\$ -	\$(2,497)
Non-U.S. government and agency obligations	(1)	(5)	-	(6)
Loans and securities backed by:				
residential real estate	-	(3)	-	(3)
Corporate loans and debt securities	-	(237)	(24)	(261)
Total cash instrument liabilities	\$(2,498)	\$(245)	\$(24)	\$(2,767)

In the tables above:

- Cash instrument assets and liabilities are included in “Financial instruments owned” and “Financial instruments sold, but not yet purchased” respectively.
- Cash instrument assets are shown as positive amounts and cash instrument liabilities are shown as negative amounts.

Significant Unobservable Inputs

The table below presents the amount of level 3 assets, and ranges and weighted averages of significant unobservable inputs used to value the Bank’s level 3 cash instruments.

\$ in millions	Level 3 Assets and Range of Significant Unobservable Inputs (Weighted Average) as of	
	June 2017	December 2016
Loans and securities backed by commercial real estate		
Level 3 assets	\$105	\$171
Yield	4.5% to 9.9% (7.8%)	4.2% to 9.9% (6.2%)
Corporate loans and debt securities		
Level 3 assets	\$185	\$305
Yield	2.9% to 5.6% (4.8%)	2.5% to 13.9% (5.2%)
Recovery rate	54.4% to 85.0% (68.5%)	40.0% to 85.0% (72.4%)
Duration (years)	1.7 to 2.6 (1.9)	1.1 to 2.4 (2.0)
Equity securities		
Level 3 assets	\$220	\$192
Discount rate/yield	8.0% to 22.1% (16.4%)	7.6% to 19.0% (17.4%)
Capitalization rate	4.8% to 6.0% (4.8%)	5.0% to 6.0% (5.0%)
Other cash instruments		
Level 3 assets	\$43	\$114
Yield	4.4% to 7.4% (5.6%)	4.6% to 13.8% (9.0%)
Recovery rate	N.M.	83.5% to 92.3% (87.1%)
Duration (years)	N.M.	0.9 to 1.5 (1.3)

In the table above:

- Ranges represent the significant unobservable inputs that were used in the valuation of each type of cash instrument.
- Weighted averages are calculated by weighting each input by the relative fair value of the cash instruments.
- The ranges and weighted averages of these inputs are not representative of the appropriate inputs to use when calculating the fair value of any one cash instrument. For example, the highest recovery rate for corporate loans and debt securities is appropriate for valuing a specific loan but may not be appropriate for valuing any other corporate loan or debt security. Accordingly, the ranges of inputs do not represent uncertainty in, or possible ranges of, fair value measurements of the Bank’s level 3 cash instruments.
- Significant unobservable input types which are only relevant to a single instrument are not meaningful and therefore have been excluded.

Notes to Condensed Consolidated Financial Statements (Unaudited)

- Increases in yield or duration used in the valuation of the Bank's level 3 cash instruments would result in a lower fair value measurement, while increases in recovery rate would result in a higher fair value measurement. Due to the distinctive nature of each of the Bank's level 3 cash instruments, the interrelationship of inputs is not necessarily uniform within each product type.
- Loans and securities backed by commercial real estate, corporate loans and debt securities and other debt obligations are valued using discounted cash flows, and equity securities are valued using market comparables and discounted cash flows.
- The fair value of any one instrument may be determined using multiple valuation techniques. For example, market comparables and discounted cash flows may be used together to determine fair value. Therefore, the level 3 balance encompasses both of these techniques.

Transfers Between Levels of the Fair Value Hierarchy

Transfers between levels of the fair value hierarchy are reported at the beginning of the reporting period in which they occur. There were no transfers between level 1 and level 2 cash instrument assets or liabilities during the six months ended June 2017 and June 2016. See "Level 3 Rollforward" below for information about transfers between level 2 and level 3.

Level 3 Rollforward

The table below presents a summary of the changes in fair value for level 3 cash instrument assets and liabilities.

<i>\$ in millions</i>	Six Months Ended June	
	2017	2016
Total cash instrument assets		
Beginning balance	\$ 782	\$ 828
Net realized gains/(losses)	13	12
Net unrealized gains/(losses)	18	10
Purchases	92	270
Sales	(12)	(49)
Settlements	(90)	(172)
Transfers into level 3	6	74
Transfers out of level 3	(256)	(111)
Ending balance	\$ 553	\$ 862
Total cash instrument liabilities		
Beginning balance	\$ (24)	\$ (97)
Net unrealized gains/(losses)	3	21
Purchases	17	39
Sales	(12)	(1)
Settlements	–	(7)
Transfers into level 3	–	(1)
Ending balance	\$ (16)	\$ (46)

In the table above:

- Changes in fair value are presented for all cash instrument assets and liabilities that are classified in level 3 as of the end of the period.
- Net unrealized gains/(losses) relate to instruments that were still held at period-end.
- Purchases includes originations and secondary purchases.
- If a cash instrument asset or liability was transferred to level 3 during a reporting period, its entire gain or loss for the period is classified in level 3. For level 3 cash instrument assets, increases are shown as positive amounts, while decreases are shown as negative amounts. For level 3 cash instrument liabilities, increases are shown as negative amounts, while decreases are shown as positive amounts.
- Level 3 cash instruments are frequently economically hedged with level 1 and level 2 cash instruments and/or level 2 or level 3 derivatives. Accordingly, gains or losses that are classified in level 3 can be partially offset by gains or losses attributable to level 1 or level 2 cash instruments and/or level 2 or level 3 derivatives. As a result, gains or losses included in the level 3 rollforward below do not necessarily represent the overall impact on the Bank's results of operations, liquidity or capital resources.

Notes to Condensed Consolidated Financial Statements (Unaudited)

The table below disaggregates, by product type, the information for cash instrument assets included in the summary table above.

\$ in millions	Six Months Ended June	
	2017	2016
Loans and securities backed by commercial real estate		
Beginning balance	\$ 171	\$ 140
Net realized gains/(losses)	3	2
Net unrealized gains/(losses)	1	5
Purchases	20	87
Sales	(8)	–
Settlements	(5)	(25)
Transfers out of level 3	(77)	(35)
Ending balance	\$ 105	\$ 174
Loans and securities backed by residential real estate		
Beginning balance	\$ –	\$ 35
Purchases	–	1
Settlements	–	(36)
Ending balance	\$ –	\$ –
Corporate loans and debt securities		
Beginning balance	\$ 305	\$ 457
Net realized gains/(losses)	9	6
Net unrealized gains/(losses)	(3)	4
Purchases	65	61
Sales	(4)	(49)
Settlements	(84)	(101)
Transfers into level 3	3	74
Transfers out of level 3	(106)	(76)
Ending balance	\$ 185	\$ 376
Equity securities		
Beginning balance	\$ 192	\$ 161
Net unrealized gains/(losses)	19	5
Purchases	6	18
Transfers into level 3	3	–
Ending balance	\$ 220	\$ 184
Other cash instruments		
Beginning balance	\$ 114	\$ 35
Net realized gains/(losses)	1	4
Net unrealized gains/(losses)	1	(4)
Purchases	1	103
Settlements	(1)	(10)
Transfers out of level 3	(73)	–
Ending balance	\$ 43	\$ 128

Level 3 Rollforward Commentary

Six Months Ended June 2017. The net realized and unrealized gains on level 3 cash instrument assets of \$31 million (reflecting \$13 million of net realized gains and \$18 million of net unrealized gains) for the six months ended June 2017 were reported in “Gains and losses from financial instruments, net.”

The net unrealized gains on level 3 cash instrument assets for the six months ended June 2017 primarily reflected gains on equity securities, principally driven by strong corporate performance and company-specific events.

Transfers into level 3 during the six months ended June 2017 were not material.

Transfers out of level 3 during the six months ended June 2017 reflected transfers of certain corporate loans and debt securities, certain loans and securities backed by commercial real estate, and certain other cash instruments to level 2, principally due to certain unobservable yield and duration inputs not being significant to the valuation of these instruments.

Six Months Ended June 2016. The net realized and unrealized gains on level 3 cash instrument assets of \$22 million (reflecting \$12 million of net realized gains and \$10 million of net unrealized gains) for the six months ended June 2016 were reported in “Gains and losses from financial instruments, net.”

The net unrealized gains on level 3 cash instrument assets for the six months ended June 2016 were not material.

Transfers into level 3 during the six months ended June 2016 reflected transfers of certain corporate loans and debt securities from level 2 principally due to reduced price transparency as a result of a lack of market evidence, including fewer transactions in these instruments.

Transfers out of level 3 during the six months ended June 2016 primarily reflected transfers of certain corporate loans and debt securities and certain loans and securities backed by commercial real estate to level 2 principally due to increased price transparency as a result of market evidence, including market transactions in these instruments.

Notes to Condensed Consolidated Financial Statements (Unaudited)

Note 7.

Derivatives and Hedging Activities

Derivative Activities

Derivatives are instruments that derive their value from underlying asset prices, indices, reference rates and other inputs, or a combination of these factors. Derivatives may be traded on an exchange (exchange-traded) or they may be privately negotiated contracts, which are usually referred to as over-the-counter (OTC) derivatives. Certain of the Bank's OTC derivatives are cleared and settled through central clearing counterparties (OTC-cleared), while others are bilateral contracts between two counterparties (bilateral OTC).

Market-Making. As a market maker, the Bank enters into derivative transactions to provide liquidity to clients and to facilitate the transfer and hedging of their risks. In this role, the Bank typically acts as principal and is required to commit capital to provide execution, and maintains inventory in response to, or in anticipation of, client demand.

Risk Management. The Bank also enters into derivatives to actively manage risk exposures that arise from its market-making and lending activities in derivative and cash instruments. The Bank's holdings and exposures are hedged, in many cases, on either a portfolio or risk-specific basis, as opposed to an instrument-by-instrument basis. In addition, the Bank may enter into derivatives designated as hedges under U.S. GAAP. These derivatives are used to manage interest rate exposure in certain deposits.

The Bank enters into various types of derivatives, including:

- **Futures and Forwards.** Contracts that commit counterparties to purchase or sell financial instruments or currencies in the future.
- **Swaps.** Contracts that require counterparties to exchange cash flows such as currency or interest payment streams. The amounts exchanged are based on the specific terms of the contract with reference to specified rates, financial instruments, currencies or indices.
- **Options.** Contracts in which the option purchaser has the right, but not the obligation, to purchase from or sell to the option writer financial instruments or currencies within a defined time period for a specified price.

Derivatives are reported on a net-by-counterparty basis (i.e., the net payable or receivable for derivative assets and liabilities for a given counterparty) when a legal right of setoff exists under an enforceable netting agreement (counterparty netting). Derivatives are accounted for at fair value, net of cash collateral received or posted under enforceable credit support agreements (cash collateral netting). Derivative assets and liabilities are included in "Financial instruments owned" and "Financial instruments sold, but not yet purchased," respectively. Realized and unrealized gains and losses on derivatives not designated as hedges under ASC 815 are included in "Gains and losses from financial instruments, net" in Note 4.

The tables below present the gross fair value and the notional amounts of derivative contracts by major product type, the amounts of counterparty and cash collateral netting in the condensed consolidated statements of financial condition, as well as cash and securities collateral posted and received under enforceable credit support agreements that do not meet the criteria for netting under U.S. GAAP.

Notes to Condensed Consolidated Financial Statements (Unaudited)

\$ in millions	As of June 2017		As of December 2016	
	Derivative Assets	Derivative Liabilities	Derivative Assets	Derivative Liabilities
Not accounted for as hedges				
Exchange-traded	\$ 399	\$ 550	\$ 438	\$ 360
OTC-cleared	93,619	69,345	131,571	109,827
Bilateral OTC	463,700	452,863	503,345	495,212
Total interest rates	557,718	522,758	635,354	605,399
Currencies – Bilateral OTC	55,231	53,563	66,753	63,565
Credit – Bilateral OTC	2,791	2,613	3,187	2,806
Equities – Bilateral OTC	1,096	581	1,440	1,035
Commodities – Bilateral OTC	96	94	97	94
Subtotal	616,932	579,609	706,831	672,899
Accounted for as hedges				
OTC-cleared	130	52	137	67
Bilateral OTC	79	1	114	1
Total interest rates	209	53	251	68
Total gross fair value	\$ 617,141	\$ 579,662	\$ 707,082	\$ 672,967
Offset in condensed consolidated statements of financial condition				
OTC-cleared	\$ (69,391)	\$ (69,391)	\$(107,151)	\$(107,151)
Bilateral OTC	(488,263)	(488,263)	(537,433)	(537,433)
Counterparty netting	(557,654)	(557,654)	(644,584)	(644,584)
OTC-cleared	(24,101)	–	(24,541)	(2,743)
Bilateral OTC	(25,533)	(17,330)	(26,959)	(19,602)
Cash collateral netting	(49,634)	(17,330)	(51,500)	(22,345)
Total amounts offset	\$(607,288)	\$(574,984)	\$(696,084)	\$(666,929)
Included in condensed consolidated statements of financial condition				
Exchange-traded	\$ 399	\$ 550	\$ 438	\$ 360
OTC-cleared	257	6	16	–
Bilateral OTC	9,197	4,122	10,544	5,678
Total	\$ 9,853	\$ 4,678	\$ 10,998	\$ 6,038
Not offset in condensed consolidated statements of financial condition				
Cash collateral	\$ (155)	\$ (284)	\$(122)	\$(441)
Securities collateral	(1,737)	(510)	(1,926)	(482)
Total	\$ 7,961	\$ 3,884	\$ 8,950	\$ 5,115

\$ in millions	Notional Amounts as of	
	June 2017	December 2016
Not accounted for as hedges		
Exchange-traded	\$ 7,404,961	\$ 3,980,613
OTC-cleared	9,184,492	9,442,518
Bilateral OTC	22,291,270	19,168,270
Total interest rates	38,880,723	32,591,401
Currencies – Bilateral OTC	2,294,450	2,084,118
Credit – Bilateral OTC	159,614	164,567
Equities – Bilateral OTC	30,140	43,329
Commodities – Bilateral OTC	4,923	3,572
Subtotal	41,369,850	34,886,987
Accounted for as hedges		
OTC-cleared	18,533	22,180
Bilateral OTC	2,596	3,008
Total interest rates	21,129	25,188
Total notional amounts	\$ 41,390,979	\$ 34,912,175

In the tables above:

- Gross fair values exclude the effects of both counterparty netting and collateral, and therefore are not representative of the Bank's exposure.
- Where the Bank has received or posted collateral under credit support agreements, but has not yet determined such agreements are enforceable, the related collateral has not been netted.
- Notional amounts, which represent the sum of gross long and short derivative contracts, provide an indication of the volume of the Bank's derivative activity and do not represent anticipated losses.
- Total gross fair value of derivatives includes derivative assets and derivative liabilities of \$4.19 billion and \$1.68 billion, respectively, as of June 2017, and derivative assets and derivative liabilities of \$5.47 billion and \$1.87 billion, respectively, as of December 2016, which are not subject to an enforceable netting agreement or are subject to a netting agreement that the Bank has not yet determined to be enforceable.

Pursuant to a rule change at a clearing organization, transactions with this clearing organization are considered settled each day. The impact of reflecting transactions with this clearing organization as settled would have been a reduction in gross interest rate derivative assets and liabilities as of December 2016 of \$23.9 billion and \$26.7 billion, respectively, and a corresponding decrease in counterparty and cash collateral netting, with no impact to the condensed consolidated statements of financial condition.

Valuation Techniques for Derivatives

The Bank's level 2 and level 3 derivatives are valued using derivative pricing models (e.g., discounted cash flow models, correlation models, and models that incorporate option pricing methodologies, such as Monte Carlo simulations). Price transparency of derivatives can generally be characterized by product type, as described below.

Notes to Condensed Consolidated Financial Statements (Unaudited)

- **Interest Rate.** In general, the key inputs used to value interest rate derivatives are transparent, even for most long-dated contracts. Interest rate swaps and options denominated in the currencies of leading industrialized nations are characterized by high trading volumes and tight bid/offer spreads. Interest rate derivatives that reference indices, such as an inflation index, or the shape of the yield curve (e.g., 10-year swap rate vs. 2-year swap rate) are more complex, but the key inputs are generally observable.
- **Currency.** Prices for currency derivatives based on the exchange rates of leading industrialized nations, including those with longer tenors, are generally transparent. The primary difference between the price transparency of developed and emerging market currency derivatives is that emerging markets tend to be observable for contracts with shorter tenors.
- **Credit.** Price transparency for credit default swaps, including both single names and baskets of credits, varies by market and underlying reference entity or obligation. Credit default swaps that reference indices, large corporates and major sovereigns generally exhibit the most price transparency. For credit default swaps with other underliers, price transparency varies based on credit rating, the cost of borrowing the underlying reference obligations, and the availability of the underlying reference obligations for delivery upon the default of the issuer. Credit default swaps that reference loans, asset-backed securities and emerging market debt instruments tend to have less price transparency than those that reference corporate bonds. In addition, more complex credit derivatives, such as those sensitive to the correlation between two or more underlying reference obligations, generally have less price transparency.
- **Equity.** Price transparency for equity derivatives varies by market and underlier. Options on indices and the common stock of corporates included in major equity indices exhibit the most price transparency. Equity derivatives generally have observable market prices, except for contracts with long tenors or reference prices that differ significantly from current market prices. More complex equity derivatives, such as those sensitive to the correlation between two or more individual stocks, generally have less price transparency.

Liquidity is essential to observability of all product types. If transaction volumes decline, previously transparent prices and other inputs may become unobservable. Conversely, even highly structured products may at times have trading volumes large enough to provide observability of prices and other inputs. See Note 5 for an overview of the Bank's fair value measurement policies.

Level 1 Derivatives

Level 1 derivatives include short-term contracts for future delivery of securities when the underlying security is a level 1 instrument, and exchange-traded derivatives if they are actively traded and are valued at their quoted market price. As of both June 2017 and December 2016, the Bank had no level 1 derivatives.

Level 2 Derivatives

Level 2 derivatives include OTC derivatives for which all significant valuation inputs are corroborated by market evidence and exchange-traded derivatives that are not actively traded and/or that are valued using models that calibrate to market-clearing levels of OTC derivatives. In evaluating the significance of a valuation input, the Bank considers, among other factors, a portfolio's net risk exposure to that input.

The selection of a particular model to value a derivative depends on the contractual terms of and specific risks inherent in the instrument, as well as the availability of pricing information in the market. For derivatives that trade in liquid markets, model selection does not involve significant management judgment because outputs of models can be calibrated to market-clearing levels.

Valuation models require a variety of inputs, such as contractual terms, market prices, yield curves, discount rates (including those derived from interest rates on collateral received and posted as specified in credit support agreements for collateralized derivatives), credit curves, measures of volatility, prepayment rates, loss severity rates and correlations of such inputs. Significant inputs to the valuations of level 2 derivatives can be verified to market transactions, broker or dealer quotations or other alternative pricing sources with reasonable levels of price transparency. Consideration is given to the nature of the quotations (e.g., indicative or firm) and the relationship of recent market activity to the prices provided from alternative pricing sources.

Notes to Condensed Consolidated Financial Statements (Unaudited)

Level 3 Derivatives

Level 3 derivatives are valued using models which utilize observable level 1 and/or level 2 inputs, as well as unobservable level 3 inputs. The significant unobservable inputs used to value the Bank's level 3 derivatives are described below.

- For the majority of the Bank's interest rate and currency derivatives classified in level 3, significant unobservable inputs include correlations of certain currencies and interest rates (e.g., the correlation between Euro inflation and Euro interest rates) and specific interest rate volatilities.
- For level 3 credit derivatives, significant unobservable inputs include illiquid credit spreads, which are unique to specific reference obligations and reference entities.
- For level 3 equity derivatives, significant unobservable inputs generally include correlation inputs, such as the correlation of the price performance of two or more individual stocks or the correlation of the price performance for a basket of stocks to another asset class.

Subsequent to the initial valuation of a level 3 derivative, the Bank updates the level 1 and level 2 inputs to reflect observable market changes and any resulting gains and losses are classified in level 3. Level 3 inputs are changed when corroborated by evidence such as similar market transactions, third-party pricing services and/or broker or dealer quotations or other empirical market data. In circumstances where the Bank cannot verify the model value by reference to market transactions, it is possible that a different valuation model could produce a materially different estimate of fair value. See below for further information about significant unobservable inputs used in the valuation of level 3 derivatives.

Valuation Adjustments

Valuation adjustments are integral to determining the fair value of derivative portfolios and are used to adjust the mid-market valuations produced by derivative pricing models to the appropriate exit price valuation. These adjustments incorporate bid/offer spreads, the cost of liquidity, credit valuation adjustments and funding valuation adjustments, which account for the credit and funding risk inherent in the uncollateralized portion of derivative portfolios. The Bank also makes funding valuation adjustments to collateralized derivatives where the terms of the agreement do not permit the Bank to deliver or repledge collateral received. Market-based inputs are generally used when calibrating valuation adjustments to market-clearing levels.

In addition, for derivatives that include significant unobservable inputs, the Bank makes model or exit price adjustments to account for the valuation uncertainty present in the transaction.

Fair Value of Derivatives by Level

The tables below present the fair value of derivatives on a gross basis by level and major product type as well as the impact of netting, included in the condensed consolidated statements of financial condition.

<i>\$ in millions</i>	As of June 2017			
	Level 1	Level 2	Level 3	Total
Assets				
Interest rates	\$ -	\$ 557,436	\$ 491	\$ 557,927
Currencies	-	54,720	511	55,231
Credit	-	1,858	933	2,791
Equities	-	587	509	1,096
Commodities	-	91	5	96
Gross fair value	-	614,692	2,449	617,141
Counterparty netting in levels	-	(556,101)	(689)	(556,790)
Subtotal	\$ -	\$ 58,591	\$ 1,760	\$ 60,351
Cross-level counterparty netting				(864)
Cash collateral netting				(49,634)
Net fair value				\$ 9,853
Liabilities				
Interest rates	\$ -	\$ (521,872)	\$ (939)	\$ (522,811)
Currencies	-	(53,416)	(147)	(53,563)
Credit	-	(2,018)	(595)	(2,613)
Equities	-	(574)	(7)	(581)
Commodities	-	(90)	(4)	(94)
Gross fair value	-	(577,970)	(1,692)	(579,662)
Counterparty netting in levels	-	556,101	689	556,790
Subtotal	\$ -	\$ (21,869)	\$ (1,003)	\$ (22,872)
Cross-level counterparty netting				864
Cash collateral netting				17,330
Net fair value				\$ (4,678)

Notes to Condensed Consolidated Financial Statements (Unaudited)

\$ in millions	As of December 2016			
	Level 1	Level 2	Level 3	Total
Assets				
Interest rates	\$ -	\$ 634,953	\$ 652	\$ 635,605
Currencies	-	66,161	592	66,753
Credit	-	1,897	1,290	3,187
Equities	-	1,016	424	1,440
Commodities	-	82	15	97
Gross fair value	-	704,109	2,973	707,082
Counterparty netting in levels	-	(642,876)	(852)	(643,728)
Subtotal	\$ -	\$ 61,233	\$ 2,121	\$ 63,354
Cross-level counterparty netting				(856)
Cash collateral netting				(51,500)
Net fair value				\$ 10,998
Liabilities				
Interest rates	\$ -	\$ (604,362)	\$ (1,105)	\$ (605,467)
Currencies	-	(63,439)	(126)	(63,565)
Credit	-	(2,094)	(712)	(2,806)
Equities	-	(1,029)	(6)	(1,035)
Commodities	-	(81)	(13)	(94)
Gross fair value	-	(671,005)	(1,962)	(672,967)
Counterparty netting in levels	-	642,876	852	643,728
Subtotal	\$ -	\$ (28,129)	\$ (1,110)	\$ (29,239)
Cross-level counterparty netting				856
Cash collateral netting				22,345
Net fair value				\$ (6,038)

In the tables above:

- The gross fair values exclude the effects of both counterparty netting and collateral netting, and therefore are not representative of the Bank's exposure.
- Counterparty netting is reflected in each level to the extent that receivable and payable balances are netted within the same level and is included in counterparty netting in levels. Where the counterparty netting is across levels, the netting is included in cross-level counterparty netting.
- Derivative assets are shown as positive amounts and derivative liabilities are shown as negative amounts.

Significant Unobservable Inputs

The table below presents the amount of level 3 assets (liabilities), and ranges, averages and medians of significant unobservable inputs used to value substantially all of the Bank's level 3 derivatives.

\$ in millions	Level 3 Assets (Liabilities) and Range of Significant Unobservable Inputs (Average/Median) as of	
	June 2017	December 2016
Interest rates, net	\$(448)	\$(453)
Correlation	(10)% to 86% (56%/60%)	(10)% to 86% (56%/60%)
Volatility (bps)	31 to 151 (84/57)	31 to 151 (84/57)
Currencies, net	\$364	\$466
Correlation	25% to 70% (53%/57%)	25% to 70% (50%/55%)
Credit, net	\$338	\$578
Credit spreads (bps)	6 to 737 (161/117)	16 to 800 (210/146)
Equities, net	\$502	\$418
Correlation	19% to 79% (42%/41%)	19% to 88% (40%/40%)

In the table above:

- Derivative assets are shown as positive amounts and derivative liabilities are shown as negative amounts.
- Ranges represent the significant unobservable inputs that were used in the valuation of each type of derivative.
- Averages represent the arithmetic average of the inputs and are not weighted by the relative fair value or notional of the respective financial instruments. An average greater than the median indicates that the majority of inputs are below the average. For example, the difference between the average and the median for credit spread inputs indicates that the majority of the inputs fall in the lower end of the range.
- The ranges, averages and medians of these inputs are not representative of the appropriate inputs to use when calculating the fair value of any one derivative. For example, the highest correlation for interest rate derivatives is appropriate for valuing a specific interest rate derivative but may not be appropriate for valuing any other interest rate derivative. Accordingly, the ranges of inputs do not represent uncertainty in, or possible ranges of, fair value measurements of the Bank's level 3 derivatives.

Notes to Condensed Consolidated Financial Statements (Unaudited)

- Interest rates, currencies and equities derivatives are valued using option pricing models, and credit derivatives are valued using option pricing and discounted cash flow models.
- The fair value of any one instrument may be determined using multiple valuation techniques. For example, option pricing models and discounted cash flows models are typically used together to determine fair value. Therefore, the level 3 balance encompasses both of these techniques.
- Correlation within currencies and equities includes cross-product correlation.

Range of Significant Unobservable Inputs

The following is information about the ranges of significant unobservable inputs used to value the Bank's level 3 derivative instruments:

- **Correlation.** Ranges for correlation cover a variety of underliers both within one market (e.g., foreign exchange rates) and across markets (e.g., correlation of an interest rate and a foreign exchange rate), as well as across regions. Generally, cross-product correlation inputs are used to value more complex instruments and are lower than correlation inputs on assets within the same derivative product type.
- **Volatility.** Ranges for volatility cover numerous underliers across a variety of markets, maturities and strike prices.
- **Credit spreads.** The ranges for credit spreads cover a variety of underliers (index and single names), regions, sectors, maturities and credit qualities (high-yield and investment-grade). The broad range of this population gives rise to the width of the ranges of significant unobservable inputs.

Sensitivity of Fair Value Measurement to Changes in Significant Unobservable Inputs

The following is a description of the directional sensitivity of the Bank's level 3 fair value measurements to changes in significant unobservable inputs, in isolation:

- **Correlation.** In general, for contracts where the holder benefits from the convergence of the underlying asset or index prices (e.g., interest rates, foreign exchange rates and equity prices), an increase in correlation results in a higher fair value measurement.
- **Volatility.** In general, for purchased options an increase in volatility results in a higher fair value measurement.
- **Credit spreads.** In general, the fair value of purchased credit protection increases as credit spreads increase. Credit spreads are strongly related to distinctive risk factors of the underlying reference obligations, which include reference entity-specific factors such as leverage, volatility and industry, market-based risk factors, such as borrowing costs or liquidity of the underlying reference obligation, and macroeconomic conditions.

Due to the distinctive nature of each of the Bank's level 3 derivatives, the interrelationship of inputs is not necessarily uniform within each product type.

Level 3 Rollforward

The table below presents a summary of the changes in fair value for all level 3 derivatives.

<i>\$ in millions</i>	Six Months Ended June	
	2017	2016
Total level 3 derivatives		
Beginning balance	\$ 1,011	\$ 613
Net realized gains/(losses)	(131)	(72)
Net unrealized gains/(losses)	(157)	(9)
Purchases	50	113
Sales	(4)	(12)
Settlements	61	78
Transfers into level 3	(9)	272
Transfers out of level 3	(64)	209
Ending balance	\$ 757	\$ 1,192

Notes to Condensed Consolidated Financial Statements (Unaudited)

In the table above:

- Changes in fair value are presented for all derivative assets and liabilities that are classified in level 3 as of the end of the period.
- Net unrealized gains/(losses) relate to instruments that were still held at period-end.
- If a derivative was transferred into level 3 during a reporting period, its entire gain or loss for the period is classified in level 3. Transfers between levels are reported at the beginning of the reporting period in which they occur.
- Positive amounts for transfers into level 3 and negative amounts for transfers out of level 3 represent net transfers of derivative assets. Negative amounts for transfers into level 3 and positive amounts for transfers out of level 3 represent net transfers of derivative liabilities.
- A derivative with level 1 and/or level 2 inputs is classified in level 3 in its entirety if it has at least one significant level 3 input.
- If there is one significant level 3 input, the entire gain or loss from adjusting only observable inputs (i.e., level 1 and level 2 inputs) is classified in level 3.
- Gains or losses that have been classified in level 3 resulting from changes in level 1 or level 2 inputs are frequently offset by gains or losses attributable to level 1 or level 2 derivatives and/or level 1, level 2 and level 3 cash instruments. As a result, gains/(losses) included in the level 3 rollforward below do not necessarily represent the overall impact on the Bank's results of operations, liquidity or capital resources.

The table below disaggregates, by major product type, the information for level 3 derivatives included in the summary table above.

<i>\$ in millions</i>	Six Months Ended June	
	2017	2016
Interest rates, net		
Beginning balance	\$ (453)	\$ (632)
Net realized gains/(losses)	(38)	(15)
Net unrealized gains/(losses)	35	144
Purchases	4	2
Sales	(4)	(8)
Settlements	73	30
Transfers into level 3	(10)	235
Transfers out of level 3	(55)	227
Ending balance	\$ (448)	\$ (17)
Currencies, net		
Beginning balance	\$ 466	\$ 235
Net realized gains/(losses)	(48)	(40)
Net unrealized gains/(losses)	(103)	(106)
Purchases	11	22
Sales	–	(3)
Settlements	37	28
Transfers into level 3	2	–
Transfers out of level 3	(1)	5
Ending balance	\$ 364	\$ 141
Credit, net		
Beginning balance	\$ 578	\$ 760
Net realized gains/(losses)	(22)	(20)
Net unrealized gains/(losses)	(185)	(144)
Purchases	2	5
Sales	–	(1)
Settlements	(34)	25
Transfers into level 3	(1)	37
Transfers out of level 3	–	(14)
Ending balance	\$ 338	\$ 648
Equities, net		
Beginning balance	\$ 418	\$ 248
Net realized gains/(losses)	(23)	3
Net unrealized gains/(losses)	96	97
Purchases	33	84
Settlements	(14)	(5)
Transfers out of level 3	(8)	(9)
Ending balance	\$ 502	\$ 418
Commodities, net		
Beginning balance	\$ 2	\$ 2
Settlements	(1)	–
Ending balance	\$ 1	\$ 2

Notes to Condensed Consolidated Financial Statements (Unaudited)

Level 3 Rollforward Commentary

Six Months Ended June 2017. The net realized and unrealized losses on level 3 derivatives of \$288 million (reflecting \$131 million of net realized losses and \$157 million of net unrealized losses) were reported in “Gains and losses from financial instruments, net.”

The net unrealized losses on level 3 derivatives for the six months ended June 2017 were primarily attributable to losses on certain credit derivatives, reflecting the impact of tighter credit spreads, and losses on certain currency derivatives, reflecting the impact of changes in interest rates and foreign exchange rates, partially offset by gains on certain equity derivatives, reflecting the impact of changes in the prices of underlying indices.

Transfers into level 3 derivatives during the six months ended June 2017 were not material.

Transfers out of level 3 derivatives during the six months ended June 2017 primarily reflected transfers of certain interest rate derivative assets to level 2, primarily due to increased transparency of unobservable interest rate inputs used to value these derivatives.

Six Months Ended June 2016. The net realized and unrealized losses on level 3 derivatives of \$81 million (reflecting \$72 million of net realized losses and \$9 million of net unrealized losses) were reported in “Gains and losses from financial instruments, net.”

The net unrealized losses on level 3 derivatives for the six months ended June 2016 were primarily attributable to losses on credit derivatives from changes in certain foreign exchange rates and losses on currency derivatives from decreases in certain interest rates partially offset by gains on interest rate derivatives from changes to certain interest rates and gains on certain equity derivatives reflecting the impact of changes in the prices of underlying indices.

Transfers into level 3 derivatives during the six months ended June 2016 primarily reflected transfers of certain interest rate derivative assets into level 3, primarily due to reduced transparency of certain unobservable inputs used to value these derivatives.

Transfers out of level 3 derivatives during the six months ended June 2016 primarily reflected transfer of certain interest rate derivatives liabilities to level 2, principally due to increased transparency of interest rates used to value these derivatives.

Credit Derivatives

The Bank enters into a broad array of credit derivatives in locations around the world to facilitate client transactions and to manage the credit risk associated with its activities. Credit derivatives are actively managed based on the Bank’s net risk position.

Credit derivatives are generally individually negotiated contracts and can have various settlement and payment conventions. Credit events include failure to pay, bankruptcy, acceleration of indebtedness, restructuring, repudiation and dissolution of the reference entity.

The Bank enters into the following types of credit derivatives:

- **Credit Default Swaps.** Single-name credit default swaps protect the buyer against the loss of principal on one or more bonds, loans or mortgages (reference obligations) in the event the issuer (reference entity) of the reference obligations suffers a credit event. The buyer of protection pays an initial or periodic premium to the seller and receives protection for the period of the contract. If there is no credit event, as defined in the contract, the seller of protection makes no payments to the buyer of protection. However, if a credit event occurs, the seller of protection is required to make a payment to the buyer of protection, which is calculated in accordance with the terms of the contract.
- **Credit Options.** In a credit option, the option writer assumes the obligation to purchase or sell a reference obligation at a specified price or credit spread. The option purchaser buys the right, but does not assume the obligation, to sell the reference obligation to, or purchase it from, the option writer. The payments on credit options depend either on a particular credit spread or the price of the reference obligation.

Notes to Condensed Consolidated Financial Statements (Unaudited)

- **Credit Indices, Baskets and Tranches.** Credit derivatives may reference a basket of single-name credit default swaps or a broad-based index. If a credit event occurs in one of the underlying reference obligations, the protection seller pays the protection buyer. The payment is typically a pro-rata portion of the transaction's total notional amount based on the underlying defaulted reference obligation. In certain transactions, the credit risk of a basket or index is separated into various portions (tranches), each having different levels of subordination. The most junior tranches cover initial defaults and once losses exceed the notional amount of these junior tranches, any excess loss is covered by the next most senior tranche in the capital structure.

- **Total Return Swaps.** A total return swap transfers the risks relating to economic performance of a reference obligation from the protection buyer to the protection seller. Typically, the protection buyer receives from the protection seller a floating rate of interest and protection against any reduction in fair value of the reference obligation, and in return the protection seller receives the cash flows associated with the reference obligation, plus any increase in the fair value of the reference obligation.

The Bank economically hedges its exposure to written credit derivatives primarily by entering into offsetting purchased credit derivatives with identical underliers. Substantially all of the Bank's purchased credit derivative transactions are with financial institutions and are subject to stringent collateral thresholds. In addition, upon the occurrence of a specified trigger event, the Bank may take possession of the reference obligations underlying a particular written credit derivative, and consequently may, upon liquidation of the reference obligations, recover amounts on the underlying reference obligations in the event of default.

As of June 2017, written and purchased credit derivatives had total gross notional amounts of \$71.57 billion and \$88.04 billion, respectively, for total net notional purchased protection of \$16.47 billion. As of December 2016, written and purchased credit derivatives had total gross notional amounts of \$75.37 billion and \$89.20 billion, respectively, for total net notional purchased protection of \$13.83 billion. The Bank's written and purchased credit derivatives are primarily credit default swaps.

The table below presents certain information about credit derivatives.

\$ in millions	Credit Spread on Underlier (basis points)				Total
	0-250	251 - 500	501 - 1,000	Greater than 1,000	
As of June 2017					
Maximum Payout/Notional Amount of Written Credit Derivatives by Tenor					
Less than 1 year	\$ 24,792	\$ 97	\$ 78	\$ 409	\$ 25,376
1 - 5 years	31,510	1,729	1,103	893	35,235
Greater than 5 years	10,513	417	17	16	10,963
Total	\$ 66,815	\$ 2,243	\$ 1,198	\$ 1,318	\$ 71,574
Maximum Payout/Notional Amount of Purchased Credit Derivatives					
Offsetting	\$ 47,762	\$ 2,097	\$ 1,134	\$ 1,075	\$ 52,068
Other	34,888	612	235	237	35,972
Fair Value of Written Credit Derivatives					
Asset	\$ 1,338	\$ 90	\$ 54	\$ 21	\$ 1,503
Liability	292	43	43	238	616
Net asset/(liability)	\$ 1,046	\$ 47	\$ 11	\$ (217)	\$ 887
As of December 2016					
Maximum Payout/Notional Amount of Written Credit Derivatives by Tenor					
Less than 1 year	\$ 24,366	\$ 260	\$ 61	\$ 444	\$ 25,131
1 - 5 years	33,102	2,325	1,008	623	37,058
Greater than 5 years	12,732	422	8	15	13,177
Total	\$ 70,200	\$ 3,007	\$ 1,077	\$ 1,082	\$ 75,366
Maximum Payout/Notional Amount of Purchased Credit Derivatives					
Offsetting	\$ 52,615	\$ 2,712	\$ 1,000	\$ 1,003	\$ 57,330
Other	30,928	640	170	133	31,871
Fair Value of Written Credit Derivatives					
Asset	\$ 597	\$ 814	\$ 115	\$ 62	\$ 1,588
Liability	479	78	21	188	766
Net asset/(liability)	\$ 118	\$ 736	\$ 94	\$ (126)	\$ 822

In the table above:

- Fair values exclude the effects of both netting of receivable balances with payable balances under enforceable netting agreements, and netting of cash received or posted under enforceable credit support agreements, and therefore are not representative of the Bank's credit exposure.
- Tenor is based on expected duration for mortgage-related credit derivatives and on remaining contractual maturity for other credit derivatives.
- The credit spread on the underlier, together with the tenor of the contract, are indicators of payment/performance risk. The Bank is less likely to pay or otherwise be required to perform where the credit spread and the tenor are lower.
- Offsetting purchased credit derivatives represent the notional amount of purchased credit derivatives that economically hedge written credit derivatives with identical underliers and are included in offsetting.
- Other purchased credit derivatives represent the notional amount of all other purchased credit derivatives not included in offsetting.

Notes to Condensed Consolidated Financial Statements (Unaudited)

Impact of Credit Spreads on Derivatives

On an ongoing basis, the Bank realizes gains or losses relating to changes in credit risk through the unwind of derivative contracts and changes in credit mitigants.

The net gain, including hedges, attributable to the impact of changes in credit exposure and credit spreads (of the Bank's counterparties as well as of the Bank or its affiliates) on derivatives was \$27 million and \$46 million for the six months ended June 2017 and June 2016, respectively.

Derivatives with Credit-Related Contingent Features

Certain of the Bank's derivatives have been transacted under bilateral agreements with counterparties who may require the Bank to post collateral or terminate the transactions based on changes in the credit ratings of the Bank and/or Group Inc. Typically, such requirements are based on the credit ratings of Group Inc. The Bank assesses the impact of these bilateral agreements by determining the collateral or termination payments that would occur assuming a downgrade by all rating agencies. A downgrade by any one rating agency, depending on the agency's relative ratings of the Bank and/or Group Inc. at the time of the downgrade, may have an impact which is comparable to the impact of a downgrade by all rating agencies.

The table below presents the aggregate fair value of net derivative liabilities under such agreements (excluding application of collateral posted to reduce these liabilities), the related aggregate fair value of the assets posted as collateral and the additional collateral or termination payments that could have been called by counterparties in the event of a one-notch and two-notch downgrade in the credit ratings of the Bank and/or Group Inc.

<i>\$ in millions</i>	As of	
	June 2017	December 2016
Net derivative liabilities under bilateral agreements	\$ 5,777	\$ 5,318
Collateral posted	\$ 5,102	\$ 4,454
Additional collateral or termination payments:		
One-notch downgrade	\$ 177	\$ 165
Two-notch downgrade	\$ 294	\$ 298

Hedge Accounting

The Bank applies hedge accounting for certain interest rate swaps used to manage the interest rate exposure of certain fixed-rate certificates of deposit.

To qualify for hedge accounting, the hedging instrument must be highly effective at reducing the risk from the exposure being hedged. Additionally, the Bank must formally document the hedging relationship at inception and test the hedging relationship at least on a quarterly basis to ensure the hedging instrument continues to be highly effective over the life of the hedging relationship.

Fair Value Hedges

The Bank designates certain interest rate swaps as fair value hedges. These interest rate swaps hedge changes in fair value attributable to the designated benchmark interest rate (e.g., London Interbank Offered Rate (LIBOR)), effectively converting a substantial portion of fixed-rate obligations into floating-rate obligations.

The Bank applies a statistical method that utilizes regression analysis when assessing the effectiveness of its fair value hedging relationships in achieving offsetting changes in the fair values of the hedging instrument and the risk being hedged (i.e., interest rate risk). An interest rate swap is considered highly effective in offsetting changes in fair value attributable to changes in the hedged risk when the regression analysis results in a coefficient of determination of 80% or greater and a slope between 80% and 125%.

For qualifying fair value hedges, gains or losses on derivatives are included in "Interest expense." The change in fair value of the hedged item attributable to the risk being hedged is reported as an adjustment to its carrying value and is subsequently amortized into interest expense over its remaining life. Gains or losses resulting from hedge ineffectiveness are included in "Interest expense." When a derivative is no longer designated as a hedge, any remaining difference between the carrying value and par value of the hedged item is amortized to interest expense over the remaining life of the hedged item using the effective interest method. See Note 19 for further information about interest income and interest expense.

Notes to Condensed Consolidated Financial Statements (Unaudited)

The table below presents the gains/(losses) from interest rate derivatives accounted for as hedges, the related hedged deposits, and the hedge ineffectiveness on these derivatives, which primarily consists of amortization of prepaid credit spreads resulting from the passage of time.

\$ in millions	Six Months Ended June	
	2017	2016
Interest rate hedges	\$ (3)	\$ 515
Hedged deposits	(11)	(526)
Hedge ineffectiveness	\$ (14)	\$ (11)

Note 8.

Fair Value Option

Other Financial Assets and Financial Liabilities at Fair Value

In addition to all cash and derivative instruments included in “Financial instruments owned” and “Financial instruments sold, but not yet purchased,” the Bank accounts for certain of its other financial assets and financial liabilities at fair value primarily under the fair value option. The primary reasons for electing the fair value option are to:

- Reflect economic events in earnings on a timely basis;
- Mitigate volatility in earnings from using different measurement attributes (e.g., transfers of financial instruments owned accounted for as financings are recorded at fair value whereas the related secured financing would be recorded on an accrual basis absent electing the fair value option); and
- Address simplification and cost-benefit considerations (e.g., accounting for hybrid financial instruments at fair value in their entirety versus bifurcation of embedded derivatives and hedge accounting for debt hosts).

Hybrid financial instruments are instruments that contain bifurcatable embedded derivatives and do not require settlement by physical delivery of non-financial assets (e.g., physical commodities). The Bank has not elected to bifurcate hybrid financial instruments and accounts for the entire hybrid financial instrument at fair value under the fair value option.

Other financial assets and financial liabilities accounted for at fair value under the fair value option include:

- Repurchase agreements and substantially all resale agreements;
- Substantially all other secured financings, including advances from the Federal Home Loan Bank of New York (FHLB);
- Certain unsecured borrowings; and
- Certain time deposits (deposits with no stated maturity are not eligible for a fair value option election), including structured certificates of deposit, which are hybrid financial instruments.

Fair Value of Other Financial Assets and Financial Liabilities by Level

The table below presents, by level within the fair value hierarchy, other financial assets and financial liabilities accounted for at fair value primarily under the fair value option.

\$ in millions	Level 1	Level 2	Level 3	Total
As of June 2017				
Assets				
Securities purchased under agreements to resell	\$ -	\$ 18,464	\$ -	\$ 18,464
Total	\$ -	\$ 18,464	\$ -	\$ 18,464
Liabilities				
Deposits	\$ -	\$ (1,241)	\$ (3,579)	\$ (4,820)
Securities sold under agreements to repurchase	-	(3,014)	-	(3,014)
Other secured financings	-	(1,932)	-	(1,932)
Unsecured borrowings	-	(217)	-	(217)
Total	\$ -	\$ (6,404)	\$ (3,579)	\$ (9,983)

As of December 2016

Assets				
Securities purchased under agreements to resell	\$ -	\$ 2,825	\$ -	\$ 2,825
Total	\$ -	\$ 2,825	\$ -	\$ 2,825
Liabilities				
Deposits	\$ -	\$ (2,128)	\$ (3,173)	\$ (5,301)
Securities sold under agreements to repurchase	-	(310)	-	(310)
Other secured financings	-	(2,432)	-	(2,432)
Unsecured borrowings	-	(236)	-	(236)
Total	\$ -	\$ (5,106)	\$ (3,173)	\$ (8,279)

In the table above, other financial assets are shown as positive amounts and other financial liabilities are shown as negative amounts.

Notes to Condensed Consolidated Financial Statements (Unaudited)

Valuation Techniques and Significant Inputs

Other financial assets and financial liabilities at fair value are generally valued based on discounted cash flow techniques, which incorporate inputs with reasonable levels of price transparency, and are generally classified in level 2 because the inputs are observable. Valuation adjustments may be made for liquidity and for counterparty and the Bank's credit quality.

See below for information about the significant inputs used to value other financial assets and financial liabilities at fair value.

Resale and Repurchase Agreements. The significant inputs to the valuation of resale and repurchase agreements are funding spreads, the amount and timing of expected future cash flows and interest rates. As of both June 2017 and December 2016, the Bank had no level 3 resale or repurchase agreements. See Note 10 for further information about collateralized agreements and financings.

Deposits. The significant inputs to the valuation of time deposits are interest rates and the amount and timing of future cash flows. The inputs used to value the embedded derivative component of hybrid financial instruments are consistent with the inputs used to value the Bank's other derivative instruments. See Note 7 for further information about derivatives and Note 13 for further information about deposits.

The Bank's deposits that are classified in level 3 are hybrid financial instruments. As the significant unobservable inputs used to value hybrid financial instruments primarily relate to the embedded derivative component of these deposits, these inputs are incorporated in the Bank's derivative disclosures related to unobservable inputs in Note 7.

Other Secured Financings. The significant inputs to the valuation of other secured financings at fair value are the amount and timing of expected future cash flows, interest rates, funding spreads, the fair value of the collateral delivered by the Bank (which is determined using the amount and timing of expected future cash flows, market prices, market yields and recovery assumptions) and the frequency of additional collateral calls. As of both June 2017 and December 2016, the Bank had no level 3 other secured financings.

Unsecured Borrowings. The significant inputs to the valuation of unsecured borrowings at fair value are the amount and timing of expected future cash flows and interest rates. The inputs used to value the embedded derivative component of hybrid financial instruments are consistent with the inputs used to value the Bank's other derivative instruments. See Note 7 for further information about derivatives and Note 14 for further information about unsecured borrowings.

Transfers Between Levels of the Fair Value Hierarchy

Transfers between levels of the fair value hierarchy are reported at the beginning of the reporting period in which they occur. There were no transfers of other financial assets and financial liabilities between level 1 and level 2 during the six months ended June 2017 and June 2016. See "Level 3 Rollforward" below for information about transfers between level 2 and level 3.

Level 3 Rollforward

The table below presents a summary of the changes in fair value for other level 3 financial liabilities accounted for at fair value.

<i>\$ in millions</i>	Six Months Ended June	
	2017	2016
Deposits		
Beginning balance	\$ (3,173)	\$ (2,221)
Net realized gains/(losses)	(5)	(14)
Net unrealized gains/(losses)	(103)	(203)
Issuances	(345)	(513)
Settlements	38	15
Transfer out of level 3	9	—
Ending balance	\$ (3,579)	\$ (2,936)

In the table above:

- Changes in fair value are presented for all other financial liabilities that are classified in level 3 as of the end of the period.
- Net unrealized gains/(losses) relate to instruments that were still held at period-end.
- If a financial liability was transferred to level 3 during a reporting period, its entire gain or loss for the period is classified in level 3. For level 3 other financial liabilities, increases are shown as negative amounts, while decreases are shown as positive amounts.

Notes to Condensed Consolidated Financial Statements (Unaudited)

- Level 3 other financial liabilities are frequently economically hedged with derivatives. Accordingly, gains or losses that are classified in level 3 can be partially offset by gains or losses attributable to level 2 or 3 derivatives. As a result, gains or losses included in the level 3 rollforward below do not necessarily represent the overall impact on the Bank's results of operations, liquidity or capital resources.

Level 3 Rollforward Commentary

Six Months Ended June 2017. The net realized and unrealized losses on level 3 other financial liabilities of \$108 million (reflecting \$5 million of net realized losses and \$103 million of net unrealized losses) for the six months ended June 2017 were reported in "Gains and losses from financial instruments, net" in the condensed consolidated statements of earnings.

The net unrealized losses on level 3 other financial liabilities for the six months ended June 2017 consisted of losses on certain hybrid financial instruments included in deposits, principally due to the impact of an increase in the market value of the underlying assets.

There were no transfers into level 3 other financial liabilities during the six months ended June 2017.

Transfers out of level 3 other financial liabilities during the six months ended June 2017 were not material.

Six Months Ended June 2016. The net realized and unrealized gains on level 3 other financial liabilities of \$217 million (reflecting \$14 million of net realized losses and \$203 million of net unrealized losses) for the six months ended June 2016 were reported in "Gains and losses from financial instruments, net."

The net unrealized losses on level 3 other financial liabilities for the six months ended June 2016 consisted of losses on certain hybrid financial instruments included in deposits, principally due to the impact of an increase in the market value of the underlying assets.

There were no transfers into or out of level 3 of other financial liabilities during the six months ended June 2016.

Gains and Losses on Financial Assets and Financial Liabilities Accounted for at Fair Value Under the Fair Value Option

The table below presents the gains and losses recognized in earnings as a result of the Bank electing to apply the fair value option to certain financial assets and financial liabilities.

<i>\$ in millions</i>	Six Months Ended June	
	2017	2016
Deposits	\$ (115)	\$ (250)
Other	(5)	(22)
Total	\$ (120)	\$ (272)

In the table above:

- Gains/(losses) are included in "Gains and losses from financial instruments, net."
- Gains/(losses) exclude contractual interest, which is included in "Interest income" and "Interest expense," for all instruments other than hybrid financial instruments. See Note 19 for further information about interest income and interest expense.
- Deposits include gains/(losses) on the embedded derivative component of hybrid financial instruments. These gains and losses would have been recognized under other U.S. GAAP even if the Bank had not elected to account for the entire hybrid financial instrument at fair value.
- Other primarily consists of gains/(losses) on certain unsecured borrowings and FHLB advances.

Excluding the gains and losses on the instruments accounted for under the fair value option described above, "Gains and losses from financial instruments, net" primarily represents gains and losses on "Financial instruments owned," "Financial instruments sold, but not yet purchased" and the syndication of loans and lending commitments.

Loans and Lending Commitments at Fair Value

The Bank originates loans to provide financing to clients. These loans are typically longer-term in nature. The Bank's lending activities include lending to investment-grade and non-investment-grade corporate borrowers. The Bank's lending activities also include extending loans to borrowers that are secured by commercial and residential real estate. In addition, the Bank extends loans and lending commitments to private wealth management clients and substantially all are secured by residential real estate or other assets.

Notes to Condensed Consolidated Financial Statements (Unaudited)

The Bank accounts for certain loans at fair value under the fair value option which are included in “Financial instruments owned.” See Note 6 for a discussion of the techniques and significant inputs used in the valuation of loans. See Note 9 for information about loans receivable not accounted for at fair value.

The table below presents details about loans at fair value.

<i>\$ in millions</i>	As of	
	June 2017	December 2016
Corporate loans	\$ 1,710	\$ 1,917
Loans to private wealth management clients	6,977	6,788
Loans backed by commercial real estate	1,372	1,112
Loans backed by residential real estate	1	1
Other loans	126	130
Total	\$ 10,186	\$ 9,948

In the table above:

- Loans to private wealth management clients includes \$6.74 billion and \$6.51 billion of loans secured by residential real estate, \$169 million and \$210 million secured by investments in real or financial assets, and \$66 million and \$67 million of loans secured by commercial real estate as of June 2017 and December 2016, respectively.
- The aggregate contractual principal amount of loans for which the fair value option was elected exceeded the related fair value by \$112 million and \$126 million as of June 2017 and December 2016, respectively.
- Included in these amounts are loans in non-accrual status (including loans more than 90 days past due) with a contractual principal balance of \$6 million and a fair value of \$2 million as of June 2017, and a contractual principal balance of \$5 million and an immaterial fair value as of December 2016.

As of June 2017 and December 2016, the fair value of unfunded lending commitments for which the fair value option was elected was a liability of \$11 million and \$39 million, respectively, and the related total contractual amount of these lending commitments was \$5.25 billion and \$5.73 billion, respectively. See Note 16 for further information about lending commitments.

Impact of Credit Spreads on Loans and Lending Commitments

The estimated net gain attributable to changes in instrument-specific credit spreads on loans and lending commitments for which the fair value option was elected was \$33 million and \$43 million for the six months ended June 2017 and June 2016, respectively. The Bank generally calculates the fair value of loans and lending commitments for which the fair value option is elected by discounting future cash flows at a rate which incorporates the instrument-specific credit spreads. For floating-rate loans and lending commitments, substantially all changes in fair value are attributable to changes in instrument-specific credit spreads, whereas for fixed-rate loans and lending commitments, changes in fair value are also attributable to changes in interest rates.

Debt Valuation Adjustment

The Bank calculates the fair value of financial liabilities for which the fair value option is elected by discounting future cash flows at a rate which incorporates the Bank’s credit spreads. The net DVA on such financial liabilities was a loss of \$1 million (immaterial balance, net of tax) and \$15 million (\$9 million, net of tax) for the six months ended June 2017 and June 2016, respectively, and was included in “Debt valuation adjustment” in the condensed consolidated statements of comprehensive income. The gains/(losses) reclassified to earnings from accumulated other comprehensive loss upon extinguishment of such financial liabilities were not material for both the six months ended June 2017 and June 2016.

Notes to Condensed Consolidated Financial Statements (Unaudited)

Note 9.

Loans Receivable

Loans receivable is comprised of loans held for investment that are accounted for at amortized cost net of allowance for loan losses and loans held for sale that are accounted for at the lower of cost or market. Interest on loans receivable is recognized over the life of the loan and is recorded on an accrual basis.

The table below presents details about loans receivable.

<i>\$ in millions</i>	As of	
	June 2017	December 2016
Corporate loans	\$ 19,192	\$ 19,372
Loans to private wealth management clients	12,045	12,382
Loans backed by commercial real estate	4,605	2,218
Loans backed by residential real estate	1,521	1,029
Other loans	4,257	3,125
Total loans receivable, gross	41,620	38,126
Allowance for loan losses	(271)	(219)
Total loans receivable	\$ 41,349	\$ 37,907

In the table above:

- Loans to private wealth management clients includes \$10.13 billion and \$10.68 billion of loans secured by investments in real or financial assets, \$1.80 billion and \$1.58 billion of loans secured by commercial real estate and \$118 million and \$127 million of loans secured by residential real estate as of June 2017 and December 2016, respectively.
- Total loans receivable consists of \$39.03 billion and \$36.07 billion of loans at amortized cost net of allowance as of June 2017 and December 2016, respectively, and \$2.32 billion and \$1.84 billion of loans held for sale as of as of June 2017 and December 2016, respectively.

The following is a description of the captions in the table above:

- **Corporate Loans.** Corporate loans includes term loans, revolving lines of credit, letter of credit facilities and bridge loans, and are principally used for operating liquidity and general corporate purposes, or in connection with acquisitions. Corporate loans include loans originated as part of the Bank's CRA activities. Corporate loans may be secured or unsecured, depending on the loan purpose, the risk profile of the borrower and other factors. Loans receivable related to the Bank's relationship lending activities are reported within corporate loans.

- **Loans to Private Wealth Management Clients.**

Loans to private wealth management clients includes loans used by clients to finance private asset purchases, employ leverage for strategic investments in real or financial assets, bridge cash flow timing gaps or provide liquidity for other needs. Such loans are primarily secured by securities or other assets.

- **Loans Backed by Commercial Real Estate.**

Loans backed by commercial real estate includes loans extended by the Bank that are directly or indirectly secured by hotels, retail stores, multifamily housing complexes and commercial and industrial properties. Loans backed by commercial real estate also includes loans purchased by the Bank.

- **Loans Backed by Residential Real Estate.**

Loans backed by residential real estate includes loans extended by the Bank to clients who warehouse assets that are directly or indirectly secured by residential real estate. Loans backed by residential real estate also includes loans purchased by the Bank.

- **Other Loans.**

Other loans primarily includes loans extended to clients who warehouse assets that are directly or indirectly secured by consumer loans, including auto loans, and private student loans and other assets. Other loans also includes unsecured loans made to individuals through the Bank's online lending platform, Marcus by Goldman Sachs™ (Marcus).

Loans and Lending Commitments Held For Investment

As of June 2017 and December 2016, the fair value of loans held for investment was \$39.05 billion and \$36.02 billion, respectively. As of June 2017, had these loans been carried at fair value and included in the fair value hierarchy, \$22.12 billion and \$16.93 billion would have been classified in level 2 and level 3, respectively. As of December 2016, had these loans been carried at fair value and included in the fair value hierarchy, \$20.33 billion and \$15.69 billion would have been classified in level 2 and level 3, respectively.

Notes to Condensed Consolidated Financial Statements (Unaudited)

The Bank also extends lending commitments that are held for investment and accounted for on an accrual basis. As of June 2017 and December 2016, such lending commitments were \$95.26 billion and \$86.37 billion, respectively. Substantially all of these commitments were extended to corporate borrowers and were primarily related to the Bank's relationship lending activities. The carrying value and the estimated fair value of such lending commitments were liabilities of \$289 million and \$1.93 billion, respectively, as of June 2017, and \$249 million and \$2.11 billion, respectively, as of December 2016. As of June 2017 and December 2016, the allowance for losses on unfunded commitments was \$195 million and \$163 million as of June 2017 and December 2016, respectively, which is included in "Other liabilities and accrued expenses." As of June 2017, had these lending commitments been carried at fair value and included in the Bank's fair value hierarchy, \$760 million and \$1.17 billion would have been classified in level 2 and level 3, respectively. As of December 2016, had these lending commitments been carried at fair value and included in the Bank's fair value hierarchy, \$910 million and \$1.20 billion would have been classified in level 2 and level 3, respectively.

Loans and Lending Commitments Held For Sale

Included in loans receivable are loans held for sale which are accounted for at the lower of cost or market. The carrying value of such loans was \$2.32 billion and \$1.84 billion as of June 2017 and December 2016, respectively. These loans were primarily corporate loans and loans backed by commercial real estate. As of June 2017 and December 2016, the carrying value of loans held for sale generally approximated fair value. Had these items been included in the fair value hierarchy, most would have been classified in level 2 as of June 2017 and level 3 as of December 2016.

In addition, as of June 2017 and December 2016, \$7.28 billion and \$5.76 billion, respectively, of the Bank's lending commitments were held for sale and were accounted for at the lower of cost or market. Substantially all of these commitments were extended to corporate borrowers. As of June 2017 and December 2016, the carrying value of lending commitments held for sale generally approximated fair value. Had these items been included in the fair value hierarchy, most would have been classified in level 3 as of both June 2017 and December 2016.

Credit Quality

The Bank's risk assessment process includes evaluating the credit quality of its loans receivable. For loans receivable, the Bank performs credit reviews which include initial and ongoing analyses of its borrowers. A credit review is an independent analysis of the capacity and willingness of a borrower to meet its financial obligations, resulting in an internal credit rating. The determination of internal credit ratings also incorporates assumptions with respect to the nature of and outlook for the borrower's industry, and the economic environment. The Bank also assigns a regulatory risk rating to such loans based on the definitions provided by the U.S. federal bank regulatory agencies.

The table below presents gross loans receivable and related lending commitments by the Bank's internally determined public rating agency equivalent and by regulatory risk rating.

<i>\$ in millions</i>	Lending		Total
	Loans	Commitments	
Credit Rating Equivalent			
As of June 2017			
Investment-grade	\$ 18,070	\$ 73,188	\$ 91,258
Non-investment-grade	23,550	29,349	52,899
Total	\$ 41,620	\$ 102,537	\$ 144,157
As of December 2016			
Investment-grade	\$ 17,584	\$ 67,984	\$ 85,568
Non-investment-grade	20,542	24,098	44,640
Total	\$ 38,126	\$ 92,082	\$ 130,208
Regulatory Risk Rating			
As of June 2017			
Non-criticized/pass	\$ 40,322	\$ 100,091	\$ 140,413
Criticized	1,298	2,446	3,744
Total	\$ 41,620	\$ 102,537	\$ 144,157
As of December 2016			
Non-criticized/pass	\$ 37,118	\$ 90,090	\$ 127,208
Criticized	1,008	1,992	3,000
Total	\$ 38,126	\$ 92,082	\$ 130,208

In the table above:

- Loans and lending commitments includes loans and lending commitments held for investment and held for sale.
- Non-criticized/pass loans and lending commitments represent loans and lending commitments that are performing and/or do not demonstrate adverse characteristics that are likely to result in a credit loss.

Notes to Condensed Consolidated Financial Statements (Unaudited)

The Bank enters into economic hedges to mitigate credit risk on certain loans receivable and commercial lending commitments (both of which are held for investment) related to the Bank's relationship lending activities. Such hedges are accounted for at fair value. See Note 16 for further information about commercial lending commitments and associated hedges.

Loans receivable are determined to be impaired when it is probable that the Bank will not be able to collect all principal and interest due under the contractual terms of the loan. At that time, loans are generally placed on non-accrual status and all accrued but uncollected interest is reversed against interest income, and interest subsequently collected is recognized on a cash basis to the extent the loan balance is deemed collectible. Otherwise, all cash received is used to reduce the outstanding loan balance. In certain circumstances, the Bank may also modify the original terms of a loan agreement by granting a concession to a borrower experiencing financial difficulty. Such modifications are considered troubled debt restructurings and typically include interest rate reductions, payment extensions, and modification of loan covenants. Loans modified in a troubled debt restructuring are considered impaired and are subject to specific loan-level reserves.

As of June 2017 and December 2016, the gross carrying value of impaired loans receivable on non-accrual status was \$311 million and \$163 million, respectively. As of June 2017, there were \$29 million in loans and \$127 million in lending commitments that were modified in troubled debt restructuring. As of December 2016, there were no loans that were modified in troubled debt restructuring. However, the Bank had \$144 million in lending commitments that were modified in troubled debt restructuring.

Allowance for Losses on Loans and Lending Commitments

The Bank's allowance for loan losses is comprised of specific loan-level reserves and portfolio level reserves as described below:

- Specific loan-level reserves are determined on loans that exhibit credit quality weakness and are therefore individually evaluated for impairment.
- Portfolio level reserves are determined on loans not deemed impaired by aggregating groups of loans with similar risk characteristics and estimating the probable loss inherent in the portfolio.

The allowance for loan losses is determined using various inputs, including industry default and loss data, current macroeconomic indicators, borrower's capacity to meet its financial obligations, borrower's country of risk, loan seniority and collateral type. Management's estimate of loan losses entails judgment about loan collectability at the reporting dates, and there are uncertainties inherent in those judgments. While management uses the best information available to determine this estimate, future adjustments to the allowance may be necessary based on, among other things, changes in the economic environment or variances between actual results and the original assumptions used. Loans are charged off against the allowance for loan losses when deemed to be uncollectible. As of June 2017 and December 2016, substantially all of the Bank's loans receivable were evaluated for impairment at the portfolio level.

The Bank also records an allowance for losses on lending commitments that are held for investment and accounted for on an accrual basis. Such allowance is determined using the same methodology as the allowance for loan losses, while also taking into consideration the probability of drawdowns or funding, and is included in "Other liabilities and accrued expenses." As of June 2017 and December 2016, substantially all of such lending commitments were evaluated for impairment at the portfolio level.

The table below presents changes in the allowance for loan losses and the allowance for losses on lending commitments.

<i>\$ in millions</i>	Six Months Ended	Year Ended
	June 2017	December 2016
Allowance for loan losses		
Beginning balance	\$ 219	\$ 189
Charge-offs	(13)	-
Provision	69	58
Other	(4)	(28)
Ending balance	\$ 271	\$ 219
Allowance for losses on lending commitments		
Beginning balance	\$ 163	\$ 122
Provision	40	61
Other	(8)	(20)
Ending balance	\$ 195	\$ 163

In the table above:

- The provision for losses on loans and lending commitments was primarily related to corporate and other loans and corporate lending commitments.
- Other represents the reduction to the allowance related to loans and lending commitments transferred to held for sale.

Notes to Condensed Consolidated Financial Statements (Unaudited)

- Portfolio level reserves included in the allowance for loan losses were \$232 million and \$196 million as of June 2017 and December 2016, respectively, and were primarily related to corporate loans.
- Specific loan-level reserves included in the allowance for loan losses were \$39 million and \$23 million as of June 2017 and December 2016, respectively, and were substantially all related to corporate loans and loans to private wealth management clients.
- As of June 2017 and December 2016, substantially all of the allowance for losses on lending commitments was related to corporate lending commitments and was primarily determined at the portfolio level.

Note 10.

Collateralized Agreements and Financings

Collateralized agreements are securities purchased under agreements to resell (resale agreements). Collateralized financings are securities sold under agreements to repurchase (repurchase agreements) and other secured financings. The Bank enters into these transactions in order to, among other things, facilitate client activities, invest excess cash, and finance certain Bank activities.

Collateralized agreements and financings are presented on a net-by-counterparty basis when a legal right of setoff exists. Interest on collateralized agreements and collateralized financings is recognized over the life of the transaction and included in “Interest income” and “Interest expense,” respectively. See Note 19 for further information about interest income and interest expense.

The table below presents the carrying value of resale and repurchase agreements.

<i>\$ in millions</i>	As of	
	June 2017	December 2016
Securities purchased under agreements to resell	\$ 18,896	\$ 3,673
Securities sold under agreements to repurchase	\$ 3,014	\$ 310

In the table above:

- All repurchase agreements are carried at fair value under the fair value option.
- As of June 2017 and December 2016, \$18.46 billion and \$2.83 billion of resale agreements were at fair value, respectively.

See Note 8 for further information about the valuation techniques and significant inputs used to determine fair value.

Resale and Repurchase Agreements

A resale agreement is a transaction in which the Bank purchases financial instruments from a seller, typically in exchange for cash, and simultaneously enters into an agreement to resell the same or substantially the same financial instruments to the seller at a stated price plus accrued interest at a future date.

A repurchase agreement is a transaction in which the Bank sells financial instruments to a buyer, typically in exchange for cash, and simultaneously enters into an agreement to repurchase the same or substantially the same financial instruments from the buyer at a stated price plus accrued interest at a future date.

The financial instruments purchased or sold in resale and repurchase agreements primarily include U.S. government and agency obligations.

The Bank receives financial instruments purchased under resale agreements and makes delivery of financial instruments sold under repurchase agreements. To mitigate credit exposure, the Bank monitors the market value of these financial instruments on a daily basis, and delivers or obtains additional collateral due to changes in the market value of the financial instruments, as appropriate. For resale agreements, the Bank typically requires collateral with a fair value approximately equal to the carrying value of the relevant assets in the condensed consolidated statements of financial condition.

Offsetting Arrangements

The table below presents the gross and net resale and repurchase agreements and the related amount of counterparty netting included in the condensed consolidated statements of financial condition, as well as the amounts of counterparty netting and cash and securities collateral, not offset in the condensed consolidated statements of financial condition.

Notes to Condensed Consolidated Financial Statements (Unaudited)

<i>\$ in millions</i>	Assets	Liabilities
	Resale agreements	Repurchase agreements
As of June 2017		
Included in condensed consolidated statements of financial condition		
Gross carrying value	\$ 23,704	\$ 7,822
Counterparty netting	(4,808)	(4,808)
Total	18,896	3,014
Amounts not offset		
Counterparty netting	(36)	(36)
Collateral	(18,796)	(2,966)
Total	\$ 64	\$ 12

As of December 2016

Included in condensed consolidated statements of financial condition		
Gross carrying value	\$ 9,471	\$ 6,108
Counterparty netting	(5,798)	(5,798)
Total	3,673	310
Amounts not offset		
Counterparty netting	(115)	(115)
Collateral	(2,971)	(124)
Total	\$ 587	\$ 71

In the table above:

- Substantially all of the gross carrying values of these arrangements are subject to enforceable netting agreements.
- Where the Bank has received or posted collateral under credit support agreements, but has not yet determined such agreements are enforceable, the related collateral has not been netted.
- Amounts not offset includes counterparty netting that does not meet the criteria for netting under U.S. GAAP and the fair value of cash or securities collateral received or posted subject to enforceable credit support agreements.

Gross Carrying Value of Repurchase Agreements

The table below presents the gross carrying value of repurchase agreements by class of collateral pledged.

<i>\$ in millions</i>	Repurchase agreements as of	
	June 2017	December 2016
U.S. government and agency obligations	\$ 7,720	\$ 5,913
Corporate loans and debt securities	89	76
Non-U.S. government and agency obligations	13	39
Equity securities	-	80
Total	\$ 7,822	\$ 6,108

As of June 2017 and December 2016, all of the Bank's repurchase agreements were either overnight or had no stated maturity.

Other Secured Financings

In addition to repurchase agreements, the Bank funds certain assets through the use of other secured financings and pledges financial instruments and other assets as collateral in these transactions. These other secured financings consist of:

- FHLB advances; and
- Transfers of assets accounted for as financings rather than sales (primarily collateralized by bank loans and mortgage whole loans).

Other secured financings includes arrangements that are nonrecourse. As of June 2017 and December 2016, nonrecourse other secured financings were \$99 million and \$137 million, respectively.

The Bank has elected to apply the fair value option to substantially all other secured financings because the use of fair value eliminates non-economic volatility in earnings that would arise from using different measurement attributes. See Note 8 for further information about other secured financings that are accounted for at fair value.

Other secured financings that are not recorded at fair value are recorded based on the amount of cash received plus accrued interest, which generally approximates fair value. While these financings are carried at amounts that approximate fair value, they are not accounted for at fair value under the fair value option or at fair value in accordance with other U.S. GAAP and therefore are not included in the Bank's fair value hierarchy in Notes 6 through 8. Had these financings been included in the Bank's fair value hierarchy, they would have been primarily classified in level 3 as of June 2017 and December 2016.

Notes to Condensed Consolidated Financial Statements (Unaudited)

FHLB Advances. As a member of the FHLB, the Bank can draw under a funding arrangement secured by eligible collateral. As of June 2017 and December 2016, outstanding borrowings from the FHLB were \$1.93 billion and \$2.43 billion, respectively. As of June 2017, interest rates ranged from 3-month LIBOR plus 0.16% to 0.36% with a weighted average rate of 3-month LIBOR plus 0.26%. As of December 2016, interest rates ranged from 3-month LIBOR plus 0.14% to 0.36% with a weighted average rate of 3-month LIBOR plus 0.23%. These borrowings are carried at fair value under the fair value option in the Bank's fair value hierarchy. See Note 8 for further information about borrowings accounted for at fair value. Outstanding FHLB advances include \$504 million and \$503 million of short-term borrowings as of June 2017 and December 2016, respectively, and \$1.43 billion and \$1.93 billion of long-term borrowings as of June 2017 and December 2016, respectively.

Other. As of June 2017 and December 2016, other secured financings, excluding FHLB advances, were \$99 million and \$137 million, respectively. As of June 2017, all of the amounts outstanding had a contractual maturity of one year or less. As of December 2016, all of the amounts outstanding had a contractual maturity of greater than one year.

As of June 2017 and December 2016, the aggregate contractual principal amount of other secured financings for which the fair value option was elected approximated their fair value.

Collateral Received and Pledged

The Bank receives cash and securities (e.g., U.S. government and agency, other sovereign and corporate obligations) as collateral, primarily in connection with resale agreements, derivative transactions and customer margin loans. The Bank obtains cash and securities as collateral on an upfront or contingent basis for derivative instruments and collateralized agreements to reduce its credit exposure to individual counterparties.

In many cases, the Bank is permitted to deliver or repledge financial instruments received as collateral when entering into repurchase agreements or collateralized derivative transactions.

The Bank also pledges certain financial instruments owned and loans receivable in connection with repurchase agreements and other secured financings. These assets are pledged to counterparties who may or may not have the right to deliver or repledge them.

The table below presents financial instruments at fair value received as collateral that were available to be delivered or repledged and were delivered or repledged by the Bank.

<i>\$ in millions</i>	As of	
	June 2017	December 2016
Collateral available to be delivered or repledged	\$ 25,524	\$ 13,637
Collateral that was delivered or repledged	\$ 19,986	\$ 6,197

The table below presents information about assets pledged.

<i>\$ in millions</i>	As of	
	June 2017	December 2016
Financial instruments owned pledged to counterparties that:		
Had the right to deliver or repledge	\$ 5,404	\$ 2,719
Did not have the right to deliver or repledge	\$ 5,361	\$ 5,306
Other assets pledged to counterparties that		
did not have the right to deliver or repledge	\$ 99	\$ 137

Note 11.

Variable Interest Entities

A variable interest in a VIE is an investment (e.g., debt or equity securities) or other interest (e.g., derivatives or loans and lending commitments) that will absorb portions of the VIE's expected losses and/or receive portions of the VIE's expected residual returns.

The Bank enters into derivatives with certain mortgage-backed and corporate collateralized debt obligations (CDO) VIEs and sells loans to collateralized loan obligations (CLO) VIEs. The Bank also makes investments in and lends to VIEs that hold real estate and distressed loans. The Bank enters into basis swaps on assets held by other asset-backed VIEs. The Bank generally enters into derivatives with other counterparties to mitigate its risk from derivatives with these VIEs.

VIEs generally finance the purchase of assets by issuing debt and equity securities that are either collateralized by or indexed to the assets held by the VIE. The debt and equity securities issued by a VIE may include tranches of varying levels of subordination. See Note 3 for the Bank's consolidation policies, including the definition of a VIE.

Notes to Condensed Consolidated Financial Statements (Unaudited)

VIE Consolidation Analysis

The enterprise with a controlling financial interest in a VIE is known as the primary beneficiary and consolidates the VIE. The Bank determines whether it is the primary beneficiary of a VIE by performing an analysis that principally considers:

- Which variable interest holder has the power to direct the activities of the VIE that most significantly impact the VIE's economic performance;
- Which variable interest holder has the obligation to absorb losses or the right to receive benefits from the VIE that could potentially be significant to the VIE;
- The VIE's purpose and design, including the risks the VIE was designed to create and pass through to its variable interest holders;
- The VIE's capital structure;
- The terms between the VIE and its variable interest holders and other parties involved with the VIE; and
- Related-party relationships.

The Bank reassesses its evaluation of whether an entity is a VIE when certain reconsideration events occur. The Bank reassesses its determination of whether it is the primary beneficiary of a VIE on an ongoing basis based on current facts and circumstances.

Nonconsolidated VIEs

The table below presents a summary of the nonconsolidated VIEs in which the Bank holds variable interests. The nature of the Bank's variable interests can take different forms, as described in the rows under maximum exposure to loss.

<i>\$ in millions</i>	As of	
	June 2017	December 2016
Total nonconsolidated VIEs		
Assets in VIEs	\$ 10,411	\$ 6,460
Carrying value of variable interests – assets	1,201	713
Carrying value of variable interests – liabilities	135	202
Maximum exposure to loss:		
Retained interests	78	–
Commitments and guarantees	1,069	535
Derivatives	3,437	3,831
Loans and investments	1,080	622
Total maximum exposure to loss	\$ 5,664	\$ 4,988

In the table above:

- The Bank's exposure to the obligations of VIEs is generally limited to its interest in these entities. In certain instances, the Bank provides guarantees, including derivative guarantees, to VIEs or holders of variable interests in VIEs.

- The maximum exposure to loss excludes the benefit of offsetting financial instruments that are held to mitigate the risks associated with these variable interests.
- The maximum exposure to loss from retained interests and loans and investments is the carrying value of these interests.
- The maximum exposure to loss from commitments and guarantees, and derivatives is the notional amount, which does not represent anticipated losses and also has not been reduced by unrealized losses already recorded. As a result, the maximum exposure to loss exceeds liabilities recorded for commitments and guarantees, and derivatives provided to VIEs.

The table below disaggregates the information for nonconsolidated VIEs included in the summary table above.

<i>\$ in millions</i>	As of	
	June 2017	December 2016
Mortgage-backed		
Assets in VIEs	\$ 3,061	\$ 284
Carrying value of variable interests – assets	81	23
Maximum exposure to loss:		
Retained interests	78	–
Derivatives	108	280
Total maximum exposure to loss	\$ 186	\$ 280
Corporate CDOs and CLOs		
Assets in VIEs	\$ 1,660	\$ 729
Carrying value of variable interests – assets	607	147
Maximum exposure to loss:		
Commitments and guarantees	751	186
Derivatives	359	581
Loans and investments	567	79
Total maximum exposure to loss	\$ 1,677	\$ 846
Real estate, credit-related and other investing		
Assets in VIEs	\$ 2,720	\$ 2,280
Carrying value of variable interests – assets	513	524
Carrying value of variable interests – liabilities	1	1
Maximum exposure to loss:		
Commitments and guarantees	318	349
Loans and investments	513	524
Total maximum exposure to loss	\$ 831	\$ 873
Other asset-backed		
Assets in VIEs	\$ 2,970	\$ 3,167
Carrying value of variable interests – assets	–	19
Carrying value of variable interests – liabilities	134	201
Maximum exposure to loss:		
Derivatives	2,970	2,970
Loans and investments	–	19
Total maximum exposure to loss	\$ 2,970	\$ 2,989

In the table above, mortgage-backed included assets in VIEs of \$108 million and \$164 million, and maximum exposure to loss of \$108 million and \$164 million, as of June 2017 and December 2016, respectively, related to CDOs backed by mortgage obligations.

Notes to Condensed Consolidated Financial Statements (Unaudited)

The carrying value of the Bank's variable interests in nonconsolidated VIEs are included in the condensed consolidated statements of financial condition as follows:

- Mortgage-backed: As of both June 2017 and December 2016, assets were included in "Financial instruments owned."
- Corporate CDOs and CLOs: As of both June 2017 and December 2016, assets were included in "Financial instruments owned."
- Real estate, credit-related and other investing: As of June 2017, assets were included in "Other assets," and liabilities were included in "Other liabilities." As of December 2016, assets were included in "Financial instruments owned" and liabilities were included in "Financial instruments sold, but not yet purchased."
- Other asset-backed: As of both June 2017 and December 2016, liabilities were included in "Financial instruments sold, but not yet purchased." As of December 2016, assets were included in "Financial instruments owned."

Consolidated VIEs

As of both June 2017 and December 2016, the Bank had no consolidated VIEs.

Note 12.

Other Assets

Other assets are generally less liquid assets. The table below presents other assets by type.

\$ in millions	As of	
	June 2017	December 2016
Receivables from affiliates	\$ 249	\$ 421
Federal Reserve Board shares	413	413
Income tax-related assets	265	229
Federal Home Loan Bank shares	118	140
Investments in qualified affordable housing projects	285	263
Other	96	85
Total	\$ 1,426	\$ 1,551

Note 13.

Deposits

The table below presents the types and sources of the Bank's deposits.

\$ in millions	Savings and Demand	Time	Total
As of June 2017			
Private bank and online retail	\$ 50,554	\$ 2,558	\$ 53,112
Brokered certificates of deposit	–	31,867	31,867
Deposit sweep programs	15,864	–	15,864
Institutional	2,217	3,003	5,220
Total	\$ 68,635	\$ 37,428	\$ 106,063
As of December 2016			
Private bank and online retail	\$ 52,197	\$ 2,938	\$ 55,135
Brokered certificates of deposit	–	35,155	35,155
Deposit sweep programs	16,019	–	16,019
Institutional	5,676	3,000	8,676
Total	\$ 73,892	\$ 41,093	\$ 114,985

In the table above:

- Savings and demand accounts are comprised of money market deposit accounts, negotiable order of withdrawal accounts, and demand deposit accounts that have no stated maturity or expiration date. Savings account holders may be required by the Bank to give written notice of intended withdrawals not less than seven days before such withdrawals are made and may be limited on the number of withdrawals made within a month. Demand account holders are not subject to restrictions with respect to the timing and number of transactions that deposit holders may execute.
- Substantially all of the Bank's deposits are interest-bearing and are held in the U.S.
- Time deposits consist primarily of brokered certificates of deposit which have stipulated maturity dates and rates of interest. Early withdrawals of brokered time deposits are generally prohibited.
- Time deposits included \$4.82 billion and \$5.30 billion as of June 2017 and December 2016, respectively, of deposits accounted for at fair value under the fair value option. See below and Note 8 for further information about deposits accounted for at fair value.
- Time deposits had a weighted average maturity of approximately 2.5 years as of both June 2017 and December 2016.

Notes to Condensed Consolidated Financial Statements (Unaudited)

- Deposit sweep programs represent long-term contractual agreements with several U.S. broker-dealers who sweep client cash to FDIC-insured deposits. Pursuant to the external deposit sweep program agreements, each third party broker-dealer agrees, for a prescribed term, to place a certain minimum amount of deposits from their clients with the Bank. Each individual client's deposit may be withdrawn at any time. As of both June 2017 and December 2016, the Bank had deposit sweep program contractual arrangements with eight external U.S. broker-dealers.
- As of June 2017, all institutional deposits were from Goldman Sachs Funding LLC (Funding IHC), a wholly-owned, direct subsidiary of Group Inc. formed in 2017. As of December 2016, all institutional deposits were from Group Inc.
- Deposits insured by the FDIC as of June 2017 and December 2016 were approximately \$67.89 billion and \$69.91 billion, respectively.

The table below presents the Bank's time deposits by contractual maturity.

<i>\$ in millions</i>	As of	
	June 2017	
Remainder of 2017	\$	5,226
2018		9,719
2019		5,550
2020		4,488
2021		3,643
2022		3,895
2023 - thereafter		4,907
Total	\$	37,428

As of June 2017, deposits included \$4.72 billion of time deposits that were greater than \$250,000.

The Bank's savings and demand deposits are recorded based on the amount of cash received plus accrued interest, which approximates fair value. In addition, the Bank designates certain derivatives as fair value hedges to convert a majority of its time deposits not accounted for at fair value from fixed-rate obligations into floating-rate obligations. Accordingly, the carrying value of time deposits approximated fair value as of June 2017 and December 2016. While these savings and demand deposits and most time deposits are carried at amounts that approximate fair value, they are not accounted for at fair value under the fair value option or at fair value in accordance with other U.S. GAAP and therefore are not included in the Bank's fair value hierarchy in Notes 6 through 8. Had these deposits been included in the Bank's fair value hierarchy, they would have been classified in level 2 as of June 2017 and December 2016.

The table below presents time deposits accounted for under the fair value option by tenor.

<i>\$ in millions</i>	As of			
	June 2017		December 2016	
	Principal	Fair Value	Principal	Fair Value
Maturity ≤ 1 year	\$ 845	\$ 848	\$ 1,732	\$ 1,736
Maturity > 1 year	3,783	3,972	3,476	3,565
Total	\$ 4,628	\$ 4,820	\$ 5,208	\$ 5,301

Note 14.

Unsecured Borrowings

The table below presents details about the Bank's unsecured borrowings.

<i>\$ in millions</i>	As of	
	June 2017	December 2016
Unsecured long-term borrowings	\$ 2,134	\$ 2,133
Unsecured short-term borrowings	86	120
Total	\$ 2,220	\$ 2,253

Subordinated Borrowings

The Bank has a \$5.00 billion revolving subordinated loan agreement with Funding IHC, which matures in 2039. As of June 2017, outstanding subordinated borrowings between the Bank and Funding IHC were \$2.00 billion. The carrying value of the subordinated borrowings generally approximates fair value. Amounts borrowed under this agreement bear interest at the overnight bank funding rate plus 1.85% per annum. Any amounts payable under the agreement would be subordinate to the claims of certain other creditors of the Bank, including depositors and regulatory agencies. This revolving subordinated loan agreement was assigned by Group Inc. to Funding IHC in May 2017. As of December 2016, outstanding subordinated borrowings between the Bank and Group Inc. were \$2.00 billion.

Notes to Condensed Consolidated Financial Statements (Unaudited)

Senior Unsecured Borrowings

The Bank has a \$4.00 billion senior unsecured facility, committed on an intraday basis with Group Inc. This facility matures in August 2017, and will automatically renew each business day thereafter through February 2020. This facility was amended in February 2017 from an \$8.50 billion committed senior unsecured credit line. As of June 2017 and December 2016, there were no outstanding borrowings under this facility.

The Bank has a senior debt facility consisting of an uncommitted term unsecured line of credit with Funding IHC which matures in 2019. As of June 2017, there were no outstanding borrowings under this facility. This senior debt facility was originally between the Bank and Group Inc. and was assigned by Group Inc. to Funding IHC in May 2017. As of December 2016, there were no outstanding borrowings with Group Inc. under this facility.

Other Unsecured Borrowings

The Bank held \$220 million and \$253 million of other unsecured borrowings as of June 2017 and December 2016, respectively, substantially all of which were hybrid financial instruments. As of June 2017, \$86 million was classified as short-term borrowings and \$134 million was classified as long-term borrowings. As of December 2016, \$120 million was classified as short-term borrowings and \$133 million was classified as long-term borrowings.

The Bank accounts for hybrid financial instruments at fair value under the fair value option. See Note 8 for further information about hybrid financial instruments that are accounted for at fair value.

Note 15.

Other Liabilities and Accrued Expenses

The table below presents other liabilities and accrued expenses by type.

<i>\$ in millions</i>	As of	
	June 2017	December 2016
Income tax-related liabilities	\$ 1,181	\$ 762
Payables to affiliates	225	522
Accrued expenses and other	527	538
Total	\$ 1,933	\$ 1,822

Note 16.

Commitments, Contingencies and Guarantees

Commitments

The table below presents the Bank's commitments by type.

<i>\$ in millions</i>	As of	
	June 2017	December 2016
Commitments to extend credit		
Commercial lending:		
Investment-grade	\$ 70,710	\$ 67,511
Non-investment-grade	32,936	26,914
Warehouse financing	4,142	3,440
Total commitments to extend credit	107,788	97,865
Contingent and forward starting collateralized		
agreements	600	599
Forward starting collateralized financings	102	77
Investment commitments	760	767
Other	439	448
Total commitments	\$ 109,689	\$ 99,756

The table below presents the Bank's commitments by period of expiration.

<i>\$ in millions</i>	As of June 2017			
	Remainder of 2017	2018 - 2019	2020 - 2021	2022 - Thereafter
Commitments to extend credit				
Commercial lending:				
Investment-grade	\$ 5,441	\$ 22,938	\$ 30,672	\$ 11,659
Non-investment-grade	577	6,335	13,948	12,076
Warehouse financing	46	1,767	1,533	796
Total commitments to				
extend credit	6,064	31,040	46,153	24,531
Contingent and forward starting				
collateralized agreements	597	3	-	-
Forward starting				
collateralized financings	102	-	-	-
Investment commitments	49	-	2	709
Other	439	-	-	-
Total commitments	\$ 7,251	\$ 31,043	\$ 46,155	\$ 25,240

Commitments to Extend Credit

The Bank's commitments to extend credit are agreements to lend with fixed termination dates and depend on the satisfaction of all contractual conditions to borrowing. These commitments are presented net of amounts syndicated to third parties. The total commitment amount does not necessarily reflect actual future cash flows because the Bank may syndicate all or substantial additional portions of these commitments. In addition, commitments can expire unused or be reduced or cancelled at the counterparty's request.

Notes to Condensed Consolidated Financial Statements (Unaudited)

As of June 2017 and December 2016, \$95.26 billion and \$86.37 billion, respectively, of the Bank's lending commitments were held for investment and were accounted for on an accrual basis. In addition, as of June 2017 and December 2016, \$7.28 billion and \$5.76 billion, respectively, of the Bank's lending commitments were held for sale and were accounted for at the lower of cost or market. See Note 9 for further information about such commitments.

The Bank accounts for the remaining commitments to extend credit at fair value. Losses, if any, are generally recorded, net of any fees in "Gains and losses from financial instruments, net."

Commercial Lending. The Bank's commercial lending commitments are extended to investment-grade and non-investment-grade corporate borrowers. Commitments to investment-grade corporate borrowers are principally used for operating liquidity and general corporate purposes. The Bank also extends lending commitments in connection with contingent acquisition financing and other types of corporate lending as well as commercial real estate financing. Commitments that are extended for contingent acquisition financing are often intended to be short-term in nature, as borrowers often seek to replace them with other funding sources.

Sumitomo Mitsui Financial Group, Inc. (SMFG) provides the Bank and its affiliates with credit loss protection on certain approved loan commitments (primarily investment-grade commercial lending commitments). The notional amount of such loan commitments was \$26.75 billion and \$26.88 billion as of June 2017 and December 2016, respectively, substantially all of which was in the Bank. The credit loss protection on loan commitments provided by SMFG is generally limited to 95% of the first loss the Bank and its affiliates realize on such commitments, up to a maximum of approximately \$950 million. In addition, subject to the satisfaction of certain conditions, upon the Bank's request, SMFG will provide protection for 70% of additional losses on such commitments, up to a maximum of \$1.13 billion, of which \$768 million of protection had been provided as of both June 2017 and December 2016. The Bank also uses other financial instruments to mitigate credit risks related to certain commitments not covered by SMFG. These instruments primarily include credit default swaps that reference the same or similar underlying instrument or entity, or credit default swaps that reference a market index.

Warehouse Financing. The Bank provides financing to clients who warehouse financial assets. These arrangements are secured by the warehoused assets, substantially all of which consist of consumer and corporate loans.

Contingent and Forward Starting Collateralized Agreements / Forward Starting Collateralized Financings

Contingent and forward starting collateralized agreements includes resale agreements, and forward starting collateralized financings includes repurchase and secured lending agreements that settle at a future date, generally within three business days. The Bank also enters into commitments to provide contingent financing to its clients and counterparties through resale agreements. The Bank's funding of these commitments depends on the satisfaction of all contractual conditions to the resale agreement and these commitments can expire unused.

Investment Commitments

Investment commitments includes commitments to invest in securities, real estate and other assets.

Contingencies

Legal Proceedings. See Note 22 for information about legal proceedings.

Certain Mortgage-Related Contingencies. There are multiple areas of focus by regulators, governmental agencies and others within the mortgage market that may impact originators, issuers, servicers and investors. There remains significant uncertainty surrounding the nature and extent of any potential exposure for participants in this market.

The Bank has not been a significant originator of residential mortgage loans. The Bank did purchase loans originated by others and generally received loan-level representations. During the period 2005 through 2008, the Bank sold approximately \$10 billion of loans to government-sponsored enterprises and approximately \$11 billion of loans to other third parties. In addition, the Bank transferred loans to trusts and other mortgage securitization vehicles. In connection with both sales of loans and securitizations, the Bank provided loan-level representations and/or assigned the loan-level representations from the party from whom the Bank purchased the loans.

Notes to Condensed Consolidated Financial Statements (Unaudited)

The Bank's exposure to claims for repurchase of residential mortgage loans based on alleged breaches of representations will depend on a number of factors such as the extent to which these claims are made within the statute of limitations, taking into consideration the agreements to toll the statute of limitations the Bank has entered into with trustees representing certain trusts. Based upon the large number of defaults in residential mortgages, including those sold or securitized by the Bank, there is a potential for repurchase claims. However, the Bank is not in a position to make a meaningful estimate of that exposure at this time.

Guarantees

The table below presents information about certain derivatives that meet the definition of a guarantee, securities lending indemnifications and certain other guarantees.

<i>\$ in millions</i>	Derivatives	Securities lending indemnifications	Other financial guarantees
As of June 2017			
Carrying Value of Net Liability	\$ 1,716	\$ —	\$ 10
Maximum Payout/Notional Amount by Period of Expiration			
Remainder of 2017	\$ 46,392	\$ 43,082	\$ 370
2018 - 2019	72,183	—	630
2020 - 2021	24,877	—	1,294
2022 - thereafter	18,359	—	152
Total	\$161,811	\$ 43,082	\$ 2,446
As of December 2016			
Carrying Value of Net Liability	\$ 1,666	\$ —	\$ 7
Maximum Payout/Notional Amount by Period of Expiration			
2017	\$ 39,488	\$ 38,368	\$ 497
2018 - 2019	39,190	—	588
2020 - 2021	20,075	—	1,074
2022 - thereafter	4,767	—	22
Total	\$103,520	\$ 38,368	\$ 2,181

In the table above:

- The maximum payout is based on the notional amount of the contract and does not represent anticipated losses.
- Amounts exclude certain commitments to issue standby letters of credit that are included in "Commitments to extend credit." See the tables in "Commitments" above for a summary of the Bank's commitments.

Derivative Guarantees. The Bank enters into various derivatives that meet the definition of a guarantee under U.S. GAAP, including written currency contracts and interest rate caps, floors and swaptions. These derivatives are risk managed together with derivatives that do not meet the definition of a guarantee, and therefore the amounts in the table above do not reflect the Bank's overall risk related to its derivative activities. Disclosures about derivatives are not required if they may be cash settled and the Bank has no basis to conclude it is probable that the counterparties held the underlying instruments at inception of the contract. The Bank has concluded that these conditions have been met for certain large, internationally active commercial and investment bank counterparties, central clearing counterparties and certain other counterparties. Accordingly, the Bank has not included such contracts in the tables above. In addition, see Note 7 for information about credit derivatives that meet the definition of a guarantee, which are not included in the table above.

Derivatives are accounted for at fair value and therefore the carrying value is considered the best indication of payment/performance risk for individual contracts. However, the carrying values in the table above exclude the effect of counterparty and cash collateral netting.

Securities Lending Indemnifications. The Bank, in its capacity as an agency lender, indemnifies most of its securities lending customers against losses incurred in the event that borrowers do not return securities and the collateral held is insufficient to cover the market value of the securities borrowed. Collateral held by the lenders in connection with securities lending indemnifications was \$44.19 billion and \$39.36 billion as of June 2017 and December 2016, respectively. Because the contractual nature of these arrangements requires the Bank to obtain collateral with a market value that exceeds the value of the securities lent to the borrower, there is minimal performance risk associated with these guarantees.

Other Financial Guarantees. In the ordinary course of business, the Bank provides other financial guarantees of the obligations of third parties (e.g., standby letters of credit and other guarantees to enable clients to complete transactions). These guarantees represent obligations to make payments to beneficiaries if the guaranteed party fails to fulfill its obligation under a contractual arrangement with that beneficiary.

Notes to Condensed Consolidated Financial Statements (Unaudited)

Indemnities and Guarantees of Service Providers. In the ordinary course of business, the Bank indemnifies and guarantees certain service providers, such as clearing and custody agents, trustees and administrators, against specified potential losses in connection with their acting as an agent of, or providing services to, the Bank or its affiliates.

The Bank may also be liable to some clients or other parties for losses arising from its custodial role or caused by acts or omissions of third-party service providers, including sub-custodians and third-party brokers. In certain cases, the Bank has the right to seek indemnification from these third-party service providers for certain relevant losses incurred by the Bank. In addition, the Bank is a member of a clearing and settlement network as well as exchanges around the world that may require the Bank to meet the obligations of such networks and exchanges in the event of member defaults and other loss scenarios.

Other Representations, Warranties and Indemnifications. The Bank provides representations and warranties to counterparties in connection with a variety of commercial transactions and occasionally indemnifies them against potential losses caused by the breach of those representations and warranties. The Bank may also provide indemnifications protecting against changes in or adverse application of certain U.S. tax laws in connection with ordinary-course transactions such as borrowings or derivatives.

In addition, the Bank may provide indemnifications to some counterparties to protect them in the event additional taxes are owed or payments are withheld, due either to a change in or an adverse application of certain non-U.S. tax laws.

These indemnifications generally are standard contractual terms and are entered into in the ordinary course of business. Generally, there are no stated or notional amounts included in these indemnifications, and the contingencies triggering the obligation to indemnify are not expected to occur. The Bank is unable to develop an estimate of the maximum payout under these guarantees and indemnifications. However, management believes that it is unlikely the Bank will have to make any material payments under these arrangements, and no material liabilities related to these arrangements have been recognized in the condensed consolidated statements of financial condition as of June 2017 and December 2016.

Note 17.

Regulation and Capital Adequacy

The Bank is regulated as described in Note 1, and is subject to consolidated regulatory capital requirements as described below. For purposes of assessing the adequacy of its capital, the Bank calculates its capital requirements in accordance with the risk-based capital and leverage regulations applicable to state member banks which are based on the Federal Reserve Board's revised risk-based capital and leverage regulations, subject to certain transitional provisions (Revised Capital Framework).

The risk-based capital requirements are expressed as capital ratios that compare measures of regulatory capital to risk-weighted assets (RWAs). Failure to comply with these capital requirements could result in restrictions being imposed by the Bank's regulators. The Bank's capital levels are also subject to qualitative judgments by the regulators about components of capital, risk weightings and other factors.

Capital Framework

The regulations under the Revised Capital Framework are largely based on the Basel Committee on Banking Supervision's (Basel Committee) capital framework for strengthening international capital standards (Basel III) and also implement certain provisions of the U.S. Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act). Under the Revised Capital Framework, the Bank is an "Advanced approach" banking organization.

The Bank calculates its Common Equity Tier 1 (CET1), Tier 1 capital and Total capital ratios in accordance with (i) the Standardized approach and market risk rules set out in the Revised Capital Framework (together, the Standardized Capital Rules) and (ii) the Advanced approach and market risk rules set out in the Revised Capital Framework (together, the Basel III Advanced Rules). The lower of each ratio calculated in (i) and (ii) is the ratio against which the Bank's compliance with its minimum ratio requirements is assessed. Each of the ratios calculated in accordance with the Standardized Capital Rules was lower than that calculated in accordance with the Basel III Advanced Rules and therefore the Standardized Capital ratios were the ratios that applied to the Bank as of June 2017 and December 2016. The capital ratios that apply to the Bank can change in future reporting periods as a result of these regulatory requirements.

Notes to Condensed Consolidated Financial Statements (Unaudited)

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

Under the regulatory framework for prompt corrective action applicable to the Bank, in order to meet the quantitative requirements for being a “well-capitalized” depository institution, the Bank must meet higher minimum requirements than the minimum ratios in the table below. The table below presents the minimum ratios and “well-capitalized” minimum ratios required for the Bank.

	Minimum Ratio as of		"Well-capitalized" Minimum Ratio
	June 2017	December 2016	
CET1 ratio	5.750%	5.125%	6.5%
Tier 1 capital ratio	7.250%	6.625%	8.0%
Total capital ratio	9.250%	8.625%	10.0%
Tier 1 leverage ratio	4.000%	4.000%	5.0%

The Bank was in compliance with its minimum capital requirements and the “well-capitalized” minimum ratios as of June 2017 and December 2016. The Bank’s capital levels and prompt corrective action classification are also subject to qualitative judgements by the regulators about components of capital, risk weightings and other factors. Failure to comply with these capital requirements, including a breach of the buffers discussed below, could result in restrictions being imposed by the Bank’s regulators.

In the table above:

- The minimum capital ratios as of June 2017 reflect the 50% phase-in of the capital conservation buffer of 2.5%, and the countercyclical capital buffer of zero percent, each described below.
- The minimum capital ratios as of December 2016 reflect the 25% phase-in of the capital conservation buffer of 2.5%, and the countercyclical capital buffer of zero percent, each described below.
- Tier 1 leverage ratio is defined as Tier 1 capital divided by quarterly average adjusted total assets (which includes adjustments for goodwill and identifiable intangible assets).

Certain aspects of the Revised Capital Framework’s requirements phase in over time (transitional provisions). These include capital buffers. The minimum CET1, Tier 1 and Total capital ratios that apply to the Bank will increase as the capital buffers are phased in.

The capital conservation buffer, which consists entirely of capital that qualifies as CET1, began to phase in on January 1, 2016 and will continue to do so in increments of 0.625% per year until it reaches 2.5% of RWAs on January 1, 2019.

The Revised Capital Framework also provides for a countercyclical capital buffer, which is an extension of the capital conservation buffer, of up to 2.5% (consisting entirely of CET1) intended to counteract systemic vulnerabilities. As of June 2017, the Federal Reserve Board has set the countercyclical capital buffer at zero percent.

Failure to meet the capital levels inclusive of the buffers could limit the Bank’s ability to distribute capital, including dividend payments, and to make certain discretionary compensation payments.

Definition of Risk-Weighted Assets. RWAs are calculated in accordance with both the Standardized Capital Rules and the Basel III Advanced Rules. The following is a comparison of RWA calculations under these rules:

- RWAs for credit risk in accordance with the Standardized Capital Rules are calculated in a different manner than the Basel III Advanced Rules. The primary difference is that the Standardized Capital Rules do not contemplate the use of internal models to compute exposure for credit risk on derivatives and securities financing transactions, whereas the Basel III Advanced Rules permit the use of such models, subject to supervisory approval. In addition, credit RWAs calculated in accordance with the Standardized Capital Rules utilize prescribed risk-weights which depend largely on the type of counterparty, rather than on internal assessments of the creditworthiness of such counterparties;
- RWAs for market risk in accordance with the Standardized Capital Rules and the Basel III Advanced Rules are generally consistent; and
- RWAs for operational risk are not required by the Standardized Capital Rules, whereas the Basel III Advanced Rules do include such a requirement.

Notes to Condensed Consolidated Financial Statements (Unaudited)

Regulatory Capital Ratios and RWAs. Each of the ratios calculated in accordance with the Standardized Capital Rules was lower than that calculated in accordance with the Basel III Advanced Rules, and therefore the Standardized Capital ratios were the ratios that applied to the Bank as of June 2017 and December 2016.

The table below presents the Bank's ratios calculated in accordance with both the Standardized and Basel III Advanced Rules.

\$ in millions	As of	
	June 2017	December 2016
Standardized		
Common Equity Tier 1	\$ 24,659	\$ 24,485
Tier 1 capital	24,659	24,485
Tier 2 capital	2,466	2,382
Total capital	\$ 27,125	\$ 26,867
Basel III Advanced		
Common Equity Tier 1	\$ 24,659	\$ 24,485
Tier 1 capital	24,659	24,485
Standardized Tier 2 capital	2,466	2,382
Allowance for losses on loans and lending commitments	(466)	(382)
Tier 2 capital	2,000	2,000
Total capital	\$ 26,659	\$ 26,485
RWAs		
Standardized	\$ 213,904	\$ 204,232
Basel III Advanced	143,099	131,051
CET1 ratio		
Standardized	11.5%	12.0%
Basel III Advanced	17.2%	18.7%
Tier 1 capital ratio		
Standardized	11.5%	12.0%
Basel III Advanced	17.2%	18.7%
Total capital ratio		
Standardized	12.7%	13.2%
Basel III Advanced	18.6%	20.2%
Tier 1 leverage ratio	15.7%	14.4%

The decrease in the Bank's Standardized and Basel III Advanced capital ratios from December 2016 to June 2017 is primarily due to an increase in credit RWAs, principally due to an increase in lending activity.

Required Reserves

The deposits of the Bank are insured by the FDIC to the extent provided by law. The Federal Reserve Board requires that the Bank maintain cash reserves with the Federal Reserve Bank of New York. The amount deposited by the Bank at the Federal Reserve Bank of New York was \$41.59 billion and \$74.24 billion as of June 2017 and December 2016, respectively, which exceeded regulatory reserve requirements of \$162 million and \$153 million by \$41.43 billion and \$74.09 billion as of June 2017 and December 2016, respectively.

Note 18.

Transactions with Related Parties

Transactions between the Bank and its affiliates are regulated by the Federal Reserve Board. These regulations generally limit the types and amounts of transactions (including credit extensions from the Bank) that may take place and generally require those transactions to be on terms that are at least as favorable to the Bank as prevailing terms for comparable transactions with non-affiliates. These regulations generally do not apply to transactions between the Bank and its subsidiaries.

The table below presents amounts outstanding to/from affiliates, as defined by U.S. GAAP.

\$ in millions	As of	
	June 2017	December 2016
Assets		
Cash	\$ 114	\$ 67
Securities purchased under agreements to resell	15,669	467
Receivables from customers and counterparties, brokers, dealers and clearing organizations	2,187	1,265
Financial instruments owned	543	746
Other assets	249	421
Total	\$ 18,762	\$ 2,966
Liabilities		
Deposits due to affiliates	\$ 5,567	\$ 8,699
Securities sold under agreements to repurchase	2,978	233
Payables to customers and counterparties, brokers, dealers and clearing organizations	235	170
Financial instruments sold, but not yet purchased	672	1,372
Unsecured borrowings	2,176	2,187
Other liabilities and accrued expenses	225	522
Total	\$ 11,853	\$ 13,183

Notes to Condensed Consolidated Financial Statements (Unaudited)

Group Inc. General Guarantee

Group Inc. has guaranteed the payment obligations of the Bank, subject to certain limitations.

Interest Income and Interest Expense

The Bank recognizes interest income and interest expense in connection with various affiliated transactions. These transactions include securities purchased under agreements to resell, securities sold under agreements to repurchase, deposits due to affiliates, collateral posted and received, other liabilities and accrued expenses, and subordinated borrowings. For the six months ended June 2017, the Bank recorded net interest expense to affiliates of \$40 million. For the six months ended June 2016, the Bank recorded net interest income from affiliates of \$14 million.

Other Transactions

The Bank enters into various activities with affiliated entities and allocates revenues to, and receives revenues from, such affiliates for their participation. The Bank allocated net revenues to affiliates of \$206 million and \$349 million for the six months ended June 2017 and June 2016, respectively. These amounts are included in “Gains and losses from financial instruments, net.”

The Bank is subject to service charges from affiliates. The Bank reimbursed affiliates \$289 million and \$250 million for the six months ended June 2017 and June 2016, respectively, for services rendered. These amounts are included in “Service charges.”

The Bank enters into derivative contracts with Group Inc. and its affiliates in the normal course of business. As of June 2017 and December 2016, the net outstanding derivative contracts with Group Inc. and affiliates totaled \$543 million and \$746 million, respectively, in “Financial instruments owned,” and \$672 million and \$1.37 billion, respectively, in “Financial instruments sold, but not yet purchased.”

In connection with its partnership interest in MMDP, the Bank has provided to Mitsui Sumitomo additional protection in the form of assets held in a VIE which could be liquidated for the benefit of Mitsui Sumitomo under certain circumstances.

Equity Transactions

During the six months ended June 2017 and June 2016, there were no capital contributions into the Bank. During the six months ended June 2017, the Bank paid a dividend of \$500 million to Group Inc. During the six months ended June 2016, there were no dividends paid by the Bank to Group Inc.

Note 19.

Interest Income and Interest Expense

Interest is recorded over the life of the instrument on an accrual basis based on contractual interest rates. The table below presents the Bank’s sources of interest income and interest expense.

<i>\$ in millions</i>	Six Months Ended June	
	2017	2016
Interest income		
Deposits with banks	\$ 311	\$ 159
Collateralized agreements	68	41
Financial instruments owned	433	402
Loans receivable	699	564
Other interest	160	136
Total interest income	1,671	1,302
Interest expense		
Deposits	528	358
Collateralized financings	21	10
Financial instruments sold, but not yet purchased	26	20
Borrowings	41	35
Other interest	212	114
Total interest expense	828	537
Net interest income	\$ 843	\$ 765

In the table above:

- Other interest income includes interest income on collateral balances posted to counterparties, loans accounted for as held for sale and other interest-earning assets.
- Borrowings includes interest expense from other secured financings and unsecured borrowings, which primarily relates to interest incurred on the Bank’s affiliate borrowings from Group Inc. and Funding IHC and FHLB advances.
- Other interest expense includes interest expense on collateral balances received from counterparties and on funding facilities, primarily from affiliates.

Notes to Condensed Consolidated Financial Statements (Unaudited)

Note 20.

Income Taxes

Provision for Income Taxes

Income taxes are provided for using the asset and liability method under which deferred tax assets and liabilities are recognized for temporary differences between the financial reporting and tax bases of assets and liabilities. The Bank reports interest expense related to income tax matters in “Provision for taxes” and income tax penalties in “Other expenses.”

The Bank’s results of operations are included in the consolidated federal and certain state tax returns of GS Group. The Bank computes its tax liability as if it was filing a tax return on a modified separate company basis and settles such liability with Group Inc. pursuant to a tax sharing agreement. To the extent the Bank generates tax benefits from losses, it will be reimbursed by Group Inc. pursuant to a tax sharing agreement at such time as GS Group would have been able to utilize such losses.

Deferred Income Taxes

Deferred income taxes reflect the net tax effects of temporary differences between the financial reporting and tax bases of assets and liabilities. These temporary differences result in taxable or deductible amounts in future years and are measured using the tax rates and laws that will be in effect when such differences are expected to reverse. Valuation allowances are established to reduce deferred tax assets to the amount that more likely than not will be realized. Tax assets and liabilities are presented as a component of “Other assets” and “Other liabilities and accrued expenses,” respectively.

Unrecognized Tax Benefits

The Bank recognizes tax positions in the condensed consolidated financial statements only when it is more likely than not that the position will be sustained on examination by the relevant taxing authority based on the technical merits of the position. A position that meets this standard is measured at the largest amount of benefit that will more likely than not be realized on settlement. A liability is established for differences between positions taken in a tax return and amounts recognized in the condensed consolidated financial statements.

Regulatory Tax Examinations

The Bank is subject to examination by the U.S. Internal Revenue Service, as part of GS Group, and other taxing authorities in jurisdictions where the Bank has significant business operations such as New York State and City. The tax years under examination vary by jurisdiction.

The Joint Committee on Taxation finalized its review of the U.S. Federal examinations of GS Group for fiscal 2008 through calendar 2010 in 2016. U.S. Federal examinations of 2011 and 2012 began in 2013.

GS Group has been accepted into the Compliance Assurance Process program by the U.S. Internal Revenue Service for each of the tax years from 2013 through 2017. This program allows GS Group to work with the U.S. Internal Revenue Service to identify and resolve potential U.S. federal tax issues before the filing of tax returns. The 2013 through 2015 tax years remain subject to post-filing review.

New York State and City examinations of GS Bank tax filings for fiscal 2007 through calendar 2014 have been completed. All years including and subsequent to 2015 for New York State and City remain open to examination by the taxing authorities. All years including and subsequent to 2007 for all other significant states, excluding New York State and City, remain open to examination by the taxing authorities.

All years including and subsequent to the years detailed above remain open to examination by the taxing authorities.

The Bank believes that the liability for unrecognized tax benefits it has established is adequate in relation to the potential for additional assessments.

Note 21.

Credit Concentrations

Credit concentrations may arise from the Bank’s lending, market-making and other activities and may be impacted by changes in economic, industry or political factors. The Bank seeks to mitigate credit risk by actively monitoring exposures and obtaining collateral from counterparties as deemed appropriate.

Notes to Condensed Consolidated Financial Statements (Unaudited)

While the Bank's activities expose it to many different industries and counterparties, the Bank routinely executes a high volume of transactions with asset managers, investment funds, commercial banks, brokers and dealers, clearing houses and exchanges, which results in significant credit concentrations.

In the ordinary course of business, the Bank may also be subject to a concentration of credit risk to a particular counterparty, borrower or issuer, including sovereign issuers, or to a particular clearing house or exchange.

As of June 2017 and December 2016, the Bank had exposure in cash instruments of \$17.90 billion or 11.8% of total assets, and \$14.03 billion or 8.8% of total assets, respectively, related to U.S. government and agency obligations. These are included in "Financial instruments owned." As of June 2017 and December 2016, the Bank did not have credit exposure to any other external counterparty that exceeded 2% of total assets.

To reduce credit exposures, the Bank may enter into agreements with counterparties that permit the Bank to offset receivables and payables with such counterparties and/or enable the Bank to obtain collateral on an upfront or contingent basis. Collateral obtained by the Bank related to derivative assets is principally cash and is held by the Bank or a third-party custodian. Collateral obtained by the Bank related to resale agreements is primarily U.S. government and agency obligations. See Note 10 for further information about collateralized agreements and financings.

The Bank had \$20.27 billion and \$6.76 billion of U.S. government and agency obligations that collateralize resale agreements as of June 2017 and December 2016, respectively. Because the Bank's primary credit exposure on such transactions is to the counterparty to the transaction, the Bank would be exposed to the collateral issuer only in the event of counterparty default.

Note 22.

Legal Proceedings

The Bank is involved in a number of judicial, regulatory and other proceedings (including those described below) concerning matters arising in connection with the conduct of the Bank's businesses. Many of these proceedings are in early stages, and involve an indeterminate amount of damages.

With respect to the matters described below, management is unable to estimate a range of reasonably possible loss for matters in which the Bank is involved due to various factors, including (i) actual or potential plaintiffs have not claimed an amount of money damages, except in those instances where management can otherwise determine an appropriate amount, (ii) the matters are in early stages, (iii) matters relate to regulatory investigations or reviews, except in those instances where management can otherwise determine an appropriate amount, (iv) there is uncertainty as to the likelihood of a class being certified or the ultimate size of the class, (v) there is uncertainty as to the outcome of pending appeals or motions, (vi) there are significant factual issues to be resolved, and/or (vii) there are novel legal issues presented.

Management does not believe, based on currently available information, that the outcomes of any matters will have a material adverse effect on the Bank's financial condition, though the outcomes could be material to the Bank's operating results for any particular period, depending, in part, upon the operating results for such period. Matters that the Bank is involved in include but are not limited to the following:

- SunEdison Bankruptcy Litigation.** The Bank is among the defendants named in an adversary proceeding filed on October 20, 2016 in the U.S. Bankruptcy Court for the Southern District of New York arising from the bankruptcy of SunEdison, Inc. (SunEdison). The complaint alleges that amounts transferred and liens granted by SunEdison to its secured creditors, including the Bank, prior to filing for bankruptcy were fraudulent and preferential transfers. Plaintiffs seek to recoup those transfers, avoid those liens and disallow certain claims of the secured creditors. The Bank received pre-filing payments from SunEdison aggregating \$169 million that are subject to the recoupment claims and post-filing payments of \$40 million that are subject to the avoidance and disallowance claims. On July 25, 2017, the court approved a settlement, which will resolve the litigation without any contribution by the Bank, subject to consummation of the reorganization plan.

Notes to Condensed Consolidated Financial Statements (Unaudited)

- **Interest Rate Swap Antitrust Litigation.** The Bank and certain affiliates of the Bank (including Group Inc.) are among the defendants named in putative antitrust class actions relating to the trading of interest rate swaps, filed beginning in November 2015 and consolidated in the U.S. District Court for the Southern District of New York. The second consolidated amended complaint filed on December 9, 2016 generally alleges a conspiracy among the defendants since at least January 1, 2007 to preclude exchange trading of interest rate swaps. The complaint seeks declaratory and injunctive relief, as well as treble damages in an unspecified amount. Defendants moved to dismiss on January 20, 2017.

The Bank and certain affiliates of the Bank (including Group Inc.) are among the defendants named in antitrust actions relating to the trading of interest rate swaps filed in the U.S. District Court for the Southern District of New York beginning in April 2016 by two operators of swap execution facilities and certain of their affiliates. These actions have been consolidated with the class action described above for pretrial proceedings. The second consolidated amended complaint filed on December 9, 2016 generally asserts claims under federal and state antitrust laws and state common law in connection with an alleged conspiracy among the defendants to preclude trading of interest rate swaps on the plaintiffs' respective swap execution facilities and seeks declaratory and injunctive relief, as well as treble damages in an unspecified amount. Defendants moved to dismiss on January 20, 2017.

- **Credit Default Swap Antitrust Litigation.** The Bank and certain affiliates of the Bank (including Group Inc.) are among the defendants named in an antitrust action relating to the trading of credit default swaps filed in the U.S. District Court for the Southern District of New York on June 8, 2017 by the operator of a swap execution facility and certain of its affiliates. The complaint generally asserts claims under federal and state antitrust laws and state common law in connection with an alleged conspiracy among the defendants to preclude trading of credit default swaps on the plaintiffs' swap execution facility. The complaint seeks declaratory and injunctive relief, as well as treble damages in an unspecified amount.

- **Regulatory Investigations and Reviews and Related Litigation.** The Bank and certain of its affiliates (including Group Inc.) are subject to a number of investigations and reviews by, and in some cases have received subpoenas and requests for documents and information from, various governmental and regulatory bodies and self-regulatory organizations and litigation relating to such matters in each case relating to the Bank's current and past businesses and operations, including, but not limited to residential mortgage servicing, lending and compliance with related consumer laws; the sales, trading, execution and clearance of derivatives, currencies and other financial products and related communications and activities, including trading activities and communications in connection with the establishment of benchmark rates, such as currency rates, and activities in U.S. Treasury securities; and transactions involving government-related financings and other matters, including those related to 1Malaysia Development Berhad (1MDB), a sovereign wealth fund in Malaysia. The Bank is cooperating with all such regulatory investigations and reviews.

In addition, governmental and other investigations, reviews, actions, and litigation involving the Bank's affiliates and such affiliates' businesses and operations, including without limitation various matters referred to above, may have an impact on the Bank's businesses and operations.

Note 23.

Subsequent Events

The Bank evaluated subsequent events through August 10, 2017, the date the condensed consolidated financial statements were issued, and determined that there were no material events or transactions that would require recognition or additional disclosure in these condensed consolidated financial statements.



Report of Independent Auditors

To the Board of Directors and Shareholder of Goldman Sachs Bank USA and Subsidiaries:

We have reviewed the accompanying condensed consolidated interim financial information of Goldman Sachs Bank USA and its subsidiaries (the "Bank"), which comprise the condensed consolidated statement of financial condition as of June 30, 2017, the related condensed consolidated statements of earnings for the six months ended June 30, 2017 and 2016, the condensed consolidated statements of comprehensive income for the six months ended June 30, 2017 and 2016, the condensed consolidated statement of changes in shareholder's equity for the six months ended June 30, 2017, and the condensed consolidated statements of cash flows for the six months ended June 30, 2017 and 2016.

Management's Responsibility for the Condensed Consolidated Interim Financial Information

The Bank's management is responsible for the preparation and fair presentation of the condensed consolidated interim financial information in accordance with accounting principles generally accepted in the United States of America; this responsibility includes the design, implementation, and maintenance of internal control sufficient to provide a reasonable basis for the preparation and fair presentation of the condensed consolidated interim financial information in accordance with accounting principles generally accepted in the United States of America.

Auditors' Responsibility

Our responsibility is to conduct our review in accordance with auditing standards generally accepted in the United States of America applicable to reviews of interim financial information. A review of interim financial information consists principally of applying analytical procedures and making inquiries of persons responsible for financial and accounting matters. It is substantially less in scope than an audit conducted in accordance with auditing standards generally accepted in the United States of America, the objective of which is the expression of an opinion regarding the financial information taken as a whole. Accordingly, we do not express such an opinion.

Conclusion

Based on our review, we are not aware of any material modifications that should be made to the accompanying condensed consolidated interim financial information for it to be in accordance with accounting principles generally accepted in the United States of America.

Other Matters

We previously audited, in accordance with auditing standards generally accepted in the United States of America, the consolidated statement of financial condition of the Bank as of December 31, 2016, and the related consolidated statements of earnings, comprehensive income, changes in shareholder's equity and cash flows for the year then ended (not presented herein), and in our report dated March 20, 2017, we expressed an unmodified opinion on those consolidated financial statements. In our opinion, the information set forth in the accompanying condensed consolidated statement of financial condition as of December 31, 2016, and the condensed consolidated statement of changes in shareholder's equity for the year ended December 31, 2016, is consistent, in all material respects, with the audited consolidated financial statements from which it has been derived.

PricewaterhouseCoopers LLP

August 10, 2017

Supplemental Financial Information

Distribution of Assets, Liabilities and Shareholder's Equity

The tables below present a summary of average balances, interest, and interest rates.

\$ in millions	Average Balance for the Six Months Ended June	
	2017	2016
Assets		
Deposits with banks	\$ 68,970	\$ 62,776
Collateralized agreements	4,506	3,119
Financial instruments owned	27,837	26,210
Loans receivable	36,914	37,660
Other interest-earning assets	9,161	8,973
Total interest-earning assets	147,388	138,738
Cash and due from banks	226	317
Other non-interest-earning assets	11,070	14,787
Total assets	\$ 158,684	\$ 153,842
Liabilities		
Interest-bearing deposits	\$ 110,141	\$ 102,621
Collateralized financings	1,556	4,749
Financial instruments sold, but not yet purchased	2,753	2,222
Borrowings	4,493	5,633
Other interest-bearing liabilities	4,209	4,023
Total interest-bearing liabilities	123,152	119,248
Non-interest bearing deposits	3,471	2,470
Other non-interest-bearing liabilities	7,692	8,607
Total liabilities	\$ 134,315	\$ 130,325
Shareholder's equity	24,369	23,517
Total liabilities and shareholder's equity	\$ 158,684	\$ 153,842

\$ in millions	Interest for the Six Months Ended June	
	2017	2016
Assets		
Deposits with banks	\$ 311	\$ 159
Collateralized agreements	68	41
Financial instruments owned	433	402
Loans receivable	699	564
Other interest-earning assets	160	136
Total interest-earning assets	\$ 1,671	\$ 1,302
Liabilities		
Interest-bearing deposits	\$ 528	\$ 358
Collateralized financings	21	10
Financial instruments sold, but not yet purchased	26	20
Borrowings	41	35
Other interest-bearing liabilities	212	114
Total interest-bearing liabilities	\$ 828	\$ 537
Net interest income	\$ 843	\$ 765

	Average Rate (annualized) for the Six Months Ended June	
	2017	2016
Assets		
Deposits with banks	0.90%	0.51%
Collateralized agreements	3.02%	2.63%
Financial instruments owned	3.11%	3.07%
Loans receivable	3.79%	3.00%
Other interest-earning assets	3.49%	3.03%
Total interest-earning assets	2.27%	1.88%
Liabilities		
Interest-bearing deposits	0.96%	0.70%
Collateralized financings	2.70%	0.42%
Financial instruments sold, but not yet purchased	1.89%	1.80%
Borrowings	1.83%	1.24%
Other interest-bearing liabilities	10.07%	5.67%
Total interest-bearing liabilities	1.34%	0.90%
Net interest margin (bps)	115	110

In the tables above:

- Deposits with banks primarily consist of deposits held at the Federal Reserve Bank of New York.
- See Note 10 to the condensed consolidated financial statements and "Results of Operations" in Part II of this Semi-Annual Report for further information about collateralized agreements and collateralized financings and related interest.
- See Notes 4 through 8 to the condensed consolidated financial statements and "Results of Operations" in Part II of this Semi-Annual Report for further information about financial instruments owned, and financial instruments sold, but not yet purchased and related interest.
- Loans receivable is comprised of loans held for investment that are accounted for at amortized cost net of allowance for loan losses. Interest on loans receivable is recognized over the life of the loan and is recorded on an accrual basis. See Note 9 to the condensed consolidated financial statements and "Results of Operations" in Part II of this Semi-Annual Report for further information about loans receivable and related interest.
- Other interest-bearing assets and liabilities primarily consists of certain receivables and payables from customers and counterparties.

Supplemental Financial Information

- Other non-interest-earning assets and other non-interest-bearing liabilities include derivatives. See Note 19 to the condensed consolidated financial statements and “Results of Operations” in Part II of this Semi-Annual Report for further information about other interest income and interest expense.
- Borrowings include subordinated borrowings and other secured financings. See Notes 10 and 14 to the condensed consolidated financial statements and “Balance Sheet Analysis and Metrics” in Part II of this Semi-Annual Report for further information about short-term and long-term borrowings and related interest.
- Interest-bearing deposits primarily consist of deposits from private wealth management clients, through deposit sweep agreements with third-party broker-dealers, through the issuances of term certificates of deposit and directly from our retail customers through our online deposit platform. See Note 13 to the condensed consolidated financial statements and “Results of Operations” in Part II of this Semi-Annual Report for further information about deposits and related interest.

PART II. Management's Discussion and Analysis of Financial Condition and Results of Operations

Introduction

Goldman Sachs Bank USA, together with its consolidated subsidiaries (collectively, the Bank), is a New York State-chartered bank and a member of the Federal Reserve System. The Bank is supervised and regulated by the Board of Governors of the Federal Reserve System (Federal Reserve Board), the New York State Department of Financial Services (NYDFS) and the U.S. Consumer Financial Protection Bureau (CFPB), and is a member of the Federal Deposit Insurance Corporation (FDIC). The Bank's deposits are insured by the FDIC up to the maximum amount provided by law. The Bank is registered with the U.S. Commodity Futures Trading Commission (CFTC) as a swap dealer and as a government securities dealer subject to the rules and regulations of the U.S. Department of the Treasury (Treasury).

The Bank's principal office is located in New York, New York. The Bank operates one domestic branch located in Salt Lake City, Utah, which is regulated by the Utah Department of Financial Institutions. The Bank also has a branch in London, United Kingdom, which is regulated by the Financial Conduct Authority and the Prudential Regulation Authority.

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

The Bank's primary activities include lending, engaging in derivatives transactions and deposit taking. The Bank is a lender to private wealth management clients of Goldman Sachs & Co. LLC (GS&Co.), to institutional and corporate clients, and to retail customers. The Bank enters into interest rate, credit, currency, commodity and equity derivatives and related products for the purpose of market making and risk management. The Bank accepts deposits from private wealth management clients, online retail customers and through deposit sweep programs and issues brokered certificates of deposit.

This Management's Discussion and Analysis of Financial Condition and Results of Operations should be read in conjunction with our Annual Report for the year ended December 31, 2016. References to "the 2016 Annual Report" are to our Annual Report for the year ended December 31, 2016.

The 2016 Annual Report includes information related to the Bank's business, the supervision and regulation to which it is subject, risk factors affecting its business, results of operations and financial condition, and the 2016 and 2015 consolidated financial statements of the Bank.

When we use the terms "the Bank," "we," "us" and "our," we mean Goldman Sachs Bank USA and its consolidated subsidiaries. When we use the term "GS Group," or "firmwide" we are referring to Group Inc. and its consolidated subsidiaries, including the Bank. References to revenue-producing units and control and support functions include activities performed by the Bank's employees, by dual employees (who are employees who perform services for both the Bank and another Group Inc. affiliate) and by affiliate employees under Bank supervision pursuant to a Master Services Agreement supplemented by Service Level Agreements (collectively, the Master Services Agreement) between the Bank and its affiliates.

All references to "this Semi-Annual Report," of which this Management's Discussion and Analysis forms a part, refers to the report dated August 10, 2017, as may be amended, and includes information relating to the Bank's results of operations and financial condition, as well as the condensed consolidated financial statements of the Bank.

References to "the condensed consolidated financial statements" or "Supplemental Financial Information" are to Part I of this Semi-Annual Report. All references to June 2017 and June 2016 refer to our periods ended, or the dates, as the context requires, June 30, 2017 and June 30, 2016, respectively. All references to December 2016 refer to the date December 31, 2016. Any reference to a future year refers to a year ending on December 31 of that year. Certain reclassifications have been made to previously reported amounts to conform to the current presentation.

Management's Discussion and Analysis

Executive Overview

We generated net earnings of \$721 million for the first half of 2017, an increase of 1% compared with \$712 million for the first half of 2016.

Net revenues, including net interest income, were \$1.79 billion for the first half of 2017, an increase of 14% compared with \$1.57 billion for the first half of 2016, reflecting higher net gains from financial instruments and higher net interest income.

Non-interest revenues were \$946 million for the first half of 2017, an increase of 17% compared with \$806 million the first half of 2016, reflecting higher net gains from financial instruments.

Net interest income was \$843 million for the first half of 2017, an increase of 10% compared with \$765 million for the first half of 2016, driven by higher interest rates on loans receivable and higher interest rates on higher average cash deposits held at banks, partially offset by higher interest expense due to higher rates on increased average deposit balances.

Net interest margin was 115 basis points for the first half of 2017, an increase of 5 basis points compared with 110 basis points for the first half of 2016, driven by higher interest rates on loans receivable and higher interest on cash held at banks, partially offset by higher interest expense.

Operating expenses were \$675 million for the first half of 2017, an increase of 34% compared with \$502 million for the first half of 2016, reflecting higher other expenses primarily related to new business initiatives, as well as higher compensation and benefits and service charges.

Total assets were \$151.21 billion as of June 2017, a decrease of 5% compared with \$159.11 billion as of December 2016. This decrease primarily reflected a decrease in cash deposits partially offset by an increase in securities purchased under agreements to resell.

Our global core liquid assets (GCLA) were \$69.42 billion as of June 2017, compared with \$85.35 billion as of December 2016, driven by decreases in deposits and increases in lending activity. See “Risk Management — Liquidity Risk Management — Liquidity Risk Management Principles — Global Core Liquid Assets” below for further information.

We continued to maintain strong capital ratios. As of June 2017, our Common Equity Tier 1 ratio as calculated in accordance with the Standardized approach and the Basel III Advanced approach, in each case reflecting the applicable transitional provisions, was 11.5% and 17.2%, respectively. See Note 17 to the condensed consolidated financial statements and “Equity Capital Management and Regulatory Capital” below for further information about our applicable capital ratios.

Business Environment

United States

In the U.S., real gross domestic product (GDP) growth decreased in the first half of 2017 compared with the second half of 2016, reflecting a decrease in consumer spending growth. Measures of consumer confidence remained high, while the pace of housing starts and home sales were flat, compared with the second half of 2016. The unemployment rate was 4.4% as of June 2017, 0.3% lower than the end of 2016, and measures of inflation decreased. Following a rate increase of 25 basis points in December 2016, the U.S. Federal Reserve increased its target rate for the federal funds rate by 25 basis points in March and June this year, and the target range was 1.00% to 1.25% as of June. The yield on the 10-year U.S. Treasury note ended the first half of 2017 at 2.30%, 14 basis points lower compared with the end of 2016. In equity markets, the NASDAQ Composite Index, the S&P 500 Index and the Dow Jones Industrial Average increased by 14%, 8% and 8%, respectively, in the first half of 2017.

Management's Discussion and Analysis

Global

During the first half of 2017, global economic growth appeared mixed compared with the second half of 2016, as real GDP growth in the U.S. and U.K. appeared to slow, while growth in the Euro area increased and Japan appeared to increase. Growth in China was roughly unchanged from the second half of last year. Broadly, global macroeconomic data remained strong throughout the first half of 2017, and volatility in equity, currency and commodity markets was low. France held a presidential election in May and the U.K. held a general election in June, but neither caused a significant increase in volatility across markets. Major central banks continued to gradually tighten their stance on monetary policy. The U.S. Federal Reserve followed an increase in the target federal funds rate in December 2016 with two further increases in March and June. The People's Bank of China tightened its stance of monetary policy slightly by raising certain interest rates, and the European Central Bank decreased the pace of its monthly asset purchases beginning in April 2017. The price of crude oil ended June 2017 at approximately \$46 per barrel, a decrease of 14% from the end of 2016.

Critical Accounting Policies

Loans Receivable

Loans receivable in the condensed consolidated statements of financial condition is comprised of:

- Loans held for investment that are accounted for at amortized cost net of allowance for loan losses.
- Loans held for sale which are accounted for at the lower of cost or market.
- Interest on loans receivable is recognized over the life of the loan and is recorded on an accrual basis.

The Bank assesses its loans for impairment on an ongoing basis through its credit review process. A credit review is an independent analysis of the capacity and willingness of a borrower to meet its financial obligations, resulting in an internal credit rating. The Bank also assigns a regulatory risk rating to such loans based on the definitions provided by the U.S. federal bank regulatory agencies. Such loans are determined to be impaired when it is probable that the Bank will not be able to collect all principal and interest due under the contractual terms of the loan. At that time, loans are generally placed on non-accrual status, all accrued but uncollected interest is reversed against interest income, and interest subsequently collected is recognized on a cash basis to the extent the loan balance is deemed collectible. Otherwise, all cash received is used to reduce the outstanding loan balance.

The Bank's allowance for loan losses is comprised of specific loan-level reserves and portfolio level reserves. Specific loan-level reserves are determined on loans that exhibit credit quality weakness and are therefore individually evaluated for impairment. Portfolio level reserves are determined on loans not deemed impaired by aggregating groups of loans with similar risk characteristics and estimating the probable loss inherent in the portfolio.

See Note 9 to the condensed consolidated financial statements for further information about loans receivable.

Fair Value

Fair Value Hierarchy. Financial instruments owned and Financial instruments sold, but not yet purchased (i.e., inventory), as well as certain other financial assets and financial liabilities, are reflected in our condensed consolidated statements of financial condition at fair value (i.e., marked-to-market), with related gains or losses generally recognized in our condensed consolidated statements of earnings.

The fair value of a financial instrument is the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. We measure certain financial assets and financial liabilities as a portfolio (i.e., based on its net exposure to market and/or credit risks). In determining fair value, the hierarchy under U.S. generally accepted accounting principles (U.S. GAAP) gives (i) the highest priority to unadjusted quoted prices in active markets for identical, unrestricted assets or liabilities (level 1 inputs), (ii) the next priority to inputs other than level 1 inputs that are observable, either directly or indirectly (level 2 inputs), and (iii) the lowest priority to inputs that cannot be observed in market activity (level 3 inputs). In evaluating the significance of a valuation input, we consider, among other factors, a portfolio's net risk exposure to that input. Assets and liabilities are classified in their entirety based on the lowest level of input that is significant to their fair value measurement.

The fair values for substantially all of our financial assets and financial liabilities are based on observable prices and inputs and are classified in levels 1 and 2 of the fair value hierarchy. Certain level 2 and level 3 financial assets and financial liabilities may require appropriate valuation adjustments that a market participant would require to arrive at fair value for factors such as counterparty and the Bank or its affiliates' credit quality, funding risk, transfer restrictions, liquidity and bid/offer spreads.

Management's Discussion and Analysis

Instruments classified in level 3 of the fair value hierarchy are those which require one or more significant inputs that are not observable. As of June 2017 and December 2016, level 3 financial assets represented 1.5% and 1.8% of our total assets, respectively. See Notes 5 through 8 to the condensed consolidated financial statements for further information about level 3 financial assets, including changes in level 3 financial assets and related fair value measurements. Absent evidence to the contrary, instruments classified in level 3 of the fair value hierarchy are initially valued at transaction price, which is considered to be the best initial estimate of fair value. Subsequent to the transaction date, we use other methodologies to determine fair value, which vary based on the type of instrument. Estimating the fair value of level 3 financial instruments requires judgments to be made. These judgments include:

- Determining the appropriate valuation methodology and/or model for each type of level 3 financial instrument;
- Determining model inputs based on an evaluation of all relevant empirical market data, including prices evidenced by market transactions, interest rates, credit spreads, volatilities and correlations; and
- Determining appropriate valuation adjustments, including those related to illiquidity or counterparty credit quality.

Regardless of the methodology, valuation inputs and assumptions are only changed when corroborated by substantive evidence.

Controls Over Valuation of Financial Instruments

The Bank leverages GS Group's control infrastructure over valuation of financial instruments, which is described below. Market makers and investment professionals in revenue-producing units are responsible for pricing our financial instruments. GS Group's control infrastructure is independent of the revenue-producing units and is fundamental to ensuring that all of our financial instruments are appropriately valued at market-clearing levels. In the event that there is a difference of opinion in situations where estimating the fair value of financial instruments requires judgment (e.g., calibration to market comparables or trade comparison, as described below), the final valuation decision is made by senior managers in control and support functions. This independent price verification is critical to ensuring that our financial instruments are properly valued.

Price Verification

All financial instruments at fair value classified in levels 1, 2 and 3 of the fair value hierarchy are subject to an independent price verification process. The objective of price verification is to have an informed and independent opinion with regard to the valuation of financial instruments under review. Instruments that have one or more significant inputs which cannot be corroborated by external market data are classified in level 3 of the fair value hierarchy. Price verification strategies utilized by our independent control and support functions include:

- **Trade Comparison.** Analysis of trade data (both internal and external where available) is used to determine the most relevant pricing inputs and valuations.
- **External Price Comparison.** Valuations and prices are compared to pricing data obtained from third parties (e.g., brokers or dealers, Markit, Bloomberg, IDC, TRACE). Data obtained from various sources is compared to ensure consistency and validity. When broker or dealer quotations or third-party pricing vendors are used for valuation or price verification, greater priority is generally given to executable quotations.
- **Calibration to Market Comparables.** Market-based transactions are used to corroborate the valuation of positions with similar characteristics, risks and components.
- **Relative Value Analyses.** Market-based transactions are analyzed to determine the similarity, measured in terms of risk, liquidity and return, of one instrument relative to another or, for a given instrument, of one maturity relative to another.
- **Collateral Analyses.** Margin calls on derivatives are analyzed to determine implied values which are used to corroborate our valuations.
- **Execution of Trades.** Where appropriate, trading desks are instructed to execute trades in order to provide evidence of market-clearing levels.
- **Backtesting.** Valuations are corroborated by comparison to values realized upon sales.

See Notes 5 through 8 to the condensed consolidated financial statements for further information about fair value measurements.

Management's Discussion and Analysis

Review of Net Revenues

Independent control and support functions ensure adherence to GS Group's pricing policy through a combination of daily procedures, including the explanation and attribution of net revenues based on the underlying factors. Through this process, we independently validate net revenues, identify and resolve potential fair value or trade booking issues on a timely basis and seek to ensure that risks are being properly categorized and quantified.

Review of Valuation Models

A model risk management group (Model Risk Management), consisting of quantitative professionals who are separate from model developers, performs an independent model review and validation process of valuation models. New or changed models are reviewed and approved prior to being put into use. Models are evaluated and re-approved annually to assess the impact of any changes in the product or market and any market developments in pricing theories. See "Risk Management — Model Risk Management" for further information about the review and validation of valuation models.

Recent Accounting Developments

See Note 3 to the condensed consolidated financial statements for information about Recent Accounting Developments.

Use of Estimates

U.S. GAAP requires management to make certain estimates and assumptions. In addition to the estimates we make in connection with the allowance for losses on loans and lending commitments held for investment, the use of estimates and assumptions is also important in determining fair value measurements, discretionary compensation accruals, litigation, regulatory proceedings (including governmental investigations) and tax audits. Significant judgment is required in making these estimates and our final liabilities may ultimately be materially different.

We estimate and record an allowance for losses related to our loans receivable and lending commitments held for investment. Management's estimate of loan losses entails judgment about loan collectability at the reporting dates, and there are uncertainties inherent in those judgments. See Note 9 to the condensed consolidated financial statements for further information about the allowance for losses on loans receivable and lending commitments held for investment.

The Bank's compensation and benefits include discretionary compensation, which is finalized at year-end. We believe the most appropriate way to allocate estimated annual discretionary compensation among interim periods is based on an allocation of GS Group's discretionary compensation estimates for the same interim periods. The Bank's overall compensation expense in any given year is influenced by, among other factors, GS Group's overall financial performance, prevailing labor markets, business mix, the structure of GS Group's share-based compensation programs and the external environment. See "Results of Operations — Financial Overview — Operating Expenses" below for information about our compensation.

In accounting for income taxes, we recognize tax positions in the financial statements only when it is more likely than not that the position will be sustained on examination by the relevant taxing authority based on the technical merits of the position. See Note 20 to the condensed consolidated financial statements for further information about accounting for income taxes.

Any estimated liability in respect of litigation and regulatory proceedings is determined on a case-by-case basis and represents an estimate of probable losses after considering the progress of each case, proceeding or investigation, our experience and the experience of others in similar cases, proceedings or investigations and the opinions and views of legal counsel. See Note 22 to the condensed consolidated financial statements for further information about certain judicial, litigation and regulatory proceedings.

Management's Discussion and Analysis

Results of Operations

The composition of our net revenues has varied over time as financial markets and the scope of our operations have changed. The composition of net revenues can also vary over the shorter term due to fluctuations in economic and market conditions. In addition to transactions entered into with third parties, the Bank also enters into transactions with affiliates in the normal course of business, primarily as part of its market-making activities and general operations. See "Risk Factors" in Part I of the 2016 Annual Report for further information about the impact of economic and market conditions on our results of operations.

Financial Overview

The table below presents an overview of our financial results and selected financial ratios. In the table below, annualized return on average shareholder's equity is calculated by dividing net earnings by average monthly shareholder's equity.

<i>\$ in millions, except ratios</i>	Six Months Ended June	
	2017	2016
Net revenues	\$ 1,789	\$ 1,571
Pre-tax earnings	\$ 1,114	\$ 1,069
Net earnings	\$ 721	\$ 712
Annualized net earnings to average assets	0.9%	0.9%
Annualized return on average shareholder's equity	5.9%	6.1%
Average equity to average assets	15.3%	15.3%

Net Revenues

The table below presents our net revenues by line item in the condensed consolidated statements of earnings, as well as our net interest margin.

<i>\$ in millions, except net interest margin</i>	Six Months Ended June	
	2017	2016
Interest income	\$ 1,671	\$ 1,302
Interest expense	828	537
Net interest income	843	765
Non-interest revenues	946	806
Net revenues, including net interest income	\$ 1,789	\$ 1,571
Net interest margin (basis points)	115	110

In the table above:

- Interest income is primarily generated from the Bank's lending portfolio, consisting of corporate lending, private bank lending and other lending inclusive of its online lending platform, Marcus by Goldman Sachs™ (Marcus). Corporate lending interest income includes income from term loans, revolving lines of credit, letter of credit facilities and bridge loans (collectively, "bank loans"). Private bank lending interest income includes income from loans to private wealth management clients, substantially all of which are secured by residential mortgages. Other lending interest income includes interest from unsecured, fixed-rate installment loans made through Marcus. Interest income is also earned from certain financial instruments owned and collateralized agreements. In addition, interest is earned on cash deposits held primarily at the Federal Reserve Bank of New York (FRBNY) and from collateral balances posted to counterparties.
- Interest expense includes the interest associated with deposit-taking activities, including accepting deposits directly from private wealth management clients, through deposit sweep agreements with third-party broker-dealers, through the issuance of term certificates of deposit and directly from retail customers through our online deposit platform. The Bank applies hedge accounting to certain interest rate swaps used to manage the interest rate exposure of certain fixed-rate term certificates of deposit. For qualifying fair value hedges, gains and losses on derivatives are included in interest expense. See Note 7 to the condensed consolidated financial statements for further information about hedge accounting. Interest expense also includes interest from certain financial instruments sold, but not yet purchased, collateralized financings (including interest on advances from the Federal Home Loan Bank of New York (FHLB), unsecured borrowings (including funding facilities primarily from affiliates) and collateral balances received from counterparties.

Management's Discussion and Analysis

- Non-interest revenues include net gains and losses from financial instruments related to market-making and risk management activities in interest rate, currency, credit, commodity and equity derivatives and related products which are primarily accounted for at fair value. Non-interest revenues also include net gains and losses from loans and lending commitments primarily accounted for at fair value. In addition, non-interest revenues include fees earned from relationships with affiliates, loan syndication fees and other fees, offset by provisions for losses on loans and lending commitments.

Six Months Ended June 2017 vs June 2016

Net revenues in the condensed consolidated statements of earnings were \$1.79 billion for the first half of 2017, an increase of 14% compared with \$1.57 billion for the first half of 2016, reflecting higher net gains from financial instruments and higher net interest income.

Net Interest Income. Net interest income in the condensed consolidated statements of earnings was \$843 million for the first half of 2017, 10% higher than the first half of 2016. Net interest income was 47% of net revenues in the first half of 2017, compared with 49% in the first half of 2016. See below for further information about interest income and interest expense.

Interest Income. Interest income in the condensed consolidated statements of earnings was \$1.67 billion for the first half of 2017, 28% higher than the first half of 2016. See below and “Supplemental Financial Information – Distribution of Assets, Liabilities and Shareholder’s Equity” for further information about our sources of interest income, including average balances and rates.

The table below presents our sources of interest income.

\$ in millions	Six Months Ended June	
	2017	2016
Loans receivable	\$ 699	\$ 564
Financial instruments owned	433	402
Collateralized agreements	68	41
Deposits with banks	311	159
Other	160	136
Total interest income	\$ 1,671	\$ 1,302

In the table above:

- Interest income from loans receivable was \$699 million for the first half of 2017, 24% higher than the first half of 2016, primarily due to higher interest rates on corporate loans and increased other lending activity. See Note 9 to the condensed consolidated financial statements for further information about loans receivable.
- Interest income from financial instruments owned was \$433 million for the first half of 2017, 8% higher than the first half of 2016, primarily due to higher average holdings. Interest income from financial instruments owned includes interest income from U.S government and agency obligations accounted for at fair value. See Note 4 to the condensed consolidated financial statements for further information about financial instruments owned. Interest income from financial instruments owned, also includes interest income from our loans accounted for at fair value. See Note 8 to the condensed consolidated financial statements for further information about loans accounted for at fair value.
- Interest income from collateralized agreements was \$68 million for the first half of 2017, 66% higher than the first half of 2016, primarily due to higher average securities purchased under agreements to resell.
- Interest income from deposits with banks was \$311 million for the first half of 2017, 96% higher than the first half of 2016, primarily due to higher interest rates on higher average deposits held at the FRBNY. See Note 3 to the condensed consolidated financial statements for further information about our cash.
- Other interest income was \$160 million for the first half of 2017, 18% higher than the first half of 2016, primarily due to higher interest rates. Other interest income includes interest income from loans accounted for as held for sale and collateral balances posted to counterparties.

Interest Expense. Interest expense in the condensed consolidated statements of earnings was \$828 million for the first half of 2017, 54% higher than the first half of 2016. See below and “Supplemental Financial Information – Distribution of Assets, Liabilities and Shareholder’s Equity” for further information about our sources of interest expense, including average balances and rates.

Management's Discussion and Analysis

The table below presents our sources of interest expense.

<i>\$ in millions</i>	Six Months Ended June	
	2017	2016
Deposits	\$ 528	\$ 358
Borrowings	41	35
Financial instruments sold, but not yet purchased	26	20
Other	233	124
Total interest expense	\$ 828	\$ 537

In the table above:

- Interest expense from deposits was \$528 million for the first half of 2017, 47% higher than the first half of 2016, primarily due to higher interest rates on higher average deposit balances.
- Interest expense from borrowings was \$41 million for the first half of 2017, 17% higher than the first half of 2016, primarily due to higher interest rates on the subordinated borrowings from Group Inc. and Goldman Sachs Funding LLC (Funding IHC), a wholly-owned, direct subsidiary of Group Inc. formed in 2017.
- Interest expense from financial instruments sold, but not yet purchased was \$26 million for the first half of 2017, 30% higher than the first half of 2016, primarily due to higher interest rates.
- Other interest expense was \$233 million for the first half of 2017, 88% higher than the first half of 2016, primarily due to higher interest rates. Other interest expense primarily includes interest expense on collateral balances received from counterparties and expense on funding facilities, primarily from affiliates.

Non-Interest Revenues. Non-interest revenues were \$946 million for the first half of 2017, 17% higher than the first half of 2016. The increase was primarily driven by improved results in lending and related activities.

Net Interest Margin. Net interest margin increased by 5 basis points to 115 basis points for the first half of 2017, compared with 110 basis points for the first half of 2016, primarily driven by higher interest rates on loans receivable and higher interest on cash held at banks, partially offset by higher interest expense.

Operating Expenses

Our operating expenses are primarily influenced by levels of compensation, headcount and levels of business activity. The principal component of our operating expenses is service charges, which represent the cost of services provided by affiliates to the Bank. Service charges include employment related costs of dual employees and employees of affiliates pursuant to the Master Services Agreement. Compensation and benefits includes salaries, estimated year-end discretionary compensation, amortization of equity awards and other items such as benefits. Compensation and benefits relate to direct Bank employees. Discretionary compensation is significantly impacted by, among other factors, GS Group's overall financial performance, prevailing labor markets, business mix, the structure of GS Group's share-based compensation programs and the external environment. See "Use of Estimates" for further information about expenses that may arise from compensation and benefits.

The table below presents our operating expenses and total staff (including employees, consultants and temporary staff).

<i>\$ in millions, except total staff</i>	Six Months Ended June	
	2017	2016
Compensation and benefits	\$ 163	\$ 112
Service charges	289	250
Other expenses	223	140
Total operating expenses	\$ 675	\$ 502
Total staff at period-end	992	691

In the table above:

- Compensation and benefits and service charges include employee-related expenses. As described above, compensation and benefits are expenses of direct Bank employees. Service charges includes expenses related to dual employees and employees of affiliates who provide services to the Bank pursuant to the Master Services Agreement.
- Other expenses include brokerage, clearing, exchange and distribution fees, market development, professional fees, regulatory and agency fees and occupancy expenses.

Management's Discussion and Analysis

Six Months Ended June 2017 versus June 2016

Operating expenses in the condensed consolidated statements of earnings were \$675 million for the first half of 2017, 34% higher than the first half of 2016. The accrual for compensation and benefits expenses in the condensed consolidated statements of earnings were \$163 million for the first half of 2017, 46% higher than the first half of 2016, reflecting an increase in total staff, primarily related to new business initiatives.

Service charges in the condensed consolidated statements of earnings were \$289 million for the first half of 2017, 16% higher than the first half of 2016, primarily reflecting an increase in services received for new business initiatives and an increase in fees paid for services required under the Master Services Agreement.

Other expenses in the condensed consolidated statements of earnings were \$223 million for the first half of 2017, 59% higher than the first half of 2016, reflecting an increase in marketing fees, primarily related to new business initiatives, in addition to increases in regulatory and other fees.

We expect operating expenses will continue to increase as we launch new business initiatives and grow our business, primarily as a result of the need to increase total staff and expand the scope of services received through the Master Services Agreement in order to support our new initiatives.

Provision for Taxes

The effective income tax rate for the first half of 2017 was 35.3%, up from the full year tax rate of 32.6% for 2016. The increase compared with full year 2016 was primarily due to the impact of settlements of tax audits in 2016.

Balance Sheet and Funding Sources

Balance Sheet Management

One of the risk management disciplines for a financial institution is its ability to manage the size and composition of its balance sheet. The Bank leverages the firmwide balance sheet management process. While the asset base of the Bank changes due to client activity, market fluctuations and business opportunities, the size and composition of the balance sheet also reflects factors including (i) overall risk tolerance, (ii) the amount of equity capital held and (iii) the funding profile, among other factors. See "Equity Capital Management and Regulatory Capital — Equity Capital Management" for information about our equity capital management process.

In order to ensure appropriate risk management, we seek to maintain a sufficiently liquid balance sheet and, together with GS Group, have processes in place to dynamically manage our assets and liabilities which include (i) balance sheet planning, (ii) business-specific limits for the businesses of GS Group, which include the activities of the Bank, (iii) monitoring of key metrics and (iv) scenario analyses.

Balance Sheet Planning. GS Group prepares a balance sheet plan that combines projected total assets and composition of assets with its expected funding sources over a one-year time horizon. This plan is reviewed semi-annually and may be adjusted in response to changing business needs or market conditions. Within this process and with the involvement of Bank Finance, GS Group also considers which businesses operate within the Bank and the availability of Bank-specific funding sources. The objectives of this planning process are:

- To develop balance sheet projections, taking into account the general state of the financial markets and expected business activity levels, as well as regulatory requirements;
- To allow GS Group's business risk managers and managers from independent control and support functions to objectively evaluate balance sheet limit requests from business managers in the context of GS Group's overall balance sheet constraints, including the Bank's and GS Group's liability profile and equity capital levels, and key metrics; and
- To inform the target amount, tenor and type of funding to raise, based on projected assets and contractual maturities.

Business risk managers and managers from our independent control and support functions along with business managers review current and prior period information and expectations for the year to prepare our balance sheet plan. The specific information reviewed includes asset and liability size and composition, limit utilization, risk and performance measures, and capital usage. Within this process, GS Group also considers which businesses operate within the Bank and the availability of Bank-specific funding sources and capital constraints.

As part of the firmwide process, the consolidated balance sheet plan is reviewed and approved by the Firmwide Finance Committee, which includes Bank representatives, and is a sub-committee of the Firmwide Risk Committee of GS Group.

The review includes balance sheet plans by businesses of GS Group, including planned activities in the Bank; funding projections and projected key metrics.

Management's Discussion and Analysis

The Bank's limits are reviewed and approved by the Bank Asset Liability Committee. See "Risk Management — Overview and Structure of Risk Management" for an overview of our risk management structure.

Business-Specific Limits. The Firmwide Finance Committee sets asset and liability limits for each of GS Group's businesses, which include activities of the Bank. These limits are set at levels which are close to actual operating levels, rather than at levels which reflect GS Group's or our maximum risk appetite, in order to ensure prompt escalation and discussion among business managers and managers in independent control and support functions on a routine basis. The Firmwide Finance Committee, as well as the Bank Asset Liability Committee where applicable to the Bank, reviews and approves limits on a semi-annual basis and may also approve changes in limits on a more frequent basis in response to changing business needs or market conditions. In addition, the GS Group Risk Governance Committee sets aged inventory limits for certain financial instruments, including the financial instruments of the Bank, as a disincentive to hold inventory over longer periods of time. Requests for changes in limits are evaluated after giving consideration to their impact on key metrics. Compliance with limits is monitored on a daily basis by business risk managers, as well as managers in independent control and support functions.

Monitoring of Key Metrics. Key balance sheet metrics are monitored daily as part of the GS Group process, both by businesses of GS Group, which include activities of the Bank, and on a consolidated basis, including limit utilization and risk measures. This includes allocating assets to businesses and reviewing movements resulting from new business activity and market fluctuations.

Scenario Analyses. The Bank conducts scenario analyses as part of the Dodd-Frank Act Stress Tests (DFAST), and its resolution planning, as well as for other regulatory and business planning purposes. See "Equity Capital Management and Regulatory Capital — Equity Capital Management" below for further information about these scenario analyses. These scenarios cover short-term and long-term time horizons using various macroeconomic and Bank-specific assumptions, based on a range of economic scenarios. We use these analyses to assist us in developing our longer-term balance sheet management strategy, including the level and composition of assets, funding and equity capital. Additionally, these analyses help us develop approaches for maintaining appropriate funding, liquidity and capital across a variety of situations, including a severely stressed environment.

Balance Sheet Analysis and Metrics

As of June 2017, total assets in the condensed consolidated statements of financial condition were \$151.21 billion, a decrease of \$7.90 billion from December 2016. This decrease primarily reflected a decrease in cash partially offset by an increase in securities purchased under agreements to resell (reflecting a change in the composition of our GCLA).

As of June 2017, total liabilities in the condensed consolidated statements of financial condition were \$126.38 billion, a decrease of \$8.12 billion from December 2016. This decrease was driven by a decrease in deposits, reflecting a reduction in private bank deposits, net maturities of brokered certificates of deposit and a reduction in institutional deposits, partially offset by an increase in online retail deposits.

Funding Sources

Our primary sources of funding are deposits, collateralized financings, and unsecured borrowings from affiliates. We seek to maintain broad and diversified funding sources across products, programs, tenors and creditors to avoid funding concentrations.

We raise funding through a number of different sources, including:

- Savings and demand deposits sourced through deposit sweep programs with affiliated and third-party broker-dealers, online savings accounts and affiliate deposit accounts;
- Time deposits, substantially all of which are brokered certificates of deposit received through third-party and affiliated brokers and non-brokered certificates of deposit sourced from online retail customers;
- Collateralized financings, such as repurchase agreements and FHLB advances; and
- Unsecured borrowings from affiliates.

Substantially all of our funding is raised in U.S. dollars. We generally distribute our funding products through third-party distributions and private wealth advisors, to a creditor base in a variety of markets and, with respect to our online deposit platform, directly to retail customers. We believe that our relationships with our creditors are critical to our liquidity. Our creditors include individuals, financial institutions, non-financial institutions, corporations and asset managers. We have imposed various internal guidelines to monitor creditor concentration across our funding programs.

Management's Discussion and Analysis

Deposits. Our deposits provide us with a diversified source of liquidity and reduce our reliance on wholesale funding. A growing source of our deposit base is comprised of retail deposits. Deposits are primarily used to finance lending activity, other inventory and a portion of our GCLA. As of June 2017 and December 2016, the Bank's deposits were \$106.06 billion and \$114.99 billion, respectively.

The average annualized interest rate on the Bank's total deposits was 0.96% and 0.70% for the first half of 2017 and 2016, respectively. The table below presents the average annualized interest rate on each type of deposit.

	Six Months Ended June	
	2017	2016
Savings and demand	0.74%	0.43%
Time	1.32%	0.99%

See "Supplemental Financial Information — Distributions of Assets, Liabilities, and Shareholder's Equity" and Note 13 to our condensed consolidated financial statements for further information about deposits.

Collateralized Financings. The Bank funds certain of its inventory on a secured basis by entering into collateralized financing agreements, such as repurchase agreements. The Bank also is a member of the FHLB. Outstanding borrowings from the FHLB were \$1.93 billion and \$2.43 billion as of June 2017 and December 2016, respectively. See Note 10 to our condensed consolidated financial statements for further information about collateralized financings.

We also have access to funding through the Federal Reserve Bank discount window. While we do not rely on this funding in our liquidity planning and stress testing, we maintain policies and procedures necessary to access this funding and we test the discount window borrowing procedures. The table below presents the Bank's collateralized financings in the condensed consolidated statements of financial condition.

	As of	
	June 2017	December 2016
<i>\$ in millions</i>		
Securities sold under agreements to repurchase	\$ 3,014	\$ 310
Secured long-term borrowings	1,428	2,066
Secured short-term borrowings	603	503
Total	\$ 5,045	\$ 2,879

Unsecured Borrowings. The Bank may raise funding through unsecured borrowings primarily from Funding IHC and Group Inc. Group Inc. raises non-deposit unsecured funding and lends to Funding IHC and other affiliates, including consolidated subsidiaries, such as the Bank, to meet those entities' funding needs. This approach enhances the flexibility with which Funding IHC and Group Inc. can meet the funding requirements of the Bank and other Group Inc. subsidiaries. See Note 14 to the condensed consolidated financial statements for further information about our unsecured borrowings.

Outstanding long-term subordinated borrowings includes \$2.00 billion from a \$5.00 billion revolving subordinated loan agreement with Funding IHC as of June 2017. This revolving subordinated loan was assigned by Group Inc. to Funding IHC in May 2017. As of December 2016, outstanding subordinated borrowings between the Bank and Group Inc. were \$2.00 billion. See Note 14 to the condensed consolidated financial statements for further information about our subordinated borrowings.

The table below presents the Bank's unsecured borrowings.

	As of	
	June 2017	December 2016
<i>\$ in millions</i>		
Unsecured long-term borrowings	\$ 2,134	\$ 2,133
Unsecured short-term borrowings	86	120
Total	\$ 2,220	\$ 2,253

Equity Capital Management and Regulatory Capital

Capital adequacy is of critical importance to us. We have in place a comprehensive capital management policy that provides a framework, defines objectives and establishes guidelines to assist us in maintaining the appropriate level and composition of capital in both business-as-usual and stressed conditions.

Equity Capital Management

The Bank has established a comprehensive governance structure for capital management, where capital management activity is overseen by the Bank's Board of Directors (the Bank Board) and the Bank Asset Liability Committee reviews capital levels monthly. Levels of capital usage are controlled principally by setting limits on Bank unsecured funding utilization and/or limits on risk at both the Bank and business levels.

Management's Discussion and Analysis

We determine the appropriate level and composition of our equity capital by considering multiple factors including our current and future consolidated regulatory capital requirements, the results of our capital planning and stress testing processes, capital requirements for resolution planning and other factors such as rating agency guidelines, the business environment and conditions in the financial markets.

As part of our capital management policy, we maintain a contingency capital plan. Our contingency capital plan provides a framework for evaluating and remediating capital deficiencies, specifying potential drivers, mitigants and actions that can be taken to address such deficiencies. Our contingency capital plan also outlines the communication and escalation procedures for internal and external stakeholders in the event of a capital shortfall.

Restrictions on Payments

In addition to required capital, stress testing and resolution planning considerations, the Bank's payment of dividends to Group Inc. is subject to certain restrictions. In addition to limitations on the payment of dividends imposed by federal and state laws, the Federal Reserve Board and the FDIC have the authority to prohibit or limit the payment of dividends by the banking organizations they supervise if, in their opinion, payment of a dividend would constitute an unsafe or unsound practice in light of the financial condition of the banking organization, pursuant to applicable Federal Reserve Board regulations (the amount of dividends paid should be limited to the lesser of the amounts calculated under a recent earnings test and an undivided profits test). During the six months ending June 2017, the Bank paid a dividend of \$500 million to Group Inc. During the year ended December 2016, the Bank did not pay any dividends. Under the Federal Reserve Board regulations referenced above, as of June 2017 and December 2016, the Bank could have declared dividends up to \$3.36 billion and \$4.46 billion, respectively, to Group Inc.

Capital Planning and Stress Testing Process

As part of capital planning, we project sources and uses of capital given a range of business environments, including stressed conditions. Our stress testing process is designed to identify and measure material risks associated with our business activities including market risk, credit risk and operational risk, as well as our ability to generate revenues.

The following is a description of our capital planning and stress testing process.

Capital Planning. Our capital planning process incorporates an assessment of internal capital adequacy with the objective of ensuring that the Bank is appropriately capitalized relative to the risks in our business. We incorporate stress scenarios into our capital planning process with a goal of holding sufficient capital to ensure we remain adequately capitalized in baseline and stressed conditions.

Stress Testing. Our stress tests incorporate our internally designed stress scenarios, including our internally developed severely adverse scenario and those required under DFAST, and are designed to capture our specific vulnerabilities and risks. The rules adopted by the Federal Reserve Board under the Dodd-Frank Act require the Bank to conduct stress tests on an annual basis and publish a summary of our results. The Bank submitted its 2017 DFAST results to the Federal Reserve Board in April 2017 and published a summary of its results in June 2017.

Consolidated Regulatory Capital

The Bank is subject to regulatory capital requirements and calculates its capital ratios in accordance with the risk-based capital and leverage requirements applicable to state member banks, which are based on the Federal Reserve Board's revised risk-based capital and leverage regulations, subject to certain transitional provisions (Revised Capital Framework). These regulations are largely based on the Basel Committee on Banking Supervision's (Basel Committee) capital framework for strengthening international capital standards (Basel III) and also implement certain provisions of the Dodd-Frank Act. Under the Revised Capital Framework, we are an "Advanced approach" banking organization.

We calculate our Common Equity Tier 1 (CET1), Tier 1 capital and Total capital ratios in accordance with (i) the Standardized approach and market risk rules set out in the Revised Capital Framework (together, the Standardized Capital Rules) and (ii) the Advanced approach and market risk rules set out in the Revised Capital Framework (together, the Basel III Advanced Rules) as described in Note 17 to the condensed consolidated financial statements. The lower of each ratio calculated in (i) and (ii) is the ratio against which our compliance with minimum ratio requirements is assessed. Each of the ratios calculated in accordance with the Standardized Capital Rules was lower than those calculated in accordance with the Basel III Advanced Rules and therefore the Standardized Capital ratios were the ratios that applied to us as of June 2017 and December 2016.

Management's Discussion and Analysis

See Note 17 to the condensed consolidated financial statements for further information about our capital ratios as of June 2017 and December 2016, and for further information about the Revised Capital Framework.

Minimum Capital Ratios and Capital Buffers

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

Under the regulatory framework for prompt corrective action applicable to the Bank, in order to meet the quantitative requirements for being a "well-capitalized" depository institution, the Bank must meet higher minimum requirements than the minimum ratios in the table below.

The table below presents our minimum required ratios and "well-capitalized" minimum ratios in accordance with the Revised Capital Framework as of June 2017.

	June 2017 Minimum Ratio	"Well-capitalized" Minimum Ratio
CET1 ratio	5.750%	6.5%
Tier 1 capital ratio	7.250%	8.0%
Total capital ratio	9.250%	10.0%
Tier 1 leverage ratio	4.000%	5.0%

In the table above:

- The minimum capital ratios as of June 2017 reflect (i) the 50% phase-in of the capital conservation buffer of 2.5% and (ii) the countercyclical capital buffer of zero percent.
- Tier 1 leverage ratio is defined as Tier 1 capital divided by quarterly average adjusted total assets (which includes adjustments for goodwill and identifiable intangible assets).
- The Bank was in compliance with its minimum capital requirement and the "well-capitalized" minimum ratios as of June 2017 and December 2016.

The minimum capital ratios applicable to us as of January 2019 will reflect the fully phased-in capital conservation buffer and the countercyclical capital buffer determined by the Federal Reserve Board. The countercyclical capital buffer in the future may differ due to additional guidance from our regulators and/or positional changes.

See Note 17 to the condensed consolidated financial statements for further information about the capital conservation buffer and the countercyclical capital buffer.

Fully Phased-in Capital Ratios

The fully-phased-in CET1, Tier 1 Capital and Total Capital ratios under both the Standardized Capital Rules and the Basel III Advanced Rules are substantially the same as our transitional CET1, Tier 1 Capital and Total Capital ratios under the Standardized Capital Rules and Basel III Advanced Rules as of both June 2017 and December 2016. See Note 17 to the condensed consolidated financial statements for information about our transitional capital ratios.

Supplementary Leverage Ratio

The Revised Capital Framework includes a supplementary leverage ratio requirement for Advanced approach banking organizations. Under amendments to the Revised Capital Framework, the U.S. federal bank regulatory agencies approved a final rule that implements the supplementary leverage ratio aligned with the definition of leverage established by the Basel Committee. The supplementary leverage ratio compares Tier 1 capital to a measure of leverage exposure, which consists of total daily average assets for the quarter, and certain off-balance-sheet exposures less certain balance sheet deductions. Under Federal Reserve Board rules, commencing on January 1, 2018, in order to be considered a "well-capitalized" depository institution, the Bank must have a supplementary leverage ratio of 6.0% or greater.

The table below presents the Bank's supplementary leverage ratio, calculated on a fully phased-in basis.

\$ in millions	For the Three Months Ended or as of	
	June 2017	December 2016
Tier 1 capital	\$ 24,657	\$ 24,479
Total average assets	\$ 157,146	\$ 169,721
Deductions from Tier 1 capital	(13)	(20)
Total adjusted average assets	157,133	169,701
Off-balance-sheet exposures	183,685	163,464
Total supplementary leverage exposure	\$ 340,818	\$ 333,165
Supplementary leverage ratio	7.2%	7.3%

In the table above, the off-balance-sheet exposures were comprised of derivatives, secured financing transactions, commitments and guarantees.

Management's Discussion and Analysis

This supplementary leverage ratio is based on our current interpretation and understanding of the U.S. federal bank regulatory agencies' final rule and may evolve as we discuss the interpretation and application of this rule with our regulators.

Rating Agency Guidelines

The credit rating agencies assign the Bank long- and short-term issuer ratings, as well as ratings on our long-term and short-term bank deposits. They also assign credit ratings to the obligations of Group Inc., which guarantees substantially all of our senior unsecured obligations and deposits, excluding most CDs, outstanding as of June 2017.

The level and composition of our equity capital are among the many factors considered in determining our credit ratings. Each agency has its own definition of eligible capital and methodology for evaluating capital adequacy, and assessments are generally based on a combination of factors rather than a single calculation. See "Risk Management — Liquidity Risk Management — Credit Ratings" for further information about our credit ratings.

Regulatory Matters and Developments

Our activities are subject to significant and evolving regulation. The Dodd-Frank Act, enacted in July 2010, significantly altered the financial regulatory regime within which we operate. In addition, other reforms have been adopted or are being considered by regulators and policy makers. Given that many of the new and proposed rules are highly complex, the full impact of regulatory reform will not be known until the rules are implemented and market practices develop under the final regulations.

There has been increased regulation of, and restrictions on, our activities, including over the counter (OTC) derivatives markets and transactions, particularly related to swaps and security-based swaps.

Resolution Plan

The Bank is required by the FDIC to submit periodic plans that describe our strategy for a rapid and orderly resolution in the event of material financial distress or failure (resolution plan). In June 2017, the Bank received notification from the FDIC that our resolution plan submission date was extended to July 1, 2018, and that the 2016 and 2017 resolution plan requirements will be satisfied by the submission of the 2018 resolution plan.

Group Inc. is required by the Federal Reserve Board and the FDIC to submit a periodic resolution plan and the Bank is considered a material operating entity in GS Group's plan. In June 2017, GS Group submitted its 2017 resolution plan. See "Business — Regulation" in Part I of the 2016 Annual Report for further information about the resolution plan of the Bank.

GS Group's preferred resolution strategy is a variation on a single point of entry strategy in which, in resolution, Group Inc. would enter bankruptcy proceedings but its major subsidiaries, including the Bank, would be recapitalized and receive additional liquidity, as necessary, and wind down (or in the case of asset management entities, be sold) outside of resolution proceedings in an orderly manner.

As part of its resolution planning efforts, GS Group has also established Resolution Capital Adequacy and Positioning, Resolution Liquidity Adequacy and Positioning, and triggers and alerts frameworks. These frameworks are designed to ensure that Group Inc. maintains sufficient loss-absorbing capacity so that its major subsidiaries, including the Bank, would be in a position to execute its preferred resolution strategy and that GS Group maintains sufficient GCLA so that the major subsidiaries, including the Bank, could continue to meet their outflows and operating requirements in a stressed environment. See "Risk Management — Liquidity Risk Management — GCLA Metrics" for further information about our GCLA.

Total Loss-Absorbing Capacity

In December 2016, the Federal Reserve Board adopted a final rule establishing loss-absorbency and related requirements for U.S. bank holding companies that are G-SIBs, such as Group Inc. The rule will be effective in January 2019 with no phase-in period. Although it does not apply to depository institutions, the rule impacts aspects of the operations of depository institutions that are subsidiaries of U.S. G-SIBs, including the Bank. For example, it prohibits Group Inc. from (i) guaranteeing obligations of the Bank if an insolvency or receivership of Group Inc. could give the counterparty the right to exercise a default right (for example, early termination) against the Bank, subject to an exception for guarantees permitted by rules of the U.S. federal banking agencies imposing restrictions on qualified financial contracts (QFCs), which have not yet been adopted; (ii) incurring liabilities guaranteed by the Bank; and (iii) entering into QFCs with any person that is not a subsidiary of Group Inc. Moreover, the Federal Reserve Board has indicated that it is considering imposing total loss absorbing capacity requirements on material operating subsidiaries of U.S. G-SIBs, which may include the Bank.

Management's Discussion and Analysis

Other Regulatory Developments

In September 2016, the final margin rules issued by the U.S. federal bank regulatory agencies and the CFTC for uncleared swaps became effective. The phase-in schedule of the initial and variation margin requirements applicable to a particular swap dealer depends on the level of swap, security-based swap and/or exempt foreign exchange derivative transaction activity of the swap dealer and the relevant counterparty. Under the final rules, the largest swap market counterparties, including the Bank, were required to implement the initial and variation margin requirements for uncleared swaps between those largest counterparties beginning in September 2016. The initial margin requirements will continue to be phased in through 2020. The variation margin requirements became effective for swaps between swap dealers and all relevant financial counterparties, including the Bank, in March 2017. The final rules of the U.S. federal bank regulatory agencies generally apply to inter-affiliate transactions, with limited relief available from initial margin requirements for affiliates.

See “Business — Regulation” in Part I of the 2016 Annual Report for further information about the regulations that may impact the Bank in the future.

Off-Balance-Sheet Arrangements and Contractual Obligations

Off-Balance-Sheet Arrangements

We have various types of off-balance-sheet arrangements that we enter into in the ordinary course of business. Our involvement in these arrangements can take many different forms, including:

- Holding interests in special purpose entities such as mortgage-backed and other asset-backed securitization vehicles;
- Providing guarantees, indemnifications, commitments, and representations and warranties; and
- Entering into interest rate, foreign currency, equity, commodity and credit derivatives, including total return swaps.

We enter into these arrangements primarily in connection with our lending and market-making activities.

Our financial interests in, and derivative transactions with, such nonconsolidated entities are generally accounted for at fair value, in the same manner as our other financial instruments.

The table below presents where information about our various off-balance-sheet arrangements may be found in this Semi-Annual Report. In addition, see Note 3 to the condensed consolidated financial statements for information about our consolidation policies.

Type of Off-Balance-Sheet Arrangement	Disclosure in this Semi-Annual Report
Variable interests and other obligations, including contingent obligations, arising from variable interests in nonconsolidated VIEs	See Note 11 to the condensed consolidated financial statements.
Lending and other commitments	See “Contractual Obligations” below and Note 16 to the condensed consolidated financial statements.
Guarantees	See “Contractual Obligations” below and Note 16 to the condensed consolidated financial statements.
Derivatives	See “Credit Risk Management — Credit Exposures — OTC Derivatives” below and Notes 4, 5, 7 and 16 to the condensed consolidated financial statements.

Contractual Obligations

We have certain contractual obligations which require us to make future cash payments. These contractual obligations include our unsecured long-term borrowings, secured long-term financings, time deposits and contractual interest payments, all of which are included in our condensed consolidated statements of financial condition.

Our obligations to make future cash payments also include certain off-balance-sheet contractual obligations such as commitments, indemnifications and guarantees.

Management's Discussion and Analysis

The table below presents our contractual obligations, commitments and guarantees by type.

\$ in millions	As of	
	June 2017	December 2016
Amounts related to on-balance-sheet obligations		
Time deposits	\$ 25,123	\$ 26,840
Secured long-term financings	\$ 1,428	\$ 2,066
Unsecured long-term borrowings	\$ 2,134	\$ 2,133
Contractual interest payments	\$ 2,116	\$ 2,401
Amounts related to off-balance-sheet arrangements		
Commitments to extend credit	\$ 107,788	\$ 97,865
Contingent and forward starting collateralized agreements	\$ 600	\$ 599
Forward starting collateralized financings	\$ 102	\$ 77
Investment commitments	\$ 760	\$ 767
Other commitments	\$ 439	\$ 448
Derivative guarantees	\$ 161,811	\$ 103,520
Securities lending indemnifications	\$ 43,082	\$ 38,368
Other financial guarantees	\$ 2,446	\$ 2,181

The table below presents our contractual obligations, commitments and guarantees by period of expiration.

\$ in millions	As of June 2017			
	Remainder of 2017	2018 - 2019	2020 - 2021	2022 - Thereafter
Amounts related to on-balance-sheet obligations				
Time deposits	\$ -	\$ 8,190	\$ 8,131	\$ 8,802
Secured long-term financings	\$ -	\$ 928	\$ 500	\$ -
Unsecured long-term borrowings	\$ -	\$ 134	\$ -	\$ 2,000
Contractual interest payments	\$ 260	\$ 932	\$ 543	\$ 381
Amounts related to off-balance-sheet arrangements				
Commitments to extend credit	\$ 6,064	\$ 31,040	\$ 46,153	\$ 24,531
Contingent and forward starting collateralized agreements	\$ 597	\$ 3	\$ -	\$ -
Forward starting collateralized financings	\$ 102	\$ -	\$ -	\$ -
Investment commitments	\$ 49	\$ -	\$ 2	\$ 709
Other commitments	\$ 439	\$ -	\$ -	\$ -
Derivative guarantees	\$ 46,392	\$ 72,183	\$ 24,877	\$ 18,359
Securities lending indemnifications	\$ 43,082	\$ -	\$ -	\$ -
Other financial guarantees	\$ 370	\$ 630	\$ 1,294	\$ 152

In the table above:

- Obligations maturing within one year of our financial statement date or redeemable within one year of our financial statement date at the option of the holders are excluded as they are treated as short-term obligations.

- Obligations that are repayable prior to maturity at our option are reflected at their contractual maturity dates and obligations that are redeemable prior to maturity at the option of the holders are reflected at the earliest dates such options become exercisable.
- Amounts included in the table do not necessarily reflect the actual future cash flow requirements for these arrangements because commitments and guarantees represent notional amounts and may expire unused or be reduced or cancelled at the counterparty's request.
- Due to the uncertainty of the timing and amounts that will ultimately be paid, our liability for unrecognized tax benefits has been excluded. See Note 20 to the condensed consolidated financial statements for further information about our unrecognized tax benefits.
- Contractual interest payments represents estimated future interest payments related to unsecured long-term borrowings, secured long-term financings and time deposits based on applicable interest rates as of June 2017.
- Contingent and forward starting collateralized agreements includes resale agreements, and forward starting collateralized financings includes repurchase and secured lending agreements that settle at a future date, generally within three business days.

See Notes 14 and 16 to the condensed consolidated financial statements for further information about our borrowings and our commitments, contingencies and guarantees, respectively.

Risk Management

Risks are inherent in our business and include liquidity, market, credit, operational, model, legal, regulatory and reputational risks. For further information about our risk management processes, see “— Overview and Structure of Risk Management” below. Our risks include the risks across our risk categories, regions or global businesses, as well as those which have uncertain outcomes and have the potential to materially impact our financial results, our liquidity and our reputation. For further information about our areas of risk, see “— Liquidity Risk Management,” “— Market Risk Management,” “— Credit Risk Management,” “— Operational Risk Management” and “— Model Risk Management” below and “Risk Factors” in Part I of the 2016 Annual Report.

Management's Discussion and Analysis

Certain risk management processes as described in the “— Liquidity Risk Management,” “— Market Risk Management,” “— Credit Risk Management,” “— Operational Risk Management” and “— Model Risk Management” sections below are performed by GS Group at the level of its businesses, products, and revenue producing units which encompass all activities of the Bank. These processes are subject to Bank oversight, either pursuant to a Service Level Agreement between the Bank and certain affiliates, or inclusive of Bank activities. All references in the sections below to businesses, products, and revenue-producing units refer to those of GS Group.

Overview and Structure of Risk Management

Overview

We believe that effective risk management is of primary importance to our success. Accordingly, we have comprehensive risk management processes through which we monitor, evaluate and manage the risks we assume in conducting our activities. These include liquidity, market, credit, operational, model, legal, compliance, regulatory and reputational risk exposures. Our risk management framework, consistent with GS Group, is built around three core components: governance, processes and people.

Governance. Risk management governance starts with the Bank Board which plays an important role in reviewing and approving risk management policies and practices. The Bank Board also receives regular briefings on our risks, including market risk, liquidity risk, credit risk, operational risk and model risk from our independent control and support functions, including the Bank's chief risk officer and chief financial officer, on compliance risk from the Bank's chief compliance officer, and litigation, regulatory proceedings and other matters that may negatively impact our reputation from the Bank's general counsel, a member of both the Bank's and GS Group's Client and Business Standards Committees. The Bank's chief risk officer, as part of the review of our risk portfolio, regularly advises the Bank Board of relevant risk metrics and material exposures. Next, at our most senior levels, our leaders are experienced risk managers, with a sophisticated and detailed understanding of the risks we take.

Our senior management, and senior managers within revenue-producing units and independent control and support functions, lead and participate in risk-oriented committees, including the Bank Risk Committee. Independent control and support functions include Compliance, Controllers, Credit Risk Management and Advisory (Credit Risk Management), Legal, Liquidity Risk Management and Analysis (Liquidity Risk Management), Market Risk Management and Analysis (Market Risk Management), Model Risk Management, Operational Risk Management and Analysis (Operational Risk Management), Operations, Tax, Technology, and Bank Finance working in conjunction with GS Group Treasury.

Our governance structure provides the protocol and responsibility for decision-making on risk management issues and ensures implementation of those decisions. We make extensive use of our risk-related committees that meet regularly and serve as an important means to facilitate and foster ongoing discussions to identify, manage and mitigate risks.

We maintain strong communication about risk and we have a culture of collaboration in decision-making among the revenue-producing units, independent control and support functions, committees and senior management. While we believe that the first line of defense in managing risk rests with the managers in the revenue-producing units, we dedicate extensive resources to independent control and support functions in order to ensure a strong oversight structure and an appropriate segregation of duties. GS Group regularly reinforces its strong culture of escalation and accountability across GS Group divisions and functions, including the Bank.

Processes. We maintain various processes and procedures that are critical components of our risk management. We apply a rigorous framework of limits to control risk across transactions, products, businesses and markets. Bank-wide limits are set by the Bank Board and its committees, with certain levels set by the Bank Risk Committee and monitored on a daily basis. Certain limits, other than regulatory and Bank Board-level limits, may be set at levels that will require periodic adjustment, rather than at levels which reflect our maximum risk appetite. This fosters an ongoing dialogue on risk among revenue-producing units, independent control and support functions, committees, senior management, and the Bank Board, as well as rapid escalation of risk-related matters. See “Liquidity Risk Management,” “Market Risk Management” and “Credit Risk Management” for further information about our risk limits.

Management's Discussion and Analysis

Active management of our positions is another important process. Proactive mitigation of our market and credit exposures minimizes the risk that we will be required to take outsized actions during periods of stress.

We also focus on the rigor and effectiveness of our risk systems. The goal of our risk management technology is to get the right information to the right people at the right time, which requires systems that are comprehensive, reliable and timely. We devote significant time and resources to our risk management technology to ensure that it consistently provides us with complete, accurate and timely information.

People. Even the best technology serves only as a tool for helping to make informed decisions in real time about the risks we are taking. Ultimately, effective risk management requires our people to interpret our risk data on an ongoing and timely basis and adjust risk positions accordingly. In both the revenue-producing units and independent control and support functions, the experience of the professionals, and their understanding of the nuances and limitations of each risk measure, guide us in assessing exposures and maintaining them within prudent levels.

We reinforce a culture of effective risk management through firmwide training and development programs, inclusive of Bank, as well as the way we evaluate performance, and recognize and reward our people. The training and development programs, including certain sessions led by GS Group's most senior leaders, are focused on the importance of risk management, client relationships and reputational excellence. As part of the firmwide annual performance review process, we assess reputational excellence including how an employee exercises good risk management and reputational judgment, and adheres to the code of conduct and compliance policies. The Bank is included in GS Group's review and reward processes which are designed to communicate and reinforce to our professionals the link between behavior and how people are recognized, the need to focus on our clients and our reputation, and the need to always act in accordance with the highest standards.

Structure

Ultimate oversight of risk is the responsibility of the Bank Board. The Bank Board oversees risk both directly and through its Audit Committee and its Risk Committee. Bank Management has established committees for risk oversight and committee membership generally consists of senior managers from both revenue-producing units and independent control and support functions. We have established procedures for these committees to ensure that appropriate information barriers are in place. Our primary risk committees, are described below. All chairs of Bank management-level committees are employees or dual employees of the Bank.

The Bank leverages firmwide and divisional committees, where appropriate, for advice on certain Bank activities. Members of such committees understand their responsibility to review any proposed products, transactions or activities of the Bank and to act in the interest of the Bank. In addition, both Bank committees and firmwide committees have responsibility for considering the impact of transactions and activities on the Bank's reputation.

Membership of our risk committees is reviewed regularly and updated to reflect changes in the responsibilities of the committee members. Accordingly, the length of time that members serve on the respective committees varies as determined by the committee chairs and based on the responsibilities of the members within the Bank.

The Bank's independent control and support functions are responsible for day-to-day oversight or monitoring of risk, as described in greater detail in the following sections. The Bank's Internal Audit is accountable to the Audit Committee of the Bank Board. Internal Audit, which includes professionals with a broad range of audit and industry experience, including risk management expertise, is responsible for independently assessing and validating key controls within the Bank's risk management framework.

Management's Discussion and Analysis

Our risk management governance structure includes the Bank Board Risk Committee, which has ultimate risk management oversight for the Bank, our key risk-related committees, which are described in further detail below, and the independence of our key control and support functions. The Bank operates as a subsidiary of GS Group and, when applicable, the Bank utilizes the structure and expertise of GS Group's firmwide, divisional and regional committees. In addition to its own Bank Committees, the Bank benefits from firmwide, regional and divisional committees for risk management, including the Firmwide Client and Business Standards Committee, Firmwide Risk Committee, GS Group Risk Governance Committee (through delegated authority from the Firmwide Risk Committee), Firmwide Enterprise Risk Committee, the Consumer Lending Credit Policy Committee (CLCPC), the Private Wealth Management Capital Committee (PWMCC), Consumer and Commercial Banking Division Capital Committee, and the Firmwide Capital Committee, and related sub-committees.

The CLCPC supervises all consumer credit risk exposures, and is responsible for establishing the credit risk management requirements and framework for Marcus and other retail lending. The CLCPC has three control side co-chairs, including two of the Bank's deputy chief credit risk officers for retail lending.

Committee Structure

The Bank's committee structure is described as follows:

Bank Management Committee. The Bank Management Committee oversees our activities, including our risk control functions. It provides this oversight directly and through authority delegated to committees it has established. This committee is comprised of our most senior leaders, and is chaired by our chief executive officer.

The Bank Management Committee also serves as the Bank's Client and Business Standards Committee (Bank's CBSC). In its capacity as the Bank's CBSC, the Bank Management Committee also addresses client concerns and incidents, reviews Bank operational and reputational risks, and reviews business practices.

The following are the committees that are principally involved in Bank's risk management:

Bank New Activity Committee. The Bank New Activity Committee (BNAC) is responsible for the review and approval of proposed new activities to be conducted in the Bank. In addition, BNAC may review, at its discretion, previously approved activities that are significant and that have changed in complexity and/or structure or present different reputational and suitability concerns over time to consider whether these activities remain appropriate. The review process may utilize the expertise of the Firmwide New Activity Committee and the Regional New Activity Committees.

Bank Risk Committee. The Bank Risk Committee is responsible for the ongoing monitoring and management of our risks, including but not limited to, market risk, credit risk, liquidity and funding risk, model risk, legal risk, operational risk, and compliance with minimum regulatory capital ratios; internal capital adequacy assessment process; and Dodd-Frank Act stress testing procedures. The risk management methodologies of the Bank Risk Committee and its sub-committees are consistent with those of the Firmwide Risk Committee, as appropriate.

The following are the primary committees that report to the Bank Risk Committee:

- **Bank Investment Committee.** The Bank Investment Committee approves extensions of credit that are intended to be held until repayment and are made for the purpose of achieving certain total economic returns on an individual or portfolio basis (transactions); reviews and approves proposed transactions of the Bank; determines risk tolerance, diversification or other metrics for such transactions; and provides oversight of any such transactions or portfolio of transactions. The Bank Investment Committee provides approval and oversight of debt-related transactions. This Committee also reports to Firmwide Investment Policy Committee.
- **Bank Asset Liability Committee.** The Bank Asset Liability Committee is responsible for the ongoing monitoring and review of the Bank's liquidity and funding risk management, balance sheet planning and asset liability management, compliance with the minimum regulatory capital ratios, interest rate risk monitoring and management and resolution planning.

Management's Discussion and Analysis

Liquidity Risk Management

Overview

Liquidity risk is the risk that we will be unable to fund the Bank or meet our liquidity needs in the event of Bank-specific, firmwide, broader industry, or market liquidity stress events. Liquidity is of critical importance to us, as most of the failures of financial institutions have occurred in large part due to insufficient liquidity. Accordingly, we have in place a comprehensive and conservative set of liquidity and funding policies. Our principal objective is to be able to fund the Bank and to enable our core businesses to continue to serve clients and generate revenues, even under adverse circumstances.

Bank Finance, working in conjunction with GS Group Treasury, has the primary responsibility for assessing, monitoring and managing our liquidity and funding strategy. Bank Finance is independent of the revenue-producing units and reports to the Bank's chief financial officer.

Liquidity Risk Management, which is independent of the revenue-producing units and reports to Bank's chief risk officer, has primary responsibility for control and oversight of the Bank's liquidity risk management framework, including stress testing and limit governance. Liquidity Risk Management fulfills these responsibilities both directly and through use of a Service Level Agreement with GS Group's Liquidity Risk Management function, which reports to GS Group's chief risk officer. Services provided by GS Group's Liquidity Risk Management function are subject to the Bank's risk management policies for any work it performs for the Bank under a Service Level Agreement.

Liquidity Risk Management Principles

We manage liquidity risk according to three principles: (i) hold sufficient excess liquidity in the form of GCLA to cover outflows during a stressed period, (ii) maintain appropriate Asset-Liability Management and (iii) maintain a viable Contingency Funding Plan.

Global Core Liquid Assets. GCLA is liquidity that we maintain to meet a broad range of potential cash outflows and collateral needs in a stressed environment. Our most important liquidity policy is to pre-fund our estimated potential cash and collateral needs during a liquidity crisis and hold this liquidity in the form of unencumbered, highly liquid securities and cash. We believe that the securities held in our GCLA would be readily convertible to cash in a matter of days, through liquidation, by entering into repurchase agreements or from maturities of resale agreements, and that this cash would allow us to meet immediate obligations without needing to sell other assets or depend on additional funding from credit-sensitive markets.

Our GCLA reflects the following principles:

- The first days or weeks of a liquidity crisis are the most critical to a company's survival;
- Focus must be maintained on all potential cash and collateral outflows, not just disruptions to financing flows. Liquidity needs are determined by many factors, including market movements, collateral requirements and client commitments, all of which can change dramatically in a difficult funding environment;
- During a liquidity crisis, credit-sensitive funding, including unsecured borrowings, certain deposits and some types of secured financing agreements, may be unavailable, and the terms (e.g., interest rates, collateral provisions and tenor) or availability of other types of secured financing may change and certain deposits may be withdrawn; and
- As a result of our policy to pre-fund liquidity that we estimate may be needed in a crisis, we hold more cash and unencumbered securities and have larger deposit and borrowings balances than we would otherwise require. We believe that our liquidity is stronger with greater balances of cash and highly liquid unencumbered securities, even though it increases our total assets and our funding costs.

We believe that our GCLA provides us with a resilient source of funds that would be available in advance of potential cash and collateral outflows and gives us significant flexibility in managing through a difficult funding environment.

Management's Discussion and Analysis

Asset-Liability Management. Our liquidity risk management policies are designed to ensure we have a sufficient amount of financing, even when funding markets experience persistent stress. We seek to maintain a diversified funding profile with an appropriate tenor, taking into consideration the characteristics and liquidity profile of our assets and modeled tenor of deposits with no stated maturity.

Our approach to asset-liability management includes:

- Conservatively managing the overall characteristics of our funding book, with a focus on maintaining long-term, diversified sources of funding in excess of our current requirements. See “Balance Sheet and Funding Sources — Funding Sources” for additional details;
- Actively managing and monitoring our asset base, with particular focus on the liquidity, holding period and our ability to fund assets on a secured basis. We assess our funding requirements and our ability to liquidate assets in a stressed environment while appropriately managing risk. This enables us to determine the most appropriate funding products and tenors. See “Balance Sheet and Funding Sources — Balance Sheet Management” for further information about our balance sheet management process; and
- Raising deposits and obtaining other funding sources that have a long contractual or modeled tenor relative to the liquidity profile of our assets. This reduces the risk that our liabilities will come due in advance of our ability to generate liquidity from the sale of our assets.

Our goal is to ensure that we maintain sufficient liquidity to fund our assets and meet our contractual and contingent obligations in normal times as well as during periods of market stress. Funding plans are reviewed and approved by the Bank Asset Liability Committee and Firmwide Finance Committee on a regular basis. In a liquidity crisis, we would first use our GCLA in order to avoid reliance on asset sales (other than our GCLA). However, we recognize that orderly asset sales may be prudent or necessary in a severe or persistent liquidity crisis.

Contingency Funding Plan. The Bank maintains a contingency funding plan to provide a framework for analyzing and responding to a liquidity crisis situation or periods of market stress. The contingency funding plan outlines a list of potential risk factors, key reports and metrics that are reviewed on an ongoing basis to assist in assessing the severity of, and managing through, a liquidity crisis and/or market dislocation. The contingency funding plan also describes in detail the potential responses if our assessments indicate that we have entered a liquidity crisis, which include pre-funding for what we estimate will be the potential cash and collateral needs as well as utilizing secondary sources of liquidity. Mitigants and action items to address specific risks which may arise are also described and assigned to individuals responsible for execution.

The contingency funding plan identifies key groups of individuals to foster effective coordination, control and distribution of information, all of which are critical in the management of a crisis or period of market stress. The contingency funding plan also details the responsibilities of these groups and individuals, which include making and disseminating key decisions, coordinating all contingency activities throughout the duration of the crisis or period of market stress, implementing liquidity maintenance activities and managing internal and external communication.

Liquidity Stress Tests

In order to determine the appropriate size of our GCLA, we use GS Group's internal liquidity model, referred to as the Modeled Liquidity Outflow, which captures and quantifies our liquidity risks. We also consider other factors including, but not limited to, an assessment of our potential intraday liquidity needs through an additional internal liquidity model, referred to as the Intraday Liquidity Model, the results of GS Group's long-term stress testing models, our resolution liquidity models and other applicable regulatory requirements and a qualitative assessment of GS Group's (inclusive of the Bank) condition as well as the financial markets. The results of the Modeled Liquidity Outflow, the Intraday Liquidity Model, the long-term stress testing models and the resolution liquidity models are reported to Bank management on a regular basis.

Management's Discussion and Analysis

Modeled Liquidity Outflow. Our Modeled Liquidity Outflow is based on conducting multiple scenarios that include combinations of market-wide and GS Group (inclusive of the Bank) specific stress. These scenarios are characterized by the following qualitative elements:

- Severely challenged market environments, including low consumer and corporate confidence, financial and political instability, adverse changes in market values, including potential declines in equity markets and widening of credit spreads; and
- A GS Group-specific crisis potentially triggered by material losses, reputational damage, litigation, executive departure, and/or a ratings downgrade.

The following are the critical modeling parameters of the Modeled Liquidity Outflow:

- Liquidity needs over a 30-day scenario;
- A two-notch downgrade of our and/or Group Inc.'s long-term senior unsecured credit ratings;
- A combination of contractual outflows, such as upcoming maturities of unsecured borrowings, and contingent outflows (e.g., actions though not contractually required, we may deem necessary in a crisis). We assume that most contingent outflows will occur within the initial days and weeks of a crisis;
- No issuance of equity or unsecured borrowings;
- No support from additional government funding facilities. Although we have access to funding through the Federal Reserve Bank discount window, we do not assume reliance on additional sources of funding in a liquidity crisis; and
- No asset liquidation, other than the GCLA.

The potential contractual and contingent cash and collateral outflows covered in our Modeled Liquidity Outflow include:

Unsecured Funding

- Contractual: All upcoming maturities of unsecured borrowings and other unsecured funding products. We assume that we will be unable to issue new unsecured borrowings or rollover any maturing borrowings.

Deposits

- Contractual: All upcoming maturities of term deposits. We assume that we will be unable to raise new term deposits or rollover any maturing term deposits.

- Contingent: Partial withdrawals of deposits that have no contractual maturity. The withdrawal assumptions reflect, among other factors, the type of deposit, whether the deposit is insured or uninsured, and our relationship with the depositor.

Secured Funding

- Contractual: A portion of upcoming contractual maturities of secured funding due to either the inability to refinance or the ability to refinance only at wider haircuts (i.e., on terms which require us to post additional collateral). Our assumptions reflect, among other factors, the quality of the underlying collateral, counterparty roll probabilities (our assessment of the counterparty's likelihood of continuing to provide funding on a secured basis at the maturity of the trade) and counterparty concentration.
- Contingent: Adverse changes in the value of financial assets pledged as collateral for financing transactions, which would necessitate additional collateral postings under those transactions.

OTC Derivatives

- Contingent: Collateral postings to counterparties due to adverse changes in the value of our OTC derivatives, excluding those that are cleared and settled through central counterparties (OTC-cleared).
- Contingent: Other outflows of cash or collateral related to OTC derivatives, excluding OTC-cleared, including the impact of trade terminations, collateral substitutions, collateral disputes, loss of rehypothecation rights, collateral calls or termination payments required by a two-notch downgrade in our or Group Inc.'s credit ratings, and collateral that has not been called by counterparties, but is available to them.

Exchange-Traded and OTC-cleared Derivatives

- Contingent: Variation margin postings required due to adverse changes in the value of our outstanding exchange-traded and OTC-cleared derivatives.
- Contingent: An increase in initial margin and guaranty fund requirements by derivative clearing houses.

Unfunded Commitments

- Contingent: Draws on our unfunded commitments. Draw assumptions reflect, among other things, the type of commitment and counterparty.

Other

- Other upcoming large cash outflows, such as tax payments.

Management's Discussion and Analysis

Intraday Liquidity Model. Our Intraday Liquidity Model measures our intraday liquidity needs using a scenario analysis characterized by the same qualitative elements as our Modeled Liquidity Outflow. The model assesses the risk of increased intraday liquidity requirements during a scenario where access to sources of intraday liquidity may become constrained.

The following are key modeling elements of the Intraday Liquidity Model:

- Liquidity needs over a one-day settlement period;
- Delays in receipt of counterparty cash payments;
- A reduction in the availability of intraday credit lines at our third-party clearing agents; and
- Higher settlement volumes due to an increase in activity.

Long-Term Stress Testing. We utilize longer-term stress tests to take a forward view on our liquidity position through prolonged stress periods in which the Bank experiences a severe liquidity stress and recovers in an environment that continues to be challenging. We are focused on ensuring conservative asset-liability management to prepare for a prolonged period of potential stress, seeking to maintain a diversified funding profile with an appropriate tenor, taking into consideration the characteristics and liquidity profile of our assets.

We also perform stress tests on a regular basis as part of our routine risk management processes and conduct tailored stress tests on an ad hoc or product-specific basis in response to market developments.

Model Review and Validation

Bank Finance, working in conjunction with GS Group Treasury, regularly refines the Modeled Liquidity Outflow, Intraday Liquidity Model and other stress testing models to reflect changes in market or economic conditions and GS Group's (inclusive of the Bank's) business mix. Any changes, including model assumptions, are assessed and approved by Liquidity Risk Management.

Model Risk Management is responsible for the independent review and validation of our liquidity models. See "Model Risk Management" for further information about the review and validation of these models.

Limits

We use liquidity limits at various levels and across liquidity risk types to manage the size of our liquidity exposures. Limits are measured relative to acceptable levels of risk given the liquidity risk tolerance of the Bank. The purpose of the limits is to assist senior management in monitoring and controlling our overall liquidity profile.

The Bank Board and the Bank Asset Liability Committee approve liquidity risk limits for the Bank. Limits are reviewed frequently and amended, with required approvals, on a permanent and temporary basis, as appropriate, to reflect changing market or business conditions.

Our liquidity risk limits are monitored by Bank Finance, GS Group Treasury and Liquidity Risk Management. Bank Finance and GS Group Treasury are responsible for identifying and escalating, on a timely basis, instances where limits have been exceeded.

GCLA Metrics

Based on the results of our internal liquidity risk models, described above, as well as our consideration of other factors including, but not limited to, an assessment of our potential intraday liquidity needs and a qualitative assessment of GS Group's (inclusive of the Bank) condition as well as the financial markets, we believe our liquidity position as of both June 2017 and December 2016 was appropriate. As of June 2017 and December 2016, the fair value of certain overnight cash deposits and securities included in our GCLA totaled \$69.42 billion and \$85.35 billion, respectively, and the fair value of our GCLA averaged \$80.90 billion for the six months ended June 2017 and \$79.37 billion for the year ended December 2016. We strictly limit our GCLA to a narrowly defined list of securities and cash because they are highly liquid, even in a difficult funding environment. We do not include other potential sources of excess liquidity in our GCLA, such as less liquid unencumbered securities or committed credit facilities.

The table below presents the average fair value of our GCLA by asset class.

\$ in millions	Average for the	
	Six Months Ended June 2017	Year Ended December 2016
Overnight cash deposits	\$ 68,428	\$ 69,158
U.S. government obligations	442	22
U.S. agency obligations	11,819	9,924
Non-U.S. government obligations	215	270
Total	\$ 80,904	\$ 79,374

Management's Discussion and Analysis

GCLA is composed of (i) certain overnight U.S. cash deposits, (ii) unencumbered U.S. government and agency obligations (including highly liquid U.S. agency mortgage-backed obligations), all of which are eligible as collateral in Federal Reserve open market operations and (iii) certain non-U.S. dollar-dominated government obligations.

We maintain our GCLA to enable us to meet current and potential liquidity requirements. Our Modeled Liquidity Outflow and Intraday Liquidity Model incorporate a consolidated requirement for the Bank. During the second quarter of 2017, in connection with Group Inc.'s resolution plan, Group Inc. transferred substantially all of its GCLA to Funding IHC. Funding IHC is required to provide the necessary liquidity to Group Inc. during the ordinary course of business, and is also obligated to provide capital and liquidity support to certain major subsidiaries, including the Bank, in the event of GS Group's material financial distress or failure. Liquidity held directly by the Bank is intended for use only by the Bank to meet its liquidity requirements and is assumed not to be available to its affiliates, including Group Inc. or Funding IHC, unless (i) legally provided for and (ii) there are no additional regulatory, tax or other restrictions.

Liquidity Regulatory Framework

The final rules on minimum liquidity standards approved by the U.S. federal bank regulatory agencies call for a liquidity coverage ratio (LCR) designed to ensure that banking organizations maintain an adequate level of unencumbered high-quality liquid assets (HQLA) based on expected net cash outflows under an acute short-term liquidity stress scenario. The Bank is required to maintain a minimum LCR of 100%. For the six months ended June 2017, our average LCR exceeded the minimum requirement.

In addition, in the second quarter of 2016, the U.S. federal bank regulatory agencies issued a proposed rule that calls for a net stable funding ratio (NSFR) for large U.S. banking organizations. The proposal would require banking organizations to ensure they have access to stable funding over a one-year time horizon. The proposed NSFR requirement has an effective date of January 1, 2018.

The implementation of these rules, and any amendments adopted by the applicable regulatory authorities, could impact our liquidity and funding requirements and practices in the future.

Credit Ratings

Credit ratings are important when we are competing in certain markets, such as OTC derivatives, and when we seek to engage in longer-term transactions. See "Risk Factors" in Part I of the 2016 Annual Report.

The table below presents the unsecured credit ratings and outlook of the Bank by Fitch, Inc. (Fitch), Moody's Investors Service (Moody's), and Standard & Poor's Rating Services (S&P).

	As of June 2017		
	Fitch	Moody's	S&P
Short-term Debt	F1	P-1	A-1
Long-term Debt	A+	A1	A+
Short-term Bank Deposits	F1+	P-1	N/A
Long-term Bank Deposits	AA-	A1	N/A
Ratings Outlook	Stable	Stable	Stable

We believe our credit ratings are primarily based on the credit rating agencies' assessment of:

- Our status within GS Group and likelihood of GS Group support;
- Our liquidity, market, credit and operational risk management practices;
- The level and variability of our earnings;
- Our capital base;
- Our primary businesses, reputation and management;
- Our corporate governance; and
- The external operating and economic environment, including, in some cases, the assumed level of government support or other systemic considerations, such as potential resolution.

Certain of our derivatives have been transacted under bilateral agreements with counterparties who may require us to post collateral or terminate the transactions based on changes in our and/or Group Inc.'s credit ratings. We assess the impact of these bilateral agreements by determining the collateral or termination payments that would occur assuming a downgrade by all rating agencies. A downgrade by any one rating agency, depending on the agency's relative ratings of the Bank and/or Group Inc. at the time of the downgrade, may have an impact which is comparable to the impact of a downgrade by all rating agencies.

Management's Discussion and Analysis

We manage our GCLA to ensure we would, among other potential requirements, be able to make the additional collateral or termination payments that may be required in the event of a two-notch reduction in our and/or Group Inc.'s long-term credit ratings, as well as collateral that has not been called by counterparties, but is available to them.

The table below presents the additional collateral or termination payments related to our net derivative liabilities under bilateral agreements that could have been called by counterparties in the event of a one-notch and two-notch downgrade in our and/or Group Inc.'s credit ratings.

<i>\$ in millions</i>	As of	
	June 2017	December 2016
Additional collateral or termination payments:		
One-notch downgrade	\$ 177	\$ 165
Two-notch downgrade	\$ 294	\$ 298

Cash Flows

Our cash flows are complex and bear little relation to our net earnings and net assets. Consequently, we believe that traditional cash flow analysis is less meaningful in evaluating our liquidity position than the liquidity and asset-liability management policies described above. Cash flow analysis may, however, be helpful in highlighting certain macro trends and strategic initiatives in our businesses.

Six Months Ended June 2017. Our cash decreased by \$32.36 billion to \$42.31 billion at the end of the first half of 2017. We used \$19.34 billion in net cash from operating activities, which primarily reflects an increase in securities purchased under agreements to resell (reflecting a change in the composition of our GCLA), net of securities sold under agreements to repurchase, and an increase in financial instruments owned and receivables (excluding loans receivable), net of payables. We used \$10.00 billion in net cash from financing activities, primarily from a decrease in private bank deposits, net maturities of brokered certificates of deposit and a reduction in institutional deposits, partially offset by an increase in online retail deposits. We used \$3.02 billion in net cash from investing activities, primarily from an increase in loans receivable.

Six Months Ended June 2016. Our cash increased by \$22.75 billion to \$72.80 billion at the end of the first half of 2016. We generated \$26.09 billion in net cash provided by investing and financing activities primarily from net cash acquired as a result of our acquisition of GE Capital Bank's online deposit platform in April 2016 and growth in private bank deposits. We used \$3.34 billion in net cash for operating activities, which primarily reflects an increase in net receivables and payables from customers and counterparties, brokers, dealers and clearing organizations and loans held for sale.

Market Risk Management

Overview

Market risk is the risk of loss in the value of our positions, as well as certain other financial assets and financial liabilities, due to changes in market conditions. We employ a variety of risk measures, each described in the respective sections below, to monitor market risk. We hold positions primarily for market making for our clients and for our lending activities. Our positions therefore change based on client demands and our lending opportunities. Categories of market risk include the following:

- Interest rate risk: results from exposures to changes in the level, slope and curvature of yield curves, the volatilities of interest rates, prepayment speeds and credit spreads;
- Currency rate risk: results from exposures to changes in spot prices, forward prices and volatilities of currency rates; and
- Equity price risk: results from exposures to changes in prices and volatilities of individual equities, baskets of equities and equity indices.

Market Risk Management, which is independent of the revenue-producing units and reports to Bank's chief risk officer, has primary responsibility for control and oversight of the Bank's market risk management framework. Market Risk Management fulfills these responsibilities both directly and through use of a Service Level Agreement with GS Group's Market Risk Management function, which reports to GS Group's chief risk officer. Services provided by GS Group's Market Risk Management function are subject to the Bank's risk management policies for any work it performs for the Bank under a Service Level Agreement.

Management's Discussion and Analysis

Managers in revenue-producing units and Market Risk Management discuss market information, positions and estimated risk and loss scenarios on an ongoing basis. Managers in revenue-producing units are accountable for managing risk within prescribed limits. These managers have in-depth knowledge of their positions, markets and the instruments available to hedge their exposures.

Market Risk Management Process

We manage our market risk by diversifying exposures, controlling position sizes and establishing economic hedges in related securities or derivatives. This process includes:

- Accurate and timely exposure information incorporating multiple risk metrics;
- A dynamic limit setting framework; and
- Constant communication among revenue-producing units, risk managers and senior management.

Risk Measures. Market Risk Management produces risk measures and monitors them against established market risk limits. These measures reflect an extensive range of scenarios and the results are aggregated at product, business, GS Group and Bank levels.

We use a variety of risk measures to estimate the size of potential losses for both moderate and more extreme market moves over both short-term and long-term time horizons. Our primary risk measures are Value-at-Risk (VaR), which is used for shorter-term periods, and stress tests. Risk reports detail key risks, drivers and changes for each desk and business, and are distributed daily to senior management of both the revenue-producing units and the independent control and support functions.

Value-at-Risk. VaR is the potential loss in value due to adverse market movements over a defined time horizon with a specified confidence level. We typically employ a one-day time horizon with a 95% confidence level. We use a single VaR model which captures risks including interest rates, currency rates and equity prices. As such, VaR facilitates comparison across portfolios of different risk characteristics. VaR also captures the diversification of aggregated risk at the Bank level.

We are aware of the inherent limitations to VaR and therefore use a variety of risk measures in our market risk management process. Inherent limitations to VaR include:

- VaR does not estimate potential losses over longer time horizons where moves may be extreme;
- VaR does not take account of the relative liquidity of different risk positions; and
- Previous moves in market risk factors may not produce accurate predictions of all future market moves.

When calculating VaR, we use historical simulations with full valuation of approximately 70,000 market factors. VaR is calculated at a position level based on simultaneously shocking the relevant market risk factors for that position. We sample from five years of historical data to generate the scenarios for our VaR calculation. The historical data is weighted so that the relative importance of the data reduces over time. This gives greater importance to more recent observations and reflects current asset volatilities, which improves the accuracy of our estimates of potential loss. As a result, even if our positions included in VaR were unchanged, our VaR would increase with increasing market volatility and vice versa.

Given its reliance on historical data, VaR is most effective in estimating risk exposures in markets in which there are no sudden fundamental changes or shifts in market conditions.

Our VaR measure does not include:

- Positions that are best measured and monitored using sensitivity measures; and
- The impact of changes in counterparty and our own credit spreads on derivatives, as well as changes in our own credit spreads on unsecured borrowings for which the fair value option was elected.

We perform daily backtesting of the VaR model (i.e., comparing daily net revenues for positions included in VaR to the VaR measure calculated as of the prior business day) at the Bank and business level.

Stress Testing. Stress testing is a method of determining the effect of various hypothetical stress scenarios. We use stress testing to examine risks of specific portfolios as well as the potential impact of our significant risk exposures. We use a variety of stress testing techniques to calculate the potential loss from a wide range of market moves on our portfolios, including sensitivity analysis, scenario analysis and stress tests. The results of our various stress tests are analyzed together for risk management purposes.

Management's Discussion and Analysis

Sensitivity analysis is used to quantify the impact of a market move in a single risk factor across all positions (e.g., equity prices or credit spreads) using a variety of defined market shocks, ranging from those that could be expected over a one-day time horizon up to those that could take many months to occur. We also use sensitivity analysis to quantify the impact of the default of any single entity, which captures the risk of large or concentrated exposures.

Scenario analysis is used to quantify the impact of a specified event, including how the event impacts multiple risk factors simultaneously. When conducting scenario analysis, we typically consider a number of possible outcomes for each scenario, ranging from moderate to severely adverse market impacts. In addition, these stress tests are constructed using both historical events and forward-looking hypothetical scenarios.

Bank stress testing combines market, credit, operational and liquidity risks into a single combined scenario. Bank stress tests are primarily used to assess capital adequacy as part of our capital planning and stress testing process; however, we also ensure that Bank stress testing is integrated into our risk governance framework. This includes selecting appropriate scenarios to use for our capital planning and stress testing process. See "Equity Capital Management and Regulatory Capital — Equity Capital Management" for further information.

Unlike VaR measures, which have an implied probability because they are calculated at a specified confidence level, there is generally no implied probability that our stress test scenarios will occur. Instead, stress tests are used to model both moderate and more extreme moves in underlying market factors. When estimating potential loss, we generally assume that our positions cannot be reduced or hedged (although experience demonstrates that we are generally able to do so).

Stress test scenarios are conducted on a regular basis as part of our routine risk management process and on an ad hoc basis in response to market events or concerns. Stress testing is an important part of our risk management process because it allows us to quantify our exposure to tail risks, highlight potential loss concentrations, undertake risk/reward analysis, and assess and mitigate our risk positions.

Limits. We use risk limits at various levels (including Bank, business and product) to govern risk appetite by controlling the size of our exposures to market risk. Limits are set based on VaR and on a range of stress tests relevant to our exposures. Limits are reviewed frequently and amended on a permanent or temporary basis to reflect changing market conditions, business conditions or tolerance for risk. The Bank Board Risk Committee and Bank Risk Committee approve market risk limits and sublimits at the Bank, business and product levels, consistent with our risk appetite.

The purpose of the firmwide limits is to assist senior management in controlling our overall risk profile. Sub-limits are set below the approved level of risk limits. Sub-limits set the desired maximum amount of exposure that may be managed by any particular business on a day-to-day basis without additional levels of senior management approval, effectively leaving day-to-day decisions to individual desk managers and traders. Accordingly, sub-limits are a management tool designed to ensure appropriate escalation rather than to establish maximum risk tolerance. Sub-limits also distribute risk among various businesses in a manner that is consistent with their level of activity and client demand, taking into account the relative performance of each area.

Our market risk limits are monitored daily by Market Risk Management, which is responsible for identifying and escalating, on a timely basis, instances where limits have been exceeded.

When a risk limit has been exceeded (e.g., due to positional changes or changes in market conditions, such as increased volatilities or changes in correlations), it is escalated to the relevant senior managers in Market Risk Management, Bank chief risk officer and Bank Risk Committee. Such instances are remediated by an exposure reduction and/or a temporary or permanent increase to the risk limit.

Model Review and Validation

Our VaR and stress testing models are regularly reviewed by Market Risk Management and enhanced in order to incorporate changes in the composition of positions included in our market risk measures, as well as variations in market conditions. Prior to implementing significant changes to our assumptions and/or models, Model Risk Management performs model validations. Significant changes to our VaR and stress testing models are reviewed with GS Group's chief risk officer and GS Group's chief financial officer, and approved by GS Group Firmwide Risk Committee.

See "Model Risk Management" for further information about the review and validation of these models.

Management's Discussion and Analysis

Systems

GS Group has made a significant investment in technology to monitor market risk including:

- An independent calculation of VaR and stress measures;
- Risk measures calculated at individual position levels;
- Attribution of risk measures to individual risk factors of each position;
- The ability to report many different views of the risk measures (e.g., by desk, business or product type); and
- The ability to produce ad hoc analyses in a timely manner.

Metrics

We analyze VaR at the Bank level and a variety of more detailed levels, including by risk category, business, and region. The tables below present average daily VaR and period-end VaR, as well as the high and low VaR for the period. Diversification effect in the tables below represents the difference between total VaR and the sum of the VaRs for the two risk categories. This effect arises because the two market risk categories are not perfectly correlated.

The table below presents average daily VaR by risk category.

\$ in millions	Six Months Ended June	
	2017	2016
Interest rates	\$ 23	\$ 19
Currency rates	4	6
Diversification effect	(5)	(5)
Total	\$ 22	\$ 20

Our average daily VaR increased to \$22 million for the first half of 2017 from \$20 million for the first half of 2016, primarily reflecting an increase in the interest rates category due to increased exposures.

The table below presents period-end VaR by risk category.

\$ in millions	As of	
	June 2017	December 2016
Interest rates	\$ 16	\$ 20
Currency rates	4	3
Diversification effect	(3)	(4)
Total	\$ 17	\$ 19

Our daily VaR decreased to \$17 million as of June 2017 from \$19 million as of December 2016, primarily reflecting a decrease in the interest rates category primarily due to reduced volatility.

During both the first half of 2017 and the year ended December 2016, the Bank's VaR risk limit was not exceeded, raised or reduced.

The table below presents high and low VaR by risk category.

\$ in millions	Six Months Ended June 2017	
	High	Low
Interest rates	\$ 32	\$ 16
Currency rates	8	2

The high and low total VaR was \$32 million and \$16 million, respectively, for the six months ended June 2017.

Sensitivity Measures

Certain portfolios and individual positions are not included in VaR because VaR is not the most appropriate risk measure. Other sensitivity measures we use to analyze market risk are described below.

10% Sensitivity Measures. The table below presents market risk for positions, accounted for at fair value, that are not included in VaR by asset category. The market risk of these positions is determined by estimating the potential reduction in net revenues of a 10% decline in the value of these positions.

\$ in millions	As of	
	June 2017	December 2016
Equity	\$ 32	\$ 31
Debt	831	837
Total	\$ 863	\$ 868

In the table above:

- Equity positions relate to investments in qualified affordable housing projects.
- Debt positions include loans backed by commercial and residential real estate, corporate bank loans and other corporate debt.
- Equity and debt funded positions are reflected in our condensed consolidated statements of financial condition in "Financial instruments owned." See Note 6 to the condensed consolidated financial statements for further information about cash instruments.

Management's Discussion and Analysis

- These measures do not reflect diversification benefits across asset categories or across other market risk measures.

Interest Rate Sensitivity. Loans receivable that are held for investment as of June 2017 and December 2016 were \$39.03 billion and \$36.07 billion, respectively, substantially all of which had floating interest rates. As of June 2017 and December 2016, the estimated sensitivity to a 100 basis point increase in interest rates on such loans was \$361 million and \$335 million, respectively, of additional interest income over a twelve-month period, which does not take into account the potential impact of an increase in costs to fund such loans. See Note 9 to the condensed consolidated financial statements for further information about loans receivable that are held for investment.

Other Market Risk Considerations

As of June 2017 and December 2016, we had commitments and held loans for which GS Group has obtained credit loss protection from Sumitomo Mitsui Financial Group, Inc. See Note 16 to the condensed consolidated financial statements for further information about such lending commitments.

Credit Risk Management

Overview

Credit risk represents the potential for loss due to the default or deterioration in credit quality of a counterparty (e.g., an OTC derivatives counterparty or a borrower) or an issuer of securities or other instruments we hold. Our exposure to credit risk comes mostly from client transactions in loans and lending commitments and OTC derivatives. Credit risk also comes from cash placed with banks, securities financing transactions (i.e., resale and repurchase agreements) and receivables from brokers, dealers, clearing organizations, customers and counterparties.

Credit Risk Management, which is independent of the revenue-producing units and reports to Bank's chief risk officer, has primary responsibility for control and oversight of the Bank's credit risk management framework. Credit Risk Management fulfills these responsibilities both directly and through use of a Service Level Agreement with GS Group's Credit Risk Management function, which reports to GS Group's chief risk officer. Services provided by GS Group's Credit Risk Management function are subject to the Bank's risk management policies for any work it performs for the Bank under a Service Level Agreement.

In addition to Credit Risk Management approval, all loans to which the Bank commits that are in excess of defined thresholds must also be approved by a Bank risk officer. The Bank Risk Committee approves the Bank's credit policies. In addition, we hold other positions that give rise to credit risk (e.g., bonds held in our inventory and secondary bank loans). These credit risks are captured as a component of market risk measures, which are monitored and managed by Market Risk Management, consistent with other positions. We also enter into derivatives to manage market risk exposures. Such derivatives also give rise to credit risk, which is monitored and managed by Credit Risk Management.

Credit Risk Management Process

Effective management of credit risk requires accurate and timely information, a high level of communication and knowledge of customers, countries, industries and products. Our process for managing credit risk includes:

- Approving transactions and setting and communicating credit exposure limits;
- Establishing or approving underwriting standards, including continuous review and refinement in connection with our lending activities;
- Monitoring compliance with established credit exposure limits;
- Assessing the likelihood that a counterparty will default on its payment obligations;
- Measuring our current and potential credit exposure and losses resulting from counterparty default;
- Reporting of credit exposures to Bank senior management, the Bank Board and regulators;
- Using credit risk mitigants, including collateral and hedging; and
- Communicating and collaborating with other independent control and support functions such as operations, legal and compliance.

Management's Discussion and Analysis

As part of the risk assessment process, Credit Risk Management performs credit reviews, which include initial and ongoing analyses of our counterparties. The Bank employs well-defined underwriting standards and policies, which seek to mitigate credit risk through analysis of a borrower's credit history, financial information, cash flow, sustainability of liquidity and collateral quality adequacy, if applicable. For substantially all of our credit exposures, the core of our process is an annual counterparty credit review. A credit review is an independent analysis of the capacity and willingness of a counterparty to meet its financial obligations, resulting in an internal credit rating. The determination of internal credit ratings also incorporates assumptions with respect to the nature of and outlook for the counterparty's industry, and the economic environment. Senior personnel within Credit Risk Management, with expertise in specific industries, inspect and approve credit reviews and internal credit ratings.

Our risk assessment process may also include, where applicable, reviewing certain key metrics, such as delinquency status, collateral values, credit scores and other risk factors.

GS Group's global credit risk management systems capture credit exposure to individual counterparties and on an aggregate basis to counterparties and their subsidiaries (economic groups). These systems also provide management with comprehensive information on our aggregate credit risk by product, internal credit rating, industry, country and region.

Risk Measures and Limits

We measure our credit risk based on the potential loss in the event of non-payment by a counterparty using current and potential exposure. For loans and lending commitments, the primary measure is a function of the notional amount of the position. For derivatives and securities financing transactions, current exposure represents the amount presently owed to us after taking into account applicable netting and collateral arrangements while potential exposure represents our estimate of the future exposure that could arise over the life of a transaction based on market movements within a specified confidence level. Potential exposure also takes into account netting and collateral arrangements.

We use credit limits at various levels (e.g., counterparties including affiliates, economic group, industry and country) as well as underwriting standards to control the size and nature of our credit exposures. Limits for counterparties and economic groups are reviewed regularly and revised to reflect changing risk appetites for a given counterparty or group of counterparties. Limits for industries and countries are based on our risk tolerance and are designed to allow for regular monitoring, review, escalation and management of credit risk concentrations.

The Bank Board Risk Committee and Bank Risk Committee approve credit risk limits at the Bank, business and product levels. Credit Risk Management (through delegated authority from the GS Group Risk Governance Committee, and through its Service Level Agreement with the Bank) sets credit limits for individual counterparties (including affiliates), economic groups, industries and countries. Policies authorized by the Firmwide Risk Committee, the GS Group Risk Governance Committee and the GS Group Credit Policy Committee prescribe the level of formal approval required for us to assume credit exposure to a counterparty across all product areas, taking into account any applicable netting provisions, collateral or other credit risk mitigants.

Stress Tests

We use regular stress tests to calculate the credit exposures, including potential concentrations that would result from applying shocks to counterparty credit ratings or credit risk factors (e.g., currency rates, credit spreads, interest rates, equity prices). These shocks include a wide range of moderate and more extreme market movements. Some of our stress tests include shocks to multiple risk factors, consistent with the occurrence of a severe market or economic event.

Unlike potential exposure, which is calculated within a specified confidence level, with a stress test there is generally no assumed probability of these events occurring.

We perform stress tests on a regular basis as part of our routine risk management processes and conduct tailored stress tests on an ad hoc basis in response to market developments. Stress tests are conducted jointly with our market and liquidity risk functions.

Model Review and Validation

Our potential credit exposure and stress testing models, and any changes to such models or assumptions, are reviewed by Model Risk Management. See "Model Risk Management" for further information about the review and validation of these models.

Management's Discussion and Analysis

Risk Mitigants

To reduce our credit exposures on loans and lending commitments, depending on the credit quality of the borrower and other characteristics of the transaction, we employ a variety of potential risk mitigants. Risk mitigants include collateral provisions, guarantees, covenants, structural seniority of the bank loan claims and, for certain lending commitments, provisions in the legal documentation that allow us to adjust loan amounts, pricing, structure and other terms as market conditions change. The type and structure of risk mitigants employed can significantly influence the degree of credit risk involved in a loan or lending commitment.

For derivatives and securities financing transactions, we may enter into netting agreements with counterparties that permit us to offset receivables and payables with such counterparties. We may also reduce credit risk with counterparties by entering into agreements that enable us to obtain collateral from them on an upfront or contingent basis and/or to terminate transactions if the counterparty's credit rating falls below a specified level. We monitor the fair value of the collateral on a daily basis to ensure that our credit exposures are appropriately collateralized. We seek to minimize exposures where there is a significant positive correlation between the creditworthiness of our counterparties and the market value of collateral we receive.

When we do not have sufficient visibility into a counterparty's financial strength or when we believe a counterparty requires support from its parent, we may obtain third-party guarantees of the counterparty's obligations. We may also mitigate our credit risk using credit derivatives or participation agreements.

Credit Exposures

As of June 2017, our aggregate credit exposure decreased as compared with December 2016, primarily reflecting a decrease in cash deposits with central banks partially offset by an increase in loans and lending commitments. The percentage of our credit exposures arising from non-investment-grade counterparties (based on our internally determined public rating agency equivalents) increased as compared with December 2016, reflecting a decrease in investment-grade credit exposure related to cash deposits with central banks and an increase in non-investment-grade loans and lending commitments.

During the six months ended June 2017, the number of counterparty defaults remained the same as compared with the same prior year period, and such defaults primarily occurred within loans and lending commitments. The total number of counterparty defaults remained low, representing less than 0.5% of all counterparties. Estimated losses associated with counterparty defaults were lower compared with the same prior year period and were not material to the Bank. Our credit exposures are described further below.

Cash. Our credit exposure on cash arises from our unrestricted cash, and includes both interest-bearing and non-interest-bearing deposits. To mitigate the risk of credit loss, we place substantially all of our deposits with highly-rated banks and central banks. Unrestricted cash was \$42.01 billion and \$74.42 billion as of June 2017 and December 2016, respectively, and excludes cash segregated for regulatory and other purposes of \$298 million and \$252 million as of June 2017 and December 2016, respectively.

OTC Derivatives. Our credit exposure on OTC derivatives arises primarily from our market-making activities. As a market maker, we enter into derivative transactions to provide liquidity to clients and to facilitate the transfer and hedging of their risks. We also enter into derivatives to manage market risk exposures. We manage our credit exposure on OTC derivatives using the credit risk process, measures, limits and risk mitigants described above.

Derivatives are reported on a net-by-counterparty basis (i.e., the net payable or receivable for derivative assets and liabilities for a given counterparty) when a legal right of setoff exists under an enforceable netting agreement. Derivatives are accounted for at fair value, net of cash collateral received or posted under enforceable credit support agreements. We generally enter into OTC derivatives transactions under bilateral collateral arrangements that require the daily exchange of collateral. As credit risk is an essential component of fair value, we include a credit valuation adjustment (CVA) in the fair value of derivatives to reflect counterparty credit risk, as described in Note 7 to the condensed consolidated financial statements. CVA is a function of the present value of expected exposure, the probability of counterparty default and the assumed recovery upon default.

Management's Discussion and Analysis

The table below presents the distribution of our exposure to OTC derivatives by tenor, both before and after the effect of collateral and netting agreements.

<i>\$ in millions</i>	Investment-Grade	Non-Investment-Grade / Unrated	Total
As of June 2017			
Less than 1 year	\$ 5,641	\$ 323	\$ 5,964
1 - 5 years	14,931	485	15,416
Greater than 5 years	48,911	758	49,669
Total	69,483	1,566	71,049
Netting	(61,305)	(290)	(61,595)
OTC derivative assets	\$ 8,178	\$ 1,276	\$ 9,454
Net credit exposure	\$ 6,262	\$ 1,261	\$ 7,523
As of December 2016			
Less than 1 year	\$ 5,895	\$ 195	\$ 6,090
1 - 5 years	15,294	298	15,592
Greater than 5 years	48,327	501	48,828
Total	69,516	994	70,510
Netting	(59,842)	(108)	(59,950)
OTC derivative assets	\$ 9,674	\$ 886	\$ 10,560
Net credit exposure	\$ 7,529	\$ 884	\$ 8,413

In the table above:

- Tenor is based on expected duration for mortgage-related credit derivatives and generally on remaining contractual maturity for other derivatives.
- Receivable and payable balances with the same counterparty in the same tenor category are netted within such tenor category.
- Receivable and payable balances for the same counterparty across tenor categories are netted under enforceable netting agreements, and cash collateral received is netted under enforceable credit support agreements.
- Net credit exposure represents OTC derivative assets, included in "Financial instruments owned," less cash collateral and the fair value of securities collateral, primarily U.S. government and agency obligations and non-U.S. government and agency obligations, received under credit support agreements, which management considers when determining credit risk, but such collateral is not eligible for netting under U.S. GAAP.

The tables below present the distribution of our exposure to OTC derivatives by tenor and our internally determined public rating agency equivalents.

<i>\$ in millions</i>	Investment-Grade				Total
	AAA	AA	A	BBB	
As of June 2017					
Less than 1 year	\$ 24	\$ 1,484	\$ 3,379	\$ 754	\$ 5,641
1 - 5 years	440	4,100	8,193	2,198	14,931
Greater than 5 years	922	24,812	17,230	5,947	48,911
Total	1,386	30,396	28,802	8,899	69,483
Netting	(211)	(27,643)	(25,127)	(8,324)	(61,305)
OTC derivative assets	\$ 1,175	\$ 2,753	\$ 3,675	\$ 575	\$ 8,178
Net credit exposure	\$ 1,175	\$ 2,285	\$ 2,289	\$ 513	\$ 6,262
As of December 2016					
Less than 1 year	\$ 4	\$ 818	\$ 4,038	\$ 1,035	\$ 5,895
1 - 5 years	670	4,051	8,124	2,449	15,294
Greater than 5 years	1,034	26,140	12,893	8,260	48,327
Total	1,708	31,009	25,055	11,744	69,516
Netting	(337)	(28,662)	(19,795)	(11,048)	(59,842)
OTC derivative assets	\$ 1,371	\$ 2,347	\$ 5,260	\$ 696	\$ 9,674
Net credit exposure	\$ 1,371	\$ 1,870	\$ 3,673	\$ 615	\$ 7,529

<i>\$ in millions</i>	Non-Investment-Grade / Unrated		Total
	BB or lower	Unrated	
As of June 2017			
Less than 1 year	\$ 180	\$ 143	\$ 323
1 - 5 years	482	3	485
Greater than 5 years	756	2	758
Total	1,418	148	1,566
Netting	(290)	–	(290)
OTC derivative assets	\$ 1,128	\$ 148	\$ 1,276
Net credit exposure	\$ 1,113	\$ 148	\$ 1,261
As of December 2016			
Less than 1 year	\$ 149	\$ 46	\$ 195
1 - 5 years	293	5	298
Greater than 5 years	499	2	501
Total	941	53	994
Netting	(106)	(2)	(108)
OTC derivative assets	\$ 835	\$ 51	\$ 886
Net credit exposure	\$ 833	\$ 51	\$ 884

Management's Discussion and Analysis

Lending and Financing Activities. We manage our lending and financing activities using the credit risk process (including adherence to product underwriting standards), measures, limits and risk mitigants described above. Other lending positions, including secondary trading positions, are risk-managed as a component of market risk.

- **Lending Activities.** Our lending activities include lending to investment-grade and non-investment-grade institutional and corporate borrowers. Loans and lending commitments associated with these activities are principally used for operating liquidity and general corporate purposes or in connection with contingent acquisitions. Corporate loans may be secured or unsecured, depending on the loan purpose, the risk profile of the borrower and other factors. Our lending activities also include extending loans to borrowers that are secured by commercial and other real estate. See the tables below for further information about our credit exposures associated with these lending activities.
- **Securities Financing Transactions.** We enter into securities financing transactions in order to, among other things, facilitate client activities and acquire securities to cover short positions. We bear credit risk related to resale agreements only to the extent that cash advanced or the value of securities pledged or delivered to the counterparty exceeds the value of the collateral received. We also have credit exposure on repurchase agreements to the extent that the value of securities pledged or delivered to the counterparty for these transactions exceeds the amount of cash or collateral received. Securities collateral obtained for securities financing transactions primarily includes U.S. government and agency obligations. We had approximately \$79 million and \$28 million as of June 2017 and December 2016, respectively, of credit exposure related to securities financing transactions reflecting both netting agreements and collateral that management considers when determining credit risk.

- **Other Credit Exposures.** We are exposed to credit risk from our receivables from customers and counterparties, brokers, dealers and clearing organizations. These receivables are primarily comprised of initial cash margin placed with clearing organizations and receivables related to sales of loans which have traded, but not yet settled. These receivables generally have minimal credit risk due to the short-term nature of receivables related to loan settlements and the low probability of clearing organization default. Our net credit exposure related to these activities was approximately \$3.29 billion and \$2.51 billion as of June 2017 and December 2016, respectively, and was primarily comprised of initial margin (both cash and securities) placed with investment-grade clearing organizations. The regional breakdown of our net credit exposure related to these activities was approximately 12% and 12% in the Americas, approximately 88% and 87% in Europe, Middle East and Africa (EMEA) and approximately 0% and 1% in Asia as of June 2017 and December 2016, respectively.

In addition, we extend other loans and lending commitments to our private wealth management clients that are primarily secured by residential real estate, securities or other assets, as well as purchase loans backed by residential real estate and consumer loans. The fair value of the collateral received against such loans and lending commitments generally exceeds their carrying value. We also extend unsecured loans to individuals through Marcus. The gross exposure related to the loans and lending commitments described above was approximately \$22.49 billion and \$22.09 billion as of June 2017 and December 2016, respectively. The regional breakdown of our net credit exposure related to these activities was substantially all concentrated in the Americas as of both June 2017 and December 2016.

Management's Discussion and Analysis

Credit Exposure by Industry, Region and Credit Quality

The tables below present our credit exposure related to cash, OTC derivatives, and loans and lending commitments (excluding credit exposures described above in "Securities Financing Transactions" and "Other Credit Exposures") broken down by industry, region and credit quality. In the tables below, substantially all cash is held with the Federal Reserve Bank.

\$ in millions	Cash as of	
	June 2017	December 2016
Credit Exposure by Industry		
Financial Institutions	\$ 572	\$ 231
Sovereign	41,436	74,186
Total	\$ 42,008	\$ 74,417
Credit Exposure by Region		
Americas	\$ 41,820	\$ 74,327
EMEA	157	31
Asia	31	59
Total	\$ 42,008	\$ 74,417
Credit Exposure by Credit Quality (Credit Rating Equivalent)		
AAA	\$ 41,436	\$ 74,186
AA	204	105
A	280	87
BBB or lower	88	39
Total	\$ 42,008	\$ 74,417

\$ in millions	OTC Derivatives as of	
	June 2017	December 2016
Credit Exposure by Industry		
Funds	\$ 1,022	\$ 1,564
Financial Institutions	3,359	3,806
Consumer, Retail & Healthcare	152	41
Sovereign	516	638
Municipalities & Nonprofit	2,495	2,603
Natural Resources & Utilities	482	553
Real Estate	34	7
Technology, Media & Telecommunications	533	336
Diversified Industrials	466	511
Other (including Special Purpose Vehicles)	395	501
Total	\$ 9,454	\$ 10,560
Credit Exposure by Region		
Americas	\$ 6,286	\$ 7,826
EMEA	2,774	2,406
Asia	394	328
Total	\$ 9,454	\$ 10,560
Credit Exposure by Credit Quality (Credit Rating Equivalent)		
AAA	\$ 1,175	\$ 1,371
AA	2,753	2,348
A	3,675	5,259
BBB	575	696
BB or lower	1,128	835
Unrated	148	51
Total	\$ 9,454	\$ 10,560

\$ in millions	Loans and Lending Commitments as of	
	June 2017	December 2016
Credit Exposure by Industry		
Funds	\$ 4,372	\$ 3,595
Financial Institutions	9,185	10,379
Consumer, Retail & Healthcare	36,898	26,740
Sovereign	483	479
Municipalities & Nonprofit	663	709
Natural Resources & Utilities	19,221	20,416
Real Estate	9,838	8,591
Technology, Media & Telecommunications	23,683	25,825
Diversified Industrials	15,989	15,358
Other (including Special Purpose Vehicles)	13,942	9,747
Total	\$ 134,274	\$ 121,839
Credit Exposure by Region		
Americas	\$ 110,711	\$ 99,406
EMEA	21,364	20,820
Asia	2,199	1,613
Total	\$ 134,274	\$ 121,839
Credit Exposure by Credit Quality (Credit Rating Equivalent)		
AAA	\$ 2,980	\$ 3,135
AA	8,081	7,554
A	25,479	26,101
BBB	43,633	38,761
BB or lower	53,322	46,136
Unrated	779	152
Total	\$ 134,274	\$ 121,839

Operational Risk Management

Overview

Operational risk is the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events. Our exposure to operational risk arises from routine processing errors as well as extraordinary incidents, such as major systems failures or legal and regulatory matters.

Potential types of loss events related to internal and external operational risk include:

- Clients, products and business practices;
- Execution, delivery and process management;
- Business disruption and system failures;
- Employment practices and workplace safety;
- Damage to physical assets;
- Internal fraud; and
- External fraud.

Management's Discussion and Analysis

Operational Risk Management, which is independent of the revenue-producing units and reports to Bank's chief risk officer, has primary responsibility for development and implementation of the Bank's operational risk management framework. Operational Risk Management fulfills these responsibilities both directly and through use of a Service Level Agreement with GS Group's Operational Risk Management function, which reports to GS Group's chief risk officer. Services provided by GS Group's Operational Risk Management function are subject to the Bank's risk management policies for any work it performs for the Bank under a Service Level Agreement.

Operational Risk Management Process

Managing operational risk requires timely and accurate information as well as a strong control culture of compliance. We seek to manage our operational risk through:

- Training, supervision and development of our people;
- Active participation of senior management in identifying and mitigating key operational risks across the Bank;
- Independent control and support functions that monitor operational risk on a daily basis, and implementation of extensive policies and procedures, and controls designed to prevent the occurrence of operational risk events;
- Proactive communication between revenue-producing units and independent control and support functions; and
- A network of systems to facilitate the collection of data used to analyze and assess our operational risk exposure.

We combine top-down and bottom-up approaches to manage and measure operational risk. From a top-down perspective, senior management assesses Bank and business-level operational risk profiles. From a bottom-up perspective, revenue-producing units and independent control and support functions at the Bank are responsible for risk identification and risk management on a day-to-day basis, including escalating operational risks to senior management.

Our operational risk management framework is in part designed to comply with the operational risk measurement rules under the Revised Capital Framework and has evolved based on the changing needs of our businesses and regulatory guidance.

Our operational risk management framework comprises the following practices:

- Risk identification and assessment;
- Risk measurement; and
- Risk monitoring and reporting.

Internal Audit performs an independent review of our operational risk management framework, including our key controls, processes and applications, on an annual basis to assess the effectiveness of our framework.

The Bank expanded its existing risk management platform and controls to incorporate the additional employees, vendors, technology, call center and compliance controls, including the expansion of fraud prevention, anti-money laundering and consumer compliance considerations, related to the growing number of retail customers as a result of the establishment of Marcus and other new business initiatives.

Risk Identification and Assessment

The core of our operational risk management framework is risk identification and assessment. We have a comprehensive data collection process, which is in line with GS Group's policies and procedures, for operational risk events.

The Bank adheres to GS Group's policies that require revenue-producing units and independent control and support functions to report and escalate operational risk events. When operational risk events are identified, the policies require that the events be documented and analyzed to determine whether changes are required in our systems and/or processes to further mitigate the risk of future events.

In addition, the GS Group systems capture internal operational risk event data, key metrics such as transaction volumes, and statistical information such as performance trends. We use an internally developed operational risk management application to aggregate and organize this information. One of GS Group's key risk identification and assessment tools is an operational risk and control self-assessment process which is performed by managers from both revenue-producing units and independent control and support functions. This process consists of the identification and rating of operational risks, on a forward-looking basis, and the related controls. The results from this process are analyzed to evaluate operational risk exposures and identify businesses, activities or products with heightened levels of operational risk.

Management's Discussion and Analysis

Risk Measurement

We measure our operational risk exposure over a twelve-month time horizon using both statistical modeling and scenario analyses, which involve qualitative assessments of the potential frequency and extent of potential operational risk losses, for each business. Operational risk measurement incorporates qualitative and quantitative assessments of factors including:

- Internal and external operational risk event data;
- Assessments of internal controls;
- Evaluations of the complexity of business activities;
- The degree of and potential for automation in processes;
- New activity information;
- The legal and regulatory environment;
- Changes in the markets for our products and services, including the diversity and sophistication of our customers and counterparties; and
- Liquidity of the capital markets and the reliability of the infrastructure that supports the capital markets.

The results from these scenario analyses are used to monitor changes in operational risk and to determine business lines that may have heightened exposure to operational risk. These analyses ultimately are used in the determination of the appropriate level of operational risk capital to hold.

Risk Monitoring and Reporting

We evaluate changes in the operational risk profile of the Bank and its businesses, including changes in business mix or jurisdictions in which we operate, by monitoring the factors noted above at a Bank level. We have both preventive and detective internal controls, which are designed to reduce the frequency and severity of operational risk losses and the probability of operational risk events. We monitor the results of assessments and independent internal audits of these internal controls.

We also provide periodic operational risk reports to senior management, risk committees and the Bank Board. In addition, we have established thresholds to monitor the impact of an operational risk event, including single loss events and cumulative losses over a twelve-month period, as well as escalation protocols. We also provide periodic operational risk reports, which include incidents that breach escalation thresholds, to senior management and the Bank Risk Committee.

Model Review and Validation

The statistical models utilized by Operational Risk Management are subject to independent review and validation by Model Risk Management. See "Model Risk Management" for further information about the review and validation of these models.

Model Risk Management

Overview

Model risk is the potential for adverse consequences from decisions made based on model outputs that may be incorrect or used inappropriately. We rely on quantitative models across our business activities primarily to value certain financial assets and liabilities, to monitor and manage our risk, and to measure and monitor our regulatory capital.

The Bank's framework for managing model risk is consistent with and part of GS Group's framework. GS Group's model risk management framework is managed through a governance structure and risk management controls, which encompass standards designed to ensure we maintain a comprehensive model inventory, including risk assessment and classification, sound model development practices, independent review and model-specific usage controls.

The GS Group Firmwide Enterprise Risk Committee and the GS Group Firmwide Model Risk Control Committee oversee our model risk management framework. Model Risk Management, which is independent of model developers, model owners and model users, reports to GS Group's chief risk officer. Model Risk Management has primary responsibility for identifying and reporting significant risks associated with models. Model Risk Management provides periodic updates to senior management, risk committees, including the Bank Risk Committee and the GS Group Risk Committee of the Board. The Bank makes use of a Service Level Agreement with Model Risk Management. The Bank's chief risk officer monitors whether Model Risk Management is providing satisfactory service through evaluating key performance indicators.

Management's Discussion and Analysis

Model Review and Validation

Model Risk Management consists of quantitative professionals who perform an independent review, validation and approval of models. This review includes an analysis of the model documentation, independent testing, an assessment of the appropriateness of the methodology used, and verification of compliance with model development and implementation standards. Model Risk Management reviews all existing models on an annual basis, as well as new models or significant changes to models.

The model validation process incorporates a review of models and trade and risk parameters across a broad range of scenarios (including extreme conditions) in order to critically evaluate and verify:

- The model's conceptual soundness, including the reasonableness of model assumptions, and suitability for intended use;
- The testing strategy utilized by the model developers to ensure that the models function as intended;
- The suitability of the calculation techniques incorporated in the model;
- The model's accuracy in reflecting the characteristics of the related product and its significant risks;
- The model's consistency with models for similar products; and
- The model's sensitivity to input parameters and assumptions.

See "Critical Accounting Policies — Fair Value — Review of Valuation Models," "Liquidity Risk Management," "Market Risk Management," "Credit Risk Management" and "Operational Risk Management" for further information about our use of models within these areas.

Cautionary Statement

In the preceding discussion and analysis of our financial condition and results of operations, we have included information that may constitute "forward-looking statements." Forward-looking statements are not historical facts, but instead represent only our beliefs regarding future events, many of which, by their nature, are inherently uncertain and outside our control. These statements include statements other than historical information or statements of current conditions and may relate to our future plans and objectives and results, among other things, and may also include statements about the effect of changes to the capital, leverage, liquidity, long-term debt and total loss-absorbing capacity rules applicable to banks and bank holding companies, the impact of the Dodd-Frank Act on our businesses and operations, and various legal proceedings, governmental investigations or mortgage-related contingencies as set forth in Notes 16 and 22, respectively, to the condensed consolidated financial statements, as well as statements about the results of our Dodd-Frank Act and Bank stress tests, statements about the objectives and effectiveness of risk management and liquidity policies, statements about our and GS Group's resolution plans and resolution strategies, statements about the design and effectiveness of our resolution capital and liquidity models and GS Group's triggers and alerts frameworks, statements about new business initiatives or trends or growth opportunities for our businesses, and statements about our future status, activities or reporting under U.S. or non-U.S. banking and financial regulation.

By identifying these statements for you in this manner, we are alerting you to the possibility that our actual results and financial condition may differ, possibly materially, from the anticipated results and financial condition indicated in these forward-looking statements. Important factors that could cause our actual results and financial condition to differ from those indicated in the forward-looking statements include, among others, those described in "Risk Factors" in Part I of the 2016 Annual Report.