

The Goldman Sachs Group, Inc.

# PILLAR 3 DISCLOSURES

For the period ended December 31, 2014

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#### Introduction

#### Overview

The Goldman Sachs Group, Inc. (Group Inc.) is a leading global investment banking, securities and investment management firm that provides a wide range of financial services to a substantial and diversified client base that includes corporations, financial institutions, governments and high-net-worth individuals. When we use the terms "Goldman Sachs," "the firm," "we," "us" and "our," we mean Group Inc., a Delaware corporation, and its consolidated subsidiaries.

The Board of Governors of the Federal Reserve System (Federal Reserve Board) is the primary regulator of Group Inc., a bank holding company under the Bank Holding Company Act of 1956 (BHC Act) and a financial holding company under amendments to the BHC Act. As a bank holding company, we are subject to consolidated risk-based regulatory capital requirements which are computed in accordance with the applicable risk-based capital regulations of the Federal Reserve Board.

These capital requirements are expressed as capital ratios that compare measures of regulatory capital to risk-weighted assets (RWAs). Our capital levels are subject to qualitative judgments by the regulators about components of capital, risk weightings and other factors. In addition, we are subject to requirements with respect to leverage.

The Revised Capital Framework, as described below, requires new disclosures based on the third pillar of Basel III (Pillar 3). The purpose of Pillar 3 disclosures is to provide information on banking institutions' risk management practices and regulatory capital ratios. This document is designed to satisfy these requirements and should be read in conjunction with our most recent Annual Report on Form 10-K. References to "the 2014 Form 10-K" are to our Annual Report on Form 10-K for the year ended December 31, 2014. All references to December 2014 refer to the period ended, or the date December 31, 2014 as the context requires.

# **Applicable Capital Framework**

As of December 2013, we were subject to the risk-based capital regulations of the Federal Reserve Board that were based on the Basel I Capital Accord of the Basel Committee on Banking Supervision (Basel Committee), and incorporated the revised market risk regulatory capital requirements (together, the Prior Capital Rules).

As of January 1, 2014, we became subject to 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's final capital framework for strengthening international capital standards (Basel III) and also implement certain provisions of the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act). Under the Revised Capital Framework, we are an "Advanced approach" banking organization.

We were notified in the first quarter of 2014 that we had completed a "parallel run" to the satisfaction of the Federal Reserve Board, as required under the Revised Capital Framework. As such, additional changes in our capital requirements became effective on April 1, 2014.

Beginning on January 1, 2014, regulatory capital was calculated based on the Revised Capital Framework. Beginning April 1, 2014, there were no changes to the calculation of regulatory capital, but RWAs were calculated using (i) the Prior Capital Rules, adjusted for certain items related to capital deductions under the previous definition of regulatory capital and for the phase-in of new capital deductions (Hybrid 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 the ratios calculated under the Hybrid Capital Rules and those calculated under the Basel III Advanced Rules are the binding regulatory capital requirements for the firm. The ratios calculated under the Basel III Advanced Rules were lower than those calculated under the Hybrid Capital Rules and therefore were the binding ratios for the firm as of December 2014.

In order to complete the parallel run to the satisfaction of its supervisors, a bank holding company is required to demonstrate that, over a period of at least four consecutive quarters, it meets the qualification requirements of the Basel III Advanced Rules. These qualification requirements address the following areas: the bank's governance processes and systems for maintaining adequate capital commensurate with its risk profile; its internal systems for segmenting exposures and applying risk weights; its quantification of risk parameters used including its modelbased estimates of exposures; its operational risk management processes, data management and quantification systems; the data management systems that are designed to support the timely and accurate reporting of risk-based capital requirements; and the control, oversight and validation mechanisms exercised by senior management and by the Board of Directors of Group Inc. (Board). Once a bank holding company has completed the parallel run, it is required to continue meeting these requirements on an ongoing basis, and to notify supervisors of any change to a model that would result in a material change in its RWAs for an exposure type, or when it makes any significant change to its modeling assumptions.

The information presented in this document is calculated under the Revised Capital Framework (incorporating transitional provisions) with RWAs calculated under the Basel III Advanced Rules, unless otherwise specified.

Regulatory Capital and Capital Ratios. The Revised Capital Framework changed the definition of regulatory capital to include a new capital measure called Common Equity Tier 1 (CET1) and the related regulatory capital ratio of CET1 to RWAs (CET1 ratio), and changed the definition of Tier 1 capital. The Revised Capital Framework also increased the level of certain minimum risk-based capital and leverage ratios applicable to us.

**Definition of Risk-Weighted Assets.** As of December 2014, RWAs were calculated under both the Basel III Advanced Rules and the Hybrid Capital Rules. Under both the Basel III Advanced Rules and the Hybrid Capital Rules, certain amounts not required to be deducted from CET1 under the transitional provisions are either deducted from Tier 1 capital or are risk weighted.

For additional information about the Revised Capital Framework, including the transitional provisions related to new deductions from CET1, and the requirement to calculate RWAs under both the Basel III Advanced Rules and the Hybrid Capital Rules, see "Note 20. Regulation and Capital Adequacy," in Part II, Item 8 "Financial Statements and Supplementary Data" in the 2014 Form 10-K. For additional information about our regulatory capital requirements, see "Regulation," in Part I, Item 1 "Business" in the 2014 Form 10-K.

#### **Fair Value**

The inventory reflected on our consolidated statements of financial condition as "Financial instruments owned, at fair value" and "Financial instruments sold, but not yet purchased, at fair value" as well as certain other financial assets and financial liabilities, are accounted for at fair value (i.e., marked-to-market), with related gains or losses generally recognized in our consolidated statements of earnings and, therefore, in capital. 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. The use of fair value to measure financial instruments is fundamental to our risk management practices and is our most critical accounting policy. The daily discipline of marking substantially all of our inventory to current market levels is an effective tool for assessing and managing risk and provides transparent and realistic insight into our financial exposures. The use of fair value is an important aspect to consider when evaluating our capital base and our capital ratios as changes in the fair value of our positions are reflected in the current period's shareholders' equity, and accordingly, regulatory capital; it is also a factor used to determine the classification of positions into the banking book and trading book, as discussed further below.

For additional information regarding the determination of fair value under accounting principles generally accepted in the United States (U.S. GAAP) and controls over valuation of inventory, see "Note 3. Significant Accounting Policies," in Part II, Item 8 "Financial Statements and Supplementary Data" and "Critical Accounting Policies - Fair Value" in Part II, Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" in the 2014 Form 10-K.

#### **Banking Book/Trading Book Classification**

In order to determine the appropriate regulatory capital treatment for our exposures, positions must be first classified into either "banking book" or "trading book." Positions are classified as banking book unless they qualify to be classified as trading book.

Banking book positions may be accounted for at amortized cost, fair value or under the equity method; they are not generally held "for the purpose of short-term resale or with the intent of benefiting from actual or expected short-term price movements or to lock in arbitrage profits<sup>1</sup>." Banking book positions are subject to credit risk capital requirements. 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. See "Credit Risk" for additional details.

Trading book positions generally meet the following criteria: they are assets or liabilities that are accounted for at fair value; they are risk managed using a Value-at-Risk (VaR) internal model; and they are positions that we hold as part of our market-making and underwriting businesses "for the purpose of short-term resale or with the intent of benefiting from actual or expected short-term price movements or to lock in arbitrage profits<sup>1</sup>." In accordance with the Revised Capital Framework, trading book positions are generally considered "covered" positions; foreign exchange and commodity positions are typically considered covered positions, whether or not they meet the other criteria for classification as trading book positions. Covered positions are subject to market risk regulatory capital requirements which are designed to cover the risk of loss in value of these positions due to changes in market conditions. See "Market Risk" for further details. Some trading book positions, such as derivatives, are also subject to counterparty credit risk capital requirements.

#### **Basis of Consolidation**

The Pillar 3 disclosures and the firm's regulatory capital ratio calculations are prepared at the consolidated Group Inc. level. Our consolidated financial statements are prepared in accordance with U.S. GAAP and include the accounts of Group Inc. and all other entities in which we have a controlling financial interest. Intercompany transactions and balances have been eliminated. The scope of consolidation for regulatory capital purposes is substantially consistent with the U.S. GAAP consolidation.

For further information about the basis of presentation of our financial statements and accounting consolidation policies, see "Note 2. Basis of Presentation" and "Note 3. Significant Accounting Policies," in Part II, Item 8 "Financial Statements and Supplementary Data" in the 2014 on Form 10-K.

# Restrictions on the Transfer of Funds or **Regulatory Capital within the Firm**

Group Inc. is a holding company and, therefore, utilizes dividends, distributions and other payments from its subsidiaries to fund dividend payments and other payments on its obligations, including debt obligations. Regulatory capital requirements as well as provisions of applicable law and regulations restrict Group Inc.'s ability to withdraw capital from its regulated subsidiaries.

For information on restrictions on the transfer of funds within Group Inc. and its subsidiaries, see "Note 20. Regulation and Capital Adequacy," in Part II, Item 8 "Financial Statements and Supplementary Data" and "Risk Management and Risk Factors - Liquidity Risk Management - Asset-Liability Management" and "Equity Capital Management and Regulatory Capital," in Part II, Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" in the 2014 Form 10-K.

#### **Compliance with Capital Requirements**

As of December 2014, none of Group Inc.'s consolidated subsidiaries had capital levels less than the minimum regulatory capital requirement specified in the local jurisdiction.

GS Bank USA, an FDIC-insured, New York State-chartered bank and a member of the Federal Reserve System, is supervised and regulated by the Federal Reserve Board, the FDIC, the New York State Department of Financial Services and the Consumer Financial Protection Bureau. GS Bank USA is an "Advanced approach" banking organization under the Revised Capital Framework. For information about GS Bank USA's regulatory capital ratios and for further information about other regulated subsidiaries, see "Note 20. Regulation and Capital Adequacy" in Part II, Item 8 "Financial Statements and Supplementary Data" and "Equity Capital Management and Regulatory Capital -Subsidiary Capital Requirements," in Part II, Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" in the 2014 Form 10-K.

#### Other Items

For a detailed description of our equity capital and additional information regarding our capital planning and stress testing process, including the Comprehensive Capital Analysis and Review (CCAR), the Dodd-Frank Act Stress Tests (DFAST), our internally designed stress tests and our internal risk-based capital assessment, see "Equity Capital Management and Regulatory Capital," in Part II, Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" in the 2014 Form 10-K.

For an overview of our risk management structure, see "Risk Management and Risk Factors - Overview and Structure of Risk Management," in Part II, Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" in the 2014 Form 10-K.

Measures of exposures and other metrics disclosed in this report may not be based on U.S. GAAP, may not be directly comparable to measures reported in the 2014 Form 10-K, and may not be comparable to similar measures used by other companies. These disclosures are not required to be, and have not been, audited by our independent auditors. Our historical filings with the SEC and previous Pillar 3 and Regulatory Capital Disclosure documents are located at:

www.gs.com/shareholders.

# **Regulatory Capital**

The table below summarizes our regulatory capital ratios, reflecting regulatory capital calculated under the Revised Capital Framework (incorporating transitional provisions) and RWAs calculated under the Basel III Advanced Rules. The ratios calculated under the Basel III Advanced Rules were lower than those calculated under the Hybrid Capital Rules and therefore were the binding ratios for us as of December 2014.

Table 1: Regulatory Capital Ratios

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\$ in millions	As of December 2014
Common Equity Tier 1 capital	\$69,830
Tier 1 capital	78,433
Tier 2 capital	12,545
Total capital	\$90,978
Basel III Advanced	
Risk-Weighted Assets	\$570,313
Common Equity Tier 1 ratio	12.2%
Tier 1 capital ratio	13.8%
Total capital ratio	16.0%
Total average adjusted assets	\$868,681
Tier 1 leverage ratio	9.0%

The CET1 ratio is defined as CET1 divided by RWAs, the Tier 1 capital ratio is defined as Tier 1 capital divided by RWAs, and the Total capital ratio is defined as Total capital divided by RWAs.

The Tier 1 leverage ratio is defined as Tier 1 capital divided by average adjusted total assets (which includes adjustments for goodwill and identifiable intangible assets, and certain investments in nonconsolidated financial institutions).

The table below presents the minimum ratios applicable to the firm as of December 2014. Failure to comply with these capital requirements could result in restrictions being imposed by our regulators.

**Table 2: Minimum Regulatory Capital Ratios Under the Revised Capital Framework** 

	December 2014 Minimum Ratio
Common Equity Tier 1 ratio	4.0 %
Tier 1 capital ratio <sup>1</sup>	5.5 %
Total capital ratio <sup>1</sup>	8.0 %
Tier 1 leverage ratio	4.0 %

1. In order to meet the quantitative requirements for being "well-capitalized" under the Federal Reserve Board's capital regulations, we must meet a higher required minimum Tier 1 capital ratio of 6.0% and a Total capital ratio of 10.0%.

Certain aspects of the Revised Capital Framework's requirements phase in over time (transitional provisions). These include increases in the minimum capital ratio requirements and the introduction of new capital buffers and certain deductions from regulatory capital (such as investments in nonconsolidated financial institutions). In addition, junior subordinated debt issued to trusts is being phased out of regulatory capital. The minimum CET1, Tier 1 and Total capital ratios applicable to us will increase as the transitional provisions phase in and new capital buffers are introduced.

Effective on January 1, 2015, regulatory capital continues to be calculated under the Revised Capital Framework, but RWAs are required to be calculated under the Basel III Advanced Rules, as well as the Standardized approach and market risk rules set out in the Revised Capital Framework (together, the Standardized Capital Rules). The lower of the ratios calculated under the Basel III Advanced Rules and those calculated under the Standardized Capital Rules are the binding regulatory capital requirements for the firm.

For a detailed description of regulatory capital reforms that impact us, including an increase in minimum capital ratios and capital buffers, Basel III Advanced fully phased-in capital ratios, the supplementary leverage ratio and fully phased-in ratios under the Standardized Capital Rules, see "Equity Capital Management and Regulatory Capital," in Part II, Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations." For a detailed description of transitional ratios under the Basel III Advanced and Standardized Capital Rules, see "Note 20. Regulation and Capital Adequacy," in Part II, Item 8 "Financial Statements and Supplementary Data" in the 2014 Form 10-K.

# **Capital Structure**

The table below presents information on the components of regulatory capital under the Revised Capital Framework as of December 2014.

**Table 3: Capital Structure** 

\$ in millions	As of December 2014
Common stock	\$9
Share-based awards	3,766
Additional paid-in capital	50,049
Retained earnings	78,984
Accumulated other comprehensive income / (loss)	(743)
Stock held in treasury, at cost	(58,468)
Common Shareholders' Equity	73,597
Deductions for goodwill and identifiable intangible assets, no deferred tax liabilities	et of (2,787)
Deductions for investments in nonconsolidated financial institutions	(953)
Other adjustments	(27)
Common Equity Tier 1	69,830
Perpetual non-cumulative preferred stock	9,200
Junior subordinated debt issued to trusts	660
Other adjustments	(1,257)
Tier 1 capital	78,433
Qualifying subordinated debt	11,894
Junior subordinated debt issued to trusts	660
Other adjustments	(9)
Tier 2 capital	12,545
Total capital	\$90,978

#### In the table above:

• The deduction for goodwill and identifiable intangible assets, net of deferred tax liabilities, represents goodwill of \$3.65 billion and identifiable intangible assets of \$103 million (20% of \$515 million), net of associated deferred tax liabilities of \$961 million. The remaining 80% of the deduction of identifiable intangible assets will be phased in ratably per year from 2015 to 2018. Identifiable intangible assets that are not deducted during the transitional period are risk weighted.

- The deduction for investments in nonconsolidated financial institutions represents the amount by which our investments in the capital of nonconsolidated financial institutions exceed certain prescribed thresholds. As of December 2014, 20% of the deduction was reflected (calculated based on transitional thresholds). The remaining 80% will be phased in ratably per year from 2015 to 2018. The balance that is not deducted during the transitional period is risk weighted. See "Equity Exposures in the Banking Book" for further details.
- Other adjustments within CET1 and Tier 1 capital primarily include accumulated other comprehensive loss, credit valuation adjustments on derivative liabilities, the overfunded portion of our defined benefit pension plan obligation, net of associated deferred tax liabilities, disallowed deferred tax assets and other required credit risk-based deductions. As of December 2014, 20% of the deductions related to credit valuation adjustments on derivative liabilities, the overfunded portion of our defined benefit pension plan obligation, net of associated deferred tax liabilities, disallowed deferred tax assets and other required credit risk-based deductions were included in other adjustments within CET1 and 80% of the deductions were included in other adjustments within Tier 1 capital. Most of the deductions that were included in other adjustments within Tier 1 capital will be phased into CET1 ratably per year from 2015 to 2018. Other adjustments within Tier 1 capital also include a deduction for investments in the preferred equity of nonconsolidated financial institutions.
- Junior subordinated debt issued to trusts is reflected in both Tier 1 capital (50%) and Tier 2 capital (50%) and is reduced by the amount of trust preferred securities we purchased. Junior subordinated debt issued to trusts will be fully phased out of Tier 1 capital by 2016, and then also from Tier 2 capital by 2022. See "Note 16. Long-Term Borrowings," in Part II, Item 8 "Financial Statements and Supplementary Data" in the 2014 Form 10-K for additional information about our junior subordinated debt issued to trusts and trust preferred securities we purchased.
- Qualifying subordinated debt represents subordinated debt issued by Group Inc. with an original term to maturity of five years or greater. The outstanding amount of subordinated debt qualifying for Tier 2 capital is reduced, or discounted, upon reaching a remaining maturity of five years. For additional information about our subordinated debt, see "Note 16. Long-Term Borrowings," in Part II, Item 8 "Financial Statements and Supplementary Data" in the 2014 Form 10-K.

For further information on the terms and conditions of our common stock, perpetual non-cumulative preferred stock, junior subordinated debt issued to trusts and qualifying subordinated debt, see "Note 16. Long-Term Borrowings" and "Note 19. Shareholders' Equity," in Part II, Item 8 "Financial Statements and Supplementary Data" in the 2014 Form 10-K.

For additional information on the firm's capital, see "Equity Capital Management and Regulatory Capital," in Part II, Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" in the 2014 Form 10-K, and the following footnotes to the consolidated financial statements in Part II, Item 8 "Financial Statements and Supplementary Data" in the 2014 Form 10-K:

- "Note 13. Other Assets," for a discussion on our goodwill and identifiable intangible assets.
- "Note 16. Long-Term Borrowings," for a discussion on our subordinated borrowings and junior subordinated debt issued to trusts.
- "Note 19. Shareholders' Equity," for detail on common equity, preferred equity and accumulated other comprehensive income / (loss).

# **Risk-Weighted Assets**

The table below presents a summary of the components of RWAs under the Basel III Advanced Rules as of December 2014. More details on each of the material components,

including a description of the methodologies used, can be found in the remainder of this document, under the section headings indicated below.

Table 4: Risk-Weighted Assets by Exposure Category

\$ in millions	As of December 2014	Section Reference
Credit Risk-Weighted Assets		
Wholesale Exposures	\$ 174,164	Credit Risk
Cleared Exposures	2,641	Credit Risk
Retail Exposures	1,666	Credit Risk
Other Assets	24,769	Credit Risk
Equity Exposures	37,874	Equity Exposures in the Banking Book
Securitization Exposures	9,438	Securitizations in the Banking Book
Subtotal: Credit Risk-Weighted Assets subject to the 6% add-on	250,552	
6% add-on <sup>1</sup>	15,033	
Credit Valuation Adjustment	62,359	Credit Risk
Total Credit Risk-Weighted Assets	327,944	
Market Risk-Weighted Assets		
Regulatory VaR	10,238	Market Risk
Stressed VaR	29,625	Market Risk
Incremental Risk	16,950	Market Risk
Comprehensive Risk <sup>2</sup>	8,150	Market Risk
Specific Risk	79,918	Market Risk
Total Market Risk-Weighted Assets	144,881	
Operational Risk-Weighted Assets	97,488	Operational Risk
Total Risk-Weighted Assets	\$570,313	

<sup>1.</sup> The Federal Reserve Board's regulations require that a 6% add-on be applied to all components of our credit RWAs other than the Credit Valuation Adjustment

<sup>2.</sup> Includes standardized surcharge of 8%. See "Market Risk - Market Risk-Weighted Assets - Comprehensive Risk" for further details.

#### **Credit Risk**

#### 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 OTC derivatives and loans and lending commitments. Credit risk also comes from cash placed with banks, securities financing transactions (i.e., resale and repurchase agreements and securities borrowing and lending activities) and receivables from brokers, dealers, clearing organizations, customers and counterparties.

Credit Risk Management, which is independent of the revenue-producing units and reports to our chief risk officer, has primary responsibility for assessing, monitoring and managing credit risk at the firm. The Credit Policy Committee and the Firmwide Risk Committee establish and review credit policies and parameters. 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 inventory 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.

Policies authorized by the Firmwide Risk Committee and the 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.

#### **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;
- 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 senior management, the Board and regulators;
- Use of credit risk mitigants, including collateral and hedging; and
- Communication and collaboration with other independent control and support functions such as operations, legal and compliance.

As part of the risk assessment process, Credit Risk Management performs credit reviews which include initial and ongoing analyses of our counterparties. 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 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.

#### **Credit Risk Measures and Limits**

We measure our credit risk based on the potential loss in an event of non-payment by a counterparty. For derivatives and securities financing transactions, the primary measure is potential exposure, which is 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 takes into account netting and collateral arrangements. For loans and lending commitments, the primary measure is a function of the notional amount of the position. We also monitor credit risk in terms of current exposure, which is the amount presently owed to us after taking into account applicable netting and collateral.

We use credit limits at various levels (counterparty, economic group, industry, country) to control the size 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.

#### **Credit Exposures**

For information on our credit exposures, including the gross fair value, netting benefits and current exposure of our derivative exposures and our securities financing transactions, see "Note 7. Derivatives and Hedging Activities" and "Note 10. Collateralized Agreements and Financings," in Part II, Item 8 "Financial Statements and Supplementary Data" and Credit Risk Management in Part II, Item 7 "Management Discussion and Analysis of Financial Condition and Results of Operations" in the 2014 Form 10-K.

# Allowance for Losses on Loans and Lending Commitments

For information on our impaired loans and loans on non-accrual status, and allowance for losses on loans and lending commitments, see "Note 9. Loans Receivable," in Part II, Item 8 "Financial Statements and Supplementary Data" in the 2014 Form 10-K.

#### **Credit Risk: Risk-Weighted Assets**

Credit RWAs are calculated based upon measures of credit exposure which are then risk weighted. Below is a description of the methodology used to calculate RWAs for Wholesale exposures, which generally include credit exposures to corporates, sovereigns or government entities (other than securitization, retail or equity exposures, which are covered in later sections). We have been given permission by our supervisors to compute risk weights for certain exposures in accordance with the Advanced Internal Ratings-Based (AIRB) approach, which utilizes internal assessments of each counterparty's creditworthiness. The Revised Capital Framework requires that a bank holding company obtain prior written agreement from its regulators before using the Internal Models Methodology (IMM).

**Exposure at Default (EAD).** The exposure amount for on-balance-sheet assets, such as receivables and cash, is generally based on the carrying value. For the calculation of EAD for off-balance-sheet exposures, including commitments and guarantees, a credit equivalent exposure amount is calculated based on the notional amount of each transaction multiplied by a credit conversion factor designed to estimate the net additions to funded exposures that would be likely to occur over a one-year horizon, assuming the obligor were to default. Historical studies and empirical data are generally used to estimate the credit conversion factor.

For substantially all of the counterparty credit risk arising from OTC derivatives and securities financing transactions, internal models calculate the distribution of exposure upon which the EAD calculation is based, in accordance with the IMM. The models estimate Expected Exposures (EE) at various points in the future using risk factor simulations. The model parameters are derived from historical data using the most recent three-year period. The models also estimate the Effective Expected Positive Exposure (EEPE) over the first year of the portfolio, which is the time-weighted average of non-declining positive credit exposure over the EE simulation. Under the Basel III Advanced Rules, we calculate two EEPEs: one based on stressed conditions and one based on unstressed conditions. For the stressed EEPE calculation, the model is re-calibrated using historical market parameters from a period of stress as identified by elevated credit spreads for our counterparties. Both stressed and unstressed EAD are calculated by multiplying the EEPE by a standard regulatory factor of 1.4. Our RWAs under the IMM are the greater of the RWAs based on the stressed or unstressed EEPE.

Our implementation of the IMM incorporates the impact of netting and collateral into calculations of exposure. The EAD detailed in Table 5 below represents the exposures used in computing capital requirements and is not directly comparable to amounts presented in our consolidated statement of financial condition in the 2014 Form 10-K, due to differences in measurement methodology, counterparty netting and collateral offsets used.

Advanced Internal Ratings-Based Approach. RWAs are calculated by multiplying EAD by the counterparty's risk-weight. Under the AIRB approach, risk-weights are a function of the counterparty's Probability of Default (PD), Loss Given Default (LGD) and the effective maturity of the trade or portfolio of trades, where:

• PD is an estimate of the probability that an obligor will default over a one-year horizon. For the majority of our Wholesale exposure, the PD is assigned using an approach where quantitative factors are combined with a qualitative assessment to determine internal credit rating grades. For each internal credit rating grade, over 5 years of historical empirical data is used to calculate a long run average annual PD which is assigned to each counterparty with that credit rating grade.

Our internal credit rating grades each have external public rating agency equivalents. The scale that we employ for internal credit ratings corresponds to those used by the major rating agencies and our internal credit ratings, while arrived at independently of public ratings, are assigned using definitions of each internal credit rating grade that are consistent with the definitions used by the major rating agencies for their equivalent credit rating grades. As a result, we are able to map default data published by the major rating agencies for obligors with public ratings to our counterparties with equivalent internal credit ratings for quantification and validation of risk parameters.

- LGD is an estimate of the economic loss rate if a default occurs during economic downturn conditions. For Wholesale exposures, the LGD is determined using recognized vendor models, but exposure-specific estimates of LGD are employed where the recovery prospects of an exposure are more accurately captured by an analysis incorporating information about the specific collateral, structure or type of client.
- The definition of effective maturity depends on the nature of the exposure. For OTC derivatives, effective maturity is an average time measure weighted by credit exposure (based on EE and EEPE). For securities financing transactions, effective maturity represents the notional weighted average number of days to maturity. For other products, the effective maturity is based on the contractual maturity. Effective maturity is floored at one year and capped at five years except where the Basel III Advanced Rules allow a maturity of less than one year to be used as long as certain criteria are met.

The table below presents a distribution of EAD, Weighted Average LGD, Weighted Average PD, and Weighted Average Risk-Weight by PD band for Wholesale exposures (excluding exposures to central counterparties). The table also shows the notional amount of undrawn commitments and guarantees that are included in the Total EAD.

Table 5: Credit Risk Wholesale Exposures by PD Band

\$ in millions		As of Dece	mber 2014				
					Exposure		
		Exposure	Exposure		Weighted	Undrawn	Undrawn
		Weighted	Weighted		Average Risk	Commitments &	Commitments &
PD Band Range	Total EAD <sup>1, 2</sup>	Average LGD	Average PD	RWA	Weight	Guarantees <sup>3</sup>	Guarantees EAD
0 to <0.05%	\$157,465	56.63%	0.02%	\$11,035	7.01%	\$8,861	\$6,700
0.05% to <0.25%	142,509	59.22%	0.09%	38,617	27.10%	23,659	18,920
0.25% to <0.75%	43,060	49.73%	0.50%	31,003	72.00%	17,305	10,819
0.75% to <5.0%	18,557	50.47%	1.90%	24,441	131.71%	7,978	4,503
5.0% to <20%	21,043	48.96%	7.46%	43,066	204.66%	6,692	3,877
20% to <100%	8,323	51.20%	23.78%	23,914	287.32%	1,215	905
100% (default)	2,088	60.09%	100.00%	2,088	100.00%	4,004	157
Total <sup>4</sup>	\$393,045			\$174,164		\$69,714	\$45,881

<sup>1.</sup> Includes Counterparty Credit Risk EAD of \$175.69 billion.

<sup>2.</sup> Collateral is generally factored into the EAD for OTC derivatives and securities financing transactions using the IMM.

<sup>3.</sup> Excludes \$30.67 billion of unfunded commitments and guarantees that are treated for regulatory capital purposes as securitizations. See "Securitizations in the Banking Book."

<sup>4.</sup> Excludes \$1.32 billion of EAD and \$2.67 billion of RWAs associated with OTC derivatives where the counterparty is a securitization special purpose entity, and which are treated for regulatory capital purposes as securitizations. See "Securitizations in the Banking Book."

#### **Governance and Validation of Risk Parameters**

Committees within Credit Risk Management that ultimately report to the Chief Credit Risk Officer or the Credit Policy Committee oversee the methodology for determining PD and the performance of models used for both LGD and EAD.

To assess the performance of the PD parameters used, on an annual basis we perform a benchmarking and validation exercise which includes comparisons of realized annual default rates to the expected annual default rates for each credit rating band and comparisons of the internal realized long-term average default rates to the empirical long-term average default rates assigned to each credit rating band. For the year ended December 2014, as well as in previous annual periods, the PDs used for regulatory capital calculations were higher (i.e., more conservative) than our actual internal realized default rate.

During the year ended December 2014, the total number of counterparty defaults remained low, representing less than 0.5% of all counterparties, and such defaults primarily occurred within loans and lending commitments. Estimated losses associated with counterparty defaults were higher compared with the prior year. However, such estimated losses were not material to us.

To assess the performance of LGD parameters used, on an annual basis we perform a validation exercise, including comparisons of recovery rates following counterparty defaults to the recovery rates based on LGD parameters assigned to the corresponding exposures prior to default. While the actual realized recovery on each defaulted exposure varies due to transaction and other situation-specific factors, on average, recovery rates remain higher than those implied by the LGD parameters used in our regulatory capital calculations.

The models used to determine the EAD under the IMM, as well as those used for CVA (see "Credit Valuation Adjustment Risk-Weighted Assets"), are subject to review and validation by our independent model validation group, which consists of quantitative professionals who are separate from model developers. This review includes:

- A critical evaluation of the models, their theoretical soundness and adequacy for intended use;
- Verification of the testing strategy utilized by the model developers to ensure that the models function as intended;
- Verification of the suitability of the calculation techniques incorporated in the models.

The performance of each IMM model is also assessed quarterly via backtesting procedures, performed by comparing the predicted and realized exposure of a set of representative trades and portfolios at certain horizons. Our models are monitored and enhanced in response to backtesting results and portfolio changes. Changes to our models which would result in material change in the RWAs for an exposure type, or significant changes in our modeling assumptions, require notification to our regulators.

#### **Credit Risk Mitigation**

To reduce our credit exposures on derivatives and securities financing transactions, we may enter into master netting agreements or similar arrangements (collectively, netting agreements) with counterparties that permit us 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 nondefaulting party. Upon exercise of such termination rights, all transactions governed by the netting agreement are terminated and a net settlement amount is calculated.

We may also reduce credit risk with counterparties by entering into agreements that enable us to receive and post cash and securities collateral with respect to our 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 nondefaulting party exercising termination provisions the right to liquidate collateral and apply the proceeds to any amounts owed. In order to assess enforceability of our right to setoff under netting and credit support agreements, we evaluate various factors, including applicable bankruptcy laws, local statutes and regulatory provisions in the jurisdiction of the parties to the agreement. Securities collateral obtained primarily includes U.S. government and federal agency obligations and non-U.S. government and agency obligations.

Our collateral is managed by an independent control function within the Operations Division. This function is responsible for reviewing exposure calculations, making margin calls with relevant counterparties, and ensuring subsequent settlement of collateral movements. We monitor the fair value of the collateral on a daily basis to ensure that our credit exposures are appropriately collateralized.

For additional information about our derivatives (including collateral and the impact of the amount of collateral we would have to provide in the event of a ratings downgrade) see "Note 7. Derivatives and Hedging Activities," in Part II, Item 8 "Financial Statements and Supplementary Data" in the 2014 Form 10-K. See "Note 10. Collateralized Agreements and Financings," in Part II, Item 8 "Financial Statements and Supplementary Data" in the 2014 Form 10-K for further information about our collateralized agreements and financings.

For 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.

When we do not have sufficient visibility into a counterparty's financial strength or when we believe a counterparty requires support from its parent company, 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 Derivatives**

We enter into credit derivative transactions primarily to facilitate client activity and to manage the credit risk associated with market-making, including to hedge counterparty exposures arising from OTC derivatives (intermediation activities).

We also use credit derivatives to hedge counterparty exposure associated with investing and lending activities. Some of these hedges qualify as credit risk mitigants for regulatory capital purposes. For these transactions, the substitution approach is applied, where the PD and/or LGD associated with the credit derivative counterparty replaces the PD and/or LGD of the loan obligors for capital calculations. Where the aggregate notional of credit derivatives hedging exposure to a loan obligor is less than the notional loan exposure, the substitution approach is only employed for the percentage of loan exposure covered by eligible credit derivatives. As of December 2014, our purchased credit default swaps that were used to hedge counterparty exposure associated with investing and lending activities had a notional amount of \$6.57 billion, of which \$2.33 billion were deemed to be eligible hedges for regulatory capital purposes.

For further information regarding our credit derivative transactions, see "Note 7. Derivatives and Hedging Activities," in Part II, Item 8 "Financial Statements and Supplementary Data" in the 2014 Form 10-K.

For information regarding credit risk concentrations, see "Note 26. Credit Concentrations," in Part II, Item 8 "Financial Statements and Supplementary Data" in the 2014 Form 10-K.

#### Wrong-way Risk

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, which is known as "wrong-way risk." Wrong-way risk is commonly categorized into two types: specific wrong-way risk and general wrong-way risk. We categorize exposure as specific wrong-way risk when our counterparty and the issuer of the reference asset of the transaction are the same entity or are affiliates, or if the collateral supporting a transaction is issued by the counterparty or its affiliates. General wrong-way risk arises when there is a significant positive correlation between the probability of default of a counterparty and general market risk factors affecting the exposure to that counterparty. We have procedures in place to actively monitor and control specific and general wrongway risk, beginning at the inception of a transaction and continuing through its life, including assessing the level of risk through stress tests. We ensure that material wrong-way risk is mitigated using collateral agreements or increases to initial margin, where appropriate.

#### Credit Valuation Adjustment Risk-Weighted Assets

RWAs for CVA address the risk of losses related to changes in counterparty credit risk arising from OTC derivatives. We calculate RWAs for CVA primarily using the Advanced CVA approach set out in the Revised Capital Framework, which permits the use of regulator approved VaR models. Consistent with our Regulatory VaR calculation (see "Market Risk" for further details), the CVA RWAs are calculated at a 99% confidence level over a 10-day time horizon. The CVA RWAs also include a Stressed CVA component, which is also calculated at a 99% confidence level over a 10-day horizon using both a stressed VaR period and stressed EEs. The CVA VaR model estimates the impact on our credit valuation adjustments of changes to our counterparties' credit spreads. It reflects eligible CVA hedges (as defined in the Revised Capital Framework), but it excludes those hedges that, although used for riskmanagement purposes, are ineligible for inclusion in the regulatory CVA VaR model. Examples of such hedges are interest rate hedges, or those that do not reference the specific exposures they are intended to mitigate, but are nevertheless highly correlated to the underlying credit risk.

#### Other Credit Risk-Weighted Assets

Credit RWAs (as summarized in Table 4 above) also include the following components:

**Cleared Transactions.** RWAs for cleared transactions and default fund contributions (defined as payments made by clearing members to central clearing agencies pursuant to mutualized loss arrangements) are calculated based on specific rules within the Revised Capital Framework. A majority of our exposures on centrally cleared transactions are to counterparties that are considered to be Qualifying Central Counterparties (QCCPs) under the Revised Capital Framework. Such exposures arise from OTC derivatives, exchange-traded derivatives, securities financing transactions and long settlement transactions and are required to be risk weighted at either 2% or 4% based on the specified criteria.

**Retail Exposures.** We have an immaterial level of Retail exposures (defined as residential mortgage exposures, qualifying revolving exposures, or other retail exposures that are managed as part of a segment of exposures with homogeneous risk characteristics, not on an individual exposure basis). The PD and LGD parameters for Retail exposures are determined based on the risk characteristics of each homogeneous pool.

**Other Assets.** Other assets primarily include property, leasehold improvements and equipment, deferred tax assets, and assets for which there is no defined capital methodology or that are not material. RWAs for other assets are generally based on the carrying value plus a percentage of the notional amount of off-balance-sheet exposures, and are typically risk weighted at 100%.

# **Equity Exposures in the Banking Book**

#### Overview

We make direct investments in public and private equity securities; we also make investments, both through funds that we manage (some of which are consolidated) and through funds that are managed by third parties, in debt securities and loans, public and private equity securities and real estate entities. These investments are typically longer-term in nature and are primarily held for capital appreciation purposes; they are therefore classified for regulatory capital purposes as banking book equity investments. We also make commitments to invest, primarily in private equity, real estate and other assets; such commitments are made both directly and primarily through funds that we raise and manage.

For more information related to our equity investments and investment commitments, see "Note 6. Cash Instruments," "Note 13. Other Assets," with respect to information regarding investments accounted for as equity method investments; "Note 18. Commitments, Contingencies and Guarantees," for information on our equity investment commitments; and "Note 22. Transactions with Affiliated Funds," for a description of transactions with affiliated funds in Part II, Item 8 "Financial Statements and Supplementary Data" in the 2014 Form 10-K.

#### **Risk Management**

Our equity investments and investment commitments are subject to comprehensive risk management processes through which we assess investment opportunities, and monitor, evaluate and manage the risks associated with such investments.

Risk management governance starts with the Board, which plays an important role in reviewing and approving risk management policies and practices, both directly and through its committees.

Prior to making an investment, or entering into an investment commitment, opportunities are subject to rigorous due diligence, review and, where appropriate, approval by the relevant investment, capital and/or risk committee. Such committees are either specific to the relevant division of the firm or they are firmwide committees such as the Firmwide Investment Policy Committee. The committees consider, among other matters, the risks and rewards of the opportunity, as well as factors such as balance sheet usage and risk measures such as stress tests

On an ongoing basis, our equity exposures are reviewed by senior management, including the Firmwide Risk Committee and Finance Committee.

Other critical components of our risk management processes and procedures include setting limits (such as balance sheet limits) and, our discipline of marking substantially all of our equity investments to current market levels, verified by our independent control and support functions.

Our equity exposures are included in the scope of our stress tests, which 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. We use stress tests to examine the risks of specific equity investments as well as the potential impact of significant risk exposures across the firm. We use a variety of scenarios to calculate the potential loss from a wide range of market moves on our equity investments.

#### **Valuation and Accounting Policies**

Substantially all of our equity investments are included in financial instruments owned at fair value on our consolidated statement of financial condition. For further information on our accounting and valuation policies applicable to equity investments, see the following sections in the 2014 Form 10-K, in Part II, Item 8 "Financial Statements and Supplementary Data."

- "Note 3. Significant Accounting Policies," for a discussion of our policies on consolidation, equitymethod investments and investment funds;
- "Note 4. Financial Instruments Owned, at Fair Value and Financial Instruments Sold, But Not Yet Purchased, at Fair Value," for a description of our policies for recognizing gains and losses through earnings; and
- "Note 6. Cash Instruments," for a description of 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, including for private equity investments and investments in real estate entities.

#### **Regulatory Capital Measurement**

Many of our equity exposures are investments in funds that are required to be treated as "financial institutions" for the purposes of the deduction from capital for investments in the capital of nonconsolidated financial institutions. If an equity investment in a nonconsolidated financial institution is 10% or more of that institution's common equity (or equivalent), then it is regarded as "significant." We are required to deduct from our CET1 any excess of the aggregate of our significant investments in the common stock of nonconsolidated financial institutions that exceeds 10% of a measure of our capital, and all non-common significant investments must be deducted from Tier 1 or Tier 2 capital using the corresponding deduction approach. Under the transitional provisions, as of December 2014, we must deduct 20% of this excess (the percentage of the excess that must be deducted will increase in the future) and the remainder of the aggregate of our significant investments is risk weighted at 100%. Balances that are deducted from capital are not included in Table 6 below.

The computation of RWAs for banking book equity investments that are not deducted from capital is based upon either the Simple Modified Look-Through Approach (SMLTA) or the Simple Risk Weight Approach (SRWA).

Equity exposures in investment funds that do not have material leverage are risk weighted based upon the SMLTA, where risk-weights are determined based on the highest risk weights that would apply to the types of investments that the fund is permitted to hold under the terms of its prospectus. An equity investment in an investment fund is considered applicable for treatment under the look-through approach if the investment fund has no material liabilities and the assets of the fund are substantially all "financial assets" (defined as cash or other monetary instruments, evidence of debt, evidence of an ownership interest in an entity, or a contract that conveys a right to receive or exchange cash or another financial instrument with another party).

Direct equity investments and equity investments in leveraged investment funds are risk weighted under the SRWA in accordance with the table below.

Risk Weight	Investment Category
100%	Community development equity exposures
	Significant common stock investments in financial institutions which are not deducted from capital under transitional provisions (risk-weight will increase to 250% once transitional provisions expire in 2018)
	Non-significant equity exposures to the extent that the aggregate adjusted carrying value of the exposures does not exceed 10% of our Tier 1 capital plus Tier 2 capital
300%	A publicly traded equity exposure (other than an equity exposure that receives a 600% risk weight)
400%	A private equity exposure (other than an equity exposure that receives a 600% risk weight)
600%	An equity exposure to an investment firm that (1) would meet the definition of a traditional securitization but for the fact that the investment firm can exercise control over the size and composition of their assets, liabilities, and off-balance-sheet exposures, and (2) has greater than immaterial leverage

Risk weights are applied to the "adjusted carrying value" of the equity exposure. For on-balance-sheet positions, the adjusted carrying value is the same as the balance sheet carrying value. For our unfunded equity investment commitments, the adjusted carrying value is a percentage of the notional amount, based upon the estimated funding of the commitment during economic downturn conditions.

Although the SRWA assigns specific risk weights to different types of equity exposures as set out above, the regulations allow for "non-significant equity exposures" to be risk weighted at 100%. Under the "non-significant equity exposures" treatment, the aggregate carrying value of our equity exposures that is less than 10% of our Tier 1 plus Tier 2 capital is risk weighted at 100%, and the remaining portion is then risk weighted as appropriate under the SRWA. Generally, those equity exposures that would attract the lowest risk weights under SRWA are required to be treated under the non-significant equity exposures, before inclusion of any equity exposures that would otherwise attract higher risk weights under SRWA.

The table below presents the adjusted carrying values and RWAs for our equity exposures in the banking book.

**Table 6: Equity Exposures in the Banking Book** 

\$ in millions December		As of nber 2014	
	Adjusted		
	Carrying		
	Value <sup>1</sup>	RWA%	RWA
Community development			
equity exposures	\$1,305	100%	\$1,305
Simple Risk Weight Approach (SRWA)			
Significant investments in nonconsolidated financial institutions (transitional			
provisions) <sup>2</sup>	10,160	100%	10,160
Non-significant equity exposures		100%	9,099
Publicly traded equity exposures under the SRWA <sup>3</sup>		300%	
Private equity exposures under the SRWA		400%	14,256
Equity exposures in leveraged investment funds under the SRWA	89	600%	534
Total SRWA	24,217		35,354
Simple Modified Look-Through Approach (SMLTA)			
Equity Exposures to Investment Funds	593		2,520
Total SMLTA	593		2,520
Total	\$ 24,810 <sup>4</sup>		\$37,874

- The adjusted carrying value of the equity exposures includes \$2.45 billion representing a percentage of our unfunded commitment exposure.
- Represents significant equity investments that are subject to risk-weighting, and excludes the items deducted from capital.
- Our publicly traded equity exposures are being risk weighted under the nonsignificant equity exposures risk-weight.
- Adjusted carrying value consists of \$3.93 billion of publicly traded (defined as any equity security traded on a recognized exchange) and \$20.88 billion of private equity exposures.

# Securitizations in the Banking Book

#### Overview

The Revised Capital Framework defines certain activities as securitization transactions which attract capital requirements under the "Securitization Framework." A portion of our positions that meet the regulatory definition of a securitization are in our trading book and capital requirements for those positions are calculated under the market risk capital rules (see "Market Risk - Specific Risk -Securitization Positions"). However, we also have certain banking book positions that meet the regulatory definition of a securitization.

Under the Revised Capital Framework, the regulatory definition of a securitization includes the following criteria:

- All or a portion of the credit risk of one or more underlying exposures is transferred to one or more third parties.
- The credit risk associated with the underlying exposures has been separated into at least two tranches reflecting different levels of seniority.
- Performance of the securitization exposures depends upon the performance of the underlying exposures.
- All or substantially all of the underlying exposures are financial exposures.

The regulations also distinguish between traditional and synthetic securitizations, the primary difference being that a traditional securitization involves the transfer of assets from a bank's balance sheet into a securitization vehicle, whereas a synthetic securitization involves the transfer of credit risk through credit derivatives or guarantees.

There are also specific rules for resecuritization exposures (a resecuritization exposure is one which involves the securitization of assets, one or more of which has already been securitized). As of December 2014, we did not have banking book securitization exposures that met the definition of a resecuritization.

We have described below our banking book activities that meet the regulatory definition of a securitization. It is important to note that the scope of banking book securitizations for regulatory purposes is not comparable to the population of securitization activity reported in "Note 11. Securitization Activities," in Part II, Item 8 "Financial Statements and Supplementary Data" in the 2014 Form 10-K.

Credit Protection (Synthetic Securitizations). Some of the credit protection that we have purchased meets the definition of a "synthetic securitization" under the Revised Capital Framework. The positions on which we have purchased protection are therefore treated for regulatory capital purposes under the Securitization Framework. Under the most material of these synthetic securitization transactions, our hedge counterparty provides us with credit loss protection on certain approved loan commitments (primarily investment-grade commercial commitments). The notional amount of such loan commitments was \$27.51 billion as of December 2014. The credit loss protection on loan commitments provided by our hedge counterparty is generally limited to 95% of the first loss we realize on such commitments, up to a maximum of approximately \$950 million. In addition, subject to the satisfaction of certain conditions, upon the firm's request, our hedge counterparty 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 December 2014. This protection has been fully cash collateralized by our hedge counterparty.

Warehouse Financing and Lending. We provide financing to clients who warehouse financial assets. These arrangements are secured by the warehoused assets, primarily consisting of corporate loans and commercial mortgage loans. We also provide financing to non-operating companies on an over-collateralized basis.

OTC Derivatives facing Securitization Special Purpose Entities (SSPEs). We have OTC derivatives (primarily credit derivatives) with counterparties that meet the definition of an SSPE. An SSPE is an entity organized for the specific purpose of holding the assets underlying a securitization, whose activities are limited to holding such assets, and whose structure is intended to isolate the underlying assets from the credit risk of the seller who originally sold them to the SSPE. An OTC derivative with an SSPE counterparty attracts counterparty credit risk capital requirements under the Securitization Framework. All of our derivatives that fall into this category are considered to be "covered positions" under the Federal Reserve Board's final rules, and as such they are also subject to market risk capital requirements (see "Market Risk").

**Other.** We have certain other banking book securitization activities such as holding securities issued by securitization vehicles.

# **Risk Management**

By engaging in the banking book securitization activities noted above, we are primarily exposed to credit risk and to the performance of the underlying assets. We mitigate the credit risk arising on our banking book securitization activities primarily through the purchase of credit protection and through obtaining collateral, predominantly in the form of cash, securities or loans. These positions are incorporated into our overall risk management of financial instruments.

#### **Accounting / Valuation Policies**

For information on accounting and valuation policies applicable to these positions, see "Note 3. Significant Accounting Policies," in Part II, Item 8 "Financial Statements and Supplementary Data" in the 2014 Form 10-K.

#### **Calculation of Risk-Weighted Assets**

RWAs for banking book securitization exposures (including counterparty credit risk exposures that arise from trading book derivative positions) are calculated through application of a hierarchy of approaches described below.

**Deduction.** A bank is required to deduct from CET1 any after-tax gain on sale resulting from the sale of loans for the purpose of a traditional securitization, unless the banking organization's equity capital has increased as a consequence of having received cash in connection with the securitization. As of December 2014 we did not have any deductions of this nature.

Supervisory Formula Approach (SFA). If a bank is in a position to obtain or calculate, on an on-going basis, all of the parameters needed to perform the SFA calculation, then it must use this methodology to calculate the capital requirements for a securitization position. Under the SFA, RWAs are based on the capital requirements that would apply to the underlying assets if they were held directly on our balance sheet; this is then adjusted to take account of the degree of subordination (i.e., loss absorbance by junior tranches) of a given tranche. The capital requirements that would apply under the Basel III Advanced Rules to the underlying assets must be calculated separately for each asset, unless the underlying assets are a homogenous pool of retail exposures, in which case the calculation can be done for the overall pool. The parameters required in order to calculate RWAs under the SFA are set out below:

Amount of underlying exposure (UE)	The EAD of all underlying exposures within the pool
Tranche Percentage (TP)	Ratio of the amount of the tranche that contains the bank's securitization exposure to the underlying exposures
Capital requirement on underlying exposures (Kirb)	The AIRB capital requirement if the underlying exposures were held directly on balance sheet. This requires an assignment of PD and LGD to the underlying exposures. It is calculated as the ratio of i) the sum of the risk-based capital requirements for the underlying exposures plus the expected credit losses of the underlying exposures; to ii) UE.
Credit Enhancement Level (L)	Ratio of the amount of all securitization exposure subordinated to the tranche that contains the bank's securitization exposure to UE
Thickness of Tranche (T)	Ratio of the amount of the tranche that contains the bank's securitization exposure to UE
N	Effective number of exposures in the underlying pool
EWALGD	Exposure weighted average loss given default of the underlying pool

Based on the above inputs, the SFA uses a prescribed regulatory formula to calculate the capital requirement. It results in a 1,250% risk weight for portions of the tranche with a subordination level below the Kirb threshold (see definition in the table above) and applies progressively lower RWAs to more senior tranches above the Kirb threshold, subject to a minimum risk-weight of 20%.

### Simplified Supervisory Formula Approach (SSFA).

The SSFA is allowed only if the information needed to perform the SFA is not available, and only if the data used in the calculation is no more than 91 calendar days old.

Consistent with the SFA, the SSFA is based on the capital requirements that would apply to the underlying pool of assets if they were held directly on the balance sheet; this is then adjusted to take account of the degree of subordination of a given tranche, and the level of delinquent exposures in the pool. A key difference, however, is that the capital requirements applicable to the assets in the securitization pool are calculated using the Hybrid Capital Rules, rather than the Basel III Advanced Rules. The SSFA also mirrors the SFA in that the capital requirements are lower for senior securitization exposures and higher for more junior ones.

The parameters required in order to calculate RWAs under the SSFA are set out below:

Weighted average capital requirement on underlying exposures (Kg)	Weighted average capital requirement of the underlying pool based on the Hybrid Capital Rules
Severe delinquency and non-performance (W)	Ratio of delinquent exposures in the underlying pool
Attachment point (A)	Represents the threshold at which credit losses will first be allocated to the exposure
Detachment point (D)	Represents the threshold at which credit losses of principal allocated to the exposure would result in a total loss of principal
Securitization Surcharge (P)	Supervisory calibration parameter (0.5 for securitizations and 1.5 for resecuritizations). This parameter results in a capital requirement that would be 50% or 150% higher than assets held directly on balance sheet

Similar to the SFA, the SSFA results in a 1,250% risk-weight for portions of the tranche with a subordination level below the Kg threshold, and applies progressively lower RWAs to more senior tranches above the Kg threshold, subject to a minimum risk-weight of 20%.

**1,250% Risk Weight.** If the securitization is neither deducted from regulatory capital, nor qualifies for either SFA or SSFA, a 1,250% risk-weight is applied.

An exception to the hierarchy of approaches described above is for securitizations that are non-credit OTC derivatives that have a first priority claim on the cash flows from the underlying exposures. Subject to supervisory approval, the RWAs for such securitizations may be equal to the exposure amount.

#### **Exposure Amount**

The definition of "exposure amount" that is used for regulatory purposes for banking book securitizations is set out below.

Exposure Amount by product - Banking Book		
On-Balance-Sheet	Loans and Securities: carrying value (either fair value or cost)	
Off-Balance-Sheet	Unfunded commitments: the notional amount for unfunded commitments adjusted by the appropriate credit conversion factor	
	Credit derivatives: the notional amount for credit derivatives adjusted for applicable collateral after applying the appropriate haircuts	
	Other derivatives: model-based EEPE is used for OTC derivative contracts (except for credit derivatives)	

The table below presents the exposure amount and related RWAs of our banking book securitizations, including onbalance-sheet (retained or purchased) and off-balance-sheet exposures, broken out between traditional and synthetic securitizations, by underlying exposure type. Exposure amounts below represent the associated EAD as calculated and defined by the regulatory rules, and are not comparable to securitization measures reported in "Note 11. Securitization Activities," in Part II, Item 8 "Financial Statements and Supplementary Data" in the 2014 Form 10-K.

Table 7: Securitization Exposures and Related RWAs by Exposure Type

\$ in millions		As of Decen	nber 2014		
		Exposure A	mount (EAD)		
	On-balance-sheet	Off-balance-	-sheet		
	Traditional	Traditional	Synthetic	Total EAD	RWA
Residential mortgages	\$17	\$ -	\$ -	\$17	\$6
Commercial mortgages	1,649	12	-	1,661	1,015
Corporates	54	1,005	18,285	19,344	4,416
Asset-backed and other	2,035	1,817	-	3,852	1,334
OTC Derivatives facing SSPEs <sup>1</sup>	<u>-</u>		1,315	1,315	2,667
Total	\$3,755	\$2,834	\$ 19,600	\$26,189	\$9,438

<sup>1.</sup> Represents counterparty credit risk charges on trading book OTC derivative transactions that face securitization SPEs. See "Market Risk - Specific Risk -Securitization Positions" for more information on our trading book exposures.

The table below presents the aggregate amount of our banking book securitization exposures further categorized by risk-based capital approach and risk-weight bands.

Exposure amounts below represent the associated EAD, as calculated and defined by the regulatory rules.

Table 8: Securitization Exposures and Related RWAs by Regulatory Capital Approach

\$ in millions	As of December 2014									
	Supervisory Formula Approach (SFA)			Simplified Supervisory Formula Approach (SSFA)		1,250 percent risk weight				
	Exposure Amount	RWAs	Exposure Amount	RWAs	Exposure Amount	RWAs	Exposure Amount	RWAs		
0% - 25%	\$18,162	\$3,626	\$5,914	\$1,184	\$ -	\$ -	\$24,076	\$4,810		
26% - 100%	44	30	1,043	904	-	-	1,087	934		
101% - 250%	32	44	460	863	-	-	492	907		
251% - 650%	151	452	245	837	-	-	396	1,289		
651% - 1,250%	47	485	40	377	51	636	138	1,498		
Total	\$18,436	\$4,637	\$7,702	\$4,165	\$51	\$636	\$26,189	\$9,438		

We account for a securitization as a sale when we have relinquished control over the transferred assets. Prior to securitization, we account for assets pending transfer at fair value and therefore do not typically recognize significant gains or losses upon the transfer of assets.

The table below provides the principal amount of positions that we held in our banking book that have been securitized in the current year, whether or not we have retained a position, by exposure type. There has been no material new activity in relation to our synthetic securitization hedge transactions in 2014.

The principal amount is presented for the purpose of providing information about the size of our banking book securitization activities. This amount is not representative of our risk of loss.

Table 9: Securitization Activity – Banking Book

\$ in millions	Year Ended December 2014
Commercial mortgages	\$ 5,503
Asset-backed and other	1,895
Total Activity	\$ 7,398

#### **Market Risk**

# **Market Risk-Weighted Assets**

Our covered positions are subject to market risk capital requirements which are designed to cover the risk of loss in value of these positions due to changes in market conditions. These capital requirements are determined either by applying prescribed risk weighting factors, or they are based on internal models which are subject to various qualitative and quantitative parameters. The market risk regulatory capital rules require that a bank holding company obtain prior written agreement from its regulators before using any internal model to calculate its risk-based capital requirement for covered positions.

RWAs for market risk under the market risk regulatory capital rules are computed using the following internal models: Value-at-Risk (VaR), Stressed VaR (SVaR), Incremental risk and Comprehensive risk (which also includes a surcharge). In addition, the Specific risk measure is also used to compute RWAs for market risk, under the standardized measurement method, for certain securitized and non-securitized covered positions by applying risk-weighting factors predetermined by regulators, to positions after applicable netting is performed. As defined in the Federal Reserve Board's regulations, RWAs for market risk are the sum of each of these measures multiplied by 12.5. An overview of each of these measures is provided below.

Regulatory VaR. VaR is the potential loss in value of inventory positions, as well as certain other financial assets and financial liabilities, due to adverse market movements over a defined time horizon with a specified confidence level. For both risk management purposes (positions subject to VaR limits) and regulatory capital calculations (for covered positions) we use a single VaR model. However, VaR used for regulatory capital requirements (regulatory VaR) differs from risk management VaR due to different time horizons and confidence levels (10-day and 99% for regulatory VaR vs. one-day and 95% for risk management VaR), as well as differences in the scope of positions on which VaR is calculated. In addition, the daily trading net revenues used to determine risk management VaR exceptions (i.e., comparing the daily trading net revenues to the VaR measure calculated as of the prior business day) include intraday activity, whereas the Federal Reserve Board's regulatory capital regulations require that intraday activity be excluded from daily trading net revenues when calculating regulatory VaR exceptions. Intraday activity includes bid/offer net revenues, which are more likely than not to be positive.

The VaR model captures risks including interest rates, equity prices, currency rates and commodity prices. As such, VaR facilitates comparison across portfolios of different risk characteristics. VaR also captures the diversification of aggregated risk at the firmwide level. 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, mortgage prepayment speeds and credit spreads;
- Equity price risk: results from exposures to changes in prices and volatilities of individual equities, baskets of equities and equity indices;
- Currency rate risk: results from exposures to changes in spot prices, forward prices and volatilities of currency rates; and
- Commodity price risk: results from exposures to changes in spot prices, forward prices and volatilities of commodities, such as crude oil, petroleum products, natural gas, electricity, and precious and base metals.

In accordance with the market risk regulatory capital requirements, we evaluate the accuracy of our VaR model through daily backtesting. The results of the backtesting determine the size of the VaR multiplier used to compute RWAs.

For further information on our VaR model and market risk management, see "Risk Management and Risk Factors -Market Risk Management," in Part II, Item 7 "Management Discussion and Analysis of Financial Condition and Results of Operations" in the 2014 Form 10-K.

The table below presents by risk category our periodend, high, low and mean of the average daily Regulatory VaR for the three months ended December 2014. Average, per the market risk regulatory capital requirements, is determined based on the average daily Regulatory VaR over the preceding 60 business days.

Table 10: Regulatory VaR

_	-	
		As of
	Decem	ber 2014
\$ in millions	Gı	roup, Inc.
Regulatory VaR	\$	273
VaR x Multiplier		819 <sup>1</sup>
RWAs	\$	10,238

		As of		Thr	ee Month Decem		
	Decemb			High	Low		Mean
Group, Inc.	\$	273	\$	288	268	\$	274
Interest rates		181	<b>.</b>	234	180	<u>-</u>	198
Equity prices		91		101	91	<u>.</u>	97
Currency rates		136		136	89		113
Commodity prices		111		111	96		102
Diversification <sup>2</sup>		(246)					(236)

<sup>1.</sup> Regulatory VaR is subject to a regulatory multiplier that is set at a minimum of three (which is the multiplier used in this table) and can be increased up to four, depending upon the number of backtesting exceptions. See "Regulatory VaR Backtesting Results." This result is further multiplied by 12.5 to convert into RWAs.

**Stressed VaR.** SVaR is the potential loss in value of inventory positions during a period of significant market stress. SVaR is calculated at a 99% confidence level over a 10-day horizon using market data inputs from a continuous 12-month period of stress. We identify the stressed period by comparing VaR using market data inputs from different historical periods.

The table below presents our period-end, high, low and mean of the average weekly SVaR for the three months ended December 2014. Average, per the market risk regulatory capital requirements, is determined based on the average weekly amount for the preceding 12 weeks.

Table 11: Stressed VaR

	As of December 2014		Thre			e Months Decembe			
\$ in millions	Gr	oup, Inc.		High		Low	N	<b>l</b> lean	
SVaR	\$	790	\$	801	\$	767	\$	785	
SVaR x Multiplier		2,370 1							
RWAs	\$	29,625							

<sup>1.</sup> SVaR is subject to the same regulatory multiplier used for Regulatory VaR and is further multiplied by 12.5 to convert into RWAs.

**Incremental Risk.** Incremental risk is the potential loss in value of non-securitized inventory positions due to the default or credit migration of issuers of financial instruments over a one-year time horizon. As required by the market risk regulatory capital rules, this measure is calculated at a 99.9% confidence level over a one-year time horizon. It uses a multi-factor model assuming a constant level of risk. When assessing the risk, we take into account market and issuer-specific concentration, credit quality, liquidity horizons and correlation of default and migration risk. The liquidity horizon is calculated based upon the size of exposures and the speed at which we can reduce risk by hedging or unwinding positions, given our experience during a historical stress period, and is subject to the prescribed regulatory minimum.

<sup>2.</sup> Diversification effect in the table above represents the difference between total VaR and the sum of the VaRs for the four risk categories. This effect arises because the four market risk categories are not perfectly correlated

The table below presents our period-end, high, low and mean of the maximum of the average weekly Incremental risk measure or the point-in-time measure. Average, per the market risk regulatory capital requirements, is determined based on the average weekly amount over the preceding 12 weeks.

Table 12: Incremental Risk

		As of T December 2014		e Months Decemb	
\$ in millions	Group,	Inc.	High	Low	Mean
Incremental Risk	\$ 1	,356 <sup>1</sup>	\$ 1,769	\$ 1,356	\$ 1,465
RWAs	\$ 16	,950			

<sup>1.</sup> In order to convert the results of Incremental risk into RWAs, it is multiplied by 12.5.

Comprehensive Risk. Comprehensive risk is the potential loss in value, due to price risk and defaults, within our credit correlation positions. A credit correlation position is defined as a securitization position for which all or substantially all of the value of the underlying exposures is based on the credit quality of a single company for which a two-way market exists, or indices based on such exposures for which a two-way market exists, or hedges of these positions (which are typically not securitization positions).

As required by the market risk regulatory capital requirements, Comprehensive risk comprises a modelmeasure and a surcharge based on the standardized measurement method. The model-based measure is calculated at a 99.9% confidence level over a one-year time horizon applying a constant level of risk. The model comprehensively covers price risks including effects and takes price nonlinear into account contractual structure of cash flows, the effect of multiple defaults, credit spread risk, volatility of implied correlation, recovery rate volatility and basis risk. The liquidity horizon is based upon our experience during a historical stress period, subject to the prescribed regulatory minimum.

The surcharge is 8% of the standardized specific risk addon. For detail on the calculation of the add-on for securitization positions, see "Specific Risk - Securitization Positions" below, and for detail on the calculation of the add-on for hedges see "Specific Risk - Other Specific Risk Positions" below.

As of December 2014, we had credit correlation positions, subject to the Comprehensive risk measure, with a fair value of \$130 million in net assets and \$214 million in net liabilities.

The table below presents our period-end, high, low and mean of the maximum of the average weekly Comprehensive risk measure or the point-in-time measure, inclusive of both modeled and non-modeled components for the three months ended December 2014. Average, per the market risk regulatory capital requirements, is determined based on the average weekly amount for the preceding 12 weeks.

**Table 13: Comprehensive Risk** 

	Decem	As of ber 2014	Three Months Ended December 2014			
\$ in millions	Gr	oup, Inc.	High	Low	Mean	
Comprehensive Risk	\$	652 <sup>1,2</sup>	\$721	\$652	\$696	
RWAs	\$	8,150				

- 1. In order to convert the Comprehensive risk measure into RWAs, it is multiplied by 12.5.
- 2. These results include a surcharge of \$0.33 billion on credit correlation positions

#### Model Review and Validation

The models discussed above, which are used to determine Regulatory VaR, SVaR, Incremental risk and Comprehensive risk, are subject to review and validation by our independent model validation group, which consists of quantitative professionals who are separate from model developers. This review includes:

- A critical evaluation of the model, its theoretical soundness and adequacy for intended use;
- Verification of the testing strategy utilized by the model developers to ensure that the model functions as intended; and
- Verification of the suitability of the calculation techniques incorporated in the model.

These models are regularly reviewed and enhanced in order to incorporate changes in the composition of covered positions, as well as variations in market conditions. Prior to implementing significant changes to our assumptions and/or models, we perform model validation and test runs. Significant changes to our models are reviewed with our chief risk officer and chief financial officer, and approved by the Firmwide Risk Committee.

#### **Regulatory VaR Backtesting Results**

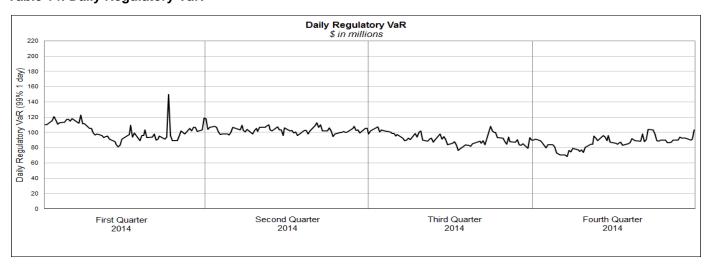
As required by the market risk regulatory capital requirements, we validate the accuracy of our Regulatory VaR models by backtesting the output of such models against the daily positional loss results. The actual number of exceptions (that is, the number of business days for which the positional losses exceed the corresponding 99% one-day Regulatory VaR) over the most recent 250 business days is used to determine the size of the VaR multiplier, which could increase from a minimum of three to a maximum of four, depending on the number of exceptions.

As defined in the market risk regulatory capital requirements, positional net revenues for any given day represent the impact of that day's price variation on the value of positions held at the close of business the previous day. As a consequence, these results exclude certain revenues associated with market-making businesses, such as bid/offer net revenues, which by their nature are more likely than not to be positive. In addition, positional net revenues used in our Regulatory VaR

backtesting relate only to positions which are included in Regulatory VaR and, as noted above, differ from positions included in our risk management VaR. This measure of positional net revenues is used to evaluate the performance of the Regulatory VaR model and is not comparable to our actual daily trading net revenues, see "Risk Management and Risk Factors - Market Risk Management," in Part II, Item 7 "Management Discussion and Analysis of Financial Condition and Results of Operations" in the 2014 Form 10-K.

Our positional losses observed on a single day exceeded our 99% one-day Regulatory VaR on three occasions during 2014. There was no change in the VaR multiplier used to calculate Market RWAs. Note that, although a one-day time horizon is used for backtesting purposes, a 10-day time horizon is used, as described earlier, to determine RWAs associated with Regulatory VaR.

The table below presents our 99% one-day Regulatory VaR during the previous 12 months.



**Table 14: Daily Regulatory VaR** 

#### Stress Testing

Stress testing is a method of determining the effect on the firm of various hypothetical stress scenarios. We use stress testing to examine risks of specific portfolios as well as the potential impact of significant risk exposures across the firm. 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 firmwide stress tests.

For a detailed description of our stress testing practices, see "Risk Management and Risk Factors – Market Risk Management – Stress Testing," in Part II, Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" in the 2014 Form 10-K.

#### Specific Risk

Specific risk is the risk of loss on a position that could result from factors other than broad market movements and includes event risk, default risk and idiosyncratic risk. The specific risk add-on is applicable for both securitization positions and for certain non-securitized debt and equity positions, to supplement the model-based measures.

market risk regulatory capital requirements introduced new standards to assess creditworthiness, in response to a Dodd-Frank Act mandate that the U.S. federal bank regulatory agencies remove references to, and prohibit reliance on, external credit ratings from regulations and supervisory guidance and replace them with appropriate alternative standards of creditworthiness. These alternative measures of creditworthiness, which are used to determine appropriate risk-weighting factors within the specific risk component of the market risk measure, are incorporated in the table below. This table presents the RWAs of our non-modeled-based specific risk measure on securitization (excluding credit correlation positions captured by the Comprehensive risk measure) and non-securitization positions.

Table 15: Specific Risk

\$ in millions	De	As of cember 2014
Securitization positions	\$	48,622
Other specific risk positions		31,296
Total Specific Risk RWAs	\$	79,918

Securitization Positions. The "Securitization Framework" section of the rules is used to calculate the RWAs for any covered position that has been identified as a securitization or resecuritization (for detailed descriptions of the regulatory definition of a securitization and of the hierarchy of approaches used within the Securitization Framework to calculate regulatory capital requirements, see "Securitizations in the Banking Book"). Products covered by the regulatory definition of a securitization include mortgage-backed securities (MBS) and other asset-backed securities (ABS), derivatives referencing MBS or ABS, or derivatives referencing indices of MBS or ABS, which are held in inventory. The population includes positions purchased in the secondary market, as well as retained interests in securitization structures we sponsor. Consistent with the rules, this notably excludes mortgage-backed passthrough securities guaranteed by government-sponsored entities (for example, Federal National Mortgage Association).

The RWAs for trading book securitization positions are calculated by multiplying the exposure amount by the specific risk-weighting factors assigned and then multiplying by 12.5. The exposure amount is defined as the carrying value for securities, or the market value of the effective notional of the instrument or indices underlying derivative positions. The securitization capital requirements are the greater of the capital requirements on the net long or short exposure (incorporating applicable netting), and are capped at the maximum loss that could be incurred on any given transaction.

The table below presents our aggregate on-balance-sheet and off-balance-sheet trading book securitization exposures (excluding credit correlation positions captured by the Comprehensive risk measure) by underlying exposure type. Amounts below reflect securitization exposures, as defined for regulatory capital purposes and are not comparable to securitization measures reported in "Note 11. Securitization Activities," in Part II, Item 8 "Financial Statements and Supplementary Data" in the 2014 Form 10-K.

**Table 16: Trading Book Securitization Exposures** 

\$ in millions As of December		
Residential mortgages	\$ 4,306	
Commercial mortgages	2,300	
Corporates <sup>1</sup>	1,324	
Asset-backed and other	2,230	
Total Securitization Exposures <sup>2</sup>	\$ 10,160	

- 1. Reflects corporate collateralized debt and loan obligations.
- 2. Includes securities with a fair value of \$7.88 billion.

Securitization positions, including resecuritizations, are incorporated into our overall risk management approach for financial instruments. For a detailed discussion of our risk management process and practices, see "Risk Management and Risk Factors – Market Risk Management" and "Risk Management and Risk Factors – Credit Risk Management," in Part II, Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" in the 2014 Form 10-K.

Other Specific Risk Positions. The standard specific risk add-on for debt positions ranges from 0.25% to 12%, other than for certain sovereign and supranational positions which have a 0% add-on. The add-on for sovereigns, public sector entities and depository institutions is based on the Organization for Economic Co-operation and Development country risk classifications of the sovereign and the remaining contractual maturity of the position. The add-on for corporate entities that have issued public financial instruments is based on internal assessments of creditworthiness and the remaining contractual maturity of the position. All other types of debt positions are subject to an 8% add-on. The standard specific risk add-on for equity positions will generally be 8%, but this could decrease to 2% for well-diversified portfolios of equities, certain indices, and certain futures-related arbitrage strategies.

The standard specific risk RWAs for debt and equity positions are calculated by multiplying the exposure amount by the appropriate standard specific risk add-on, and then multiplying by 12.5. The exposure amount is defined as the carrying value for securities and loans, or the market value of the effective notional of the instrument or indices underlying derivative positions. The specific risk capital requirements are capped at the maximum loss that could be incurred on any given transaction.

# **Operational Risk**

#### 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. 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.

We maintain a comprehensive control framework designed to provide a well-controlled environment to minimize operational risks. The Firmwide Operational Risk Committee, along with the support of regional or entity-specific working groups or committees, provides oversight of the ongoing development and implementation of our operational risk policies and framework. Operational Risk Management is a risk management function independent of our revenue-producing units, reports to our chief risk officer, and is responsible for developing and implementing policies, methodologies and a formalized framework for operational risk management with the goal of minimizing our exposure to operational risk.

#### **Operational Risk Management Process**

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

- The training, supervision and development of our people;
- The active participation of senior management in identifying and mitigating key operational risks across the firm:
- 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 our revenueproducing units and our independent control and support functions; and
- A network of systems throughout the firm 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, our senior management assesses firmwide and business level operational risk profiles. From a bottom-up perspective, revenue-producing units and independent control and support functions are responsible for risk management on a day-to-day basis, including identifying, mitigating, and escalating operational risks to senior management.

Our operational risk 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 framework comprises the following practices:

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

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

# **Risk Identification and Reporting**

The core of our operational risk management framework is risk identification and reporting. We have a comprehensive data collection process, including firmwide policies and procedures, for operational risk events.

We have established policies that require managers in our revenue-producing units and our independent control and support functions to escalate operational risk events. When operational risk events are identified, our 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, our firmwide 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. Managers from both revenue-producing units and independent control and support functions analyze the information to evaluate operational risk exposures and identify businesses, activities or products with heightened levels of operational risk. We also provide periodic operational risk reports to senior management, risk committees and the Board.

#### **Risk Measurement**

We measure our operational risk exposure over a twelvemonth 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 of our businesses. Operational risk measurement incorporates qualitative and quantitative assessments of factors including:

- Internal and external operational risk event data;
- Assessments of our internal controls:
- Evaluations of the complexity of our business activities;
- The degree of and potential for automation in our processes;
- New product 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
- The 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.

#### **Regulatory Capital Measurement**

We have been given permission by our supervisors to compute operational RWAs in accordance with the Advanced Measurement Approach (AMA) of the Revised Capital Framework.

Under the AMA, we employ a Scenario-Based Approach (SBA) model that incorporates qualitative and quantitative data elements. Scenario analysis is conducted across a matrix of businesses and centralized corporate functions throughout the firm and across their applicable operational risk categories: 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. Each intersection of a business or corporate function and a risk category is referred to as a risk class. For each risk class, internal loss data, external data, Business Environment and Internal Control Factors and judgment are used to develop and substantiate estimates of the likely frequency and severity of operational risk losses over a twelve-month time horizon. These estimates are used as inputs to produce two separate distributions (one for frequency, one for severity) which are then combined for each risk class. The results for all risk classes are aggregated, taking into consideration the possibility of correlations between them. The SBA model calculates operational risk capital requirements for the firm at the 99.9<sup>th</sup> percentile confidence level.

For a subset of risks in our operational risk capital determination we incorporate insurance as a risk transfer mechanism. We continue to seek opportunities to use compliant insurance, where appropriate.

#### **Risk Monitoring**

We evaluate changes in the operational risk profile of the firm and our businesses, including changes in business mix or jurisdictions in which we operate, by monitoring the factors noted above at a firmwide 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.

#### Model Review and Validation

The SBA model discussed above is subject to review and validation by our independent model validation group, which consists of quantitative professionals who are separate from model developers. This review includes:

- A critical evaluation of the model, its theoretical soundness and adequacy for intended use;
- Verification of the testing strategy utilized by the model developers to ensure that the model functions as intended; and
- Verification of the suitability of the calculation techniques incorporated in the model.

# **Interest Rate Sensitivity**

#### Interest Rate Risk in the Trading Book

Our exposure to interest rate risk on our trading book positions arises primarily from inventory held to support client market-making activities. Our inventory is accounted for at fair value and therefore our inventory balances fluctuate not only due to changes in inventory levels driven by client demand, but also because of changes in inventory prices. For additional information regarding interest rate risk as a component of Market risk, see "Risk Management and Risk Factors – Market Risk Management," in Part II, Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" in the 2014 Form 10-K.

#### Interest Rate Risk in the Banking Book

Our banking book positions are primarily floating rate or the interest rate risk is hedged. These positions are principally funded with floating rate liabilities. Consequently, our banking book activities have immaterial exposure to movements in interest rates.

For information regarding asset-liability management, see "Risk Management and Risk Factors – Liquidity Risk Management," in Part II, Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" in the 2014 Form 10-K.

#### **Common Equity and Fixed-Rate Liabilities**

We also monitor the implied interest rate sensitivity of our capital base. Although our banking book and trading book assets are principally funded by floating rate liabilities, they are also partially funded by our common equity and, to some degree, by fixed-rate liabilities. Because neither common equity nor fixed-rate liabilities give rise to increased interest expense when rates rise, an environment in which interest rates are rising will tend to have a positive effect on net revenues.

We run a hypothetical scenario on a quarterly basis in which we assess the impact of an instantaneous rise in interest rates of 100 basis points and assume that the size and composition of our balance sheet remains constant. We estimate that this rise in interest rates could result in a positive impact of approximately \$1 billion to our net revenues over a one-year period. This hypothetical scenario does not reflect our expectations regarding the movement of interest rates in the near term. Furthermore, the level of client and other market activity is generally the primary driver of our net revenues, and changes to such activity levels as a consequence of a rise in interest rates are not reflected in this hypothetical scenario. We have not estimated the effect of a 100 basis point decrease in interest rates, since we do not consider such a reduction to be realistic.

# Cautionary Note on Forward-Looking Statements

We have included or incorporated by reference in these disclosures, and from time to time our management may make, statements that may constitute "forward-looking statements" within the meaning of the safe harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995. 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 condition 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 and leverage rules applicable to bank holding companies, the impact of the Dodd-Frank Act on our businesses and operations, as well as statements about the objectives and effectiveness of our risk management and liquidity policies, statements about trends in 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.

We have provided in this report information regarding interest rate sensitivity. Certain statements with respect to potential net revenue impact from a hypothetical change in interest rates on our banking book and trading book assets and common equity and fixed-rate liabilities are forward-looking statements that are based on the current composition of our balance sheet and do not address any adverse impacts on our businesses that could be caused by a change in interest rates. The estimated impact to our net revenues does not reflect our expectations regarding movement of interest rates in the near term or any estimated business revenue that might be generated in a changing interest rate environment.

It is possible 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 discussed under "Risk Factors." in Part I, Item 1A in the 2014 Form 10-K.

# **Glossary of Risk Terms**

- Advanced Internal Ratings-Based (AIRB). The AIRB approach of the Revised Capital Framework provides a methodology for banks, subject to supervisory approval, to use various risk parameters to determine the EAD and risk-weights for regulatory capital calculations. Other risk parameters used in the determination of risk weights are each counterparty's Probability of Default (PD), Loss Given Default (LGD) and the effective maturity of the trade or portfolio of trades.
- Advanced Measurement Approach (AMA). The AMA of the Revised Capital Framework provides a methodology for a bank to estimate capital requirements for Operational Risk, subject to meeting a range of qualitative and quantitative data requirements, and to supervisory approval. The AMA establishes requirements for a bank's operational risk management processes, data and assessment systems, and quantification systems.
- Comprehensive Risk. The potential loss in value, due to price risk and defaults, within our credit correlation positions. Comprehensive risk comprises a modeled measure which is calculated at a 99.9% confidence level over a one-year time horizon plus a surcharge which is 8% of the standardized specific risk add-on.
- Credit Correlation Position. A securitization position for which all or substantially all of the value of the underlying exposures is based on the credit quality of a single company for which a two-way market exists, or indices based on such exposures for which a two-way market exists, or hedges of these positions (which are typically not securitization positions).
- **Credit Risk.** 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.

- **Default.** A default is considered to have occurred when either or both of the two following events have taken place: (i) we consider that the obligor is unlikely to pay its credit obligations to us in full; or (ii) the obligor has defaulted on a payment and/or is past due more than 90 days on any material Wholesale credit obligation, 180 days on residential mortgage obligations or 120 days on other retail obligations.
- **Default Risk.** The risk of loss on a position that could result from failure of an obligor to make timely payments of principal or interest on its debt obligation, and the risk of loss that could result from bankruptcy, insolvency, or similar proceedings.
- Effective Expected Positive Exposure (EEPE). The time-weighted average of non-declining positive credit exposure over the EE simulation. EEPE is used under the IMM as the exposure measure that is then risk weighted to determine counterparty risk capital requirements.
- **Event Risk.** The risk of loss on equity or hybrid equity positions as a result of a financial event, such as the announcement or occurrence of a company merger, acquisition, spin-off, or dissolution.
- Expected Exposure (EE). The expected value of the probability distribution of non-negative credit risk exposures to a counterparty at any specified future date before the maturity date of the longest term transaction in a netting set.
- Exposure at Default (EAD). The exposure amount that is risk weighted for regulatory capital calculations. For on-balance-sheet assets, such as receivables and cash, EAD is generally based on the balance sheet value. For the calculation of EAD for off-balance-sheet exposures, including commitments and guarantees, an equivalent exposure amount is calculated based on the notional amount of each transaction multiplied by a credit conversion factor designed to estimate the net additions to funded exposures that would be likely to occur over a one-year horizon, assuming the obligor were to default. For substantially all of the counterparty credit risk arising from OTC derivatives and securities financing transactions, internal models calculate the distribution of exposure upon with the EAD calculation is based.

- **Idiosyncratic Risk.** The risk of loss in the value of a position that arises from changes in risk factors unique to that position.
- **Incremental Risk.** The potential loss in value of non-securitized inventory positions due to the default or credit migration of issuers of financial instruments over a one-year time horizon. This measure is calculated at a 99.9% confidence level over a one-year time horizon using a multi-factor model.
- Internal Models Methodology (IMM). The IMM of the Revised Capital Framework establishes a methodology for banks to use their internal models to estimate exposures arising from OTC derivatives, securities financing transactions, and eligible margin loans, subject to qualitative and quantitative requirements and supervisory approval.
- Loss Given Default (LGD). An estimate of the economic loss rate if a default occurs during economic downturn conditions.
- Market Risk. The risk of loss in the value of our inventory, as well as certain other financial assets and financial liabilities, due to changes in market conditions.
- **Operational Risk.** The risk of loss resulting from inadequate or failed internal processes, people and systems or from external events.
- **Probability of Default (PD).** Estimate of the probability that an obligor will default over a one-year horizon.
- Regulatory Value-at-Risk (VaR). The potential loss in value of covered positions due to adverse market movements over a 10-day time horizon with a 99% confidence level.
- Regulatory VaR Backtesting. Comparison of daily positional loss results to the Regulatory VaR measure calculated as of the prior business day.

- **Resecuritization Position.** Represents an on or off-balance-sheet transaction in which one or more of the underlying exposures is a securitization position, or an exposure that directly or indirectly references a resecuritization exposure.
- **Retail Exposure.** Residential mortgage exposures, qualifying revolving exposures, or other retail exposures that are managed as part of a segment of exposures with homogeneous risk characteristics, not on an individual exposure basis.
- Securitization Position. Represents an on- or off-balance-sheet transaction in which all or a portion of the credit risk of one or more underlying exposures is transferred to one or more third parties; the credit risk associated with the underlying exposures has been separated into at least two tranches, reflecting different levels of seniority; the performance of the securitization exposures is dependent upon the performance of the underlying exposures; all or substantially all of the underlying exposures are financial exposures; and the underlying exposure ownership is subject to certain ownership criteria prescribed by the regulatory rules.
- Simplified Supervisory Formula **Approach** (SSFA). Calculation method used in the Securitization Framework under which RWAs are based on the capital requirements that would apply to the underlying pool of assets if they were held directly on the balance sheet; this is then adjusted to take account for the degree of subordination of a given tranche. The capital requirement applicable to the assets in the securitization pool are calculated using the general risk-based requirements (i.e. the Hybrid Capital Rules), rather than the Basel III Advanced Rules. The SSFA is allowed only if the information needed to use the SFA is not available, and only if the data used in the calculation is no more than 91 calendar days old.
- **Specific Risk.** The risk of loss on a position that could result from factors other than broad market movements and includes event risk, default risk and idiosyncratic risk. The specific risk add-on is applicable for both securitization positions and for certain non-securitized debt and equity positions, to supplement the model-based measures.
- **Stress Testing.** Stress testing is a method of determining the effect on the firm of various hypothetical stress scenarios.

- Stressed VaR (SVaR). The potential loss in value of inventory positions during a period of significant market stress. SVaR is calculated at a 99% confidence level over a 10-day horizon using market data inputs from a continuous 12-month period of stress.
- Supervisory Formula Approach (SFA). Calculation methodology used in the Securitization Framework under which RWAs are based on the capital requirements that would apply to the underlying pool of assets if they were held directly on our balance sheet; this is then adjusted to take account of the degree of subordination (i.e. loss absorbance by junior tranches) of a given tranche.
- Synthetic Securitization. Defined in the Revised Capital Framework as a transaction in which all or some of the following criteria are met; all or a portion of the credit risk of the underlying exposures is transferred to a third party through the use of credit derivatives or guarantees; credit risk associated with the underlying exposures has been separated into at least two tranches reflecting different levels of seniority; the performance of the securitization exposures depends on the performance of the underlying exposures; and, all or substantially all of the underlying exposures are financial exposures.
- Traditional Securitization. Defined in the Revised Capital Framework as a transaction which meets various criteria including that all or a portion of the credit risk of underlying exposures is transferred to a third party other than through the use of credit derivatives or guarantees; the credit risk associated with the underlying exposures has been separated into at least two tranches reflecting different levels of seniority; the performance of the securitization exposures depends on the performance of the underlying exposures; and, all or substantially all of the underlying exposures are financial exposures.
- Value-at-Risk (VaR). The potential loss in value of inventory positions, as well as certain other financial assets and financial liabilities, due to adverse market movements over a defined time horizon with a specified confidence level. Risk management VaR is calculated at a 95% confidence level over a one-day horizon.
- Wholesale Exposure. A term used in the Revised Capital Framework to refer collectively to credit exposures to companies, sovereigns or government entities (other than securitization, retail or equity exposures).

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