

JPMORGAN CHASE & Co.
PILLAR 3 REGULATORY CAPITAL DISCLOSURES

For the quarterly period ended December 31, 2015

Table of Contents

Disclosure map	<u>1</u>
Introduction	<u>2</u>
Report overview	<u>2</u>
Basel III overview	<u>2</u>
Enterprise-wide risk management	<u>3</u>
Risk governance	<u>3</u>
Regulatory capital	<u>4</u>
Components of capital	<u>4</u>
Risk-weighted assets	<u>5</u>
Capital adequacy	<u>6</u>
Supplementary leverage ratio	<u>7</u>
Credit risk	<u>8</u>
Retail credit risk	<u>10</u>
Wholesale credit risk	<u>13</u>
Counterparty credit risk	<u>15</u>
Securitization	<u>17</u>
Equity risk in the banking book	<u>20</u>
Market risk	<u>21</u>
Material portfolio of covered positions	<u>21</u>
Value-at-risk	<u>21</u>
Regulatory market risk capital models	<u>22</u>
Independent review	<u>26</u>
Economic-value stress testing	<u>26</u>
Operational risk	<u>28</u>
Capital measurement	<u>28</u>
Interest rate risk in the banking book	<u>29</u>
Supplementary leverage ratio	<u>30</u>
Appendix	<u>31</u>
Valuation process	<u>31</u>
Model risk management	<u>32</u>
References	<u>33</u>

DISCLOSURE MAP

Pillar 3 Requirement	Description	Pillar 3 Report page reference	2015 Form 10-K page reference
Capital structure	Terms and conditions of capital instruments	4	1, 279, 282
	Capital components	4	178, 282
Capital adequacy	Capital adequacy assessment process	6	149, 155
	Risk-weighted assets by risk stripe	5	
	Regulatory capital metrics	7	288
Credit risk: general disclosures	Policies and practices	8	112, 207, 233, 242, 262, 290
	Credit risk exposures	9	112, 141
	<u>Retail</u>		
	Distribution of exposure	9	115, 247, 258, 291
	Impaired loans and ALLL	9	248, 264
	<u>Wholesale</u>		
	Distribution of exposure	9	122, 233, 259, 291
	Impaired loans and ALLL	9	261, 264
Credit risk: IRB	Parameter estimation methods	10, 13	
	RWA	8, 11, 14, 16	
Counterparty credit	Parameter estimation methods	15	
	Policies and practices	15	208, 238, 296
	Counterparty credit risk exposure	16	115, 122, 208, 238
	Credit derivatives purchased and sold	9	129, 219
Credit risk mitigation	Policies and practices	9	208, 242, 296
	Exposure covered by guarantees and CDS	14, 16	
Securitization	Objectives, vehicles, accounting policies	17	77, 91, 184, 208, 266
	Securitization RWA	18	
	Securitization exposure	19	
	Assets securitized	19	
	Current year securitization activity	19	
Market risk	Material portfolio of covered positions	21	
	Value-at-risk	21	133, 135
	Regulatory market risk capital models	22	
	Stress testing	27	136, 137
Operational risk	Operational risk management policies	28	144
	Description of AMA	28	144
Equity investments in the banking book	Policies and practices	20	143, 181, 184, 189, 223, 233
	Carrying value and fair value	20	
	Realized and unrealized gains/(losses)	20	
	Equity investments by risk weight	20	
Interest rate risk in the banking book	Nature, assumptions, frequency of measurement	29	138
	Earnings sensitivity to rate shocks	29	138
Supplementary leverage ratio (SLR)	Overview of SLR	7	155
	Components of SLR	30	

INTRODUCTION

JPMorgan Chase & Co., (“JPMorgan Chase” or the “Firm”) a financial holding company incorporated under Delaware law in 1968, is a leading global financial services firm and one of the largest banking institutions in the United States of America (“U.S.”), with operations worldwide; the Firm had \$2.4 trillion in assets and \$247.6 billion in stockholders’ equity as of December 31, 2015. The Firm is a leader in investment banking, financial services for consumers and small businesses, commercial banking, financial transaction processing and asset management. Under the J.P. Morgan and Chase brands, the Firm serves millions of customers in the U.S. and many of the world’s most prominent corporate, institutional and government clients.

JPMorgan Chase’s principal bank subsidiaries are JPMorgan Chase Bank, National Association (“JPMorgan Chase Bank, N.A.”), a national banking association with U.S. branches in 23 states, and Chase Bank USA, National Association (“Chase Bank USA, N.A.”), a national banking association that is the Firm’s credit card-issuing bank. JPMorgan Chase’s principal nonbank subsidiary is J.P. Morgan Securities LLC (“JPMorgan Securities”), the Firm’s U.S. investment banking firm. The bank and nonbank subsidiaries of JPMorgan Chase operate nationally as well as through overseas branches and subsidiaries, representative offices and subsidiary foreign banks. One of the Firm’s principal operating subsidiaries in the United Kingdom (“U.K.”) is J.P. Morgan Securities plc, a subsidiary of JPMorgan Chase Bank, N.A.

Pillar 3 report overview

This report provides information on the Firm’s capital structure, capital adequacy, risk exposures, and risk-weighted assets (“RWA”). This report describes the internal models used to translate risk exposures into required capital.

This report should be read in conjunction with JPMorgan Chase’s Annual Report on Form 10-K for the year ended December 31, 2015 (“2015 Form 10-K”) which has been filed with the U.S. Securities and Exchange Commission (“SEC”).

Basel III overview

The Basel framework consists of a three “Pillar” approach:

- Pillar 1 establishes minimum capital requirements, defines eligible capital instruments, and prescribes rules for calculating RWA.
- Pillar 2 requires banks to have an internal capital adequacy assessment process and requires that banking supervisors evaluate each bank’s overall risk profile as well as its risk management and internal control processes.
- Pillar 3 encourages market discipline through disclosure requirements which allow market participants to assess the risk and capital profiles of banks.

The U.S. capital requirements generally follow the Capital Accord of the Basel Committee, as amended from time to time. Prior to January 1, 2014, the Firm and its banking subsidiaries were subject to the capital requirements of Basel I and Basel 2.5. Effective January 1, 2014, the Firm became subject to Basel III (which incorporates Basel 2.5).

Basel III capital rules, for large and internationally active U.S. bank holding companies and banks, including the Firm and its insured depository institution (“IDI”) subsidiaries, revised, among other things, the definition of capital and introduced a new common equity Tier 1 capital (“CET1 capital”) requirement. Basel III presents two comprehensive methodologies for calculating risk-weighted assets (“RWA”), a general (Standardized) approach, which replaced Basel I RWA effective January 1, 2015 (“Basel III Standardized”) and an advanced approach, which replaced Basel II RWA (“Basel III Advanced”); and sets out minimum capital ratios and overall capital adequacy standards. Certain of the requirements of Basel III are subject to phase-in periods that began on January 1, 2014 and continue through the end of 2018 (“transitional period”).

Basel III also includes a requirement for Advanced Approach banking organizations, including the Firm, to calculate a Supplementary Leverage Ratio (“SLR”). Certain U.S. bank holding companies, including the Firm, are required to have a minimum SLR of 5% and IDI subsidiaries, including JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A., to have a minimum SLR of 6%, both beginning January 1, 2018.

ENTERPRISE-WIDE RISK MANAGEMENT

Risk is an inherent part of JPMorgan Chase's business activities. When the Firm extends a consumer or wholesale loan, advises customers on their investment decisions, makes markets in securities, or offers other products or services, the Firm takes on some degree of risk. The Firm's overall objective is to manage its businesses, and the associated risks, in a manner that balances serving the interests of its clients, customers and investors and protects the safety and soundness of the Firm.

Firmwide Risk Management is overseen and managed on an enterprise-wide basis. The Firm believes that effective risk management requires:

- Acceptance of responsibility, including identification and escalation of risk issues, by all individuals within the Firm;
- Ownership of risk management within each of the lines of business and corporate functions; and
- Firmwide structures for risk governance.

The Firm's Operating Committee, which consists of the Firm's Chief Executive Officer ("CEO"), Chief Risk Officer ("CRO") and other senior executives, is responsible for developing and executing the Firm's risk management framework. The framework is intended to provide controls and ongoing management of key risks inherent in the Firm's business activities and create a culture of transparency, awareness and personal responsibility through reporting, collaboration, discussion, escalation and sharing of information. The Operating Committee is responsible and accountable to the Firm's Board of Directors.

The Firm strives for continual improvement through ongoing employee training and development, as well as talent retention. The Firm follows a disciplined and balanced compensation framework with strong internal governance and independent Board oversight. The impact of risk and control issues are carefully considered in the Firm's performance evaluation and incentive compensation processes. The Firm is also engaged in a number of activities focused on conduct risk and in regularly evaluating its culture with respect to its business principles.

Risk appetite and governance

The Firm's overall tolerance for risk is governed by a "Risk Appetite" framework for measuring and monitoring risk. The framework measures the Firm's capacity to take risk against stated quantitative tolerances and qualitative factors at each of the line of business ("LOB") levels, as well as at the Firmwide level. The framework and tolerances are set and approved by the Firm's CEO, Chief Financial Officer ("CFO"), CRO and Chief Operating Officer ("COO"). LOB-level Risk Appetite parameters and tolerances are set by the respective LOB CEO, CFO and CRO and are approved by the Firm's CEO, CFO, CRO and COO. Quantitative risk tolerances are expressed in terms of tolerance levels for stressed net income, market risk, credit risk, liquidity risk, structural interest rate risk,

operational risk and capital. Risk Appetite results are reported quarterly to the Risk Policy Committee of the Board of Directors ("DRPC").

The Firm's CRO is responsible for the overall direction of the Firm's Risk Management functions and is head of the Risk Management Organization, reporting to the Firm's CEO and DRPC. The Risk Management Organization operates independently from the revenue-generating businesses, which enables it to provide credible challenge to the businesses. The leadership team of the Risk Management Organization is aligned to the various LOBs and corporate functions as well as across the Firm for firmwide risk categories (e.g. firmwide market risk, firmwide model risk, firmwide reputation risk, etc.) producing a matrix structure with specific subject matter expertise to manage risks both within the businesses and across the Firm.

The Firm places key reliance on each of the LOBs as the first line of defense in risk governance. The LOBs are accountable for identifying and addressing the risks in their respective businesses and for operating within a sound control environment.

In addition to the Risk Management Organization, the Firm's control environment also includes firmwide functions like Oversight and Control, Compliance and Internal Audit.

The Firmwide Oversight and Control Group consists of dedicated control officers within each of the LOBs and corporate functions, as well as a central oversight function. The group is charged with enhancing the Firm's control environment by looking within and across the LOBs and corporate functions to identify and remediate control issues. The group enables the Firm to detect control problems more quickly, escalate issues promptly and engage other stakeholders to understand common themes and interdependencies among the various parts of the Firm.

Each LOB is accountable for managing its compliance risk. The Firm's Compliance Organization ("Compliance"), which is independent of the LOBs, works closely with the Operating Committee and management to provide independent review, monitoring and oversight of business operations with a focus on compliance with the legal and regulatory obligations applicable to the offering of the Firm's products and services to clients and customers.

Internal Audit, a function independent of the businesses, Compliance and the Risk Management Organization, tests and evaluates the Firm's risk governance and management, as well as its internal control processes. This function brings a systematic and disciplined approach to evaluating and improving the effectiveness of the Firm's governance, risk management, and internal control processes.

- Refer to pages 107-111 of the 2015 Form 10-K for information on Enterprise-Wide Risk Management.

REGULATORY CAPITAL

There are three categories of risk-based capital under the Basel III Transitional rules: common equity Tier 1 capital (“CET1 capital”), as well as Tier 1 capital and Tier 2 capital. CET1 capital predominantly includes common stockholders’ equity (including capital for accumulated other comprehensive income (“AOCI”) related to debt and equity investment securities classified as available-for-sale (“AFS”) as well as for defined benefit pension and other post retirement employee benefit plans), less certain deductions for goodwill, mortgage servicing rights (“MSRs”) and deferred tax assets that arise from net operating loss and tax credit carryforwards. Tier 1 capital predominantly consists of CET1 capital as well as perpetual preferred stock. Tier 2 capital includes long-term debt qualifying as Tier 2 and qualifying allowance for credit losses. Total capital is Tier 1 capital plus Tier 2 capital.

Components of capital

A reconciliation of total stockholders’ equity to Basel III Advanced Transitional CET1 capital, Tier 1 capital, Tier 2 capital, and Total capital is presented in the table below.

- Refer to the Consolidated balance sheet on page 178 of the 2015 Form 10-K for the components of total stockholders’ equity.

December 31, 2015 (in millions)	Basel III Advanced Transitional ^(a)
Total stockholders’ equity	\$ 247,573
Less: Preferred stock	26,068
Common stockholders’ equity	221,505
Less: AOCI adjustment	112
CET1 capital before regulatory adjustments	221,393
Less:	
Goodwill	47,325
Other intangible assets	105
Other CET1 capital adjustments	1,713
Add:	
Deferred tax liabilities ^(b)	3,148
CET1 capital	175,398
Preferred stock	26,068
Other Tier 1 capital adjustments	1,227
Less: Tier 1 capital deductions	2,211
Total Tier 1 capital	200,482
Long-term debt and other instruments qualifying as Tier 2 capital	16,679
Qualifying allowance for credit losses	4,543
Other Tier 2 capital adjustments	2,989
Less: Tier 2 capital deductions	77
Total Tier 2 capital	24,134
Total capital	\$ 224,616

(a) Reflects transitional treatment to the capital components over the phase-in period, as applicable.

(b) Represents deferred tax liabilities related to tax-deductible goodwill and to identifiable intangibles created in nontaxable transactions, which are netted against goodwill and other intangibles when calculating tangible common equity.

Terms of capital instruments

The terms and conditions of the Firm’s capital instruments are described in the Firm’s SEC filings.

- Refer to Note 22 on page 282, and Note 23 on pages 282–283, respectively, of the 2015 Form 10-K for additional information on preferred stock and common stock.
- Refer to Note 21 on pages 279–281 of the 2015 Form 10-K for information on trust preferred securities.
- Refer to the Supervision and Regulation section in Part 1, Item 1 on pages 1–2 of the 2015 Form 10-K.

Restrictions on capital and transfer of funds

There are regulations governing the amount of dividends the Firm’s banking subsidiaries could pay without the prior approval of their relevant banking regulators.

Additionally, the bank subsidiaries of JPMorgan Chase (including subsidiaries of those banks) are subject to certain restrictions imposed by federal law on extensions of credit to, investments in stock or securities of, and derivatives, securities lending and certain other transactions with, JPMorgan Chase & Co. and certain other affiliates.

- Refer to Note 27 on page 288 of the 2015 Form 10-K for information on restrictions on cash and intercompany funds transfers.

Capital management

For additional information on regulatory capital, capital actions, and regulatory capital outlook, refer to the Capital Management section on pages 149–158 and to Note 28 on pages 288–290 of the 2015 Form 10-K. The Capital Management section of the Form 10-K reflects calculations under the Basel III Advanced and Standardized Fully Phased-In rules, in addition to regulatory capital, RWA, and capital ratios calculated under the Basel III Advanced and Standardized Transitional rules, whereas the related capital metrics presented in this report are calculated under Basel III Advanced Transitional rules, except where explicitly noted.

Risk-weighted assets

Basel III establishes two comprehensive methodologies for calculating RWA (a Standardized approach and an Advanced approach) which include capital requirements for calculating credit risk, market risk, and in the case of Basel III Advanced, also operational risk. Key differences in the calculation of credit risk RWA between the Standardized and Advanced approaches are that for Basel III Advanced, credit risk RWA is based on risk-sensitive approaches which largely rely on the use of internal credit models and parameters, whereas for Basel III Standardized, credit risk RWA is generally based on supervisory risk-weightings which vary primarily by counterparty type and asset class. Market risk RWA is calculated on a generally consistent basis between Basel III Standardized and Basel III Advanced, both of which incorporate the requirements set forth in Basel 2.5. In addition to the RWA calculated under these methodologies, the Firm may supplement such amounts to incorporate management judgment and feedback from its bank regulators.

Covered position definition

The covered position definition determines which positions are subject to market risk RWA treatment and, consequently, which positions are subject to credit risk RWA treatment.

Basel III defines a covered position as:

- (1) A trading asset or trading liability that meets both of the following conditions:
 - The position is held for the purpose of short-term resale or with the intent to benefit from actual or expected short-term price movements, or to lock in arbitrage profits;
 - The position is free of any restrictive covenants on its tradability or the Firm is able to hedge the material risk elements of the position in a two-way market;
- (2) A hedge of a covered position; or
- (3) A foreign exchange or commodity position, regardless of whether the position is a trading position (excluding structural foreign currency positions with prior supervisory approval).

Basel III specifies that characterization of an asset or liability as “trading” under accounting principles generally accepted in the U.S. (“U.S. GAAP”) would not on its own determine whether the asset or liability meets the definition of a covered position.

Throughout this report, covered positions are also referred to as “trading book” positions. Similarly, non-covered positions are referred to as “banking book” positions. Both covered and non-covered derivative transactions are assigned counterparty credit risk RWA.

Components of risk-weighted assets

Basel III Advanced rules classify capital requirements into three broad categories:

- Credit risk RWA covers the risk of unexpected losses due to obligor, counterparty, or issuer default, and in certain cases adverse changes in credit quality. Credit risk RWA includes retail credit risk, wholesale credit risk, counterparty credit risk, certain securitization exposures, equity investments, other assets, and the credit valuation adjustment (CVA) capital charge.
- Market risk RWA covers the risk of losses due to adverse movements in market conditions and idiosyncratic events.
- Operational risk RWA covers the risk of loss resulting from inadequate or failed processes or systems or due to external events that are neither market- nor credit-related.

The following table presents the Firm’s total risk-weighted assets under Basel III Advanced Transitional at December 31, 2015.

December 31, 2015 (in millions)	Basel III Advanced Transitional RWA
Credit risk	\$ 943,435
Market risk	141,802
Operational risk	400,099
Total RWA	\$ 1,485,336

RWA rollforward

The following table presents changes in the components of RWA under Basel III Advanced Transitional for the three months ended December 31, 2015. The amounts in the rollforward categories are estimates, based on the predominant driver of the change.

Three months ended December 31, 2015 (in millions)	Basel III Advanced Transitional RWA			
	Credit risk	Market risk	Operational risk	Total
September 30, 2015	\$ 948,386	\$ 154,299	\$ 400,000	\$ 1,502,685
Model & data changes ^(a)	338	(1,000)	–	(662)
Portfolio runoff ^(b)	(7,500)	(1,100)	–	(8,600)
Movement in portfolio levels ^(c)	2,211	(10,397)	99	(8,087)
Changes in RWA	(4,951)	(12,497)	99	(17,349)
December 31, 2015	\$ 943,435	\$ 141,802	\$ 400,099	\$ 1,485,336

(a) Model & data changes refer to movements in levels of RWA as a result of revised methodologies and/or treatment per regulatory guidance (exclusive of rule changes).

(b) Portfolio runoff for credit risk RWA primarily reflects reduced risk from position rollofs in legacy portfolios in Mortgage Banking, and for market risk RWA reflects reduced risk from position rollofs in legacy portfolios in the wholesale businesses.

(c) Movement in portfolio levels for credit risk RWA refers to changes in book size, composition, credit quality, and market movements; and for market risk RWA refers to changes in position and market movements.

Capital requirements

A strong capital position is essential to the Firm's business strategy and competitive position. The Firm's capital strategy focuses on long-term stability, which enables the Firm to build and invest in market-leading businesses, even in a highly stressed environment.

- Refer to the Capital Management section on pages 149–158 of the 2015 Form 10-K for information on capital strategy and governance.

The Basel III framework applies to the consolidated results of JPMorgan Chase & Co. The basis of consolidation used for regulatory reporting is the same as that used under U.S. GAAP. There are no material entities within JPMorgan Chase that are deconsolidated or whose capital is deducted.

Under the risk-based capital ("RBC") guidelines of the Federal Reserve, JPMorgan Chase is required to maintain minimum ratios of CET1, Tier 1 and Total capital to risk-weighted assets, as well as minimum leverage ratios (which are defined as Tier 1 capital divided by adjusted quarterly average assets). Failure to meet these minimum requirements could cause the Federal Reserve to take action. Bank subsidiaries also are subject to these capital requirements by their respective primary regulators.

The following table presents the minimum ratios to which the Firm and its national bank subsidiaries are subject as of December 31, 2015.

	Minimum capital ratios ^(a)	Well-capitalized ratios for BHCs ^(b)
Capital ratios		
CET1	4.5%	—%
Tier 1	6.0	6.0
Total	8.0	10.0
Tier 1 leverage	4.0	—

(a) As defined by the regulations issued by the Federal Reserve, the Office of the Comptroller of the Currency ("OCC") and the Federal Deposit Insurance Corporation ("FDIC") and to which the Firm and its national bank subsidiaries are subject.

(b) Represents requirements for Bank Holding Companies ("BHC") pursuant to regulations issued by the Federal Reserve.

Capital adequacy

As of December 31, 2015, JPMorgan Chase and all of its U.S. banking subsidiaries were well-capitalized and met all capital requirements to which each was subject. Capital ratios for the Firm's significant national bank subsidiaries are presented below.

In addition to its U.S. banking subsidiaries, JPMorgan Chase also has other regulated subsidiaries, all of which meet applicable capital requirements.

The capital adequacy of the Firm and its national bank subsidiaries is evaluated against the Basel III approach (Standardized or Advanced) which results, for each quarter, in the lower ratio (the "Collins Floor"), as required by the Collins Amendment of the Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act").

Internal Capital Adequacy Assessment Process

Semiannually, the Firm completes the Internal Capital Adequacy Assessment Process ("ICAAP"), which provides management with a view of the impact of severe and unexpected events on earnings, balance sheet positions, reserves and capital. The Firm's ICAAP integrates stress testing protocols with capital planning.

The process assesses the potential impact of alternative economic and business scenarios on the Firm's earnings and capital. Economic scenarios, and the parameters underlying those scenarios, are defined centrally and applied uniformly across the businesses. These scenarios are articulated in terms of macroeconomic factors, which are key drivers of business results; global market shocks, which generate short-term but severe trading losses; and idiosyncratic operational risk events. The scenarios are intended to capture and stress key vulnerabilities and idiosyncratic risks facing the Firm. However, when defining a broad range of scenarios, realized events can always be worse. Accordingly, management considers additional stresses outside these scenarios, as necessary. ICAAP results are reviewed by management and the Board of Directors.

Comprehensive Capital Analysis and Review ("CCAR")

The Federal Reserve requires large bank holding companies, including the Firm, to submit a capital plan on an annual basis. The Federal Reserve uses the CCAR and Dodd-Frank Act stress test processes to ensure that large bank holding companies have sufficient capital during periods of economic and financial stress, and have robust, forward-looking capital assessment and planning processes in place that address each bank holding company's unique risks to enable them to have the ability to absorb losses under certain stress scenarios.

Through the CCAR, the Federal Reserve evaluates each bank holding company's capital adequacy and internal capital adequacy assessment processes, as well as its plans to make capital distributions, such as dividend payments or stock repurchases. The Firm's CCAR process is integrated into and employs the same methodologies utilized in the Firm's ICAAP process.

Regulatory capital metrics for JPMorgan Chase and its significant national bank subsidiaries

The following tables present the regulatory capital, risk-weighted assets and risk-based capital ratios for JPMorgan Chase and its significant national bank subsidiaries under both Basel III Standardized Transitional and Basel III Advanced Transitional.

December 31, 2015 (in millions, except ratios)	JPMorgan Chase & Co. ^(f)	
	Basel III Standardized Transitional	Basel III Advanced Transitional
Regulatory capital		
CET1 capital	\$ 175,398	\$ 175,398
Tier 1 capital ^(a)	200,482	200,482
Total capital ^(g)	234,413	224,616
Assets		
Risk-weighted ^(b)	\$ 1,465,262	\$ 1,485,336
Adjusted average ^(c)	2,361,177	2,361,177
Capital ratios^(d)		
CET1	12.0%	11.8%
Tier 1 ^(a)	13.7	13.5
Total	16.0	15.1
Tier 1 leverage ^(e)	8.5	8.5

December 31, 2015 (in millions, except ratios)	JPMorgan Chase Bank, N.A. ^(f)	
	Basel III Standardized Transitional	Basel III Advanced Transitional
Regulatory capital		
CET1 capital	\$ 168,857	\$ 168,857
Tier 1 capital ^(a)	169,222	169,222
Total capital	183,262	176,423
Assets		
Risk-weighted ^(b)	\$ 1,264,056	\$ 1,249,607
Adjusted average ^(c)	1,913,448	1,913,448
Capital ratios^(d)		
CET1	13.4%	13.5%
Tier 1 ^(a)	13.4	13.5
Total	14.5	14.1
Tier 1 leverage ^(e)	8.8	8.8

December 31, 2015 (in millions, except ratios)	Chase Bank USA, N.A. ^(f)	
	Basel III Standardized Transitional	Basel III Advanced Transitional
Regulatory capital		
CET1 capital	\$ 15,419	\$ 15,419
Tier 1 capital ^(a)	15,419	15,419
Total capital	21,418	20,069
Assets		
Risk-weighted ^(b)	\$ 105,807	\$ 181,775
Adjusted average ^(c)	134,152	134,152
Capital ratios^(d)		
CET1	14.6%	8.5%
Tier 1 ^(a)	14.6	8.5
Total	20.2	11.0
Tier 1 leverage ^(e)	11.5	11.5

(a) At December 31, 2015, trust preferred securities included in Basel III Tier 1 capital were \$992 million and \$420 million for JPMorgan Chase and JPMorgan Chase Bank, N.A., respectively. At December 31, 2015, Chase Bank USA, N.A. had no trust preferred securities.

(b) Effective January 1, 2015, the Basel III Standardized RWA is calculated under the Basel III definition of the Standardized approach.

(c) Adjusted average assets, for purposes of calculating the Tier 1 leverage ratio, includes total quarterly average assets adjusted for unrealized gains/(losses) on securities, less deductions for goodwill and other intangible assets, defined benefit pension plan assets, and deferred tax assets related to net operating loss carryforwards.

(d) For each of the risk-based capital ratios, the capital adequacy of the Firm and its national bank subsidiaries are evaluated against the Basel III approach, Standardized or Advanced, resulting in the lower ratio (the "Collins Floor"), as required by the Collins Amendment of the Dodd-Frank Act.

(e) The Tier 1 leverage ratio is not a risk-based measure of capital. This ratio is calculated by dividing Tier 1 capital by adjusted average assets.

(f) Asset and capital amounts for JPMorgan Chase's banking subsidiaries reflect intercompany transactions; whereas the respective amounts for JPMorgan Chase reflect the elimination of intercompany transactions.

(g) Total capital for JPMorgan Chase & Co. includes \$1.0 billion of surplus capital in insurance subsidiaries.

Supplementary leverage ratio ("SLR")

The following table presents the components of the Firm's Advanced Transitional SLR as of December 31, 2015.

(in millions, except ratio)	December 31, 2015	
Basel III Advanced Transitional Tier 1 capital	\$	200,482
Total average assets		2,408,253
Less: Amounts deducted from Tier 1 capital		47,076
Total adjusted average assets ^(a)		2,361,177
Off-balance sheet exposures ^(b)		718,620
Leverage exposure	\$	3,079,797
Basel III Advanced Transitional SLR		6.5%

(a) Adjusted average assets, for purposes of calculating the SLR, includes total quarterly average assets adjusted for on-balance sheet assets that are subject to deduction from Tier 1 capital predominantly comprising deductions for goodwill and other intangible assets.

(b) Off-balance sheet exposures are calculated as the average of each of the three month's period-end balances.

Additional information on the components of the leverage exposure is provided in the SLR section of this report.

CREDIT RISK

Credit risk is the risk of loss arising from the default of a customer, client or counterparty. The Firm provides credit to a variety of customers, ranging from large corporate and institutional clients to individual consumers and small businesses. The consumer credit portfolio refers to exposures held by Consumer & Community Banking as well as prime mortgage loans held in the Asset Management and the Corporate segments. The consumer portfolio consists primarily of residential real estate loans, credit card loans, auto loans, business banking loans, and student loans. The wholesale credit portfolio refers primarily to exposures held by Corporate & Investment Bank, Commercial Banking, Asset Management, and Corporate. In addition to providing credit to clients, the Firm engages in client-related activities that give rise to counterparty credit risk such as securities financing, margin lending, and market-making activities in derivatives. Finally, credit risk is also inherent in the Firm's investment securities portfolio held by Treasury and Chief Investment Office ("CIO") in connection with its asset-liability management objectives. Investment securities, as well as deposits with banks, are classified as wholesale exposures for RWA reporting.

In addition to counterparty default risk, Basel III includes a capital charge for credit valuation adjustments ("CVA") which reflects counterparty credit risk in the valuation of OTC derivatives. The firm calculates CVA RWA using the Simple CVA approach, which uses risk weights based on internal PD ratings and a combination of the current exposure method ("CEM") and the internal model method ("IMM") EADs.

- Refer to the Counterparty Credit Risk section on page 15 of this report for further description of the IMM and CEM EAD methodologies.

In addition to Credit Risk Management, Internal Audit performs periodic exams, as well as continuous reviews, where appropriate, of the Firm's consumer and wholesale portfolios. For risk-rated portfolios, a Credit Review group within Internal Audit is responsible for:

- Independently assessing and validating the changing risk grades assigned to exposures; and
- Evaluating the effectiveness of business units' risk-ratings, including the accuracy and consistency of risk grades, the timeliness of risk grade changes and the justification of risk grades in credit memoranda.

For information on risk management policies and practices and accounting policies related to these exposures:

- Refer to Credit Risk Management on pages 112-132 of the 2015 Form 10-K.
- Refer to the Notes to the Consolidated Financial Statements beginning on page 181 of the 2015 Form 10-K. Specific page references are contained in the Appendix of this report.

Summary of credit risk RWA

Credit risk RWA includes retail, wholesale, and counterparty credit exposures described in this section, as well as securitization and equity exposures in the banking book. Other exposures such as non-material portfolios, unsettled transactions, and other assets that are not classified elsewhere are also included. The following table presents the Firm's total credit risk RWA at December 31, 2015.

December 31, 2015 (in millions)	Basel III Advanced Transitional RWA
Retail exposures	\$ 248,074
Wholesale exposures	412,450
Counterparty exposures	86,092
Securitization exposures ^(a)	36,599
Equity exposures	36,577
Other exposures ^(b)	77,290
CVA	46,353
Total credit risk RWA	\$ 943,435

(a) Represents banking book securitization RWA only.

(b) Includes other assets, non-material portfolios, and unsettled transactions.

Credit risk exposures

Credit risk exposures as reported under U.S. GAAP as of and for the three months ended December 31, 2015 are contained in the 2015 Form 10-K. Specific references are listed below.

Traditional credit products

- Refer to Credit Risk Management beginning on page 112 in the 2015 Form 10-K for credit-related information on the consumer and wholesale portfolios.
- Refer to Note 14 on pages 242-261 of the 2015 Form 10-K for the distribution of loans by geographic region and industry.
- Refer to Note 29 on pages 290-295 of the 2015 Form 10-K for the contractual amount and geographic distribution of lending-related commitments.

Counterparty credit risk

- Refer to Note 6 on pages 208-220 of the 2015 Form 10-K for the gross positive fair value, netting benefits, and net exposure of derivative receivables.
- Refer to Derivative contracts on pages 127-129 of the 2015 Form 10-K for credit derivatives used in credit portfolio management activities.
- Refer to Note 13 on pages 238-241 of the 2015 Form 10-K for information on gross and net securities purchased under resale agreements and securities borrowed transactions, and for information regarding the credit risk inherent in the securities financing portfolio.
- Refer to the Consumer Credit Portfolio section on pages 115-121, and to the Wholesale Credit Portfolio section on pages 122-129 of the 2015 Form 10-K for margin loans asset balance.

Investment securities

- Refer to Note 12 on pages 233-237 of the 2015 Form 10-K for the investment securities portfolio by issuer type.

Country risk

- Refer to page 140 of the 2015 Form 10-K for the top 20 country exposures.

Allowance for credit losses

- Refer to Allowance for Credit Losses on pages 130-132 of the 2015 Form 10-K for a summary of changes in the allowance for loan losses and allowance for lending-related commitments.
- Refer to Note 15 on pages 262-265 of the 2015 Form 10-K for the allowance for credit losses and loans and lending-related commitments by impairment methodology.

Average balances

- Refer to page 316 of the 2015 Form 10-K for the Consolidated average balance sheet.

Credit risk concentrations

Concentrations of credit risk arise when a number of customers are engaged in similar business activities or activities in the same geographic region, or when they have similar economic features that would cause their ability to meet contractual obligations to be similarly affected by changes in economic conditions.

JPMorgan Chase regularly monitors various segments of its credit portfolios to assess potential credit risk concentrations and to obtain collateral when deemed necessary. Senior management is significantly involved in the credit approval and review process, and risk levels are adjusted as needed to reflect the Firm's risk appetite.

In the Firm's consumer portfolio, concentrations are evaluated primarily by product and by U.S. geographic region, with a key focus on trends and concentrations at the portfolio level, where potential credit risk concentrations can be remedied through changes in underwriting policies and portfolio guidelines.

In the wholesale portfolio, credit risk concentrations are evaluated primarily by industry and monitored regularly on both an aggregate portfolio level and on an individual customer basis. The Firm's wholesale exposure is managed through loan syndications and participations, loan sales, securitizations, credit derivatives, master netting agreements, and collateral and other risk-reduction techniques.

RETAIL CREDIT RISK

The retail portfolio is a scored portfolio. For the retail portfolio, credit loss estimates are based on statistical analysis of credit losses over discrete periods of time. The statistical analysis uses portfolio modeling, credit scoring, and decision-support tools, which consider loan-level factors such as delinquency status, credit scores, collateral values, and other risk factors.

The population of exposures subject to retail capital treatment for regulatory reporting substantially overlaps with the consumer credit portfolio reflected in the Firm's SEC disclosures. The retail population consists of all scored exposures (mainly in the Consumer and Community Banking business segment), certain residential mortgages booked as trading assets (that do not meet the definition of a covered position) and certain wholesale loans under \$1 million as required by Basel III.

The retail capital population excludes certain risk-rated business banking and auto dealer loans; these are subject to wholesale capital treatment.

Risk parameter estimation

The internal ratings process for retail exposures covers the assignment of individual loan, line of credit or off-balance exposures into homogeneous segments defined by predominant product and borrower risk characteristics. The criteria for grouping loans into segments was developed using a combination of empirical analysis and management judgment. Predominant risk drivers used for segmentation vary by portfolio and exposure type, but include loan characteristics such as product type, collateral type and loan-to-value, exposure size, origination channel and documentation type and borrower information such as credit score, delinquency history and line of credit utilization rate.

The retail exposures are first broken into their retail subcategories. Residential mortgage exposures include all exposures secured by residential real estate. This includes traditional mortgages, home equity loans, home equity lines of credit and business banking exposures that are primarily secured by residential real estate. Qualifying revolving exposures ("QRE") include credit cards where the overall credit limit is less than or equal to \$100,000. Other retail includes all exposures not classified as residential mortgage or QRE. This includes personal auto finance loans, student loans and business banking loans that are less than \$500,000 and that are scored or managed as a group of loans with homogeneous risk characteristics.

The segmentation process creates differentiated risk buckets spanning a wide-spectrum of relatively-low to relatively-high expected loss rates. The assignment of exposures to segments occurs on a monthly basis for the majority of the retail portfolio, and at least quarterly for all modeled retail exposures. The overall capital requirement for a given retail subcategory fluctuates based on the shift across products and key risk drivers used for segmentation, and may be impacted by any model enhancements or modifications to parameter estimates.

For each retail sub-category, a separate segmentation model exists for probability of default ("PD"), loss given default ("LGD") and, for exposures with available undrawn credit exposure, exposure at default ("EAD"). EAD for a given segment is defined as the Firm's carrying value for on-balance sheet exposure plus a portion of the off-balance sheet exposure based on the Firm's best estimate of net additions to the balance sheet if the exposure were to enter into default in the upcoming year, assuming economic downturn for that period. Quantification of EAD for off-balance sheet exposures is developed through empirical analysis of historical behavior of defaulted exposures in the months leading up to a default.

Probability of default for a given segment estimates the likelihood a borrower will default on the exposure over the next year, based on historical observations over an economic cycle. PD is quantified based on empirical analysis and observed default rate performance over five or more years, including during a period of downturn stress conditions. Generally, the PD rate for a given segment equates to the simple average of observed one-year default rates over the available historical reference data. However, in some instances the Firm makes adjustments to PD estimates to better reflect a full economic cycle.

Loss given default for a given segment is an estimate of expected loss per dollar of EAD under downturn economic conditions. The LGD estimate is based on empirical analysis of post-default loss and recovery information over a historical observation period, and factors in the timing of expected cash flows, estimated recovery costs and accrued interest and fees. The Firm's final estimate is based on the higher of observed performance between the long-run reference data and the downturn-specific performance.

The Model Risk function conducts initial and ongoing reviews of the segmentation system and the risk parameter estimation parameters (PD, LGD, and EAD). The risk drivers comprising the segments are evaluated on their ability to differentiate risk consistently over time. Modifications to the segments are made periodically, driven by the validation results, shifts in risk management strategies, regulatory guidance or risk modeling best practices. Changes to the segmentation model or parameter estimates are reviewed by the Model Risk function, and tested prior to being put into production. The risk characteristics used for segmentation are consistent with the predominant risk drivers used for other internal credit risk models used by the Firm.

Risk-weighted assets

To calculate retail credit RWA, the Firm inputs its risk parameter estimates (PD, LGD, and EAD) into the Internal Ratings Based (IRB) risk weight formula, as specified by the U.S. banking supervisors. The IRB risk weight formula generates an estimate of unexpected losses at a 99.9% confidence level. Unexpected losses are converted to an RWA measure by application of a 12.5 supervisory multiplier.

December 31, 2015 (in millions)	Basel III Advanced Transitional RWA
Residential mortgages	\$ 129,634
Qualifying revolving	90,807
Other retail	27,633
Total retail credit RWA	\$ 248,074

Residential mortgage exposures

The following table includes first lien and junior lien mortgages and revolving home equity lines of credit. First lien mortgages represent approximately 81% of the exposure amount, revolving exposures approximately 18%, with the remaining exposures related to junior lien mortgages. Most revolving exposures were originated prior to 2010 and drive over 39% of the total risk weighted assets of this portfolio, with nearly 34% of the exposures above a PD of 0.75%. Recent originations are primarily first lien mortgages and are predominantly reflected in the less than 0.75% PD ranges.

December 31, 2015
(in millions, except ratios)

PD range (%)		Balance sheet amount	Off balance sheet commitments	EAD	RWA	Exposure-weighted average		
						PD	LGD	Risk weight
0.00 to < 0.10	\$	23,091	\$ 19,262	\$ 25,294	\$ 1,888	0.04%	53.67%	7.46%
0.10 to < 0.20		137,567	17,441	153,835	19,803	0.15	37.06	12.87
0.20 to < 0.75		47,163	17,071	62,819	21,203	0.42	48.03	33.75
0.75 to < 5.50		34,445	2,773	36,893	45,203	2.01	61.05	122.52
5.50 to < 10.00		3,760	9	3,767	9,677	6.78	65.89	256.88
10.00 to < 100		5,052	2	5,052	15,296	27.73	60.91	302.77
100 (default)		19,076	463	19,549	16,564	100.00	— ^(a)	84.73 ^(b)
Total	\$	270,154	\$ 57,021	\$ 307,209	\$ 129,634	7.31%	41.94%	42.20%

(a) The LGD rate is reported as zero for residential mortgage exposures in default because by the time they reach the Basel III definition of default they have been charged off to the fair value of the underlying collateral less cost to sell.

(b) The exposure-weighted average risk weight for defaulted loans is less than 100% due to certain loans being insured and/or guaranteed by U.S. government agencies.

Qualifying revolving exposures

The following table includes exposures to individuals that are revolving, unsecured, and unconditionally cancelable by JPMorgan Chase; and they have a maximum exposure amount of up to \$100,000 (i.e., credit card and overdraft lines on individual checking accounts).

December 31, 2015
(in millions, except ratios)

PD range (%)		Balance sheet amount	Off balance sheet commitments	EAD	RWA	Exposure-weighted average		
						PD	LGD	Risk weight
0.00 to < 0.50	\$	44,309	\$ 451,487	\$ 174,463	\$ 9,464	0.10%	91.90%	5.42%
0.50 to < 2.00		36,322	41,480	42,361	17,120	1.13	91.92	40.41
2.00 to < 3.50		14,371	8,105	15,263	11,790	2.67	92.25	77.25
3.50 to < 5.00		14,688	1,970	14,769	14,390	3.76	91.54	97.43
5.00 to < 8.00		6,066	1,408	6,104	8,925	6.89	92.72	146.22
8.00 to < 100		15,501	1,109	15,504	29,118	19.26	91.82	187.81
100 (default) ^(a)		—	—	—	—	—	—	—
Total	\$	131,257	\$ 505,559	\$ 268,464	\$ 90,807	1.87%	91.92%	33.82%

(a) There are no balances reported in default because qualifying revolving exposures consist entirely of unsecured credit cards that are charged off at or prior to reaching the Basel III definition of default.

Other retail exposures

The following table includes other retail exposures to individuals that are not classified as residential mortgage or qualifying revolving exposures (i.e., includes auto loans, student loans, credit card accounts above \$100,000, scored business banking loans, and certain wholesale loans under \$1 million).

December 31, 2015
(in millions, except ratios)

PD range (%)		Balance sheet amount	Off balance sheet commitments	EAD	RWA	Exposure-weighted average		
						PD	LGD	Risk weight
0.00 to < 0.50	\$	37,653	\$ 8,105	\$ 40,618	\$ 5,930	0.17%	36.94%	14.60%
0.50 to < 2.00		16,246	3,320	17,006	8,730	0.97	49.42	51.34
2.00 to < 3.50		4,120	405	4,232	3,596	2.58	59.17	84.96
3.50 to < 5.00		1,986	7	1,996	1,777	4.18	57.94	89.01
5.00 to < 8.00		1,957	7	1,971	1,991	6.11	62.99	101.00
8.00 to < 100		3,490	32	3,501	4,489	22.68	60.46	128.22
100 (default)		1,090	141	1,230	1,120	100.00	— ^(a)	91.18 ^(b)
Total	\$	66,542	\$ 12,017	\$ 70,554	\$ 27,633	3.65%	43.13%	39.17%

(a) The LGD rate is reported as zero for retail exposures in default because by the time they reach the Basel III definition of default they have been charged off to the fair value of the underlying collateral less cost to sell.

(b) The exposure-weighted average risk weight for defaulted loans is less than 100% due to certain loans being insured and/or guaranteed by U.S. government agencies.

WHOLESALE CREDIT RISK

The wholesale portfolio is a risk-rated portfolio. Risk-rated portfolios are generally held in the Corporate & Investment Bank, Commercial Banking and Asset Management business segments, and in Corporate but also include certain business banking and auto dealer loans held in the Consumer & Community Banking business segment that are risk-rated because they have characteristics similar to commercial loans. For the risk-rated portfolio, credit loss estimates are based on estimates of the probability of default and loss severity given a default. The estimation process begins when risk-ratings are assigned to each obligor and credit facility to differentiate risk within the portfolio. These risk ratings are reviewed regularly by Credit Risk management and revised as needed to reflect the borrower's current financial position, risk profile and related collateral.

The population of risk-rated loans and lending-related commitments receiving wholesale treatment for regulatory capital purposes largely overlaps with the wholesale credit portfolio reflected in the Firm's SEC disclosures. In accordance with Basel III, the wholesale population for regulatory capital consists of:

- All risk-rated loans and commitments (excluding certain wholesale loans under \$1 million which receive retail regulatory capital treatment);
- Deposits with banks, and cash and due from banks;
- Exposures to issuer risk for debt securities;
- Certain exposures recorded as trading assets that do not meet the definition of a covered position; and
- Repo-style transactions that do not meet the Basel III requirements for netting.

Certain off-balance sheet commitments, which are reported net of risk participations for U.S. GAAP, are included gross of risk participations for regulatory reporting.

Risk parameter estimation

Risk weights are determined by using internal risk weight parameters. The estimation process for these parameters begins with internal risk-ratings assigned to the obligor and internal loss severity classifications assigned to the credit facility. The obligor ratings are mapped to estimates of PD and the loss severity classifications are mapped to estimates of LGD. Obligor ratings and loss severity classifications are used for both internal risk management and regulatory capital calculations.

For regulatory capital, probability of default is defined as the Firm's best estimate of the long-run, through-the-cycle average one-year default rate. The Firm's PD estimates used in RWA calculations are derived by mapping the internal rating for the relevant obligor to historical external credit rating agency default rates. The Firm's PD estimates are generally in-line with the rating agency default rates.

Regulatory LGD is defined as an estimate of losses given a default event under downturn economic conditions. Loss severity classifications are assigned by Credit Risk taking into account the type of client, the type of collateral, and the facility's seniority, priority under law, and contractual and structural support, if any. The regulatory LGD estimate is based on empirical analysis of post-default loss and recovery information over the historical observation period, and factors in the timing of expected cash flows, estimated recovery costs, and accrued interest and fees. The regulatory LGD used in the RWA calculation reflects the higher of the loss experience over the entire historical observation period and the loss experience during the downturn period.

EAD for a non-defaulted obligor is the estimate of total exposure upon default of the obligor. EAD is a calculation of the full amount of the Firm's exposure to on-balance sheet loans plus a portion of the off-balance sheet exposure based on the Firm's best estimate of net additions of contingent exposure if the obligor were to enter into default in the upcoming year under downturn conditions. Quantification of EAD for off-balance sheet exposures is developed through empirical analysis of historical behavior of defaulted exposures in the months leading up to default. The Firm has developed separate EAD models for different facility types and LOBs. The models incorporate adjustments for downturn conditions whenever the downturn effects are statistically significant.

Both the internal ratings process and the risk parameter estimation process are subject to independent review. The Model Risk function conducts initial and ongoing reviews of the risk parameter estimates (PD, LGD, and EAD), assessing both methodology and implementation.

Risk-weighted assets

To calculate wholesale credit RWA, the Firm inputs its risk parameter estimates (PD, LGD, and EAD) into the IRB risk weight formula, as specified by the U.S. banking supervisors. The IRB risk weight formula generates an estimate of unexpected losses at a 99.9% confidence level. Unexpected losses are converted to an RWA measure by application of a 12.5 supervisory multiplier.

The adjacent table presents risk-weighted assets by Basel reporting classification. The Corporate classification includes both credit and issuer exposure to corporate entities. Similarly, the Bank and Sovereign classifications include both credit and issuer exposure to banks and sovereign entities, respectively. High volatility commercial real estate (“HVCRE”) refers to acquisition, development

and construction lending. HVCRE is a separate Basel classification because these loans represent higher risk than loans financing income-producing real estate (“IPRE”).

December 31, 2015 (in millions)	Basel III Advanced Transitional RWA
Corporate	\$ 335,044
Bank	21,381
Sovereign	13,002
Income-producing real estate	38,717
High volatility commercial real estate	4,306
Total wholesale credit RWA	\$ 412,450

Wholesale exposures

The following table presents exposures to wholesale clients and issuers by PD range. Exposures are comprised primarily of traditional credit products (i.e., loans and lending-related commitments), investment securities, and cash placed with various central banks, predominantly Federal Reserve Banks. Total EAD is \$1.2 trillion, with 78% of this exposure in the first two PD ranges, which are predominantly investment-grade. Exposures meeting the Basel definition of default represent less than 0.2% of total EAD. The exposure-weighted average LGD for the wholesale portfolio is approximately 32%.

December 31, 2015
(in millions, except ratios)

PD range (%)	Balance sheet amount	Off balance sheet commitments	EAD	RWA	Exposure-weighted average		
					PD	LGD	Risk weight
0.00 to < 0.15	\$ 628,244	\$ 220,812	\$ 786,119	\$ 130,428	0.05%	30.58%	16.59%
0.15 to < 0.50	118,167	115,917	186,601	91,082	0.26	38.44	48.81
0.50 to < 1.35	146,767	72,520	189,309	100,317	0.74	28.25	52.99
1.35 to < 10.00	43,433	44,618	69,665	75,040	3.82	36.46	107.71
10.00 to < 100	5,236	4,731	7,406	12,583	22.63	36.58	169.91
100 (default)	1,553	1,436	2,832	3,000	100.00	39.42	105.96
Total	\$ 943,400	\$ 460,034	\$ 1,241,932	\$ 412,450	0.76%	31.79%	33.21%

Credit risk mitigation

The risk mitigating benefit of eligible guarantees and credit derivative hedges are reflected in the RWA calculation by either substituting the PD of the guarantor or hedge counterparty for the PD of the obligor, or by adjusting the LGD. At December 31, 2015, \$54.4 billion of EAD for wholesale exposures is covered by eligible guarantees or credit derivatives.

COUNTERPARTY CREDIT RISK

Risk parameter estimation

Counterparty credit risk RWA calculations utilize the PD and LGD methodologies described in the Wholesale Credit Risk section of this report. The EAD methodologies are described below.

Over-the-counter (“OTC”) Derivatives

The Firm principally uses the internal model method (“IMM”) under Basel III for calculating counterparty credit risk regulatory capital for OTC derivatives.

The IMM methodology uses the Firm’s internal models to calculate effective expected positive exposure (“EEPE”), which when multiplied by the regulatory-prescribed multiplier, produces the counterparty-level regulatory measure of EAD.

The Firm’s IMM methodology simulates forward-looking market risk factors and uses product-specific pricing models to produce distributions of future mark-to-market (“MTM”) values over the life of each trade level exposure. In addition to the regulatory measure of exposure, the IMM model also produces a variety of other risk measures used for internal credit risk management and reporting.

For certain types of derivatives where IMM is not used, regulatory exposure is calculated using the current exposure measure (“CEM”). In the CEM methodology, EAD is the sum of the MTM plus an add-on amount based on the notional and a regulatory conversion factor for each trade.

In the EAD calculation, trade level exposures are aggregated to incorporate the effects of legally enforceable master netting agreements. In addition, both methods incorporate the effects of collateral received or posted. The EAD is used in the regulatory capital formula to calculate counterparty-level RWA.

All models are subject to initial and ongoing review by the Firm’s independent Model Risk function prior to use. The model is also subject to periodic backtesting to demonstrate that performance continues to be acceptable.

Further, the internal models are also used to project the impact of various internal and regulatory stress events to enhance knowledge of the impact potential events have on a credit exposure and capital adequacy.

Certain OTC derivatives are considered securitization exposures and reported in the Securitization section of this report.

Repo-style transactions

Counterparty credit risk for repo style transactions stems from the inability or unwillingness of the firm’s trading counterparty to fulfill contractual obligations; the risk is attributed to the difference, upon default, between the market value of the exposure to the counterparty and the market value of the collateral collected from the counterparty.

Counterparty credit risk RWA for repo-style transactions is calculated using the Collateral Haircut Approach. Under this method, the credit risk mitigation benefits of collateral are recognized in the EAD.

EAD is calculated as the net market value of exposure and collateral under a legally enforceable master netting agreement (“netting set”) adjusted for potential increases of net exposure by applying standard supervisory market price volatility haircuts.

EAD for repo-style transactions includes certain exposures which are not reflected on the balance sheet such as:

- Securities borrowing and lending transactions collateralized by securities, and
- Securities lending indemnification agreements and guarantees.

Repo-style transactions that do not meet eligibility requirements specified in the Basel III rule are treated as loans for regulatory capital purposes and reported as wholesale exposures in this report.

Margin loans

Counterparty credit risk RWA for margin loans is calculated using the LGD Estimation Method. Under this method, the benefits of financial collateral are recognized in the LGD rather than the EAD. Exposure at default is calculated as the amount of the margin loan plus the market value of any short trading positions in the customer’s account less any cash balance.

Cleared transactions

Cleared transactions include exchange-traded derivatives such as futures and options, OTC derivatives and repo-style transactions that the Firm clears through a central counterparty (CCP) for its own account and for client accounts. A CCP is a counterparty (for example, a clearing house) that interposes itself between counterparties to contracts traded in one or more financial markets, becoming the buyer to every seller and the seller to every buyer. A CCP becomes counterparty to trades with market participants through novation, an open offer system, or another legally binding arrangement.

Basel III introduced capital requirements for cleared transactions. The calculations of EAD for cleared trades are similar to the calculations for OTC derivatives and repo-style transactions discussed previously. Only cleared trades where the counterparty is a CCP are classified as cleared transactions under U.S. Basel rules. A cleared derivative where the counterparty is a client is classified as an OTC derivative for regulatory reporting.

Wrong-way risk

Wrong-way risk is the risk that exposure to a counterparty is positively correlated with the impact of a default by the same counterparty, which could cause exposure to increase at the same time as the counterparty's capacity to meet its obligations is decreasing. This risk would result in greater EAD when compared with a transaction with another counterparty that does not have this risk. The Firm has policies and processes in place to actively monitor and control wrong-way risk throughout the life of each transaction. Wrong-way risk is factored into the Firm's EAD and RWA calculations in line with the Basel III rules.

Risk-weighted assets

Counterparty credit risk exposures consist of OTC derivatives, repo-style transactions, margin loans, and cleared transactions.

To calculate counterparty credit risk RWA, the Firm inputs its risk parameter estimates (PD, LGD, and EAD) into the same IRB risk weight formula as wholesale exposures. The IRB risk weight formula generates an estimate of unexpected losses at a 99.9% confidence level.

Unexpected losses are converted to an RWA measure by application of a 12.5 supervisory multiplier. RWA for exposures where the counterparty is a CCP depends on whether the CCP meets the criteria for classification as a qualifying CCP.

The following table presents risk-weighted assets by transaction type.

December 31, 2015 (in millions)	Basel III Advanced Transitional RWA
OTC derivatives	\$ 59,743
Repo-style transactions	18,754
Margin loans	2,524
Cleared transactions	5,071
Total counterparty credit RWA	\$ 86,092

Counterparty credit exposures

The following table presents counterparty credit risk exposures for OTC derivatives and netted repo-style transactions by PD range. The table does not include margin loans or cleared transactions. Total EAD is \$211.7 billion, with 89% of this exposure in the first two PD ranges, which are predominantly investment-grade. Exposures meeting the Basel definition of default represent 0.2% of total EAD. The exposure-weighted average LGD for this portfolio is 43%. The collateral benefit is reflected in the EAD.

December 31, 2015
(in millions, except ratios)

PD range (%)	EAD	RWA	Exposure-weighted average		
			PD	LGD	Risk weight
0.00 to < 0.15	\$ 159,177	\$ 44,631	0.10%	42.37%	28.04%
0.15 to < 0.50	30,106	13,955	0.26	44.05	46.35
0.50 to < 1.35	16,708	12,230	0.76	43.45	73.20
1.35 to < 10.00	4,990	6,359	3.66	43.65	127.43
10.00 to < 100	402	942	22.67	44.11	234.41
100 (default)	357	380	100.00	42.01	106.00
Total	\$ 211,740	\$ 78,497	0.47%	42.72%	37.07%

Credit risk mitigation

The risk mitigating benefit of eligible guarantees are reflected in the RWA calculation by substituting the PD of the guarantor for the PD of the counterparty. At December 31, 2015, \$5.5 billion of EAD for OTC derivatives is covered by eligible guarantees.

SECURITIZATION

Securitizations are transactions in which:

- The credit risk of the underlying exposure is transferred to third parties, and has been separated into two or more tranches;
- The performance of the securitization depends upon the performance of the underlying exposures or reference assets; and
- All or substantially all of the underlying exposures or reference assets are financial exposures.

Securitizations include on- or off-balance sheet exposures (including credit enhancements) that arise from a securitization or re-securitization transaction; or an exposure that directly or indirectly references a securitization (e.g., credit derivative). A re-securitization is a securitization transaction in which one or more of the underlying exposures that have been securitized is itself a securitization.

On-balance sheet exposures include securities, loans, as well as servicing advances related to private-label mortgage backed securitizations for which the Firm acts as servicer. Off-balance sheet exposures include liquidity commitments, certain recourse obligations, and derivatives for which the counterparty risk or the reference obligation is a securitization exposure.

Securitizations are classified as either traditional or synthetic. In a traditional securitization, the originator establishes a special purpose entity (“SPE”) and sells assets (either originated or purchased) off its balance sheet into the SPE, which issues securities to investors. In a synthetic securitization, credit risk is transferred to an investor through the use of credit derivatives or guarantees. In a synthetic securitization, there is no change in accounting treatment for the assets securitized.

This section includes both banking book and trading book securitizations, with the exception of modeled correlation trading positions which are included in the Market Risk section.

Due diligence

For each securitization and re-securitization exposure, the Firm is required to perform due diligence prior to acquiring that exposure, and documents such due diligence within three business days as required by Basel III. The Firm’s due diligence procedures are designed to provide it with a comprehensive understanding of the features that would materially affect the performance of a securitization or re-securitization.

The Firm’s due diligence procedures include analyzing and monitoring:

- The quality of the credit risk, including information regarding the performance of the underlying credit exposures and relevant market data;
- The structural and other enhancement features that may affect the credit quality of a securitization or re-securitization; and
- For re-securitization positions, information on the performance of the underlying securitization exposures.

The level of detail included in the due diligence process is commensurate with the complexity of each securitization or re-securitization exposure held. In addition to pre-trade due diligence, due diligence is also performed no less frequently than quarterly as required by Basel III.

Risk management

The risks related to securitization and re-securitization transactions are managed in accordance with the Firm’s credit risk and market risk management policies.

Credit risk mitigation

Various strategies are employed by the Firm to mitigate the risks that arise from securitization and re-securitization positions. These include credit risk mitigation at both the transaction and portfolio levels through diversification and hedging.

Market risk monitoring

Each line of business that transacts in securitizations and the Market Risk function work together to monitor the positions, position changes, and the composition of the total portfolio. This includes, but is not limited to, the review of daily positions against approved risk limits using risk measures such as market values, risk factor sensitivities and stress loss scenarios. Covered securitization and re-securitization positions are included in the Firm’s Risk Management VaR and Regulatory VaR. These positions are included in the market risk and limit reports that are distributed on a daily basis to the trading desks, Risk Management and senior managers within the lines of business.

Securitization positions can be sensitive to interest rate levels and the overall credit environment. The Firm may hedge credit spread and interest rate risk, and non-USD foreign exchange risk associated with non-U.S. denominated assets, as needed, related to its securitization and re-securitization positions. JPMorgan Chase’s policies allow various financial instruments to be employed to mitigate or hedge the risks of securitization and re-securitization positions. Examples of these instruments include U.S. Treasuries, interest rate swaps, FX forwards, and various credit derivatives.

Hierarchy of approaches

Basel III Advanced rules prescribe a hierarchy of approaches for calculating securitization RWA starting with the Supervisory Formula Approach (“SFA”), which uses internal models to determine RWA; followed by the Simplified Supervisory Formula Approach (“SSFA”), which uses supervisory risk weights and other inputs to determine RWA; and finally the application of a 1250% risk weight.

For securitization exposures, Basel III overlays a maximum capital requirement which can result in an effective risk weight lower than the risk weight calculated in the hierarchy of approaches. Additionally, the regulatory

prescribed scalar applied broadly to credit risk RWA may result in a banking book exposure receiving a risk weight greater than 1250%.

Risk-weighted assets

The following table presents banking book and trading book exposures receiving securitization capital treatment (with the exception of modeled correlation trading positions which are presented in the Market Risk section). The amounts include traditional and synthetic securitization exposures, with re-securitizations shown separately.

December 31, 2015 (in millions)	Securitization							
	SFA		SSFA		1250%		Total	
	Exposure	RWA	Exposure	RWA	Exposure	RWA	Exposure	RWA
Risk weight								
= 0% ≤ 20%	\$ 61,045	\$ 12,942	\$ 68,434	\$ 14,321	\$ —	\$ —	\$ 129,479	\$ 27,263
> 20% ≤ 50%	4,291	1,040	4,218	1,308	—	—	8,509	2,348
> 50% ≤ 100%	426	260	704	520	—	—	1,130	780
> 100% < 1250%	8	40	725	2,166	—	—	733	2,206
= 1250%	86	1,070	100	1,264	438	5,769	624	8,103
Securitization, excluding re-securitization	\$ 65,856	\$ 15,352	\$ 74,181	\$ 19,579	\$ 438	\$ 5,769	\$ 140,475	\$ 40,700
December 31, 2015 (in millions)	Re-securitization							
	SFA		SSFA		1250%		Total	
	Exposure	RWA	Exposure	RWA	Exposure	RWA	Exposure	RWA
Risk weight								
= 0% ≤ 20%	\$ 1,514	\$ 319	\$ 301	\$ 63	\$ —	\$ —	\$ 1,815	\$ 382
> 20% ≤ 50%	4	1	13	4	—	—	17	5
> 50% ≤ 100%	—	—	23	17	—	—	23	17
> 100% < 1250%	26	137	91	293	—	—	117	430
= 1250%	5	68	13	172	24	307	42	547
Re-securitization^(a)	\$ 1,549	\$ 525	\$ 441	\$ 549	\$ 24	\$ 307	\$ 2,014	\$ 1,381
Total securitization^(b)	\$ 67,405	\$ 15,877	\$ 74,622	\$ 20,128	\$ 462	\$ 6,076	\$ 142,489	\$ 42,081

(a) As of December 31, 2015, there were no re-securitizations to which credit risk mitigation has been applied.

(b) Total securitization RWA includes \$5.5 billion of RWA on trading book exposure of \$4.9 billion. The trading book RWA represents non-modeled securitization charges in the Market Risk section of this report.

Any gain-on-sale in connection with a securitization exposure must be deducted from common equity tier 1 capital. The amount deducted as of December 31, 2015 was immaterial.

Exposure by collateral type

The following table presents banking book and trading book exposures receiving securitization capital treatment (with the exception of modeled correlation trading positions which are presented in the Market Risk section). The amounts below include traditional and synthetic securitization exposures.

December 31, 2015 (in millions)	Exposure				RWA
	On-balance sheet	Off-balance sheet ^(a)	Total		
Collateral type:					
Residential mortgages	\$ 26,465	\$ 805	\$ 27,270	\$	12,346
Commercial mortgages	28,804	469	29,273		7,800
Commercial and industrial loans	40,552	1,337	41,889		11,115
Consumer auto loans	17,844	127	17,971		4,176
Student loans	11,607	97	11,704		2,747
Municipal bonds	1	6,291 ^(b)	6,292		1,381
Other	6,215	1,875	8,090		2,516
Total securitization exposure	\$ 131,488	\$ 11,001	\$ 142,489	\$	42,081

(a) Includes the counterparty credit risk EAD associated with derivative transactions for which the counterparty credit risk is a securitization exposure.

(b) Represents liquidity facilities supporting nonconsolidated municipal bond VIEs.

Assets securitized

The following table presents the outstanding principal balance of JPMorgan Chase-sponsored securitization trusts in which the Firm has retained exposure in either the banking book or the trading book. Third-party assets in deals sponsored by JPMorgan Chase are shown separately.

December 31, 2015 (in millions)	Principal amount outstanding			
	JPMorgan Chase assets held in traditional securitizations ^(a)	Third-party assets held in traditional securitizations ^(a)	JPMorgan Chase assets held in synthetic securitizations	Assets impaired or past due ^(b)
Collateral type:				
Residential mortgages	\$ 88,092	\$ 13	\$ 595	\$ 13,621
Commercial mortgages	58,890	31,612	—	1,682
Commercial and industrial loans	—	—	2,459	—
Consumer auto loans	—	—	—	—
Student loans	1,427	—	—	103
Municipal bonds	6,178	—	—	—
Other	—	—	—	—
Total	\$ 154,587	\$ 31,625	\$ 3,054	\$ 15,406

(a) Represents assets held in nonconsolidated securitization VIEs.

(b) Represents assets 90 days or more past due or on nonaccrual status.

Securitization activity

The following table presents assets pending securitization (i.e., assets held with the intent to securitize) at December 31, 2015 and the Firm's securitization activities for the year ended December 31, 2015, related to assets held in JPMorgan Chase-sponsored securitization entities that were not consolidated by the Firm, and where sale accounting was achieved based on the accounting rules in effect at the time of the securitization. All instruments transferred into securitization trusts during the year ended December 31, 2015 were classified as trading assets under U.S. GAAP. As such, changes in fair value were recorded in principal transactions revenue, and there were no significant gains or losses associated with the securitization activity.

December 31, 2015 (in millions)	Carrying value	Original principal amount	
	Assets pending securitization	Assets securitized with retained exposure	Assets securitized without retained exposure
Collateral type:			
Residential mortgages	\$ 6,659	\$ 2,845	\$ 163
Commercial mortgages	2,546	10,015	1,918
Commercial and industrial loans	—	—	—
Consumer auto loans	—	—	—
Student loans	—	—	—
Municipal bonds	—	—	—
Other	—	—	—
Total	\$ 9,205	\$ 12,860	\$ 2,081

EQUITY RISK IN THE BANKING BOOK

Equity investments in the banking book include AFS equity securities, private equity investments, investments in unconsolidated subsidiaries, investments in hedge funds, investment funds (including separate accounts), other equity investments classified within other assets, and certain equity investments classified within trading assets that do not meet the definition of a covered position.

Equity investments in the banking book are held for a variety of reasons, including strategic purposes and capital gains over the long term.

Investments in separate accounts are held in connection with corporate- and bank-owned life insurance ("COLI/BOLI") and certain asset management activities.

- Refer to Note 9 on pages 223 and 228 of the 2015 Form 10-K for a discussion of COLI and the related investment strategy and asset allocation.

Investments in marketable equity securities in the banking book are accounted for at fair value or under the equity method where the Firm has significant influence but has not elected the fair value option. Investments in nonmarketable equity securities in the banking book are accounted for using one of the following methods:

- Equity method for investments where the Firm has the ability to exercise significant influence but has not elected the fair value option
- Fair value when elected under the fair value option
- Cost for all other nonmarketable equity investments
- Proportional amortization method for certain investments in affordable housing projects that qualify for the low-income housing tax credit

Accounting and valuation policies for equity investments

- Refer to Principal Risk Management, on page 143 of the 2015 Form 10-K for a discussion of principal risk management related to privately-held investments.
- Refer to Note 1 on pages 181-183 of the 2015 Form 10-K for a discussion of the accounting for investments in unconsolidated subsidiaries and investments in affordable housing projects.
- Refer to Note 3 on pages 184-203 of the 2015 Form 10-K for more information on the Firm's methodologies regarding the valuation of private equity direct investments and fund investments (i.e., mutual/collective investment funds, private equity funds, hedge funds and real estate funds).
- Refer to Note 12 on pages 233-237 of the 2015 Form 10-K for further discussion of the accounting for AFS equity securities.

Risk-weight approaches

For equity exposures to investment funds, the Firm uses a combination of the Full Look-Through Approach and the Simple Modified Look-Through Approach to calculate RWA. Under these approaches, RWA is calculated on the underlying exposures held by the fund as if they were held directly by the Firm and, then, multiplying that amount by the Firm's proportional ownership share of the fund. For all other equity exposures, the Firm uses the Simple Risk-Weight Approach ("SRWA"). Under the SRWA, the Firm applies the regulatory prescribed risk weights to the carrying value of each equity exposure.

Equity risk-weighted assets

The table below presents the exposure and RWA by risk weight.

December 31, 2015 (in millions)		
Risk-weight category	Exposure ^(a)	RWA
0%	\$ 6,179 ^(b)	\$ —
20%	2,628	557
100%	23,216	24,609
600%	391	2,487
Look-through	16,784	8,924
Total	\$ 49,198	\$ 36,577

(a) Includes off-balance sheet unfunded commitments for equity investments of \$921 million.

(b) Consists of Federal Reserve Bank stock.

Carrying value and fair value

The following table presents the carrying value and fair value of equity investments in the banking book.

December 31, 2015 (in millions)		
	Carrying value	Fair value
Publicly traded	\$ 22,278	\$ 22,488
Privately held and third-party fund investments	25,101	30,023
Total	\$ 47,379	\$ 52,511

Realized gains/(losses)

Cumulative realized gains/(losses) from sales and liquidations during the three months ended December 31, 2015 were \$91 million. This includes previously recognized unrealized gains/(losses) which have been reversed and booked as realized gains/(losses).

Unrealized gains/(losses)

At December 31, 2015 (in millions)	Cumulative unrealized gains/(losses), pre-tax
Recognized in AOCI ^(a)	\$ 20
Unrecognized ^(b)	4,695

(a) Unrealized gains of \$5 million were included in Tier 2 capital per Basel III rules.

(b) Unrecognized gains/(losses) apply to cost and proportional amortization method investments.

MARKET RISK

Market risk is the potential for adverse changes in the value of the Firm's assets and liabilities resulting from changes in market variables such as interest rates, foreign exchange rates, equity prices, commodity prices, implied volatilities or credit spreads.

For a discussion of the Firm's Market Risk Management organization, risk identification and classification, tools used to measure risk, and risk monitoring and control, see Market Risk Management on pages 133-139 of the 2015 Form 10-K.

Measures included in market risk RWA

The following table presents the Firm's market risk-based capital and risk-weighted assets at December 31, 2015. The components of market risk RWA are discussed in detail in the Regulatory market risk capital models section on pages 22-25 of this report. RWA is calculated as RBC times a multiplier of 12.5; any calculation differences are due to rounding.

Three months ended December 31, 2015 (in millions)	Risk-based capital	RWA
Internal models		
Value-at-Risk based measure ("VBM")	\$ 956	\$ 11,946
Stressed Value-at-Risk based measure ("SVBM")	2,867	35,837
Incremental risk charge ("IRC")	284	3,556
Comprehensive risk measure ("CRM")	681	8,514
Total internal models	4,788	59,853
Non-modeled specific risk	5,123	64,036
Other charges	1,433	17,913
Total Market risk	\$ 11,344	\$ 141,802

Material portfolio of covered positions

The Firm's market risks arise predominantly from activities in the Firm's Corporate & Investment Bank ("CIB") business. CIB makes markets in products across fixed income, foreign exchange, equities and commodities markets; the Firm's portfolio of covered positions under Basel III is predominantly comprised of positions held by the CIB. Other lines of business have covered positions with an immaterial firmwide impact.

- Refer to pages 83-84 and pages 94-98 of the 2015 Form 10-K for a discussion of CIB's Business Segment Results.

Value-at-Risk ("VaR")

VaR is a statistical risk measure used to estimate the potential loss from adverse market moves in a normal market environment. The Firm has a single VaR framework used as a basis for calculating Regulatory VaR and Risk Management VaR.

- Refer to Market Risk Management on pages 133-139 of the 2015 Form 10-K for information on the Firm's VaR framework.

Since VaR is based on historical data, it is an imperfect measure of market risk exposure and potential losses, and it is not used to estimate the impact of stressed market conditions or to manage any impact from potential stress events. In addition, based on their reliance on available historical data, limited time horizons, and other factors, VaR measures are inherently limited in their ability to measure certain risks and to predict losses, particularly those associated with market illiquidity and sudden or severe shifts in market conditions. The Firm therefore considers other measures in addition to VaR, such as stress testing, to capture and manage its market risk positions.

- Refer to the Economic-value stress testing section on page 27 for further information on stress testing.

Risk management VaR comparison to Regulatory VaR

Risk Management VaR is calculated assuming a one-day holding period and an expected tail-loss methodology which approximates a 95% confidence level. VaR provides a consistent framework to measure risk profiles and levels of diversification across product types and is used for aggregating risks across businesses and monitoring limits. These VaR results are reported to senior management, the Board of Directors and regulators.

Under the Firm's Risk Management VaR methodology, assuming current changes in market values are consistent with the historical changes used in the simulation, the Firm would expect to incur VaR "band breaks," defined as losses greater than that predicted by VaR estimates, not more than five times every 100 trading days. For risk management purposes, the Firm believes the use of a 95% confidence level with a one-day holding period provides a stable measure of VaR that closely aligns to the day-to-day risk management decisions made by the lines of business, and provides the necessary and appropriate information needed to respond to risk events on a daily basis. The Firm's Risk Management VaR is disclosed in its SEC filings.

As required by Basel III, the Firm calculates Regulatory VaR assuming a 10-day holding period and an expected tail loss methodology, which approximates a 99% confidence level. Assuming current changes in market values are consistent with the historical changes used in the simulation, the Firm would expect to incur losses greater than that predicted by Regulatory VaR using a one-day holding period not more than once every 100 trading days. In contrast to the Firm's Risk Management VaR, Regulatory VaR currently excludes the diversification benefit for certain VaR models.

As noted above, Regulatory VaR is applied to "covered positions" as defined by Basel III, which may be different from the positions included in the Firm's Risk Management VaR. For example, credit derivative hedges of accrual loans are included in the Firm's Risk Management VaR, while Regulatory VaR excludes these credit derivative hedges.

Regulatory market risk capital models

VaR-Based Measure ("VBM")

The VBM measure is an aggregate loss measure combining Regulatory VaR and modeled specific risk ("SR") factors over a 10-day holding period and a 99% confidence level. While the Regulatory VaR portion of the VBM measures the estimated maximum amount of decline due to market price or rate movements for all covered positions, the modeled SR portion of the VBM measures the risk of loss from factors other than broad market movements. Modeled SR factors include event risk and idiosyncratic risk for a subset of covered positions for which the model is approved by the Firm's banking supervisors.

The Firm's VBM is converted to a capital requirement using a regulatory multiplier. The capital requirement is then translated to risk-weighted assets using a multiplier of 12.5 as prescribed by Basel III.

The following table presents the results of the Firm's VBM converted risk-weighted assets based on the application of regulatory multipliers as specified by Basel III.

Three months ended December 31, 2015 (in millions)	Average VBM	Risk- based capital ^(a)	RWA
Firm modeled VBM	\$ 319	956	\$11,946

(a) The Firm's multiplier for determining risk-based capital associated with VBM is 3.

CIB VaR-Based Measure ("VBM")

For the three months ended December 31, 2015, JPMorgan Chase's average CIB VBM was \$322 million, compared with CIB average Risk Management VaR of \$52 million. The CIB VBM was higher due to the longer holding period (10 days), the higher confidence level (99%), differences in population, and the exclusion of diversification benefit for certain VaR models.

The following table presents the average, minimum, maximum and period-end VBM by risk type for the CIB and total VBM for the Firm. In addition, the table presents the reduction of total risk resulting from the diversification of the portfolio, which is the sum of the CIB VBMs for each risk type less the total CIB VBM.

	Three months ended December 31, 2015			At December 31, 2015
(in millions)	Avg.	Min	Max	
CIB VBM by risk type				
Interest rate ^(a)	\$122	\$ 98	\$152	\$ 103
Credit spread ^(a)	217	205	239	213
Foreign exchange	50	28	80	28
Equities	60	41	84	45
Commodities and other	53	43	72	52
Diversification benefit	(181) ^(b)	NM ^(c)	NM ^(c)	(143) ^(b)
Total CIB VBM	322	291	359	297
Total Firm VBM	\$319	\$293	\$348	\$ 305

(a) For certain products and portfolios, a full revaluation model is used to calculate VBM, which considers both interest rate and credit spread risks together. As such, the Firm allocates the results of the full revaluation model between interest rate and credit spread risk based on the predominant characteristics of the product or portfolio.

(b) Average portfolio VBM and period-end portfolio VBM were less than the sum of the components described above due to portfolio diversification.

(c) Designated as not meaningful ("NM"), because the minimum and maximum may occur on different days for different risk components, and hence it is not meaningful to compute a portfolio-diversification effect.

The average CIB VBM diversification benefit was \$181 million, or 36% of the sum of the individual risk components for the three months ended December 31, 2015. The CIB average Risk Management trading and credit portfolio VaR diversification benefit was \$40 million, or 43% of the sum of the individual risk components, for the three months ended December 31, 2015. The difference in diversification benefit between the two methodologies is consistent with the description provided on page 21 of this report.

➤ Refer to pages 133-139 of the 2015 Form 10-K for additional information on Value-at-risk and Risk Management VaR in the Market Risk Management section.

VBM back-testing

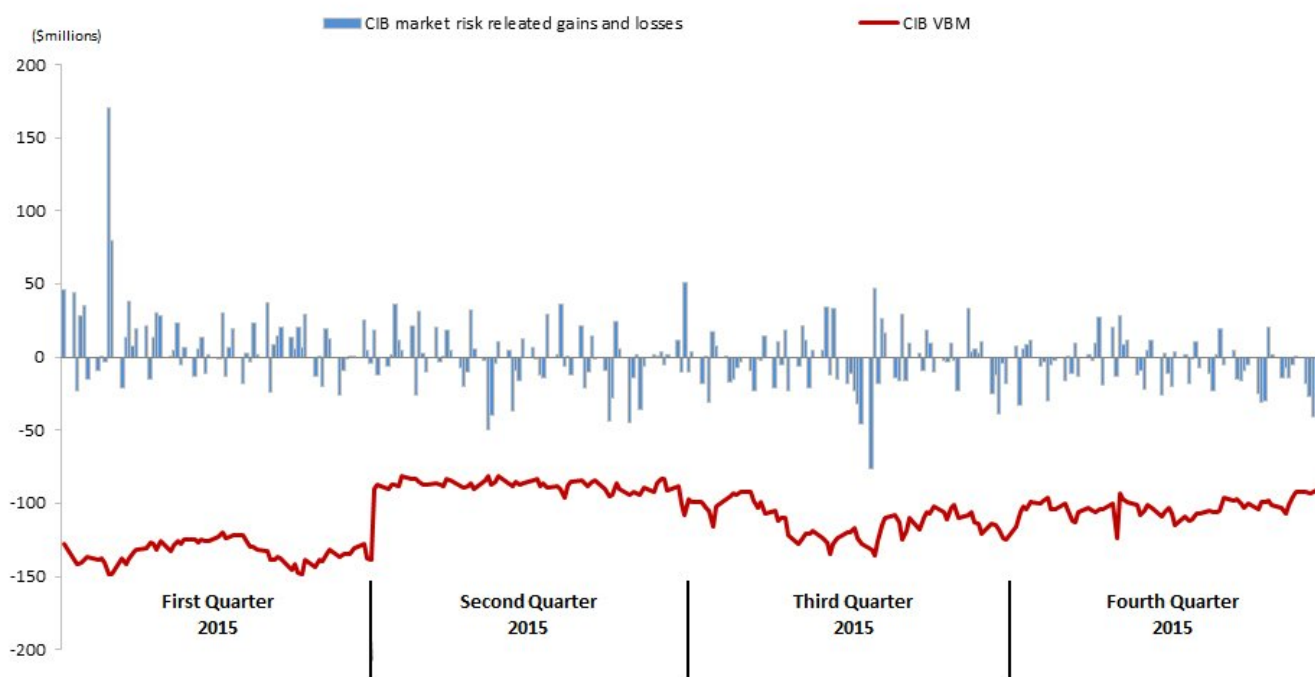
Back-testing is an approach used to evaluate the effectiveness of the Firm's VBM methodology. Back-testing compares daily market risk-related gains and losses with one-day VBM results. Market risk-related gains and losses are defined as profits and losses on covered positions, excluding fees, commissions, certain valuation adjustments (e.g., liquidity and DVA), net interest income, and gains and losses arising from intraday trading. VBM "band breaks" occur when market risk-related losses are greater than the estimate predicted by the VBM for the corresponding day.

The following chart presents the VBM back-testing results for CIB's covered positions. The VBM presented in the chart reflects the exclusion of the diversification benefit for certain VaR models. The chart shows that for the year ended December 31, 2015, the CIB observed no band breaks and posted market-risk related gains on 130 of the 260 trading days. The CIB posted gains on 25 of the 66 days for the three months ended December 31, 2015. The results in the table below are different from the results of VaR back-testing disclosed in the Firm's SEC filings due to the differences between the Risk Management VaR and Regulatory VaR as described on page 21 of this report.

CIB daily market risk-related gains and losses on covered positions

Total VBM (1-day, 99.0% confidence-level)

Twelve months ended December 31, 2015



Stressed VaR-Based Measure (“SVBM”)

The SVBM uses the same Regulatory VaR and SR models as are used to calculate the VBM, but the models are calibrated to reflect historical data from a continuous 12-month period that reflects significant financial stress appropriate to the Firm’s current portfolio.

The SVBM presented in the tables below reflects an interim approach until the Firm finalizes its SVBM model.

The following table presents the results of the Firm’s SVBM converted to risk-based capital based on the application of regulatory multipliers as specified by Basel III. The capital requirement is then translated to risk-weighted assets using a multiplier of 12.5 as prescribed by Basel III.

Three months ended December 31, 2015 (in millions)	Average SVBM	Risk-based capital ^(a)	RWA
Firm modeled SVBM	\$ 956	2,867	\$ 35,837

(a) The Firm’s multiplier for determining risk-based capital associated with SVBM is 3.

The following table presents the average, minimum, maximum and period-end SVBM for the CIB and the Firm.

(in millions)	Three months ended December 31, 2015			At December 31, 2015
	Avg.	Min	Max	
Total CIB SVBM	\$ 965	\$ 874	\$ 1,078	\$ 892
Total Firm SVBM	\$ 956	\$ 878	\$ 1,044	\$ 916

Incremental Risk Charge (“IRC”)

The IRC measure captures the risks of issuer default and credit migration for credit-sensitive covered positions that are incremental to the risks already captured in the VBM. The model is intended to measure the potential loss over a one-year holding period at a 99.9% confidence level, and it is limited for use to non-securitized covered positions. The IRC is calculated on a weekly basis.

JPMorgan Chase has developed a Monte Carlo simulation-based model to compute the IRC for its credit-sensitive, non-securitized covered positions. Modeling of default events is based on a proprietary multi-factor asset approach, which incorporates the effects of issuer, regional and industry risk concentrations. Credit migration risk is captured in the IRC model by an explicit simulation of credit spread distributions. Product concentrations are captured by incorporating product-specific factors such as bond-credit default swap (“CDS”) basis risk. The underlying simulation model is calibrated to provide joint distributions across all risk factors (e.g., default, spread, recovery, basis effects), while capturing important cross-effects that can have a significant impact on the tail risk of the portfolio, such as the correlation between defaults and recoveries.

The IRC model assumes the level of trading positions remains constant in order to model profit and loss distributions over a one-year holding period. This approach effectively assumes a one-year liquidity horizon for all positions, while all risk factor shocks are applied to the portfolio instantaneously. The IRC measures the potential loss in the current value of the portfolio at a 99.9% confidence level. The IRC model uses a full revaluation approach to capture the re-pricing risk of all positions due to credit migration and default events. This approach requires full economic details on all positions for re-pricing, thereby capturing the non-linear effects of risk factors on the value of the portfolio during large market moves.

The IRC is validated through the evaluation of modeling assumptions, sensitivity analysis, ongoing monitoring, benchmarking and outcome analysis. In addition, over time, as market conditions and portfolios change, periodic testing of the model (including sensitivity analysis, accuracy and convergence testing) is conducted to ensure the appropriateness of model settings and parameters, as well as the accuracy and robustness of the model output. In order to ensure continued applicability and relevance, the IRC model’s calibration to historical market data is updated quarterly.

The following table presents the IRC risk-based capital requirement for the CIB, which is the same as the risk measure itself, and the risk-weighted assets which is calculated by multiplying the risk measure by 12.5 as prescribed by Basel III.

Three months ended December 31, 2015 (in millions)	IRC ^(a)	RWA
Total CIB IRC	\$ 284	\$ 3,556

(a) IRC reflects the higher of the quarterly average and period-end spot measure under Basel III.

The following table presents the average, minimum, maximum and period-end IRC for the CIB.

(in millions)	Three months ended December 31, 2015			At December 31, 2015
	Avg.	Min	Max	
CIB IRC on trading positions	\$ 284	\$ 244	\$ 338	\$ 244

Comprehensive Risk Measure (“CRM”)

The CRM captures material price risks of one or more portfolios of correlation trading positions. Correlation trading positions refer to client-driven, market-making activities in credit index and bespoke tranche swaps that are delta hedged with single-name and index credit default positions. In addition, Basel III requires that an additional charge equal to 8% of the market-risk based capital calculated using the non-modeled specific risk be added to the CRM model-based capital requirements; this is referred to as the CRM surcharge.

Similar to the IRC, the CRM measures potential losses over a one-year holding period at a 99.9% confidence level. The CRM is calculated on a weekly basis.

The CRM model is an extension of the previously described Monte-Carlo simulation-based IRC model, and it includes additional risk factors that are relevant for index tranches, bespoke tranches, and first-to-default positions in the Firm's correlation trading portfolio. The range of risk factors simulated by the CRM model includes default events, credit spreads, recovery rates, implied correlations and inherent basis risks within these products.

The CRM model assumes the level of trading positions remains constant in order to model profit and loss distributions over a one-year holding period. This approach effectively assumes a one-year liquidity horizon for all positions, while all risk factor shocks are applied to the portfolio instantaneously. The CRM is measured as a 99.9% quantile loss from the gain and loss distribution relative to the current value of the portfolio. The CRM model uses a full revaluation approach to capture the re-pricing risk of all correlation trading positions, thereby capturing the non-linear effects of risk factors on the value of the portfolio during large market moves, particularly due to the convexity of tranche valuation to default events.

The CRM model is validated through the evaluation of modeling assumptions, sensitivity analysis, ongoing monitoring, benchmarking and outcome analysis. In order to ensure continued applicability and relevance, the CRM model's calibration to historical market data is updated quarterly. As an additional validation, and to comply with the requirements of Basel III, weekly CRM stress testing is performed for all correlation trading positions. The weekly CRM stress testing leverages pre-defined stress scenarios across major risk factors including default, spread, index-CDS basis spreads, and base correlation. In addition, over time, as market conditions and portfolios change, periodic testing of the model (including sensitivity analysis, accuracy and convergence testing) is conducted to ensure the appropriateness and accuracy of model settings, parameters and outputs.

The following table presents the CRM risk-based capital requirement (which is the same as the risk measure itself) and the risk-weighted assets (which is calculated by multiplying the capital requirement by 12.5 as prescribed by Basel III) for the CIB.

Three months ended December 31, 2015 (in millions)	CRM ^(a)	RWA
Total CIB CRM	\$ 681	\$ 8,514

(a) CRM reflects the higher of the quarterly average and period-end spot measure under Basel III.

The following table presents the average, minimum, maximum and period-end CRM for the CIB.

(in millions)	Three months ended December 31, 2015			At December 31, 2015
	Avg.	Min	Max	
CRM model on CIB trading positions	\$ 345	\$ 259	\$ 464	\$ 259
CRM surcharge on CIB trading positions	336	290	348	293
Total CIB CRM	\$ 681	\$ 552^(a)	\$ 812^(a)	\$ 552

(a) The minimum and maximum for the CRM model, CRM surcharge, and total CRM measure are determined independently of each other. Therefore, the minimum and maximum for each of the three metrics can occur on different dates and thus may not always be additive.

Aggregate correlation trading positions

The following table presents the net notional amount and fair value of the Firm's aggregate correlation trading positions and the associated credit hedges. Credit hedges of the correlation trading positions are included as they are considered to be part of the aggregate correlation trading positions. The presentation distinguishes between positions that are modeled in CRM and those that are not modeled in CRM.

December 31, 2015 (in millions)	Notional amount ^(a)	Fair value ^(b)
Positions modeled in CRM	\$ (4,956)	\$ (1,294)
Positions not modeled in CRM	(1,538)	(16)
Total correlation trading positions	\$ (6,494)	\$ (1,310)

(a) Reflects the net of the notional amount of the correlation trading portfolio, including credit hedges.

(b) Reflects the fair value of securities and derivatives, including credit hedges.

Non-modeled specific risk

Non-modeled specific risk is calculated using supervisory-prescribed risk weights and methodologies for covered debt, equity and securitization positions that are not included in modeled SR. The market risk-based capital and risk-weighted assets (which is calculated by multiplying the capital requirement by 12.5 as prescribed by Basel III) for non-modeled specific risk are shown in the table below.

December 31, 2015 (in millions)	Risk-based capital	RWA
Securitization positions	\$ 439	\$ 5,482
Nonsecuritization positions	4,684	58,554
Total Non-modeled specific risk	\$ 5,123	\$ 64,036

Other charges

Other charges reflect exposures receiving alternative capital treatments. The capital requirement is translated to risk-weighted assets using a multiplier of 12.5 as prescribed by Basel III.

December 31, 2015 (in millions)	Risk-based capital	RWA
Total Firm other charges	\$ 1,433	\$ 17,913

Independent review of market risk regulatory capital models

The Model Risk function within the Firm's Model Risk unit reviews and approves market risk regulatory capital models used by the Firm. Model Risk applies a consistent approach to evaluate the models used to calculate regulatory capital. The critical elements of the validation process are:

- An evaluation of the completeness of the risk factors for each product/instrument, and of the conceptual soundness of the risk factor simulation models;
- An analysis of model outcomes, including a comparison of the outputs with empirical experience and, where relevant, with alternative model specifications;
- An evaluation of the adequacy of model calibration procedures and model implementation testing performed by model developers; and
- An ongoing process to monitor the performance of models.

The evaluation of the soundness of a model seeks to assess the reasonableness of model specifications, and takes into consideration the purpose of the model and the state of current modeling technologies. The process to evaluate models also seeks to identify the main model assumptions, evaluate their adequacy, understand their strengths and weaknesses, and the impact that such assumptions may have on model output. Model Risk requires that critical weaknesses that have been identified in models have remediation plans that include specific action steps and analyses to resolve deficiencies within a specified period of time.

The output of models, and the models' response to changes in inputs, are evaluated via outcome analysis, which include comparing model results against empirical evidence, comparing model results against the results obtained with alternative settings or models, and assessing the reasonableness of the sensitivity of model results to changes in portfolio and market inputs.

While evidence of the integrity of model implementation is collected throughout the entire validation process, Model Risk dedicates a stand-alone workstream to assess the completeness and quality of the testing performed by model developers. The evaluation also considers operational risk, including access and change controls. Special attention is devoted to model inputs, in particular the quality of the specifications provided to model developers, and whether inputs require transformation or involve business logic prior to being input into the model.

Model Risk also evaluates the approach used by model developers to ensure the numerical accuracy of the results, such as the setting of the number of trials in a Monte Carlo simulation or the number of points used in a numerical integration performed to revalue a financial instrument under different market conditions. To evaluate the testing performed on models, Model Risk relies on walk-through examples that describe the sequence of steps performed in calculations and specifies the outputs, including reported quantities and model diagnostics. Additional model testing may be requested of the model development team by Model Risk or may be performed directly by Model Risk. The model validation process requires ongoing monitoring of model performance. This includes periodic reviews of:

- Model results and sensitivity analysis of key model parameters for significant sub-portfolios and for benchmark test portfolios specified by Model Risk;
- Results and impact analysis of model parameter recalibration; and
- Test results of the adequacy of the numerical settings in models.

For further information, refer to Model Risk Management on page 142 of the 2015 Form 10-K.

Economic-value stress testing

Along with VaR, stress testing is an important tool in measuring and controlling risk. While VaR reflects the risk of loss due to adverse changes in markets using recent historical market behavior as an indicator of losses, stress testing is intended to capture the Firm's exposure to unlikely but plausible events in abnormal markets. The Firm runs weekly stress tests on market-related risks across the lines of business using multiple scenarios that assume significant changes in risk factors such as credit spreads, equity prices, interest rates, currency rates or commodity prices.

The Firm uses a number of standard scenarios that capture different risk factors across asset classes including geographical factors, specific idiosyncratic factors and extreme tail events. The stress framework calculates multiple magnitudes of potential stress for both market rallies and market sell-offs for each risk factor and combines them in multiple ways to capture different market scenarios. For example, certain scenarios assess the potential loss arising from current exposures held by the Firm due to a broad sell off in bond markets or an extreme widening in corporate credit spreads. The flexibility of the stress testing framework allows risk managers to construct new, specific scenarios that can be used to form decisions about future possible stress events.

Stress testing complements VaR by allowing risk managers to shock current market prices to more extreme levels relative to those historically realized, and to stress test the relationships between market prices under extreme scenarios.

Stress-test results, trends and qualitative explanations based on current market risk positions are reported to the respective LOB's and the Firm's senior management to allow them to better understand the sensitivity of positions to certain defined events and to enable them to manage their risks with more transparency. In addition, results are reported to the Board of Directors.

Stress scenarios are defined and reviewed by Market Risk, and significant changes are reviewed by the relevant LOB Risk Committees and may be redefined on a periodic basis to reflect current market conditions. The Firm's stress testing framework is utilized in calculating results under scenarios mandated by the Federal Reserve's CCAR and ICAAP processes. In addition, the results are incorporated into the quarterly assessment of the Firm's Risk Appetite Framework and are also presented to the DRPC.

OPERATIONAL RISK

Operational risk is the risk of loss resulting from inadequate or failed processes or systems, human factors or due to external events that are neither market- nor credit-related.

Operational risk is inherent in the Firm's activities and can manifest itself in various ways, including fraudulent acts, business interruptions, inappropriate behavior of employees, failure to comply with applicable laws and regulations or failure of vendors to perform in accordance with their arrangements. These events could result in financial losses, litigation and regulatory fines, as well as other damage to the Firm. The goal is to keep operational risk at appropriate levels, in light of the Firm's financial strength, the characteristics of its businesses, the markets in which it operates, and the competitive and regulatory environment to which it is subject.

One of the ways operational loss may be mitigated is through insurance maintained by the Firm. The Firm purchases insurance to be in compliance with local laws and regulations (e.g., workers compensation), as well as to serve other needs (e.g., property loss and public liability). Insurance may also be required by third parties with whom the Firm does business. The insurance purchased is reviewed and approved by senior management.

- Refer to pages 144-146 of the 2015 Form 10-K for a discussion of JPMorgan Chase's Operational Risk Management.

Measurement

Two standard forms of operational risk measurement include operational risk capital and operational risk losses under baseline and stressed conditions.

The Firm's operational risk capital methodology incorporates the four required elements of the Advanced Measurement Approach under the Basel III framework:

- Internal losses,
- External losses,
- Scenario analysis, and
- Business environment and internal control factors.

The primary component of the operational risk capital estimate is the result of a statistical model, the Loss Distribution Approach ("LDA"), which simulates the frequency and severity of future operational risk losses based on historical data.

The LDA model is used to estimate an aggregate operational risk loss over a one-year time horizon, at a 99.9% confidence level. The LDA model incorporates actual internal operational risk losses in the quarter following the period in which those losses were realized, and the calculation generally continues to reflect such losses even after the issues or business activities giving rise to the losses have been remediated or reduced.

The calculation is supplemented by external loss data as needed, as well as both management's view of plausible tail risk, which is captured as part of the Scenario Analysis process, and evaluation of key LOB internal control metrics (BEICF). The Firm may further supplement such analysis to incorporate feedback from its bank regulators.

The Firm considers the impact of stressed economic conditions on operational risk losses and a forward looking view of material operational risk events that may occur in a stressed environment. The Firm's operational risk stress testing framework is utilized in calculating results for the Firm's CCAR, ICAAP, and Risk Appetite processes.

- Refer to Capital Management on pages 149-158 of the 2015 Form 10-K for information related to operational risk RWA.

INTEREST RATE RISK IN THE BANKING BOOK

The effect of interest rate exposure on the Firm's reported net income is important as interest rate risk represents one of the Firm's significant market risks. Interest rate risk arises not only from trading activities but also from the Firm's traditional banking activities, which include extension of loans and credit facilities, taking deposits and issuing debt. The Firm evaluates its structural interest rate risk exposure through earnings-at-risk, which measures the extent to which changes in interest rates will affect the Firm's net interest income and interest rate-sensitive fees. Earnings-at-risk excludes the impact of CIB's markets-based activities and MSRs, as these sensitivities are captured under VaR.

The CIO, Treasury and Corporate ("CTC") Risk Committee establishes the Firm's structural interest rate risk policies and market risk limits, which are subject to approval by the DRPC. The CIO, working in partnership with the lines of business, calculates the Firm's structural interest rate risk profile and reviews it with senior management including the CTC Risk Committee and the Firm's Asset and Liability Committee.

The Firm manages structural interest rate risk generally through its investment securities portfolio and interest rate derivatives.

The Firm generates a net interest income baseline, and then conducts simulations of changes for interest rate-sensitive assets and liabilities denominated in U.S. dollar and other currencies ("non-U.S. dollar" currencies). Earnings-at-risk scenarios estimate the potential change in this net interest income baseline, excluding CIB's markets-based activities and MSRs, over the following 12 months, utilizing multiple assumptions. These scenarios may consider the impact on exposures as a result of changes in interest rates from baseline rates, as well as pricing sensitivities of deposits, optionality and changes in product mix. The scenarios include forecasted balance sheet changes, as well as modeled prepayment and reinvestment behavior, but do not include assumptions about actions which could be taken by the Firm in response to any such instantaneous rate changes. For example, mortgage prepayment assumptions are based on current interest rates compared with underlying contractual rates, the time since origination, and other factors which are updated periodically based on historical experience. The Firm's earnings-at-risk scenarios are periodically evaluated and enhanced in response to changes in the composition of the Firm's balance sheet, changes in market conditions, improvements in the Firm's simulation and other factors.

- Refer to page 138 of the 2015 Form 10-K for a detailed discussion of Earnings-at-risk.

Effective January 1, 2015, the Firm conducts earnings-at-risk simulations for assets and liabilities denominated in U.S. dollars separately from assets and liabilities denominated in non-U.S. dollar currencies in order to enhance the Firm's ability to monitor structural interest rate risk from non-U.S. dollar exposures.

The Firm's U.S. dollar sensitivity is presented in the table below. The result of the non-U.S. dollar sensitivity scenarios were not material to the Firm's earnings-at-risk at December 31, 2015.

JPMorgan Chase's 12-month pretax net interest income sensitivity profiles

(Excludes the impact of CIB's markets-based activities and MSRs)

(in billions)	Instantaneous change in rates			
December 31, 2015	+200 bps	+100 bps	-100 bps	-200 bps
U.S. dollar	\$ 5.2	\$ 3.1	NM ^(a)	NM ^(a)

(a) Downward 100- and 200-basis-points parallel shocks result in a federal funds target rate of zero and negative three- and six-month U.S. Treasury rates. The earnings-at-risk results of such a low probability scenario are not meaningful.

The Firm's benefit to rising rates on U.S. dollar assets and liabilities is largely a result of reinvesting at higher yields and assets repricing at a faster pace than deposits.

Separately, another U.S. dollar interest rate scenario used by the Firm – involving a steeper yield curve with long-term rates rising by 100 basis points and short-term rates staying at current levels – results in a 12-month pretax benefit to net interest income, excluding CIB's markets-based activities and MSRs, of approximately \$700 million. The increase in net interest income under this scenario reflects the Firm reinvesting at the higher long-term rates, with funding costs remaining unchanged. The result of the comparable non-U.S. dollar scenario was not material to the Firm.

Non-U.S. dollar FX Risk

Non-U.S. dollar FX risk is the risk that changes in foreign exchange rates affect the value of the Firm's assets or liabilities or future results. The Firm has structural non-U.S. dollar FX exposures arising from capital investments, forecasted expense and revenue, the investment securities portfolio and issuing debt in denominations other than the U.S. dollar. Treasury and CIO, working in partnership with the lines of business, primarily manage these risks on behalf of the Firm. Treasury and CIO may hedge certain of these risks using derivatives within risk limits governed by the CTC Risk Committee.

SUPPLEMENTARY LEVERAGE RATIO

The SLR is defined as Tier 1 capital under Basel III divided by the Firm's total leverage exposure. The tables below present the components of the Firm's SLR as of December 31, 2015 with on-balance sheet amounts calculated as the quarterly average and the off-balance sheet amounts calculated as the average of each of the three month's period-end balances.

(in millions, except ratio)	December 31, 2015
Basel III Advanced Transitional Tier 1 Capital	\$ 200,482
Total average assets	2,408,253
Less: amounts deducted from Tier 1 capital	47,076
Total adjusted average assets	2,361,177
Adjustment for derivative exposures	382,466
Adjustment for repo-style transactions	22,087
Adjustment for other off-balance sheet exposures	314,067
Off-balance sheet exposures	718,620
Total leverage exposure	\$ 3,079,797
Basel III Advanced Transitional SLR	6.5%

Derivative exposures

The following table presents the components of total derivative exposure.

(in millions)	December 31, 2015
Replacement cost for derivative exposures ^(a)	\$ 71,624
Add-on amounts for potential future exposure (PFE) for derivative exposures	387,577
Gross-up for cash collateral posted if deducted from the on-balance sheet assets, except for cash variation margin	3,535
Effective notional principal amount of sold credit protection	1,544,772
Less:	
Exempted CCP leg of client-cleared transactions	61,928
Effective notional principal amount offsets and PFE adjustments for sold credit protection	1,497,071
Total derivative exposure^(b)	448,509
Less: on-balance sheet amount	
Derivative receivables	66,043
Adjustment for derivative exposures	\$ 382,466

(a) Includes cash collateral received of \$5,581.

(b) Receivables for cash variation margin posted under a qualifying derivative master agreement is netted against derivative liabilities and not included in on-balance sheet assets.

Repo-style transactions

The following table presents the components of total exposures for repo-style transactions.

(in millions)	December 31, 2015
Gross on-balance sheet assets for repo-style transactions ^(a)	\$ 460,269
Counterparty credit risk for repo-style transactions where the Firm acts as principal	22,556
Exposure for repo-style transactions where the Firm acts as an agent ^(b)	250
Less: amounts netted ^(c)	154,111
Total exposures for repo-style transactions	328,964
Less: on-balance sheet amounts	
Federal funds sold and securities purchased under resale agreements	202,205
Securities borrowed	104,672
Adjustment for repo-style transactions	\$ 22,087

(a) Includes adjustments for securities received where the securities lender has not sold or rehypothecated securities received.

(b) Includes exposures where the Firm's guarantee is greater than the difference between the fair value of the security or cash the Firm's customer has lent and the value of the collateral provided.

(c) Reflects netting of transactions where the Firm has obtained an appropriate legal opinion with respect to master netting agreements, and where the relevant criteria have been met.

Other off-balance sheet exposures

The following table presents wholesale and retail commitments after applying the relevant credit conversion factors.

(in millions)	December 31, 2015
Off-balance sheet exposures at gross notional amounts	\$ 1,075,592
Less: adjustments for conversion to credit equivalent amounts	761,525
Adjustment for other off-balance sheet exposures	\$ 314,067

Valuation process

The accounting and financial reporting policies of JPMorgan Chase and its subsidiaries conform to accounting principles generally accepted in the U.S. (“U.S. GAAP”). Additionally, where applicable, the policies conform to the accounting and reporting guidelines prescribed by regulatory authorities. It is JPMorgan Chase’s policy to carry its covered positions at fair value.

Risk-taking functions are responsible for providing fair value estimates for assets and liabilities carried on the Consolidated balance sheets at fair value. The Firm’s valuation control function, which is part of the Firm’s Finance function and independent of the risk-taking functions, is responsible for verifying these estimates and determining any fair value adjustments that may be required to ensure that the Firm’s positions are recorded at fair value. In addition, the firmwide Valuation Governance Forum (“VGF”) is composed of senior finance and risk executives and is responsible for overseeing the management of risks arising from valuation activities conducted across the Firm. The VGF is chaired by the Firmwide head of the valuation control function (under the direction of the Firm’s CFO), and includes sub-forums covering the Corporate & Investment Bank, Consumer & Community Banking (“CCB”), Commercial Banking, Asset Management and certain corporate functions including Treasury and Chief Investment Office (“CIO”).

The valuation control function verifies fair value estimates provided by the risk-taking functions by leveraging independently derived prices, valuation inputs and other market data, where available. Where independent prices or inputs are not available, additional review is performed by the valuation control function to ensure the reasonableness of the estimates. The review may include evaluating the limited market activity including client unwinds, benchmarking of valuation inputs to those for similar instruments, decomposing the valuation of structured instruments into individual components, comparing expected to actual cash flows, reviewing profit and loss trends, and reviewing trends in collateral valuation. There are also additional levels of management review for more significant or complex positions.

The valuation control function determines any valuation adjustments that may be required to the estimates provided by the risk-taking functions. No adjustments are applied to the quoted market price for instruments classified within level 1 of the fair value hierarchy.

- Refer to Note 3 on pages 184–203 of the 2015 Form 10-K for more information on the fair value hierarchy.

For other positions, judgment is required to assess the need for valuation adjustments to appropriately reflect liquidity considerations, unobservable parameters, and for certain portfolios that meet specified criteria, the size of the net open risk position. The determination of such adjustments follows a consistent framework across the Firm:

- Liquidity valuation adjustments are considered where an observable external price or valuation parameter exists but is of lower reliability, potentially due to lower market activity. Liquidity valuation adjustments are applied and determined based on current market conditions. Factors that may be considered in determining the liquidity adjustment include analysis of: (1) the estimated bid-offer spread for the instrument being traded; (2) alternative pricing points for similar instruments in active markets; and (3) the range of reasonable values that the price or parameter could take.
- The Firm manages certain portfolios of financial instruments on the basis of net open risk exposure and, as permitted by U.S. GAAP, has elected to estimate the fair value of such portfolios on the basis of a transfer of the entire net open risk position in an orderly transaction. Where this is the case, valuation adjustments may be necessary to reflect the cost of exiting a larger-than-normal market-size net open risk position. Where applied, such adjustments are based on factors that a relevant market participant would consider in the transfer of the net open risk position, including the size of the adverse market move that is likely to occur during the period required to reduce the net open risk position to a normal market-size.
- Unobservable parameter valuation adjustments may be made when positions are valued using prices or input parameters to valuation models that are unobservable due to a lack of market activity or because they cannot be implied from observable market data. Such prices or parameters must be estimated and are, therefore, subject to management judgment. Unobservable parameter valuation adjustments are applied to reflect the uncertainty inherent in the resulting valuation estimate.

Where appropriate, the Firm also applies adjustments to its estimates of fair value in order to appropriately reflect counterparty credit quality, the Firm’s own creditworthiness and the impact of funding, utilizing a consistent framework across the Firm.

- Refer to Note 3 on pages 200–201 of the 2015 Form 10-K, for information on credit and funding valuation adjustments.

Valuation model review and approval

If prices or quotes are not available for an instrument or a similar instrument, fair value is generally determined using valuation models that consider relevant transaction data such as maturity and use as inputs market-based or independently sourced parameters. Where this is the case the price verification process described above is applied to the inputs to those models.

New valuation models, as well as material changes to existing valuation models, are reviewed and approved prior to implementation except where specified conditions are met, including the approval of an exception granted by the head of the Model Risk function. The Model Risk function performs an annual status assessment that considers developments in the product or market to determine whether valuation models which have already been reviewed need to be, on a full or partial basis, reviewed and approved again.

Model risk management

Model risk is the potential for adverse consequences from decisions based on incorrect or misused model outputs and reports.

The Firm uses models for many purposes including the valuation of positions and the measurement of risk. Valuation models are employed by the Firm to value certain financial instruments for which quoted prices may not be readily available. Valuation models may be employed as inputs into risk measurement models including VaR, regulatory capital, estimation of stress loss and the allowance for credit losses.

Models are owned by various functions within the Firm based on the specific purposes of such models. For example, VaR models and certain regulatory capital models are owned by the line of business-aligned risk management functions. Owners of models are responsible for the development, implementation and testing of their models, as well as referral of models to the Model Risk function for review and approval. Once models have been approved, model owners are responsible for the maintenance of a robust operating environment and must monitor and evaluate the performance of the models on an ongoing basis. Model owners may seek to enhance models in response to changes in the portfolios and in product and market developments, as well as to capture improvements in available modeling techniques and systems capabilities.

The Model Risk review and governance functions review and approve a wide range of models, including risk management, valuation and regulatory capital models used by the Firm. Independent of the model owners, the Model Risk review and governance functions are part of the Firm's Model Risk unit, and the Firmwide Model Risk Executive reports to the Firm's CRO.

- Refer to the Model Risk Management section on page 142 of the 2015 Form 10-K for additional information.

References to JPMorgan Chase's 2015 Form 10-K

JPMorgan Chase's 2015 Form 10-K contains important information on the Firm's risk management policies and practices, capital management processes, and accounting policies relevant to this report. Specific references are listed below.

Management's discussion and analysis

Section	Page reference
Enterprise-wide risk management	107-164
Credit risk management	112-132
Consumer credit risk	115-121
Wholesale credit risk	122-129
Allowance for credit losses	130-132
Market risk management	133-139
Model risk management	142
Principal risk management	143
Operational risk management	144-146
Capital management	149-158

Notes to consolidated financial statements

Section	Page reference
Note 1 Basis of presentation	181-183
Note 3 Fair value measurement	184-203
Note 4 Fair value option	203-206
Note 5 Credit risk concentrations	207
Note 6 Derivative instruments	208-220
Note 9 Pension and other postretirement employee benefit plans	223-230
Note 12 Securities	233-237
Note 13 Securities financing activities	238-241
Note 14 Loans	242-261
Note 15 Allowance for credit losses	262-265
Note 16 Variable interest entities	266-273
Note 17 Goodwill and other intangible assets	274-277
Note 21 Long-term debt	279-281
Note 22 Preferred stock	282
Note 23 Common stock	282-283
Note 25 Accumulated other comprehensive income/(loss)	284
Note 27 Restrictions on cash and intercompany funds transfers	288
Note 28 Regulatory capital	288-290
Note 29 Off-balance sheet lending-related financial instruments, guarantees and other commitments	290-295
Note 30 Commitments, pledged assets and collateral	296