

JPMORGAN CHASE & Co.
PILLAR 3 REGULATORY CAPITAL DISCLOSURES

For the quarterly period ended September 30, 2016

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DISCLOSURE MAP

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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 \$2.5 trillion in assets and \$254.3 billion in stockholders’ equity as of September 30, 2016. 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 Pillar 3 Regulatory Capital Disclosures Report for the quarterly period ended December 31, 2015 (“4Q15 Pillar 3 Report”), as well as the Annual Report on Form 10-K for the year ended December 31, 2015 (“2015 Form 10-K”) and the Quarterly Report on Form 10-Q for the period ended September 30, 2016 (“3Q16 Form 10-Q”), which have 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.

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 RWA. A general (Standardized) approach (“Basel III Standardized”), and an advanced approach (“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”).

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 efforts to enhance controls, ongoing employee training and development, talent retention, and other measures. 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.

Effective September 2016, the Firm has aligned the Compliance and Risk Management functions. As a result of this realignment, the Firm's Chief Compliance Officer now reports to the Firm's CRO. Together, Compliance and Risk provide the second line of defense for the Firm. For further information on Risk Governance and Compliance Risk Management, refer to pages 108 and 147, respectively, of JPMorgan Chase's 2015 Annual Report.

Risk appetite and governance

- Refer to pages 107-111 of the 2015 Form 10-K for information on Risk appetite and governance.

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 securities classified as available-for-sale (“AFS”) as well as for defined benefit pension and other postretirement 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 87 of 3Q16 Form 10-Q for the components of total stockholders’ equity.

September 30, 2016 (in millions)	Basel III Advanced Transitional ^(a)
Total stockholders’ equity	\$ 254,331
Less: Preferred stock	26,068
Common stockholders’ equity	228,263
Less: AOCI adjustment	496
CET1 capital before regulatory adjustments	227,767
Less:	
Goodwill	47,302
Other intangible assets	88
Other CET1 capital adjustments ^(b)	2,003
Add:	
Deferred tax liabilities ^(c)	3,232
CET1 capital	181,606
Preferred stock	26,068
Other Tier 1 capital adjustments	119
Less: Tier 1 capital deductions ^(b)	1,363
Total Tier 1 capital	206,430
Long-term debt and other instruments qualifying as Tier 2 capital	16,947
Qualifying allowance for credit losses	3,623
Other Tier 2 capital adjustments	2,388
Less: Tier 2 capital deductions	64
Total Tier 2 capital	22,894
Total capital	\$ 229,324

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

(b) Effective January 1, 2016, the adjustment includes the impact of the adoption of debit valuation adjustments (“DVA”) through other comprehensive income. For further discussion of the accounting change refer to Note 19 on page 153 of the 3Q16 Form 10-Q

(c) 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 page 279 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.

- 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 67–73, Note 20 on pages 155–156, and Regulatory and business developments on page 6, of the 3Q16 Form 10-Q. The Capital Management section of the Form 10-Q 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. As a result, there are differences in the amounts presented between the two reports.

Risk-weighted assets

Basel III establishes two comprehensive methodologies for calculating RWA (a Standardized approach and an Advanced approach) which include capital requirements for 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. 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 September 30, 2016.

September 30, 2016 (in millions)	Basel III Advanced Transitional RWA
Credit risk	\$ 974,471
Market risk	140,706
Operational risk	400,000
Total RWA	\$ 1,515,177

RWA rollforward

The following table presents changes in the components of RWA under Basel III Advanced Transitional for the three months ended September 30, 2016. The amounts in the rollforward categories are estimates, based on the predominant driver of the change.

Three months ended September 30, 2016 (in millions)	Basel III Advanced Transitional RWA			
	Credit risk	Market risk	Operational risk	Total
June 30, 2016	\$ 968,013	\$ 129,496	\$ 400,000	\$ 1,497,509
Model & data changes ^(a)	6,941	(1,022)	–	5,919
Portfolio runoff ^(b)	(3,220)	–	–	(3,220)
Movement in portfolio levels ^(c)	2,737	12,232	–	14,969
Changes in RWA	6,458	11,210	–	17,668
September 30,	\$ 974,471	\$ 140,706	\$ 400,000	\$ 1,515,177

(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.

(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. Maintaining a strong balance sheet to manage through economic volatility is considered a strategic imperative by the Firm's Board of Directors, CEO and Operating Committee. The Firm's capital management strategy focuses on maintaining long-term stability to enable the Firm to build and invest in market-leading businesses, even in a highly stressed environment. The Firm executes its capital management strategy through the establishment of minimum capital targets and a strong capital governance framework. The Firm's minimum capital targets are set based on the most binding of three pillars: an internal assessment of the Firm's capital needs; an estimate of required capital under the Comprehensive Capital Analysis and Review ("CCAR") and Dodd Frank Act stress testing ("DFAST") requirements; and current regulatory minimums. The capital governance framework includes regular monitoring of the Firm's capital positions, stress testing and defining escalation protocols, both at the Firm and line of business level.

- Refer to the Capital Management section on pages 67-73 of the 3Q16 Form 10-Q and pages 149-158 of the 2015 Form 10-K for information on the Firm's 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 a minimum leverage ratio (which is 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. National 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 September 30, 2016.

	Minimum capital ratios		Well-capitalized ratios	
	BHC ^(a)	IDJ ^(b)	BHC ^(c)	IDJ ^(d)
Capital ratios				
CET1	6.25%	5.125%	—%	6.5%
Tier 1	7.75	6.625	6.0	8.0
Total	9.75	8.625	10.0	10.0
Tier 1 leverage	4.0	4.0	—	5.0

Note: The table above is as defined by the regulations issued by the Federal Reserve, OCC and FDIC and to which the Firm and its national bank subsidiaries are subject.

- (a) Represents the transitional minimum capital ratios applicable to the Firm under Basel III at September 30, 2016. Commencing in the first quarter of 2016, the CET1 minimum capital ratio includes 0.625% resulting from the phase in of the Firm's 2.5% capital conservation buffer and 1.125%, resulting from the phase in of the Firm's

estimated 4.5% GSIB surcharge as of December 31, 2014 published by the Federal Reserve on July 20, 2015.

- (b) Represents requirements for JPMorgan Chase's banking subsidiaries. The CET1 minimum capital ratio includes 0.625% resulting from the phase in of the 2.5% capital conservation buffer that is applicable to the banking subsidiaries. The banking subsidiaries are not subject to the GSIB surcharge.
- (c) Represents requirements for Bank Holding Companies ("BHC") pursuant to regulations issued by the Federal Reserve.
- (d) Represents requirements for bank subsidiaries pursuant to regulations issued under the FDIC Improvement Act.

Capital adequacy

As of September 30, 2016, 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").

- For information on the Firm's Internal Capital Adequacy Assessment Process ("ICAAP") and Comprehensive Capital Analysis and Review ("CCAR") processes, refer to Regulatory Capital on page 6 of the 4Q15 Pillar 3 Report and page 72 of the 3Q16 Form 10-Q.

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

The following tables present the regulatory capital, 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.

September 30, 2016 (in millions, except ratios)	JPMorgan Chase & Co. ^(f)	
	Basel III Standardized Transitional	Basel III Advanced Transitional
Regulatory capital		
CET1 capital	\$ 181,606	\$ 181,606
Tier 1 capital	206,430	206,430
Total capital ^(a)	241,004	229,324
Assets		
Risk-weighted	\$ 1,480,291	\$ 1,515,177
Adjusted average ^(b)	2,427,423	2,427,423
Capital ratios^(c)		
CET1 ^(d)	12.3%	12.0%
Tier 1	13.9	13.6
Total	16.3	15.1
Tier 1 leverage ^(e)	8.5	8.5

JPMorgan Chase Bank, N.A. ^(f)			
September 30, 2016 (in millions, except ratios)	Basel III Standardized Transitional	Basel III Advanced Transitional	
Regulatory capital			
CET1 capital	\$ 176,083	\$ 176,083	
Tier 1 capital	176,375	176,375	
Total capital	190,955	182,984	
Assets			
Risk-weighted	\$ 1,319,671	\$ 1,302,659	
Adjusted average ^(b)	2,041,246	2,041,246	
Capital ratios^(c)			
CET1 ^(d)	13.3%	13.5%	
Tier 1	13.4	13.5	
Total	14.5	14.0	
Tier 1 leverage ^(e)	8.6	8.6	

Chase Bank USA, N.A. ^(f)			
September 30, 2016 (in millions, except ratios)	Basel III Standardized Transitional	Basel III Advanced Transitional	
Regulatory capital			
CET1 capital	\$ 16,597	\$ 16,597	
Tier 1 capital	16,597	16,597	
Total capital	22,602	21,247	
Assets			
Risk-weighted	\$ 106,507	\$ 184,858	
Adjusted average ^(b)	121,335	121,335	
Capital ratios^(c)			
CET1 ^(d)	15.6%	9.0%	
Tier 1	15.6	9.0	
Total	21.2	11.5	
Tier 1 leverage ^(e)	13.7	13.7	

- (a) Total capital for JPMorgan Chase & Co. includes \$528 million of surplus capital in insurance subsidiaries
- (b) Adjusted average assets, for purposes of calculating the Tier 1 leverage ratio, includes total quarterly average assets adjusted for unrealized gains/(losses) on AFS securities, less deductions for goodwill and other intangible assets, defined benefit pension plan assets, and deferred tax assets related to net operating loss and tax credit carryforwards
- (c) For each of the risk-based capital ratios, the capital adequacy of the Firm and its national bank subsidiaries is evaluated against the Basel III approach, Standardized or Advanced, which results in the lower ratio (the "Collins Floor"), as required by the Collins Amendment of the Dodd-Frank Act.
- (d) Commencing in the first quarter of 2016, the Firm and its U.S. subsidiary banks are required to maintain a capital conservation buffer in addition to the 4.5% minimum CET1 requirement, or be subject to limitations on the amount of capital that may be distributed, including dividends and common equity repurchases. The capital conservation buffer is calculated as the lowest of the: (i) CET1 ratio less the CET1 minimum requirement, (ii) Tier 1 ratio less the Tier1 minimum requirement and (iii) Total capital ratio less the Total capital minimum requirement. At September 30, 2016, the capital conservation buffer of the Firm, JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A. was 7.1%, 6.0% and 3.0%, respectively. This was in excess of the estimated required capital conservation buffer of 1.75% (inclusive of the GSIB surcharge) for the Firm and 0.625% for JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A. at that date. In addition, the buffer retained earnings of the Firm, JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A. was \$9.2 billion, \$8.1 billion and \$1.2 billion respectively.
- (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.

Supplementary leverage ratio ("SLR")

The following table presents the components of the Firm's Advanced Transitional SLR as of September 30, 2016.

(in millions, except ratio)	Sept. 30, 2016
Basel III Advanced Transitional Tier 1 Capital	\$ 206,430
Total assets	2,521,029
Less: Adjustments for frequency of calculations ^(a)	43,214
Total average assets^(b)	2,477,815
Less: Adjustments for deductions from tier 1 capital	49,538
Total adjusted average assets^(c)	2,428,277
Off-balance sheet exposures ^(d)	712,456
Total leverage exposure	\$ 3,140,733
Basel III Advanced Transitional SLR	6.6%

- (a) The adjustment for frequency of calculations represents the difference between total assets at September 30, 2016, and total average assets for the quarter ended September 30, 2016, excluding the adjustments for frequency of calculations for derivatives and repo-style transactions of \$254 million and \$599 million, respectively.
- (b) To reconcile to total average assets as reported in the 3Q16 Form 10-Q, the total average assets reported in this table must be reduced by the aforementioned adjustment for frequency of calculations for derivative and repo-style transactions.
- (c) 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 goodwill and other intangible assets.
- (d) Off-balance sheet exposures are calculated as the average of the three month-end spot balances in the reporting quarter.

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 and associated lending-related commitments. 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 may be classified as either wholesale exposure or securitization exposure for RWA reporting. Deposits with banks are classified as wholesale exposures for RWA reporting.

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

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 and page 43 of the 3Q16 Form 10-Q.
- 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 September 30, 2016.

September 30, 2016 (in millions)	Basel III Advanced Transitional RWA
Retail exposures	\$ 244,298
Wholesale exposures	418,041
Counterparty exposures	104,991
Securitization exposures ^(a)	32,434
Equity exposures	37,910
Other exposures ^(b)	71,878
CVA	64,919
Total credit risk RWA	\$ 974,471

(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 September 30, 2016 are contained in the 3Q16 Form 10-Q. Specific references are listed below.

Traditional credit products

- Refer to Credit Risk Management beginning on page 43 in the 3Q16 Form 10-Q for credit-related information on the consumer and wholesale portfolios.
- Refer to Note 13 on pages 126-140 of the 3Q16 Form 10-Q for the distribution of loans by geographic region and industry.
- Refer to Note 21 on pages 157-160 of the 3Q16 Form 10-Q for the contractual amount and geographic distribution of lending-related commitments.

Counterparty credit risk

- Refer to Note 5 on pages 106-115 of the 3Q16 Form 10-Q for the gross positive fair value, netting benefits, and net exposure of derivative receivables.
- Refer to Derivative contracts on pages 55-56 of the 3Q16 Form 10-Q for credit derivatives used in credit portfolio management activities.
- Refer to Note 12 on pages 124-125 of the 3Q16 Form 10-Q 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 44-49, and to the Wholesale Credit Portfolio section on pages 50-56 of the 3Q16 Form 10-Q for margin loans balances.

Investment securities

- Refer to Note 11 on pages 120-124 of the 3Q16 Form 10-Q for the investment securities portfolio by issuer type.

Country risk

- Refer to page 66 of the 3Q16 Form 10-Q for the top 20 country exposures.

Allowance for credit losses

- Refer to Allowance for Credit Losses on pages 57-59 of the 3Q16 Form 10-Q for a summary of changes in the allowance for loan losses and allowance for lending-related commitments.
- Refer to Note 14 on page 141 of the 3Q16 Form 10-Q for the allowance for credit losses and loans and lending-related commitments by impairment methodology.

Average balances

- Refer to page 170 of the 3Q16 Form 10-Q for the Consolidated average balance sheet.

Credit risk monitoring

- For further information on credit risk concentrations, refer to Credit risk monitoring in the 4Q15 Pillar 3 Report.

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 that are included in the consumer portfolio in the Firm's SEC disclosures; these are subject to wholesale capital treatment as required by Basel III.

Risk-weighted assets

To calculate retail credit RWA, the Firm inputs its risk parameter estimates (PD, loss given default ("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.

➤ For information on risk parameter estimation methods for the retail credit portfolio, refer to Retail Credit Risk on pages 10-11 of the 4Q15 Pillar 3 Report.

September 30, 2016 (in millions)	Basel III Advanced Transitional RWA
Residential mortgages	\$ 121,081
Qualifying revolving	95,441
Other retail	27,776
Total retail credit RWA	\$ 244,298

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 83% of the exposure amount, revolving exposures approximately 17%, with the remaining exposures related to junior lien mortgages. Most revolving exposures were originated prior to 2010 and drive approximately 37% 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.

September 30, 2016
(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	\$ 21,601	\$ 19,257	\$ 25,091	\$ 2,157	0.04%	56.28%	8.60%
0.10 to < 0.20	169,056	20,875	188,377	25,633	0.15	38.46	13.61
0.20 to < 0.75	39,810	13,251	45,008	18,084	0.47	52.47	40.18
0.75 to < 5.50	31,025	2,849	33,486	39,480	1.91	61.22	117.90
5.50 to < 10.00	3,190	7	3,189	8,269	6.86	65.71	259.30
10.00 to < 100	4,150	1	4,150	12,350	27.08	59.99	297.59
100 (default)	17,064	408	17,366	15,108	100.00	— ^(a)	87.00 ^(b)
Total	\$ 285,896	\$ 56,648	\$ 316,667	\$ 121,081	6.27%	42.72%	38.24%

(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).

September 30, 2016
(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	\$	43,804	\$ 475,581	\$ 177,505	\$ 9,698	0.10%	91.92%	5.46%
0.50 to < 2.00		36,662	46,200	43,728	17,513	1.12	91.92	40.05
2.00 to < 3.50		15,301	12,980	17,465	13,391	2.65	92.15	76.67
3.50 to < 5.00		14,445	2,118	14,542	14,184	3.77	91.54	97.54
5.00 to < 8.00		6,448	1,639	6,492	9,423	6.82	92.61	145.15
8.00 to < 100		16,577	1,230	16,580	31,232	19.39	91.80	188.37
100 (default) ^(a)		—	—	—	—	—	—	—
Total	\$	133,237	\$ 539,748	\$ 276,312	\$ 95,441	1.93%	91.92%	34.54%

(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).

September 30, 2016
(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	\$	40,656	\$ 8,946	\$ 43,848	\$ 6,410	0.17%	37.06%	14.62%
0.50 to < 2.00		16,664	2,792	17,276	8,763	0.96	49.17	50.72
2.00 to < 3.50		4,334	530	4,480	3,776	2.59	58.63	84.28
3.50 to < 5.00		1,944	150	1,979	1,772	4.17	58.30	89.56
5.00 to < 8.00		1,474	82	1,500	1,554	5.92	64.85	103.60
8.00 to < 100		3,426	27	3,439	4,354	22.45	59.73	126.62
100 (default)		1,125	107	1,233	1,147	100.00	— ^(a)	92.93 ^(b)
Total	\$	69,623	\$ 12,634	\$ 73,755	\$ 27,776	3.43%	42.78%	37.66%

(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.

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 \$1.3 trillion, with 77% of this exposure in the first two PD ranges, which are predominantly investment-grade. Exposures meeting the Basel definition of default represent 0.4% of total EAD. The exposure-weighted average LGD for the wholesale portfolio is 31%.

September 30, 2016 (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	\$ 692,930	\$ 173,752	\$ 824,849	\$ 115,793	0.04%	29.00%	14.04%
0.15 to < 0.50	124,559	122,661	195,349	93,233	0.26	37.74	47.73
0.50 to < 1.35	159,490	94,978	214,641	116,085	0.74	29.06	54.08
1.35 to < 10.00	47,712	51,156	76,250	71,855	3.78	33.84	94.24
10.00 to < 100	5,811	10,362	10,477	15,106	22.82	36.39	144.18
100 (default)	4,859	1,467	5,672	5,969	100.00	38.98	105.22
Total	\$ 1,035,361	\$ 454,376	\$ 1,327,238	\$ 418,041	1.01%	30.67%	31.50%

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. At September 30, 2016, \$66.7 billion of EAD for wholesale exposures is covered by eligible guarantees or credit derivatives.

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.

- For information on risk parameter estimation methods for the wholesale credit portfolio, refer to Wholesale Credit Risk on page 13 of the 4Q15 Pillar 3 Report.

The following 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").

September 30, 2016 (in millions)	Basel III Advanced Transitional RWA
Corporate	\$ 339,622
Bank	15,121
Sovereign	17,362
Income-producing real estate	42,022
High volatility commercial real estate	3,914
Total wholesale credit RWA	\$ 418,041

COUNTERPARTY CREDIT RISK

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

Risk-weighted assets

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 central counterparty ("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.

- For information on the risk parameter estimation methods and wrong-way risk for counterparty credit risk, refer to Counterparty Credit Risk on pages 15–16 of the 4Q15 Pillar 3 Report.

September 30, 2016 (in millions)	Basel III Advanced Transitional RWA
OTC derivatives	\$ 72,380
Repo-style transactions	24,617
Margin loans	2,153
Cleared transactions	5,841
Total counterparty credit RWA	\$ 104,991

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 \$237.7 billion, with 85% 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.

September 30, 2016
(in millions, except ratios)

PD range (%)	EAD	RWA	Exposure-weighted average		
			PD	LGD	Risk weight
0.00 to < 0.15	\$ 172,298	\$ 51,637	0.10%	42.45%	29.97%
0.15 to < 0.50	29,093	13,874	0.26	43.98	47.69
0.50 to < 1.35	27,953	20,457	0.78	43.41	73.18
1.35 to < 10.00	7,177	8,972	4.45	42.58	125.01
10.00 to < 100	721	1,615	22.70	40.55	224.06
100 (default)	417	442	100.00	41.34	106.00
Total	\$ 237,659	\$ 96,997	0.57%	42.74%	40.81%

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 September 30, 2016, \$5.9 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.

- For information on risk management and due diligence for securitization exposures, refer to Securitization on page 17 of the 4Q15 Pillar 3 Report.

Hierarchy of approaches

- For information on Hierarchy of approaches for securitization exposures, refer to Securitization on page 18 of the 4Q15 Pillar 3 Report.

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.

September 30, 2016 (in millions)	Securitization							
	SFA		SSFA		1250%		Total	
	Exposure	RWA	Exposure	RWA	Exposure	RWA	Exposure	RWA
Risk weight								
= 0% ≤ 20%	\$ 60,139	\$ 12,661	\$ 66,135	\$ 13,983	\$ —	\$ —	\$ 126,274	\$ 26,644
> 20% ≤ 50%	720	201	3,526	1,004	—	—	4,246	1,205
> 50% ≤ 100%	105	78	459	355	—	—	564	433
> 100% < 1250%	59	336	845	1,574	—	—	904	1,910
= 1250%	4	45	48	610	274	3,633	326	4,288
Securitization, excluding re-securitization	\$ 61,027	\$ 13,321	\$ 71,013	\$ 17,526	\$ 274	\$ 3,633	\$ 132,314	\$ 34,480
September 30, 2016 (in millions)	Re-securitization							
	SFA		SSFA		1250%		Total	
	Exposure	RWA	Exposure	RWA	Exposure	RWA	Exposure	RWA
Risk weight								
= 0% ≤ 20%	\$ 439	\$ 51	\$ 99	\$ 21	\$ —	\$ —	\$ 538	\$ 72
> 20% ≤ 50%	1,113	256	1	—	—	—	1,114	256
> 50% ≤ 100%	6	1	25	20	—	—	31	21
> 100% < 1250%	8	20	36	105	—	—	44	125
= 1250%	—	—	12	178	25	312	37	490
Re-securitization^(a)	\$ 1,566	\$ 328	\$ 173	\$ 324	\$ 25	\$ 312	\$ 1,764	\$ 964
Total securitization^(b)	\$ 62,593	\$ 13,649	\$ 71,186	\$ 17,850	\$ 299	\$ 3,945	\$ 134,078	\$ 35,444

(a) As of September 30, 2016, there were no re-securitizations to which credit risk mitigation has been applied.

(b) Total securitization RWA includes \$3.0 billion of RWA on trading book exposure of \$4.2 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 September 30, 2016 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

September 30, 2016 (in millions)	Exposure				RWA
	On-balance sheet	Off-balance sheet ^(a)	Total		
Collateral type:					
Residential mortgages	\$ 22,741	\$ 547	\$ 23,288	\$	8,977
Commercial mortgages	25,366	168	25,534		6,498
Commercial and industrial loans	38,674	1,990	40,664		9,196
Consumer auto loans	16,438	386	16,824		3,897
Student loans	10,658	39	10,697		2,612
Municipal bonds	1	5,941 ^(b)	5,942		1,343
Other	9,879	1,250	11,129		2,921
Total securitization exposure	\$ 123,757	\$ 10,321	\$ 134,078	\$	35,444

(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 of which \$1.1 billion relate to JPMorgan Chase-sponsored securitization trusts.

Assets securitized

The following table presents the total 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.

September 30, 2016 (in millions)	Principal amount outstanding			Assets impaired or past due ^(b)	
	JPMorgan Chase assets held in traditional securitizations ^(a)	Third-party assets held in traditional securitizations ^(a)	JPMorgan Chase assets held in synthetic securitizations		
Collateral type:					
Residential mortgages	\$ 92,182 ^(c)	\$ 12	\$ 4,207	\$ 12,882 ^(c)	
Commercial mortgages	47,648	30,254	—	1,300	
Commercial and industrial loans	—	—	—	—	
Consumer auto loans	—	—	—	—	
Student loans	364	—	—	41	
Municipal bonds	1,736	—	—	—	
Other	—	—	—	—	
Total	\$ 141,930	\$ 30,266	\$ 4,207	\$ 14,223	

(a) Represents assets held in nonconsolidated securitization VIEs.

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

(c) Effective with the quarter ended September 30, 2016, residential mortgages now include the Principal amount outstanding and Assets impaired or past due related to assets held in JPMorgan Chase-sponsored securitization trusts which are not serviced by the Firm.

Securitization activity

The following table presents assets pending securitization (i.e., assets held with the intent to securitize) at September 30, 2016, and the Firm's securitization activities for nine months ended September 30, 2016, 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 nine months ended September 30, 2016 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.

September 30, 2016 (in millions)	Carrying value	Original principal amount	
	Assets pending securitization	Assets securitized with retained exposure	Assets securitized without retained exposure
Collateral type:			
Residential mortgages	\$ 11,699	\$ 1,111	\$ —
Commercial mortgages	2,346	3,901	1,885
Commercial and industrial loans	—	—	—
Consumer auto loans	—	—	—
Student loans	—	—	—
Municipal bonds	—	—	—
Other	—	—	—
Total	\$ 14,045	\$ 5,012	\$ 1,885

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.

Private equity investments are held primarily based on the expectation of capital gains. All other equity and investment fund positions are held primarily for reasons other than capital gains including client relationships and employee benefits.

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 223-230 of the 2015 Form 10-K for a discussion of COLI and the related investment strategy and asset allocation.
- For information on investments in marketable equity, refer to Equity risk in the banking book on page 20 of the 4Q15 Pillar 3 Report.

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 page 90 of the 3Q16 Form 10-Q and 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.

Other

- Refer to Other sensitivity-based measures, on page 65 of the 3Q16 Form 10-Q for a discussion of other sensitivity-based measures.

Risk-weight approaches

For equity exposures to investment funds, the Firm employs the Full Look-Through and Simple Modified Look-Through Approaches. For all other banking book equity exposures, the Firm employs the Simple Risk-Weight Approach (SRWA).

- For information on Risk-weight approaches, refer to Equity risk in the banking book on page 20 of the 4Q15 Pillar 3 Report.

Equity risk-weighted assets

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

September 30, 2016 (in millions)		
Risk-weight category	Exposure ^(a)	RWA
0%	\$ 6,031 ^(b)	\$ —
20%	2,976	631
100%	22,902	24,275
600%	363	2,310
Look-through	18,632	10,694
Total	\$ 50,904	\$ 37,910

(a) Includes off-balance sheet unfunded commitments for equity investments of \$1.5 billion.

(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.

September 30, 2016 (in millions)		
	Carrying value	Fair value
Publicly traded	\$ 23,172	\$ 23,309
Privately held and third-party fund investments	25,714	30,474
Total	\$ 48,886	\$ 53,783

Realized gains/(losses)

Cumulative realized gains/(losses) from sales and liquidations during the three months ended September 30, 2016 were \$150 million. This includes previously recognized unrealized gains/(losses) that have been reversed and booked as realized gains/(losses).

Unrealized gains/(losses)

At September 30, 2016 (in millions)		Cumulative unrealized gains/(losses), pre-tax
Recognized in AOCI ^(a)	\$	21
Unrecognized ^(b)		4,686

(a) Unrealized gains of \$4 million were included in Tier 2 capital under the Basel III Transitional 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 21-27 of the 4Q15 Pillar 3 Report, as well as Market Risk Management on pages 133-139 of the 2015 Form 10-K and pages 60-65 of the 3Q16 Form 10-Q.

Measures included in market risk RWA

The following table presents the Firm's market risk-based capital and risk-weighted assets at September 30, 2016. The components of market risk RWA are discussed in detail in the Regulatory market risk capital models section on pages 19-22 of this report. RWA is calculated as RBC times a multiplier of 12.5; any calculation differences are due to rounding.

Three months ended September 30, 2016 (in millions)	Risk-based capital	RWA
Internal models		
Value-at-Risk based measure ("VBM")	\$ 934	\$ 11,672
Stressed Value-at-Risk based measure ("SVBM")	2,801	35,015
Incremental risk charge ("IRC")	318	3,971
Comprehensive risk measure ("CRM")	528	6,602
Total internal models	4,581	57,260
Non-modeled specific risk ^(a)	5,135	64,186
Other charges	1,541	19,260
Total Market risk	\$ 11,256	\$ 140,706

(a) Non-modeled specific risk includes trading book securitization RWA of \$3.0 billion.

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 25-30 of the 3Q16 Form 10-Q and to 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 22 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 "back testing exceptions", 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 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 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 September 30, 2016 (in millions)	Average VBM	Risk- based capital ^(a)	RWA
Firm modeled VBM	\$ 311	\$ 934	\$11,672

(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 September 30, 2016, JPMorgan Chase's average CIB VBM was \$307 million, compared with CIB average Risk Management VaR of \$43 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 the 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 September 30, 2016				
(in millions)	Avg.	Min	Max		At September 30, 2016
CIB VBM by risk type					
Interest rate ^(a)	\$218	\$167	\$264	\$	167
Credit spread ^(a)	172	152	207		174
Foreign exchange	132	95	202		95
Equities	44	28	57		42
Commodities and other	43	31	65		38
Diversification benefit	(302) ^(b)	NM ^(c)	NM ^(c)		(266) ^(b)
Total CIB VBM	307	250	339		250
Total Firm VBM	\$311	\$251	\$343	\$	251

(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 \$302 million, or 50% of the sum of the individual risk components for the three months ended September 30, 2016. The CIB average Risk Management trading and credit portfolio VaR diversification benefit was \$52 million, or 55% of the sum of the individual risk components, for the three months ended September 30, 2016. The difference in diversification benefit between the two methodologies is consistent with the description provided on page 18 of this report.

➤ Refer to Market Risk Management on pages 60-65 of the 3Q16 Form 10-Q and pages 133-139 of the 2015 Form 10-K for additional information on Risk Management VaR.

VBM back-testing

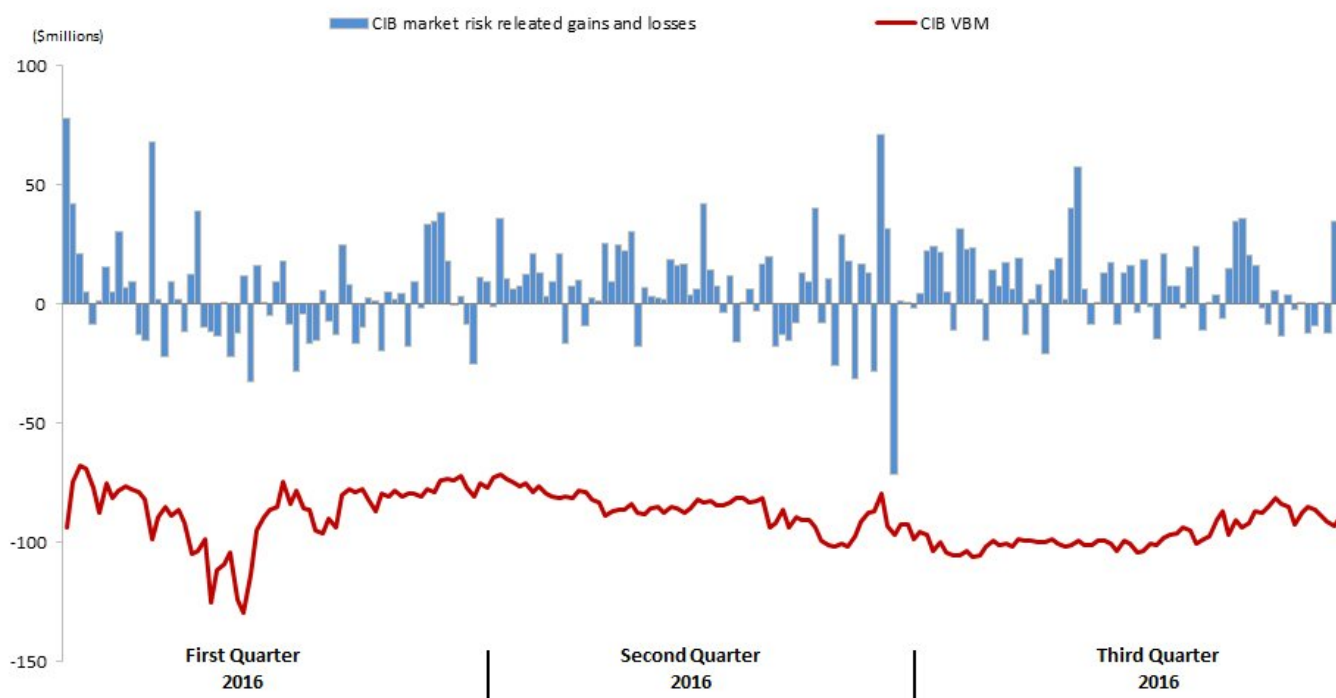
The Firm evaluates the effectiveness of its VBM methodology by back-testing, which compares daily market risk-related gains and losses with daily VBM results for a one-day holding period and a 99% confidence level as prescribed by Basel III. Market risk-related gains and losses are defined as profits 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 “back-testing exceptions” 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 nine months ended September 30, 2016, the CIB observed no back-testing exceptions and posted market-risk related gains on 132 of the 195 trading days. 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 18 of this report.

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

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

Nine months ended September 30, 2016



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 September 30, 2016 (in millions)	Average SVBM	Risk-based capital ^(a)	RWA
Firm modeled SVBM	\$ 934	2,801	\$ 35,015

(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 September 30, 2016			At September 30, 2016
	Avg.	Min	Max	
Total CIB SVBM	\$ 922	\$ 749	\$ 1,018	\$ 749
Total Firm SVBM	\$ 934	\$ 754	\$ 1,029	\$ 754

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 is not applicable to correlation trading positions or securitization positions. The IRC is calculated on a weekly basis.

➤ For information on the Firm’s IRC model, refer to Market Risk on page 24 of the 4Q15 Pillar 3 Report.

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 September 30, 2016 (in millions)	IRC ^(a)	RWA
Total CIB IRC	\$ 318	\$ 3,971

(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 September 30, 2016			At September 30, 2016
	Avg.	Min	Max	
CIB IRC on trading positions	\$ 318	\$ 231	\$ 546	\$ 245

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.

➤ For information on the Firm’s CRM model, refer to Market Risk on pages 24-25 of the 4Q15 Pillar 3 Report.

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 September 30, 2016 (in millions)	CRM ^(a)	RWA
Total CIB CRM	\$ 528	\$ 6,602

(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 September 30, 2016			At September 30, 2016
	Avg.	Min	Max	
CRM model on CIB trading positions	\$ 198	\$ 186	\$ 218	\$ 218
CRM surcharge on CIB trading positions	323	287	334	310
Total CIB CRM	\$ 521	\$ 472 ^(a)	\$ 534 ^(a)	\$ 528

(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 securitization positions

- For information on the aggregate amount of on-balance sheet and off-balance sheet securitization positions by exposure type, refer to Securitization on page 16 of this Pillar 3 Report.

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 (included in non-modeled specific risk).

September 30, 2016 (in millions)	Notional amount ^(a)	Fair value ^(b)
Positions modeled in CRM	\$ 6,242	\$ (252)
Positions not modeled in CRM	(650)	67
Total correlation trading positions	\$ 5,592	\$ (185)

(a) Reflects the net of the notional amount of the correlation trading portfolio, including credit hedges. Negative balances reflect aggregate net short correlation trading positions.

(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.

September 30, 2016 (in millions)	Risk-based capital	RWA
Securitization positions	\$ 241	\$ 3,010
Nonsecuritization positions	4,894	61,176
Total Non-modeled specific risk	\$ 5,135	\$ 64,186

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.

September 30, 2016 (in millions)	Risk-based capital	RWA
Total Firm other charges	\$ 1,541	\$ 19,260

Independent review of market risk regulatory capital models

- For information on the independent review of market risk regulatory capital models, refer to Market Risk on page 26 of the 4Q15 Pillar 3 Report and 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.

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.

- For information on the Firm's Economic-value stress testing, refer to Economic-value stress testing on page 27 of 4Q15 Pillar 3 Report.

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.

- Refer to Operational Risk on page 28 in the 4Q15 Pillar 3 Report and pages 144-146 of the 2015 Form 10-K for a discussion of Operational Risk Management.

Measurement

- Refer to Operational Risk Management on pages 144-146 of the 2015 Form 10-K for information related to operational risk measurement and RWA.

INTEREST RATE RISK IN THE BANKING BOOK

The effect of interest rate exposure on the Firm's reported net income is also 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 CCB's MSRs, as these sensitivities are captured under VaR.

The Firm generates a net interest income baseline, excluding CIB's markets-based activities and MSRs, and then conducts simulations of changes for interest rate-sensitive assets and liabilities denominated in U.S. dollars and other currencies ("non-U.S. dollar" currencies). Earnings-at-risk scenarios estimate the potential change in this net interest income baseline, over the following 12 months utilizing multiple assumptions. These scenarios consider the impact on exposures as a result of changes in interest rates from baseline rates, as well as the 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 that could be taken by the Firm in response to any such instantaneous rate changes. Mortgage prepayment assumptions are based on scenario 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.
- Refer to page 64 of the 3Q16 Form 10-Q for further discussion of Earnings-at-risk.

The Firm's U.S. dollar sensitivities are presented in the table below. The non-U.S. dollar sensitivities are not material to the Firm's earnings-at-risk at September 30, 2016.

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			
September 30, 2016	+200 bps	+100 bps	-100 bps	-200 bps
U.S. dollar	\$ 4.5	\$ 2.8	NM ^(a)	NM ^(a)

(a) Given the current level of market interest rates, downward parallel 100 and 200 basis point earnings-at-risk scenarios are not considered to be 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 re-pricing 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 pre-tax 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 analysis was not material to the Firm.

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 September 30, 2016 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.

Summary comparison of accounting assets and total leverage exposure

(in millions, except ratio)	Sept. 30, 2016
Basel III Advanced Transitional Tier 1 Capital	\$ 206,430
Total assets	2,521,029
Less: Adjustments for frequency of calculations ^(a)	43,214
Total average assets^(b)	2,477,815
Less: Adjustments for deductions from tier 1 capital	49,538
Total adjusted average assets	2,428,277
Adjustment for derivative transactions	382,454
Adjustment for repo-style transactions	22,860
Adjustment for off-balance sheet exposures	307,142
Total leverage exposure	\$ 3,140,733
Basel III Advanced Transitional SLR	6.6%

- (a) The adjustment for frequency of calculations represents the difference between total assets at September 30, 2016, and average assets for the quarter ended September 30, 2016, excluding frequency of calculations for derivatives and repo-style transactions (\$254 million and \$599 million respectively) which are included in the adjustment for the requisite exposure lines.
- (b) To reconcile to total average assets as reported in the 3Q16 Form 10-Q, the total average assets reported in this table must be reduced by the aforementioned adjustment for frequency of calculations for derivative and repo-style transactions.

Derivative transactions

The following table presents the components of total derivative exposure.

(in millions)	Sept. 30, 2016
Replacement cost for all derivative transactions ^(a)	\$ 76,314
Add-on amounts for potential future exposure (PFE) for all derivative transactions	389,924
Gross-up for collateral posted in derivative transactions if collateral is deducted from on-balance sheet assets	3,727
Less: Exempted exposures to central counterparties (CCPs) in cleared transactions	60,693
Adjusted effective notional principal amount of sold credit protection	1,315,603
Less: Effective notional principal amount offsets and PFE deductions for sold credit protection	1,270,154
Total derivative exposure^(b)	454,721
Less: On-balance-sheet average derivative receivables	72,013
Less: Adjustments for frequency calculations ^(c)	254
Adjustment for derivative transactions	\$ 382,454

- (a) Includes cash collateral received of \$4.3 billion.
- (b) Receivables for cash variation margin that are posted under a qualifying derivative master netting agreement are netted against derivative liabilities and are not included in on-balance sheet assets.
- (c) The adjustment for frequency of calculations represents the difference between total assets at September 30, 2016, and average assets for the quarter ended September 30, 2016.

Repo-style transactions

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

(in millions)	Sept. 30, 2016
Gross assets for repo-style transactions ^(a)	\$ 481,501
Less: amounts netted ^(b)	183,820
Counterparty credit risk for all repo-style transactions	24,961
Exposure amount for repo-style transactions where the Firm acts as an agent ^(c)	264
Total exposures for repo-style exposures	322,906
Less: on-balance sheet amounts	
Federal funds sold and securities purchased under resale agreements	196,657
Securities borrowed	102,790
Less: Adjustments for frequency calculations ^(d)	599
Adjustment for repo-style transactions	\$ 22,860

- (a) Includes adjustments for securities received where the securities lender has not sold or rehypothecated securities received.
- (b) Reflects netting of transactions where the Firm has obtained an appropriate legal opinion with respect to master netting agreements with the same counterparty, and where other relevant criteria under U.S. GAAP are met.
- (c) 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.
- (d) The adjustment for frequency of calculations represents the difference between total assets at September 30, 2016, and average assets for the quarter ended September 30, 2016.

Other off-balance sheet exposures

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

(in millions)	Sept. 30, 2016
Off-balance sheet exposures - gross notional amounts	\$ 1,072,864
Less: Adjustments for conversion to credit equivalent amounts	765,722
Adjustment for other off-balance sheet exposures	\$ 307,142

APPENDIX

Valuation process

For a discussion of the Firm's valuation methodologies for assets, liabilities and lending-related commitments measured at fair value and the fair value hierarchy, refer to Valuation Process in the 4Q15 Pillar 3 Report and to Note 3 of the 2015 Form 10-K.

- Refer to Note 3 on pages 91-102 of the 3Q16 Form 10-Q, for information on credit and funding valuation adjustments.

Model risk management

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

- For a discussion of the Firm's model risk management, model risk review and governance, refer to Model risk management on page 32 of the 4Q15 Pillar 3 Report and Model Risk Management on page 142 of the 2015 Form 10-K

References to JPMorgan Chase's 2015 Form 10-K and 3Q16 Form 10-Q

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	Form 10-K Page reference	Form 10-Q Page reference
Enterprise-wide risk management	107-164	41-78
Credit risk management	112-132	43-59
Consumer credit risk	115-121	44-49
Wholesale credit risk	122-129	50-56
Allowance for credit losses	130-132	57-59
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Model risk management	142	
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Capital management	149-158	67-73

Notes to consolidated financial statements

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