

JPMORGAN CHASE & CO.

**REGULATORY CAPITAL DISCLOSURES – MARKET RISK  
PILLAR 3 REPORT**

For the quarterly period ended June 30, 2013

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## I. Executive summary

### 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 \$209.2 billion in stockholders’ equity as of June 30, 2013. The Firm is a leader in investment banking, financial services for consumers and small businesses, commercial banking, financial transaction processing, asset management and private equity. 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 bank with U.S. branches in 23 states, and Chase Bank USA, National Association (“Chase Bank USA, N.A.”), a national bank 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 (formerly J.P. Morgan Securities Ltd.), a subsidiary of JPMorgan Chase Bank, N.A.

The Board of Governors of the Federal Reserve System (“Federal Reserve”) establishes capital requirements, including well-capitalized standards, for JPMorgan Chase, the consolidated financial holding company. The Office of the Comptroller of the Currency (“OCC”) establishes similar capital requirements and standards for the Firm’s national banks, including JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A.

### Basel II Overview

The minimum risk-based capital requirements adopted by the U.S. federal banking agencies follow the Capital Accord (“Basel I”) of the Basel Committee on Banking Supervision (“Basel Committee”). In 2004, the Basel Committee published a revision to the Capital Accord (“Basel II”). The goal of the Basel II framework is to provide more risk-sensitive regulatory capital calculations and promote enhanced risk management practices among large, internationally active banking organizations. U.S. banking regulators published a final Basel II rule in December 2007, which requires JPMorgan Chase to implement Basel II at the holding company level, as well as at certain of its key U.S. bank subsidiaries.

Prior to full implementation of the Basel II framework, JPMorgan Chase is required to complete a qualification period of at least four consecutive quarters during which it needs to demonstrate that it meets the requirements of the rule to the satisfaction of its U.S. banking regulators. JPMorgan Chase is currently in the qualification period and expects to be in compliance with all relevant Basel II rules within the established timelines. In addition, the Firm has adopted, and will continue to adopt, based on various established timelines, Basel II rules in certain non-U.S. jurisdictions, as required.

Basel II introduced a three “Pillar” approach of minimum capital requirements, supervisory review and market discipline as follows:

- Pillar 1 – Minimum capital requirements: Establishes new approaches for calculating minimum regulatory capital requirements for exposure to credit risk and operational risk while retaining the approach to market risk as developed in Basel I;
- Pillar 2 – Supervisory review: Requires banks to have an internal capital assessment process and requires that banking supervisors evaluate each bank’s overall risk profile as well as its risk management and internal control processes. This pillar establishes an expectation that banks hold capital beyond the minimums computed under Pillar 1, including additional capital for any risks that are not adequately captured under Pillar 1; and
- Pillar 3 – Market discipline: Sets minimum disclosure requirements for banks, which covers the composition and structure of a bank’s capital, the nature of its risk exposures, its risk management and internal control processes, and its capital adequacy. The disclosure requirements are intended to improve transparency and strengthen market discipline through enhanced public disclosure of the Firm’s risk management practices and regulatory capital ratios .

### Basel 2.5 market risk rule requirements

In June 2012, U.S. federal banking agencies published the final rule that specifies market risk regulatory capital requirements (“Basel 2.5” or “MRR”). While the Firm is still subject to the capital requirements of Basel I, Basel 2.5 rules became effective for the Firm on January 1, 2013, ahead of Basel II implementation in the U.S. The Basel 2.5 final rule revised the scope of positions subject to the market risk capital requirements, and it introduced new market risk measures which resulted in additional capital requirements for covered positions as defined below. Total Basel I risk-weighted assets at June 30, 2013 (including the impact of Basel 2.5), were \$1.4 trillion, of which \$193.0 billion related to market risk. The implementation of these rules in the first quarter of 2013 resulted in an increase of approximately \$150 billion in risk-weighted assets (“RWA”) compared with the Basel I rules. The implementation of these rules also resulted in decreases of the Firm’s Tier 1 capital, Total capital and Tier 1 common capital ratios by

140 basis points, 160 basis points and 120 basis points, respectively, at March 31, 2013. In July 2013, U.S. federal banking agencies approved a final rule for implementing Basel III in the U.S., which is effective January 1, 2014; the final rule provides some clarifying amendments to the MRR but will not have a material impact on the Firm's market risk capital.

This Pillar 3 report includes disclosures required under the MRR. The Pillar 3 disclosures included herein may differ from how disclosures on similar topics are disclosed in the Firm's Annual Reports on Form 10-K ("Form 10-K") and Quarterly Reports on Form 10-Q ("Form 10-Q") because these latter reports are based on applicable SEC and U.S. GAAP reporting requirements, which may differ from the requirements under the MRR. The Firm files its annual Form 10-K and its quarterly Forms 10-Q with the Securities and Exchange Commission ("SEC filings"), and they are available on JPMorgan Chase & Co.'s website (<http://investor.shareholder.com/jpmorganchase>) and on the Securities and Exchange Commission's website ([www.sec.gov](http://www.sec.gov)). Additional Pillar 3 disclosure requirements will become effective when the Firm exits Basel II parallel.

The key components under Basel 2.5 include:

- A revised definition of covered positions, which includes:
  - Trading assets or trading liabilities (whether on- or off-balance sheet) that meet the following conditions:
    - A trading position 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; or
    - A hedge of a covered position; and
    - A position that is free of any restrictive covenants on its tradability or where the bank is able to hedge the material risk elements of the position in a two-way market.
  - All foreign exchange ("FX"), except structural foreign currency positions with supervisory approval, and commodity positions (excluding those accounted for as operating leases).

*The MRR specifies that characterization of an asset or liability as "trading" under U.S. GAAP would not on its own determine whether the asset or liability meets the definition of a covered position for purposes of the MRR.*

## Measures included in the MRR

The following table sets forth the Firm's market risk-based capital and risk-weighted assets at June 30, 2013, in accordance with the market risk measures. These market risk measures are discussed in detail in the "Regulatory market risk capital models" section, on the pages 3-8 of this Pillar 3 report as indicated in the table.

June 30, 2013 (in millions)	Page Reference	Risk- based capital	Risk- weighted assets
<b>Market risk capital requirement</b>			
Value-at-Risk-Based Measure ("VBM")	3	\$ 909	\$ 11,363
Stressed Value-at-Risk-Based Measure ("SVBM")	6	2,727	34,090
Incremental Risk Charge ("IRC")	6	908	11,353
Comprehensive Risk Measure ("CRM")	7	4,209	52,617
Standard Specific Risk:	7		
Securitization positions		1,348	16,855
Nonsecuritization positions		2,635	32,933
Total Standard Specific Risk		3,983	49,788
Other charges <sup>(a)</sup>	8	2,702	33,776
<b>Total</b>		<b>\$ 15,438</b>	<b>\$192,987</b>

- (a) The Firm has segregated the capital and RWA in the table above that primarily relates to positions that have not received supervisory approval for model-based VBM and SVBM; they are disclosed as "other charges" as of June 30, 2013. These amounts were previously included within the VBM and SVBM and, at March 31, 2013, were \$2,590 million and \$32,370 million for risk-based capital and RWA, respectively.

Market risk risk-weighted assets ("market risk RWA") were \$193.0 billion at June 30, 2013, a decrease of \$22.0 billion from March 31, 2013. The decrease in market risk RWA was predominantly attributable to lower levels of risk, including reduced risk in the synthetic credit portfolio, and a reduction in fixed income positions, which includes reductions in the correlation trading portfolio.

## II. Composition of JPMorgan Chase's material portfolio of covered positions

The Firm's market risks arise predominantly from activities in the Corporate & Investment Bank ("CIB"). CIB makes markets in products across fixed income, foreign exchange, equities and commodities markets; the positions held by the CIB comprise predominantly all the Firm's portfolio of covered positions under the MRR. Some additional covered positions are held by the Firm's other lines of business. For a discussion of CIB, see Business Segment Results on pages 78-79 and 92-95 of JPMorgan Chase's Annual Report on Form 10-K for the year ended December 31, 2012 ("2012 Form 10-K"); and Business Segment Results on pages 17-18 and 34-40 of JPMorgan Chase's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2013 ("2Q13 Form 10-Q").

### III. Value-at-Risk (“VaR”)

JPMorgan Chase has a single overarching VaR model framework used for calculating the Firm’s Regulatory Value-at-Risk (“Regulatory VaR”), as well as used for daily risk management purposes across the Firm (“Risk Management VaR”). VaR is a statistical risk measure to estimate the potential loss from adverse market moves in a normal market environment consistent with the day-to-day risk decisions made by the lines of business, which utilizes historical simulation based on data for the previous 12 months. The framework’s approach assumes that historical changes in market values are representative of the distribution of potential outcomes in the immediate future. VaR is not used to estimate the impact of stressed market conditions or to manage any impact from potential stress events. The Firm uses economic-value stress testing and other techniques to capture and manage market risk arising under stressed scenarios, as described further below.

Because VaR is based on historical data, it is an imperfect measure of market risk exposure and potential losses. For example, differences between current and historical market price volatility may result in fewer or greater VaR exceptions than the number indicated by the historical simulation. The VaR measurement also does not provide an estimate of the extent to which losses may occur from stress events not reflected in the historical look-back period. 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. As VaR cannot be used to determine future losses in the Firm’s market risk positions, the Firm considers other metrics in addition to VaR to monitor and manage its market risk positions. For further information on stress testing, see the “Stress tests applied to positions subject to market risk” section on page 9 of this Pillar 3 Report.

Underlying the overall VaR model framework are individual VaR models that simulate historical market returns for individual products and/or risk factors. To capture material market risks as part of the Firm’s risk management framework, comprehensive VaR model calculations are performed daily for businesses whose activities give rise to market risk. These VaR models are granular and incorporate numerous risk factors and inputs to simulate daily changes in market values over the historical period; inputs are selected based on the risk profile of each portfolio as sensitivities and historical time series used to generate daily market values may be different for different products or risk management systems. The VaR model results across all portfolios are aggregated at the Firm level.

#### Risk management VaR comparison to Regulatory VaR

The Firm’s Risk Management VaR is calculated assuming a one-day holding period and an expected tail-loss methodology, which approximates a 95% 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 the Firm’s Risk Management VaR estimates not more than five times in every 100 trading days. The Firm’s Risk Management VaR is disclosed in its SEC filings.

As required by the MRR, 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 the one-day, Regulatory VaR estimates not more than once every 100 trading days.

As noted above, Regulatory VaR is applied to covered positions as defined by the MRR, 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.

### IV. 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 supervisors; default events are covered by the IRC or CRM measures as discussed below. The results of the Firm’s VBM are converted to capital requirements based on the application of multipliers specified by the MRR. The capital requirements are then translated to risk-weighted assets using a multiplier of 12.5 as prescribed by the MRR.

The Firm’s Regulatory VaR and modeled SR calculations are continuously evaluated and enhanced in response to changes in the composition of the Firm’s portfolios, changes in market conditions, improvements in the Firm’s modeling techniques to minimize differences in models for like products, systems capabilities, and other factors. Such changes will affect historical comparisons of the VBM and VaR results.

The following table presents the results of the Firm’s VBM, converted to risk-based capital and risk-weighted assets based on the application of regulatory multipliers as specified by the MRR.

June 30, 2013 (in millions)	VBM	Risk-based capital <sup>(a)</sup>	RWA <sup>(b)</sup>
Firm modeled VBM	\$ 303	\$ 909	\$ 11,363

(a) The modeled VBM is subject to a regulatory multiplier that is set at a minimum of 3 (which is the multiplier used in this table) and can be

increased up to 4, depending upon the number of backtesting exceptions.

(b) RWA is risk-based capital times a multiplier of 12.5.

The following table sets forth the average, minimum, maximum and period-end VBM by risk type for the CIB and the Firm. In addition, the table also reflects 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. The diversification effect reflects the fact that risks are not perfectly correlated.

	Three months ended June 30, 2013			At June 30, 2013
(in millions)	Avg.	Min	Max	
<b>VBM by risk type</b>				
Interest rate <sup>(a)</sup>	\$ 346	\$ 292	\$ 426	\$ 306
Credit spread <sup>(a)</sup>	159	128	222	141
Foreign Exchange	36	24	59	24
Equities	58	42	84	69
Commodities and other	87	68	116	85
Diversification benefit	(383) <sup>(b)</sup>	NM <sup>(c)</sup>	NM <sup>(c)</sup>	(318) <sup>(b)</sup>
<b>Total CIB VBM</b>	<b>\$ 304</b>	<b>\$ 244</b>	<b>\$ 366</b>	<b>\$ 306</b>
<b>Total Firm VBM</b>	<b>\$ 303</b>	<b>\$ 234</b>	<b>\$ 365</b>	<b>\$ 336</b>

- (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.

For the three months ended June 30, 2013, JPMorgan Chase's average CIB VBM was \$304 million, compared with average Risk Management CIB trading and credit portfolio VaR of \$40 million (see Value-at-risk on pages 95-97 of JPMorgan Chase's 2Q13 Form 10-Q). The CIB VBM was higher predominantly due to the longer holding period (10 days), as well as the higher confidence factor (99%) and differences in population.

The average CIB VBM diversification benefit was \$383 million, or 56% of the sum of the individual risk components for the three months ended June 30, 2013. The average Risk Management CIB trading and credit portfolio VaR diversification benefit was \$42 million, or 51% of the sum of the individual risk components for the three months ended June 30, 2013 (see Value-at-risk on pages 95-97 of JPMorgan Chase's 2Q13 Form 10-Q).

For additional information on Risk Management VaR, see Market Risk Management, on page 163-169 Of JPMorgan Chase's 2012 Form 10-K, and on pages 95-97 of JPMorgan Chase's 2Q13 Form 10-Q.

### Comparison of VaR-based estimates with actual gains and losses

JPMorgan Chase conducts backtesting of its one-day VBM against daily gains and losses based on “clean” profits and losses (“clean P&L”). Clean P&L is defined in the MRR as profits and losses on covered positions, excluding fees, commissions, fair value adjustments, net interest income, and gains and losses arising from intraday trading of covered positions.

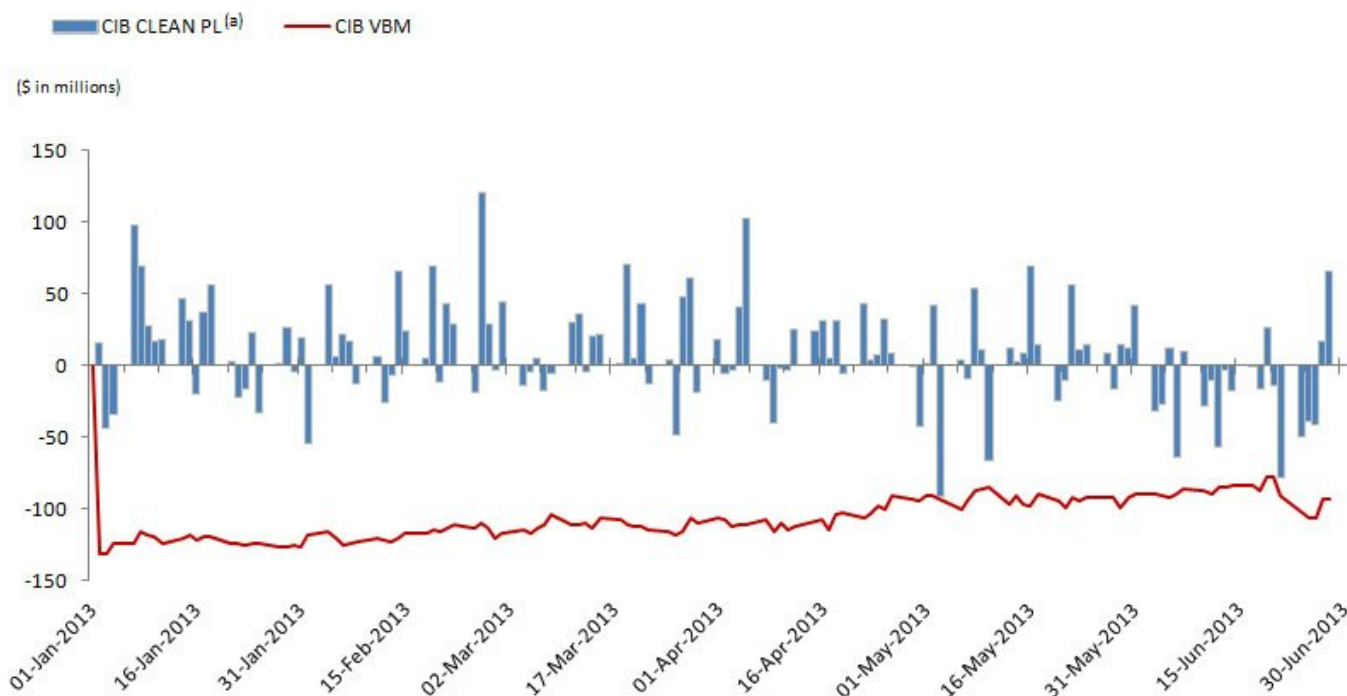
The following histogram illustrates the daily CIB clean P&L for positions included in the Firm’s VBM calculation for the six months ended June 30, 2013. As the chart presents gains and losses under VBM (which includes Regulatory VaR and modeled SR factors), the results in the table below are different than the results of VaR backtesting disclosed in the Firm’s SEC filings (which are based on Risk Management VaR and use a different basis for calculating gains and losses on trading positions).

The chart shows that for the six months ended June 30, 2013, the CIB posted gains on 76 of the 128 days in this period. The chart also indicates that there were no days on which the CIB sustained losses that exceeded the VBM during the six months ended June 30, 2013.

#### **CIB daily gains and losses on covered positions**

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

Six months ended June 30, 2013



(a) The clean P&L used in regulatory backtesting represents P&L generated only by market moves, and it is not reflective of CIB’s actual P&L.

### 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 following table presents the results of the Firm’s SVBM, converted to risk-based capital and risk-weighted assets based on the application of regulatory multipliers as specified by the MRR.

June 30, 2013 (in millions)	SVBM	Risk-based capital <sup>(a)</sup>	RWA <sup>(b)</sup>
Firm modeled SVBM	\$ 909	\$ 2,727	\$ 34,090

- (a) The modeled SVBM is subject to a regulatory multiplier that is set at a minimum of 3 (which is the multiplier used in this table) and can be increased up to 4, depending upon the number of backtesting exceptions.
- (b) RWA is risk-based capital times a multiplier of 12.5.

The following table sets forth the average, minimum, maximum and period-end SVBM for the CIB and the Firm. The SVBM presented in the table below reflects an interim approach until the Firm finalizes its internal SVBM model.

(in millions)	Three months ended June 30, 2013			At June 30, 2013
	Avg.	Min	Max	
<b>Total CIB SVBM</b>	\$ 913	\$ 733	\$ 1,097	\$ 919
<b>Total Firm SVBM</b>	\$ 909	\$ 703	\$ 1,096	\$ 1,008

### 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 liquidity time horizon 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 in an instantaneous setting. The IRC is measured as a 99.9% quantile loss from the gain and loss distribution relative to the current value of the portfolio. 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 is needed (including sensitivity analysis, accuracy and convergence testing) 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 based on the application of regulatory multipliers as specified by the MRR.

June 30, 2013 (in millions)	IRC	RWA <sup>(a)</sup>
<b>Total CIB IRC</b>	\$ 908	\$ 11,353

- (a) In order to convert the IRC into RWA, it is multiplied by 12.5.

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

(in millions)	Three months ended June 30, 2013			At June 30, 2013
	Avg.	Min	Max	
<b>IRC on CIB trading positions</b>	\$ 908	\$ 785	\$ 1,018	\$ 872



### Comprehensive Risk Measure (“CRM”)

The CRM captures material price risks of one or more portfolios of correlation positions. Correlation trading positions primarily 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, the MRR requires that an additional charge equal to 8% of the market-risk based capital calculated using the standard SR model (see below) 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, index-to-constituent spread basis risk, bespoke-to-index correlation basis risk, and capital structure basis risks.

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 in an instantaneous setting. 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 the MRR, 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 needed to ensure the appropriateness of model settings and parameters, as well as the accuracy and robustness of the model output.

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 based on the application of regulatory multipliers as specified by the MRR) for the CIB.

June 30, 2013 (in millions)	CRM <sup>(a)</sup>	RWA <sup>(b)</sup>
<b>Total CIB CRM</b>	<b>\$ 4,209</b>	<b>\$ 52,617</b>

(a) Includes a CRM surcharge, which amounted to \$1.7 billion on CIB trading positions.

(b) In order to convert the CRM into RWA, it is multiplied by 12.5.

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

(in millions)	Three months ended June 30, 2013			At June 30, 2013
	Avg.	Min	Max	
CRM model on CIB trading positions	\$ 2,474	\$ 2,249	\$ 2,702	\$ 2,469
CRM surcharge on CIB trading positions	1,735	1,495	1,825	1,495
<b>Total CIB CRM</b>	<b>\$ 4,209</b>	<b>\$ 3,744</b>	<b>\$ 4,527</b>	<b>\$ 3,964</b>

### **Aggregate correlation trading positions**

The following table sets forth the net notional amount of aggregate correlation trading positions for the Firm, including positions receiving internal model treatment and standard SR charge treatment.

June 30, 2013 (in millions)	Notional amount <sup>(a)</sup>	Fair value <sup>(b)(c)</sup>
<b>Total correlation trading positions</b>	<b>\$ 36,039</b>	<b>\$ 453</b>

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

(b) Reflects the fair value of securities and derivatives.

(c) Includes all associated hedges.

### Non-Modeled SR add-on (Standard SR)

Non-modeled SR add-on (or “standard SR”) 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 for non-modeled SR is shown in the table below.

June 30, 2013 (in millions)	Risk-based capital	RWA <sup>(a)</sup>
<b>Standard Specific Risk:</b>		
Securitization positions	\$ 1,348	16,855
Nonsecuritization positions	2,635	32,933
<b>Total Standard Specific Risk</b>	<b>\$ 3,983</b>	<b>49,788</b>

(a) In order to convert the standard specific risk into RWA, it is multiplied by 12.5.

### Other charges

The Firm has segregated the capital and RWA in the table below that primarily relates to those positions that have not received supervisory approval for model-based VBM and SVBM; they are disclosed as “other charges” as of June 30, 2013. These amounts were previously included within the VBM and SVBM and, at March 31, 2013, were \$2,590 million and \$32,370 million for risk-based capital and RWA, respectively.

The market risk-based capital and risk-weighted assets for other charges is shown in the table on page 2 of this Pillar 3 Report.

June 30, 2013 (in millions)	Risk-based capital	RWA <sup>(a)</sup>
<b>Other charges</b>	<b>\$ 2,702</b>	<b>\$ 33,776</b>

(a) In order to convert the standard specific risk into RWA, it is multiplied by 12.5.

### **V. Securitization positions**

A securitization or re-securitization position includes on- or off-balance sheet credit exposure (including credit enhancements) that arise from a securitization (including a re-securitization); or an exposure that directly or indirectly references a securitization (e.g., credit derivative). A securitization is defined as a structure for which the credit risk of its underlying exposures is transferred to third parties, the credit risk 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. A re-securitization means that one or more of the underlying exposures is a securitization position.

#### Credit risk monitoring

For each covered trading securitization and re-securitization position, the Firm performs due diligence on the credit worthiness of each position within three days of the execution of the purchase of that position as required by the MRR. 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: (1) the quality of the position, including relevant information regarding the performance of the underlying credit exposures and relevant market data; (2) the structural and other enhancement features that may affect the credit quality of a securitization or re-securitization; and (3) for re-securitization positions, information on the performance of the underlying securitization exposures. The level of detail included in the due diligence procedures is commensurate with the complexity of each securitization or re-securitization position held. The due diligence procedures are performed on a quarterly basis for each securitization and re-securitization position. In accordance with the due diligence requirements of the Dodd-Frank Wall Street Reform and Consumer Protection Act, which are

incorporated into the MRR, the Firm has implemented an automated recordkeeping system to document the due diligence procedures that are performed.

#### Market risk monitoring

Covered trading securitization and re-securitization positions are included in the Firm's Risk Management VaR on a daily basis, and they are subject to market risk and limit reports that are distributed on a daily basis to the trading desk, Risk Management and senior managers within the lines of business.

#### Credit risk mitigation

JPMorgan Chase's policy on using credit instruments to mitigate the risks of securitization and re-securitization positions is governed by two general rules as follows:

1. JPMorgan Chase only recognizes the benefit of credit risk mitigation from a guarantee (including a credit derivative that qualifies as a guarantee).
2. JPMorgan Chase only recognizes the benefit of credit risk mitigation from a credit derivative that hedges an exposure that is different from the credit derivative's reference exposure used for determining the derivative's cash settlement value, delivery obligation, or the occurrence of a credit event if:
  - (a) The reference exposure ranks equally with or is junior to the hedged exposure; and
  - (b) The reference exposure and the hedged exposure reference the same legal entity, and legally enforceable cross-default or cross-acceleration clauses are in place to assure payments under the credit derivative are triggered when the obligor fails to pay under the terms of the hedged exposure.

In addition, JPMorgan Chase makes appropriate adjustments to the protection amount for any hedged securitization exposures and any more senior securitization exposures that benefit from the hedge. In the context of a synthetic securitization, when a guarantee or credit derivative that qualifies as a guarantee covers multiple hedged exposures that have different residual maturities, JPMorgan Chase uses the longest residual maturity of any of the hedged exposures as the residual maturity of all the hedged exposures.

## Securitization positions – on- and off-balance sheet

The following table sets forth by reference asset type the aggregate risk exposure of on- and off-balance sheet covered securitization positions that are subject to the standard SR measure as a securitization. The net notional

amount and fair value is shown for net long and net short credit derivatives positions. Under the MRR, the Firm is required to hold capital against the greater of the aggregate net long or net short positions. All positions are in the CIB.

June 30, 2013 (in millions)	Securities at fair value <sup>(d)</sup>	Credit derivatives <sup>(c)(d)</sup>			
		Net long positions		Net short positions	
		Net notional amount	Fair value	Net notional amount	Fair value
<b>Reference asset type</b>					
Residential mortgage <sup>(a)</sup>	\$ 1,912	\$ 244	\$ (56)	\$ (288)	\$ 162
Other consumer	2,364	–	–	–	–
Commercial mortgage <sup>(a)</sup>	1,266	462	(283)	(855)	403
Other commercial	963	59	(39)	(2,706)	(111)
<b>Total trading securitization positions<sup>(b)</sup></b>	<b>\$ 6,505</b>	<b>\$ 765</b>	<b>\$ (378)</b>	<b>\$ (3,849)</b>	<b>\$ 454</b>
<b>Memo: Total re-securitization positions included<sup>(b)</sup></b>	<b>\$ 575</b>	<b>\$ 47</b>	<b>\$ (36)</b>	<b>\$ (622)</b>	<b>\$ 369</b>

(a) Excludes mortgage securitization positions guaranteed by U.S. government-sponsored enterprises.

(b) Excludes correlation trading positions.

(c) Includes credit-linked notes.

(d) The fair value and the net notional amount reflect netting consistent with the MRR.

## VI. Stress tests applied to covered positions subject to market risk

### 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 framework uses a grid-based approach, which calculates multiple magnitudes of stress for both market rallies and market sell-offs for each risk factor. Stress-test results, trends and explanations based on current market risk positions are reported to the Firm's senior management and to the lines of business to allow them to better understand the sensitivity of positions to certain defined events and manage their risks with more transparency.

Stress scenarios are defined and reviewed by Market Risk, and significant changes are reviewed by the relevant risk committees; for further details, see Risk Governance, on pages 123–125 of JPMorgan Chase's 2012 Form 10-K. While most of these scenarios estimate losses based on significant market moves, such as an equity market collapse or credit crisis, the Firm also develops scenarios to quantify risk arising out of specific portfolios or concentrations of risks, which attempt to capture certain idiosyncratic market movements. Scenarios may be redefined on an ongoing basis to reflect current market conditions. Ad hoc scenarios are run in response to specific market events or concerns.

Furthermore, the Firm's stress testing framework is utilized in calculating results under scenarios mandated by the Federal Reserve's Comprehensive Capital Analysis and Review ("CCAR") and Internal Capital Adequacy Assessment Process ("ICAAP") processes as described further below.

## VII. Internal capital adequacy soundness standards and methodologies

The Firm's capital management objectives are to hold capital sufficient to:

- Cover all material risks underlying the Firm's business activities;
- Maintain "well-capitalized" status under regulatory requirements;
- Maintain debt ratings that enable the Firm to optimize its funding mix and liquidity sources while minimizing costs;
- Retain flexibility to take advantage of future investment opportunities; and
- Build and invest in businesses, even in a highly stressed environment.

These objectives are achieved through ongoing monitoring of the Firm's capital position, regular stress testing, and a capital governance framework.

Semiannually, the Firm completes the 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.

For further information on the Firm's ICAAP process and the CCAR, see Internal Capital Adequacy Assessment Process and Comprehensive Capital Analysis and Review ("CCAR"), respectively, on page 116 of JPMorgan Chase's 2012 Form 10K.

## **VIII. Risk management**

Risk is an inherent part of JPMorgan Chase's business activities. The Firm's risk management framework and governance structure are intended to provide comprehensive controls and ongoing management of the major risks inherent in the Firm's business activities. The Firm employs a holistic approach to risk management intended to ensure the broad spectrum of risk types are considered in managing its business activities. The Firm's risk management framework is intended to create a culture of risk awareness and personal responsibility throughout the Firm where collaboration, discussion, escalation and sharing of information are encouraged. For further information on Risk Management, see pages 123-126 of JPMorgan Chase's 2012 Form 10-K, and page 65 of JPMorgan Chase's 2Q13 Form 10-Q.

The Firm has identified the following major risk types arising out of its business activities: liquidity risk, credit risk, market risk, interest rate risk, country risk, principal risk, operational risk, legal risk, fiduciary risk and reputation risk. In particular, market risk is the exposure to an adverse change in the market value of portfolios and financial instruments caused by a change in their market prices.

Risk Management reports independently of the lines of business to provide oversight of firmwide risk management and controls, and is viewed as a partner in achieving appropriate business risk and reward objectives. Risk Management coordinates and communicates with each line of business through the line of business risk committees and Chief Risk Officers to manage risk. The Risk Management function is headed by the Firm's Chief Risk Officer, who is a member of the Firm's Operating Committee and who reports to the Chief Executive Officer and is accountable to the Board of Directors, primarily through the Board's Risk Policy Committee. Within the Firm's Risk Management function are units responsible for credit risk, market risk, country risk, principal risk, model risk and development, reputational risk and operational risk framework, as well as risk reporting and risk policy.

## **Market risk management**

Market Risk works within the Risk Management function in close partnership with the lines of business, including Corporate/Private Equity, to identify and monitor market risks throughout the Firm and to define market risk policies and procedures.

Market Risk seeks to control risk, facilitate efficient risk/return decisions, reduce volatility in operating performance and provide transparency into the Firm's market risk profile for senior management, the Board of Directors and regulators. Market Risk is responsible for the following functions:

- Establishment of a market risk policy framework
- Independent measurement, monitoring and control of line of business and firmwide market risk
- Definition, approval and monitoring of limits
- Performance of stress testing and qualitative risk assessments

For further information on Market Risk Management, see pages 163-169 of JPMorgan Chase's 2012 Form 10-K.

## **IX. Model risk validation**

The Model Risk and Development Group ("MRaD"), within the Risk Management function, provides oversight of the firmwide Model Risk policy, guidance with respect to a model's appropriate usage and conducts independent reviews of models.

MRaD 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 strength and weaknesses, and the impact that such assumptions may have on model output. MRaD 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, MRaD 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. MRaD 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, MRaD 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 MRaD or may be performed directly by MRaD.

The model validation process requires ongoing monitoring of model performance. This includes periodic reviews of (1) model results and sensitivity analysis of key model parameters for significant sub-portfolios and for benchmark test portfolios specified by MRaD; (2) results and impact analysis of model parameter recalibration; and (3) test results of the adequacy of the numerical settings in models.

For further discussion, see Model risk on pages 125-126 of JPMorgan Chase's 2012 Form 10-K.

## **X. 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 Firm has a firmwide Valuation Governance Forum ("VGF") comprising senior finance and

risk executives to oversee 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, and also includes sub-forums for the CIB and other lines of business and corporate functions.

The valuation control function verifies fair value estimates 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 estimates that cannot be verified to external independent data, and 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. In addition there are 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. For more information on the fair value hierarchy, see Note 3 on pages 197-200 of JPMorgan Chase's 2012 Form 10-K. 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 when the Firm may not be able to observe a recent market price for a financial instrument that trades in an inactive (or less active) market. The Firm estimates the amount of uncertainty in the initial fair value estimate based on the degree of liquidity in the market. Factors considered in determining the liquidity adjustment include: (1) the amount of time since the last relevant pricing point; (2) whether there was an actual trade or relevant external quote or alternatively pricing points for similar instruments in active markets; and (3) the volatility of the principal risk component of the financial instrument. For certain portfolios of financial instruments that the Firm manages on the basis of net open risk exposure, valuation adjustments are 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 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 internally developed models that incorporate unobservable parameters - that is, parameters that must be estimated

and are, therefore, subject to management judgment. Unobservable parameter valuation adjustments are applied to reflect the uncertainty inherent in the valuation estimate provided by the model.

Where appropriate, the Firm also applies adjustments to its estimates of fair value in order to appropriately reflect counterparty credit quality and the Firm's own creditworthiness, applying a consistent framework across the Firm. For more information on such adjustments see Credit adjustments, on page 212 of JPMorgan Chase's 2012 Form 10-K, and page 125 of JPMorgan Chase's 2Q13 Form 10-Q.

#### 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.

The Firm's Model Risk function within MRaD reviews and approves valuation models used by the Firm. Model reviews

consider a number of factors about the model's suitability for valuation of a particular product including whether it accurately reflects the characteristics and significant risks of a particular instrument; the selection and reliability of model inputs; consistency with models for similar products; the appropriateness of any model-related adjustments; and sensitivity to input parameters and assumptions that cannot be observed from the market. When reviewing a model, the Model Risk function analyzes and challenges the model methodology and the reasonableness of model assumptions and may perform or require additional testing, including backtesting of model outcomes.

New significant valuation models, as well as material changes to existing models, are reviewed and approved prior to implementation except where specified conditions are met. The Model Risk function performs an annual firmwide model risk assessment where developments in the product or market are considered in determining whether valuation models which have already been reviewed need to be reviewed and approved again.

The following table describes the valuation methodologies used by the Firm to measure its more significant products/instruments at fair value.

Product/instrument	Valuation methodology, inputs and assumptions
Securities financing agreements	<p>Valuations are based on discounted cash flows, which consider:</p> <ul style="list-style-type: none"> <li>• Derivative features. For further information refer to discussion on derivatives below.</li> <li>• Market rates for the respective maturity</li> <li>• Collateral</li> </ul>
Loans and lending-related commitments - wholesale	
Trading portfolio	<p>Where observable market data is available, valuations are based on:</p> <ul style="list-style-type: none"> <li>• Observed market prices (circumstances are limited)</li> <li>• Relevant broker quotes</li> <li>• Observed market prices for similar instruments</li> </ul> <p>Where observable market data is unavailable or limited, valuations are based on discounted cash flows, which consider the following:</p> <ul style="list-style-type: none"> <li>• Yield</li> <li>• Lifetime credit losses</li> <li>• Loss severity</li> <li>• Prepayment speed</li> <li>• Servicing costs</li> </ul>
Securities	<p>Quoted market prices are used where available.</p> <p>In the absence of quoted market prices, securities are valued based on:</p> <ul style="list-style-type: none"> <li>• Observable market prices for similar securities</li> <li>• Relevant broker quotes</li> <li>• Discounted cash flows</li> </ul> <p>In addition, the following inputs to discounted cash flows are used for the following products:</p> <p><i>Mortgage- and asset-backed securities specific inputs:</i></p> <ul style="list-style-type: none"> <li>• Collateral characteristics</li> <li>• Deal-specific payment and loss allocations</li> <li>• Current market assumptions related to yield, prepayment speed, conditional default rates and loss severity</li> </ul> <p><i>Collateralized loan obligations ("CLOs"), specific inputs:</i></p> <ul style="list-style-type: none"> <li>• Collateral characteristics</li> <li>• Deal-specific payment and loss allocations</li> <li>• Expected prepayment speed, conditional default rates, loss severity</li> <li>• Credit spreads</li> <li>• Credit rating data</li> </ul>
Physical commodities	Valued using observable market prices or data

Product/instrument	Valuation methodology, inputs and assumptions
Derivatives	<p>Exchange-traded derivatives that are actively traded and valued using the exchange price, and over-the-counter contracts where quoted prices are available in an active market.</p> <p>Derivatives valued using models such as the Black-Scholes option pricing model, simulation models, or a combination of models, that use observable or unobservable valuation inputs (e.g., plain vanilla options and interest rate and credit default swaps). Inputs include:</p> <ul style="list-style-type: none"> <li>• Contractual terms including the period to maturity</li> <li>• Readily observable parameters including interest rates and volatility</li> <li>• Credit quality of the counterparty and of the Firm</li> <li>• Correlation levels</li> </ul> <p>In addition, the following specific inputs are used for the following derivatives that are valued based on models with significant unobservable inputs:</p> <p><i>Structured credit derivatives specific inputs include:</i></p> <ul style="list-style-type: none"> <li>• CDS spreads and recovery rates</li> <li>• Credit correlation between the underlying debt instruments (levels are modeled on a transaction basis and calibrated to liquid benchmark tranche indices)</li> <li>• Actual transactions, where available, are used to regularly recalibrate unobservable parameters</li> </ul> <p><i>Certain long-dated equity option specific inputs include:</i></p> <ul style="list-style-type: none"> <li>• Long-dated equity volatilities</li> </ul> <p><i>Certain interest rate and FX exotic options specific inputs include:</i></p> <ul style="list-style-type: none"> <li>• Interest rate correlation</li> <li>• Interest rate spread volatility</li> <li>• Foreign exchange correlation</li> <li>• Correlation between interest rates and foreign exchange rates</li> <li>• Parameters describing the evolution of underlying interest rates</li> </ul> <p><i>Certain commodity derivatives specific inputs include:</i></p> <ul style="list-style-type: none"> <li>• Commodity volatility</li> </ul> <p>Adjustments to reflect counterparty credit quality (credit valuation adjustments or “CVA”), and the Firm’s own creditworthiness (debit valuation adjustments or “DVA”), see Credit adjustments, on page 212 of JPMorgan Chase’s 2012 Form 10-K, and page 125 of JPMorgan Chase’s 2Q13 Form 10-Q.</p>
Fund investments (i.e., mutual/collective investment funds, and real estate funds)	<p>Net asset value (“NAV”)</p> <ul style="list-style-type: none"> <li>• NAV is validated by sufficient level of observable activity (i.e., purchases and sales)</li> <li>• Adjustments to the NAV as required, for restrictions on redemption (e.g., lock up periods or withdrawal limitations) or where observable activity is limited</li> </ul>

For further discussion of the Firm’s valuation policy and methodologies, see Note 3 on pages 196–214 of JPMorgan Chase’s 2012 Form 10-K.