

**Risk-Based Capital Guidelines; Market Risk**

***The Bank of New York Mellon Corporation  
Market Risk Disclosures***

**As of December 31, 2013**

## Basel II.5 Market Risk Annual Disclosure

### *Introduction*

Since January 1, 2013, The Bank of New York Mellon Corporation (the “Company”) has operated under the revised risk-based capital guidelines for market risk, referred to as Basel II.5, issued jointly by the Office of the Comptroller of the Currency (“OCC”), Board of Governors of the Federal Reserve System (“FRB”), and Federal Deposit Insurance Corporation (“FDIC”), and published in the Federal Register (Vol. 77, No. 169) on August 30, 2012<sup>1</sup> (the “Final Market Risk Capital Rule”).

The Final Market Risk Capital Rule requires us to make publicly available quantitative disclosures at least quarterly. Specifically, we are required to disclose among other items, certain quantitative information on the following measures as applicable to the Company:

- Value-at-Risk (“VaR”) based measures:

VaR is a measure of the dollar amount of potential loss at a specified confidence level from adverse market movements in an ordinary market environment.

- Stressed VaR based measures:

Stressed VaR is a measure of the dollar amount of potential loss at a specified confidence level from adverse market movements in an environment of significant market stress.

- Incremental risk capital (“IRC”) requirements:

IRC is a measure of the dollar amount of potential loss from the exposure to default and

migration risks for fixed income positions in trading books.

- Comprehensive risk measure (“CRM”) capital requirements:  
CRM is a measure of the dollar amount of potential loss from the exposure to all price risks in correlation trading portfolios.

The quantitative and qualitative information included in this quarterly disclosure is provided at the Company consolidated level.

### *Covered Positions*

The Final Market Risk Capital Rule requires us to calculate the market risk regulatory capital based on the population of covered positions. Covered positions include all foreign exchange and commodity positions as well as assets and liabilities in our trading book that meet minimum regulatory requirements for inclusion in the market risk regulatory capital.

Due to the regulatory requirements for covered positions, the population of positions included in our regulatory VaR is different from the population of positions in management VaR we disclose in our 10-Q and Annual Reports. Management VaR includes positions subject to internal management VaR limits. The population of covered positions in our regulatory VaR is a subset of the population of positions included in our management VaR.

### *Securitizations*

As of the end of the fourth quarter of 2013, the Company’s population of covered positions does not include any positions that meet the definition of a securitization position in the Final Market Risk Capital Rule.

### *Correlation Trading Positions*

During the fourth quarter of 2013, the CompanyBNY Mellon’s population of covered positions did not include any correlation trading positions.

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<sup>1</sup><https://www.federalregister.gov/articles/2012/08/30/2012-16759/risk-based-capital-guidelines-market-risk#h-61>. The Final Market Risk Capital Rule was revised by the Federal banking agencies and published in the Federal Register (Vol. 78, No. 243) on December 18, 2013 (<http://www.gpo.gov/fdsys/pkg/FR-2013-12-18/pdf/2013-29785.pdf>). While the revisions are not mandated to become effective until April 1, 2014, the Company has elected to adopt these revisions early.

## Measurement and Monitoring

The following table summarizes the minimum capital requirement and risk-weighted assets (“RWA”) for market risk as of the end of the fourth quarter of 2013 calculated in accordance with the Final Market Risk Capital Rule.

Component (\$ in millions)	Dec 31, 2013	
	Capital	RWA
VaR	\$ 107.7	\$ 1,346.3
Stressed VaR	133.8	1,672.5
Specific Risk Standard Charge	250.2	3,127.5
Total Market Risk Capital and RWA	\$ 491.7	\$6,146.3

## VaR Based Measures

VaR is a measure of the dollar amount of potential loss at a specified confidence level from adverse market movements in an ordinary market environment. Our VaR methodology is based on a Monte Carlo simulation. The calculation of our regulatory VaR assumes a ten-day holding period, utilizes a 99% confidence level, a 500 day look-back with a weighting scheme, and incorporates the non-linear characteristics of options. The ten-day regulatory VaR is derived by scaling one-day VaR to a ten-day holding period.

The following table indicates the calculated regulatory VaR amounts for the overall portfolio of covered positions as well as separate measures for interest rate, foreign exchange, equity and credit components of VaR for the fourth quarter of 2013.

VaR (a) (\$ in millions)	Q4 2013			Dec 31 (b)
	Mean	Low	High	
Interest rate	\$ 35.8	\$ 23.6	\$ 47.3	\$ 23.6
Foreign exchange	2.5	1.0	5.7	1.9
Equity	8.2	6.2	12.3	6.7
Credit	0.0	0.0	0.0	0.0
Diversification	(10.6)	N/M	N/M	(7.1)
Overall portfolio	\$ 35.9	\$ 25.0	\$ 47.3	\$ 25.0

(a) Ten-day, 99% confidence regulatory VaR.

(b) VaR is calculated on last business date of quarter.

N/M – Because the minimum and maximum may occur on different days for different risk components, it is not meaningful to compute a portfolio diversification effect.

## Composition of material portfolios of covered positions

The interest rate component of VaR represents instruments whose values predominantly vary with the level or volatility of interest rates. These instruments include, but are not limited to: debt securities, mortgage-backed securities, swaps, swaptions, forward rate agreements, exchange traded futures and options, and other interest rate derivative products.

The foreign exchange component of VaR represents instruments whose values predominantly vary with the level or volatility of currency exchange rates or interest rates. These instruments include, but are not limited to: currency balances, spot and forward transactions, currency options, and exchange traded futures and options, and other currency derivative products.

The equity component of VaR is comprised of instruments that represent an ownership interest in the form of domestic and foreign common stock or other equity-linked instruments. These instruments include, but are not limited to: common stock, exchange traded funds, American Depositary Receipts, listed equity options (puts and calls), OTC equity options, equity total return swaps, equity index futures and other equity derivative products.

The diversification component of VaR is the risk reduction benefit that occurs when combining portfolios and offsetting positions, and from the correlated behavior of risk factor movements.

During the fourth quarter of 2013, interest rate risk generated 77% of average VaR, equity risk generated 18% of average VaR and foreign exchange risk accounted for 5% of average VaR.

## Stressed VaR Based Measures

Stressed VaR is a measure of the dollar amount of potential loss at a specified confidence level from adverse market movements in an environment of significant market stress. Stressed VaR uses the same model as our regulatory VaR, but incorporating inputs calibrated to historical data from a continuous one year stress period selected based on empirical studies. The calculation of our regulatory Stressed VaR assumes a ten-day holding

period, utilizes a 99% confidence level, a 250 day look-back with a weighting scheme, and incorporates the non-linear characteristics of options. The ten-day regulatory Stressed VaR is derived by scaling one-day Stressed VaR to a ten-day holding period.

The following table indicates the calculated regulatory Stressed VaR amounts for the overall portfolio of covered positions as well as separate measures for interest rate, foreign exchange, equity and credit components of Stressed VaR for the fourth quarter of 2013.

Stressed VaR (a) (\$ in millions)	Q4 2013			
	Mean	Low	High	Dec 31
Interest rate	\$ 48.6	\$ 34.5	\$ 59.4	\$ 50.4
Foreign exchange	3.7	2.0	8.3	6.3
Equity	6.7	4.0	11.6	5.0
Credit	0.0	0.0	0.0	0.0
Diversification	(14.5)	N/M	N/M	(18.3)
Overall portfolio	\$ 44.6	\$ 31.4	\$ 56.6	\$ 43.4

(a) Ten-day, 99% confidence regulatory Stressed VaR.  
N/M – Because the minimum and maximum may occur on different days for different risk components, it is not meaningful to compute a portfolio diversification effect.

During the fourth quarter of 2013, interest rate risk generated 82% of average Stressed VaR, equity risk generated 12% of average Stressed VaR and foreign exchange risk accounted for 6% of average Stressed VaR.

### Specific Risk Measures

Specific risk means the risk of loss on a position that could result from factors other than broad market movements and include event risk, default risk, and idiosyncratic risk. The Final Market Risk Capital Rule requires us to measure the specific risk for debt, equity and securitization positions using either our internal models (e.g., VaR, IRC, CRM) provided our regulators approve the use of these models to measure specific risk, or the standardized measurement method. The following three sections describe our specific risk measures.

### Specific Risk Standard Charge

We calculate the specific risk standard charge on a quarterly basis under the standardized measurement method. It measures specific risk pursuant to fixed risk weights, which are prescribed by the Final Market Risk Capital Rule.

### IRC Requirements

The IRC model will not be used for the calculation of our market risk regulatory capital until the model is approved by our regulators.

### CRM Requirements

The CRM model is not applicable as we do not have correlation trading positions in our population of covered positions.

### Regulatory VaR Back-testing

On a daily basis, we compare one-day 99% regulatory VaR to trading profits and losses excluding fees, commissions, reserves, net interest income, and intraday trading to determine the back test multiplier for VaR and Stressed VaR for purposes of calculating the market risk regulatory capital. This daily back-testing is also done at a sub-portfolio level and facilitates the assessment of the performance of our VaR model.

During the fourth quarter of 2013, our daily trading loss excluding fees, commissions, reserves, net interest income, and intraday trading did not exceed our calculated regulatory VaR amount of the overall portfolio of covered positions on any given day.

## *Valuation Process*

It is the Company's policy to record its trading assets and liabilities, including covered positions, at fair value. Fair Value is determined by the Company in accordance with generally accepted accounting principles in the U.S. ("US GAAP"). US GAAP (ASC 820) defines fair value as the price that would be received to sell an asset, or paid to transfer a liability, in an orderly transaction between market participants at the measurement date. US GAAP also establishes a framework, based upon levels of pricing transparency, for measuring fair value.

The following is a description of our valuation methodologies and processes for measuring fair value. Business line trading units are responsible for estimating fair value for trading assets and liabilities on the Company's balance sheet. An independent valuation control function, which is part of the Company's Finance team, is responsible for verifying these estimates and making valuation adjustments, if necessary, to ensure that such financial instruments are recorded at fair value.

Where possible, the valuation control function compares business line fair value estimates to prices obtained from independent pricing vendors. Vendors compile prices from various sources and may apply matrix pricing for similar bonds or loans where no price is observable.

It is the Company's policy to measure fair value of its trading assets and liabilities based upon quoted market prices in active markets, where available. For instruments where quotes from recent exchange transactions in active markets are not available, we determine fair value based upon valuation methods including comparison to vendor prices, comparison to quoted prices for recent trading activity in securities with the same or similar characteristics, discounted cash flow analysis, and the use of financial models.

Where quoted prices are available in an active market, such instruments are classified as Level 1 in the valuation hierarchy. Valuation for Level 1 instruments is based upon the quoted market price unadjusted, and generally include U.S. Treasury securities, highly liquid government and equity securities, money market mutual funds, and actively

traded listed options. Valuation methodologies for financial instruments classified as Level 2 include using quoted prices for similar assets and liabilities in active markets, quoted prices for identical or similar assets in markets that are not active, as well as discounted cash flow analysis and financial models for which the valuation inputs are observable or can be corroborated, directly or indirectly, for substantially the full term of the financial instrument. Level 2 financial instruments generally include agency and non-agency mortgage-backed securities, corporate debt, and over-the-counter derivative contracts. Level 2 derivatives generally include interest rate swaps and swap options, forward rate agreements, equity swaps and options, credit default swaps, and foreign-exchange options. Level 2 over-the counter derivatives are valued using model-based pricing which utilizes inputs of observable prices, where available, for interest rates, foreign exchange rates, equity prices, credit spreads, option volatilities and other factors. Pricing models are benchmarked and validated by an independent risk management function.

Financial instruments are classified as Level 3 when inputs to the valuation methodology are unobservable and significant to the fair value measurement. As of December 31, 2013 less than 1% of the Company's assets and liabilities carried at fair value are classified as Level 3. Non-derivative trading assets classified as Level 3 include certain distressed debt for which discounted cash flow analysis is utilized in determining fair value. These instruments are classified as Level 3 as the expected life and credit spreads utilized in determining fair value are unobservable. Derivative trading assets and liabilities classified as Level 3 include certain long-dated option contracts (both equity and FX) and certain structured foreign exchange swaptions. Long dated option contracts are valued utilizing option pricing models such as Black-Scholes or other simulation models, for which the long-term volatility input parameter is deemed unobservable. Structured foreign exchange swaptions are valued utilizing option pricing models or combinations of models for which the both long-term foreign exchange volatility and correlation input parameters are deemed unobservable. Where possible, the Company benchmarks its fair value methodology for these Level 3 instruments to other industry participants

methodologies through participation in fair value pricing surveys.

Valuation adjustments including adjustments for model, liquidity and credit are an integral part of the Company's determination of fair value. For more information on the Company's fair value measurement policies and valuation hierarchy, see note X 20 – Fair Value Measurement in the Company's 2013 Form 10-K.

### *Stress Testing*

The Company performs a suite of market risk stress tests as an integral part of its risk management process, complementary to the Company's other risk measures such as VaR and Stressed VaR. The market risk stress scenarios include low probability yet plausible events that could create extraordinary losses and gains, with reduced liquidity conditions, and significantly altered correlation relationships. The scenarios target specific portfolio risk characteristics and concentrations.

Global Markets Risk Management runs stress tests on a periodic basis as part of routine risk management, and when appropriate will perform ad-hoc stress analysis to address specific events or concerns. Global Markets Risk Management works with business line management to design historical and hypothetical stress scenarios. These scenarios include both comprehensive scenarios, which stress all major risk factors (equity, foreign exchange, and interest rates) across the Company's entire portfolio of covered positions, and scenarios that target specific risk factors.

The stress testing results are computed using a full revaluation of the portfolio. These results are reviewed and discussed with trading management on a regular basis. Stress tests incorporate risk factors not perturbed in the VaR model so these risks can be better understood and managed.

### *Model Risk Management*

Ongoing management of model risk is the responsibility of the Enterprise Model Risk Committee (EMRC). Two additional approval committees reporting to the EMRC oversee new model implementations, model change management and independent model validation.

By policy, the Model Risk Management Group maintains a comprehensive model inventory to monitor the organizational usage and validation status. The group monitors the frequency of model review, the last review date and planned remediation activities. The inventory includes:

- A description of the model
- Documentation of a discontinued model
- Most recent model validation results along with any recommendations for aggregated model risk percentages and frequency of model reviews

Additionally, model documentation is associated with each model in the inventory. This documentation is maintained by model owners and includes implementation-specific details concerning the relevant model. The documentation includes information such as:

- Discussion of the necessary data and the frequency of the data inputs
- Thorough discussion of the underlying assumptions and the impact these assumptions have on model output
- Documentation of the strengths and weaknesses of the model both computationally and in its business application
- Current volumes and usage

Finally, the validation scope includes an evaluation of the conceptual soundness and evidence supporting the methodologies used in the model. This includes a back-testing analysis using various techniques to assess the robustness of the model's performance. The analysis is performed at various sub portfolio levels.

For additional information, please refer to the Company's 2013 Form 10-K.

### *Soundness Standard*

The Company's Internal Capital Adequacy Assessment Process (ICAAP) methodology is consistent with the soundness standard and was established to address the following three fundamental objectives:

- Identifying and measuring material risks

- Setting and assessing internal capital adequacy goals that relate directly to risk
- Ensuring the integrity of internal capital adequacy assessments

The Company has established a robust governance framework for the ICAAP to ensure that all aspects of the methodology and capital adequacy assessment receive appropriate review by the designated management committees and the Board of Directors. The governance framework leverages established roles and responsibilities and committee charters for the global management of risk and incorporates enhancements based on additional requirements established by the ICAAP.

The ICAAP, in its current form, was adopted by the Board of Directors. The Company reviews the ICAAP and its components regularly. Revisions are approved by the Risk Committee of the Board of Directors.

In March 2013, the Company received confirmation that the Board of Governors of the Federal Reserve System did not object to our 2013 capital plan submitted in connection with the Federal Reserve's Comprehensive Capital Analysis and Review (CCAR). In addition to the CCAR stress testing requirements, Federal Reserve regulations also include the new Dodd-Frank Act stress tests (DFAST), which were included in the proposed SIFI Rules and adopted in final form in October 2012. Under the DFAST regulations, we are required to undergo regulatory stress tests conducted by the Federal Reserve annually, and to conduct our own internal stress tests pursuant to regulatory requirements twice annually.

For additional information, please refer to the Company's 2013 Form 10-K.

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*Additional information related to the Company is contained in the Company's reports filed with the Securities and Exchange Commission (the "SEC"), including the Annual Report on Form 10 K for the year ended December 31, 2013 (including the Annual Report to Shareholders (the "Annual Report") the "2013 Form 10 K", each, a "'34 Act Report"). These periodic '34 Act Reports can be viewed, as they become available, on the SEC's website at [www.sec.gov](http://www.sec.gov) and at [www.bnymellon.com](http://www.bnymellon.com). Information contained in '34 Act Reports that the Company makes with the SEC subsequent to the date of the 2013 Form 10 K may modify, update and supersede the information contained in such '34 Act Report and provided in this document.*

*This document and the Company's '34 Act Reports referred to above contain forward looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, including statements regarding our IRC model. Words such as "estimate," "forecast," "project," "anticipate," "confident," "target," "expect," "intend," "seek," "believe," "plan," "goal," "could," "should," "may," "will," "strategy," "opportunities," "trends" and words of similar meaning, signify forward looking statements. These statements are based on the Company's current beliefs and expectations and are subject to significant risks and uncertainties that are subject to change based on various important factors (some of which are beyond the Company's control). Actual results may differ materially from those set forth in the forward looking statements. Factors that could cause the Company's actual results to differ materially from those described in the forward looking statements can be found in the "Risk Factors" section of the 2013 Form 10 K and the Company's other filings with the SEC. All forward looking statements speak only as of the date on which such statements are made and the Company does not undertake to update the forward looking statements to reflect the impact of circumstances or events that may arise after the date of the forward looking statements.*