THE BANK OF NEW YORK MELLON

Model Validation Review Committee Meeting Minutes
October 30, 2014

VOTING MEMBERS

Area Represented	Members	Present	Delegate
Chair, Head of Model Risk Validation	Mengmeng Fu	Y	
Head of Basel & Capital Adequacy	Gary Gegick	N	Dave Phillippi
Basel & Capital Adequacy	Dave Phillippi	Y	
Head of Operational Risk Modeling	Shangzuo Gao	N	
Head of Credit Risk Modeling	Katie Hysenbegasi	N	
Credit Risk Model Development	Jane Zheng	Y	
Credit Risk Model Development	Xaixin Hu	Y	
Head of Counterparty and Market Risk Modeling	Stephen Ahn	N	Tanya Tamarchenko
Head of Interest Rate Risk and Fund Transfer Pricing Methodology	Randy Ahluwalia	N	
Head of Treasury Risk	Avi Lopchinsky	Y	

ATTENDEES

Area Represented	Attendee	Present	Delegate
Model Risk Governance	Sarah Vijlee	Y	
	Suresh Joseph	N	
Model Risk Management Group	Lu Lu	Y	
	Hong Wu	Y	
	Adam Joplin	Y	
	Jun Liu	Y	
	Weiman Ma	Y	
	Brad Si	Y	
	Zhuo Yu	Y	
	Jie Zhang	Y	
	Wenhao Zhang	Y	
Credit Risk Modeling	Jun Zhang	N	
Operational Risk Modeling	Cheng Shen	Y	
	Jiaqing Xu	Y	
Internal Audit	Charles Huang	Y	
	Jenny Yu	N	
Treasury Risk	Tiphaine Masse	N	
EMEA	Kristine Rasmussen	N	

7. Market Risk RWA – CCAR (#2290)

Adam Joplin presented the full scope model validation for approval. The Market Risk RWA (CCAR) model is developed by the Global Markets Risk Management ("GMRM") group in order to forecast market risk risk-weighted asset ("RWA") nine quarters into the future as part of the Comprehensive Capital Analysis and Review ("CCAR") exercise. For the 2015 CCAR exercise, a new model is built to replace the regression-based model used for CCAR 2014. The primary determinant of RWA is value at risk ("VaR") and stressed value at risk ("SVaR"). The model uses macroeconomic forecasts provided by the Federal Reserve and a third-party vendor (i.e. Moody's) to forecast the risk factors underlying BNY Mellon's trading portfolio. These values are used to rescale Monte Carlo simulation paths of the risk factors generated for the current portfolio. These paths, along with the current trading portfolio's sensitivities, are used to calculate a Delta-Gamma approximation of 1-day VaR and SVaR. Given that the model is entirely different, a full-scope validation was performed. The VaR platform and the underlying pricing functions are all validated.

The purpose of the model is to forecast the market risk RWA nine quarters into the future under the Federal Reserve's supervisory scenarios and the bank holding company ("BHC") stress scenario. The model is built for the CCAR exercise.

The following tasks were performed as part of this validation:

- Description and assessment of conceptual framework
- Analysis of model assumptions
- Identification of model risks, limitations and issues
- Performed a code review
- Tests to further test model assumption appropriateness, including:
    - Delta-Gamma Analysis on Sample Portfolio
    - Comparison of Percent Changes for Risk Factors and Corresponding Core Risk Factors
- Review of model documentation

Model Issue summary: 2 new issues were identified: 0-Level 1, 1- Level 2, 1-Level 3
3 existing issues have been closed

MVRC Decision: Approved