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Mr. David C. Bushnell
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Mr. James M. Garnett
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New York, NY 10103

Dear Messrs. Bushnell and Garnett:

Examiners from the Office of the Comptroller of the Currency and the Federal Reserve Bank of New York completed a joint examination of the Global Corporate and Investment Bank's Market Risk Management (MRM) function. The review included on-site work in London and New York. The scope of the examination included a review of key responsibilities including: limit setting and monitoring, stress testing of trading and accrual book activities, and other MRM roles designated in GCIB Market Risk Policies. We did not review specific limit exceptions and related documentation as this was tested in a recent internal audit as well as during previous OCC business examinations. The FRBNY placed particular emphasis on the extent to which stress testing scenarios were reflective of underlying risks, rigorous and comprehensive in terms of risk capture and exposure coverage, and integrated into the risk management process.

Our conclusions were derived principally from extensive meetings with management given that a limited amount of material was provided in response to our request letter. The findings also consider MRM oriented conclusions and issues that have arisen in OCC reviews conducted over the past two years. In addition, discussions were held with ARR to determine the scope of its MRM review, and we were able to consider the final ARR report before issuing this letter.

CONCLUSIONS

- The quality of risk management is satisfactory. The MRM group is staffed with highly competent individuals who effectively perform their primary roles of risk identification and limit setting/monitoring. MRM has implemented a robust corporate limit process, which is regularly reviewed for appropriateness, clearly communicated and well documented. The limit structure reflects the firm's risk appetite and effectively addresses the primary risks of each business in accordance with supervisory expectations. Moreover, the quality of documentation supporting the annual limit review process has improved notably and is satisfactory.

- While reporting line independence has clearly been established, a recent OCC review of MRM decisions associated with an equity derivatives risk measurement issue has created some lingering concern regarding the degree of actual operational independence from the businesses.

- GCIB Market Risk policies describe broad, comprehensive and proactive roles and responsibilities for MRM. However, MRM fulfillment of these responsibilities is decidedly selective and occurs on an advisory or consultative basis. Furthermore, documentation supporting the execution of these roles is largely absent. In essence, GCIB Market Risk policies do not accurately describe what MRM actually does.

- Management has made progress in integrating the exposures and systems of the legacy institutions and in developing a market risk framework suitable for the merged organization. In particular, efforts to date in developing the firm's stress testing program and increasing the frequency of such scenarios are viewed favorably and considered satisfactory. However, the firm trails its peer group especially with respect to the development of portfolio tailored stress scenarios that focus on vulnerabilities and concentrations both within and across lines of business. Documentation of existing stress tests also needs improvement.

The following recommendations reflect enhancements that would strengthen existing risk management practices and the data integrity processes. We also provide additional commentary in the observation section that follows our recommendations. These comments provide additional support for our recommendations as well as more ancillary views, and are presented for management's consideration.

RECOMMENDATIONS

Roles and Responsibilities

With the exception of the limits policy, there is generally inadequate documentation of the execution of MRM's roles and responsibilities under the GCIB Market Risk policies. Additionally, these roles and responsibilities are written in such a way as to imply broad, proactive responsibility. In practice, most of these responsibilities are handled on a reactive/ad hoc or advisory basis. For example, MRM bears equal responsibility with Risk Architecture under GCIB policy to "review and assess appropriateness of models for their intended use" and "the validity of market-related assumptions." Rather than being addressed proactively and comprehensively, MRM involvement in model validation issues occurs on an as-requested basis. Other specific policy requirements may not be performed as described. For example, the Price Verification policy requires risk managers to conduct an annual review of price verification procedures. Such reviews are not conducted, although periodic Price Verification and Aged Inventory Reports are reviewed, unverified positions and aged inventory are stressed, and a presentation is made to the Risk Committee. We recommend the following actions.

- Senior management should ensure that policies actually describe the work performed by risk managers. We do not mean to provide motivation to diminish the responsibilities assigned to MRM; rather that policy requirements and actual practice should not be subject to significant divergence or uncertainty. MRM should adopt written procedures describing how risk managers are to fulfill all policy designated roles and responsibilities.

- When risk managers engage in activities that satisfy the requirements of GCIB policy, these activities should be documented and available for review.

- As a best practice, management should conduct an annual self-assessment process to ensure that all roles, responsibilities and processes actually occurring in MRM are robust, effective and reflect GCIB policy.

Adoption of these measures would also provide the head of market risk management with additional objective criteria to consider in the annual performance evaluation process.

VaR Triggers at the Business and Division Level

Because VaR is a key measure of aggregated risk exposure, and because of its key role in the regulatory capital attribution process, it should be used as a trigger at least down to the business level. We note that the regulatory agencies approve certain VaR models at the desk level based on the model's demonstrated ability to reasonably capture risk. While we concur that VaR is less useful at the trader level, it provides meaningful risk diagnostic capability that should not be ignored. Further, use as a trigger at the business level will allow risk managers to fulfill two roles currently assigned under the GCIB Market Risk Measurement policy: reviewing VaR methodology, and determining reasons for backtesting exceptions. Typically, peers not only set VaR limits at the corporate level (i.e., GCIB level), but also at lower levels of aggregation.

Value-at-Risk Data Capture Processes

The firm has made significant progress in integrating risk measurement systems and enhancing data capture processes. However, to meet sound practice and supervisory guidance, management should make meaningful progress in updating VaR time series data so that it reflects the most current information. Currently, the time series is updated quarterly, with a quarter lag in the historical time series data. Therefore, between quarters there can be an almost 6-month total time series lag. Although the Monte Carlo methodology used by the firm and the ability of risk mangers to incorporate volatility overrides mitigates the severity of the lag, supervisory guidance and sound practices suggest that there should be no more than a 3-month lag in the time series data.

Moreover, management should enhance the process and implement policies and procedures that address the capture of immaterial positions. Presently certain positions deemed to be immaterial are not captured in GMR. In order to ensure consistency in how materiality is defined across businesses, management should clearly define in its policies and procedures how this threshold is determined. Also, to ensure that positions which might be immaterial individually but that could be material in aggregate are identified, management should have in place a process to centralize monitoring of such positions. Management should determine at what level aggregate "immaterial" exposures should be incorporated into VaR and stress reporting.

Stress Testing

The GCIB conducts four quarterly corporate-wide stress tests consisting of the Risk Manager Estimate, two historical simulations (correlated and uncorrelated) and a stressed VaR approach. The correlated historical simulation and stressed VaR approach are being transitioned to a monthly basis. Our findings and recommendations are:

- The quality of documentation for the Risk Manager Estimates needs improvement. Bank policy should require minimum documentation standards that provide sufficient transparency and justification for all key assumptions. Further, documentation should allow an alternate risk manager to independently replicate the analysis. While acknowledging business differences, we found FX stress documentation to be the most robust while equities documentation requires the most improvement. Any add-on factors used in any scenario should also be adequately documented (e.g., idiosyncratic risk).

- Management should enhance its ongoing corporate stress test program to incorporate stress scenarios tailored to the underlying portfolio risks. These should be more forward-looking and judgmental as they can provide management with a more complete picture of the range of potential outcomes. The Risk Manager estimates do not achieve this purpose: by their very methodology, they are largely driven by changes in average exposure levels rather than judgment or an analysis of business conditions, and they generally do not differ meaningfully over time from the correlated historical simulation scenario.

- Management has not developed tailored scenarios at the business level. GCIB Market Risk Measurement policy not only requires MRM to "jointly develop global standard stress scenarios", but also to "construct and implement business stress tests." We recommend that management also develop tailored scenarios at the business level (rather than for common factors or events *across* businesses) in conjunction with the businesses and in-business risk managers.

- In order to better integrate the corporate stress testing process into the overall risk management framework, management should consider establishing limits or triggers on those scenarios that it deems most relevant to ensure that corporate tolerance levels are clearly denoted and subsequent management action steps are more transparent.

Market Risk Reporting

The frequency and content of market risk reporting can be improved. Analytical reports should be prepared periodically for each major business using input from Risk Architecture/Price Verification reports and other sources deemed relevant (e.g., back office data on volumes may be relevant with respect to implications for flow revenues, as would P&L attribution analysis). MRM can direct senior management's attention to key trends, risk issues (GCIB wide or legal vehicle specific) or other concerns by providing thoughtful analysis, transparency and evaluative comments. MRM could even consider risk-rating businesses on a periodic basis, for example, by the number of month's revenue at risk from current limit utilization, amount of VaR usage to produce $1 million of revenue or other factors. Trends in risk and risk/return measures could be highlighted, as could meaningful changes in stress scenarios. We do not regard weekly risk commentary for the Risk Committee as fulfilling this role. Furthermore, we view Risk Architecture's weekly "tiered" reports as one of a number of potential inputs to such an analysis. We note that "one-off" topical presentations to the Risk Committee are responsive to the type of analysis we envision. While these reports appropriately tend to address specific market developments of concern, basic business level risk analysis and reporting on an ongoing basis can be improved.

Capital Markets Approval Committee

In London, we reviewed the procedures and database system for administration of the Capital Markets Approval Committee (CMAC) process for Europe. This process is clearly at a level of best practices and is recommended for other CMAC processes globally. The recommendation is offered, based on process-related CMAC findings in previous OCC business examinations where we have found aspects of the CMAC process to be not well documented and in light of management's recent emphasis on the CMAC process, particularly as it relates to structured products.

OBSERVATIONS REGARDING STRESS TESTING AND VAR

Consistency of Stress Tests to Portfolio Composition

MRM has made significant progress in developing its GCIB corporate stress testing framework since the merger by implementing new scenarios and increasing the frequency and reporting of such stress tests to senior management. However, we believe management can enhance its ongoing corporate program to incorporate stress scenarios that are tailored to the risks underlying portfolios to ensure consistency with both supervisory expectations and industry practices. Presently the firm does not meet supervisory expectations and lags peers in this regard because its Risk Manager Estimates (RMEs), which are used to identify concentrations and vulnerabilities to event risks at the business line level, are not transparent and well documented, thus limiting their efficacy in identifying what risks are being measured and evaluated. In fact, as a general rule, RMEs of potential loss in a business line are not significantly different than those generated from the statistically generated scenarios. Further, the methodology used to calculate both is, in practice, similar. In some cases where they differ, there may be an over-reliance on front office views (2 vol points for swaptions rather than the analytically determined 4 vol point move). As a result, MRM should develop truly forward-looking, judgmental scenarios both within and across businesses that capture more than historical behavior. MRM should also enhance the transparency of its scenarios by ensuring that the qualitative assessments and assumptions underlying risk manager and Stressed VaR estimates are clearly articulated, well documented and reflective of portfolio risks.

Rigor and Comprehensiveness

Stress testing was deemed to be consistent with supervisory expectations from the standpoint of rigor and comprehensiveness due to the high degree of risk factor and exposure coverage, particularly for the statistically generated scenarios. However, it was noted that while adequate compensating controls are in place to address data integrity, the process is manually intensive, reliant on numerous data checks, and time-consuming. In particular, management information systems used to compile accrual stress testing data rely heavily on manual processes. Management should consider automating manual data processes to minimize the possibility of errors and enhance the efficiency of the overall process.

While consistent with supervisory expectations, the rigor and comprehensiveness of the stress testing process trails peer practices. Neither the statistically-based scenarios nor the risk manager estimates are forward-looking (as they rely solely on historical changes), and they do not capture the interrelationship among risks (e.g., market, credit, liquidity), which is increasingly common in the peer group.

Integration into Risk Management

From the standpoint of how well stress tests are integrated into management and internal control processes, MRM practices are consistent with supervisory expectations due to the timeliness and comprehensiveness of stress test reports submitted to senior management. However, practices lag peer because stress scenarios that reflect the correlation among market risk factors are not integrated into the bank's internal control infrastructure through limit and/or triggers. Currently, MRM relies on historically derived factor shocks that do not reflect these interrelationships (the GCIB corporate stress triggers by greek, tenor and/or currency). While it is appropriate for MRM to rely on these shocks for limit setting purposes, sole reliance on them as a stress limit is inconsistent with the practices of peers. As a result, management should consider setting stress testing limits and/or triggers based on scenarios that capture the interrelationship among risk factors in order to enhance the internal control infrastructure and align the practices of the firm with those of its peer group.

Stressed VaR Methodology

The OCC believes the stressed VaR methodology, particularly with defeasance, is the most analytically meaningful stress number produced. The risk manager estimate is a highly subjective and rudimentary "ballpark" number, while the historical scenarios suffer from other weaknesses, including the inability of traders to change positions for a full quarter. Generally, we would observe that disruptions in flow revenues and/or a breakdown in correlations are potentially more "stressful" than exposure to open risk positions.

Other VaR Data Capture Issues

It was noted that data integrity processes for incoming time series data could be improved with automated checks, which would facilitate the ability to identify feed errors that may be harder to identify manually as is done at some peer institutions. Although no deficiencies in the data integrity process were identified during the course of the examination, there is heavy reliance on familiarity with the numbers and visual spot-checks and ultimately individual personnel. We believe management should consider mitigating these effects by establishing more automated checks and formal tolerance thresholds.

Please provide a written response to the recommendations discussed above within 45 days of the receipt of this letter. We appreciate the level of cooperation that was extended to us during this review. In closing, we wish to note that this letter contains confidential material and should be treated accordingly by your organization. As such, the contents of this letter are subject to the rules of the Board of Governors of the Federal Reserve System and the Office of Comptroller of the Currency regarding disclosure of confidential supervisory information.

If you have any questions, please feel free to contact Randolph Brown (FRBNY) at (212) 720-2302 and Daniel Staehle (OCC) at (212) 527-1040 or either of the undersigned Gene Jacobi at (212) 527-0154 and Homer C. Hill, III at (212) 720-2164.

Sincerely,

Eugene A. Jacobi, Jr. National Bank Examiner Comptroller of the Currency	Homer C. Hill, III Assistant Vice President Federal Reserve Bank of New York

CC: Duke, Guggenheimer, Helfer, Kirchen, Masin, Peterson, Prince, Sabatacakis, Thomson