

# FS Regulatory Briefs\*

## Will Regulatory Scrutiny of Model Risk Management Intensify?

Richard R. Pace, Principal

Target Audience: Banks, Broker/Dealers, and Investment Advisers

**On March 18, 2009, Ms. Orice M. Williams – a Director in the United States Government Accountability Office’s (“GAO’s”) Division of Financial Markets and Community Investment – testified before a Senate Banking subcommittee hearing on regulators’ oversight of risk management systems at large, complex financial institutions. The GAO’s review focused specifically on: “(1) how regulators oversee risk management at large financial institutions, (2) the extent to which regulators identified shortcomings in risk management at selected institutions prior to the beginning of the financial crisis in the summer of 2007, and (3) how some aspects of the regulatory system may have contributed to or hindered the oversight of risk management.”**

According to Ms. Williams’ testimony, the GAO “found that regulators had identified numerous weaknesses in the institutions’ risk management systems prior to the beginning of the financial crisis; however, regulators did not effectively address the weaknesses or in some cases fully appreciate their magnitude until the institutions were stressed.”

One of the three risk management systems highlighted in the GAO testimony was “Oversight and Testing of Risk Models”. Specific weaknesses in institutions’ model risk management systems were described as follows:

- “One regulator found several weaknesses involving the use of models that had not been properly tested to measure credit risks, an important input into institutions’ determinations of capital needed, but did not aggressively take steps to ensure that the firm corrected these weaknesses. In a 2006 letter addressed to the head of the institution’s risk management division, the examiners reported deficiencies in models used to estimate credit risk, including lack of testing, a lack of review of the assumptions used in the models, and concerns about the independence of staff testing the

models. The regulator issued a letter requiring management to address these weaknesses, but continued to allow the institution to use the models and did not change its overall assessment. Although the institution showed improvement in its processes, over time, in late 2007, examiners found that some of the weaknesses persisted. In late 2008, examiners closed the matter in a letter to management, but continued to note concerns about internal controls associated with risk management.”

- “A horizontal review of credit risk models by the Federal Reserve and OCC in 2008 found a similar lack of controls surrounding model validation practices for assessing credit risks, leading to questions about the ability of large, complex institutions to understand and manage these risks and provide adequate capital to cushion against potential losses. For example, the review found that some institutions lacked requirements for model testing, clearly defined roles and responsibilities for testing, adequate detail for the scope or frequency of validation, and a specific process for correcting problems identified during validation.”
- “Before the crisis, another regulator found that an institution’s model control group did not keep a complete inventory of its models and did not have an audit trail for models prior to 2000. The examiners said that they did not find these issues to be significant concerns. However, they were subsequently criticized for not aggressively requiring another institution to take action on weaknesses they had identified that were related to risk models, including lack of timely review, understaffing, lack of independence of risk managers, and an inability or

unwillingness to update models to reflect the changing environment.”

- “Other regulators noted concerns about pricing models for illiquid instruments, but made these findings only as the crisis was unfolding. For example, in a 2007 horizontal review of 10 broker-dealers’ exposure to subprime mortgage-related products, SEC and FINRA examiners found weaknesses in pricing assumptions in valuation models for complex financial products. They found that several of these firms relied on outdated pricing information or traders’ valuations for complex financial transactions, such as CDOs. In some cases, firms could not demonstrate that they had assessed the reasonableness of prices for CDOs. Another regulator noted in a 2007 targeted examination that although management had stated that the risk of loss exposure from highly rated CDOs was remote, the downturn in the subprime mortgage market could mean that they would not perform as well as similarly rated instruments performed historically.”

## Points to Consider

The GAO testimony will certainly be the subject of on-going debate among the federal regulatory agencies – but it has, at the very least, put the area of model risk management into the current regulatory spotlight. As a result, we believe that the GAO’s criticism of recent regulatory oversight of model risk creates a high likelihood of increased regulatory scrutiny of financial institutions’ model risk management programs going forward. To prepare for this potential increased scrutiny, a financial institution may wish to consider:

- Evaluating the design of its model risk management program relative to regulatory guidance (i.e., OCC Risk Bulletin 2000-16) and typical industry practices, and ensuring that the program is operating effectively. Areas on which to focus should include:
  - Ensuring the program scope – as determined by the company’s definition of a “model” – is reasonable and, at the very least, covers the types of computational applications that expose the company

to the greatest risk of loss or material misstatement of financial condition.

- Ensuring that model risk ratings accurately reflect the relative risk of the models to the company and are periodically updated to reflect changing conditions.
- Ensuring an enterprise-wide model inventory exists and it is complete and accurate.
- Ensuring model governance roles and responsibilities are well-defined, formalized, and properly allocated to company personnel.
- Ensuring sufficiently detailed model validation guidelines and standards exist to ensure quality and consistency in model testing.
- Ensuring that personnel performing independent model validations possess appropriate skills and experience and are sufficiently independent of model developers and owners.
- Ensuring that independent model validations are performed consistent with applicable policy and procedures, and meet or exceed quality expectations.
- Ensuring that outstanding model validation findings are tracked and remediated in a timely manner.
- Ensuring sufficiently detailed model documentation guidelines and standards exist to aid in model validation and to mitigate key person dependencies.
- Ensuring robust model performance monitoring policies and procedures exist to identify in a timely manner emerging model risk issues and/or model performance degradation – and to report significant model performance issues to senior management.
- Ensuring effective model change management policies and procedures are in place to prevent unauthorized model changes, and to mitigate the risk that authorized changes are made incompletely and/or inaccurately.

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- Ensuring sufficient model operational controls are in place and that these controls have been designed effectively.
- Evaluating whether senior management exercises sufficient oversight of enterprise-wide model risk – for example:
  - Establishes an enterprise-wide senior management view on model risk management through approval of the Model Governance Policy and Program
  - Periodically monitors enterprise-wide model risk by:
    - Receiving briefings on new high-risk models, major changes to high-risk models, and new uses of high-risk models
    - Receiving high-level summary of high-risk model performance and any corrective actions taken in response to material underperformance
    - Receiving briefings on critical model validation findings and associated remediation plans
    - Receiving briefings on the emerging model risks that could lead to material impact on the Company's model performance
  - Periodically monitors effectiveness of the Model Governance Program by:
    - Monitoring effectiveness of the independent model validation function (e.g., timeliness of validation activities, appropriate remediation of validation findings, sufficient resources, effectiveness of function head, etc.)
    - Reviewing Internal Audit reports on independent model validation function
    - Periodically updating the Model Governance Program
  - Intervenes as appropriate to ensure proper model risk management

## Additional Information

If you would like additional information about the topic discussed in this FS Regulatory Brief, a copy of the GAO's testimony, or advice related to your specific model risk management program please contact:

**Richard R. Pace, Principal**

Phone: (703) 918-1385

Email: Ric.Pace@us.pwc.com

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