



Office of the Superintendent of
Financial Institutions Canada

Bureau du surintendant des
institutions financières Canada

Office of the Superintendent of Financial Institutions of Canada

Internal Audit Report on Risk Measurement & Analytics Assessment Services

November 2013



Canada

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1. Background

Introduction

Internal Audit conducts assurance work to determine whether the Office of the Superintendent of Financial Institutions Canada's (OSFI's) risk management, control, and governance processes, as designed and represented by management, are adequate and functioning in a manner to ensure risks are appropriately identified and managed, and to ensure compliance with such requirements as policies, plans, procedures and applicable laws and regulations.

The audit of Risk Measurement & Analytics Assessment Services (RMAAS) was approved by the OSFI Audit Committee and the Superintendent for inclusion in the OSFI 2013 to 2014 Internal Audit Plan.

This report presents the results of that audit based on audit work completed at the end of July 2013. The audit recommendation will support RMAAS to continuously improve their control framework for regulatory capital models' approvals.

This report was presented to the OSFI Audit Committee on November 21, 2013 and approved by the Superintendent on November 29, 2013. The Deputy Superintendent, Supervision Sector, and RMAAS Senior Management, who have provided their management comments within this report, have also reviewed it.

Context

Capital is a source of financial support to protect an institution against unexpected losses and is, therefore, a key contributor to its safety and soundness. While the minimum capital requirements for Pillar 1 risks (i.e. credit, operational and market risks) may be calculated using standardized approaches, OSFI's "Capital Adequacy Requirements" (CAR) Guideline gives a federally regulated deposit-taking institution (DTI) the option to use internally developed capital models to arrive at a measurement that is more "risk sensitive". The intent is to provide institutions with incentives for better risk management by more closely aligning regulatory capital requirements with internal measures of risk, and thereby permitting the possibility of lower capital requirements.

However, the DTIs must seek explicit approval from OSFI to (a) use any new capital models and (b) for any material modifications to previously approved models. Furthermore, these models are subject to periodic post-approval supervisory review and monitoring to determine the ongoing appropriateness of these models.

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1. Background, Continued

Context
(continued)

RMAAS has the primary responsibility to administer the capital model approval process for the DTIs' capital models. It also monitors capital models through targeted reviews and analysis to verify that they meet OSFI's overall risk management and control expectations on an ongoing basis. While RMAAS has primary responsibility for the approval process, it engages stakeholders internal and external to OSFI to provide input throughout the process.

Context

The RMAAS team is one of the Supervision Support Groups (*SSGs*) within the Supervision Sector that supports OSFI's mandate of protecting depositors and policyholders from undue loss.

RMAAS' objectives in the regulatory capital model approval process include ensuring:

1. Capital rules regarding the qualifications for use of internal models are interpreted accurately;
2. A consistent set of criteria exists to assess and approve the use of capital models for regulatory capital purposes; and
3. Capital rules and approval criteria are consistently applied across risks, product types and business lines; among financial institutions within the same sector; and across different sectors, where applicable.

To achieve these objectives, OSFI formalized its capital model approval process in the Capital Models Approval Framework (***Framework***). This Framework consists of three components:

1. Conceptual Framework for all Regulatory Capital Model Approvals and Ongoing Monitoring (***Conceptual Framework***);
 2. Capital Model Approval Policy (***Policy***); and
 3. Supervisory Process for Approval and Ongoing Monitoring of Capital Models" (***Process***).
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2. Audit Objective, Scope and Approach

Audit Objective The objective of the audit was to provide reasonable assurance that the supervisory process to approve regulatory capital models is effectively applied for the capital model applications from the deposit-taking institutions (DTIs).

Specifically, the audit assessed whether:

1. Capital models that are developed by the DTIs, are assessed and approved by OSFI in accordance with OSFI's Capital Models Approval Framework;
 2. The appropriate quality assurance reviews are in place to ensure approval decisions are made consistently, and are well-supported; and
 3. Management provides adequate oversight over the Conceptual Framework, Policy and Process to ensure that it is up-to-date.
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Audit Scope The audit reviewed the key controls throughout the six phases of the Capital Model Approval process, as identified in OSFI's "Supervisory Process for Approval and Ongoing Monitoring of Capital Models", for a sample of completed and in-progress DTI capital model applications, from the period of April 1, 2012 to April 30, 2013.

We also examined how management provides oversight over the Framework and how it mitigates risks that may impact the sustainability of the Framework and processes supporting capital models' approvals.

Scope Exclusions

The scope of the audit work excluded the following:

- The design of the key controls throughout the Capital Model Approval process. Given that Internal Audit's consultation review in May 2010¹ did not identify any significant gaps, and there have been no material changes to the Framework relative to DTI capital model approvals, IA did not revisit the design of the key controls.
 - The assessment of the accuracy and completeness of OSFI's analysis (i.e. input) supporting the conclusions and resulting capital model approval/deferral decision.
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¹ Internal Audit's May 2010 consultation review assessed the design of the regulatory capital models approval and ongoing monitoring process. The results of that review concluded that RMAAS developed a comprehensive process and did not note any significant gaps in the design of the core process.

2. Audit Objective, Scope and Approach, Continued

**Audit
Approach**

The audit was conducted in accordance with the Institute of Internal Auditors' International Standards for the Professional Practice of Internal Auditing, consistent with the Treasury Board Policy on Internal Audit.

The RMAAS audit was predominantly conducted by leveraging the internationally recognized Enterprise Risk Management – Integrated Framework recommended by the Committee of Sponsoring Organizations of the Treadway Commission (*COSO*).

The approach to conducting the audit included:

- A review of the Capital Models Approval Framework to update our understanding of the requirements;
- Walkthroughs with RMAAS, management, and other internal stakeholders of the approval process as applicable, to facilitate our understanding of the regulatory capital model approval process, quality control and management oversight;
- Examination of OSFI review documents related to the DTIs' capital model applications to determine whether the rationale supporting the model approval decision can be followed, and whether quality assurance reviews at each phase of the approval process is operating effectively; and
- Discussions/ interviews with key personnel and stakeholders.

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3. Conclusion

Conclusion

Overall, IA is reasonably assured that the supervisory process to approve regulatory capital models is effectively and consistently applied for the capital model applications from the deposit-taking institutions (*DTIs*). Specifically:

1. Capital models that are developed by the *DTIs* are assessed and approved by OSFI in accordance with OSFI's Capital Models Approval Framework;
2. The appropriate quality assurance reviews are in place to ensure approval decisions are made consistently, and are well-supported; and
3. Management provides adequate oversight over the Conceptual Framework, Policy and Process to ensure that it is up-to-date.

Internal Audit has identified an opportunity for improvement, where RMAAS can further enhance its Conceptual Framework, Policy and Process to reflect operational practices.

In my professional judgment as Chief Audit Executive, sufficient and appropriate audit procedures have been conducted and evidence gathered to support the accuracy of the opinion provided and contained in this report. The opinion is based on a comparison of the conditions, as they existed at the time, against pre-established audit criteria that were agreed on with management. The opinion is applicable only to the entity examined. The audit was conducted in conformance with the internal audit standards of the Government of Canada, as supported by the results of the Quality Assurance and Improvement Program.

We wish to recognize the excellent rapport and exchange of views with all involved in the audit. The depth of the review and focusing on what matters would not have been possible without the support received throughout the audit.

Chief Audit Executive, IA

Date

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4. Observations and Recommendations

**Audit
Evaluation
Criteria**

The audit criteria were derived from IA's assessment of the key risks inherent to the Risk Measurement & Analytics Assessment Service (*RMAAS*) group and are based on the internationally recognized Enterprise Risk Management – Integrated Framework recommended by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

**Process and
Control
Activities**

- a. Analysis and assessments supporting the capital model approval decisions are documented and are filed appropriately. An opportunity for improvement exists – please refer to Observation/ Recommendation #1 below.
 - b. Communication protocol (internal and external stakeholders) throughout the regulatory capital model approval process is clearly defined, and is followed.
 - c. Approval decisions are timely and are in accordance with agreed timeframes, where applicable. Follow-up resulting from conditional model approvals is executed as planned.
 - d. Quality control and escalation processes are built into the model application process, and are effective in detecting work quality issues and resolving difference in opinions. An opportunity for improvement exists – please refer to Observation/ Recommendation #1 below.
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**Monitoring and
Management
Reporting**

- a. The Framework is reviewed periodically to ensure continued relevance, reflecting changes in the environment, people and processes.
 - b. Management reporting practices and tools such as monthly project updates to the Deputy Superintendent and quarterly reports to the Executive are in place to monitor progress against plan and identify risks to the plan and allow adjustments to be made.
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4. Observations and Recommendations, Continued

Observation 1 **Observation: Enhancing the “Supervisory Process for Approval and Ongoing Monitoring of Capital Models” to reflect operational practices.**

OSFI’s *Capital Adequacy Requirements (CAR)* Guideline requires deposit-taking institutions (*DTIs*) to seek prior approval from OSFI to use capital models for the purposes of minimum regulatory capital computation. These ‘internal’ or ‘advanced’ approaches are designed for each of the Pillar 1 risk classes (i.e., credit risk, operational risk, and market risk) and are intended for use, where the DTI meets “minimum requirements”.

OSFI’s Supervisory Process for Approval and Ongoing Monitoring of Capital Models (“the Process”) elaborates on the OSFI Guideline approval requirements by setting out the process (“acceptance standards”) whereby OSFI will review and approve institutions’ applications for using capital models. The “Process” document outlines the key stages or “phases” for capital model approvals and ongoing monitoring.

The following instances were noted where RMAAS had an operational process, but the “Supervisory Process for Approval and Ongoing Monitoring of Capital Models” guidance was either unclear or silent:

1. The documentation and approval standards to be adopted for the smaller DTIs vs. the larger DTIs.
2. Criteria to distinguish between a new model application vs. a material modification to an existing model.

Recommendation:

To avoid ambiguity and to ensure that there is a consistent approach in assessing and reviewing capital models applications from the different types of institutions, RMAAS should consider updating its Process for capital models approvals to provide additional guidance on the criteria to distinguish between the different types of capital models applications, including specific guidance on the review approach, the documentation requirements and quality assurance reviews to be adopted for the smaller DTIs vs. the larger DTIs.

Action Plan:

We propose to “true-up” the “**Supervisory Process for Approval and Ongoing Monitoring of Capital Models**” document with these road-tested practices at the next mandated annual review. The work is scheduled to begin in October with a draft document to be submitted to the February 2014 Capital Models Review Committee (CMRC) for approval and ready for implementation by April 1, 2014.

Responsibility: The Managing Director, RMAAS.

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5. Management Response

Overview

This report has been reviewed by the Managing Director, Risk Measurement & Analytics Assessment Service; the Senior Director, Capital Markets and Model Analytics; the Senior Director, Supervision Support Group; and the Deputy Superintendent, Supervision Sector, who acknowledge its observations and recommendation.

The recommendation will support RMAAS with its continuing efforts to enhance the Capital Model Approval process, as appropriate.

Responses / Comments

RMAAS concurs with the recommendation resulting from the recent audit. As indicated to the IA team during the audit, we have found that the operationalization of certain aspects of the approval process has proven to be over-engineered and/or impractical and we have since developed practices that have achieved the twin objectives of thoroughness and efficiency. We have put in place plans to update the Process document in time for the start of the next fiscal year.

We would like to thank the IA team for its professionalism and cooperation during the audit as well as for providing us with certain perspectives that will serve us and OSFI well for the future.
