Farm Credit Administration

1501 Farm Credit Drive
McLean, Virginia 22102-5090
(703) 883-4000

INFORMATIONAL MEMORANDUM

June 17, 2002

To: The Chief Executive Officer
All Farm Credit System Institutions

From: Roland E. Smith, Director
Office of Examination

Subject: Computer-Based Model Validation Expectations

PURPOSE

This Informational Memorandum provides guidance to Farm Credit System (FCS) institutions concerning the Farm Credit Administration's (FCA) expectations associated with computer-based model validation processes. The reliance on unvalidated models is considered a poor business practice. In addition, depending on the circumstances, examiners will consider the use of unvalidated models to manage risk as a potentially unsafe and unsound practice.

BACKGROUND

Computer models are often used to provide critical information used by management to support decisions in areas such as asset-liability management, risk measurement and management, loan pricing, valuing financial instruments, credit scoring, economic projections, capital allocations, and strategic planning. Therefore, sufficient controls must be established to ensure output from computer models is valid.

Computer models should be viewed as a tool to assist the decision-making process. However, their use requires considerable judgment and expertise in applying model results. Overly broad interpretation of model results, modeling errors, problems in the modeling process, or reliance on erroneous outputs can result in faulty decisions.

As models play an increasingly important role in decision-making processes, it is critical that board and management reduce the likelihood of erroneous model output or incorrect interpretation of model results. The best defense against such model risk is the implementation of a sound model validation framework that includes a validation policy and appropriate independent review.

SUMMARY OF COMPUTER-BASED MODEL VALIDATION EXPECTATIONS

The attachment to this Informational Memorandum describes in greater detail the expectations FCA examiners have when examining an institution's model validation process. In summary, FCA examiners will review model validation policies, procedures, and practices to ensure that the following expectations are met:

(a) Decision makers understand the meaning and limitations of a model's results. The impact that changes in assumptions have in final results must be understood, assumption changes should be documented, and data generated from the model must be useful to decision makers without concealing the model's limitations.

(b) Model results are tested against actual outcomes, particularly when a model has been in use for a reasonable period of time.

(c) The institution should demonstrate a reasonable effort to audit the information entered into the model. Input errors should be promptly corrected.

(d) Staff involved in the modeling process should be qualified and their performance evaluated regularly based on established standards and specific job responsibilities. Training needs should be identified and monitored. There should also be sufficient depth in resources to accommodate unexpected absences of key personnel.

(e) To the extent feasible, model validation should be independent from model construction and maintenance.

(f) Responsibilities for the various elements of the model-validation process should be clearly defined.

(g) Modeling software should be subject to change-control procedures, so that developers and users do not have the ability to change codes without review and approval by an independent party.

If you have any questions about this memorandum, please call Gregory L. Yowell, Senior Capital Markets Specialist, Special Examination and Supervision Division, Office of Examination, at (703) 883-4371, or correspond on the Internet at e-mail address yowellg@fca.gov.

Attachment