

Background

The Office of the Comptroller of the Currency (OCC) charters, regulates, and supervises all national banks. It also supervises the federal branches and agencies of foreign banks.

In regulating national banks, the OCC has the power to:

- Examine the banks.
- Approve or deny applications for new charters, branches, capital, or other changes in corporate or banking structure.
- Take supervisory actions against banks that do not comply with laws and regulations or that otherwise engage in unsound banking practices. The agency can remove officers and directors, negotiate agreements to change banking practices, and issue cease and desist orders as well as civil money penalties.
- Issue rules and regulations governing bank investments, lending, and other practices.

OCC has issued certain guidelines for validating risk models which are largely found in bulletin 2000-16 with some additional points in 2004-59 and 2005-22

- The guidelines cover all aspects of model validations and require independent audit, quality control, thorough documentation and statistical analysis

Overview of OCC Guidelines

The OCC guidelines include audit and validation requirements to make risk models more reliable. The guidelines cover all three components of model development: model information input (assumptions and data); model processing (theoretical and computer instructions); and reporting (output and reports).

Salient features include:

- ▶ Understand the meaning and limitations of model results;
- ▶ Model validation be independent from model construction, when feasible;
- ▶ Modeling process must be well documented;
- ▶ Model results be tested against actual outcomes, when sufficient data available;
- ▶ Regular, timely audits to address possible input errors;
- ▶ The seniority of management overseeing the modeling process should be commensurate with the materiality of the risk from the line of business;
- ▶ Responsibilities for the various elements of the model-validation process must be clearly defined;
- ▶ Proper model change-control procedures should be in place, to keep record of changes in model codes.

Importance of Validating Risk Models

Model Validation not only increases the accuracy of model output, but also familiarizes the user to its strengths and weaknesses and therefore promotes intelligent implementation.

Some specific reasons for paying special attention to model validation:

- ▶ Computer aided models are being increasingly used to make decisions that impact the risk exposure of financial Institutions, however, the modeling process is highly error prone;
- ▶ Error can occur at any stage from data collection to the final report generation;
- ▶ These errors can have significant impact on the risk exposure of the financial institution;
- ▶ A good validation process can help minimize these errors and should cover all stages of model development;
- ▶ It should combine statistical procedures with good quality control measures and business judgment;
- ▶ While these measures are critical for risk models, it is good business practice to apply them to marketing models.

Spectrum of C-Metrix OCC Compliance Solutions

| Model Policies & Inventory | Model Documentation | Data Integrity | Model Validation |
|--|---|--|---|
| <ul style="list-style-type: none"> Audit the modeling process against compliance requirements Segregate models based on risk levels Determine inter-linkages among models Determine acceptable model use and educate users on model functionalities Identify ways to mitigate model risks | <ul style="list-style-type: none"> Provide appropriate review of articles Prepare validation audit sheet Document significant "model use" concerns | <ul style="list-style-type: none"> Match data across various data sources Review input data for duplicate entries and missing values Develop reconciliation procedure to compare data against a common platform | <ul style="list-style-type: none"> Prepare validation policy for appropriate documentation and frequency of model changes Conduct extensive validation exercises including benchmarking, back-testing, sensitivity analysis, etc. |