ALLL: Model Validation Is Mandatory

Banks are required to have the ALLL methodology validated by a party who is independent of the estimation process.

The Interagency Policy Statement on Allowance for Loan and Lease Losses Methodologies and Documentation for Banks and Savings Institutions requires institutions to verify that the ALLL methodology is valid and conforms to GAAP and supervisory guidance. It also requires that the institution’s directors establish internal control policies that include procedures for a review, by a party who is independent of the ALLL estimation process, of the ALLL methodology and its application in order to confirm its effectiveness. But, what is validation?

According to OCC Bulletin 2011-12:

Model validation is the set of processes and activities intended to verify that models are performing as expected, in line with their design objectives and business uses. Effective validation helps ensure that models are sound. It also identifies potential limitations and assumptions, and assesses their possible impact. As with other aspects of effective challenge, model validation should be performed by staff with appropriate incentives, competence, and influence.

All model components, including input, processing, and reporting, should be subject to validation; this applies equally to models developed in-house and to those purchased from or developed by vendors or consultants. The rigor and sophistication of validation should be commensurate with the bank’s overall use of models, the complexity and materiality of its models, and the size and complexity of the bank’s operations.

Validation activities should continue on an ongoing basis after a model goes into use, to track known model limitations and to identify any new ones. Validation is an important check on model use during periods of benign economic and financial conditions, when estimates of risk and potential loss can become overly optimistic, and when the data at hand may not fully reflect more stressed conditions. Ongoing validation activities help to ensure that changes in markets, products, exposures, activities, clients, or business practices do not create new model limitations.

Banks should conduct a periodic review - at least annually but more frequently if warranted - of each model to determine whether it is working as intended and if the existing validation activities are sufficient. Such a determination could simply affirm previous validation work, suggest updates to previous validation activities, or call for additional validation activities. Material changes to models should also be subject to validation. It is generally good practice for banks to ensure that all models undergo the full validation process, as described in the following section, at some fixed interval, including updated documentation of all activities.

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An effective validation framework should include three core elements:

- Evaluation of conceptual soundness, including development evidence
- Ongoing monitoring, including process verification and benchmarking
- Outcomes analysis, including back-testing

Model Governance

FDIC Senior Examiner Robert Burns on Model Validation

Validation should not be thought of as a purely mathematical exercise performed by quantitative specialists. It encompasses any activity that assesses how effectively a model is operating. Validation procedures focus not only on confirming the appropriateness of model theory, but also test the integrity of model inputs, outputs, and reporting.

Validation is typically completed before a model is put into use and also on an ongoing basis to ensure the model continues to perform as intended. The frequency of planned validation will depend on the use of the model and its importance to the organization. The need for updated validation could be triggered earlier than planned by substantive changes to the model, to the data, or to the theory supporting model logic.

Examiners do not validate bank models

Validation is the responsibility of the bank. However, examiners do test the effectiveness of the bank’s validation function by selectively reviewing various aspects of validation work performed on individual models.
Examiners do not validate bank models. A third party, independent of the estimation process, should conduct validation.

When reviewing validation, examiners:
- Evaluate the scope of validation work performed
- Review the report summarizing validation findings and any additional work papers needed to understand findings
- Evaluate management’s response to the report summarizing the findings, including remediation plans and time frame
- Assess the qualifications of staff or vendors performing the validation

This process is analogous to regulatory review of bank lending. When looking at loan files, examiners do not usually rely exclusively on the review work performed by loan officers and loan review staff, but also look at original financial statements and other documents to verify the loan was properly underwritten and risk graded. Similarly, examiners review developmental evidence, verify processes, and analyze model output not to validate the model, but to assess the adequacy of the bank’s ongoing validation.

Components of Validation

Developmental evidence
The review of developmental evidence focuses on the reasonableness of the conceptual approach and quantification techniques of the model itself. This review typically considers the following:
- Documentation and support for the appropriateness of the logic and specific risk quantification techniques used in the model
- Testing of model sensitivity to key assumptions and data inputs used
- Support for the reasonableness and validity of model results

Process verification
Process verification considers data inputs, the workings of the model itself, and model output reporting. It includes an evaluation of controls, the reconciliation of source data systems with model inputs, and the usefulness and accuracy of model outputs and reporting.

Such verification also may include benchmarking of model processes against industry practices for similar models.

Outcome analysis
Outcome analysis focuses on model output and reporting to assess the ability of the model to predict. It may include both qualitative and quantitative techniques:
- Qualitative reasonableness checks consider whether the model is generally producing expected results
- Back-testing is a direct comparison of predicted results to observed actual results
- Benchmarking of model output compares predicted results generated by the model being validated with predicted results from other models or sources

Conclusion
ALLL methodology validation is a requirement. This process will verify that models are performing as expected and reveal any potential limitations. Validation needs to be conducted on an ongoing basis.

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The components of the validation process include: a review of the developmental evidence which will focus on the reasonableness of the approach and the quantification techniques; verification of the process itself; and outcome analysis where the focal points are output and reporting.

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