

Operationalize Strong Risk Model Governance

Succeed by setting up effective model risk governance frameworks with clearly defined responsibilities and tight controls



Business Impact

"SAS has been positioned as the leader in Chartis Research's 2017 Model Risk Governance RiskTech Quadrant."

*Chartis Enterprise GRC Solutions
Market Update for 2017*

Challenges

- **Increased model risk.** As models grow more complex (for example, by incorporating machine learning), banks take on greater model risk. Understanding and governing complexity and risk is essential.
- **Inability to enforce best practices enterprisewide.** With a fragmented model governance approach, there's often little integration with siloed model development ecosystems, resulting in a limited view of model risk across the enterprise.
- **No integrated model information system.** To comply with regulations, banks need reliable model risk management practices that ensure all risk categories related to models are identified, monitored and controlled.
- **Cost and resource constraints that hinder delivery of high-quality model documentation.** This documentation is critical to properly controlling model development, testing, implementation, use and validation.

The Issue

Good model risk governance is vital for all financial intuitions. For example, banks exposed to accounting credit impairment reporting (IFRS 9/CECL), evolving stress-testing programs that affect capital planning, and new regulatory requirements such as Solvency II and Basel III and IV all require comprehensive model validation. Effective model risk management is also essential to gaining shareholder confidence and complying with regulatory requirements from regulators and supervisors such as the Office of the Comptroller of the Currency (OCC), the European Banking Authority and the US Federal Reserve.

In addition, while machine learning (ML) enables models to improve automatically through experience, it also increases model risk by making them more dynamic. As a result, models need frequent performance monitoring, constant data review and benchmarking, better contextual model inventory understanding, and well thought out, action-ready contingency plans.

The implications for your bank are significant. It's more important than ever to have clear oversight of your organization's model risk life cycle so you can report to executive management and regulators with absolute accuracy. You also need a way to easily identify models that are vital for guiding the direction of your business and deploy risk mitigation and cost-reduction strategies that improve model implementation and operations.

Our Approach

With SAS®, you can understand and control model risk by creating a fully integrated model risk life cycle. Now you can manage, document, validate and audit models to support internal decision-making processes. Our software and services help you:

- **Validate models.** Independently review and validate all models to support existing supervisory guidance and business requirements. For example, the Comprehensive Capital Analysis and Review recommends that banks maintain an inventory of all models used in the capital process that produce projections or estimates on revenue or loss projections.
- **Organize models.** Design a model candidate assessment, a complete model inventory management module and an end-to-end model validation process.
- **Set policy and documentation protocols.** Perform model-related issue tracking and enable thorough documentation and policy management for effective challenge and remediation plans.
- **Easily share information.** Construct and disseminate reports with bundled tools for effective top-down model risk reporting.

With SAS, you can establish end-to-end governance of your entire model risk management life cycle, from risk identification to risk assessment. Now you can:

- **Manage the entire life cycle.** With proven data management, model risk assessments and centralized model inventory management, SAS provides complete document and workflow management, regardless of model type, model source or technology used to develop models.
- **Automate performance monitoring.** Better understand how well models are performing by automating monitoring via threshold alerts and findings.
- **Understand model context.** SAS exposes the relationships between models and the risks of interconnectedness within your model inventory.
- **Apply governance to ML and artificial intelligence (AI) in models.** Intelligent automation saves skilled modelers and validators time when creating documents used to govern AI and ML.
- **Capture model usage data systematically.** Systematically capture the execution of models in any environment and enable regulators to fully understand how models are being used.
- **Operate a repeatable, reliable and auditable process.** SAS makes it easy to track reviews, document assumptions, classify models and monitor performance.
- **Create a comprehensive, flexible workflow.** Streamline processes for model limitation scoring, validation results, criticality ratings and modeling of interdependent relationships.
- **Maintain a single source of model documentation.** Review models by model lineage, version, business line, model owner or customized factors.
- **Disseminate information across the enterprise.** Design reports once and then distribute and publish them anywhere.

A global financial institution

Situation

The chief model risk officer (CMRO) wanted to be more efficient, save time and money, and reduce complexity. Managing information around the entire model life cycle had grown increasingly labor-intensive and time-consuming. Everyday tasks – from creating risk indicators for management and responding to regulatory requests to handling compliance audits – all while adhering to policy requirements – were too complex. In addition, the CMRO wanted to stop building a model for every business problem, as this only increased workloads.

Solution

Using SAS Model Risk Management, the CMRO built a central repository that made it easy to identify and understand all models in the company's model risk inventory. Now, model risk management is centralized. Actual model development, testing, validation and implementation remains the responsibility of the business units.

Results

Within three months of using the SAS solution, this financial institution has:

- Decreased time spent managing models.
- Better utilized analytical staffing.
- Granted more users accessibility while encouraging model reuse.
- Made it easier to meet regulatory requirements.
- Provided executives with a dashboard of information on aggregated model risk, complete with drill-down capabilities.
- Made its model risk management program audit-ready.

Inventory and Manage All Models

What if you could centrally inventory and manage all models regardless of model type, model source (in-house and third party) or technology used to develop the models?

Support Governance

What if you could provide support for the model validation and governance process in accordance with the supervisory guidance on model risk management?

Define Quantitative Models

What if you could establish a systematic process for assessing if potential candidates subscribe to the OCC definition of a quantitative model?

SAS Facts

- SAS ranked as a category leader in the Chartis RiskTech Quadrant® for Model Risk Governance 2017, recognizing the software's "completeness of offering" and "market-share potential."
- More than 90 of the top 100 global banks use SAS.
- SAS customers make up 96 percent of banks in the Fortune Global 500®.

Learn more about SAS software and services at sas.com/risk.

To contact your local SAS office, please visit: sas.com/offices

