



Model Validation & Governance

HOSTED LIVE ONLINE

COURSE DATES

July 8, 2024 to July 11, 2024

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TIMES

July 8:	1 - 4pm ET
July 9:	1 - 4pm ET
July 10:	1 - 4pm ET
July 11:	1 - 4:30pm ET

Overview



The Course

Financial institutions' inventory and complexity of models continues to rise substantially. Banks are increasingly using models built with advanced analytical methodologies for their decision-making. Model Risk Management (MRM), when done correctly, assists firms in critical areas such as capital allocation and stress testing. With increasing automation and digital processes becoming a regular portion of business processes, the need for effective and efficient MRM has never been greater. These models are a very large source of risk as financial institutions are increasingly reliant on them and errors in coding can result in losses of hundreds of millions of dollars. Sometimes, the use of model outputs is the source of critical mistakes where large key risk measures are misunderstood and/or ignored, giving rise to large market losses, as witnessed in recent months across the financial services industry.

This learning opportunity will explore best practices for conducting MRM in financial institutions by utilizing case studies on topical risk quantification models. Participants will enhance their knowledge in MRM to better develop and implement effective procedures for model validation and model governance that meet regulatory expectations.

This course is designed to facilitate peer-to-peer discussion for enhanced learning, benchmarking against best practices and real-life examples, and interaction through Q&A and polls.

Who Should Attend?

This course will be beneficial to banks of varying sizes who may be looking to stand up their own model validation and governance program, better understand the outsourcing of their models and validation, or benchmark to best practices. Relevant departments in financial institutions may include but are not limited to:

- Model risk management
- Credit risk management
- Regulation
- Credit model development
- Artificial intelligence (AI)
- Audit
- Enterprise risk management

Participants should have some prior exposure to risk modeling.

Key Features

- Pre-course questionnaire to establish your individual and business concerns
- Practical exercises and case studies throughout the course to support the sessions
- A certificate of completion is available for download after the course
- Opportunity to benchmark the state of your organization's Model Validation & Governance

Program Highlights

Delegates attending this course will learn about:

- Guiding principles for comprehensive model risk assessment
- Designing and implementing a framework and infrastructure for managing, monitoring, and reporting model risk
- Tracking model misuse and model change management for minimizing model risk
- Distinct sources of model risk in ML models and how to measure them
- Strengthening understanding of model risk regulations and expectations
- Why effective model risk management is more than just compliance

What our clients are saying about our courses

"Lots of takeaway, lots of food for present and future thought."
—BNP Paribas

"Very intensive and interesting course. Great trainer with as complete a knowhow as is possible for this big topic. Great insights and good solutions to use in mastering the coming situation."
—HVB Unicredit

"Excellent. Not what I expected, but better; it put the model into a comprehensive perspective."
—Barclays

"Very good, lots of content and applicable and interesting real-life stories/examples."
—Morgan Stanley



Session One

Model Validation Defined

- What is model risk
- Model life cycle
- Rating model risk
- Model validation and model governance
- Guiding principles for comprehensive model assessment
- Conceptual vs. technical soundness
- Vendor models
- Quantification of model risk

Model Risk Management (MRM) framework

- Regulations and brief history
- Roles and responsibilities within the organization
- Model modification management
- Model risk reporting
- Towards a model risk corporate policy
- Standards and procedures

Assignment: Questionnaire on current state of MRM at your organization to benchmark against best practices

Assignment: Run statistical tests on output of a model to assess its performance. Gives hands-on experience performing quantitative validation.

Session Three

Case Study Two: Current Expected Credit Losses (CECL)

- CECL standard overview and comparison with other regulations
- Regulatory and audit expectations
- Assessing distinct sources of uncertainty for model risk in CECL
- Evaluating model adjustment and overlays
- Validation of third-party models

Case Study Three: Stress Testing

- Top-down vs. bottom-up stress testing
- Regulatory and company-run scenarios
- Validating the scenario narrative
- Back-testing of stress testing models
- Stress testing for model risk vs. stress testing for risk management

Session Two

Infrastructure for Managing Model Risk

- Planning
- Pre-validation checklist
- Comprehensive model assessment
- Inventory management (qualitative and quantitative testing)
- Ongoing monitoring and review
- Example of an end-to-end process for model risk management

Case Study One: Credit Risk Models

- Credit risk rating/scoring models
- Regulatory guidance
- Conceptual soundness of credit risk models
- Tests for technical soundness by model type
- Evaluate model use test
- Example of tracking model misuse

Session Four

Guest Speaker – MRM from the Trenches

Model Risk in Machine Learning (ML) Models

- Applications of ML in risk management
- Regulatory perspective on ML and model risk
- Distinct sources of ML model risk: bias/variance, transparency, explainability
- Validation of ML models
- Application of ML to model risk management

Discussion

- Assignment results
- Course recap

Instructor



"With increasing automation and digital processes becoming a regular portion of business processes, the need for effective and efficient MRM has never been greater."

Team



Grigoris Karakoulas

President, InfoAgora Inc.

Grigoris Karakoulas is a visionary business leader combining over 26 years of risk management and predictive modeling experience. He is the president and founder of InfoAgora (infoagora.com) which since 2004 provides risk management consulting, predictive risk analytics, price optimization, economic scenario generation, CECL/IFRS9/stress testing and climate stress testing solutions as well as model validation services.

He is also Adjunct Professor in the Department of Computer Science at the University of Toronto. Grigoris has published over 40 papers on predictive modeling and risk management.

He is on the PRMIA subject matter boards for Stress Testing and Enterprise Risk Management. He holds a PhD in Computer Science (Artificial Intelligence).



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About Risk Management Association (RMA)

Founded in 1914, the Risk Management Association is a not-for-profit, member-driven professional association whose sole purpose is to advance the use of sound risk management principles in the financial services industry. RMA promotes an enterprise approach to risk management that focuses on credit risk, market risk, and operational risk. Headquartered in Philadelphia, Pennsylvania, RMA has 1,600 institutional members that include banks of all sizes as well as nonbank financial institutions. They are represented in the Association by 55,000 individuals located throughout North America, Europe, Australia, and Asia/Pacific.

