Model Risk Management For Financial Institutions

Program – December 3

9:00 a.m. – 9:05 a.m.

Opening Remarks from the Chair

Cassandra Tontini, Director- Risk Modelling Services, PricewaterhouseCoopers LLP

9:05 a.m. – 10:30 a.m.

Understanding OSFI Model Risk Management Guideline (E-23) and Pending Changes in Draft Guideline

John Belmonte, Senior Manager, PricewaterhouseCoopers LLP

Shin Ng, Senior Manager, PricewaterhouseCoopers LLP

- Overview of Guideline E-23 and Draft Guideline E-23
- Explanation of the regulatory definition of models
- Identifying models used in financial enterprises
    - where are they used
    - how are they used and understanding the functions they perform

- Scope application to models – E-23 and Draft Guideline
- Explanation of the model lifecycle – key stages and processes
- Model Risks OSFI wants managed – financial and non-financial
    - issues raised by AI and Machine Learning

- Required steps for model risk management
- Disclosure and reporting – what you need to know

10:30 a.m. – 10:45 a.m. – Morning Networking Break

10:45 a.m. – 12:00 p.m.

Examining Regulatory Regimes Affecting Models, Model Risk, AI/ML and Data – Canada, US, International

Shane Morganstein, Associate, Borden, Ladner, Gervais LLP

Anjali Mankotia, Managing Legal Counsel, Royal Bank of Canada

Regulatory Treatment of Models and Model Risk in Financial Institutions

- Highlighting regulations and statutes affecting models and model risk (including related issues)
- Examining overlap of parallel requirements both Canadian and foreign
- How to develop a comprehensive compliance and reporting process
- Understanding differences in terms and objectives of differing requirements
- Establishing primary or coordinated governance responsibilities
- Ensuring your oversight framework is complete, comprehensive and remains up to date
- Implications of inadequate oversight/governance

Restrictions on Data Usage – OSFI, Canadian and International Regulations/Laws

- Legislative restrictions on data usage
  - PIPEDA
  - Federal and provincial privacy laws
  - GDPR
  - Anti-spam regulations

- Specific legal and regulatory requirements for financial institutions
  - Bank Act
  - OSFI requirements for banks, insurers and pension funds including data governance
  - FSRA guidance for credit unions
  - provincial laws and regulations for financial services

- Emerging trends and challenges
  - data used for artificial intelligence and machine learning
  - cross-border data transfers/usage
  - OSFI operational resilience compliance
  - increasing penalties for non-compliance

12:00 p.m. – 1:00 p.m. – Luncheon

1:00 p.m. – 2:00 p.m.
Data and Digital Risks for Effective Management

Nicolas Gemin, Risk Leader for Insurance, Deloitte LLP

Andreas Witz, Data Risk and Compliance Leader, Deloitte LLP

- Importance of Data Risk for Banks and Insurers
- OSFI E-21 Data Risk and Impact on Bank and Insurers
- Addressing Common Data Risk Challenges
- Evolving Data Governance for Modern Data Risk Management
- Building a Mature AI Risk Management Framework and AI Solutions
- Leveraging Data Risk as Business Advantage

2:00 p.m. – 2:45 p.m.
Impact of E-23 on Organizational Structure/Processes and Governance

Carla Crichlow, Senior Manager, Actuarial Consulting, Oliver Wyman

Dean Rootenberg, Senior Principal, Actuarial Life Consulting, Oliver Wyman

- Getting E-23 structure in place – establishing working group and implementation plan
- Delineating, and implementing a model risk management framework
  - identifying the essential elements of the framework

- Understanding organizational model/data exposures including reputational risk
- Implementing tools to measure/monitor model risk including data governance
- Inclusion of model related risks into the risk appetite framework
- Defining roles and responsibilities relative to other parts of the organization, e.g., business, audit, compliance
- Inclusion of model related risks into the risk appetite framework
- Development of KPI's
- Risk management oversight – what needs to be done?
- New challenges for model risk management and oversight

2:45 p.m. – 3:00 p.m. – Afternoon Networking Break

3:00 p.m. – 4:00 p.m.
Governance and Internal Controls Related to Model Risk Reporting

Ulana Oswald, Partner, Ernst & Young LLP

Wissem Bouraoui, Senior Manager, Ernst & Young LLP

- Role of internal controls for model risk management and reporting
- Developing a reporting control framework methodology including non-financial considerations
- Entity-level internal controls related to models and model risk including
  - managing changes to models
  - decommissioning of models
  - ongoing matters affecting model data – new data, obsolete data
  - completeness of model inventory
  - Defining the three lines of defense in model risk management
  - Reliance on 3rd party service providers for model and data services
  - evaluation of controls in place for service providers

- Applying the COSO framework for model risk reporting controls
- Data integrity and accountability
- Continuous monitoring of processes and controls

4:00 p.m. – 5:00 p.m.
MRM Documentation Summary and Critical Highlight

Alison Rose, Partner – Life and Pensions Actuarial, KPMG LLP

Simmy Leung, Senior Manager, Actuarial, Risk and Insurance Services, KPMG LLP

- Summary of regulatory requirements for model risk management documentation
- Main topics of documentation and key elements
  - model development
  - model validation
  - model governance and oversight
  - model performance and monitoring

- ○ regulatory compliance
  - ○ stress testing and scenario analysis
  - ○ model retirement and decommissioning

- Items to consider not addressed by specific headings
- Relationship to data management and governance documentation expectations
- Who owns the documentation process?
- Linking documentation to financial/regulatory reporting

5:00 p.m. – End of Day 1

Program – December 4

9:00 a.m. – 9:05 a.m.

Opening Remarks from the Chair

Cassandra Tontini, Director- Risk Modelling Services, PricewaterhouseCoopers LLP

9:05 a.m. – 10:10 a.m.

"Fireside Chat" – Practical Perspectives on MRM and E-23 – Lessons Learned in Banking and Insurance

Matt Devine, Partner – Financial Services Risk and Regulatory, PricewaterhouseCoopers LLP
Mark Jarvis, Assistant Vice President – Corporate Model Risk Management, Sun Life
Satish Kumaraswami, Vice President – Global Model Risk Management, Scotiabank

10:10 a.m. – 11:00 a.m.

Examination of Tools for Model Risk and Data Risk Management

Ulana Oswald, Partner, Ernst & Young LLP
Wissem Bouraoui, Senior Manager, Ernst & Young LLP

- Model risk governance platforms
- Data management and quality tools
- Model development and deployment tools

- Workflow automation and collaboration tools
- Regulatory compliance tools
- AI/ML-specific MRM tools

11:00 a.m. – 11:15 a.m. – Morning Networking Break

11:15 a.m. – 12:05 p.m.
Applying E-23 to Non-Traditional Models Including Gen AI, MLM

Debanjan Bandyopadhyay, Manager, PricewaterhouseCoopers LLP

Divya Tulapurkar, Director, PricewaterhouseCoopers LLP

- E-23's expectations for non=traditional models
- LLM/RAG validation design
- Mixture of Experts model design
- Roadmap to compliance

12:05 p.m. – 1:00 p.m. – Luncheon

1:00 p.m. – 2:00 p.m.
Model Validation – Traditional Models, GenAI and Others

Maximillian Boermann, Senior Manager, Risk Consuting Services, KPMG LLP

David Tang, Senior Manager – Data Analytics and Data Science, KPMG LLP

- Regulatory background for model performance validation
- Focus topics for model validation

  Theoretical Review
  - Use of models from traditional to GenAI
  - Quality and appropriateness of model with focus on GenAI
  - Model risk rating

Performance Testing Metrics

- Library of performance measurement metrics between traditional and GenAI
- Fairness audit for ethical and bias risks

2:00 p.m. – 2:50 p.m.
Applying E-23 to Climate Risk Models

Anna Kryshtopenko, Senior Actuarial Consultant, KPMG LLP

- Examination of unique risks presented by climate risk models
  - scenario analysis
  - geospatial analysis
  - financial impact quantification
  - dynamic modelling

- Highlighting the data requirements for climate risk management
  - data risk arising from climate risk management that must be managed
    - data quality
    - data relevance
    - emerging metrics
    - projections and uncertainty
    - third part dependencies
  - Integration into existing risk management processes
  - Integration with risk management frameworks

2:50 p.m. – End of Conference