MODEL GOVERNANCE & RISK MANAGEMENT

FMS NJ/NYC Chapter Meeting

MAY 18, 2016



AGENDA

Model Governance

- What is Model Governance?
- Guidance from SR 11-7/OCC 2011-12
- Common issues with a Model Governance Program

Risk Management

- What is risk management?
- Three lines of defense
- Typical Risk Management Framework
- Enterprise Risk Management
- Typical Enterprise Risk Management Framework
- ERM examples
- Common issues with Risk Management



What is Model Governance

- Model Governance is the oversight structure for managing risk related to the development, use, reporting and validation of models. Model Governance in Financial Institutions is typically managed by some sort of model risk management function that reports to the Board of Directors.
- The regulatory expectation is that most Banks develop a model governance function.
 - This becomes a requirement if a Bank is at least \$10 billion in assets.



Model Governance – Guidance from SR 11-17/OCC 2011-12

- SR 11-17 and OCC 2011-12 focus on the following:
 - Governance, Policies and Controls
 - Model Development, Implementation, and Use
 - Model Change Control
 - Model Inventory
 - Model Validation
 - Model Reporting



Common Issues with Model Governance Program

- Inadequate model governance policies and procedures
- Inappropriate governance structure
- Inaccurate and or incomplete model inventory
- Inadequate change control process
- Inadequate documentation around model design, implementation and use
- Inadequate model validation processes
- Inadequate model risk reporting



What is Risk Management?

 Risk management is the process of identification, analysis and either acceptance or mitigation of uncertainty. Financial Institutions are required to build a risk management framework that is properly aligned with their structure, client profile and activities.



Why is Risk Management Important?

Business volatility, complexity and increasing risk is dominating the landscape for all financial institutions. Financial Institutions have started to respond but the journey is challenging and new thinking is needed if risk management is to improve resilience and enhance value creation

Business **volatility** and economic **uncertainty** are here to stay – increasing resilience is the order of the day

Business model **complexity** is stifling performance and creating **inefficiency**

Speed of business change is rapid – increased speed of response and corporate agility is needed

The current internal and external environment has created increased risk, risk complexity and risk velocity

Exercising control across the business model is challenging - dominated by a critical web of third party relationships and geographic spread

The emergence of **new/changed risks** requires improved oversight rigor and access to new skill sets

Stakeholders are asking for more complete answers to more challenging questions - regulation continues to drive onerous compliance requirements



A holistic view of risk

What is a holistic view of risk?

- Aggregated risk exposures across the enterprise
 - For example, concentrations by business line, product, customer segment, industry, or geography
- Consideration of all types of risk, including interactions between risks
- Consideration of alternative, forward-looking scenarios

Risk types vary and include:

- Operational risk
- Liquidity risk
- Strategic risk
- Market risk
- Compliance risk
- Reputational risk
- Legal risk
- Environmental
- Security
- Country



Why do Financial Institutions need to improve Risk Management?

- Regulatory Requirement
- Competitive Advantage
- Take more risk (aligned with appetite)
- Major Surprise or History of Losses / Underperformance
- Board accountability
- Enhance organizational collaboration and culture alignment



Integrating Risk Management into decisionmaking

- To be effective, risk management must be integrated into day-to-day business line activities and corporate decisions
 - Risk Managers must be involved at the onset of strategy setting processes
 - Risks associated with new products should be considered and communicated to the board
 - Analysis of emerging risks and stress tests should influence business decisions
 - Risk information should be shared across the company to avoid the same event recurring



Risk Management – Three lines of defense

- Every organization regardless of size should have a risk management structure based on the three lines of defense model:
 - First line of defense Business operations: Perform day-to-day risk management activities
 - Second line of defense Management oversight functions: Various committees provide set policies and provide compliance and oversight
 - Third line of defense internal audit providing independent assurance

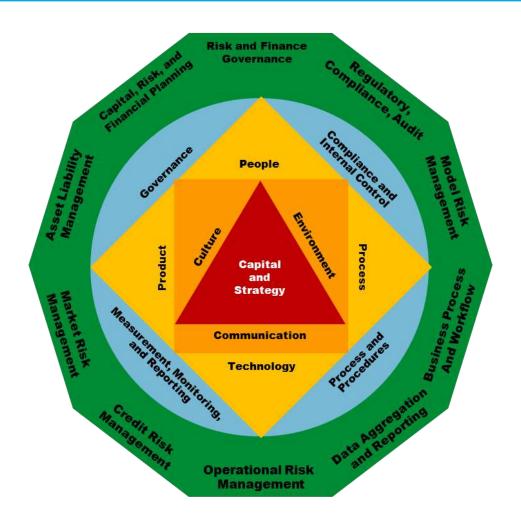


Risk Management - Three lines of defense

The Three Lines of Defense Model Source: Institute of Internal Auditors (IIA) **Governing Body / Board / Audit Committee Senior Management** External audit Regulator 1st Line of Defense 2nd Line of Defense 3rd Line of Defense Financial Control Security Internal Risk Management Management Internal Control Controls Audit Quality Measures Inspection Compliance



Typical Risk Management Strategy/Framework





Enterprise Risk Management (ERM)

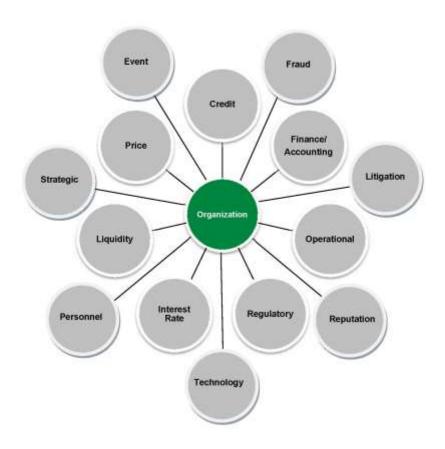
• Enterprise risk management (ERM) is the process of planning, organizing, leading, and controlling the activities of an organization at the enterprise level in order to minimize the effects of risk on the organization's operations.



ERM Awareness

Risk factors associated with accounting, regulatory compliance, information technology, strategy, operations and other aspects of your business can be difficult to manage because these functions are rarely integrated and have their own unique management challenges.

Enterprise Risk within a Typical Organization





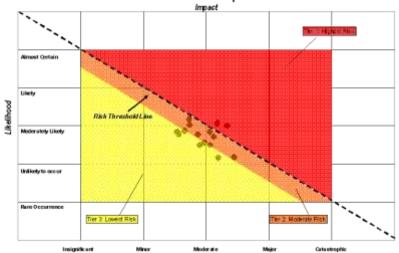
Typical Enterprise Risk Management Strategy/Framework

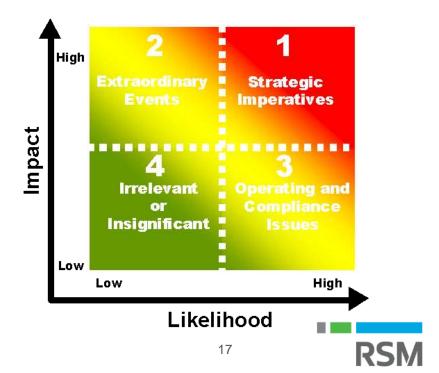




ERM Examples

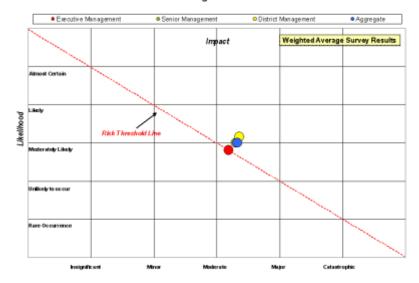




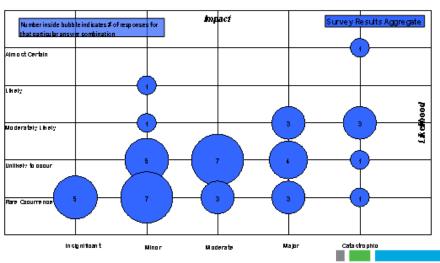


ERM Examples

Question 31: How likely is it that the company would fall to meet strategic goals?



Question 42: How likely is it that the company's external financial and operating reporting information is incomplete?



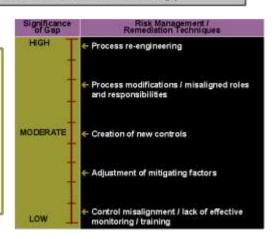
ERM Examples

AVOID	Divest
RETAIN	Accept Plan Self insure
REDUCE	Mitigate
TRANSFER	 Insure Reinsure Securitize Share Outsource Indemnity

Gap Remediation Strategy

Considerations Impacting Risk Management / Remediation Techniques

- · Severity/Volatility of Risk
- Process Complexity
- Availability of Data
- Desired Capability
- Cost Benefit Analysis
- Time to Correct
- · Cross-silo Implications





Common Issues with Risk Management Program

- Inadequate risk management policies and procedures
- Lack of an effective Enterprise Risk Management Structure
- Inappropriate governance structure
- Ineffective "Effective Challenge" across three lines of defense
- Inability to identify changing risks due to internal and external factors
- Inadequate risk reporting



Q&A



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