

# Risk Management Case Studies

Over the last 30 years, Treasury, Risk, & Audit Consulting (TRAC) has offered the following Risk Management Consulting services to large, medium, and small banks.

- Enterprise Risk Management
- Operational Risk Management
- Compliance Risk Management
- Credit Risk Management
- Liquidity Risk Management
- Market Risk Management
- Model Risk Management
- Data Risk Management
- Interest Rate and Foreign Exchange Risk Management

# Enterprise Risk Management

**Project Overview:** Worked with a big 4 accounting firm to establish an Enterprise Risk Management (ERM) practice to assist several Clients to develop their ERM framework, methodology, policies and procedures, board governance, management oversight, risk identification, risk assessment, risk monitoring, risk aggregation and risk reporting practices and lay the groundwork to establish the firm's risk appetite, risk culture, risk measurement, and risk mitigation.

**Value Add:** Developed the ERM framework, board and senior management reporting, risk appetite methodology, scenario analysis workshops to identify key risks, assess frequency and severity, and document risk mitigation action plans.

# Operational Risk Management

**Project Overview:** Worked with a large Systemically Important Bank (USD 1.5 trillion in total consolidated assets) to define it's risk appetite, streamline it's risk management culture, establish the framework and methodology for the identification, assessment, measurement, monitoring, and reporting of it's Operational risks after the financial crisis and it's merger to enhance its Governance, Risk Management, and Internal Controls in line with Basel and US regulatory expectations and industry best practices to prepare the firm for enhanced Supervision.

**Value Add:** Suggested enhancements to internal and external loss data collection, risk control self assessment, risk identification, risk measurement, board and senior management monitoring and reporting, limit framework, compliance with Basel requirements which helped the firm de-risk and face increased supervisory examination expectations but also prepared the firm for further growth.

# Compliance Risk Management

**Project Overview:** Worked with a large (USD 200 billion in total consolidated assets) bank to establish the framework and several compliance programs for the identification, assessment, monitoring, and reporting of its Regulatory Compliance risks in its Capital Markets businesses to enhance Governance, Risk Management, and Internal Controls in line with Basel and US regulatory requirements and expectations and industry best practices to prepare the firm for enhanced Supervision.

**Value Add:** Suggested enhancements to compliance risk assessment, compliance risk monitoring, surveillance and testing, and board and senior management reporting for increased supervisory examination expectations and prepare the firm for further growth.

# Credit Risk Management

**Project Overview:** Worked with a large (USD 200 billion in total consolidated assets) bank to establish the framework and program for the identification, assessment, monitoring, and reporting of Counterparty Credit risk in it's Capital Markets businesses to enhance Governance, Risk Management, and Internal Controls in line with US regulatory requirements and expectations and industry best practices to prepare the firm for enhanced Supervision.

**Value Add:** Suggested enhancements to counterparty credit risk measurement, risk monitoring, and board and senior management oversight and reporting for increased supervisory examination expectations and prepare the firm for further growth.

# Liquidity Risk Management

**Problem:** Worked with a large bank (\$200 billion in total consolidated assets) to enhance their liquidity stress testing and second line liquidity risk management areas to remediate FRB regulatory MRIA and MRA to ensure full compliance with FRB Regulation YY Enhanced Prudential Standards.

**Value Add:** The FRB (their primary regulator) closed the 2 MRAs related to Liquidity Project Plan (to enhance LCR and FRB 6G regulatory reporting) and Second Line Liquidity Risk Management Oversight and the four MRAs related to Liquidity Stress Testing, Liquidity Limits, Cashflow Projections, and Contingency Funding Plan. Developed a roadmap to enhance the data management and regulatory reporting areas for compliance with US Liquidity Coverage Ratio (FRB Regulation WW) and FRB 6G reporting instructions including infrastructure controls (such as interface, configuration, system parameter, change management, regulatory engine) and data integrity controls (such as reconciliations, variance analysis, approval, edit checks, data hierarchy, critical data elements, data mapping, data hierarchy, data lineage, business rules).

# Market Risk Management

**Project Overview:** Worked with a large GSIB (USD 1.8 trillion in total consolidated assets) nationally chartered bank to audit the Basel 2.5 Market Risk Rule compliance requirements based upon internal models approach for default risk, ratings migration risk, VaR, and stressed VaR. The audit scope included: risk framework, governance (policies/procedures, board and management oversight, roles and responsibilities, delegation of authority), trading mandates, Risk P&L attribution, risk limits, exposure calculation, use of proxy data, risk models, risk metrics (VaR, greeks, vol., correlation ), stress testing, scenario analysis, risk reporting, market risk capital, etc.

**Value Add:** Suggested enhancements including governance (policies and procedures, board and senior management oversight), risk measurement, risk monitoring and reporting.

# Model Risk Management

**Project Overview:** Worked with a large size (USD 550 billion in total consolidated assets) national chartered bank to complete internal audit of Model Risk Management which covered a variety of models (ALM, Risk Analytics, Valuations, Finance, and Stress Testing) and the scope included:

- Governance (Policy, Standards & Procedures; Board & senior management oversight and reporting),
- Staffing (adequacy, competence, training, independence, stature, incentives, external resource use),
- model risk appetite and model risk assessment,
- model identification and designation; model inventory; and change management,
- model documentation (development, implementation, and use),
- performance monitoring, and
- model validation and approval, compensating and use controls, and issue resolution.

**Value Add:** Suggested several enhancements in the audit approach, scope, depth and breadth of coverage which resulted in value add recommendations related to model methodology, conceptual soundness, outcome analysis, use of compensating controls and overlays, benchmark and challenger models.

# Data Risk Management

**Project Overview:** Worked with a nationally chartered Global Systemically Important Bank (USD 1.8 trillion in total consolidated assets) to audit the Data governance program which included data hierarchy, data mapping, data dictionary, data lineage, data sourcing and aggregation, reporting, reconciliations, attestations, Critical Data Elements, etc.

**Value Add:** Suggested enhancements related to senior management oversight, ownership/accountability, data validation/business rules, data aggregation, reporting, and data taxonomy.

# Interest Rate and Foreign Exchange Risk Management

**Project Overview:** Worked with a large financial services firm (USD 550 billion in total consolidated assets) to audit the asset liability management/interest rate risk and foreign exchange risk management program to ensure effective governance, risk management, and internal controls.

**Value Add:** Suggested several enhancements related to board and senior management oversight and reporting; risk appetite, risk measurement (basis risk, prepayment risk, credit spread risk, NII@Risk, EVE@Risk, VaR, etc.); exposure monitoring and limit excess approval and escalation; stress testing; hedging strategies; and model risk management.