



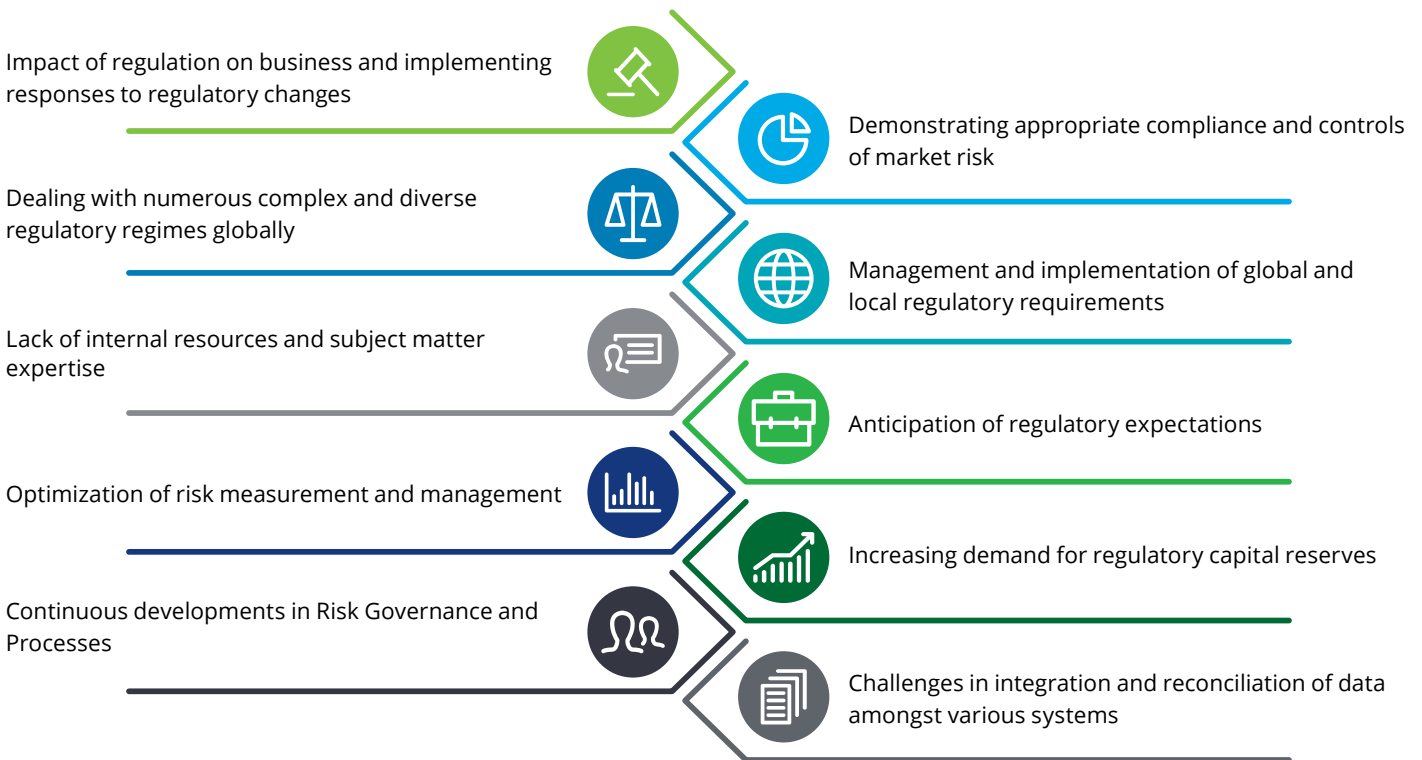
Market Risk & Asset Liability Management

April 2018

In the wake of the recent upheavals, market risk and asset liability management is undergoing significant change with stringent risk assessments. Regulators have begun to demand more transparency. They want to know the market risk profile, including short term profit and loss (P&L) volatilities and long term economic risk, understand how much risk has been accumulated by the banks and how the aggregate risk compares with the bank's approved risk appetite. Further, new regulations have a potential of creating bigger regulatory burden for banks. Effective market risk management can therefore help banks to navigate the ever-changing regulatory and business landscapes.

Risk management is the leap from simple risk controls to risk intelligence, which can identify the potential business growth opportunities.

Key challenges:



In our experience, the regulatory and governance monitoring landscape suggests that a centralized approach to risk management is required to address current and future market risk challenges.

Market Risk & ALM: Key Service Offerings

Market Risk identification, measurement and assessment	Systematic process to identify, measure and / or estimate risks through quantitative and qualitative assessment
	Benchmark the Risk Management Practices with best-in-class practices and provide recommendations
	Implementation of Integrated Risk Management, Basel II Advanced Approaches and system implementation specifically for market risk
Capital Planning	Calculation and measurement of Economic Capital
	Capital computation as per Standardized Approach of Revised Market Risk Guidelines i.e. FRTB Guidelines of BCBS.
	Identifying gaps in existing data, process and systems
Risk Based Performance Management	Computation of Risk Adjusted Return on Capital (RAROC) and Economic Value Added (EVA)
	Evaluation of Treasury Portfolios and recommend risk based portfolio optimization

Standardised Approach for Counterparty Credit Risk (SACCR):	Measurement of SACCR for the derivative instruments on the Bank's banking and trading books
	Measurement of potential future exposure (PFE) and replacement costs (RC) under SACCR
Credit Value Adjustment (CVA):	Computation of Basel III credit value adjustment (CVA) and debit value adjustment (DVA) capital charge
	Computation of Discounted Cash Flows and Standardized Approach as per the Basel III Guidelines
Interest Rate Risk in the Banking Book (IRRBB):	Assistance in regulatory capital treatment and supervision of IRRBB
	Development of interest rate risk framework as per regulatory guidelines
	Computation of economic value measure i.e. economic value of equity (EVE) and earnings measure i.e. net interest income (NII)
	Generation of interest rate shock scenarios (parallel and non- parallel) and conducting reverse stress testing under IRRBB
	Implementation of BCBS 368 guidelines including Conditional Prepayment Rate (CPR) modelling for asset classes, Term Deposit Redemption Rate (TDRR) modelling and Non Maturity Deposits (NMD) behavioural modelling
Stress Testing:	Generating stress testing scenarios as per the regulatory requirements and industry best practices
	Stress Testing for Market Risk based on Indian and Global Risk factors
	Assistance in Scenario and Sensitivity Analysis
	Generation of complex scenarios in valuation engines like R and FinCAD
Reverse Stress Testing:	Review of existing reverse stress testing themes, quantification methodology
	Reporting of reverse stress test results and MIS framework, including methods and templates used
Model Risk:	Development of challenger and champion models for business lines
	Conduct gap analysis of existing models
	Full life-cycle implementation of Model Risk Management – Liquidity Risk and Interest Rate Risk - (ALM)
Model Validation:	Validation of various market risk models and providing template
	Performing sensitivity analysis for models
	Validation of Stress Testing Module
Fundamental Review of the Trading Book (FRTB):	Assistance in implementation of FRTB framework
	Assistance in risk governance aspects, policies and procedures, limit framework, P&L Attribution, Trading Book/ Banking Book limit setting
	Development of FRTB compliant models and back testing eligibility criteria under FRTB
	Computation of FRTB capital charge as per the advanced approach and standardized approach
	Detailed benchmarking against peer practice for FRTB methodologies and models

Net Overnight Open Position (NOOP):	Validation and reconciliation of NOOP components between the front office and back/mid office
	Preparation of control Framework for monitoring the components of NOOP
Asset Liability Management (ALM)	Development, implementation and review of ALM framework/ systems like OFSAA
	Assistance in integrating ALM data into a unique platform where the input data is managed from risk areas (e.g. liquidity and Interest Rate Risk)
	Establishing pricing mechanism to be adopted into suitable asset liability pools depending on the cash flow and risk characteristics
Liquidity Risk:	Assistance in implementation of liquidity risk framework
	Computation of Basel III liquidity metric like liquidity coverage ratio (LCR) and net stable funding Ratio (NSFR)
	Performance of gap analysis of existing liquidity risk framework including processes, policies and governance structures and intraday liquidity reporting requirements
	Developing stress and reverse stress-testing models (qualitative and quantitative) for liquidity risk, ILAAP and behavioural modelling
Market Illiquidity:	Framework for computation of market illiquidity as per the client's positions Preparation of Market Illiquidity methodology
	Assistance in implementation of fund transfer pricing services

Deloitte also provides a host of customized solutions based on the need of clients.



The Deloitte Difference:



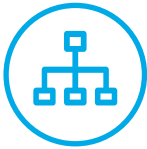
Industry Experience & Specialized Knowledge:

Deloitte’s professionals have extensive experience in managing large scale risk transformation projects and are supported by a team of Subject Matter Experts (SMEs) with extensive experience in risk and regulatory compliance engagements



Value Beyond Scope of Work:

Assist in periodic review of processes, provide issue repositories and insights based on multi-dimensional trend analysis



Centralized Quality Management:

Dedicated central quality review and management team prior to issuance of reports, conduct risk transformations



Effective Delivery Model:

Robust delivery model with effective combination of execution, supervisor and quality review capabilities with global delivery model approach for project execution with seamless integration across global teams



Pan India Presence:

Dedicated multi-locational Financial Services Team across locations to effectively service all client locations



Capability to support increasing volumes:

Our capability to support our clients in conducting timely reviews with adequate resourcing support on need basis

Our Experience and Specialization:

Deloitte named the global leader in **Risk Consulting**, based strategy and capability by IDC MarketScape

Dedicated multi-locational **Financial Services Team of over 175 members**

Experience of working with **10 large banks and the banking regulator in India and Middle East**

Deloitte has delivered multiple multi-year risk and finance transformation projects (Basel and other regulatory programs)

Deloitte has **rich experience in India and across the globe**, including the regulatory bodies, including working with the largest banks across the areas of Enterprise Risk Management (ERM), Risk & Capital Management and technology implementation

Experience of providing **services to the in-house departments and captive units** of more than **30 banks**, supporting them in **finance, market risk & system** initiatives

Provided **model validation, risk advisory and system automation services** to more than 20 banks for delivering on multi-year risk transformation initiatives

Worked with the **largest public sector, private sector and foreign banks** in India, providing **credit risk, market risk, Basel II reporting and model development / validation** services.

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