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Risk Management In The Banking Sector

The banking sector has a huge role to play in the development of the economy. Certainly, it is the driver of the economic growth of the country. It plays an important role in identifying the idle resources for their efficient utilisation to attain maximum productivity. However, this process involves risk. Banks are highly regulated in order to promote financial stability, foster competition, and protect consumers. And since the risk is directly proportional to returns, the more risk a bank take, the higher it can generate profits. Hence, it is very important to manage the risks and identify if they are worth taking.

In 2023, when the US and Europe banking turmoil had taken place, the then Reserve Bank of India Governor Shaktikanta Das had said "the recent developments in the US and Europe banking system drive home the importance of ensuring prudent asset liability management, robust risk management and sustainable growth in liabilities and assets in the banking sector, among others."

Risk management refers to identifying, assessing, and mitigating risks that banks face in their day-to-day operations. It is a comprehensive approach involving various risk management tools, techniques, and methodologies to manage risks effectively.The objective of risk management in banking is to minimise the impact of risks on the bank's operations, financial performance, and reputation.

Risks Faced By Banks

1. Credit Risk
2. Market Risk
3. Liquidity Risk
4. Operational Risk
5. Interest Rate Risk
6. Foreign Exchange Risk

7. Asset Liability Management Risk

8. Compliance Risk & Legal Risk

9. Counterparty Credit Risk

10. Concentration Risk

11. Country Risk

12. Solvency Risk

13. Climate Risk

14. Cybersecurity Risk

15. Reputational Risk

16. Strategic Risk

17. Fraud Risk

18. Environmental, Social And Governance Risk

19. Open Banking Risk

20. Systemic Risk

1. Credit Risk Management

Credit risk refers to the possibility of losses associated with diminution in the credit quality of borrowers or counterparties. Credit risk management is an ongoing process in the borrower's journey to examine credit risk according to their financial behavior. In a bank's portfolio, losses stem from outright default due to the inability or unwillingness of a customer or counterparty to meet commitments concerning lending, trading, settlement, and other financial transactions.

In simple terms, banks experience credit risk when assets in a bank's portfolio are threatened by loan defaults. Credit risk is a sum of default risk and portfolio risks.

Default risk happens due to the inability or unwillingness of a borrower to return the promised loan amount to the lender. Whereas, portfolio risks depend upon several internal and external factors.

Internal factors can be bank policy, absence of prudential limits on credit, lack of a loan review mechanism within the company, and more. External factors may include the state of the economy, forex rates, trade restrictions, economic sanctions, and more.

The presence of credit risk deteriorates the expected returns and creates more than expected losses for banks.

Stress Testing Methods For Assessment Of Credit Risk

1️⃣ Sensitivity Analysis

- Involves the impact of a large movement on single factor or parameter of the model
- Used to assess model risk, effectiveness of potential hedging strategies, etc.

2️⃣ Scenario Analysis

- Full representations of possible future situations to which portfolio may be subjected
- Involves simultaneous, extreme moves of a set of factors
- Reflects individual effects and interactions between different risk factors, assuming a certain cause for the combined adverse movements
- Used to assess particular scenarios (e.g., current forecast, worst-case) to gain better.

3 Event-driven Scenarios

Scenario is based solely on a specific event independent of the portfolio characteristics.

- Identify risk sources/events that cause changes in market
- Identify effects of these changes on the risk parameters

4 Portfolio-driven Scenarios

Scenario is directly linked to the portfolio:

- Identify risk parameters changes that result in a portfolio change. Identify events that cause the parameters to change
- May be drawn from expert analysis or quantitative techniques

5 Macroeconomic Scenarios

An shock to the entire economy that will affect industries to different degrees

- Occurs external to a firm and develops over time e.g.changes in unemployment in a region, movement towards a recession, etc.

6 Market Scenarios

A shock to the financial and capital markets :
This shock may be historical or hypothetical, though historic events help support the plausibility e.g. stock market crash of early 2000s, change in interest rates, shock to credit spreads in a sector.

7 Worst Case/Catastrophe Scenarios

Events are exogenous to the markets or economy, though impact arises through resulting changes. Such events are often tied to specific characteristics of portfolio or exposures, e.g. terrorist attack on major financial center, change in regulations or policies.

Factors Affecting Credit Risk Forecasting

For lenders to minimise credit risk, credit risk forecasting needs to be more precise. Here are some factors to consider:

Probability of default

Probability of default (PD) is the likelihood that a borrower will fail to pay their loan obligations, and lenders use it to assess the level of risk that comes with loaning money. For individual borrowers, the PD is typically based on two primary factors:

1. Credit score
2. Debt-to-income ratio

Loss Given Default

Loss given default (LGD) refers to the amount of money a lender is likely to lose if a borrower defaults on a loan, helping them predict and manage their risk exposure. LGD accounts for:

- Value of the collateral
- The type of loan
- The legal framework in which the lender operates

It helps lenders with credit risk management and make informed decisions about loan pricing and underwriting.

Exposure At Default

Exposure at default refers to the amount of possible loss a lender is exposed to at any point in time, allowing them to better manage their risk. It considers factors including:

- The outstanding principal balance
- Accrued interest
- Any fees or penalties associated with the loan

Tools For Credit Risk Management

1️⃣ Creating multi-tier credit approving system at origination of loan assets

2️⃣ Setting up prudential credit limits for lending in different sectors

3️⃣ Framing Of Credit Risk Policy

4️⃣ Risk rating of borrower's credit worthiness

5️⃣ Risk pricing of loan products based on borrower's credit score

6️⃣ Analytics for risk detection and control

7️⃣ Credit risk monitoring in real time

8️⃣ Loan review mechanism

2. Market Risk Management

Market Risk Management refers to the process of identifying & measuring the risk of losses in balance sheet & off-balance sheet items arising from changes in market prices viz. equity prices, interest rates, exchange rates, credit spreads & commodity prices. Banks are required to maintain a minimum amount of capital to account for this risk.

Example ■ The failure to prudently measure risks associated with traded instruments caused major losses in banks during global financial crises.

■ In 2013, when the US Fed indicated that it would look to taper its bond purchases, there was a massive sell-off globally & even Indian markets were not spared.

Measures of Market Risk (MR)

Value at Risk (VaR)

VaR is a statistic that is used in risk management to predict the greatest possible losses over a specific time frame. VaR modeling is a statistical risk management method that quantifies a stock's or portfolio's potential loss as well as the probability of that potential loss occurring.

VaR is defined as the maximum amount expected to be lost over a given time horizon, at a pre-defined confidence level. For example, if the 95% one-month VAR is ₹1 million, there is 95% confidence that over the next month the portfolio will not lose more than ₹1 million.

Under the parametric method, also known as variance-covariance method, VaR is calculated as a function of mean and variance of the returns series, assuming normal distribution. With the historical method, VaR is determined by taking the returns belonging to the lowest quintile of the series (identified by the confidence level) and observing the highest of those returns. The Monte Carlo method simulates large numbers of scenarios for the portfolio and determines VAR by observing the distribution of the resulting paths.

Sensitivity Analysis

Sensitivity analysis to market risk reflects the degree to which changes in interest rates, foreign exchange rates, commodity prices, or equity prices can adversely affect a financial institution's earnings or capital. Market variables like interest rates, exchange rates, asset prices, etc., impact businesses significantly. Analysts can analyse these variables to help organisations evade exposure to market risks and develop necessary hedging strategies.

Sensitivity analysis can be carried out manually or using a Microsoft Excel spreadsheet.However, manual calculations might seem challenging if the dataset is vast.

Stress Testing

It refers to measure of the average of all potential losses arising from bank’s market risk factors exceeding the VaR at a given confidence level, which makes up for VaR’s shortcomings in capturing the risk of extreme losses.

Expected Shortfall

Expected shortfall is a risk measure sensitive to the shape of the tail of the distribution of returns on a portfolio, unlike the more commonly used value-at-risk . Expected shortfall is calculated by averaging all of the returns in the distribution that are worse than the VAR of the portfolio at a given level of confidence. For instance, for a 95% confidence level, the expected shortfall is calculated by taking the average of returns in the worst 5% of cases.

3. Liquidity Risk Management

The main objective of liquidity risk management is to ensure sufficient reliable liquidity at all times and in the all circumstances. Effective liquidity risk management (LRM)helps ensure a bank's ability to meet cash flow obligations, which are uncertain as they are affected by external events and other agent's behaviour. LRM is of paramount importance because a liquidity shortfall at a single institution can have system-wide repercussions.

Liquidity risk refers to the risks resulted from an entity's failure to pay debts and obligations when come due because of its inability to convert assets into cash.

Characteristics Of Liquidity Risk

First, it is difficult to measure liquidity risk due to uncertain cash flow obligations, which depends on external events and on other agent's behaviour.

Second, the liquidity risk is likely unpredictable because a secondary event often occurs following another type of risk event.

Third, the severity of liquidity risk can grow rapidly and system wide connected.

Lastly, there is a tipping point beyond which recovery is impossible once a system faces liquidity crises.

Types Of Liquidity Shortages In The Banks

➡️Central Bank Liquidity

➡️ Market Liquidity

➡️ Funding Liquidity

Central bank liquidity is the term used to refer to deposits of financial institutions at the central bank. It is synonymous with reserves, or settlement balances. These reserve balances are held by financial institutions to meet reserve requirements, if any, and to achieve final

settlement of all financial transactions in the payments system. Individual institutions can borrow and lend these funds in the interbank market, but, for the system as a whole, the only source of these funds is the central bank itself.

Market liquidity refers to the ability to buy and sell assets in reasonably large quantities without significantly affecting price. This use of the term "liquidity" is closest to the common, textbook definition: the ease with which an asset can be converted into means of payment viz cash.

Funding liquidity refers to the ability of an individual or institution to raise cash, or its equivalent, again in reasonably large quantities, either via asset sales or by borrowing. As such, market and funding liquidity are closely linked.

The above types of liquidity shortages do not always occur in isolation. Important interdependencies exist and the occurrence of one can lead to another with dynamics that often reinforce one another.

Tools For Managing Liquidity In The Banks

- Availing Repo & Variable Rate Repo facilities & Marginal Standing Facility from the central bank by the banks.
- Availing intra day facility against reserves with the central bank.
- Sale of Govt securities under open market operations to the central bank.
- By borrowing funds from interbank market.

The Basel Committee has prescribed maintenance of two liquidity ratios at 100 % level viz.Liquidity Coverage Ratio (LCR) & Net Stable Funding Ratio (NSFR) & Comprehensive Liquidity Assessment Review (CLAR) for managing the liquidity risk.

LCR refers to the ratio of bank's stock of high quality assets to the estimated total net cash outflows over a 30 days period.
NSFR requires banks to maintain enough stable funding to cover the potential use of funds over a one year horizon.

CLAR tests a bank's ability to meet funding obligations under periods of stress.

4. Operational Risk Management

Operational risk refers to the risk of loss due to errors, breaches, interruptions or damages, either intentional or accidental, caused by people, internal processes, systems or external events.

Banks that take a comprehensive approach to operational risk management (ORM) recognise four broad areas that requires attention :

1 People

Even in a digital age, employees and the customers with whom they interact can cause substantial damage when they do things wrong, either by accident or on purpose. Problems can arise from a combination of factors, including intentional and illegal breaches of policies and rules, sloppy execution, lack of knowledge and training, and unclear and sometimes contradictory procedures. Unauthorised trading, for example, can cause billions in direct losses and multimillions more in regulatory, legal and restructuring costs.

2 Information Technology (IT)

Systems can be hacked and breached; data can be corrupted or stolen. The risks banks face extend to the third-party IT providers that so many banks now rely on for cloud-based storage and other services. Systems can slow down or crash, leaving customers unable to access ATMs or mobile apps. Even the speed of technological change presents an operational risk. With the cyber landscape evolving so rapidly, banks can have trouble keeping up with new threats.

3 Organisational Structure

By setting aggressive sales targets and rewarding employees for how well they meet them, the bank management can encourage, and, in some cases, explicitly condone inappropriate risk taking. Such activity, when exposed, can lead to management changes, shareholder losses and regulatory fines.

4 Regulation

The fourth area that vexes ORM planners is regulation. Since the global financial crisis, regulators have increased the number and complexity of rules that banks must follow. The banks that operate in multiple jurisdictions can face overlapping, inconsistent and conflicting regulatory regimes. Lapses can be expensive and embarrassing, triggering regulatory sanctions and customer defections. As is the case with technology, the speed and magnitude of regulatory change can be daunting. Even as banks are trying to contain costs, they must invest in the people, systems and processes that foster compliance.

Types Of Operational Risks

The top operational risks in banks include:
Cybersecurity risks: Cyber risks including ransomware & phishing have become more frequent posing a major risk to banks.

Third-party risks: Increasingly, the banks have to identify & evaluate the risks associated with vendors, suppliers & contractors that their third-party vendors use.

Business Disruption & System Failures: Hardware/software system failures, power failures & disruption in telecommunications can interrupt business operations & cause financial loss.

Steps In Operational Risk Management

- Identification of risks
- Assessment of risks
- Develop a scale to measure risks
- Risks monitoring
- Strategise a policy to avoid potential risk

5. Interest Rate Risk Management

Measuring and assessing interest rate risk is essential for effective risk management in the banks. Various methods can be used to quantify the potential impact of interest rate fluctuations on a bank's financial position and performance.

Gap Analysis

Gap analysis is a commonly used method for measuring interest rate risk. It involves comparing the repricing of assets and liabilities within specified time periods, which helps identify potential mismatches that could affect a bank’s net interest income.

Using gap analysis, banks can assess their exposure to repricing risk and develop strategies to mitigate the potential impact of interest rate changes.

However, this method may not fully capture the complexity of a firm's interest rate risk exposure, particularly when considering yield curve risk and optionality risk.

Duration Analysis

Duration analysis is another method for assessing interest rate risk, focusing on the sensitivity of a bank’s assets and liabilities to changes in interest rates.Duration measures the weighted average time until an instrument's cash flows are received, which can help estimate the potential impact of interest rate changes on the value of assets and liabilities.

By comparing the duration of assets and liabilities, banks can gauge their exposure to interest rate risk and develop strategies to manage this risk, such as duration matching. However, duration analysis may not fully capture the effects of non-parallel shifts in the yield curve or the impact of embedded options.

Simulation Analysis

Simulation analysis involves using computer models to estimate the potential impact of various interest rate scenarios on a bank’s financial position and performance.This method can help firms assess their exposure to different types of interest rate risk, including repricing risk, yield curve risk, and optionality risk.

By simulating the potential impact of interest rate changes under various scenarios, banks can better understand their interest rate risk exposure and develop appropriate risk management strategies. However, the accuracy of simulation analysis depends on the quality of the underlying models and assumptions.

Value at Risk

Value at Risk (VaR) is a statistical technique used to estimate the potential losses a bank could incur due to changes in market factors, including interest rates.

VaR calculates the maximum potential loss a bank could experience within a specified time period and confidence level. Using VaR, banks can quantify their interest rate risk exposure and develop strategies to manage this risk. However, VaR has limitations, as it may not fully capture the potential losses in extreme market events and may underestimate the tail risk associated with interest rate fluctuations.

6. Foreign Exchange Risk Management

Foreign exchange risk is the exposure of an institution to the potential impact of movements in foreign exchange rates. The risk is that adverse fluctuations in exchange rates may result in a loss in rupee terms to the institution.

Foreign exchange risk arises from two factors: currency mismatches in an institution's assets and liabilities (both on and off-balance sheet) that are not subject to a fixed exchange rate vis-a-vis the Indian rupee and currency cash flow mismatches. Such risk continues until the foreign exchange position is covered. This risk may arise from a variety of sources such as foreign currency retail accounts and retail cash transactions and services, foreign exchange trading, investments denominated in foreign currencies and investments in foreign companies. The amount at risk is a function of the magnitude of potential exchange rate changes and the size and duration of the foreign currency exposure.

Managing foreign exchange risk is a fundamental component in the safe and sound management of all institutions that have exposures in foreign currencies. It involves prudently managing foreign currency positions in order to control, within set parameters, the impact of changes in exchange rates on the financial position of the institution. The frequency and direction of rate changes, the extent of the foreign currency exposure and the ability of counterparts to honour their obligations to the institution are significant factors in foreign exchange risk management.

Foreign Exchange Risk Management Policies

Well articulated policies, setting forth the objectives of the institution's foreign exchange risk management strategy and the parameters within which this strategy is to be controlled, are the focal point of effective and prudent foreign exchange risk management. These policies need to include:

1️⃣ A statement of risk principles and objectives governing the extent to which the institution is willing to assume foreign exchange risk.

2️⃣ Explicit and prudent foreign exchange risk limits : Each institution needs to establish explicit and prudent foreign exchange limits, and ensure that the level of its foreign exchange risk exposure does not exceed these limits. Where applicable, these limits need to cover, at a minimum:

- the currencies in which the institution is permitted to incur exposure; and;

- the level of foreign currency exposure that the institution is prepared to assume.

Foreign exchange risk limits need to be set within an institution's overall risk profile, which reflects factors such as its capital adequacy, liquidity, credit quality, investment risk and interest rate risk. Foreign exchange positions should be managed within an institution's ability to quickly cover such positions if necessary. Moreover, foreign exchange risk limits needs to be reassessed on a regular basis to reflect potential changes in exchange rate volatility, the institution's overall risk philosophy and risk profile.

3️⃣ Clearly defined levels of delegation of trading authorities

7. Asset Liability Risk Management

Asset Liability Risk Management is the practice of managing financial risks that arise due to mismatches between the assets and liabilities. These discrepancies can occur due to changes to the economic

landscape, such as different interest rates or liquidity requirements. ALM helps to ensure that assets are invested most optimally and liabilities are moderated over the long term. The success of ALM depends on matching of assets and liabilities in terms of rate and maturity to optimise the yield and maintain the net interest margin.

Tools of Asset and Liability Risk Management

Preparation of Statement of Liquidity

The Statement of Liquidity is prepared by placing all cash inflows and outflows in the maturity ladder according to the expected timing of cash flows. A maturing liability is referred as a cash outflow while a maturing asset is referred as a cash inflow. Maturity profile of assets and liabilities is used for measuring the future cash flows of banks in different time buckets viz. i) 1 to 14 days ii) 15 to 28 days iii) 29 days to 3 months iv) Over 3 months and up to 6 months v) Over 6 months and up to 12 months vi) Over 1 year and to up to 2 years vii) Over 2 years and up to 5 years viii) Over 5 years. It is also necessary to take into account the rupee inflows and outflows on account of forex operations. Thus, the foreign currency resources raised abroad but swapped into rupees and deployed in rupee assets, is also reflected in the rupee liquidity. The wider the negative mismatch, the higher is the liquidity risk.

Gap Analysis Model

The Gap or Mismatch risk is measured by calculating gaps over different time intervals as at a given date. Gap analysis measures mismatches between rate sensitive liabilities (RSLs) and rate sensitive assets (RSAs) including off-balance sheet positions.The Gap Report is generated by grouping rate sensitive liabilities, assets and off-balance sheet positions into time buckets (as stated above in ‘statement of liquidity’) according to residual maturity or next re-pricing period, whichever is earlier. All investments, advances, deposits and borrowings, etc. that mature/re-price within a specified timeframe are interest rate sensitive. Similarly, any principal repayment of loan is also rate sensitive if the bank expects to receive it within the time horizon. This includes final principal repayment and interim installments. The positive gap indicates that it has more RSAs than RSLs whereas the negative gap indicates that it has more RSLs.

8. Compliance Risk And Legal Risk Management

Compliance risk refers to the risk of regulatory sanctions, financial loss, or damage to reputation that may arise from a bank's failure to comply with laws, regulations, and industry standards related to that sector.

This includes risks associated with anti-money laundering, know-your-customer requirements, data privacy, consumer protection, financial stability, and other areas.

Banks use manage compliance risk by implementing policies and procedures to assure that they comply with applicable laws and regulations, as well as by conducting regular monitoring and testing to detect and address potential compliance issues.

A well developed compliance management system with effective risk controls should establish and communicate compliance responsibilities to employees, the board of directors, and senior management; incorporate legal requirements and internal policies into business processes; and, ultimately, improve the effectiveness of the bank’s compliance programs.

Regulatory compliance audits by internal team ensures adherence to regulatory requirements.

Legal Risk

Legal risk is when a bank fails to comply with regulations or contractual terms. It is caused by internal errors, flawed processes, and deliberate infractions.

Under Basel capital accord, operational risk includes the legal risk. For example, operational risks arising from the failure of internal tasks, internal processes, disrupted policies, and uncompelled regulations can lead to legal action.

Legal risks associated with banks are as follows:

- Claims against the institution
- Damages, penalties, and fines

- Documentation defects
- Record keeping errors
- Loss of reputation

Legal risk assessments identifies and manages legal risks associated with contracts, litigation, and other legal matters.

9. Counterparty Credit Risk Management

Counterparty credit risk (CCR) is the risk that the counterparty to a transaction could default before the final settlement of the transaction's cash flows. An economic loss would occur if the transactions or portfolio of transactions with the counterparty has a positive economic value at the time of default.

From OTC derivatives trading to prime brokerage, securities lending, and repos, CCR is inherently bound to the daily operations of markets businesses and markets environments. It is most often manifested in default risk, replacement risk and settlement risk—albeit at the tail end of probabilities.

Types Of Counterparty Credit Risk

Pre-Settlement Risk

Pre-settlement risk, also called **replacement risk**, occurs when a counterparty defaults before the settlement date. As a result, the other party must replace the contract, potentially at unfavorable market prices.

Example: A bank enters a **three-month forward contract to buy foreign currency.** However, the counterparty defaults **two months in**, and the bank must find a replacement contract, possibly incurring a financial loss.

■ Settlement Risk

Settlement risk occurs during the actual exchange of assets, often due to timing mismatches in payments between parties.

Example: In a **cross-border transaction**, Bank A (US) sends USD in the morning, while Bank B (Europe) sends euros later in the day. If Bank B defaults before sending the euros, Bank A faces a loss.

BCBS Guidelines On Managing CCR

1️⃣ Conduct comprehensive due diligence of counterparties both at initial onboarding and on an ongoing basis. The aim is to ensure banks have a full understanding of the risks they are taking before they make key credit risk decisions and that they are able to act swiftly and with sufficient information on the changing risk profiles of counterparties during times of stress.

2️⃣ Develop a comprehensive credit risk mitigation strategy to effectively manage counterparty exposures. This entails the use of robust contractual terms and tools such as risk-sensitive margining

3️⃣ Measure, control, and limit counterparty credit risk using a wide variety of complementary metrics. This should be done while ensuring that counterparty credit risk metrics comprehensively cover the bank's range of material risks, portfolios, and counterparties.

4️⃣ Build a strong counterparty credit risk governance framework. This should be guided by clear risk management processes, including limits and escalations, and supported by informative and reliable reporting that is integrated into decision-making processes.

10. Concentration Risk Management

Concentration risk can be defined as the potential for financial loss due to an overexposure to a single counterparty, sector, or geographic region.

The presence of concentration risk increases the vulnerability of a portfolio to market fluctuations and economic downturns. It is essential for investors to understand the different types of concentration risk and their potential impact on their investments.

Types of Concentration Risk

There are mainly three types of concentration risk: credit, sector, and geographic concentration risk. Each type represents a different aspect of potential overexposure in a portfolio or financial institution.

1️⃣ Credit Concentration Risk

Credit concentration risk arises when a financial institution or investor has a significant exposure to a single borrower or a group of borrowers.This risk can lead to substantial losses if the borrower defaults on their obligations, affecting the financial stability of the institution or investor.

2️⃣ Sector Concentration Risk

Sector concentration risk occurs when a portfolio or institution has a significant exposure to a particular industry or sector. This risk can result in losses if the sector experiences a downturn or faces challenges that negatively impact its performance. Diversifying across different sectors can help mitigate sector concentration risk.

3️⃣ Geographic Concentration Risk

Geographic concentration risk is the potential for loss that arises when a portfolio or financial institution has a significant exposure to a particular geographic area.This risk can result from economic or political instability in the area or from external events such as natural disasters. To mitigate geographic concentration risk, diversification across different regions is recommended.

Management Of Concentration Risk

◾ Risk Identification & Assessment

The first step in managing concentration risk is identifying and assessing the potential areas of overexposure in a portfolio or financial institution. This can be achieved through regular portfolio reviews,

market analysis, and the use of concentration ratios and portfolio analytics.

- **Diversification Strategies**

Diversification strategies are essential for managing concentration risk. These strategies include asset allocation, sector and geographic diversification, and rebalancing portfolios.Rebalancing portfolios involves adjusting the weights of different assets, sectors, & regions within a portfolio to maintain a desired level of diversification.

- **Risk Limits And Monitoring**

Setting risk limits & regular monitoring are important aspects of managing concentration risk. Risk limits involve establishing thresholds for acceptable levels of concentration risk within a portfolio or financial institution.

11. Country Risk Management

Country risk refers to the ability and willingness of borrowers within a country to meet their obligations. It is thus a credit risk on obligations advanced across borders. Assessment of country risk relies on the analysis of economic, social and political variables that relate to the particular country in question. Although the economic factors can be measured objectively, the social and political variables will often involve subjective judgments.

Country risk can be categorised under two headings. The first sub-category of country risk is sovereign risk, which refers to both the risk of default by a sovereign government on its foreign currency obligations, and the risk that direct or indirect actions by the sovereign government may affect the ability of other entities in that country to use their available funds to meet foreign currency debt obligations.

In the former case, sovereign risk addresses the credit risk of national governments, but not the specific default risks of other debt issuers. Here, credit risk relates to two key aspects: economic risk, which addresses the government's ability to repay its obligations on time, and political risk, which addresses its willingness to repay debt. In practice, these risks are related, since a government that is unwilling to repay

debt is often pursuing economic policies that weaken its ability to do so.

12. Solvency Risk Management

Solvency risk refers to the risk of having insufficient capital to cover losses generated by all types of risks, and is thus effectively the risk of default of the bank. From a regulatory viewpoint, the issue of adequate capital is critically important for the stability of the banking system.

To address solvency risk, it is necessary to define the level of capital which is appropriate for given levels of overall risk. The key principles involved can be summarised as follows:

- Risks generate potential losses.
- The ultimate protection for such losses is capital.
- Capital should be adjusted to the level required to ensure capability to absorb the potential losses generated by all risks.

To implement the latter, all risks should be quantified in terms of potential losses, and a measure of aggregate potential losses should be derived from the potential losses of all component risks.

13. Climate Risk Management

Climate change can pose many risks to the banking sector, including extreme weather events, long-term climate shifts, and asset value declines. These risks can negatively impact clients' creditworthiness, cause business interruptions, and lead to the closure of retail branches.

Initially, the banks should reassess their credit business strategies to address climate change issues: the markets, segments, and clients they will serve; the products they will offer, and the innovations they will bring to the market. The revised strategies may derive from the banks' sustainability commitments, including goals for reducing financed emissions or overall risk exposure.

The consequences of global warming can manifest through physical risks and transition risks.

Physical risks deal with the impact of extreme weather events like hurricanes, floods, or droughts; transition risks are those that result from changing policies, practices, and technologies as organizations shift toward a low-carbon economy. Physical risk and transition risk are not independent of each other-efforts to limit global warming may reduce physical risk but increase. transition risk through higher market, technology, and regulatory costs.

To embed these considerations into the credit risk framework, the banks should first develop a taxonomy and map of climate risks and their transmission channels, such as macroeconomic outcomes, capital depreciation, new customer preferences, or business disruptions. They could use a scoring system, based on emissions or other indicators, to visualize the magnitude of each risk on a heatmap. The heatmap would show risks across different dimensions, including industries/ sectors, geographies, and client types.

The next step for banks is to translate the overarching credit business strategy and product focus into appropriate risk appetite, credit risk processes and policies.

14. Cybersecurity Risk Management

Cybersecurity risk the probability of exposure or loss resulting from a cyber attack or data breach on your organisation. It involves identifying potential threats and vulnerabilities in your organization's digital systems and networks. The risk is not only about the likelihood of a cyberattack but also the potential consequences, such as financial loss, reputational damage, or operational disruption.

Strategies For Managing Cybersecurity Risk

■ Vulnerability Assessments

Identifies weaknesses in the bank's cybersecurity infrastructure.

■ Incident Response Planning

Prepares for and responds to cybersecurity incidents.

15. Reputational Risk Management

Reputational risk is associated with an institution losing consumer or stakeholder trust. It's the risk that those consumers and stakeholders will take on a negative perception of the bank following a particular event.

A reputation risk management is a systematic approach to governance and operational activity designed to identify, assess, monitor and report, and control potential events or situations that may have an adverse impact on an organisation's reputation. It provides a set of guidelines and processes for effectively and efficiently managing risks that arise.

The most effective reputation risk frameworks are :

- **Actively challenge business decision-making and strategy -** without seizing ownership of the risk;

- **Constructively provide an 'outside in' perspective** - bringing together a range external and internal stakeholder perspectives; and

- **Develop intelligent and actionable insights** - to enable senior management and the Board to make risk-intelligent decisions.

16. Strategic Risk Management

Strategic risk management is a fundamental aspect of a company's strategy. It involves identifying and evaluating potential risks that may impact the achievement of organisational goals and objectives. SRM is an ongoing and proactive process that allows businesses to identify vulnerabilities, mitigate threats, and capitalize on opportunities.

Strategic risk encompasses risks concerning the long-term functioning of a financial institution. It embraces various variables, such as corporate governance and factors based on market characteristics and stakeholders.

■ Measuring Strategic Risk Management

To effectively measure strategic risk management, two key metrics are commonly used: economic capital and risk-adjusted return on capital.

1️⃣ **Economic capital** refers to the amount of capital that a company needs to cover potential losses resulting from risks. It provides a clear understanding of the financial resources required to withstand unexpected events.

2️⃣ **Risk-adjusted return on capital** is a measure that incorporates the level of risk taken to generate returns. It helps assess whether the returns on investments justify the risks undertaken by the organisation.

■ Tools For Managing Strategic Risk Management

- ■ Use of Key Performance Indicators (KPIs)
- ■ SWOT Analysis
- ■ Risk Mapping
- ■ Scenario Planning

1️⃣ Use Of KPIs

KPIs are measurable metrics that track the performance and progress of key areas within an organization. By establishing relevant KPIs, companies can monitor and evaluate the effectiveness of their risk management strategies. For example, financial KPIs such as return on investment (ROI) or revenue growth can indicate the success of risk mitigation efforts.

2️⃣ SWOT Analysis

SWOT is a structured framework for evaluating your organisation's internal and external factors. SWOT analysis helps in identifying organization's strengths & weaknesses, as well as potential opportunities & threats in the market. This risk analysis can help you

prioritise your resources & develop strategies to capitalise on opportunities while minimising threats.

3️⃣ Risk Mapping

Risk mapping tools allow you to visualise and analyze the interdependencies between different risks and their potential impact on your organization. By mapping internal and external risks, you can identify key risk areas, establish key risk indicators, understand their potential cascading effects, and develop targeted mitigation strategies.

4️⃣ Scenario Planning

Scenario planning involves developing and analyzing different future scenarios based on a range of potential risks. This tool allows you to explore different possibilities and prepare for various outcomes. By simulating potential scenarios, you can identify the most effective strategies to mitigate risks and optimize your decision-making process.

17. Fraud Risk Management

The banks need to undertake following strategic initiatives for an effective fraud risk management :

1️⃣ Special Committee Of Board On Management Of Frauds

Constitute an SCBMF headed by an independent director/non-executive director that shall oversee effectiveness of FRM in banks.

2️⃣ Board Approved Policy On Fraud Risk Management

Develop a board approved policy on FRM, clearly defining roles and responsibilities of the board/ committees, SM and measures for fraud prevention and detection, including provisions on principle of natural justice.

3️⃣ Dedicated FRM Role In Risk

Appoint a senior official at the rank of at least a general manager or equivalent for monitoring and reporting of frauds.

4️⃣ Early Warning Signals (EWS) Framework

Set up/upgrade EWS framework by 15 Jan 2025. The EWS framework integrated with core banking should be comprehensive, incorporating both quantitative and qualitative indicators, and should provide for periodic review of the credit sanction/ monitoring process.

5️⃣ Policy For Auditors' Engagement

Develop a policy on engagement of external auditors covering aspects such as due diligence, competency and track record of the auditors.

6️⃣ Reporting Of Fraud

Comply with new reporting requirements of fraud/red flagging of accounts (RFA) to law enforcement agencies (LEAs) and the RBI, including reporting of fraudulent transactions related to payment systems Central Payments Fraud Information Registry (CPFIR), fraud pertaining to group entities not regulated by the RBI, and frauds at an overseas group entity.

7️⃣ EWS For Non-Credit Transactions

Implement EWS system to monitor other banking or non-credit related transactions.

8️⃣ Data Analytics (DA) And Market Intelligence (MI) Unit

Set up a DA and MI unit, which shall facilitate collection of relevant information to enable early detection and prevention of fraud. The

unit will monitor and analyse both credit and non-credit transactions.

18. Environmental, Social and Governance (ESG) Risk Management

ESG risk refers to the potential negative impacts on an organisation's financial performance and sustainability arising from environmental, social, and governance factors. These risks can stem from a company's own practices or from broader systemic issues within the markets and communities they operate.These risks can significantly impact an organisation's performance, and can lead to legal issues. Managing these risks effectively is crucial for sustainable success and long-term viability.

Environmental, social, and governance events, from climate change to diversity and inclusion policies, can have material impact on the value of investments. Banks must proactively measure and manage these risks, integrating ESG data, scoring models, and climate models into the investment process and credit risk evaluations.

19. Open Banking Risk Management

An open banking ecosystem functions as a single platform for a number participants like regulators and government agencies, data providers, third-party providers, customers, to engage in an open infrastructure with an end motive to enhance the customer experience.

Open banking introduces potential security risks, as data can be accessed by third parties, increasing the risk of data breaches. Additionally, open banking may expose customers to fraud if they are not aware of the potential risks involved in sharing their financial data. Banks must ensure that they have robust security measures in place to protect customer data and protect customers from fraud.

Aggregated customer data such as transactions maintained in the third-party provider's (FinTech startup's) infrastructure and servers, can cause significant risk to the bank's cybersecurity. Banks need to move quick in complying with PSD2 and GDPR directives laid down by independent government agencies, and the financial regulatory bodies to avoid

exposing themselves to a myriad of systemic risks which could lead to financial as well as reputational damages.

20. Systemic Risk Management

Systemic risk refers to the risk of a breakdown of an entire system rather than simply the failure of individual parts. In a financial context, it denotes the risk of a cascading failure in the financial sector, caused by linkages within the financial system, resulting in a severe economic downturn.

Systemic risk includes a possibility of bringing down the entire financial system to a standstill, what was possibly seen during the global financial crisis 2008. This is caused due to a domino effect where the failure of one bank could ripple down the failure of its counterparties/ other stakeholders, which could, in turn, threaten the entire financial services industry.

The Volatility Index(VIX) is a good measure of systemic risk. Systemic risk, in itself, would not lead to direct losses. However, in a scenario where VIX is at high levels, there is a high probability of market risks(and other risks) to reach very high levels which would eventually lead to losses.

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