Country Paper

Risk Management Frameworks in Banks: Bangladesh Perspective

Bangladesh Bank

RISK MANAGEMENT FRAMEWORKS IN BANKS: BANGLADESH PERSPECTIVE

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Executive Summary

As risk and return are like two faces of the same coin, the financial institutions (FIs) need to take risks to bag a formidable return for themselves and stakeholders. In their case, they should take prudent decisions in terms of risk taking as they mostly deals with other people's money. The recent financial turmoil has point out clearly the interconnectedness among the financial systems around the world which raised concern about contagion risk in addition to individual bank wide risk. Bangladesh Bank (BB) has been acting proactively long before the financial turmoil of 2007-08. It has issued guidelines for banks and Non Bank Financial Institutions (NBFIs) on identifying assessing and mitigating risks in an effective manner. With the vision to help the FIs adopt contemporary methods to identify, measure, monitor, and control risks throughout their institutions, BB has formulated frameworks under which the financial institutions will guidelines formulate strategy and design tool to measure various risks namely, credit risk, market risk, liquidity risk and operational risks. Besides these, BB has taken steps to strengthen the capital base of FIs acting in its jurisprudence. Risk is the integral part of the banking business around the world. There is cost involvement in the endeavor too diminish risk. BB has taken a clear position where zero tolerance has been shown towards the institutions taking excessive risk which may put the whole banking industry in jeopardy.

1. Introduction

Financial services industries are facing various challenges due to increased competition and expansion of diversified business networks globally. Particularly the first decade of this century was terribly challenging for the financial industry in most parts of the world. Credit providers, securities firms, foreign exchange dealers, money service providers, insurance companies, and many other financial institutions had to face increasing competition, precariousness in interest and exchange rates, asset and share price bubbles, unpredictable changes in the legal and regulatory framework and a deep recession that shattered the whole western economy. Many financial institutions failed to cope with these challenges, resulting in great cost to taxpayers and surviving institutions and in a general decline in customer confidence in banks and consumer confidence in the economy as a whole.

The key to survive for fortunate banks were their risk management strategies. They realized and successfully forecasted the risks associated. Therefore, they entered new markets cautiously and promoted new products with utmost caution, expanded their scale of operations compatible to their capital bases, carried out their operations within regulatory framework, built up information database so that they could monitor their position in the market and fluctuations in their profitability.

Scheduled banks in Bangladesh had also gone through those challenges, although they have fortunately been spared some of the worst upheavals that occurred in western world especially. Banking companies in Bangladesh usually face the following major risks:

a) Credit risk (including concentration risk, country risk, transfer risk, and settlement risk)

b) Market risk (including interest rate risk, foreign exchange risk, and equity market risk)

c) Liquidity Risk

d) Operational Risk

e) Other risks (Compliance, strategic, reputation and money laundering risk)

With a view to managing various risks in a prudent manner, Bangladesh Bank has already issued various guidelines and the scheduled banks adopted different risk management strategies in line with the guidelines of Bangladesh Bank. Overall risk management frameworks of scheduled banks in Bangladesh are discussed in brief in this paper.

2. Guidelines Issued by Bangladesh Bank

Bangladesh Bank issued sets of guidelines on the following issues based on contemporary methods so that banks can identify, measure, monitor, and control risks throughout their institutions.

1. Risk based capital adequacy in accordance with Basel II
2. Stress testing and
3. Managing banking risks in six core areas:

    i. Internal Control and Compliance Risk

    ii. Foreign Exchange Risk

    iii. Credit Risk

    iv. Asset Liability Management Risk

    v. Money Laundering Risk

    vi. Information & Communication Technology Security Risk

2.1. Major guidelines issued by Bangladesh Bank

- Guidelines on Stress Testing (DOS Circular 01/21.04.2010)
- Revised Guidelines on Stress Testing (DOS Circular 01/23.02.2011)
- Guidelines on "Managing Core Risks in Banking" (BRPD Circular 17/07.10.2003)
- Guidelines on "Managing Core Risks in Banking" (BRPD Circular 04/05.03.2007)
- Guidelines on Environmental Risk Management (ERM) (BRPD Circular 01/30.01.2011)
- Implementation of Credit Risk Grading Manual (BRPD Circular 18/11.12.2005)
- Implementation of Credit Risk Grading Manual (BRPD Circular 07/09.07.2007)
- Large Loan and Risk Management (BRPD Circular Letter 03/13.03.2007)

3. Formation of Risk Management Unit

BB has imposed prudential requirements to assess banks' risk management capacity and has instructed the banks to establish an independent Risk Management Unit (RMU). The RMU conducts stress testing for examining the bank's capacity to defend future shocks and deals with all potential risks that might occur in future.

Banks have to prepare a risk management paper and must place the same in the monthly meeting of the Risk Management Unit. The minutes of the meetings should contain specific decisions based on the analyses/recommendations made in the risk management paper. Banks have to submit risk management papers (hard & soft copies for successive months of each quarter) along with the minutes of the meetings within 10 days of each quarter end to the Department of Off-site Supervision, Bangladesh Bank.

3.1. Elements of Risk Management System

In compliance with Bangladesh Bank guidelines, scheduled Banks in Bangladesh have developed a risk management system comprising the following:

a) Risk management structure with board and senior management;

b) Developed Organizational policies, procedures and limits;

c) Adequate risk identification, measurement, monitoring, control and management information systems;

d) Established internal control; and

e) Comprehensive audits to detect any deficiencies in the internal control environment in a timely fashion.

3.2. Optimal Risk Organizations in Scheduled Banks

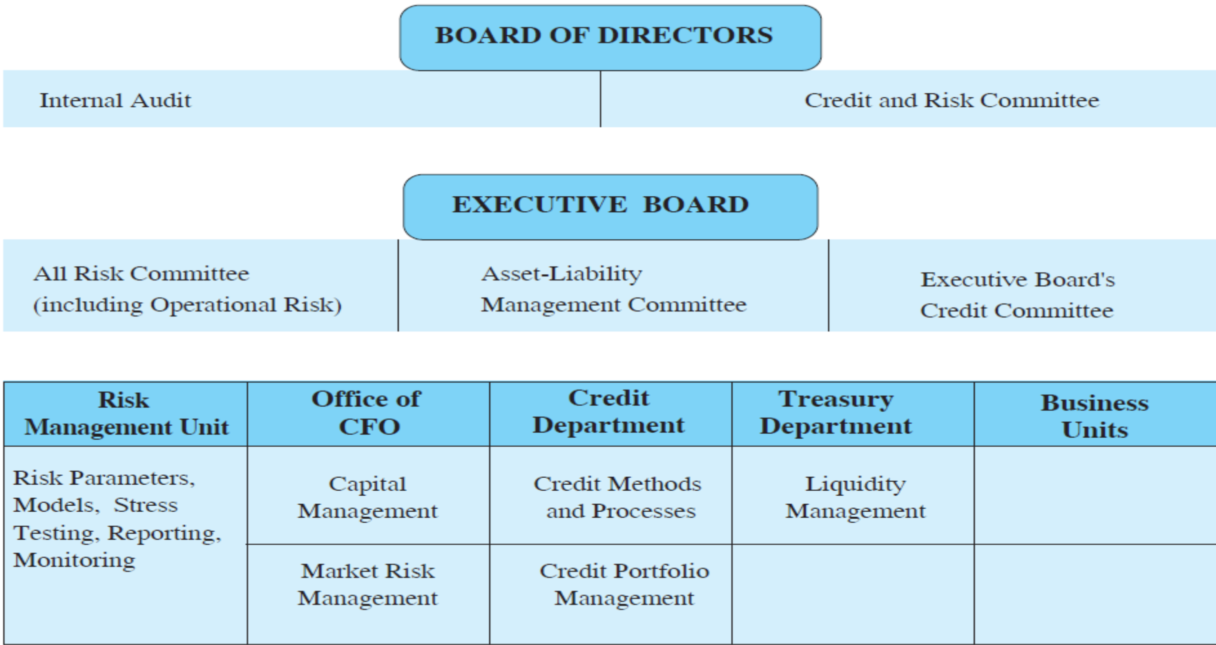

Figure 1. Role of Risk Organizations as Defined by Bangladesh Bank

3.2.1. Role of the Board of Directors

- Defining the risk appetite;
- Designing the organizational structure to manage risk within the bank;
- Reviewing and approving risk management policies and re-reviewing at least annually;
- Enforcing and using adequate recordkeeping and reporting systems; and
- Monitoring compliance with overall risk management policies and limits

3.2.2. Role of the Credit and Risk Committee

The functions of Credit and Risk Committee shall be set by the board. The Credit and Risk Committee shall work as a consulting panel on significant credit exposures submitted to the board.

3.2.3. Role of the Executive Board

- Ensuring appropriate knowledge, experience, and expertise of lower-level managers and staff involved in risk management;

- Supervising day-to-day activities of senior managers and heads of business lines;
- Identifying risks involved in new products and activities and ensuring that the risks can be measured, monitored, and controlled adequately; and
- Establishing committees and sub-committees for ongoing risk management.

3.2.4. Role of the All Risk Committee

The functions of All Risk Committee shall be set by the Executive Board (EB). All Risk Committee shall be responsible for managing all risk types across the bank.

- Setting targets for capital ratios and capital composition;
- Managing the balance sheet and funding structure;
- Determining general principles for measuring, managing, and reporting the bank's risks;
- Developing risk policies for business units;
- Determining the overall investment strategy;
- Identifying, monitoring, and managing the bank's current and potential operational risk exposures;
- Following up on reports from BB and Internal Audit and informing the EB.

3.2.5. Role of Asset-liability Management Committee (ALCO)

ALCO is a senior management level committee responsible for management of market risk (mainly interest rate and liquidity risks). The committee generally comprises of senior managers from treasury, chief financial officer and business heads headed by the CEO.

Major responsibilities of ALCO include the following:

- Monitor the structure/composition of bank's assets and liabilities
- Decide on major aspects of balance sheet structure
- Develop maturity profile and mix of incremental assets and liabilities;
- Articulate interest rate view of the bank and deciding on the future business strategy;
- Review and revise bank's funding policy;
- Evaluate market risk involved in launching of new products;
- Review deposit-pricing strategy for the local market; and
- Review liquidity contingency plan for the bank.

3.2.6. Role of Executive Board's Credit Committee

The responsibilities of Executive Board's Credit Committee include the following:

- Deciding on credit applications that exceed the lending authorities of business units;
- Preparing credit policies for approval by the board; and
- Participating in decisions on the overall valuation of the loan portfolio

3.2.7. Role of Risk Management Unit

The Risk Management Unit (RMU) shall be headed by the Chief Risk Officer (CRO). The major responsibilities of RMU include the following:

- Serving as secretariat of All Risk Committee;
- Designing bank's overall risk management strategy;
- Developing and overseeing implementation of stress tests;
- Developing, testing, and observing use of models for measuring and monitoring risk;
- Establishing risk management policies and procedures;
- Developing and implementing loss prevention/loss retention programs;
- Adopting proper financial protection measures through risk transfer, risk avoidance, and risk retention programs.

4. Risk Management Reporting

The following reports are required to be submitted before the board on different intervals:

4.1. Quarterly Reporting

ICAAP: Internal Capital Adequacy Assessment Process (ICAAP), including an evaluation of the bank's preferred risk profile, the actual risks identified, the means by which they will be mitigated, and what risks will be covered by capital, results of stress tests and overall capital need.

Key figures from the credit portfolio: An overview of credit-quality indicators focusing on unauthorized excesses and overdue payments, the number of upgrades and downgrades in the classification system, and trends in lending volumes.

Market risk: An analysis of the bank's current equity, interest-rate risk, foreign exchange risk positions and reports on the utilization of board-approved limits since the preceding report.

Large exposures: An overview of exposures equal to or exceeding 10 percent of the bank's capital base, and the sum of all such large exposures as a percentage of the bank's capital base.

Industry analyses: Industry analyses for those industries in which the bank's exposures are concentrated.

Liquidity risk: Report on liquidity gap in different time buckets and other required liquidity metrics.

4.2. Annual reporting

Risk policy: Review of the overall risk policy, including a consideration of whether any revisions are required.

ICAAP: An evaluation of the preferred risk profile, the overall capital need, and the conclusions drawn from stress testing.

Risk management framework: A thorough analysis of the bank's risk profile, including identification and description of risks and an update on the use of risk management models.

Credit portfolio quality: An analysis of adversely-classified loans, provisions and charge-offs by types of loan.

5. Risk Management Frameworks

5.1. Framework of capital management

Banks devise and establish suitable capital management systems in order to calculate the capital adequacy ratio and secure adequate capital to cover the risks they face. In this regard the Board of Directors and Senior Management take the following steps:

(1) Define the goals of capital management in an official policy statement. Such goals must include the followings:

a) Regulatory compliance, such that capital levels always exceed BB's requirements;

b) Capital levels are aligned with the risks in the business and consistent with the strategic plan; and

c) Capital levels maintain an appropriate balance between maximizing shareholder returns and protecting the interests of depositors and other creditors.

(2) Prepare a set of policies and internal rules with regard to capital management, and segregate the relevant tasks between two or more units/divisions, namely Risk Management Unit (RMU) and Capital Management Unit (CMU) - depending on the diversity of the tasks.

(3) Integrate capital management into the bank's strategic plan. Annually conduct a detailed strategic planning process over a three-year time horizon, the outcomes of which are embodied in a Strategic Plan.

5.1.1. Capital Management Policies

The policies are inclusive of the following matters:

- The role and responsibilities of the Board, management, and the RMU/CMU.
- Basic policies for maintaining sufficient capital and on the capital allocation process;
- Risk limits in relation to the capital;
- Calculation of the capital adequacy ratio in line with capital adequacy guidelines issued by Bangladesh Bank; and
- Methods of internal capital adequacy assessment in conducting capital allocation process;
- Appropriate level of capital target for the short-term, medium-term and long-term.

5.1.2. Monitoring of Capital Adequacy

The CMU/RMU, in accordance with the capital management policy and the capital management rules, monitor capital adequacy in light of the bank's capital plan, internal environment (risk profile, the status of the use of risk limits, etc.) and external environment (economic cycle, markets, etc.).

5.1.3. Reporting to Board of Directors and Senior Management

The RMU/CMU, in line with the capital management policy and the capital management rules, provide in a regular and timely manner or on an as needed basis information necessary for the Board to make appropriate assessment and judgment with regard to the status of capital management and capital adequacy.

5.1.4. Feedback to relevant divisions

The RMU/CMU gives feedback to the results of its assessment, analysis and consideration with regard to the status of capital adequacy to relevant divisions as necessary.

5.2. Credit Risk Management Framework

5.2.1. Components of a Typical Credit Risk Management Framework in Banks

Main components may be broadly categorized into the followings:

a) Board oversight

b) Senior management's oversight

c) Organizational structure

d) Systems and procedures for identification, acceptance, measurement of risks

e) Monitoring and control of risks

5.2.1.1. Board Oversight

It is the overall responsibility of a bank's board to approve credit risk strategies and significant policies relating to credit risk and its management which are based on the overall business strategy. Overall strategies as well as significant policies are reviewed by the board on regular basis.

5.2.1.2. Senior Management Oversight

The responsibility of senior management is to transform strategic directions set by the Board in the shape of policies and procedures. It is responsible for implementing the bank's credit risk management strategies and policies and ensuring that procedures are put in place to manage and control credit risk and the quality of credit portfolio in accordance with these policies.

5.2.1.3. Organizational Structure

Organizational structures may vary according to size, complexity and diversification of bank's activities. The structure facilitates effective management oversight and proper execution of credit risk management and control processes. It is necessary to maintain the bank's overall credit risk exposure within the parameters set by the Board.

5.2.2. Credit Risk Management Committee

Each bank constitutes a Credit Risk Management Committee (CRMC), ideally comprising the heads of the risk management, credit and treasury departments. This committee reports to the bank's risk management committee (or All Risk Committee) and is empowered to oversee credit risk taking activities and overall credit risk management function. The CRMC is mainly responsible for:

a) Implementation of the credit risk policy/strategy approved by the Board;

b) Monitoring credit risk on a bank-wide basis and ensure compliance with limits;

c) Makings recommendations to the board, for its approval, clear policies on standards for presentation of credit proposals, financial covenants, rating standards and benchmarks; and

d) Deciding delegation of credit approving powers, prudential limits on large credit exposures, standards for loan collateral, portfolio management, loan review mechanism, risk concentrations, risk monitoring and evaluation, pricing of loans, provisioning, regulatory/legal compliance, etc.

5.2.3. Credit Risk Strategy

Credit risk strategy is developed on the basis of the bank's target market and its internal strength. The strategy takes into account the cyclical aspect of the country's economy and the resulting shifts in composition and quality of the overall credit portfolio. The strategy is reviewed periodically and amended, as deemed necessary.

5.2.4. Credit Policies

Credit Policies (CP) reflect the bank's appetite for credit risk. Banks develop credit policies as part of an overall credit risk management framework. It includes:

a) Detailed and formalized credit evaluation/appraisal process;

b) Credit origination, administration and documentation procedures;

c) Formal credit approval process;

e) Risk identification, measurement, monitoring and control;

f) Internal rating (risk grading) systems including definition of each risk grade and clear demarcation for each risk grade in line with BB regulations and policies; and

g) Risk acceptance criteria.

5.2.5. Credit procedures

The credit procedures aim to obtain a wide understanding of the bank's clients and their businesses in order to fully know their customers. Banks develop procedures that adequately capture salient issues regarding the borrower's industry, macro economic factors, the purpose of credit, source of repayment, track record and repayment history of the borrower, repayment capacity of the borrower, the proposed terms and conditions and covenants, adequacy and enforceability of collaterals, and appropriate authorization for the credit.

5.2.6. Measuring Credit Risk

To measure credit risks banks establish credit risk rating framework across all type of credit activities incorporating business risks (industry characteristics, competitive position and management) and financial risks (financial condition, profitability, capital structure and present and future cash flows) into consideration.

5.2.7. Internal Credit Risk Rating

Banks develop an internal credit risk rating system in line with BB's regulations and guidelines for its credits in consistent with the nature, size and complexity of the bank's activities. All credit facilities are assigned a risk grade. If any deterioration in risk is observed, the risk grade assigned to a borrower and its facilities is immediately changed.

5.2.8. Credit Risk Monitoring and Control

5.2.8.1. Stress Testing

An important element of sound credit risk management is analyzing what could potentially go wrong with individual credits and the overall credit portfolio if conditions, in which borrowers operate, change significantly. The results of this analysis then are factored into the assessment of the adequacy of provisioning and capital of the bank. Such stress analysis can reveal previously undetected areas of potential credit risk exposure that could arise in times of crisis.

Possible scenarios that banks consider in carrying out stress testing include:

a) Significant economic or industry sector downturns;

b) Adverse market-risk events; and

c) Unfavorable liquidity conditions.

Banks have to follow the instructions in the "Revised Guidelines on Stress Testing" issued by BB on 23 February 2011 and its subsequent amendments.

5.3. Market Risk Management

Market risk is the risk of potential losses in the on-balance sheet and off-balance sheet positions of a bank, steaming from adverse movements in market rates or prices such as interest rates, foreign exchange rates, equity prices, credit spreads and commodity prices.

5.3.1. Measurement of Interest Rate Risk

Interest rate risk arises when a bank's principal and interest cash flows (including final maturities), both on- and off-balance sheet, have mismatched repricing dates. Re-pricing schedules and simulation approaches are the commonly used interest rate risk measurement techniques. Banks use a combination of these techniques in managing its interest rate risk exposure.

5.3.1.1. Interest Rate Risk Management and Control Procedures

Each bank needs to develop and implement effective and comprehensive procedures and information systems to manage and control interest rate risk in accordance with its interest rate risk policies. These procedures should be appropriate to the size and complexity of the bank's interest rate risk-taking activities.

Internal inspections/audits are a key element in managing and controlling a bank's interest rate risk management program. Banks use them to ensure compliance with the interest rate risk policies and procedures. Internal inspections/audits, at a minimum, randomly test all aspects of interest rate risk management activities in order to ensure interest rate risk management policies and procedures are being adhered to.

5.3.2. Measurement of Foreign Exchange Risk

Foreign exchange risk is the current or prospective risk to earnings and capital arising from adverse movements in currency exchange rates. Each bank engaged in foreign exchange activities needs to have an effective accounting and management information system in place that accurately and frequently records and measures its foreign exchange exposure and the impact of potential exchange rate changes on the bank. Usually banks adopt monitoring and reporting techniques that measure:

a) the net spot and forward positions in each currency or pairings of currencies in which the bank is authorized to have exposure;

b) the aggregate net spot and forward positions in all currencies; and

c) transactional and translational gains and losses relating to trading and structural foreign exchange activities and exposures.

5.3.2.1. Foreign Exchange Risk Management and Control Procedures

Foreign exchange risk management procedures include, at a minimum:

- accounting and management information systems to measure and monitor foreign exchange positions, foreign exchange risk and foreign exchange gains or losses;
- controls governing the management of foreign currency activities; and
- independent inspections or audits.

5.4. Liquidity risk management

Liquidity risk is the potential for loss to a bank arising from either its inability to meet its obligations as they fall due or to fund increases in assets as they fall due without incurring unacceptable cost or losses. Liquidity risk arises when the cushion provided by the liquid assets are not sufficient enough to meet maturing obligations. Accordingly, a bank short of liquidity may have to undertake transactions at heavy cost resulting in a loss of earnings or, in a worst case scenario, the liquidity risk could result in liquidation of the bank if it is unable to undertake transactions even at current market prices.

5.4.1. Liquidity Risk Strategy

The liquidity risk strategy defined by Board enunciates specific policies on particular aspects of liquidity risk management, such as:

a) **Composition of assets and liabilities:** The strategy outlines the mix of assets and liabilities to maintain liquidity. Liquidity risk management and asset/liability management are usually integrated to avoid high costs associated with having to rapidly reconfigure the asset liability profile from maximum profitability to increased liquidity.

b) Diversification and stability of liabilities: A funding concentration exists when a single decision or a single factor has the potential to result in a significant and sudden withdrawal of funds. Since such a situation could lead to an increased risk, the Board and senior management should specify guidance relating to funding sources and ensure that the bank has diversified sources of funding day-to-day liquidity requirements.

c) Managing liquidity in different currencies: The bank should have a strategy on how to manage liquidity in different currencies.

d) Dealing with liquidity disruptions: The bank should put in place a strategy on how to deal with the potential for both temporary and long-term liquidity disruptions. The interbank market can be important source of liquidity. However, the strategy should take into account the fact that in crisis situations access to interbank market could be difficult as well as costly.

5.4.2. Measurement of Liquidity Risk

An effective liquidity risk measurement system not only helps in managing liquidity in times of crisis but also optimize return through efficient utilization of available funds. Liquidity risk of a bank varies depending upon its size and complexity of business and thus requires liquidity risk

measurement techniques accordingly. Some commonly used liquidity measurement and monitoring techniques that are adopted by the banks are discussed below.

5.4.3. Contingency Funding Plans

In order to develop comprehensive liquidity risk management framework, banks have in place plans to address stress scenarios. Such a plan, commonly known as Contingency Funding Plan (CFP), a projection of future cash flows and funding sources of a bank under market scenarios including aggressive asset growth or rapid liability erosion. To be effective it is important that a CFP should represent management's best estimate of balance sheet changes that may result from a liquidity or credit event. A CFP can provide a useful framework for managing liquidity risk both short term and in the long term. Further it helps ensure that a bank can prudently and efficiently manage routine and extraordinary fluctuations in liquidity.

5.4.4. Maturity Ladder

Banks often utilize flow measures to determine their cash position. A maturity ladder estimates a bank's cash inflows and outflows and thus net deficit or surplus (GAP) both on a day-to-day basis and over a series of specified time periods. Banks need to focus on the maturity of its assets and liabilities in different tenors. Mismatch is accompanied by liquidity risk and excessive longer tenor lending against shorter-term borrowing can put a bank's balance sheet in a very critical and risky position. To address this risk and to make sure a bank does not expose itself in excessive mismatch, a bucket-wise (e.g. call, 2-7 days, 8 days-1 month, 1-3 months, 3-12 months, 1-5 years, over 5 years) maturity profile of the assets and liabilities to be prepared to understand mismatch in every bucket. A structural maturity ladder has been furnished in the DOS circular no. 02 dated 29 March 2011.

5.4.5. Liquidity Ratios and Limits

Banks often use a variety of ratios to quantify liquidity. These ratios can also be used to create limits for liquidity management. Because ratio components as calculated by banks are sometimes inconsistent, ratio-based comparisons of banks or even comparisons of periods at a single bank can be misleading. Examples of ratios and limits that are used:

(a) Cash flow ratios and limits

(b) Liability concentration ratios and limits

(c) Other balance sheet ratios

i. Total credit to total deposits;

ii. Liquid assets to total deposits;

iii. Liquid assets to short-term liabilities; and

iv. Borrowed funds to total assets; etc.

5.4.6. Liquidity Risk Management and Control Procedures

The responsibility for managing the overall liquidity of the bank is delegated to a specific, identified group within the bank like in the form of an Asset Liability Committee (ALCO). Periodic reviews are conducted to determine whether the bank complies with its liquidity risk policies and procedures. Positions that exceed established limits receive prompt attention of appropriate management and are resolved according to the process described in approved policies. Periodic reviews of the liquidity management process also address any significant changes in the nature of instruments acquired, limits, and internal controls that have occurred since the last review.

5.5. Operational Risk Management

Operational risk is defined as the risk of unexpected losses due to physical catastrophe, technical failure and human error in the operation of a bank, including fraud, failure of management, internal process errors and unforeseeable external events.

Operational risk can be subdivided into two components: operational strategic risk and operational failure risk. It is also defined as internal operational risk. Operational strategic risk arises from environmental factors such as a new competitor that changes the business paradigm, a major political and regulatory regime change, and other factors that are generally outside the control of the bank. Operational failure risk arises from the potential for failure in the course of operating the business. A firm uses *people, process, and technology* to achieve business plans, and any one of these factors may experience a failure of some kind. Accordingly, operational failure risk is the risk that exists *within* the business unit caused by the failure of people, process or technology. A certain level of the failures may be anticipated and should be built into the business plan. These failures can be expected to occur periodically, although both their impact and their frequency may be uncertain.

5.5.1. Categorization of Operational Risk

Banks are required to adopt and utilize standard categorizations of operational risk events, according to Event Type and Business Line. Not all Business Lines will be relevant for all banks. There are seven major Event Types, and eight major (Level 1) Business Lines, and within each combination of Event Type and Business Line there may be one or more Scenario Descriptions. The following list of Scenario Descriptions, categorized by Event Type and Business Line, represent the largest scenarios most frequently reported by banks. For any bank, it is unlikely, but possible, that some of the scenarios may occur under business lines in addition to the ones reported in the table.

Event Type	Business Line	Scenario Descriptions
Type A: Internal Fraud	Corporate Finance	Loan Fraud Embezzlement Failure to follow procedures/limits
	Trading & Sales	Unauthorized trading/rogue trader Misappropriation of assets Breach of trading limits
	Retail Banking	Theft of customer data/information Embezzlement Theft of assets
	Commercial Banking	Fraudulent transfer of funds Embezzlement Theft of customer funds
	Payment and Settlement	Payment fraud Theft of client funds or assets
	Asset Management	Unauthorized trading activities
	Not allocated to any business line	Embezzlement Misuse of confidential information Misappropriation of assets
Type B: External Fraud	Corporate Finance	Client misrepresentation of information Theft Loan fraud
	Trading & Sales	Loan fraud Cybercrime Forgery
	Retail Banking	Cybercrime Check fraud Theft of information/data
	Commercial Banking	Fraudulent transfer of funds Credit product fraud (loans, L/C, guarantees)
	Payment and Settlement	Payment fraud
	Not allocated to any business line	Loan fraud Cybercrime Robbery
Type C: Employment Practices and Workplace Safety	Trading & Sales	Discrimination Occupational accident
	Retail Banking	Occupational accident Discrimination Environmental issue
	Not allocated to any business line	Pandemic Wrongful termination Discrimination

Event Type	Business Line	Scenario Descriptions
Type D: Clients, Products, and Business Practices	Corporate Finance	Regulatory breach Compromised customer information Fiduciary breach
	Trading & Sales	Fiduciary breach Regulatory breach Compromised customer information
	Retail Banking	Regulatory breach Mis-selling Compromised customer information
	Commercial Banking	Noncompliance with money laundering regulations Regulatory breach Mis-selling
	Asset Management	Mis-selling
	Not allocated to any business line	Client suitability Noncompliance with money laundering regulations
Type E: Damage to Physical Assets	Trading & Sales	Business continuity failure Damage to building and premises
	Retail Banking	Fire Flood Damage to building and premises
	Commercial Banking	Damage to building and premises Natural disaster
	Not allocated to any business line	Natural disaster Terrorist attack vandalism Earthquake
Type F: Business Disruption and System Failure	Trading & Sales	IT system failure
	Retail Banking	IT system failure Utility outage
	Commercial Banking	Off-shoring/Outsourcing risk IT system failure
	Payment and Settlement	IT system failure Failure of payments infrastructure
	Agency Services	IT system failure
	Asset Management	IT system failure
	Not allocated to any business line	IT system failure
Type G: Execution, Delivery, and Process Management	Corporate Finance	Inaccurate/Incomplete contract Transaction error Staff error in lending process
	Trading & Sales	Data entry error Model risk
	Retail Banking	Pricing error Failure of external supplier
	Commercial Banking	Failure to follow procedures Lost or incomplete loan/legal documentation Processing error Collateral management error
	Payment and Settlement	Data entry error Failure to follow procedures
	Agency Services	Processing error
	Asset Management	Mismanagement of account assets
	Not allocated to any business line	Unapproved access given to client accounts Inaccurate financial statement Failure of supplier/vendor Tax noncompliance

6. Risk Assessment and Quantification

Effective risk assessment allows the bank to better understand its risk profile and most effectively target risk management resources. Amongst the possible tools that are used by banks for identifying and assessing operational risk are:

(a) Self risk assessment: A bank assesses its operations and activities against a menu of potential operational risk vulnerabilities. This process is internally driven and often incorporates checklists and/or workshops to identify the strengths and weaknesses of the operational risk environment.

(b) Risk mapping: in this process, various business units, organizational functions or process flows are mapped by risk type. This exercise can reveal areas of weakness and help prioritize subsequent management actions.

(c) Risk indicators: risk indicators are statistics and/or metrics, often financial, which can provide insight into a bank's risk position. These indicators are to be reviewed on a periodic basis (such as monthly or quarterly) to alert banks to changes that may be indicative of risk concerns. Such indicators may include the number of failed trades, staff turnover rates and the frequency and/or severity of errors and omissions.

7. Risk Monitoring and Reporting

An effective and regular monitoring activities can offer the advantage of quickly detecting and correcting deficiencies in the policies, processes and procedures for managing operational risk. There are regular reporting of pertinent information to senior management and the board that supports the proactive management of operational risk.

Senior management ensures that information is received by the appropriate people, on a timely basis, in a form and format that will aid in the monitoring and control of the business. The reporting process include information such as:

a) The critical operational risks facing, or potentially facing, the bank;

b) Risk events and issues together with intended remedial actions;

c) The effectiveness of actions taken;

d) Details of plans formulated to address any exposures where appropriate;

e) Areas of stress where crystallization of operational risks is imminent; and

f) The status of steps taken to address operational risk.

8. Conclusion

Scheduled banks in Bangladesh have adopted integrated, bank-wide approaches to risk management that, we hope, will drive them to the forefront among banks in our region in adopting contemporary methods to identify, measure, monitor, and control risks throughout their institutions. World-class risk management can seem like a costly endeavour for our banks. But the costs of being caught unaware or unprepared for unexpected, unfavourable changes in the banking environment, from wherever these changes may come, would be far higher.

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