RISK MANAGEMENT PRACTICES IN THE INDIAN BANKING SECTOR: A COMPREHENSIVE STUDY

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ABSTRACT

"Risk management must evolve from mere risk control to risk intelligence that can identify potential opportunities." — Pearl Zhu.

In today's global economic landscape, risk management plays a crucial role in designing and implementing processes to mitigate risks, forecasting future uncertainties, and adapting to evolving business practices. Amid these uncertainties, the banking sector forms the backbone of a country's economic framework. This article aims to explore the concept, types, and practices of risk management in India, with a particular focus on the banking sector. It also discusses the key challenges faced by banks during periods of financial crisis.

Indexed Terms: *Risk Management, Forecasting, Uncertainties, Banking, Financial Crisis.*

INTRODUCTION

Risk is generally defined as the uncertainty surrounding the occurrence of an event, or the probability of incurring a loss. According to Periasamy (2008), risk refers to *"a condition where the possibility of an undesirable outcome is known, quantifiable, and therefore insurable."* It may involve financial losses or harm to reputation and image (Sharma, 2003). Vasavada, Kumar, Rao, and Pai (2005) describe risk as an unexpected event with financial implications, leading to losses or reduced earnings. Kumar, Chatterjee, Chandrasekhar, and Patwardhan (2005) define risks as uncertainties that result in adverse outcomes relative to planned objectives or expectations. While the terms *risk* and *uncertainty* are often used interchangeably, Sharan (2009) highlights a distinction between the two.

1.1 TYPES OF RISK

Banks, like any other business entity, are inherently exposed to risk as part of their operations. The principle of risk and reward suggests that the higher the risk taken, the greater the potential gain. However, higher risks can also lead to significant losses.

However, banks are generally adept at identifying, measuring, and pricing risks, while maintaining adequate capital reserves to manage contingencies effectively. The key risks associated with banking operations—commonly known as *banking risks*—are as follows:

- Liquidity Risk
- Interest Rate Risk
- Market Risk
- Credit or Default Risk
- Operational Risk

1.1.1 Liquidity Risk

Liquidity risk refers to a bank's ability to fund asset growth and meet both anticipated and unexpected cash flow and collateral requirements, without incurring significant losses or excessive costs (Manish Kumar & Ghanshyam Chand Yadav, 2013). Effective liquidity management is crucial in financial decision-making, as firms must strike a balance between liquidity and profitability to achieve optimal efficiency (Bhunia and Khan, 2011).

1.1.2 Interest Rate Risk

Interest rate risk arises from fluctuations in interest rates, which can significantly impact a bank's financial condition. Since it directly affects profitability, managing and mitigating this risk is a critical focus area for bank management (V. N. Prakash Sharma, 2016).

1.1.3 Market Risk

Market risk involves potential losses in a liquid portfolio due to changes in market prices and encompasses risks related to interest rates, currencies, equities, and commodities (Aykut Ekinci, 2016). It mainly includes foreign exchange risk, interest rate risk, commodity price risk, and stock price risk, all of which are associated with adverse movements in exchange rates, interest rates, and stock prices (Koch and MacDonald, 2006).

1.1.4 Credit or Default Risk

Credit risk refers to the likelihood of a loss occurring when a borrower defaults on a loan or fails to meet contractual obligations (Investopedia). It is considered the most significant risk exposure for banks, given its strong correlation with bank profitability and overall economic growth. For banks, sound investment decisions aim to achieve the highest possible return with the lowest level of credit risk (Aykut Ekinci, 2016).

1.1.5 Operational Risk

The Basel Committee defines operational risk as *"the risk of loss resulting from inadequate or failed internal processes, people, and systems, or from external events."* This risk encompasses everything from human error and system failures to fraud and external disruptions.

Table 1

Operational Risk Category	Main Factors Involved
Internal Process Failures	- Inefficient procedures- Process design flaws- Poor controls
Human Factors	- Human error- Lack of training- Fraud- Negligence
System Failures	- IT system outages- Cyberattacks- Software glitches
External Events	- Natural disasters- Regulatory changes- Political instability
Legal & Compliance Risks	- Non-compliance with laws- Legal disputes- Sanctions

(Source: online)

1.1.6 Strategic Risk:

Strategic risk can be defined as the set of future opportunities and threats that are significant enough to materially affect an enterprise's ability to achieve its core objectives or even its survival (Neil Allan & Patrick Godfrey, 2007). Despite strong management practices, all organizations are vulnerable to strategic threats to varying degrees. Effective management of strategic risk requires a risk management system designed not only to reduce the likelihood of these risks materializing but also to enhance the organization's ability to manage or mitigate their impact if they do occur (Robert S. Kaplan and Anette Mikes, June 2012, *Harvard Business Review*).

1.1.7 Reputational Risk:

Reputational risk refers to the potential for negative publicity, adverse public perception, or damaging stakeholder opinions that can harm a bank's reputation. This type of risk can arise from various sources, such as legal issues, regulatory breaches, operational failures, or unethical practices, and may lead to loss of customer trust, reduced revenue, and long-term damage to the institution's standing.

II. PROCESS OF RISK MANAGEMENT

Risk management is the process of identifying, assessing, and prioritizing risks, followed by the coordinated and cost-effective application of resources to minimize, monitor, and control the probability and/or impact of adverse events—or to maximize opportunities (Wikipedia). The risk management process typically involves five key steps:

1. **Risk Identification**
2. **Risk Quantification**
3. **Risk Control**
4. **Risk Monitoring & Reviewing**

III. RISK MANAGEMENT IN BANKING: BASEL COMMITTEE

The Basel Committee on Banking Supervision (BCBS) is a global committee of banking supervisory authorities established in 1974 by the central bank governors of the Group of Ten countries. The committee expanded its membership in 2009 and again in 2014. As of 2019, the BCBS includes 45 members from 28 jurisdictions, comprising central banks and other authorities responsible for banking regulation. The BCBS provides a platform for regular cooperation on banking supervisory matters.

3.1 Basel I

In 1988, the Basel Committee introduced a capital measurement system, widely known as *Basel I* or the *Basel Capital Accord*. Since its introduction, this framework has been progressively adopted not only by member countries but also by nearly all countries with active international banks. By the end of 1992, Basel I had established a framework for measuring credit risk, requiring banks to maintain a minimum capital adequacy ratio of 8%. One of the key achievements of Basel I was the standardization of the definition of bank capital and the capital adequacy ratio. This ratio is calculated as the proportion of a bank's capital to its risk-weighted assets. The capital (the numerator) is divided into:

- **Tier 1 Capital:** Core capital, which includes equity capital plus disclosed reserves, minus goodwill.
- **Tier 2 Capital:** Supplementary capital, which includes asset revaluation reserves, undisclosed reserves, and general provisions.

3.2 Basel II

In January 1999, the Basel Committee proposed a new capital framework known as *Basel II*. This framework introduced a more robust system for measuring and quantifying the risks associated with banking operations. The primary aim of Basel II was not to increase or decrease the overall regulatory capital requirements but to make them more sensitive to the actual risks banks face. The core idea was to encourage banks to adopt internal systems for measuring risk and allocating capital, aligning regulatory capital more closely with economic capital.

The Basel II framework is built on three key pillars:

- **Pillar 1:** Minimum Capital Requirements
- **Pillar 2:** Supervisory Review Process
- **Pillar 3:** Market Discipline

Pillar 1 – Minimum Capital Requirements

Pillar 1 revises the 1988 Accord's guidelines by aligning minimum capital requirements more closely with each bank's actual risk exposure. While the minimum capital adequacy ratio remains at 8% of risk-

exposure. While the minimum capital adequacy ratio remains at 8% of risk-weighted assets (with the Reserve Bank of India stipulating 9%), Basel II expands the capital requirements to cover credit, market, and operational risks. The Minimum Capital Requirement (MCR) is calculated using the following formula:

$$\text{Capital Ratio} = \frac{\text{Total Capital (Tier I + Tier II + Tier III)}}{\text{Credit Risk + Market Risk + Operational Risk}}$$

In contrast, Basel I only addressed credit risk (Dr. Krishn A. Goyal, 2010).

Pillar 2 – Supervisory Review Process

Pillar 2 emphasizes the importance of effective supervisory oversight of banks' internal risk assessments. Its goal is to ensure that bank management exercises sound judgment and maintains adequate capital to cover all significant risks. The Basel Committee outlines four key principles for supervisory review:

1. **Capital Assessment:** Banks should have a process to assess their overall capital adequacy in relation to their risk profile, along with a strategy for maintaining adequate capital levels.
2. **Supervisory Evaluation:**
   Supervisors should review and evaluate banks' internal capital adequacy assessments and strategies, ensuring that banks maintain capital levels appropriate to their risk exposures.
3. **Expectations of Capital Levels:**

   Supervisors should expect banks to operate above the minimum regulatory capital ratios and should have the ability to require banks to hold capital more than the minimum.

4. **Early Intervention:**

   Supervisors should intervene at an early stage if a bank's capital levels fall below the required minimums, and they should require rapid remedial action to restore compliance.

Pillar 3 – Market Discipline

Pillar 3 focuses on enhancing **market discipline** through effective **disclosure practices**. It requires banks to provide adequate information to the public, regulators, and the bank's board to improve **financial transparency**, encourage prudent behavior, and strengthen confidence in the banking system. According to the **Reserve Bank of India (RBI)**, all Pillar 3 disclosures—both quantitative and qualitative—must be provided annually by the end of March, along with the bank's financial statements.

3.3 Basel III

Basel III is a continued effort by the Basel Committee to strengthen the regulatory framework established by Basel I and Basel II. It was introduced in response to the **2008 global financial crisis**, which revealed shortcomings in risk management and capital adequacy in many banks.

The main objectives of Basel III are to:

- Enhance the ability of banks to withstand **financial and economic stress**
- Improve **risk management** and **supervisory practices**
- Promote **greater transparency and disclosure**

3.4 Key Enhancements in Basel III over Basel I & II

Table 2

Feature	Explanation
1. CounterCyclical Capital Buffer (CCCB)	This buffer is aimed at protecting the banking sector from periods of excess aggregate credit growth that often led to systemic risk. It requires banks to hold additional capital (ranging from 0% to 2.5%) during periods of high economic growth to absorb potential losses during downturns.
2. Capital Conservation Buffer (CCB)	The CCB requires banks to hold an extra 2.5% of common equity capital on top of the minimum capital requirement. It is designed to ensure that banks accumulate capital during good times so they can use it during periods of financial stress.
3. Leverage Ratio	Basel III introduces a simple, transparent, and non-risk-based **leverage ratio** to serve as a backstop to the risk-based capital ratios. It is intended to restrict the build-up of excessive leverage in the banking system. The minimum requirement is set at 3%.

(Source: Author)

3.5 Challenges of Basel III Implementation in the Indian Banking System

1. **Low Credit Growth and Asset Quality**

   Indian banks are facing significant challenges, such as low credit growth, deteriorating asset quality, and low profitability. The Non-Performing Assets (NPAs) in India's banking sector have reached nearly Rs 10 trillion, which severely hampers the banks' ability to extend new loans and support economic growth.

1. **Impact of Recent Economic and Policy Changes**

   The banking sector has been further strained by recent policy and economic changes, including **demonetization**, the **Goods and Services Tax (GST)** rollout, and the **Real Estate (Regulation and Development) Act (RERA)**. These reforms have introduced additional complexities for banks in terms of compliance and operational adjustments.

2. **Public Sector Banks (PSBs) and Capital Shortfalls**

   Public Sector Banks (PSBs) in India are struggling to meet the capital requirements set by Basel III. Many PSBs are falling short of the stipulated standards for Tier 1 capital, which poses a significant challenge for them to comply with Basel III while maintaining their operations.

3. **Raising High-Quality Capital**

   Indian banks need to raise high-quality capital to meet the stringent capital adequacy requirements under Basel III. This is particularly challenging in a context where profitability is low, and existing capital buffers are inadequate.

4. **Meeting Stakeholder and Customer Expectations**

   In addition to regulatory compliance, banks must also manage stakeholder and customer expectations. The pressure to meet these expectations while simultaneously adhering to stricter regulatory requirements creates a complex operational environment for banks.

IV KEY TRENDS IN BASEL III IMPLEMENTATION (2023)

1. **Implementation Delays and Global Disparities**
    1. **United States**: The Federal Reserve has proposed a phased implementation of Basel III Endgame, with the first phase expected to begin on July 1, 2025, and full compliance to be achieved by June 30, 2028. This proposal has faced criticism from the banking sector, leading to possible delays and revisions to the timeline.
    2. **United Kingdom**: The Bank of England has postponed the adoption of Basel 3.1 capital rules until January 1, 2027, citing the need for clarity regarding U.S. regulatory approaches.
    3. **European Union**: The European Union successfully implemented Basel III standards into EU law on July 9, 2024, which was an important step in bolstering the resilience and stability of the EU banking sector.

2. **Increased Capital Requirements**
    1. Basel III Endgame reforms are projected to increase capital requirements for large banks. For instance, globally systemically important banks (G-SIBs) may experience a 21% increase in capital requirements, while regional banks could see a 10% rise.
    2. In the EU, the adoption of Basel III standards is expected to raise the capital requirements for major banks over the next few years, with implementation to begin by 2024 and extend over the next eight years.
3. **Revised Risk-Weighted Asset Calculations**
    1. The reforms will introduce an aggregate output floor, ensuring that the risk-weighted assets (RWAs) calculated by banks' internal models will not fall below 72.5% of RWAs as calculated using standardized approaches.
    2. The Basel III reforms also aim to refine the standardized approach for credit risk and operational risk, ensuring more robust and risk-sensitive approaches than those currently in place.
4. **Operational Risk Capital (OpCar) Model**

    The Basel Committee has proposed replacing all previous approaches for operational risk capital, including the Advanced Measurement Approach (AMA), with a simplified formula known as the Standardized Measurement Approach (SMA). This change is intended to improve consistency and comparability across banks.
5. **Liquidity Standards**

    Large internationally active banks saw an increase in risk-based capital ratios during the first half of 2023. Meanwhile, leverage ratios and Net Stable Funding Ratios (NSFR) have remained stable. However, the Liquidity Coverage Ratio (LCR) showed a slight decrease during this period, reflecting challenges in maintaining liquidity buffers amid ongoing market fluctuations.

V GLOBAL OUTLOOK

- The Basel Committee on Banking Supervision has reiterated its commitment to ensuring the full, consistent, and timely implementation of all aspects of the Basel III framework. Nevertheless, the differing timelines and approaches adopted by jurisdictions worldwide may present challenges in achieving uniform global compliance.

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