

Risk Management in Banking and Finance Law, Covering South Asia

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Abstract

Indicators of a financial liberalized and globalized economic system's impending collapse include frequent swings and financial crises. This results from the expert study and institutional introspection following previous catastrophes. It is possible to minimize the danger of financial system failure in critical periods by using indicators and results. They can be overcome. Minuscule failure chances and rapid recovery are the goals. Financial architects must have efficient and robust security and risk management systems to limit risk exposure. In the event of firm failure or bankruptcy, maximize stakeholder value. In South Asia, there are many countries. To create a good investment climate, retain public confidence in the business and financial sectors, and promote sustainable growth, developing healthy insolvency and risk management systems is essential. India, which opened its markets in 1991, now faces the enormous challenge of liberalization and, in the future, modernization of its legal system. Several parts of the legal and financial systems of Bangladesh, Nepal, and Pakistan have been reformed. Sri Lanka has recently embarked on a road of globalization and system reforms. There have been many bank changes and insolvency reforms in the region over the last decade. Many financial sector changes are being implemented to create an efficient, well-diversified, and competitive financial system. Banks are also trying to develop acceptable and comprehensive models for risk management, which will be integrated into their working systems. The insolvency risk for 73 Indian banks using Z-Index and the probabilistic prediction of their book value bankruptcy for three years has been analyzed from 2017 to 2020. The need of the hour is an efficient risk management system that includes risk identification, measurement and control, writes Ravi Agrawal. He says it is vital to handle these risks in a pre-emptive, proficient and cohesive manner to maintain sound financial health, banks can assess future losses and prepare for them.

Keywords: Risk Management, Banking, Finance Law, Public sector banks, South Asia, Pvt. sector banks.**Copyright © 2021 The Author(s):** This is an open-access article distributed under the terms of the Creative Commons Attribution **4.0 International License (CC BY-NC 4.0)** which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.

INTRODUCTION

In the banking industry, risk management is an essential part of managing risks and protecting the value of an institution's assets, according to Professor John O'Driscoll. He says banks must identify and assess the risks they face to manage these risks effectively. They identify and evaluate the potential threats to the bank's financial stability due to the risk management process. Throughout Asia's history, the financial industry has gone through unique phases and transitions [1]. This is why the government has implemented several critical reformative steps in conjunction with the Reserve Bank, including deregulation of interest rates. The implementation of prudential standards about income recognition, provisioning, and capital, as well as the necessary money [2, 3].

As financial institutions continue to evolve in this fast-paced world, banks must deal with a wide

variety of threats. These interconnected risks must be managed effectively to preserve solid financial health. To enhance regulation of the Indian banking system, policymakers and financial sector regulatory bodies have taken several reasonable steps in the past [4]. As a rule, banks no longer accept deposits or provide advances.

Banks have some options for creating new financial instruments, products, and services in today's technology-driven environment. Many developments, including derivatives, securitization, and other "off-balance-sheet" products, pose substantial dangers to the banking industry [5]. There's a direct correlation between these dangers and the global financial crisis, which began in one country but spread to nearly every country.

The economic and regulatory environments in which banks operate have shifted banks from being

financial middlemen to becoming risk intermediaries. Banking is exposed to intense competition as a result of this process of financial intermediation. Risks and uncertainties are inherent to the banking industry, which is by its very nature risky. Every time the bank conducts a transaction, its risk profile takes on additional aspects that must be explored. Processes of risk management are forward-looking and entail continuous decision-making [6,7]. The Basel Committee on Banking Supervision (BCBS) describes a succession of four procedures as financial risk management. Market, credit, operational, and other risks are identified and assessed using data and a risk model [8]. Senior management is responsible for monitoring and reporting on these assessments regularly and controlling these risks [9].

The legal and regulatory framework:

Most South Asian countries, notably Bangladesh, India, and Pakistan, owe their existence to the British. Even though Sri Lanka's standard law system is based on English law, the Roman-Dutch rules continue to be the country's common law. While English law applies to bankruptcy and banking in Sri Lanka, Roman-Dutch Law rules apply to property

mortgages. Nepal's legal system is mainly based on common law, although it also incorporates elements of continental legal systems. The Muluki Ain (Country Code), Nepal's first codified legislation, was adopted in 1853 and superseded by the present Muluki Ain. Unlike 1963 Unlike other common-law nations, Nepal did not keep up with common law advancements. Thus, until the mid-1990s, there was no legislative framework for commercial law and no legal procedures to ensure the proper operation of the business sector. Laws from fundamentally diverse legal traditions have become models as a result of globalization and trade openings.

Legal and institutional framework

Most nations have a business law that governs liquidations. Liquidators are government employees in Bangladesh, India, and Pakistan. OCR is responsible for liquidating businesses in Nepal. There is a panel of accountants in Sri Lanka that selects the Official Receiver. In Bangladesh, India, and Pakistan, the High Court has authority over liquidations, whereas, in Sri Lanka, the District Court has jurisdiction. In Nepal, courts are not involved in the liquidation of corporations.

Table-1: The liquidation framework

	India	Bangladesh	Pakistan	Nepal	Sri Lanka
Governing Law	Companies Act 1956	Companies Act (Bangladesh) 1994 Bankruptcy Act 1997	Companies Ordinance 1984	Companies Act 2053 (1997)	Companies Act. 1982
Institution	Designated Company Court in High Court of Every State	High Court Designated Bankruptcy Court	Designated Company Court in High Court of Every State	No Role for Courts	District Courts
Regulator	Ministry of Company Affairs	No Specific Regulatory Authority	Ministry of Company Affairs	Office of the Company Registrar (OCR)	The FTC would only have regulatory powers with the Court and the OCR and no other regulatory framework.

LITERATURE REVIEW

To better understand risk management and its application in the banking industry, this section takes an in-depth look at several studies conducted in the sector, including those completed outside of India.

To examine whether banks that were better able to exchange credit risks in the loan sales market had significant benefits, Cebenoyan and Strahan (2001) performed a study. To arrive at these conclusions, the researchers executed a series of cross-sectional, reduced-form regressions. Which included the use of controls for capital structure, investments in risky loans, profits, and risk to elucidate the correlation between capital structure, risky loans, and profit margin, and how those variables influence usage of loan sales

markets by banks to help control risks. That indeed showed itself in the studies. However, when viewed from a more generalized level, buy-sell banks turned out to be no safer and probably slightly riskier; however, about their counterparts, buy-sell banks proved to be far less complicated. Based on the study, credit availability rather than system risk reduction is the expected advantage of risk management innovations in banking.

As Bichsel & Blum, 2001 discovered, a positive correlation exists between changes in risk and differences in accounting market data for risk and capital. To test whether leverage ratio impacts a bank's trouble, the authors studied data covering ten years from 1990 to 1999 and observed a correlation between

leverage ratio and risk. It was shown that changes in the capital (assets) and risk correlated. There was no association established between default risk and capital ratio.

Naïmy, 2005 calculated the total performance of all of the Lebanese banks over the 1993-2002 period by looking at both profitability and risk levels. To accurately gauge the implementation of this sector in terms of profitability and risks, he used the Du Pont equation and risk index given by Hannam and Hanweck (1988) to quantify the risk of Lebanese commercial banks. Despite solid supervision and healthy financial management, growth in the banking sector was at a virtual standstill for the first few years of the new millennium. Bank solvency and profitability were jeopardized by unexpected interest-rate fluctuations or any unforeseen political or geographic event. Lebanese banking system performance was significantly connected with During this time of economic hardship, the country was plagued by structural imbalances, a growing deficit, and a deficit in trade balance that would not go away.

The Process of Risk Management

By using appropriate methods for risk measurement, banks must identify and analyze the many types of risks that they may face. They must also establish risk policies and decide on the management decisions taken in response to these risks. All departments are informed on the attributes and causes of the risk exposures during the risk identification step. In this process, effective institutional communication channels are essential. The board of directors and senior management of banks are considered by regulatory/supervisory authorities to be the responsible entities for developing risk management strategies, implementing those strategies, and creating and implementing policies. When formulating risk policies for banks, the board of directors considers the risk management unit's recommendations. As specified by the board of directors, they are written standards that are executed by senior management.

Management is a critical component of (Notification of the Central Bank of TRNC). Clearly defined, relevant, and realistic risk policies are essential for all bank divisions. Yüzbaşolu (2003) states that risk management policies and implementation techniques should address the following topics [18].

- This includes the organization and scope of the risk management program.
- Measurement of risk methods
- The role and responsibilities of the risk management group;
- Establishment and execution of notification and warning processes. - -
- Approvals and confirmations must be issued under various circumstances.

Reporting and approval processes should be outlined in risk management policies. If a hedging transaction exceeds a specified amount, the general manager must approve it, or some transactions require a duplicate signature. Deshalb, is there a need for a robust internal audit system? If this step does not work correctly, risk management can spiral out of control. Stress testing and scenario analysis may be used to analyze the risks that cannot be assessed with risk management models. An integrated risk management system must be used effectively by calculating and allocating capital on a sector-by-sector basis.

Kaval (2000, p.33) and Varlk (2010, p.90) cite instances of policies linked to asset-side risk management. To reduce the bank's exposure to market risks, the bank invests in various risk and return groups within the bank's security portfolio, monitors the market daily for price changes, and adjusts its market value following daily and seasonal price fluctuations.

Employees in charge of these processes inside the bank's trading unit are allowed to take long positions. Stop-loss orders are applied as a priority to prevent situations from creating losses by using the pre-defined stop-loss orders. It was cited by Varlk (2010) on page 90. There are several factors to consider when it comes to adopting financial risk policies properly. The selection and administration of loans, as well as balance sheet management, are of crucial importance. Assuming that hazards cannot be eliminated, liability side policies think that a reasonable amount of risk is acceptable to achieve profitability. (Kaval 2000, p.33) They are policies for determining the potential to cover risks. They quoted in Varlk, 2010, p.

OBJECTIVES AND RESEARCH METHODOLOGY

The specific objectives of the study include the following:

- To calculate the Z Risk Index for public, private, and selected international banks operating in India from 2017 to 2020.
- Based on data for the chosen era, cross-sectional and longitudinal comparison of the bankruptcy probability of public and private banks in India.

ROA standard deviation is an effective indicator of a bank's total risk since it includes credit risk and interest rate risk, liquidity risk, and any other risk reflected in bank profitability (Sinha et al., 2009). An indicator called the Z risk index was utilized as a basis for this research.

The Development of Risk Management in Banking

BIS's founding on May 17, 1930, might be viewed as a milestone to control the international payment system. Slowly, banks began to take chances after recovering from the 1930 slump using Keynesian tactics (Tulgar, 1993, p.19). National governments

issued post-war debt instruments to speed public rebuilding and growth after World War II, which became an essential investment item for banks in a passive state. As the demand for credit grew, asset management became a priority for the banking industry, replacing liquidity.

They began looking for additional short-term liabilities in the 1960s since the banks could not fulfill credit demand with the assets they already had. The first instruments to appear were negotiable certificates of deposit and Eurodollar deposits. Also, with the use of these instruments, banks were able to collect cash from large corporations. During this time, banks began to pay more attention to their liabilities structure and liability management. At this time, banks began to see interest rate fluctuations as a risk element that needed to be managed (Klnc, 1991, p.51). The 1973-1980 oil crisis led to a rise in interest rate volatility and the hunt for new tools to combat this risk. As a result of this, the idea of liquidity took on a new meaning.

Bank liquidity used to be measured in terms of cash and assets that could be turned into money, but it has come to be measured in recent years in terms of the banks' capacity to deliver additional cash upon demand. With fixed bank returns on assets and rising interest rates, banks began to lose money. A variable interest rate was the first step attempted by the banks to combat this issue. Credit risk was brought to light as a result of clients being exposed to interest rate risk. Banks had to deal with exchange rate risk as a new risk in the 1970s, in addition to liquidity and interest rate risks.

Z Risk Index

Suggested by Hannan and Hanweck (1988), Liang & Savage (1990), Eisenbeis & Kwast (1991), Sinvey & Nash (1993), Naimy (2005), and Rahman, Ibrahim, Kameel & Meera (2009). (2010). When using the Z statistic, the banks' return on assets, return volatility, and capital base all account for formalities. Complexity is offset by the fact that it is simple to calculate and may be utilized for public and unregistered financial organizations (Strobel, 2011). The probabilities of Hannan and Hanweck becoming bankrupt are dependent on the expected return on assets

being lower than the capital-asset ratio and on the more significant being negative. The Z risk index combines the bank's regular profit margin and the variance in that profit margin. The capital to absorb that variance. in effect, the Z risk index measures the strength of the ROA capacity (as measured by the standard deviation for the amount of ROA that could be decreased). Divided by the number of standard deviations that indicate how much ROA could be reduced without significantly impacting the bank's capital base (i.e., before the book equity capital is exhausted). The Z risk index seeks to quantify the chance of a bank's profits becoming insufficient to meet its capital requirements, which will result in insolvency. Inversely, a greater Z-ratio suggests a reduced probability of bankruptcy.

$$Z = \frac{ROA + CTA}{\sigma ROA}$$

Specifically, Z is defined as:

Where: The capital-to-asset ratio is equity divided by total assets.

Instead of Total Assets, Risk-weighted assets have been used in the present study, which is the Capital Adequacy Ratio of that study (CAR). To suggest more excellent solvency, higher values of (Z) mean a lesser chance of insolvency because higher Z values represent more significant amounts of equity and earnings. As long as banks retain a sufficient capital cushion, they will keep the risk of insolvency low.

DATA ANALYSIS AND RESULTS

Measuring the Z Risk Index for Indian Banks

It is based on observations of 73 Indian commercial banks, including 27 PSBs, 20 PrSBs, and 27 foreign banks (FB). We solely evaluated international banks operating in India during the research period (2017-2020). The Indian Banking Association (Indian Banking Association) issued Performance Highlights of various banks over three years from 2017 to 2020, which provided secondary data.

Table-1: Z Risk Index and Probability of Insolvency of Indian Banks based on banks' financial results from 2017-2020

Banks	ROA μ	CAR μ	ROA σ	Z	P
Nationalized Banks (20)	0.00853	0.12570	0.00378	35.47592	0.00040
SBI Group (6)	0.00928	0.12655	0.00213	63.86803	0.00012
Public Sector Banks (26)	0.00861	0.12589	0.00347	38.75170	0.00033
Old Pvt. Banks (13)	0.01038	0.14813	0.00573	27.65114	0.00065
New Pvt. Banks (7)	0.01210	0.15154	0.00770	21.26416	0.00111
Private Sector Banks (20)	0.01098	0.14932	0.00652	24.59397	0.00083
Foreign Banks (27) *	0.02296	0.34019	0.06354	5.715399	0.015307
Note: * Those foreign banks have been considered operational in India during the whole period of 2017-2020.					

Public sector banks (PSBs), private sector banks, and foreign banks are shown in Table 1 for 2017-2020. PSB's average ROA (0.00861) is lower than

PrSB's average ROA (0.00861). (0.01098). As a result, the ROA of foreign banks is significantly higher (0.02296). When it comes to capital adequacy ratio

(CAR), FB (0.34019) has a significantly higher value than PrSB (0.14932) and PSB (0.14933). (0.12589). The Z-statistic of FB is 5.715399, compared to 24.59397 and 24.59397 for the other two bank groups, respectively (38.75170). This discrepancy is related to the standard deviation, which measures the variability of ROA. While the standard deviation of ROA for PSB

is just 0.00347, it is 0.06354 for FB. PSB (0.00652) likewise has a high value when compared to PSB. Despite FB and PrSB's greater ROA and CAR, the Z-statistic is lower due to this considerable difference in ROA's variability. Public sector banks are safer than the private sector and international banks, according to the Z-rating.

Table-2: Top Ten Banks with Highest Z-Index

S.No	Name of the Bank	ROA _{MEA} N	CTA _{MEA} N	ROA _{S,D} .	Z	P
1.	The Federal Bank Ltd. (Old PrSB)	0.01325 6	0.16826 7	0.00102 2	177.5472 46	0.00001 6
2.	Shinhan Bank (FB)	0.01886 7	0.55318 9	0.00322 5	177.3868 98	0.00001 6
3.	City Union Bank Ltd. (Old PrSB)	0.01561 1	0.13083 3	0.00091 0	160.8783 21	0.00001 9
4.	State Bank of India (SBI)	0.00867 8	0.13013 3	0.00125 3	110.8029 33	0.00004 1
5.	IDBI Ltd. (PSB)	0.00647 8	0.13064 4	0.00129 2	106.1260 15	0.00004 4
6.	State Bank of Bikaner & Jaipur (SBG)	0.00880 0	0.12734 4	0.00137 7	98.83460 5	0.00005 1
7.	Syndicate Bank (Old PrSB)	0.00830 0	0.12218 9	0.00132 1	98.78154 6	0.00005 1
8.	State Bank of Patiala (SBG)	0.00762 2	0.12504 4	0.00148 7	89.20202 4	0.00006 3
9.	State Bank of Hyderabad (SBG)	0.01030 0	0.12853 3	0.00157 5	88.15925 5	0.00006 4
10.	YES Bank (New PrSB)	0.01640 0	0.16433 3	0.00207 1	87.25887 6	0.00006 6

According to the Z risk index, the top 10 banks of 73 chosen institutions are shown in Table 2. With a Z-index of 177.547246, The Federal Bank Ltd. ranked top in this table. One New Private Sector Bank and three Old Generation Private Sector Banks make up the top 10 banks. Three different banks from the State Bank Group have also made the complete ten list of banks.

The list also includes one Public Sector Bank and one Foreign Bank. Murari (2012) found that none of the New Private Sector Banks had made a list due to a lower Z-index than other banks, but YES Bank has now made a list due to superior risk management procedures. Others, on the other hand, could not.

Table-3: Year-wise Z Risk Index and Probability of Insolvency of Indian Bank

Year (31 March)	Public Sector Banks		Private Sector Banks		Foreign Banks	
	Z	P	Z	P	Z	P
2018	35.372803	0.000400	14.6778	0.002321	19.47233	0.001319
2019	53.653943	0.000174	30.05948	0.000553	21.66058	0.001066
2020	46.441750	0.000232	39.43146	0.000322	23.16467	0.000932

As demonstrated in Table 3, the Z risk index and the probabilistic interpretation of book value bankruptcy for Indian banks have fluctuated during the research period. S&P 500 risk index (Z) rose from 35.372803 in 2017-18 to 56.447113 in 2018-19, then decreased to 31.94555 in 2019. For Indian PSBs, the Z risk index has been relatively stable during the global financial crisis and even dropped a little bit. As for PrSB, although the Z risk index climbed from 14.6778 in 2019-2020, it remained superficial. Over the years, a changing pattern has been seen. For example, the greatest Z-statistic is found in 2020 (39.43146), but it plummeted to 25.24266 in the year following,

illustrating the impact of the US subprime crisis on the economy.

Insolvency risk for PrSB has fluctuated within acceptable ranges over the research period. A similar rise was seen in FB, which climbed from 19.47233 in 2018 to 23.16467 in 2020. It then declined, however, in the last year of research, from 23.16467 to 13.55922. For several years, there has been a rising reliance on external capital flows in debt and equity to finance this gap. Foreign exchange liabilities are also joint among many companies. An overall trend of decreasing insolvency probabilities is evident for PSB and PrSB over this time, as indicated in Table 3. As a result of the

limited operational coverage in India, foreign banks operating in India exhibited a somewhat alarming trend in terms of book value insolvency. However, in the previous year, the soundness of India's banking sector showed signs of a weakening economy and fast currency depreciation, signaling increased risk.

CONCLUSION

The competitive banking industry is a must in today's world when worldwide rivalry is rising, and technology advancements are removing obstacles to commerce and finance [20]. Basel II, which has been widely adopted, calls for the real sector to be adapted. There is a pressing need to address the shortcomings of the TRNC's commercial sector. During the EU accession process, the financial sector and firms in the commerce and industrial sectors that require credit should be well-prepared to maintain a competitive edge. As a result, the corporate world we live in and seek to integrate has put these innovations into effect and established the appropriate standards [21]. As a result, the banking industry and other associated sectors should be aware of the work that has to be done on this issue but only after establishing road maps and national initiatives.

Scope for Future Research

An effective risk management strategy is needed to help Indian banks enhance their financial health by reducing non-performing loans. A combination of decreasing growth, reduced market confidence, increased non-performing assets (NPAs), and asset quality decreases have weakened Indian banks' resilience in the past financial year. A complete picture of banking hazards may be obtained by examining the following: additional research should include macro-level issues and micro-level ones.

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