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Assessment of Risk Strategies in Banking Sector of Nepal

Manoj Kumar Lal Karn

CEO, Himalayan Life Insurance Ltd
mkkarn64ins@yahoo.com
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Abstract

This article examines the impact of strategies in mitigating the risk in commercial banks of Nepal. First the paper introduces the risk in the financial institutions and then discusses the types of risks in the banks that rely on the IT systems for the operations and services. Besides, it forwards some strategies that can help the banking sector to reduce the risk and to promote the security from the attackers. I have used the mixed method of research design and have massively used the secondary data to assess the impact of the tools and techniques employed in mitigating the risk in the banking sector of Nepal. Despite the reliance on the secondary materials for information, the paper is analytical and critical contribution to the existing knowledge on the subject i.e. the risk management in the financial institutions of Nepal. The major objective of the paper has been to scrutinize the current risks faced by the banks in Nepal and the process of reducing the risks as adopted by the financial institutions in general. The finding of the study is the spread of awareness and updating the IT systems by the banks can help to protect the systems from the intruders and the cyber security must be strengthened to let the financial institutions feel safe.

Keywords: Risk, Finance, bank, strategy, credit, debit, stock market

Introduction

This paper examines the risk factors that almost all the commercial banks have been facing since their inception. Risk refers to the possibility of financial loss because of the shortcomings the banks have during the operations. The basic risks commercial banks in Nepal have been credit risk, market risk, operational risk, liquidity risk etc. These risks are likely to cause unimaginable losses on the banks that they are forced to repair the lapses. Risk is the possibility that actual return fluctuates. Return is the increase in the value of an investment. By examining the return on their investment portfolio, an investor can evaluate the financial performance of an investment. Investments in the stock market entail future uncertainty, which is a risk that all investors must be willing to accept in exchange for the projected profits, according to a study by Ravi and Patil (2018). As a result, stock market investments carry both risk and reward (Cited, Thapa, p. 27). However, the possibility of unexpected and exponential growth of the capital is high. This potential allures the bankers to invest their bigger capital in the stock market.

This article assesses the risk associated with commercial bank stock prices using financial statements and other economic data relevant to Nepal. The probability that the actual return is different from the expected return is what is meant by risk. A larger

discrepancy between actual and expected returns is indicative of higher risk. It is noteworthy to observe that risk can be thought of as both "upside potential" and "downside risk." Increasing risk also raises the potential for both large victories and catastrophic losses. The paper explores the possibilities of managing the risk in the banking sector of Nepal. It aims to justify some techniques that can help to reduce the potential of financial risk.

Discussion

In the banking sector of Nepal, risk management has been indispensible since the very beginning of the introduction of commercial banks. Risk management helps the financial institutions in efficiently recognizing, evaluating, and reducing a range of risks that can jeopardize their stability and soundness. Therefore, almost all financial organizations including commercial banks use specific techniques and methods to reduce the risk. Nepalese banks negotiate the complex and ever-changing financial market raised as a focal point in this research work. If these techniques and methods are put into practice, the findings of this paper will help Nepalese banks to manage risk and to reduce the losses systematically. The commercial institutions can improve their systems for identifying, measuring, and mitigating risks by learning about the major threats facing the sector and the practical tactics used by the leading bank at both national and international levels. To retain the stability of the banks, they must focus on the mitigation of the risks and should enable all aspects of theirs for prosperity, stability and profitability. Resilience theory is a perspective that helps the financial institutions to become resilient even in adversity.

Materials and Methods

This research paper primarily relies on secondary data. It employs mixed method in using data to discuss the results. Information regarding the risk strategies in the financial institutions especially in banks is drawn from the articles and research reports published from different authentic institutions and organizations. Nepalese banks and their strategies to reduce risk are the focal aspects in this paper. The data from 2005 to 2024 are massively used in the discussion section of the article. To assess the risk strategies of the commercial banks in Nepal, few commercial banks are prioritized due to the limitations of the researcher. The existing literature on the topic of the research paper is from both theoretical and empirical perspectives.

Review of Literature

The existing literature on risk management in the financial sector of Nepal has been tremendous. Nevertheless, the paper has selected some of the relevant sources for integrating the current knowledge on the topic. Gang Kou et al (2019) has defined the risk stating that systemic risk in finance is a situation that can result in the breakdown of a whole financial system or market in a specific region, country, or even globally. The significant impact of the 2008 global financial crisis, characterized by its strong economic devastation and causing a massive ripple effect that decimated the financial sector, highlighted the importance of systemic risk in ensuring financial stability. Even now, the world economy has not completely bounced back from the aftermath of these events caused by the harmful

impacts of systemic financial risk. Therefore, in the last ten years, there has been a significant amount of groundbreaking academic research concentrated on systemic financial risks, such as examining the financial ecosystem, financial oversight, monitoring international capital movements, etc. Nevertheless, systematic risk is constantly lurking in today's expansive financial systems, leading intelligent and automated machine learning techniques to be sought after tools for evaluating and identifying systemic risk within the growingly intricate financial network, vast amounts of financial transaction data, and market sentiments along with risk tendencies, etc.

In recent years, the term systemic financial risk has gained prominence among researchers and government officials who use it to assess the potential harm to consumers, financial markets, and the economy. What are the strategies that commercial banks can use to successfully recognize, quantify, and control the different risks they encounter in order to reduce potential losses and maintain consistent, long-term success? (Kou et al, 2019). The question is still unanswered. Therefore, the current paper seeks to explore the relevant answer. K. K. Souad (2024) has defined risk as a concern for projects especially in the banking industry. Certainly, risk can be comprehended from various angles. Risk, as defined by Gul Farhat in 2008, is a potential danger from an event that could jeopardize a part of the organization, ultimately impacting its ability to reach its goals, especially strategic ones. This definition highlights how risk can affect the organization's ability to reach its long-term objectives. In contrast, (Moncef, 2009) describes risk as a particular danger linked to a completely explainable event or series of events with uncertain outcome, but acknowledged possibility. This description emphasizes the unpredictable yet possible nature of risk, suggesting that while the concerned cannot always predict what will happen. Even if commercial institutions are guided by norms and principles of financial development, the potential outcomes are hardly to be predicted.

Banking risk refers to the market value fluctuation of the bank and is categorized into two types; risks that are uncontrollable by both the bank and the customer, like inflation risk, changing interest rates, exchange rates. The risk of a bank is connected to its ability to recover borrowed funds or generate anticipated future earnings (Habbar Abdul Razzaq, 2008). It is necessary to discover new ways to address this issue and find a solution. Risk management is the act of evaluating a risk and then creating plans to handle that risk effectively. In general, the strategies focus on shifting the risk elsewhere, evading the risk entirely, reducing its adverse effects, or acknowledging and dealing with the consequences linked to the risk. This method guarantees that risks are addressed in a proactive and efficient manner to reduce their possible negative impacts. Risk management in banking involves managing activities to control and decrease risks to levels that are deemed acceptable. In particular, it involves recognizing, quantifying, managing, and mitigating the risks encountered by a bank or financial institution.

There are diverse types of risks in the banking sector. Banking risks are categorized into various divisions, with some falling under financial risks while others fall under operational risks. The study by Narad Kumar Thapa (2022) has emphasized on the concept

of risk in the financial sector. In his perspective, refers to the uncertainty in the future or the deviation from anticipated earnings or outcomes. The amount of uncertainty that an investor is willing to tolerate in order to potentially earn a return on their investment is measured by risk. Risk in finance refers to the chance that the results may not meet expectations, particularly in terms of investment returns. Researchers have significantly developed the field of risk and return analysis. In his study, Joghee (2021) has examined the risk-return evaluations of several banks within the industry. The calculations for risk and return included finding the mean, standard deviation, covariance, variance, correlation, and beta.

Results Discussion

In the context of Nepal, commercial banks have ever encountered high risk because of two reasons: liquidity and protection of depositor money. Pertaining to depositor money, Chand et al (2021) have stated that to protect depositor money, spur economic expansion, and guarantee financial stability, financial institutions must have a stable operating environment. It follows that it is crucial to comprehend the internal factors that lead to bank stability. A stable banking sector facilitates savings, investment, and the effective distribution of financial resources (Gwachha, 2022). Like many other developing nations, Nepal's banking sector has seen substantial changes throughout time (Gwachha, 2022). The industry has seen deregulation and liberalization, which has boosted financial innovation, competitiveness, and integration with international financial markets (Chand et al., 2021). Because of these developments, Nepalese banks face numerous difficulties. It is critical to evaluate the variables affecting their stability. This paper discusses the following:

Risks Related to Finance

Financial risks encompass all risks associated with managing assets and liabilities, necessitating constant monitoring and oversight by bank management. This type of risk management is influenced by market trends, pricing, fees, economic conditions, and interactions with other related parties, ultimately resulting in either profit or loss for banks. It can be seen in two forms: the risk of default on a loan and the risk of lack of liquidity. The first refers to the risk that comes from borrowers not repaying their debts, if they pay back everything there is no risk, but if they cannot pay back due to bankruptcy or other issues, the financial institution may lose part or all of the funds. Default can occur due to accruing interest on the customer that makes repayment impossible. The second is the risk of lack of liquidity that denotes the risk which financial institutions face when the maturity of their loans prevents them from meeting payment demands from depositors and borrowing from the market due to lack of lender confidence in future payment ability. Banks face this risk because of issues with both the liabilities, such as not being able to meet sudden large withdrawal requests from depositors, and the assets, like the bank having to fulfill unexpected credit obligations, resulting in credit liquidity risk. It is essential to maintain regular communication to ensure successful project outcomes.

Market risk referring to the potential for financial loss due to fluctuating market conditions

Market risk is the fluctuation in the overall worth of an asset caused by negative shifts in economic factors, resulting in a reduction in the value of the financial holdings of the bank, such as variations in interest rates, exchange rates, risks related to commodity and raw material prices, and derivative products, along with the risk of fluctuations in stock prices.

The risk pertaining to changes in interest rates

The interest rate is the cost of obtaining resources for the bank from suppliers. Interest rate risk is about the fluctuation in a bank's net interest income and equity market value in relation to shifts in market interest rates. This involves the entire structure of the bank's assets and liabilities, the maturity distribution of its investments, and significant shifts in interest rates.

Exchange risk

Exchange risk is the conversion of foreign currency into local currency when conversion rates are unpredictable. This risk is especially significant for banks which focus on foreign currency transactions such as trade financing, foreign investments, remittances. Most of the commercial banks in Nepal engage in foreign transaction of remittances. Consequently, they suffer high risks,

When engaging in transactions, the banks in Nepal rely on modern IT systems based on information for data storage. They operate both credit and debit with the help of IT systems. This increases the level of risk as systems can be hacked and can be disrupted for the vested interests of the competitors. Despite high risks, the banks in general and commercial banks in particular are integral part of the online world and the everyday routines. They cannot stay aloof from the use of technology for the operation and management within their spheres. Rupendra Maharjan and Jyotir Moy Chatterjee have emphasized on the threat caused by the IT systems. In their perspective, protecting bank procedures and systems from attackers and reducing security threats is a challenging task. They have specified cyber-attacks which are rising. Cyber-attacks have become a great challenge to countries and organizations including banking institutions. Cyber threats are increasing both in terms of frequency and complexity (Maharjan & Chatterjee, 2019). The frequency of cyber security attacks is growing more damaging and expanding the range of methods and attack vectors being used. Implementing flexible countermeasures quickly and reducing risk could prevent the majority of these incidents. The commercial banks in Nepal need to efficiently protect and reduce cyber security threats. The banks should develop and enforce healthy cyber security policies and procedures. Besides, they need to regularly update their policies when encountering new threats and technologies.

Maharjan & Chatterjee have specified five components that are the basic components of the National Institute of Standards and Technology (NIST). These include

identify, protect, detect, respond and recover which build the foundation for creating a framework to reduce cyber security incidents that can be beneficial in the Nepalese context (2019, p.82). Identification, protection, detection, response and recovery significantly contribute to the bank operations. Malicious activities are carried out against the banking industry in Nepal. Various types of safety hazards are identified among common threats, categorized by their methods and modes of occurrence, such as malware, DDoS attacks, IP communication threats, phishing, exploits of vulnerabilities, botnets, threats to mobile phones, social networking threats, and spam. All of these security risks infringe upon Confidentiality, Integrity, or Availability (Maharjan & Chatterjee, 2019). The major security challenges that Nepalese banks face are as follows:

a. Cyber Attacks on Automated Teller Machines (ATM): Although the banks in Nepal invest a big amount of their budget for the security systems, the attacks are continued because of the current safety measures in place for ATMs. ATMs are generally operating on Windows XP or Windows 7 that lack adequate security controls including utilizing Endpoint.
b. Detection and Response (DR): This technology identifies and reacts to cyber security incidents. ATM-related incidents in the banking sector of Nepal exponentially grow despite a decrease in occurrences after the introduction of Chip and PIN technology. However, attackers continually endeavor to infiltrate the ATM network using an advanced cyber-attack on the banks.
c. Attacks by POS Systems: ATM and POS attacks are similar. Nevertheless, perpetrators use different methods to exploit vulnerabilities. This happens when customers go to a retail store, bank, or insurance branch which is meant to access POS devices. These POS systems generally lack physical security controls. Consequently, the attackers attempt to insert a malicious USB drive into these POS systems without being noticed.
d. DDoS attack: The distributed denial of service attack is prevalent and poses a high risk to the banking sector due to its powerful and simple attack systems, making service availability a top priority.

Malicious software that holds data hostage in exchange for payment affects the banking sector terribly. Ransomware commonly targets the banking industry, encrypting data and asking for payment to decrypt it. Dyre, Dridex, Wannacry and Ramnit are botnets specifically designed for targeting the banking industry. According to Kumar and Khan (2018), Wanna Cry ransomware infected over 200,000 computers across 150 countries in May 2017. This data can frighten any commercial bank. The next problem that the financial institutions suffer in Nepal is spear phishing. Phishing messages tempt employees to click on dangerous links or attachments in order to gain entry to organizations' databases. Typically, spear phishing emails are customized for a particular individual and company, giving them a more authentic appearance. Even with awareness campaigns and phishing simulations, bank employees continue to be susceptible to phishing emails. Attacks on banking sectors are on the rise as hackers exploit human users' behaviors to infiltrate their

networks. For Williams et al (2018), the method to accomplish spear phishing is through targeted, deceptive emails that try to convince employees to click on harmful links, download malicious attachments, or transfer organizational funds or sensitive information. The prevention strategies including wide spread of awareness and regular software updates.

During crisis, having a variety of income sources greatly boosts bank returns. Banks face challenges in carrying out their primary function as credit intermediaries amid the crisis, caused by macroeconomic fluctuations like a decrease in GDP growth and elevated inflation rates, resulting in challenges for businesses in repaying bank loans. To defend the systems, the banks have two reliable strategies: educating and training their employees and customers and updating the software on regular basis.

Conclusion

The research has investigated into the impact of strategies adopted by the banking sector in reducing the risks faced by the banks in Nepal in the 21st century. The study has explored the diverse types of risks faced by the financial institutions and a number of methods employed to overcome the possibility of loss in the profit and the quality of services and transactions being catered so far. The mitigation strategies as made and used for risks in Nepalese banks has played a significant role in ensuring financial security to the customers and the capital stability to the investors. The strategies used to reduce the risks in the financial institutions of Nepal have been identification and management of credit, complying with Nepal Rastra Bank regulations, and managing the potential for systematic crises that usually affect the world economy as well. The research has implied when the customer confidence is improved and efficiency is increased in the operations of different types of services by the banks, the risks are likely to be reduced. On top of all these, training and capacity building of the employees at all levels that operate the banks and their facilities will help to mitigate the risks in the banks. Meanwhile, the banking sector needs to focus on the resilience and sustainability instead of only focusing on the immediate profit generation.

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