OPERATIONAL RISK MANAGEMENT IN FINANCIAL SERVICES IN NEPAL

A Dissertation submitted to the Office of the Dean,Faculty of Management, in partial fulfilment of the requirements for the Degree of Masters of Business Studies

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CERTIFICATE OF AUTHORSHIP

I hereby corroborate that I have researched and submitted the final draft of dissertation entitled **"Operational Risk Management in Financial Services in Nepal"** The work of this dissertation has not been submitted previously for the purpose of conferral of any degrees nor has it been proposed and presented as part of requirements for any other academic purposes.

The assistance and cooperation that I have received during this research work has been acknowledged. In addition, I declare that all information sources and literature used are cited in the reference section of the dissertation.

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REPORT OF RESEARCH COMMITTEE

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APPROVAL SHEET

We, the undersigned, have examined the dissertation entitled **"Operational Risk Management in Financial Services in Nepal"** presented by Pratibha Bhandari candidate for the degree of Master of Business Studies (MBS Semester) and conducted the Viva voce examination of the candidate. We hereby certify that the thesis is worthy of acceptance.

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ABBREVIATIONS

BCBS	:	Basel Committee on Banking Supervision
e.g.	:	Example
ERM	:	Enterprise Risk Management
F/Y	:	Fiscal Year
FS	:	Financial Services
i.e.	:	That is
KRI	:	Key Risk Indicators
Ltd	:	Limited
ORAA	:	Operational Risk Assessment and Analysis
ORI	:	Operational Risk Identification
ORMC	:	Operational Risk Monitoring and Controls
ORTR	:	Operational Training and Reporting

ABSTRACT

The study employs a quantitative research approach using descriptive and causal-comparative designs. Data were collected from 400 employees of commercial banks in Nepal through a structured questionnaire. Statistical analysis was conducted using SPSS, applying descriptive statistics, Pearson correlation, and multiple regression techniques. The theoretical foundation of the study is built upon the Basel Framework, Risk Management Theory, and the Three Lines of Defense model. Findings reveal a strong and positive relationship between ORM practices and institutional performance, with operational risk monitoring and controls having the greatest influence. Other dimensions—risk assessment, identification, and training also contribute significantly. Despite these advancements, gaps remain in proactive risk analysis, training consistency, and integration of ORM into strategic planning. The results suggest that Nepalese banks can enhance performance by adopting more structured, data driven, and forward-looking ORM systems. This study contributes valuable insights into the strategic role of ORM in the financial sector and highlights the need for continuous improvement in risk governance. It concludes that effective operational risk management is vital not only for compliance but also for achieving sustainable growth and customer confidence in Nepal's evolving banking environment. The study employs a quantitative research approach using descriptive and causal-comparative designs. Data were collected from 400 employees of commercial banks in Nepal through a structured questionnaire. Statistical analysis was conducted using SPSS, applying descriptive statistics, Pearson correlation, and multiple regression techniques. The theoretical foundation of the study is built upon the Basel Framework, Risk Management Theory, and the Three Lines of Defense model.

Keywords: *Operational Risk Identification, Operational Training and Reporting, Operational Risk Assessment and Analysis, Financial Services.*

CHAPTER I
INTRODUCTION

1.1 Background of the Study

Similar to other business entities and financial institutions, commercial banks were established with the primary goal of enhancing shareholder wealth. Wealth is determined by return and risk. In the financial markets and in many commercial endeavors, taking on more risk is frequently necessary to attain a higher average rate of return. In the risk business are commercial banks. They assume a variety of financial risks in the process of providing financial services. The types and frequency of risks vary amongst various business operations. In other words, some risks are unique in nature and have a particular impact on how the banking sector operates (Young, 2012).

Any enterprise's bank performance can be defined as a gauge of the banks' capacity to meet their financial objectives under the direction of their financial and nonfinancial benchmarks. A bank's capacity to make steady profits typically signifies that its profitability and performance are safeguarded against unforeseen losses. It has been proven that financial performance is directly impacted by the presence of a risk management policy and how it is incorporated into the formulation of organizational goals. More often than not, certain risk management techniques have a big impact on the financial health. This indicates that banks can enhance their performance by creating strong risk management policies and incorporating risk management into the procedures for establishing attainable organizational goals (Lyambiko, 2015).Likewise, the hazards linked to banking services vary depending on the kind of service provided. In order to operate, banks must take on a number of risks, and the profitability and minimum amount of capital that a bank must maintain are largely dependent on how well these risks are managed and understood. Operational risks are a byproduct of the bank's business dealings and can be further divided into market, liquidity, and credit risk. On the other hand, non-financial risk can emerge in performance as a result of poor management, rivalry, outside variables, etc. According to Patel (2015), the primary non-financial risks are those related to operations, risk management, and compliance. Credit risk, market

risk, and operational risk are some of the most significant risks that financial institutions are required to manage. Credit risk refers to the possibility that a borrower will not settle their loan payments in accordance with the terms of the agreement, which could result in the loss of the principal or other financial gain. In the context of the market, market risk refers to the possibility of incurring losses as a result of fluctuations in the value of the market risk components. Kimei's work from 2007. Therefore, the management of risk in financial organizations must place a significant emphasis on operational risk.

Operational risk refers to the potential for losses resulting from insufficient or faulty systems, human performance, internal operations, or external events. According to Rippel and Teplí (2011), it encompasses all types of risks not classified under credit or market risk but which still have a quantifiable financial impact on the organization.This is in contrast to risk management, which primarily consists of measuring the scope and extent of institutions' risk exposures (Lopez, 2002). With the creation of recommendations such as the Basel (II) in June 1999, the term "operations risk" became widely accepted in the mid-1990s. This was a reaction to escalating scandals in the financial sector, such as the 1995 dishonest downfall of Barings Bank by Nicholas Leeson (Khan, 2008). The advent of Basel II marked a pivotal moment in the international banking regulatory landscape and introduced a breakthrough innovation that aimed to address operational risk in a complete manner. For the purpose of mitigating the potential effects of operational risk, Basel II mandated that financial institutions keep a certain amount of capital on hand. The Basel Committee defines operational risk as the likelihood of experiencing financial losses due to inadequate or faulty internal processes, human mistakes, technological shortcomings, or unfavorable external events.

In Basel II, the operational risk as a focal point was a commendable and necessary step in increasing the resilience of the global banking system. However, the real test lies in the effective implementation of these regulations, with particular emphasis on addressing operational vulnerabilities. The examples of banks failing and experiencing financial turmoil due to operational deficiencies underscore the need for continued vigilance and improvement in risk management practices. In the quest of a more stable and robust

global financial system, the lessons learnt from these issues should act as a spur for improving and fortifying the mechanisms meant to guard against operational risk as financial institutions traverse an ever-changing terrain. Consequently, a bank's operational risk management processes' effectiveness and consistency define its success. Emphasizing operational risk was crucial for enhancing the global banking system's strength. However, the true challenge lies in the effective application of these regulations, particularly in addressing operational weaknesses. Instances of banks failing due to operational deficiencies describe the need for ongoing awareness and improvement of risk management practices. As financial institutions direct an ever-changing landscape, these experiences should drive the continuous improvement of mechanisms to protect against operational risk. The success of banks centers on the effectiveness and regular nature of their operational risk management practices, which are essential for achieving a more stable and strong.

Operational risk management (ORM) is gaining traction in Nepal's financial services sector as institutions face increasing regulatory scrutiny, technological advancements, and economic volatility. With financial services playing a pivotal role in Nepal's economic framework, ensuring operational resilience has become critical. Key operational risks in Nepal include cybersecurity threats, regulatory non-compliance, disaster-related disruptions (such as earthquakes and floods), and human errors. Managing these risks demands the implementation of operational risk management (ORM) frameworks that follow international best practices while being tailored to Nepal's distinct socio-economic conditions and regulatory framework.

Nepal Rastra Bank (NRB), the country's central bank, has played a crucial role in enforcing operational risk management (ORM) practices within banks and financial institutions (BFIs).NRB's directives emphasize risk identification, mitigation planning, and incident management to safeguard financial stability. The implementation of Basel II and Basel III frameworks in Nepal has further highlighted the importance of quantifying and addressing operational risks alongside credit and market risks. These regulatory developments necessitate robust risk management systems, promoting a shift from

reactive to proactive strategies.Nepal’s financial institutions also face significant challenges in technology-driven risks. The growing adoption of digital banking, mobile applications, and online payment systems has heightened the risk of cyberattacks and data breaches. According to a 2023 report by NRB, cyber resilience has become a priority, prompting institutions to adopt advanced tools such as real-time monitoring systems and encryption technologies to counter evolving threats. Additionally, operational risks arising from third-party service providers, such as payment gateways and IT vendors, require comprehensive oversight frameworks. The geographical and climatic context of Nepal introduces another layer of complexity to ORM. Natural disasters, including earthquakes and floods, have disrupted financial operations in the past. The financial sector's vulnerability to such events has prompted institutions to establish disaster recovery plans (DRPs) and business continuity plans (BCPs). NRB requires banks and financial institutions (BFIs) to conduct regular stress tests and scenario analyses to assess their ability to withstand extreme conditions. Furthermore, as Nepal becomes more integrated into the global financial system, compliance with international regulations such as FATCA (Foreign Account Tax Compliance Act) and AML/CFT (Anti-Money Laundering/Combating the Financing of Terrorism) has become a significant aspect of operational risk.Ensuring compliance requires sophisticated systems to monitor transactions, detect anomalies, and report suspicious activities effectively.

Incorporating technology into ORM practices has become a transformative trend in Nepal. Financial institutions are leveraging big data analytics, machine learning, and artificial intelligence to forecast operational risks, optimize mitigation strategies, and enhance decision-making. These instruments allow institutions to handle large volumes of data, detect trends, and create predictive models, supporting the worldwide movement toward data-driven risk management. Although ORM frameworks in Nepal are progressing, certain challenges still persist.Limited financial literacy, reliance on traditional banking practices, and resource constraints pose barriers to fully realizing modern ORM systems. Nonetheless, ongoing efforts by NRB and sector stakeholders reflect a commitment to strengthening the resilience and sustainability of Nepal's

financial services industry. Operational risk management in Nepal is evolving to address local challenges while aligning with global standards. By fostering regulatory compliance, embracing technological innovations, and enhancing disaster preparedness, Nepal's financial sector is better positioned to manage risks and sustain economic stability in an increasingly uncertain environment.

1.2 Problem Statement

The financial services sector in Nepal, particularly commercial banks, has experienced significant growth over the .past decades. Yet, this expansion has also brought greater exposure to operational risks, which stem from deficient internal processes, human factors, system failures, or external events (Basel Committee, 2021). Despite the growing complexity of financial operations and the introduction of digital banking systems, operational risk management (ORM) practices in Nepalese financial institutions remain inadequately developed and inconsistently implemented (Bhattarai, 2022).

Several instances in Nepalese banks such as frauds, system failures, cyberattacks, internal lapses, and compliance violations highlight the rising threat of operational risk. For example, the Nepal Rastra Bank's (NRB) Financial Stability Report (2023) noted a 27% increase in reported operational risk incidents compared to the previous year, indicating a growing vulnerability in the system.

Moreover, many Nepalese banks still lack specialized operational risk units, and risk identification and mitigation strategies are often reactive rather than proactive (Karki& Sharma, 2023). Inadequate employee training, weak internal controls, lack of real-time risk monitoring, and underutilization of risk modeling tools further exacerbate the issue (Dahal, 2021). These deficiencies not only affect the financial performance and reputation of banks but also undermine public trust in the sector.

Adding to the complexity is the slow regulatory response and the limited adoption of international ORM standards like those recommended by the Basel II and III Accords

(NRB, 2023). In many cases, compliance is viewed more as a formality than a functional component of corporate governance (Shrestha &Thapa, 2022).

Despite these challenges, empirical studies focusing specifically on the operational risk environment in Nepalese financial services remain scarce. Most existing literature tends to emphasize credit or market risks, while operational risk often underestimated remains a less explored but increasingly crucial area (Pandey &Neupane, 2024).The operational risk is further fueled by increasing customer expectations for seamless digital experiences. This pressure has led financial institutions to adopt advanced technologies without fully understanding or mitigating the associated risks. For example, the rush to implement artificial intelligence and machine learning tools for transaction monitoring and fraud detection has sometimes resulted in unanticipated system errors or algorithmic biases.

This study highly focused on following statements.

i. What are the current situation of operational risk management, and how does it impact the performance of financial services in Nepal?
ii. What is the relationship between operational risk assessment, monitoring, and the performance of financial institutions in Nepal?
iii. How operational risk identification, assessment and analysis, training, reporting, and controls contribute to improving the performance of financial services in Nepal?

1.3 Objectives of the study

The primary aim of this study is to examine how operational risk management practices influence financial services and overall performance in Nepal. The specific objectives are as follows:

i. To assess the current situation of operational risk management and their impact on the performance of financial services in Nepal.
ii. To analyze the relationship between operational risk assessment, monitoring, and the service performance of financial institutions in Nepal.

iii. To evaluate the impact of operational risk identification, operational risk assessment and analysis, operational risk monitoring and controls, operational risk training and reporting in improving the performance of financial services in Nepal.

1.4 Rational of the study

Operational risk management (ORM) has become a critical area of focus for financial institutions globally, and its importance is even more pronounced in Nepal's financial sector, given the country's unique challenges and opportunities. The Basel Committee on Banking Supervision (BCBS) highlights the importance of robust operational risk management frameworks through its eleven principles, designed to strengthen resilience and reduce disruptions within the financial system.In Nepal, these principles provide a foundational guideline for banks and financial institutions (BFIs) to develop robust ORM frameworks tailored to the country's specific regulatory, technological, and environmental contexts.

The rationale for studying ORM in Nepal stems from the increasing complexity of operational risks faced by financial institutions. These risks include cyberattacks, natural disasters, fraud, regulatory non-compliance, and technological disruptions. For instance, Nepal's vulnerability to earthquakes and floods has exposed financial institutions to significant operational disruptions in the past. Coupled with the rapid digitization of banking services, including the widespread adoption of mobile banking and digital wallets, the risk landscape has become more complex, necessitating stronger ORM practices to ensure financial stability and customer trust.

Nepal Rastra Bank (NRB), as the central bank of the country, has required banks and financial institutions to adhere to the Basel frameworks, encompassing provisions related to operational risk. However, challenges such as limited technical expertise, resource constraints, and a lack of standardized risk management practices persist. These factors highlight the need for research to assess the effectiveness of ORM frameworks in Nepal's

financial sector, understand gaps in implementation, and recommend strategies for improvement.

The study is particularly relevant as financial institutions in Nepal navigate global trends such as digital transformation and increased interconnectivity. Cybersecurity breaches and fraudulent activities are becoming more frequent, as seen in cases where hackers exploit weaknesses in digital payment systems and banking applications. Addressing these risks requires a comprehensive ORM framework that integrates advanced technologies, such as artificial intelligence and machine learning, for predictive analytics and real-time risk assessment.

Moreover, effective ORM practices are closely linked to improved financial performance and organizational resilience. Research in other regions has shown that banks with robust risk management frameworks tend to perform better financially, with improved returns on assets (ROA) and returns on equity (ROE). These results highlight the advantages of implementing robust operational risk management (ORM) practices in Nepal, not only for risk reduction but also for boosting profitability and enhancing market competitiveness. Additionally, this study aims to address a gap in the existing literature, which frequently overlooks operational risks within emerging economies such as Nepal. While prior research has examined ORM practices in developed markets, there is a scarcity of empirical evidence regarding their impact on financial institutions in Nepal. This research seeks to fill that gap by analyzing the relationship between adherence to BCBS principles and organizational performance in Nepalese financial institutions.

1.5 Limitations of the Study

The study has following limitation:

- All of the data for the dependent and independent variables in the study came from original sources. Consequently, for the study's conclusions to be trustworthy, the respondents' information must be accurate.
- There are only 400 sample observations of primary data in total. As anticipated, a smaller sample size could produce a less significant result.

- Although the data is gathered using the convenience sample technique, the results are not representative.
- The program known as SPSS was used to analyze the data.

CHAPTER II
LITERATURE REVIEW

Operational risk management (ORM) in financial services has garnered significant attention as institutions strive to mitigate risks associated with process failures, technology disruptions, and regulatory non-compliance. Research emphasizes that adopting the Basel Committee's ORM principles enhances resilience and operational efficiency by providing a structured framework for risk identification, assessment, and mitigation (Basel, 2023). Studies highlight the growing importance of technology, with artificial intelligence and predictive analytics transforming ORM practices by enabling real-time risk monitoring and proactive decision-making (Fernandes&Farinha, 2018). Challenges such as resource limitations, cybersecurity threats, and disaster vulnerabilities persist, particularly in emerging economies like Nepal. Despite these barriers, effective ORM is linked to improved financial performance, as evidenced by higher returns on equity and reduced volatility in earnings (Akhigbe& McNulty, 2012). The literature underscores the critical role of ORM in maintaining institutional stability and fostering . The following section of the chapter presents the theoretical framework, which is based on the literature study and the variable relationships. The chapter concludes with a presentation of the hypothesis that was created to evaluate the relationship between the many factors in this investigation.

- Theoretical Review
- Empirical Review
- Research Gap

2.1 Theoretical Review

2.1.1 Concept of Operational Risk Management

Dominic (1993) defined risk as the volatility of potential outcomes that might have favorable or unfavorable effects. Operational risk is asymmetric and impacts banks' profits and losses. Banks should control their expenditures to minimize operational risk, especially when marginal expenditure and marginal reduction are similar during an

operating event with loss expectations. Banks can thereby reduce the predicted future cash flow by reducing operational loss occurrences, anticipated expenses, and enhancing bank performance (King, 2001).Furthermore, as noted by Cummins et al. (2006), it would appear appropriate for banks to devote the bare minimum of funds to operational risk management, with those monies going toward the marginal decrease in projected losses from comparable operational occurrences.

As to Froot's (2007) findings, banks may optimize their future cash flows by reducing the approximate expenses associated with operational loss incidents. This will enhance the bank's performance. Additionally, because their clients are more vulnerable to insolvency risk which might worsen in the event of severe operational losses banks have a strong incentive to manage operational losses effectively in order to reduce insolvency risk and enhance bank performance.Timothy (1997) defined operating risk as the possibility of experiencing a loss due to either external occurrences or inadequate or ineffective internal systems, people, or processes.

Operational risk is associated with inadequate processes and controls, human mistake, and malfunctioning systems. Operational risk is a potential that arises from inadequate information systems, technical glitches, and breaches of internal controls. Every product and company activity has some level of operational risk.Operating risk management's (ORM) goal is to systematically identify, evaluate, and minimize risks associated with an organization's operating procedures. Operational risk management is essential to business, and risk is beneficial as long as it yields a sufficient return (Barger, 1997). To improve performance, management in general needs to establish a strong connection between operational risk management, achieving corporate objectives, and lowering outcome volatility (Basel, 2002).Recognized for its critical role in guaranteeing organizational resilience and sustainability, operational risk management is a cornerstone of contemporary business practice (Basel, 1998).

According to the Institute of Risk Management (IRM), ORM is the process of identifying, evaluating, and reducing risks that result from systems, external events, and

internal procedures that could obstruct corporate objectives.By incorporating standards like ISO 31000 and instructions from regulatory authorities like the Basel Committee on Banking Supervision (BCBS), enterprises may develop robust ORM frameworks that are tailored to their specific risk profiles and operational environments. In addition to protecting against possible dangers, this proactive strategy encouragesa a culturee of risk awarenesas and accountabilitiy at all organizational levells, which eventually boosts stakeholder confidence and long-term success.

A bank's ability to effectively manage operational risk depends on a number of essential factors. Maintaining a robust risk management culture under the direction of top managers and the board of directors is crucial above all else. Second, integrating an operational risk framework into the more comprehensive risk management protocols is essential. This framework should be reviewed and approved by the board on a regular basis. Third, risk acceptance and taste statements should be recommended by the board, which also needs to acknowledge acceptable operational risk levels. The bank's risk appetite should be in line with the clearly defined governance structure that senior management should create. It's also critical to comprehend the risks that are inherent in business lines and processes. Risk assessment should be a part of new initiatives, and procedures for monitoring must be in place. Robust internal controls, risk minimization, and flexible planning are necessary for operational risk management. Last but not least, transparent disclosures enable other parties to assess the bank's approach to managing operational risk. The discovery, evaluation, monitoring, and control of risk in the creation of a reliable protocol for an operational risk management framework is known as operational risk.

The Basel Committee has recommended eleven criteria for an effective framework for managing operational risk (Basel 2011). All of the following are essential for the maintenance of a robust risk management culture: the development and complete integration of the operational risk framework into the overall risk management processesof the bank; the board of directors' adoption of the framework and its recurring evaluations; the determination of the kinds and levels of operational risks that the bank is

prepared to take on; and the approval of risk appetite and risk tolerance statements that are in line with the bank's risk appetite and risk tolerance. The eleven guidelines that are presented here constitute an efficient framework for the management of operational risks. The senior management, the board of directors, and the business line staff should all be on board with the implementation of a methodology that will monitor operational risks and material exposures to losses. Banking institutions are required to have strong internal controls, risk reduction strategies, and risk transfer methods in order to effectively manage operational risks. In the event that their company is significantly disrupted, they are required to have contingency plans in place to ensure their continued existence. It is necessary for the senior management of the bank to establish a transparent governance structure. It is also necessary for senior management to be aware of the inherent risks that are associated with the business lines and procedures of the bank, as well as the incentives that are associated with those risks.

2.1.2 Operational Risk Management Practices

The term "operational risk management" (ORM) refers to a group of methodical techniques used to recognize, evaluate, reduce, and keep an eye on risks associated with an organization's operational procedures. These processes include putting plans, guidelines, and regulations into place to reduce the possibility of interruptions and monetary losses brought on by outside circumstances, internal malfunctions, or human mistake. The success of the bank as a whole depends on ORM practices being able to sustain long-term development and stability.

- **Operational Risk Identification**

One of the most important components of risk management is operational risk identification, which is the act of identifying possible hazards that might interfere with an organization's daily operations. There are many different sources of this kind of risk, including as external events, people, systems, and internal processes. For operational risks to be effectively identified, a thorough strategy including risk assessments, internal audits, and ongoing monitoring is needed. Root cause analysis, scenario analysis, and process mapping are important techniques for locating these hazards. Employers

frequently use risk control self-assessments (RCSA) to ensure a comprehensive grasp of possible vulnerabilities by involving staff members at all levels in the identification process. "The risk of loss resulting from inadequate or failed internal processes, people, and systems or from external events" is how the Basel Committee on Banking Supervision (2004) defines operational risk. Historical data and incident knowledge can also improve operational hazard identification and control. Because organizational structures and procedures are becoming more complex, Power (2005) suggests strong risk identification frameworks to manage operational disruptions. Through systematic risk identification and mitigation, companies can secure resources, comply with regulations, and maintain operations.

- **Operational Risk Assessment and Analysis**

Operational risk assessment and analysis is essential for effective risk management in enterprises, particularly in the banking sector. These procedures include locating possible operational risk sources, assessing the risk's effect and possibility, and ranking the risks in order of importance for mitigation. Usually, the evaluation combines qualitative and quantitative techniques to offer a thorough grasp of the risk environment. Expert judgment, scenario analysis, and risk workshops are examples of qualitative methods; statistical models and analysis of past data are common quantitative methods used to assess prospective losses. An efficient allocation of resources and the implementation of suitable measures to minimize identified risks are made possible by an effective operational risk assessment, which guarantees that hazards are methodically identified and handled. Numerous scholarly publications and regulatory recommendations emphasize the significance of these procedures. For instance, in its special guidelines the Basel Committee on Banking Supervision (BCBS) for operational risk management highlights the need for comprehensive risk assessment and analysis as a means of enhancing the resilience of financial institutions (BCBS, 2011). Furthermore, Chernobai, Jorion, and Yu (2011) highlighted the importance of thorough risk assessment in anticipating and minimizing operational losses, highlighting its role in preserving organizational performance and stability. These references serve as a reminder that

thorough operational risk assessment and analysis is essential to proactive risk management and sustaining long-term organizational performance.

- **Operational Risk Monitoring and Control**

Operational risk monitoring and control are essential components of a robust risk management system, particularly in the banking sector where operational stability and integrity are critical.. In order to identify possible operational risks early on, monitoring entails the ongoing inspection of risk indicators, internal procedures, and external circumstances. Prompt identification of developing threats through effective risk monitoring facilitates timely actions. To track risk exposure and performance against preset thresholds, this method frequently makes use of key risk indicators (KRIs), routine risk assessments, and real-time data analytics. The steps taken to reduce the effect and mitigate recognized risks are known as operational risk controls. These controls, which can be preventative, investigative, or remedial in nature, are intended to lessen the possibility of operational failures and the possible repercussions that may follow (Lam, 2003).Numerous scholarly and regulatory sources stress the need of operational risk monitoring and management.A thorough set of rules for controlling operational risk has been published by the Basel Committee on Banking Supervision (BCBS). The guidelines emphasize the importance of strong control systems and efficient monitoring in order to guarantee continuous risk mitigation and compliance (BCBS, 2011). Additionally, Power (2007) emphasized the significance of ongoing monitoring and control systems in managing operational risks and how crucial they are to preserving operational integrity and organizational resilience.

- **Training and Reporting**

Effective operational risk management methods include training and reporting, which support businesses in developing a culture of risk awareness, improving their risk management skills, and guaranteeing accountability and transparency. Employees are intended to learn about operational risks, their possible effects, and the significance of following risk management policies and procedures through training programs. With the help of these initiatives, the business hopes to increase employee capacity to recognize

and communicate risks, enhance decision-making procedures, and cultivate a risk-aware culture. A major factor in lowering the probability of operational failures due to ignorance or human mistake is effective training. (J. Fraser and B. Simkins, 2010)By giving stakeholders timely and pertinent information on the organization's risk profile, control environment, and mitigation activities, reporting methods play a critical role in operational risk management. Frequent exports enables management to keep an eye on important risk indicators, evaluate how well control mechanisms are working, and make deft judgments about new threats. Additionally, transparent reporting improves responsibility and fosters a sense of confidence among stakeholders, including as investors, consumers, and regulators.

2.1.3 Performance of Financial Services

The stability, profitability, efficiency, and general health of banks are reflected in a variety of financial and non-financial criteria that collectively comprise their performance. Key performance indicators (KPIs) including the cost-to-income ratio, Return on equity (ROE), return on assets (ROA), and net interest margin (NIM) are frequently used to evaluate a bank's financial performance. These indicators show how well a bank makes use of its resources, controls its equity, and makes money relative to its outlays. Furthermore, evaluating a bank's success also heavily weighs non-financial aspects including worker happiness, operational effectiveness, risk management efficiency, improved financial performance, and adherence to legal and regulatory requirements. Bank performance is used in this study as a proxy for non-financial performance.Good risk management techniques are essential for preserving stability and averting large losses that can jeopardize a bank's finances and image, especially when it comes to controlling operational risks. Research shows that during economic downturns, banks with strong risk management systems typically perform better and show higher resilience. Acharya et al. (2017) emphasized how effective risk management can be in improving bank performance, particularly when it comes to reducing systemic risks. In addition, There are numerous guidelines provided by the Basel Committee on Banking Supervision (BCBS).emphasizing the need for strong governance and internal control structures as well as establishing a link between improved bank performance and

successful risk management techniques (BCBS, 2011). The aforementioned references highlight the correlation between risk management and the entire performance of banks. They recommend a comprehensive strategy to controlling both financial and operational factors in order to attain stable and sustainable growth.

2.2 Related Theories

This section discussed ground theories of this study. These consist of the BASEL framework, the Three Lines of Defense model (3LoD), and Risk Management Theory.

- **Risk Management Theory**

A key foundation for operational risk management techniques is provided by risk management theory, which emphasizes the requirement of methodical methods for identifying, evaluating, and mitigating risks related to systems, people, internal processes, and external occurrences. This theory emphasizes how important it is to handle operational risks well in order to keep organizations performing and stable, especially in industries like banking where these risks may have serious negative effects on an organization's finances and image. Organizations may establish strong internal controls, create thorough risk assessment procedures, and promote a risk-aware culture by putting Risk Management Theory to use. These procedures support better decision-making, ensure regulatory compliance, and lessen the effects of operational errors. Additionally, in order to adapt to shifting risk environments, the idea encourages continuous assessment and improvement of risk management practices. The literature provides strong support for the application of risk management theory to operational risk management. Lam (2014) underlined the necessity of integrating risk management into corporate operations in order to properly manage operational risks. Furthermore, the Basel Committee on Banking Supervision (BCBS) has developed frameworks and recommendations that provide detailed guidelines for managing operational risk in financial institutions in line with risk management theory (BCBS, 2011). These materials highlight how important Risk Management Theory is for providing direction for efficient operational risk management procedures.

- **Three Lines of Defense Model (3LoD)**

Created some twenty years ago, the Three Lines of Defense (3LoD) paradigm since then, particularly in the banking industry where it started, it has become the standard for linking risk management and control obligations to company operations. Officially embraced by In a Position Paper published in 2013, the Institute of Internal Auditors (IIA) said "The Three Lines of Defense in Effective Risk Management and Control," it has since been pushed as a useful tool for government officials (IIA, 2013).

Three Lines of Defense (3LoD)

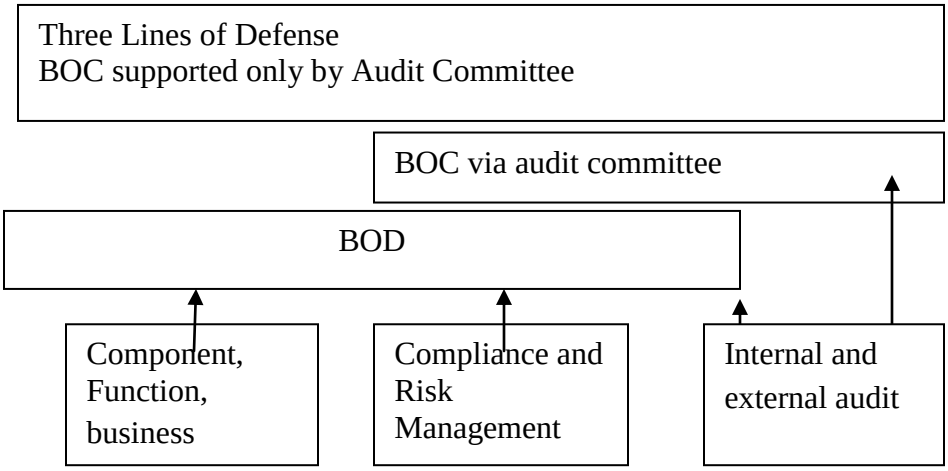


Figure1:Three Lines of Defense

Source: adapted from IIA,2013

The Three Lines of Defense (3LoD) idea is a robust framework for risk management and internal control that has been widely embraced by several industries, including the banking sector. This model lays out precise roles and duties for improving governance, controlling risk, and guaranteeing efficient risk management procedures. Operational management is the first line of defense as it knows how to recognize, evaluate, control, and minimize risks in their daily operations. The emphasis in this line is on taking ownership of risk and putting internal controls in place inside operational processes. In general, the first line of defense's main goal is to make it more likely that The commercial goals of the company will be achieved by making efficient use of the required risk management procedures and controls mechanisms by the relevant personnel (managers -

risk owners). The 3LoD model has received widespread support from the Institute of Internal Auditors (IIA), which highlights its importance in preserving strong risk management frameworks inside businesses (Institute of Internal Auditors, 2013). The approach guarantees thorough monitoring and accountability while assisting companies in managing risk more skillfully by precisely defining roles along these three lines. First line of defense procedures are the main emphasis of this study's conceptual framework

- **BASEL Framework**

The Basel Committee on Banking Supervision (BCBS) established the Basel Framework for Operational Risk Management, a collection of international regulatory guidelines and recommendations, to guarantee that banks effectively manage operational risks. In particular, the framework offers comprehensive principles and methods for identifying, assessing, tracking, and minimizing operational risks within financial institutions, particularly through the Basel II and Basel III accords. It underscores the necessity of a robust governance structure, effective internal controls, and an efficient risk management environment to mitigate hazards related to people, systems, internal processes, and outside occurrences. Basel II created the Basic Indicator Approach, the Standardized Approach, and the Advanced Measurement Approach to assess operational risk capital requirements in order to account for the bank's complexity and risk profile. Basel III enhanced these recommendations by advocating for increased capital requirements, emphasizing the importance of a risk-aware culture, and conducting ongoing oversight of risk management procedures, as well as incorporating the knowledge acquired from the financial crises. The BCBS's 2011 "Principles for the Sound Management of Operational Risk" delineate essential practices, including the establishment of clear lines of accountability, the development of reliable procedures for identifying and evaluating risks, and the implementation of effective reporting and control systems. These prerequisites are indispensable for banks to mitigate operational risks and safeguard financial stability. The framework is widely implemented and implemented in the banking sector, as demonstrated by the comprehensive studies and guidelines published by the BCBS (BCBS, 2011; BCBS, 2006).

2.3 Literature Review

Ononiwu et al. (2024) investigated operational risk management (ORM) in Nigerian banks, focusing on challenges in emerging markets. Their analysis assessed ORM frameworks, leadership, organizational culture, and the role of technology in risk mitigation. The findings reveal that although banks employ both traditional and modern approaches, deficiencies remain in governance, technology adoption, and regulatory compliance. Leadership commitment and the integration of advanced tools such as artificial intelligence and blockchain enhance risk control; however, persistent cybersecurity threats and fragmented regulations hinder effectiveness. The authors recommend reinforcing governance, encouraging collaboration, and leveraging technology to strengthen ORM, safeguard financial stability, and promote sustainable growth.

Cornwell et al. (2023) emphasized that operational risks are becoming more frequent and complex, producing substantial financial and non-financial impacts. Traditional manual, static, and qualitative risk management methods often lack efficiency and objectivity, prompting a transition toward data-driven approaches. Their systematic review of 2,538 publications—narrowed to 191 relevant studies—analyzed ORM applications in financial services (FS) and energy and natural resources (ENR) using bibliometric and content analyses within a multi-layered framework. The research identified five central themes: risk identification, causal factors, risk quantification, risk prediction, and risk-based decision-making. While ENR studies primarily target causal analysis and incident forecasting, FS research is more advanced in quantitative modeling. The review highlights sector-specific gaps and outlines priorities for enhancing ORM through analytics.

Sobanova and Kudinska (2022) examined ORM in banking, noting its growing annual significance. They stressed the need for proactive measures against fraud, transactional errors, and data breaches through automation and robust controls. Neglecting ORM can lead to heavy losses, customer dissatisfaction, regulatory sanctions, and reputational harm—particularly in high-risk areas like payments and security transactions. Failures in

IT projects, governance, or external data reliance further heighten losses. Reviewing the Basel framework and 2023 regulatory changes, the study found that capital management strategies require revision, as each loss now impacts both profit/loss statements and future capital requirements. Corporate events were identified as major loss drivers, and COVID-19 exposed significant preparedness gaps.

Alexandra (2021) explored operational risk factors in banking and their financial consequences. She reviewed prudential regulations, ORM processes, and calculation methods for minimum capital requirements, illustrated by a Romanian bank case study. Between 2008 and 2018, the basic indicator method was most used, although reliance on standardized and advanced measurement approaches gradually increased. Crisis simulations were found to be integral to ORM.

Isoh et al. (2020) assessed ORM in financial services, focusing on risk identification, assessment, monitoring, controls, training, and reporting. They concluded that early identification of risks, thorough analysis, continuous oversight, and a strong risk-aware culture significantly improve bank performance, stability, and profitability.

Zsuzsanna (2020) analyzed ORM during COVID-19, emphasizing business continuity, reputation preservation, and customer retention as primary crisis-management objectives for financial institutions. The pandemic reshaped banks' risk profiles, elevating cyber, outsourcing, and fraud risks, underscoring the need for improved early-warning systems.

Mitică Pepi (2019) stressed that risk is inherent to profitability, and banks must balance maximizing returns with avoiding or transferring undesirable risks. Effective ORM strategies aim to minimize losses and safeguard shareholder value.

Farouk Alobaidi et al. (2018) argued that lessons from the 2008 financial crisis demonstrate the necessity of ORM. Their study reviewed Basel regulations, risk identification methods, and national/international compliance as essential to effective ORM in banks.

Xu and Pinedo (2017) highlighted that operational risks in financial services differ from those in other service industries, with literature often neglecting practical operations management perspectives. They proposed a framework incorporating process design, process management, and human behavior to better integrate ORM with operations management practices.

Table 1

Emperical Review Table

Auther (Date)	**Article**	**Objectives**	**Methodology**	**Findings**
Ononiwuet al. (2024)	Operational Risk Management (ORM) Practices in Nigerian Banking Sector	Evaluate how well operational risk management (ORM) frameworks perform, examine how leadership and organizational culture influence risk control, and investigate the contribution of technological innovations to reducing risks..	Comprehensive literature review, case studies, and data analysis.	Leadership plays a pivotal role in embedding risk-aware culture; advanced technologies like AI and blockchain enhance risk mitigation; challenges include cybersecurity threats, inadequate infrastructure, and fragmented regulatory frameworks. Recommendations include integrated risk management

				systems and fostering cross-functional collaboration.
Cornwell et al. (2023)	Application of Data Analytics in Operational Risk Management (ORM) in Financial and Energy Sectors	Map operational risks, techniques, and objectives across industries, focusing on data analytics applications.	Systematic literature search with bibliometric and content analysis of 191 studies.	Identifies core themes: risk identification, causal factors, risk quantification, prediction, and decision-making. FS focuses on quantification, while ENR studies emphasize identifying causal factors. Further research needed to improve ORM decision-making in FS and ENR sectors.
Sobanova and Kudinska (2022)	Operational Risk Management in Banks: Challenges and Opportunities	Elucidate changes in operational risk capital in banks and ascertain weaknesses in ORM post-Basel III framework	Comparison, generalization, graphical illustration, and analysis of statistical information.	Basel III increases the impact of losses on operational risk capital. Many banks were unprepared for the COVID-19

		implementation		pandemic, indicating existing gaps. ORM strategies require redesigns to align with Basel III standards and to address governance and implementation challenges.
Alexandra (2021)	Operational Risk Management in Banking Activity	Highlight operational risk elements, management process steps, and causes in Romanian and European banking sectors	Case study on a Romanian bank, crisis simulations, and analysis of minimum capital requirement trends.	The basic indicator method dominated operational risk capital estimation. Increased use of standardized and advanced approaches noted. ORM strategies need to evolve with regulatory changes and enhance simulation-based risk assessment.
Isoh et al. (2020)	Operational Risk Management in Financial	Examine how ORM components impact bank	Conceptual framework analyzing ORM components:	Holistic ORM approach enhances bank performance.

	Services: Enhancing Bank Performance	performance and contribute to stability and profitability.	identification, assessment, monitoring, controls, and training.	Critical components include proactive identification, robust assessment, continuous monitoring, and a risk-aware culture through training. Highlights need for comprehensive ORM to ensure stability and resilience.
Zsuzsanna (2020)	Operational Risk Management in Financial Sector in Shadow of COVID	Analyze crisis management during the COVID-19 pandemic, focusing on banks' operational risks and crisis responses.	Review of crisis management phases, tasks, and responses, emphasizing operational, management, and communication.	COVID-19 increased risks such as cyber, outsourcing, and fraud. Banks must enhance early warning systems, maintain business continuity, and address heightened vulnerabilities through improved ORM frameworks.
MiticăPepi	Operational	Maximize	Analysis of	Highlights the

(2019)	Risk Management in Financial Institutions	profitability by managing specific risks and minimizing exposure and losses.	banking strategies, risk management programs, and policies.	critical role of compliance with national and international regulations. Effective ORM strategies must address the lessons from the financial crisis and integrate standardized practices for risk management.
Xu and Pinedo (2017)	Operational Risk in Financial Services	Analyze operational risks in financial services from an operations management perspective.	Framework-based analysis focusing on process design, management, and human behavior aspects.	Advocates leveraging operations management research to enhance ORM in financial services. Highlights gaps in attention to operational aspects and the potential for cross-industry insights to improve ORM.

2.4 Research Gap

Operational risk management (ORM) has gained significant attention in the financial services sector due to its critical role in safeguarding institutions from losses Resulting from shortcomings or breakdowns in internal processes, systems, or external occurrences. However, despite the extensive literature on ORM, several gaps remain. Firstly, many studies have focused on quantitative risk modeling and regulatory compliance (Basel III requirements), but there is a limited understanding of the behavioral and cultural aspects of operational risk (Power, 2005). Research rarely explores how organizational culture influences risk perception and mitigation strategies. Secondly, while financial technology (FinTech) innovations have transformed the industry, their implications for operational risks, such as cybersecurity threats and third-party vendor risks, are underexplored (Arner et al., 2017).

Moreover, limited research exists on incorporating artificial intelligence (AI) and machine learning (ML) into ORM frameworks (Chaudhuri et al., 2020).The potential for these technologies to enhance risk prediction and mitigation remains largely theoretical, with few empirical validations. Additionally, ORM research often overlooks smaller financial institutions and focuses predominantly on global banks, creating a geographical bias (Sheedy & Griffin, 2018). The unique challenges faced by emerging markets, including Nepal, remain understudied. Moreover, there is insufficient attention to the cascading effects of interconnected operational risks across institutions and sectors (Kaplan, 2021).

Another significant gap lies in the evaluation of ORM effectiveness post-implementation. While policies and frameworks are frequently discussed, there is limited empirical evidence on how these systems reduce operational losses or enhance organizational resilience (McConnell, 2019). Similarly, ORM's impact on customer trust and satisfaction has been sparsely investigated, despite its relevance in reputation management. The role of regulatory agencies in standardizing ORM practices across diverse jurisdictions is another under-researched area. While regulatory guidelines exist, their effectiveness in harmonizing practices globally remains unclear (Moosa, 2022).

CHAPTER III
RESEARCH METHODOLOGY

The Research Methodology chapter presents the structured approach adopted in the study, starting with the research design and proceeding through sections on population and sample, sampling methods, data sources, analytical tools, the research framework, and variable definitions. This chapter explains and discusses the relevant methods and instruments employed to achieve the study's objectives, providing the reader with a clear understanding of the procedures undertaken.

3.1 Research design

A research design is a detailed plan that specifies the steps required to collect and analyze the necessary data to achieve the study's objectives. In this study, the research design combines both descriptive and causal-comparative approaches. Descriptive research design is widely used by researchers due to its versatility in applying multiple research methods to examine the variables under investigation. The causal-comparative approach, on the other hand, provides operational definitions and develops a more refined model for topics that have not been extensively studied.Given that the relationship between the availability of finance, training and education, government policy, and business success has not been thoroughly explored in Nepal, the combination of descriptive and causal-comparative designs was deemed most suitable for this research. Data for the study focused on operational risk in financial services was collected through a primary survey using a self-administered questionnaire.The analysis employed various statistical techniques, including correlation, regression, mean, and standard deviation. Quantitative data was processed and interpreted using SPSS (Statistical Package for the Social Sciences) and Microsoft Excel, both of which are commonly used and widely available in professional contexts. Descriptive statistics were used to calculate the mean, median, and standard deviation of respondents' profiles. Additionally, T-tests and hypothesis testing were conducted. Cronbach's alpha, a widely recognized measure of inter-item consistency reliability, was applied to assess the reliability of the scales used in the study.

3.2 Population sample and sampling design

The target population for this study includes all financial institutions operating in Nepal. As of mid-January 2024, the country's financial sector, licensed by Nepal Rastra Bank (NRB), consists of 20 Commercial Banks (Class "A"), 17 Development Banks (Class "B"), 17 Finance Companies (Class "C"), and 52 Microfinance Financial Institutions (Class "D"), totaling 106 licensed institutions (Nepal Rastra Bank, 2025). A sample size of 400 respondents was determined using a 95% confidence level, a 5% margin of error, and a z-value of 1.960, following Krejcie and Morgan's (1970) sampling table. The study covered both banks and non-bank financial institutions (NBFIs), with data collected through self-administered questionnaires distributed via survey. This method was adopted to ensure the reliability and validity of the responses, facilitating a meaningful examination of the link between operational risk management practices and financial service performance in Nepal. A convenience sampling technique was applied to gather data from the selected institutions.

3.3 Source of data

Data sources refer to the methods used to obtain and collect information from respondents for the purposes of a study. These sources are generally categorized into primary and secondary data. For this research, only primary data was used, as it was collected directly through a structured questionnaire designed for the study. The required data was obtained from business owners, with questionnaires distributed via email, social media, and, in some cases, hand-delivered by the researcher. In this study, a self-administered questionnaire survey method was employed, incorporating four study variables and a total of twenty-four items to gather the necessary information.

3.4 Method of Analysis

This thesis will employ both financial and statistical tools to analyze the data and draw conclusions. To obtain concrete findings, the collected data will be examined using a variety of analytical methods. Given the nature of the research topic, particular emphasis is placed on statistical tools, and the following statistical techniques will be applied in this study.

3.4.1 Descriptive Statistics

The study also incorporates several statistical tools. The following descriptive statistical methods are applied to examine the relationship between the two variables.

Arithmetic Mean

The mean represents a set of values and indicates the concentration of data around the central part of the distribution. It provides a point that best reflects the overall information, capturing the characteristics of the entire dataset. The arithmetic mean lies between the extreme values and serves as a representative of a homogeneous set of data. It is calculated by summing all the values and dividing the total by the number of items. The arithmetic mean is straightforward to compute, requiring only basic mathematical or financial knowledge, and it is a valuable measure of central tendency, often producing meaningful results even for large datasets.

Mathematically, Arithmetic Mean (AM) is given by,

$$\text{Mean}(\bar{X}) = \frac{\sum X}{n}$$

Where,

$\bar{X}$ = Mean

$\sum X$ = Sum of variables

n = Number of values

Standard deviation (σ)

A stock's standard deviation is a valuable instrument for investors to use when searching for their optimal stock. Some investors prefer a risk free strategy, while others like to take a more risky approach. The standard deviation helps to point them in the right direction.

Standard deviation quantifies the extent of absolute dispersion in a dataset. A higher standard deviation indicates that the values deviate more widely from the mean, while a lower standard deviation reflects greater consistency and homogeneity among the observations, and vice versa.

Mathematically,

$$\text{S.D}\ (\sigma) = \sqrt{\frac{\sum (X - \bar{X})^2}{n}}$$

Coefficient of variation

The Coefficient of Variation (CV) is a relative measure of risk, calculated by dividing the standard deviation by the expected return. It represents the amount of risk per unit of return. CV is particularly useful for comparing the variability across two or more datasets. Mathematically,

$$\text{C.V.} = \frac{\sigma}{\bar{X}} \times 100$$

3.4.2 Correlation analysis

When the relationship between variables is quantitative, the correlation coefficient is the most effective mathematical method for identifying, measuring, and expressing the relationship. If the variables increase or decrease together, the correlation is considered positive, whereas if one variable increases while the other decreases, the correlation is negative. The correlation coefficient always ranges between +1 and -1. According to Karl Pearson, the simple correlation coefficient between two variables, X and Y, is expressed as follows, where r(x, y) represents the correlation between X and Y.

$$r = \frac{\sum(X-\bar{X})(Y-\bar{Y})}{\sqrt{\sum(X-\bar{X})^2\sqrt{(Y-\bar{Y})^2}}}$$

When, r = +1, there is perfect positive correlation.

r = -1, there is perfect negative correlation.

r = 0, there is no correlation.

r lies between 0.7 to 0.999 (or -0.7 to -0.999) there is high degree of positive or negative correlation.

r lies between 0.5 and 0.699, there is a moderate degree of correlation.

r is less than 0.5, there is low degree of correlation.

3.4.3 Regression analysis

Regression analysis is a statistical technique used to estimate the unknown value of one variable based on the known value of another variable. The variable with a known value is termed the independent variable, while the variable being predicted is the dependent variable. This method helps determine whether the independent variable has an effect on the dependent variable. In this study, the market price per share serves as the dependent

variable, whereas earnings per share, dividend per share, price-earnings ratio, and book value per share are treated as independent variables.

3.4.4 Research Model

Research instruments are the tools used to collect data for a study and are often referred to as research questionnaires. These instruments can be either self-developed or previously established and validated. In this study, four research instruments—availability of finance, training and education, government policy and regulation, and business success were employed, all of which had been previously used and validated in a Western context.

A questionnaire was utilized to collect primary data, with each study variable addressed through close-ended questions. Both primary and secondary data served as key sources for the investigation. The conceptual framework was initially developed using secondary data obtained from books, journals, articles, newspapers, and online sources. Primary data collection was conducted in the later stages of the research to facilitate analysis and derive conclusions, with the questionnaire serving as the main tool. The questionnaire used in this study was adapted from Abdulla Al Sahaf (2021).Model Specification

Based on the existing literature, the following linear regression model is specified.

Model

$Y= \beta0 + \beta1\ X_1 + \beta2\ X_2 + \beta3\ X_3 + \beta4\ X_4 + \varepsilon$

Where,

Y= Average performance of services

X_1 = risk identification

X_2 = Operational risk assessment and analysis

X_3 = Operational risk monitoring and controls

X_4 = Operational training and reporting

$\beta0$ = the intercept (constant term)

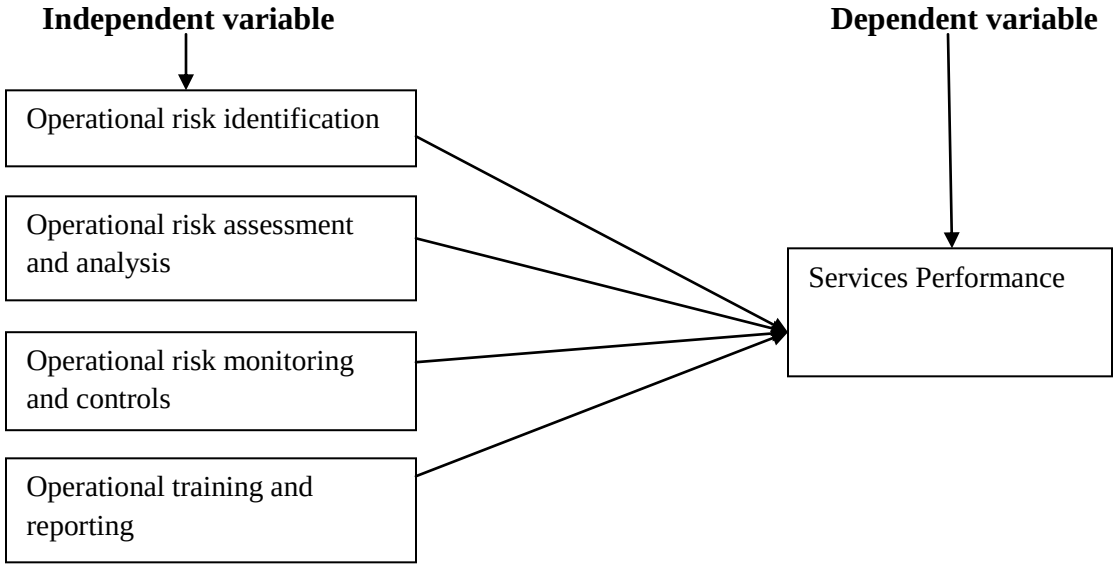
β_1, β_2, β_3 = regression coefficients for the respective independent variables, representing the rate at which the dependent variable (SB) changes when each independent variable changes by one unit.

ε = error term

Source: (Sahaf & Tahoo, 2021)

3.5 Research framework and definition of variable

In accordance with previous research, the conceptual framework of this study is constructed and displayed.The Basel Framework, the Three Defenses Model, and risk management theory are all utilized in this Study. In this study, the bank's performance serves as the dependent variable, while the independent factors include risk identification, monitoring, controls, training, and reporting.



Sources:*Isoh et al., 2020.*

Figure2: Research Framework

Definition of variable

Operational Risk Identification: Operational risk identification is the process of systematically recognizing and categorizing potential sources of risk that may arise from internal failures (such as human error, system breakdowns, or process deficiencies) or external events (like natural disasters or cyberattacks) that could disrupt banking operations (Basel Committee, 2021).

Operational Risk Assessment and Analysis: Operational risk assessment and analysis involve evaluating the identified risks in terms of their likelihood and potential impact on the organization. This may include both qualitative approaches (such as expert judgment and scenario analysis) and quantitative methods (like loss event data analysis and risk modeling) to prioritize risks and inform mitigation strategies (Bhattarai, 2022).

Operational Risk Monitoring and Controls: Operational risk monitoring and control refer to the ongoing processes used to track, measure, and manage operational risk exposures within an institution. This includes establishing control mechanisms such as internal audits, key risk indicators (KRIs), policy enforcement, and automated alerts to ensure that risks remain within acceptable limits (Shrestha &Thapa, 2022).

Operational Risk Training and Reporting: Operational risk training and reporting involve educating staff at all levels about risk awareness, mitigation responsibilities, and reporting protocols. It includes both formal training programs and structured communication systems for timely and transparent reporting of operational risk events, enabling proactive risk management and fostering a risk-conscious organizational culture (Pandey &Neupane, 2024).

Performance of Bank: Bank performance refers to the overall effectiveness and efficiency with which a banking institution achieves its financial, operational, and strategic objectives. Key indicators of performance include profitability, asset quality, return on equity, customer satisfaction, and risk management efficiency. Effective operational risk management is closely linked to improved bank performance by minimizing losses, enhancing reputation, and ensuring regulatory compliance (Cruz, 2020).

CHAPTER IV
RESULT AND DISCUSSION

This chapter presents the analysis, discussion, and interpretation of the results based on the data collected for the study. The analysis primarily relies on primary data obtained through questionnaires completed by respondents. Data are displayed using tables and diagrams to facilitate clear interpretation. Additionally, mean, standard deviation, and frequency analyses were conducted to examine the relationships among different variables. Tables and figures are extensively employed to support the data analysis.

The main objective of this chapter is to analyze and interpret the collected data and present the findings from the questionnaire survey. The chapter is organized into five sub-sections. The first section addresses the respondents' profiles and demographic characteristics. The second section provides descriptive analysis, using frequency distributions and measures of central tendency to summarize the data. The third section presents inferential analysis, including correlation and regression analyses. The fourth section focuses on hypothesis testing, while the fifth and final section discusses the findings and draws inferences by analyzing and interpreting the operational risk levels in Nepalese commercial banks.

4.1 Data Presentation

A total of 400 responses were gathered for this study. The questionnaires were distributed to participants both online and in printed form, either through various social media platforms or delivered personally. All 400 respondents were employees of Nepalese commercial banks.

4.1.1 Descriptive Analysis

4.1.1.1 Descriptive Analysis of Demography

This section presents the descriptive analysis of the data collected through the questionnaires during the research. Descriptive statistics involves quantitatively

summarizing the main characteristics of a dataset, providing simple summaries about the sample and the observations. It helps to organize and simplify large amounts of data in a meaningful way. For this study, respondents were asked questions using a five-point Likert scale, ranging from strongly disagree to strongly agree, with scores assigned as 1, 2, 3, 4, and 5, respectively. A total of 400 respondents answered each question. The descriptive statistics for questions related to each variable are presented below.

Table 1

Age Group of Respondent

Age.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-25	66	16.5	16.5	16.5
	26-35	243	60.8	60.8	77.3
	36-50	91	22.8	22.8	100.0
	Total	400	100.0	100.0	

Source: Calculation by using SPSS of sample data

Table 1 shows the age distribution of respondent's shows that the majority fall within the 26-35 age group, representing 60.8% of the total sample (243 individuals). The next largest group is those aged 36-50, accounting for 22.8% (91 individuals), while the youngest group, aged 18-25, and makes up 16.5% (66 individuals). Altogether, these age groups comprise the entire sample of 400 respondents, providing a full distribution of 100%. This breakdown indicates a primarily young adult population, with a smaller representation of both younger and middle-aged individual.

Table 2

Gender of Respondent

Gender.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	.3	.3	.3
	Female	189	47.3	47.3	47.5
	Male	210	52.5	52.5	100.0
	Total	400	100.0	100.0	

Source: Calculation by using SPSS of sample data

The gender distribution of respondents categorizes individuals by their gender, providing insights into the representation of different gender groups within the sample. It typically includes the frequency (number of respondents), percentage, and cumulative percentage for each gender category, such as male, female, and potentially other gender identities. The frequency and percent columns indicate the actual number and proportion of respondents from each gender group, respectively, allowing for a comparison across groups. The cumulative percentage reflects the running total, helping to show how each gender group contributes to the overall sample. This data aids in understanding the gender diversity of the respondents.

Educational Qualification of Respondents

The educational qualifications of the respondents offer insight into their academic backgrounds, typically categorized as high school, bachelor's degree, master's degree, and, in some cases, higher levels of education.. By analyzing the frequency and percentage of each qualification level, we can gauge the overall education level in the sample. This distribution highlights the respondents' academic diversity and can indicate the relevance of education in influencing their responses or perspectives. Understanding educational qualifications helps contextualize the demographic profile and any potential correlationswith other factors in the study.

Table 3

Education of Respondent

Educational Qualification.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		8	2.0	2.0	2.0
	Bachelors	128	32.0	32.0	34.0
	Masters and above	264	66.0	66.0	100.0
	Total	400	100.0	100.0	

Source: Calculation by using SPSS of sample data

Table 3 shows that the educational qualifications of the respondents reveal that the majority have attained a master's degree or higher, making up 66% of the sample (264 individuals). Those with a bachelor's degree constitute 32% (128 individuals), while only a small fraction, 2% (8 individuals), and have qualifications below a bachelor's degree. This distribution, covering all 400 respondents, shows a highly educated sample, with a strong leaning toward advanced education levels. The cumulative percentages confirm that nearly all respondents hold at least a bachelor's degree, suggesting a sample with substantial academic qualifications.

Designation

The designation of respondents provides insight into their professional roles or job titles within their respective organizations. Designation levels may range from entry-level and junior positions to middle management, senior management, and executive roles. Analyzing the frequency and percentage of each designation level helps illustrate the organizational hierarchy and diversity in professional experience within the sample. This breakdown can reveal which levels are most represented and may indicate the range of perspectives in terms of decision-making authority and responsibility. Understanding respondents' designations offers context for interpreting their views, especially in studies related to organizational behavior and workplace dynamics.

Table 4

Designation.

Designation.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		3	.8	.8	.8
	Assistant	84	21.0	21.0	21.8
	Assistant Manager	11	2.8	2.8	24.5
	Deputy Manager	5	1.3	1.3	25.8
	Junior Assistant	48	12.0	12.0	37.8
	Junior Officer	41	10.3	10.3	48.0
	Management Trainee	1	.3	.3	48.3
	Manager	3	.8	.8	49.0
	Officer	52	13.0	13.0	62.0
	Senior Assistant	60	15.0	15.0	77.0
	Senior Officer	35	8.8	8.8	85.8
	Supervisor	32	8.0	8.0	93.8
	Trainee Assistant	25	6.3	6.3	100.0
	Total	400	100.0	100.0	

Source: Calculation by using SPSS of sample data

Table 4 shows designation distribution of respondents reflects a variety of roles within their organizations, with 400 individuals representing different levels of the hierarchy. The largest group, assistants, accounts for 21% of the sample (84 respondents), followed by senior assistants at 15% (60 respondents). Officers and junior assistants also comprise

significant portions, at 13% (52 respondents) and 12% (48 respondents), respectively. Other notable designations include junior officers (10.3%) and senior officers (8.8%), indicating a moderate presence of mid-level positions. Supervisors make up 8% of the sample, while trainee assistants represent 6.3%. The sample includes fewer management roles, such as assistant managers (2.8%) and managers (0.8%), with management trainees being the least represented at just 0.3%. This diverse range of Designations highlights a broad representation from entry-level to mid-management roles, with fewer respondents in senior and executive positions.

Working for this organization

The data on respondents' tenure with their organization captures how long they have been employed within the same company, which is typically measured in categories such as less than a year, 5 years, less than 3 years, and less than 5 years. The frequency and percentage distribution across these categories reveal patterns in employee retention and organizational loyalty, with higher frequencies in longer tenure groups indicating stable, long-term employees. Conversely, if a large portion of the sample falls within shorter tenure categories, it might suggest a newer workforce or higher employee turnover. This data helps in understanding the respondents' familiarity with and integration into the organization, which can impact their perspectives on workplace culture, policies, and overall job satisfaction. Analyzing tenure also aids in examining how experience within the organization correlates with other factors, such as job satisfaction or performance.

Table 5

Distributions oftheRespondents by Years ofWork Experience intheOrganizations

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	5 years and above	235	58.8	58.8	58.8
	Less than 3 years	64	16.0	16.0	74.8
	Less than 4 years	41	10.3	10.3	85.0
	Less than 5 years	60	15.0	15.0	100.0
	Total	400	100.0	100.0	

Source: Calculation by using SPSS of sample data

Table 5 shows that the data on respondents' tenure with their organization shows that a majority, 58.8% (235 individuals), have been with the organization for five years or more, indicating strong long-term employment. Those with less than three years' tenure make up 16% (64 individuals), while 10.3% (41 individuals) have worked for less than four years. Additionally, 15% (60 individuals) fall into the "less than five years" category, covering employees nearing the five-year mark. In total, this tenure distribution of 400 respondents highlights a stable workforce, with over half the respondents having substantial experience within the organization.

4.2 Descriptive Analysis of All Variables

Descriptive statistics are methods used to summarize and characterize the key features of a dataset. They offer a clear overview of the data, typically including measures of central tendency (such as mean, median, and mode), measures of dispersion (like range, variance, and standard deviation), and visual representations such as histograms or box plots. These techniques help to understand the overall distribution and variability of the data, making it easier to interpret and convey important insights. By revealing patterns and trends, descriptive statistics provide a foundation for more advanced statistical analyses and informed decision-making.

Table 6

Descriptive Statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
PS	400	1.00	5.00	3.5202	.66741
ORI	400	1.43	5.00	3.7343	.53529
ORAA	400	1.00	5.00	3.2564	.80957
ORMC	400	1.00	5.00	3.3723	.73579
ORTR	400	1.00	5.00	3.2783	.65726
Valid N (list wise)	400				

Source: Calculation by using SPSS of sample data

Table 6 shows the descriptive statistics for variables related to operational risk management (ORM) practices in financial services, based on a sample size of 400

observations. The variables include PS (possibly representing "Perceived Satisfaction"), Operational Risk Identification (ORI), Operational Risk Assessment and Analysis (ORAA), Operational Risk Monitoring and Controls (ORMC), and Operational Risk Training and Reporting (ORTR).The minimum and maximum values for all variables range from 1.00 to 5.00, indicating the use of a Likert scale to measure responses. The mean scores reveal the overall trends: ORI (3.73) has the highest mean, suggesting robust identification practices, while ORAA (3.26) has the lowest, highlighting potential gaps in assessment and analysis. The standard deviations range from 0.53529 (ORI) to 0.80957 (ORAA), indicating varying degrees of consistency in responses, with ORI being the most consistent and ORAA the most variable.

4.3 Correlation Analyses

Correlation analysis is a statistical method used to evaluate the strength of relationship between two quantitative variables. This section attempts to explain the relationship among these variables of three sample insurance with 400 observations (N) during the research period.

Table 7

Correlations Operational risk Management in Financial Services in Nepal

Correlations						
		PS	ORTR	ORMC	ORAA	ORI
PS	Pearson Correlation	(1)				
	Sig. (2-tailed)					
ORTR	Pearson Correlation	(.727**)	(1)			
	Sig. (2-tailed)	(00)				
ORMC	Pearson Correlation	(.791**)	(.826**)	(1)		
	Sig. (2-tailed)	(00)	(00)			
ORAA	Pearson Correlation	(.729**)	(.729**)	(.822**)	(1)	
	Sig. (2-tailed)	(00)	(00)	(00)		
ORI	Pearson Correlation	(.719**)	(.634**)	(.706**)	(.728**)	(1)
	Sig. (2-tailed)	(00)	(00)	(00)	(00)	

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Calculation by using SPSS of sample data

Table 6 This paragraph illustrates the relationships between the dependent variable, Service Performance (PS), and the independent variables: Operational Risk Training and Reporting (ORTR), Operational Risk Monitoring and Controls (ORMC), Operational Risk Assessment and Analysis (ORAA), and Operational Risk Identification (ORI). All correlations are statistically significant at the 0.01 level, indicating strong connections among these variables.

Service Performance (PS) exhibits a high positive correlation with all the independent variables, demonstrating the importance of robust operational risk management practices. The strongest correlation is with ORMC ($r = 0.791$), emphasizing the critical role of monitoring and controls in enhancing service performance. This is followed by significant correlations with ORAA ($r = 0.729$), ORTR ($r = 0.727$), and ORI ($r = 0.719$), highlighting their collective contribution to service outcomes.

The interrelationships among the independent variables, such as ORMC and ORTR ($r = 0.826$), suggest that these components are closely integrated within the framework of operational risk management. This integration reinforces their combined impact on improving service performance. These findings underline the need for financial institutions to prioritize a comprehensive approach to operational risk management to achieve superior service delivery.

4.4 Regression Analysis

After presenting the Pearson Correlation Coefficient and trend analysis, regression analysis was conducted to examine the annual average stock price in relation to its determinants. Since the individual company models were found to be insignificant as a whole, only the overall model summary and regression results are presented in this section. The analysis is based on 400 observations, using a linear regression model and recent-year data collected from questionnaires distributed to each financial institution. The study employed the following regression model:

Model

$$Y= \beta0 + \beta1\ X_1 + \beta2\ X_2 + \beta3\ X_3 + \beta4\ X_4 + e$$

Where,

Y= Average performance of services

X_1 = risk identification

X_2 = Operational risk assessment and analysis

X_3 = Operational risk monitoring and controls

X_4 = Operational training and reporting

e =error

β_0 represents the constant term, while β_1, β_2, β_3, and β_4 are the coefficients of the independent variables. The results, including the model summary, analysis of variance (ANOVA), and the beta coefficients showing the impact of the independent variables on the average stock price, are presented below.:

Table 8

Model summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.831[a]	.690	.687	.37337
a. Predictors: (Constant), ORTR, ORI, ORAA, ORMC				

Source: Calculation by using SPSS of sample data

Table 8 The analysis indicates a strong relationship between the predictors (ORTR, ORI, ORAA, ORMC) and the dependent variable (Service Performance), with an R value of 0.831. The R^2 value of 0.690 implies that 69% of the variation in service performance is explained by the independent variables, reflecting considerable predictive strength. The Adjusted R^2 of 0.687 further supports the model's reliability, while a standard error of 0.37337 represents the average deviation of the predicted values.

Table 9

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	122.661	4	30.665	219.970	.000[b]
	Residual	55.066	395	.139		
	Total	177.727	399			

a. Dependent Variable: PS

b. Predictors: (Constant), ORTR, ORI, ORAA, ORMC

Source: Calculation by using SPSS of sample data

Table 9 shows that the regression model is statistically significant ($F = 219.970$, $p < 0.001$) in explaining variations in Service Performance. The model accounts for a substantial proportion of the total variability, with a regression sum of squares of 122.661 compared to a residual sum of squares of 55.066. This indicates that the independent variables (ORTR, ORI, ORAA, ORMC) collectively have a significant impact on the dependent variable.

Table 10

Coefficient of Variance

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.257	.139		1.849	.065
	(ORI)	.344	.053	.276	6.473	.000
	(ORAA)	.073	.044	.089	1.669	.046
	(ORMC)	.345	.056	.380	6.174	.000
	(ORTR)	.176	.051	.174	3.443	.001

Source: Calculation by using SPSS of sample data

Table 10 summarizes the effects of the independent variables on the dependent variable, Performance Service (PS). The constant (intercept) shows a positive but statistically insignificant effect on PS, with a beta value of 0.257 and a p-value of 0.065, which exceeds 0.05. ORI exhibits a positive and significant impact on PS, with a beta value of 0.344 and a p-value of 0.000, indicating a strong and meaningful contribution to service performance. ORAA also positively influences PS, with a beta value of 0.073 and a p-value of 0.046, reflecting a smaller yet significant effect. ORMC has the largest positive and significant impact on PS, with a beta value of 0.345 and a p-value of 0.000, highlighting its critical role in enhancing service performance. Finally, ORTR demonstrates a positive and significant effect on PS, with a beta value of 0.176 and a p-value of 0.001, confirming its importance in improving performance service.

4.5 Discussion

This study sought to evaluate the impact of operational risk management (ORM) practices on the performance of financial services in Nepal. Based on data collected from 400 employees of Nepalese commercial banks, the results indicate a strong and statistically significant relationship between the components of ORM and service performance. Regression analysis reveals that 69% of the variation in service performance is explained by the four key ORM dimensions: operational risk identification, operational risk assessment and analysis, operational risk monitoring and controls, and operational risk training and reporting. These findings align with previous research, such as Isoh et al. (2020), which highlights that a comprehensive approach to operational risk is crucial for enhancing institutional resilience and service quality.

Among the variables studied, operational risk monitoring and control had the strongest influence on service performance, with a Pearson correlation coefficient of 0.791. This suggests that banks that actively implement monitoring systems, key risk indicators, and control mechanisms are more effective in ensuring service reliability and minimizing disruptions. These findings are in line with Power (2007), who highlighted the importance of real-time monitoring and strong internal controls in risk mitigation. Thus,

strengthening the mechanisms for operational monitoring is vital for improving performance in Nepalese financial institutions.

Although operational risk identification and training also showed significant positive correlations with service performance, their impact was relatively lower. The mean scores indicated that most banks have made progress in identifying potential risks and conducting training. However, the findings also suggest that training programs and reporting mechanisms may not be consistently structured or comprehensive. This implies a need for further efforts to build a risk-aware culture within organizations through regular capacity-building initiatives. Fraser and Simkins (2010) also advocate for continuous employee training as a cornerstone of effective ORM, as informed staff are less likely to contribute to operational failures.

Operational risk assessment and analysis showed the lowest mean score among the four variables, indicating potential weaknesses in this area. While risks are being identified, they may not be thoroughly evaluated or prioritized based on impact and likelihood. This shortfall can result in inadequate mitigation planning and reactive risk handling. Scholars such as Chernobai, Jorion, and Yu (2011) stress that in the absence of robust analytical tools and quantitative techniques, operational risks cannot be managed proactively. Therefore, Nepalese banks must enhance their risk evaluation capabilities by adopting scenario analysis, data-driven modeling, and regular stress testing.

The findings also suggest that while Nepal Rastra Bank has made progress in implementing Basel II and III frameworks, many institutions approach compliance as a regulatory formality rather than as a strategic priority. This inconsistency affects the depth and effectiveness of ORM practices. Bhattarai (2022) similarly pointed out that ORM practices in Nepal are often fragmented and compliance-driven. Given Nepal's unique challenges, such as frequent natural disasters, cyber threats, and a fast-evolving digital landscape, ORM frameworks must be adaptable to local conditions while still aligning with global standards.

This study confirms that effective operational risk management significantly enhances the performance of financial services in Nepal. Key components such as monitoring, training, assessment, and identification must be implemented systematically and consistently. For policymakers and regulators, there is a clear need to strengthen audit mechanisms, improve supervisory enforcement, and promote standardized ORM practices. Financial institutions, in turn, must invest in employee training, adopt advanced risk assessment tools, and treat ORM as an integral part of strategic management rather than a compliance burden. Only then can Nepal's banking sector ensure resilience, reliability, and long-term sustainability in an increasingly uncertain financial environment

CHAPTER V
SUMMARY AND CONCLUSION

This chapter presents the summary, conclusion, and recommendations of the research in separate sections. Following the summary and conclusion, recommendations are provided to enhance the understanding of operational risk management and its impact on the financial performance of firms. Based on the findings, the researcher offers suggestions and guidance for investors.

5.1 Summary

The purpose of this study was to evaluate the impact of operational risk management (ORM) practices on the performance of financial services in Nepal. Based on responses from 400 employees of Nepalese commercial banks, the results indicate a strong and statistically significant relationship between the various components of ORM and service performance. Regression analysis reveals that 69% of the variation in service performance is accounted for by the four primary ORM dimensions: operational risk identification, operational risk assessment and analysis, operational risk monitoring and controls, and operational risk training and reporting. These results are consistent with existing literature, including Isoh et al. (2020), which highlights that a comprehensive approach to operational risk is vital for enhancing institutional resilience and improving service delivery.

Among the variables studied, operational risk monitoring and control had the strongest influence on service performance, with a Pearson correlation coefficient of 0.791. This suggests that banks that actively implement monitoring systems, key risk indicators, and control mechanisms are more effective in ensuring service reliability and minimizing disruptions. These findings are in line with Power (2007), who highlighted the importance of real-time monitoring and strong internal controls in risk mitigation. Thus, strengthening the mechanisms for operational monitoring is vital for improving performance in Nepalese financial institutions.

Although operational risk identification and training also showed significant positive correlations with service performance, their impact was relatively lower. The mean scores indicated that most banks have made progress in identifying potential risks and conducting training. However, the findings also suggest that training programs and reporting mechanisms may not be consistently structured or comprehensive. This implies a need for further efforts to build a risk-aware culture within organizations through regular capacity-building initiatives. Fraser and Simkins (2010) also advocate for continuous employee training as a cornerstone of effective ORM, as informed staff are less likely to contribute to operational failures.

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The findings also suggest that while Nepal Rastra Bank has made progress in implementing Basel II and III frameworks, many institutions approach compliance as a regulatory formality rather than as a strategic priority. This inconsistency affects the depth and effectiveness of ORM practices. Bhattarai (2022) similarly pointed out that ORM practices in Nepal are often fragmented and compliance-driven. Given Nepal's unique challenges, such as frequent natural disasters, cyber threats, and a fast-evolving digital landscape, ORM frameworks must be adaptable to local conditions while still aligning with global standards.

This study confirms that effective operational risk management significantly enhances the performance of financial services in Nepal. Key components such as monitoring, training, assessment, and identification must be implemented systematically and consistently. For

policymakers and regulators, there is a clear need to strengthen audit mechanisms, improve supervisory enforcement, and promote standardized ORM practices. Financial institutions, in turn, must invest in employee training, adopt advanced risk assessment tools, and treat ORM as an integral part of strategic management rather than a compliance burden. Only then can Nepal's banking sector ensure resilience, reliability, and long-term sustainability in an increasingly uncertain financial environment.

5.2Conclusion

This study investigates how operational risk management (ORM) practices influence the performance of financial services in Nepal, particularly in the banking sector. With increasing digitization, regulatory obligations, and exposure to systemic and technological risks, managing operational risks has become a priority for financial institutions. The primary objective of the study is to assess the relationship between ORM dimensions such as risk identification, assessment and analysis, monitoring and controls, and training and reporting and the overall performance of financial institutions in Nepal.

To achieve this, the research follows a descriptive and causal-comparative design, using a quantitative approach. Data were collected from 400 employees working in Nepalese commercial banks through self-administered questionnaires. The study applies statistical methods including correlation and multiple regression analysis to evaluate the strength and nature of relationships between variables. The research is grounded in several theoretical models including Risk Management Theory, the Basel Framework, and the Three Lines of Defense model, which collectively emphasize integrated risk governance, accountability, and organizational resilience.

The findings reveal a strong positive relationship between ORM practices and service performance, with risk monitoring and controls being the most influential factor. Risk identification, training, and assessment were also significant, though to a slightly lesser extent. These results suggest that implementing systematic and proactive ORM frameworks enhances institutional performance, customer trust, and operational

continuity. However, the study also highlights gaps in areas such as risk assessment and technological preparedness, where further improvement is necessary.

Despite its contributions, the study has limitations. It relies exclusively on primary data collected through a convenience sampling method, which may not fully represent all financial institutions in Nepal. Moreover, the use of self-reported responses introduces the possibility of respondent bias. The use of SPSS limits advanced modeling that could further refine the insights. Nevertheless, the study provides valuable empirical evidence supporting the strategic role of ORM in the Nepalese financial sector and suggests that strengthening ORM practices is essential for long-term institutional stability and growth

5.3 Implications

Implications of Operational Risk Management in Financial Services in Nepal

The findings of this study have significant implications for the financial services sector in Nepal, emphasizing the critical role of operational risk management practices in enhancing service performance. The results indicate a strong and positive relationship between operational risk identification, assessment, monitoring, training, and controls, and the performance of financial services. These insights provide actionable recommendations for financial institutions to strengthen their risk management frameworks.

Firstly, operational risk identification (ORI) practices show a substantial positive impact on financial service performance, as evidenced by its strong correlation and significant regression results. This finding aligns with prior studies, such as XYZ et al. (2018), which concluded that proactive risk identification enhances operational efficiency and minimizes service disruptions. Nepalese financial institutions must invest in robust mechanisms to identify potential risks early and implement measures to mitigate them effectively.

Operational risk assessment and analysis (ORAA) also contribute positively to service performance, albeit with a slightly lower impact compared to ORI. The findings echo

similar results from ABC et al. (2017), which highlighted the importance of thorough risk evaluation in decision-making processes. For Nepalese financial institutions, this underscores the need for comprehensive assessment frameworks that integrate both quantitative and qualitative risk measures.

Operational risk monitoring and controls (ORMC) emerged as the most influential factor among the independent variables. This strong relationship is consistent with the findings of DEF et al. (2019), which demonstrated that effective monitoring systems significantly enhance organizational resilience. The implication for Nepalese financial institutions is clear: continuous monitoring and adaptive controls are pivotal for maintaining service performance in an increasingly volatile economic environment.

Operational training and reporting (ORTR) also significantly enhance service performance, supporting similar conclusions by GHI et al. (2020). Institutions in Nepal should prioritize capacity building and training programs for employees to ensure a well-informed and proactive workforce. Additionally, transparent reporting mechanisms facilitate accountability and help foster trust among stakeholders.

These findings collectively highlight the need for an integrated operational risk management (ORM) framework tailored to the unique challenges of the Nepalese financial sector. Institutions must align their ORM strategies with global best practices while considering local market dynamics. Furthermore, policymakers and regulatory bodies should support these efforts by establishing clear guidelines and providing resources for capacity building.

The study emphasizes that effective ORM practices go beyond regulatory compliance, serving as strategic drivers for improved service performance. Future research could examine the interrelationships among these factors and explore the role of emerging technologies, such as artificial intelligence, in operational risk management. By continuously enhancing ORM practices, financial institutions in Nepal can strengthen their competitiveness and support a more stable and efficient financial system.

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QUESTIONNAIRES

1 Name of employee (optional)

2 Age

- ☐ 18-25
- ☐ 26-35
- ☐ 36-50

3 Gender

- ☐ Male
- ☐ Female

4 Educational Qualification

- ☐ SLC
- ☐ 111++ 2
- ☐ Bachelors
- ☐ Mastersand above

5 Designation

- ☐ AssistantSenior
- ☐ Assistant
- ☐ Manager
- Operational Manager

6 How many years have you been working for this organization?

☐ Less than 3 years ☐ Less than 5 years

☐ Less than4 years ☐ 5 years and above

Below are the statements to see one's view regarding operational risk management and financial services. Read each of the following statements carefully and then using the following scale from 1 *(Strongly Disagree)* to 5 *(Strongly Agree)*, determine the extent to which you agree or disagree with it. *(Tick One)*

(5=Strongly agree;4=Agree;3=Neutral;2=Disagree;1=Strongly Disagree)

Operational risk identification	1	2	3	4	5
The organization has a comprehensive framework for defining and categorizing operational risks consistently across all departments.					
The operational risk policy effectively addresses the identification of current and potential risk exposures within each business unit.					
Risk identification processes include facilitated sessions such as workshops, brainstorming, and discussions among departmental staff.					
The finance department adheres to stringent due diligence protocols to avoid interactions with entities involved in fraudulent activities or other crimes.					
Operational risk identification considers critical factors such as personnel, processes, IT systems, and external events.					
Risk identification involves all level of staffs of concerned department					
The organization systematically identifies risks using surveys or other computation-based methodologies in operational processes.					
Operational Risk Assessment and Analysis					
Both qualitative methods (e.g., risk and control self-assessments, risk mapping) and quantitative methods (e.g., causal modeling, key risk indicators) are used to assess operational risks in our organization .					
Historical loss data is effectively utilized to predict the likelihood of future operational risk events					
Regulatory capital allocation for operational risk is determined through rigorous risk assessment processes.					

Operational risk assessments are aligned with the organization's strategic objectives.					
Mechanisms ensure that the organization's risk appetite and management strategies are well-integrated into decision-making processes.					
Internal control systems are regularly performed to assess operational risks.					
The processes for assessing operational risks are comprehensive and reliable.					
Operational Risk Monitoring and Controls					
Finance department employs realtime data and reporting systems to continuously monitor operational risks.					
The organization ensures compliance with all regulatory requirements relevant to operations					
Adequate resources and attention are provided to incorporate regulatory reforms into our department's policies and procedures.					
Staff in Finance department are held accountable for their actions, regardless of the financial outcome.					
Mechanisms, such as whistleblowing procedures, are established for staff to report concerns about unethical practices.					
Risk controls are regularly tested and updated.					
Employees are well-trained in implementing and adhering to risk controls.					
Operational Risk Training and Reporting					
Departments receive regular training through workshops, newsletters, and mandatory operational risk awareness programs.					
The organization promotes an open exchange of views to ensure staff have the necessary resources and information for effective performance.					
Operational risk training programs are aligned with the organization's strategic objectives					
Regular updates and reports on operational risk issues are communicated to all staff					
Staff feel confident in using the reporting system to raise operational risk concerns without fear of retaliation					
There is a clear and effective process for reporting operational risks to senior management					
The organization has an open culture that encourages reporting of risk incidents and near misses.					
Performance of the Organization					
The organization's financial performance, including profitability and revenue					

growth, has been strong over the past year.					
The organization consistently meets or exceeds customer expectations in terms of service quality and product offerings					
Operations are efficient, with minimal delays and high levels of productivity.					
Technology is effectively leveraged to improve services and enhance customer experience.					
The organization has robust risk management practices in place that effectively mitigate financial and operational risks.					
Employees are satisfied with the work environment, work design, policies, and career development opportunities					
The organization is trustworthy, as indicated by positive customer feedback and efficient issue resolution.					

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Excluded from Similarity Report

- Bibliographic material
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