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Impact of Operational Risk on the Insurance Industry of Nepal

Manoj Kumar Lal Karn, PhD Scholar,

The faculty of management at Arunodaya University, Arunachal Pradesh.

Chief Executive Officer (CEO), Himalayan Life Insurance

Email: mkkarn64ins@gmail.com

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Abstract

This paper discusses the impact of operational risk in the insurance industry. The risk related to operational cost represents a financial challenge to the insurance companies in Nepal and beyond. The primary objective of this article is to explore variables that cause operational risk in financial institutions in general and in the insurance industry in Nepal in particular. The risk of high operational costs impacts insurers' financial performance. The finding of the study reflects in the risks and their impact on Nepalese insurance companies associated to claims management costs, technology infrastructure, fraud and risk management, customer acquisition and retention, and disasters and losses. The research paper centers on only five arenas wherein the risk is faced by almost all the insurance institutions in Nepal. The researcher has used secondary sources of information in order to meet the objective. The mixed research design method has been employed to analyze the data. The exploration reveals that most of the insurance companies in Nepal suffer high risk when operating the cost for technology infrastructure and disasters and losses out of numerous operational costs.

Keywords: Operation cost, risk, insurance industry, technology infrastructure, customer retention, claims management

1. Introduction

The paper examines the risks that insurance companies face in Nepal regarding operational costs. The companies need to boost their competencies to mitigate the risks. Meanwhile, they get to accept the obvious risks posed to every sort of financial institution, including insurance organizations. The contribution of insurance companies to society as a whole is commendable. However, Nepalese insurance companies are mostly under suspicion by the common insurers when buying the policies because of the rumors spread. Both insurers and prospects lack ideas about how much insurance companies pay for mitigating risks.

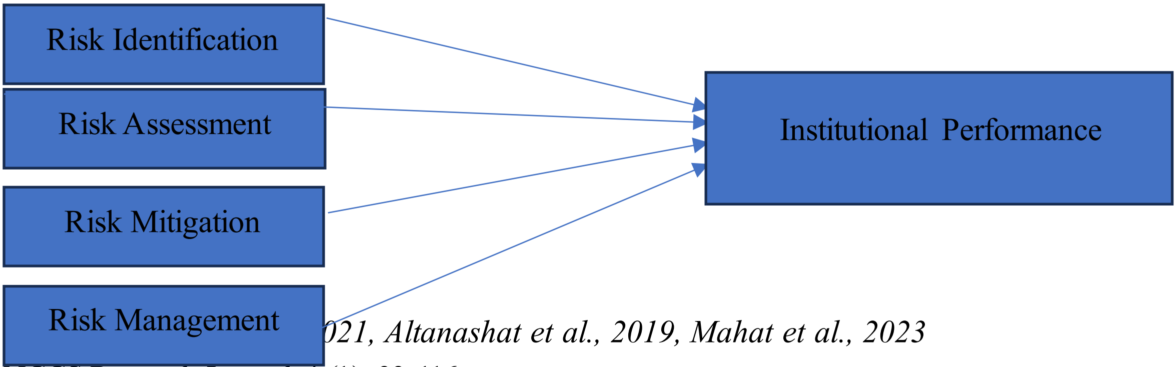
Operational risk is becoming more critical in the governance and management of insurance firms in Nepal. Insurance companies are facing greater consequences and interactions with other risks, such as credit or market risks. The management and assessment of operational risk is an essential task for insurers. The insurance industry offers numerous growth opportunities and serves as a significant area of social service through financial security. Nevertheless, its operational risk is unavoidable. The recent Nepalese regulation inevitably heightens the demand for efficient management of operational risks and the creation and execution of organized approaches for its evaluation. The traditional method of modeling, Value at Risk (VaR), along with other approaches for analyzing and quantifying operational risk for insurance companies, is also examined. The boards of directors in different insurance companies are concerned about the risk. The operational risk management identifies, analyzes, and mitigates the different risks business operations are exposed to. Two things are intertwined: the presence and integrity of management and operational controls of the insurance companies, and the capacity to keep the promise made to clients that the companies are committed to serving customers and meeting with the stakeholders, such as employees and suppliers of services. This paper assesses five different types of operational risk, such as claims management costs, technology infrastructure, fraud risk management, customer acquisition and retention, and disasters and losses that insurance companies in Nepal face.

2. Research Method

This paper has employed a descriptive and causal-comparative research design to discuss the operational risk in the insurance companies in Nepal. The descriptive research design has been adopted for fact-finding and adequate information gathering about the core issues associated with claims management costs, technology infrastructure, fraud and risk management, customer acquisition and retention and disasters and losses in the insurance companies in Nepal. It explains the real and actual conditions, situations, and facts. Causal-comparative research design has been used to demonstrate the cause-and-effect relationship among the areas of operational risk in Nepalese insurance companies. More specifically, the paper analyzes the impact of operational risk on the business of insurance companies in the current competitive business world. The article largely relies on secondary sources of information for analysis and conclusion.

Theoretical Framework

Independent Variables Dependent Variable



021, Altanashat et al., 2019, Mahat et al., 2023

3. Review of Literature

Operational risk refers to the danger of loss, direct or indirect, resulting from insufficient internal procedures and/or incorrect individuals and systems or due to external events. In particular, for the insurance industry, operational risk, according to Solvency II standards, refers to the potential loss stemming from insufficient or unsuccessful internal processes, personnel, or systems, as well as from external incidents, encompassing legal risks, but excluding risks that emerge from strategic choices and reputational dangers. This concept of operational risk emphasizes the effects of operational losses. In this regard, there have been numerous studies, and some of them have been highlighted in this paper to clarify the concept of operational risk and its relevant core issues.

Kamal Gyawali and Dhan Bahadur Pun Thapa (2024) have opined that risk management in the insurance industry is serious but imperative for the sustainability of the companies. It is critical because it impacts on both performance and sustainability of the institutions. Financial institutions have to reduce the risk by analyzing all the variables that can help to discourage risk (p. 63). Additionally, insurance companies can safeguard themselves only through effective risk management for sustainable development. In most of cases, insurance companies suffer risks in terms of finance, regulation, operation, and marketing (Gyawali & Thapa, 2024). Provided that the risk in these areas is not managed effectively, the companies cannot meet the corporate objective.

A. Sayaju & K. Dhakal (2024) investigated the opinions and knowledge of employees about operational risk management in the banking sector. Their study shows that female employees have better knowledge of operational risk management than male employees because the former are closer to the issue than the latter. Their findings imply that there has been a huge impact of identification, management, and mitigation of operational risks on operational risk reduction in commercial banks of Nepal. The researchers have explored some of the major causes of operational risk, including "systems failure, inability to use new technologies, and lack of management support" as obstacles to performing better. Effective and timely reduction of operational risks in the banking sector can help to foster morale and performance of the employees. To accelerate the growth of the banks, the proper management of operational risks has been imperative. The banks need to stay committed to the management of operational risk for collective benefits. For doing so, employees must be made aware and trained through numerous development programs related to system management and operational risk management. Ensuring the security and efficient and effective management of the operational risk, along with other problems such as organizational conflicts in the financial institutions, can help to boost the corporate culture.

V.K. Kaishev, D.S. Dimitrova, and Z.G. Ignatov (2008) have investigated the finite time probability of (non) ruin that can be used as an operational risk measure to mitigate risk in a financial institution. In their view, this approach can help to discourage the operational loss frequency. In their terms, "it allows for inhomogeneous operational loss frequency (dependent inter-arrival times) and dependent loss severities which may have any joint discrete or continuous distribution". The linkage shown between inhomogeneous operational loss frequency and dependent loss severities is reflected in operational cost management.

Bhupal Jaishi (2020) has focused on the correlation between independent variables and dependent variables. In his terms, "return on assets and earnings per share are the dependent variables. Independent variables are the total debt ratio, the equity to total assets ratio, size, liquidity and tangibility. The finding of the research demonstrates that insurance companies with a high debt ratio can have better financial performance.

Jaishi has emphasized the interdependent situation in which there is an increase in debt ratio and tangibility increases return on assets, and an increase in equity, size, and liquidity decreases return on assets in the financial institutions, especially in insurance companies of Nepal. The debt ratio and tangibility on earnings per share have garnered positive results, whereas equity, size and liquidity ratios on earnings per share have caused negative implications. Jaishi has concluded that the total debt ratio, equity to total assets ratio, leverage, size, liquidity, and tangibility significantly affect the financial performance of insurance companies in Nepal. Besides, these companies do not seem interested in enhancing financial performance that can foster their "total debt ratio and tangible assets and decrease equity, firm size, and liquidity ratio" (ibid). Jaishi has added that there has been a close connection between capital structure and the financial performance of insurance companies, although this case is disputable in both advanced and growing economies of the globe (2020). The capital structure variables, including debt and equity, along with firm-specific factors such as size, liquidity, and tangibility, have played a crucial role in shaping the financial performance of the insurance sector in Nepal. Decisions regarding capital structure directly on both investment and operational choices within the organization. Therefore, determining the optimal level of capital structure is essential since it significantly impacts the investment and operational strategies of the insurance companies.

Ganesh Sharma, in his research, found out that the size of a firm impacts financial return on equity, while it adversely affects return on assets. This implies that an increase in firm size correlates with a reduction in return on assets and an enhancement in return on equity. Similarly, leverage positively affects return on assets but negatively impacts return on equity, which indicates that greater leverage is associated with higher returns on assets and diminished returns on equity. Besides, the age of a firm positively affects return on equity and negatively influences return on assets, which further suggests that as a firm age, its return on equity increases, whereas its return on assets decreases. Furthermore, liquidity negatively impacts both return on assets and return on equity, which signifies that higher liquidity of assets corresponds to lower returns on both metrics. In a related context, the leverage ratio negatively affects return on equity, while it positively influences return on assets, which implies that an increase in the liquidity ratio results in higher returns on assets and lower returns on equity. In Sharma's observation, financial institutions represent a diverse array of business activities within the financial services industry, which includes entities such as banks, trust companies, insurance firms, brokerage houses, and investment dealers. These institutions are pivotal to the socio-economic advancement and development of a country. The insurance sector, in particular, holds a crucial position within the financial services landscape across both developed and developing nations. It contributes to economic growth, enhances resource allocation efficiency, lowers transaction costs, generates liquidity, enables economies of scale in investment, and mitigates financial losses (2024). The role of insurance companies in the growth of finance in a country is reflected in the engagement of other financial institutions, including commercial banks, with the insurance industry.

The business strategy emphasizes the importance of insurance for the entire community. Due to ongoing economic advancement and technological progress, the growth of public infrastructure systems, a rising number of cultural and artistic public facilities, population increases, heightened population density, and the accumulation of economic values per unit area, along with production and service capabilities, the population, industries, and infrastructure face greater exposure to various risks and damaging events that lead to financial losses for the involved entities (Bosiljkal, Adamovic, & Milosevic, 2025).

Insurance does not stop losses from happening nor lessen them for separate individuals. Nonetheless, it reduces their effect on the economy, since the occurrence of damage can interrupt economic networks and unsettle economic relationships. Insurance provides prompt reimbursement for losses, facilitates recovery, and supports the rehabilitation of economic entities that have experienced damage, thus allowing for a quick restart of economic operations. Nonetheless, insurance may also produce adverse effects, possibly motivating economic agents to overlook precautions that prevent negative outcomes and losses, resulting in the development of unfavorable trends (Bosiljkal, Adamovic, & Milosevic, 2025). They focused on risk management that depends on the arrangement of structures, tools, and techniques for risk metrics and control, along with the regulatory framework and oversight of insurance. Reducing risk exposure is additionally reinforced by creating a specific department in the organizational framework, focusing on specialized staff capable of effectively managing risks (2025).

Nikki et al. (2023) have stated that contemporary statistical and machine learning methods are utilized predominantly (65%), with supervised (37%) and unsupervised (28%) strategies. This extensive model family encompasses algorithms grounded in statistical learning theory that examine and identify patterns in historical (and often higher-dimensional) data to draw inferences or forecasts about unobserved (future) data (Hastie et al., 2009). Supervised learning, in contrast to unsupervised learning, is directed by a dependent variable and typically suits prediction tasks. Decision trees and artificial neural networks (ANNs) are commonly employed to forecast the occurrence, type, or intensity of micro risks, especially in ENR.

Within these challenges, operational risk emerges as a vital element affecting the financial stability, profitability, and market value of these firms. Operational risk includes possible losses arising from internal procedures, personnel, systems, and external occurrences (Basel Committee on Banking Supervision, 2004). For insurance firms in Nigeria, grasping the effects of these risks on business performance is crucial, as efficient risk management safeguards the company's worth and fosters confidence among stakeholders, such as shareholders, regulators, and policyholders (Olaiya et al., 2025).

Operational risk in insurance firms stems from breakdowns in internal processes, personnel, and systems, alongside external occurrences that may hinder business operations. Within the Nigerian insurance sector, where economic instability and operational difficulties are common, leverage significantly influences how operational risks convert into financial results. Elevated leverage can limit a company's capacity to handle unforeseen operational losses efficiently, possibly resulting in financial difficulties. On the other hand, careful management of leverage can reduce the negative impacts of operational risks on financial outcomes, allowing companies to sustain stability and profitability (Olaiya et al., 2025).

4. Results and Discussion

This paper particularly discusses five major areas of operational risk in the insurance companies of Nepal. The first is claims management costs that get higher due to inefficiencies in handling claims. When processing claims is delayed, administrative expenses increase. Consequently, profit margins decrease in the companies. The second is technology infrastructure, which is reflected in the installation of the latest technological devices that can ensure protection from cyber-attacks and hacking. For cybersecurity and data analysis, the companies are under pressure to invest a large amount in buying technologies, including Artificial Intelligence (AI) and data analytics, and digital platforms in the competitive business environment. In the beginning, the installation of such technologies becomes expensive, and the companies usually fear the risk of losing the invested amount if the profit is not made accordingly. There are two kinds of risks: the first is that the companies may fail to generate business, but the investment in the installation is high, and the second is that the maintenance expenses for proper operation have to be covered. Meanwhile, the companies are expected to update their technologies or buy the latest technologies to cope with the ongoing changes in the world of science and technology. Otherwise, the companies can go out of business.

The third is fraud and risk management, which most of the insurance companies in Nepal face now. The insurers get pressured to conduct investigations into fraudulent claims, which pose a risk to operational costs. Besides, insurers and even the companies are obliged to detect fraud and prevent their systems from any wrongdoing. Some of the insurance companies have been found incapable of managing fraud effectively. As a result, such companies get pressured to adopt more advanced fraud detection systems. This obligatory act increases the ongoing operational costs in the respective companies.

The fourth cause of the operational risk is customer acquisition and retention. How to increase the number of customers in the insurance companies is a kind of pressure on the part of the insurance agents and the executive management. Even the employees experience this pressure as they are the coordinators between the management body and the freelance agents for the insurance companies. Customer acquisition demands marketing and advertising to draw the attention of the prospects. Besides, when a new product is launched, it demands a lot of attention from new customers. The investment in customer acquisition does not always bring about the expected results. Meanwhile, to retain the business, customer retention becomes essential. Most of the insurance companies in Nepal suffer from the crisis of customer retention, especially in rural areas, because when customers stop generating income or getting salaries from their workplace, they do not even pay the premium. In some cases, without maturing the policy, the insured stops paying the premium. This customer retention gets worse when the customers do not show any interest in new products. In both cases, the insurance companies face the risk. Customer acquisition and retention become costly and sometimes more expensive than the budget allocated for marketing and advertising.

The fifth cause of the operational risk is disasters and losses. When natural disasters, including the earthquake of 2015 in Nepal and pandemics worldwide, occur, the claims volumes and operational burdens increase unexpectedly. Most of the insurance companies in Nepal had to face a terrible crisis in addressing the claims. Mostly, claims were obvious in a crisis, but some of the claims were fraudulent. Such disasters aggravated the operation of the insurance companies due to a hike in the payment to the claimants. The insurers come under pressure to allocate additional resources to address the claims in the aftermath of the disasters. Most of the insurance companies had to compensate the public for losses. On one hand, there had been the casualties due to earthquakes and pandemics, and on the other, the insured had lost their properties. The insurance companies in such crises had to allocate more resources to the operational risk in Nepal. The figure below presents the major challenges that operational risk management faces.

Table 1:

Major Challenges and Their Impact on Insurance Companies

Challenges	*Impact*
Claims management costs	Reduction of profitability
Technology infrastructure	Operational Efficiency
Fraud risk management	Financial Losses
Customer acquisition and retention	Revenue Growth and High Premium Collection Ratio
Disasters and losses	Increased Claims Volume

Nepalese insurance companies experience challenges of different types when maintaining operational costs. The risk management practices directly affect performance and delivery of services. The correlation between performance and risk identification in Nepalese insurance companies is positive. However, due to poor regulation and lack of integrity in the financial institutions, the correlation has become weak. The implementation of risk identification measures fosters performance. Managing operational risk in the insurance companies in Nepal reflects the positive correlation with performance. Both risk examination and risk reduction display this positive correlation that eventually affects the performance of the insurance industry.

There are three different approaches to mitigating operational risk, such as the Basic Indicator Approach (BIA), the Standardized Approach (TSA), and the Advanced Measurement Approach (AMA). The Advanced Measurement Approach underscores using both internal and external loss information. The lost data can be retrieved through the Loss Distribution Approach (LDA). The AMA modelling framework helps mitigate the operational risk in Nepalese insurance companies. Dutta and Perry (2006) used the LDA to fit appropriate loss distributions to operational loss data.

Insurance companies in Nepal, in terms of operational risk management, experience diverse challenges, and the top management personnel have difficulty managing risks in insurance companies. A shift in investor risk-taking behavior emerged in risk management during the financial crisis (Aren & Nayman Hamamci, 2023). Operational risk occurs when external events affect insurance company employees, systems, and procedures. The study demonstrates that operational risk has been one of the main causes of financial losses in both the insurance industry and the commercial banking sector. Therefore, roles and duties in developing operational risk patterns need to be revised (Tuncel & Alpan, 2010; Zango et al., 2015). The current tendency of operational risk in the insurance industry in Nepal needs to be understood, and according to its pattern, the solution should be explored.

Bishnu Prasad Bhattarai (2020) has opined that in an insurance company, performance is typically measured by net premiums earned, profitability from underwriting operations, yearly revenue, investment returns, and return on equity. These metrics can be categorized as profit performance metrics and investment performance metrics. The connection between capital structure and profitability has been a notable focus of significant progress over the last ten years (p. 35). The focus on the relation between the performance of the insurance companies and their premium earning reflects the core principle of the insurance industry. Pertaining to risk identification and its assessment, Nishwarth Mahat, Surendra Pandey, and Bharat Singh Thapa (2023) have explored the positive impact of risk identification, risk assessments, and risk mitigation on insurance companies' performance. Nevertheless, the impact of risk reduction is scientifically crucial. Nepalese insurance companies need to emphasize risk reduction to boost up their performance. The first thing the companies gets to do is risk identification; the second thing is the risk assessment; the third thing they must focus on risk reduction; the final thing they must do is selection and implementation of the apt risk reduction techniques. Despite the high importance of all these four steps, the impact of risk mitigation on the performance of the insurance companies is high. The performance of life insurance companies in Nepal has been negatively affected by risk management and implementation. However, there have been very few companies that showed serious concern for resolving the problem.

The performance of insurance companies in Nepal can be improved if they focus on risk identification and mitigation, as reflected in the management of the operational costs that usually increase due to the pressures of claims management costs, the need for updated technology infrastructure, fraud and risk management, customer acquisition and retention, and disasters and losses. In fact, the goal of the insurance companies, under the pretext of social service and financial security for their customers, is to make profits.

Insurance risk pertains to the probability that a covered event happens, necessitating the insurance company to settle a claim, exceeding either its initial anticipation during the cost of the insurance offering, or its willingness to take on risk, like in situations involving natural disasters. Certain insured occurrences in Nepal carry a significantly reduced insurance risk. The anticipated claim experience from insurance in Nepal is relevant. Claims involving greater quantifiable losses are not as risky. For instance, the harm caused to a car under an auto insurance policy is easier to quantify (and therefore less hazardous) than the medical expenses or other obligations. Claims that have a high probability of being settled over an extended timeframe carry more risk compared to personal accident insurance. For life insurance, a critical illness rider poses a greater risk than endowment insurance. The comparative dangers are evidenced by the different amounts of capital that the Nepalese insurance companies need to maintain. The greater the risk, the larger the volume of capital needed to back those risks. Insurance risks can emerge from any of the fundamental functions of an insurance business: costing, risk assessment, claim processing, and retrocession, as they affect the frequency and quantity of risk.

5. Conclusion

This paper has studied the intertwined relationship between risk management of operational cost and the performance of the insurance companies in Nepal. The major finding of the study is that the impact of operational risk costs has been on most of the insurance companies of Nepal in the aftermath of the earthquake of 2015 and the worldwide pandemic. Because of the casualties and property losses due to the natural calamities, claim volumes increased unexpectedly, which forced almost all Nepalese insurance companies to allocate additional resources, including employees and capital for operational risk cost management. The installation of technology infrastructure became imperative in every Nepalese insurance company for cybersecurity. Due to the digitized financial institutions across the country, even insurance companies came under pressure to adapt to the digital world. The digital culture became costly, and therefore, operational risk management proved the top priority over the years. Only risk management of the operational cost helped the financial institutions, especially Nepalese insurance companies, to modernize their operational systems for effectiveness and efficiency.

By identifying, assessing, and mitigating possible risks, Nepalese insurance companies avoided unexpected financial losses and eventually fostered profitability. The overall impact of the risk management is reflected in customers' trust in the insurance companies. The researcher, by employing the descriptive and analytical approach based on the secondary data, successfully explored the significant impact of operational risk management on Nepalese insurance companies. One of the recent explorations has been that the relationship between risk management of operational costs and the performance, effectiveness, and efficiency of the insurance companies is unavoidable.

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