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Enterprise Risk Management and Performance of Insurance Companies

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Abstract

Purpose: *This research aims to investigate the impact of risk identification (RI), risk assessment (RA), risk mitigation (RM), and risk management (RMG) on institutional performance (IP). The objective is to analyze both individual and combined effects of these risk management practices on institutional outcomes.*

Methods: *The study used descriptive and causal research design. The data were collected using structured questionnaire with five-point likert scale, targeting 151 managers, officers, and department heads from both life and non-life insurance sectors from Rupendehi district. The correlation analysis was used to examine the relationships between variables and Stepwise regression analysis to explore the effect.*

Results: *It reveals that RA, RM and RMG had significant positive effect on institutional performance at individual level. When they are analyzed in single model RA and RM were only found significant. RI, while consistently positive, was found to be statistically insignificant across all models. RA and RM are significant variables of institutional performance, while RI and RMG play lesser roles.*

Conclusion: *it is necessary to acquire deeper understanding on how risk management practices enhance institutional outcomes.*

Keywords: Risk management, Institutional performance, Risk assessment, Risk identification

I. Introduction

Financial institutions play a crucial role in handling significant amounts of financial resources, influencing business earnings, the production of goods and services, and the overall economic health of a country (Mishkin & Eakins, 2006). Insurance companies enhance the efficiency and effectiveness of a country's financial system through activities like savings mobilization,

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risk transfer, and acting as intermediaries (Das et al., 2003). They offer security and protection by preventing unanticipated losses, developing financial resources, and earning revenue to support expansion, thus contributing to the local economy (Rai, 2012). This is particularly significant in developing economies, where the progress of life and non-life insurance holds more weight compared to developed economies (Han et al., 2010).

Insurance companies act as risk absorbers in any economy, where risk is the probability that an actual outcome differs from the expected one (Green, 2015). The risk can create obstacles in achieving goals (Kanchu & Kumar, 2013). Rejda and McNamara (2014) describe enterprise risk as encompassing all significant risks faced by a business, including pure, speculative, strategic, operational, and financial. Historically, businesses have taken a defensive approach to risks, seeing them as circumstances to minimize or avoid (CAS, 2003). Enterprise risks relate to a business's future net cash flows, significantly influence value of company (Harrington et al., 2002).

Risk management is critical in the insurance sector, as it affects both performance and survivability. Insurance firms must control their exposure to risk and carry out appropriate analysis to prevent losses from compensation claims. However, Kadi (2003) claimed that many insurance companies cover insurable risks without thoroughly analyzing anticipated claims and lack systems to reduce risks appropriately.

Effective risk management is essential for all firms. Preventative actions to avert losses are crucial for risk mitigation and profitability. The financial success of insurance companies depends on how well they manage risk. Managers' attitudes toward risk influence mitigation activities. A strong risk management structure helps firms minimize exposure to risks and improve financial performance (Iqbal & Mirakhor, 2011). The choice of specific risk tools is connected to a company's calculative culture, which refers to senior decision-makers' measurable attitudes toward adopting a risk management framework. While some approaches emphasize thorough measurement and performance management based on risks, others focus on qualitative discussions and expert opinions on emerging risks (Mikes & Kaplan, 2014).

Recently, the concept of ERM has gained popularity among financial institutions. Committee of Sponsoring Organization COSO (2004, p.16) defines ERM as a "process, effected by an entity's board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives." Institutional performance is characterized and assessed through profitability, expansion, market value, overall return on shareholder investment, economic value added, and meeting stakeholder expectations in terms of customer satisfaction (Carroll, 2004). Measuring performance is crucial for effectively implementing an institution's strategies and is a vital management tool for enhancing quality and productivity (Aguinis, 2009). However, there is no universally agreed-upon standard for assessing institutional performance (Carton, 2004). Institutional performance is critical in determining whether a firm is facing losses or profit. The main concern of strategic management is business performance (Ai Ping & Muthuveloo, 2015). ERM aims to help management navigate uncertainty and the accompanying risks and opportunities while adding value. Efficient ERM implementation leads to enhanced performance. Firms that engage in ERM have a greater awareness of accumulated risk across various business operations, allowing for more objective resource allocation. This improves return on equity (ROE) and capital efficiency (Meulbroek, 2002). ERM likely has a more beneficial impact when choosing investments based on better risk-adjusted rates than traditional risk management, given the numerous investment opportunities (Eikenhout, 2015). ERM offers a framework integrating all risk management

operations, making it easier to identify risk interdependencies and lower volatility by limiting risk aggregation from multiple sources (Hoyt & Liebenberg, 2011). ERM improves knowledge about an organization's risk profile, allowing firms to be more transparent about their risks and indicating a commitment to risk management, which may reduce expected external capital and inspection costs (Meulbroek, 2002).

ERM consists of two key elements: risk governance and risk aggregation. The Board of Directors (BOD) implements risk governance to address the agency problem associated with risk management, counteracting managers' tendencies to neglect certain risks while overemphasizing others. Risk aggregation involves consolidating and analyzing various risk data to provide a comprehensive view, aiding in informed decision-making.

This study grounds its arguments in three main theories: ERM theory, stakeholder theory, and agency theory. These theories assert that organizations can handle risk individually or manage all risks collectively. Effective risk management within insurance companies is crucial for safeguarding their stability and ensuring sustainable growth. Insurance companies face a wide range of risks, including economic, regulatory, operational, and market-related dimensions. Properly addressing these risks requires a comprehensive ERM framework that aligns them with the company's strategic objectives. A well-executed ERM strategy can potentially lead to improved institutional performance (Altanashat et al., 2019). Despite the potential benefits, the relationship between ERM practices and institutional performance in Nepal's insurance industry remains insufficiently explored. Limited research exists, often not deep enough to show detailed links between risk management aspects and organizational performance outcomes. Therefore, this study proposes to analyze the relationship and effect of risk management aspects: risk identification, risk assessment, risk mitigation, and risk management on institutional performance.

II. Reviews

Risk management, as a critical element of organizational management, seeks to identify, evaluate, and address potential risks to ensure the efficient achievement of organizational objectives (Rejda, 2008; Kanchu & Kumar, 2013). This process involves making informed decisions about the acceptance of risks and managing the outcomes of significant events (Berg, 2010; Dionne, 2013). Effective risk management is particularly crucial in the insurance sector, where excessive claims and financial losses must be prevented (Magezi, 2003). Reinsurance further plays a pivotal role by compensating for large-scale financial losses and supporting insurers in risk evaluation and claim management (Swiss Re, 2004).

Enterprise Risk Management (ERM) has emerged as a dominant approach to managing business risks, largely in response to stakeholder pressures and concerns about excessive risk-taking (Gates, 2006). Unlike traditional risk management, which focuses on individual project risks, ERM takes a holistic view of organizational risks and involves senior management in the decision-making process. A comprehensive ERM system enables management to stay informed about potential risks, allowing them to adjust strategies to maintain acceptable risk levels. ERM theory formalizes risk management practices and mitigates agency-related issues, improving both understanding and practical application. By integrating risk management with strategic decision-making, ERM helps organizations achieve their objectives while managing risks systematically (COSO, 2016; Alviniussen & Jankensgard, 2009; Power, 2009). ERM also provides a framework for addressing the concerns of the Board of Directors, including aligning managers' risk management actions with investor interests (Smith & Stulz, 1985) and facilitating centralized decision-making through timely and relevant risk information (Harris & Raviv, 1996).

In the context of insurance firms, risk management addresses both financial and non-financial

risks, with financial risks-such as price, liquidity, and credit risks-being the most prominent (Ai & Brockett, 2008; McNeil et al., 2015). Non-financial risks, which include operational, hazard, and strategic risks, have become increasingly significant due to technological advancements and operational complexities (Zéghal & El Aoun, 2016; CAS, 2003).

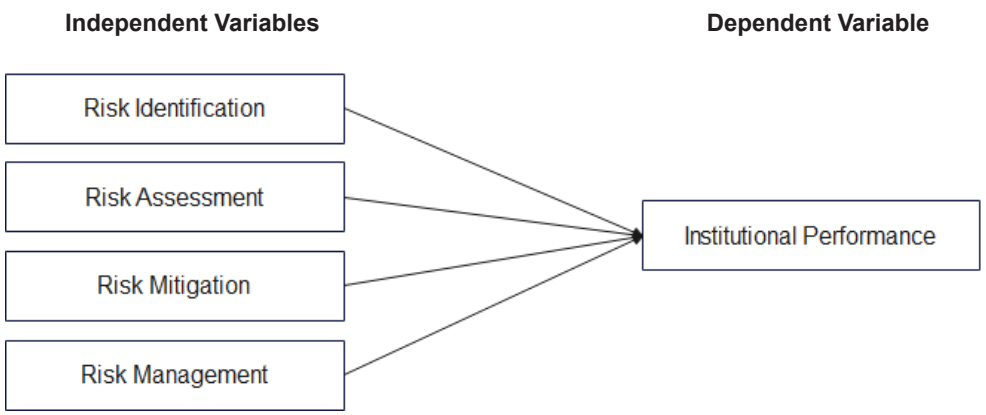
Empirical studies on ERM present mixed results. Hoyt and Liebenberg (2011) found a 20% increase in the value of U.S. insurance companies implementing ERM, while McShane et al. (2011) reported no such value enhancement, suggesting traditional risk management practices were more beneficial. Research by Saeidi et al. (2021) in Iranian financial institutions and Mahat et al. (2023) in Nepalese insurance firms found that ERM positively impacts firm performance. Conversely, studies by Kokobe and Gemechu (2016) and González et al. (2020) found no significant link between ERM practices and firm performance in Ethiopian and Spanish firms, respectively. Similarly, Alawattegama (2018) reported no significant impact of ERM on firm performance in Sri Lanka. These contradictory findings highlight the complexity of ERM's role in different organizational contexts.

Theoretical Framework

Many companies are using ERM to reduce the risk hazard, which make them stable and valuable to their investors and partners. But there's no one agreed-upon definition of ERM or the tools needed to use it. The theoretical framework shown in figure1 shows the risk management aspects and institutional performance. It starts with identifying risks, then figures out how serious they are, how to lessen them, and finally how to manage them overall.

Figure 1

Theoretical Framework



Note. Adopted from Altuntas et al., 2011; Altanashat et al., 2019; Mahat et al., 2023

Definition of Variables and Hypothesis Development

Risk Identification

Risk identification is a vital process within organizational management. Beasley et al. (2008), emphasize that reducing unexpected business events can lead to decreased return volatility and enhanced firm value. Similarly, Lagat and Tenai (2017) indicate that effective risk identification is positively associated with the performance of financial institutions. Based on this context, this study proposes the following hypothesis:

H_1: Effective risk identification positively influences institutional performance.

Risk Assessment

Risk assessment is a structured method for identifying and describing risks while assessing their importance, enabling informed decisions on how to address them effectively. Risk assessment may take place at various levels, such as organizational, departmental, project-based, or individual activities. Curtis and Carey (2012) stated that risk assessment is vital as it offers companies a comprehensive understanding of the significance of each risk in relation to achieving their overall goals. Based on the context the following hypothesis is forwarded.

H_2: Risk assessment positively influences institutional performance.

Risk Mitigation

Risk mitigation involves taking actions to reduce or eliminate the potential impact of risks on organizational objectives. This process helps organizations identify methods to manage events that could negatively impact their financial, physical, or human capital. According to Naik (2003), insurance companies employ various strategies to transfer risk including insurance, reinsurance, diversification, and hedging. Omasete (2014) indicates that effective risk mitigation is positively correlated with improved performance. Based on this context, this study offers the following hypothesis:

H_3: There is a positive effect of risk Mitigation on institutional performance.

Risk Management

Risk management is the process of identifying, evaluating, and organizing risks, and then efficiently allocating resources to reduce, monitor, and manage the likelihood or impact of adverse events (Douglas, 2009). Effective risk management strategies can yield numerous advantages for a company, including reduced operational costs, improved contractual terms, and increased firm-specific investments from stakeholders (Andersen, 2009). Based on context, the study recommends the following hypothesis:

H_4: There is a positive effect of risk management on institutional performance.

Institutional Performance

Institutional performance can be characterized as the effectiveness of management practices and the extent to which the organization provides value to its customers and other stakeholders (Moullin, 2003). Similarly, Wiig (1995) described performance as efficiency and effectiveness of an organization's activities. It involves evaluating the actual progress made toward predetermined objectives.

III. Methodology

A descriptive and casual-comparative research design is adopted for the study. The population for the study includes staff at the level of manager, deputy manager, and head of the department of life and non-life insurance companies of Rupandehi district. A total of 161 questionnaires were distributed, however only 151 responses had been collected. The data for this study were gathered through primary sources, employing close ended questionnaire. The questionnaire had two major sections; the first section was used to collect demographic information of the respondents while the second section collected information about different aspects of risk management and institutional performances in five point's Likert scale. The data thus collected were process and analyzed using statistical software program; SPSS 20 version.

To assess the influence of ERM implementation on the performance four components; risk identification, risk assessment, risk mitigation, and risk management (Altuntas et al., 2011 ; Altanashat et al., 2019) were taken based on components of COSO framework. Institutional performance serves as the dependent variable. The items in this study were adopted from the works of previous authors (Omasete, 2014; Mahat et al., 2023). The regression model use for the study is given in equation (I)

$$IP=\beta 0 + \beta 1*RI + \beta 2*RA+ \beta 3*RM+ \beta 4*RMM+ ei \quad \text{..... (I)}$$

Where, IP refers institutional performance, RI indicates risk identification, RA represents risk assessment, RM indicates risk mitigation, RMG represents risk management and ei represents random error term.

IV. Results and Discussion

Demographic Information

The sample comprises 82.2% males and 17.8% females. The majority of respondents fall within the 30-40 age range (51.5%), followed by those aged 40-50 (27.7%), 20-30 (17.8%), and a small proportion over 50 (3%). In terms of educational qualifications, 64.1% hold a Master's degree, while 38.6% have a Bachelor's degree, with no respondents possessing a +2 qualification or an MPhil/PhD. Regarding work experience, 36.6% have 2-5 years of experience, 32.7% have 5-10 years, 13.9% have less than 2 years, and 16.8% have more than 10 years of experience.

Test of Reliability

Reliability assures consistency and stability of findings over time and across different conditions. To assess the reliability of the research, the Cronbach Alpha Coefficient was utilized; the result is presented in table 1. This coefficient assesses the internal consistency of a set of scale items.

Table 1
Reliability Statistics

S.N.	Variables	Cronbach's Alpha
1	Institutional Performance	0.74
2	Risk Identification	0.73
3	Risk Assessment	0.69
4	Risk Mitigation	0.70
5	Risk Management	0.69

Generally, a Cronbach's Alpha value above 0.70 is considered acceptable for social science research, suggesting that the variables Institutional Performance and Risk Identification demonstrate acceptable reliability. Risk Assessment and Risk Management, both at 0.69, are on the borderline but still considered adequate for exploratory purposes (Tavakol & Dennick, 2011).

The descriptive statistics for the survey responses using a Likert scale are summarized in the table. The RI has average response of 3.93, close to 4, RA has average response of 4.13, RM has average response of 4.16, RM has average response of 4.10 and IP has average response of 4.08. The average response corresponds to "agree" on the Likert scale, indicating a general agreement to strong agreement among respondents about the effectiveness of risk identification, risk assessment, risk mitigation, risk management, and

institutional performance. The standard deviations for all variables are relatively low, which implies that the respondents' views are quite consistent and there is not much dispersion from the average ratings. This consistency suggests a high level of agreement among respondents.

Table 2

Descriptive Statistics

Variables	No. of Respondents	Ave. Response	Std.
Risk Identification	151	3.93	0.464
Risk Assessment	151	4.13	0.461
Risk Mitigation	151	4.16	0.524
Risk Management	151	4.10	0.496
Institutional Performance	151	4.08	0.519

Table 3

Correlation Analysis

	IP	RI	RA	RM	RMG
IP	1				
RI	0.197*	1			
RA	0.345**	0.324**	1		
RM	0.322**	0.363**	0.449**	1	
RMG	0.328**	0.406**	0.456**	0.501**	1

Note. *. Correlation is significant at the 0.05 level (2-tailed). **. Correlation is significant at the 0.01 level (2-tailed).

All the correlation coefficients are positive showing positive association between the variables. The correlations range from weak (0.197) to strong (0.501), with most being moderate. The highest correlation is between Risk Mitigation and Risk Management (0.501), suggesting a strong relationship between these two variables. All correlations are statistically significant, meaning the relationships observed are unlikely to be due to chance. These results suggest that improvements in risk identification, assessment, mitigation, and management are all positively associated with better institutional performance.

Table 4 presents the result of regression using single and multiple regression. Each model explores the relationship between IP and one or more independent variables: risk identification (RI), risk assessment (RA), risk mitigation (RM), and risk management (RMG). Model (I) demonstrates positive effect (0.250) of risk identification on institutional performance, meaning that improvements in risk identification are associated with better institutional performance, however the p value is greater than 0.05, indicating that both the relationship and model is not statistically significant. Model (II) and (III) show significant positive effect of RA and RM on institutional performance with coefficients of 0.338 and 0.319 and p value 0 and 0.01 respectively. The model explains 11.9% and 10.40% of the variance in institutional performance is explained by RA and RM respectively and F statistics indicate the models are

also significant. Similarly, model (IV) explores the effect of RMG on IP and the effect is again positive (0.343) and significant (0.001). The model explains about 10.7% of the variance in institutional performance. Model (V) depicts the combine effect of RI and RA on IP. In the model, again RI is positive but insignificant as earlier and RA is positive and significant. These both variables explain 12.7% of the variance in IP. F statistics depicts the model significant. In model (VI) the effect of RI, RA, and RM is analyzed and found all three predictors have positive effect with coefficient value 0.098, 0.472 and 0.295 respectively but as earlier RI is found insignificant. The model explains 15.6% of the variance in institutional performance and model is significant with a p-value of 0.001. Finally in model (VII), all predictor's combined effect is explored, similar result as in model (VI) reveled. Again, RA and RM were found significant and RI and RMG were found insignificant. The incorporation of all variables increases the explanatory power of the model to 18.1%. The model is found significant with a p-value of 0.002 with F stat of 4.962.

Table 4

Stepwise Regression Analysis and Model Summary

Model	Constant	RI	RA	RM	RMG	R^2	F stat.
(I)	2.783	0.250				0.39	3.984
	(0.098)	(0.240)					(0.49)
(II)	1.872		0.388			0.119	13.353
	(0.007)		(0.000)				(0.00)
(III)	1.630			0.319		0.104	11.473
	(0.017)			(0.001)			(0.01)
(IV)	1.523				0.343	0.107	11.907
	(0.014)				(0.001)		(0.01)
(V)	1.702	0.106	0.354			0.127	7.222
	(0.027)	(0.184)	(0.002)				(0.001)
(VI)	1.975	0.098	0.472	0.295		0.156	5.977
	(0.047)	(0.167)	(0.026)	(0.052)			(0.001)
(VII)	2.034	0.086	0.488	0.317	0.322	0.181	4.962
	(0.044)	(0.235)	(0.037)	(0.048)	(0.183)		(0.002)

Note. The value in parenthesis indicates p value of the coefficient.

This study on ERM in Nepalese insurance companies offers insights into how risk management practices affect performance. The findings align with existing literature, emphasizing the importance of ERM components like risk identification, risk assessment, risk mitigation, and risk management in organizational success. The correlation between performance and risk identification in insurance companies is positive but weak, indicating that while implementing risk identification measures can slightly enhance performance, and the regression result indicates insignificant effects. This finding is consistent with the research of Alawattegama (2018) and Mahat et al. (2023). Similarly, risk management shows a positive correlation with performance, but regression analysis reveals that the effect is not statistically significant. In contrast, the relationship between performance and both risk assessment and risk mitigation demonstrates a moderate positive correlation with statistically significant impacts on performance. These results align with previous studies by Altanashat et al. (2019), Omasete (2014), and Mahat et al. (2023). Risk assessment emerges as the most significant predictor,

underscoring the need for insurance companies to invest in a thorough risk evaluation process. The moderate yet significant effects of risk mitigation and risk management practices suggest that a holistic approach to ERM, integrating various strategies, is beneficial for institutional performance.

V. Conclusion and Implication

In conclusion, while risk identification, assessment, mitigation, and management practices positively influence institutional performance, risk assessment stands out as the most critical factor. To enhance performance, Nepalese insurance companies should focus on improving their risk assessment capabilities, alongside maintaining comprehensive risk mitigation and management strategies. These efforts will not only improve profitability and customer satisfaction but also strengthen the overall resilience of the organizations. Insurance companies can focus on RA and RM for better performance outcomes.

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