

THE IMPACT OF RISK MANAGEMENT ON THE FINANCIAL PERFORMANCE OF LISTED INSURANCE COMPANIES IN SRI LANKA

Supun Nishan K.¹ and Fernando. J.M.B.R²

Abstract

Introduction: Risk, if not adequately managed, can lead to the demise of most businesses, particularly those whose core business is risk management on a day-to-day basis. Risk management should therefore be at the heart of an organization's operations, with risk management techniques integrated throughout the whole organization's processes, systems, and culture. Thus, the goal of this research is to determine the impact of risk management strategies used by Sri Lankan insurance companies on their financial performance.

Design/Methodology/Approach - The study employed an exploratory research design, with 28 registered insurance companies in Sri Lanka as the target population. Secondary data was employed in the study. 15 insurance companies were contacted for secondary data. Secondary data was gathered over a six-year period from 2015 to 2020 using published sources as well as data from IRCSL's financial statements. Panel regression analysis was used in the research. Underwriting risk, market risk, liquidity risk, and operational risk were used as proxies for risk management whereas the return on asset is the proxy for financial performance. The firm size was used as a moderating variable and the type of insurance as the control variable.

Findings – Underwriting risk, market risk, and operational risk showed a significant and positive relationship with the return on assets ratio and the moderating effect of firm size on the relationship between liquidity and financial performance also show a positive and significant impact. Liquidity risk showed a significant negative relationship with the return on assets.

Conclusion – The study suggests that Sri Lanka's listed insurance companies should consider reducing their costs and claims through appropriate estimating pricing and valuation techniques. Furthermore, insurance companies should provide sufficient diversification of the insurance policy portfolio in order to earn higher premiums that can cover other losses when they occur. The findings imply that good management of a firm's operations results in lower operating expenses, which leads to an increase in the proportion of net premiums to total assets, which improves a firm's performance. To cut expenses and improve financial performance, insurance companies should employ efficient operations management procedures.

Keywords: *Risk management, Risk factors, Insurance industry, Financial performances.*

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¹Department of Finance, Faculty of Commerce and Management Studies, University of Kelaniya
(Supunnishan19@gmail.com)

²Department of Finance, Faculty of Commerce and Management Studies, University of Kelaniya

1. Introduction

Financial intermediaries play a positive role in the economic growth of a country (Hardwick & Adams, 2002). In an economy, financial services are provided by various financial institutions through different types of instruments (Liargovas & Skandalis, 2010). Therefore, financial service is one of the important pillars of a financial system (Hardwick & Adams, 2002). As a financial service, insurance contributes to the growth and development of every economy by providing unique financial services such as underwriting risk inherent in economic entities and mobilization of a large amount of funding through premiums of long-term investments (Malik, 2011).

The risk absorption role of insurance promotes financial stability in the financial market and provides a “sense of peace” to economic entities (Hardwick & Adams, 2002). Since risky businesses may not have the capacity to retain all kinds of risk in this ever-changing and uncertain global economy, the business world is unsustainable without insurance (Malik, 2011). Therefore, insurance is referred to as the backbone of managing the risk of the country (malik, 2011). The insurance provides a diverse insurance product to organizations and individuals, providing safety from risk thereby ensuring financial security (Liargovas & Skandalis, 2010). In here, insurance companies maximize their shareholders’ value based on their capacity to cover the risk in the economy (Ahmed, 2011).

Insurance companies contribute to the stability of the financial system in particular and the stability of the economy of the concerned country (Molyneux, 1992). Therefore, in general, insurance is considered a part of the

immune and repair system of the economy (Molyneux, 1992). Insurance companies give important service to both individuals and businesses as they channel funds and indemnify the losses of other sectors in the economy and put them in the same position as they were before the occurrence of the loss respectively (Malik, 2011). In addition, insurance companies provide economic and social benefits to society by preventing of losses, reduction in anxiousness, fear, and increasing employment (Ahmed, 2011).

Customer retention and cost-effectiveness have become increasingly important as the market rivalry has increased, requiring insurance businesses to look for ways to enhance sales and customer happiness while keeping costs low and sustaining profitability. As a result, new alternative distribution channels, such as online platforms, mobile applications, and social media, have emerged, enabling premium growth at lower costs.

The uncertainty connected with a future outcome or event is known as risk (Banks, 2004). Furthermore, the risk is a term that refers to the possibility of a negative influence on an asset or a value feature as a result of a current process or a future event (Wildavsky, 1982). According to Rejda (2008), Risk management is the process by which an organization discovers loss exposures and chooses the most appropriate approaches for handling such exposures.

A priority approach must be followed in risk management, with the risk with the largest loss and greatest probability of occurrence being dealt with first and risks with the lower loss being dealt with later (Stulz, 2003). However, there is no single paradigm for determining risk management is complicated by the need to strike a balance between risks with the highest potential of loss and those with lesser losses. According to Banks (2004),

the primary goal of risk management is to regulate, rather than eliminate, risk exposures so that all stakeholders are fully aware of how the organization may be harmed. In general, a good risk management approach allows a company to lower its risk exposure and prepare for unforeseen events.

There are various kind of risk factors that affect the financial performance of an insurance company such as underwriting risk, marketing risk, liquidity risk, operational risk. Therefore, it requires empirical investigation to sort out what are the important factors affecting the profitability of insurance companies and will facilitate the governing bodies to focus on the relevant factors. According to the previous studies, many researches have been conducted to identify the relationship between the performance of various institutes (such as manufacturing companies, banks, agriculture companies etc.) and different factors.

Profitability, solvency, and liquidity are all factors that can be used to evaluate a company's financial success. Financial performance can be monitored by monitoring the firm's profitability levels. According to Soreriou and Zenios (1999), profitability analysis employs profitability ratios to focus on the relationship between revenues and expenses, as well as the number of earnings relative to the size of the investment in the business. The common measurements of profitability are; return on equity (ROE) and return on assets (ROA). It is possible to assess a company's financial health by keeping track of its profitability levels. Some risks, according to Stulz (2003), present possibilities for a corporation to gain comparative advantages and improve its financial performance literature suggests that better risk management practices lead to the increased financial performance of companies. Insurance companies can better comprehend the advantages of establishing a risk

management strategy by integrating risk management and performance.

In 2011, Wharton School conducted a study that found a link between the maturity of a company's risk management system and its financial performance. For most organizations, better risk maturity is associated with improved ROA and stock performance, Ernst and Young (2012) bolsters this argument by claiming that organizations with more mature risk management procedures outperform their rivals financially and create the most revenue growth.

In Sri Lanka, the insurance sectors have reacted to the growth of the Sri Lankan economy as other sectors such as banking. The following highlighted conditions represent such growth, the insurance industry has grown at about 8.64% in a market through the year 2019 and the was sufficient growth for the economy. Because the major goal of financial management is to maximize the owner's wealth and profitability, profitability is one of the most important objectives of financial management (Frank Nguyen, 2006). But because of COVID 19, premium growth in emerging markets has become positive in both years, increasing by 1% in 2020 and 7% in 2021. In Europe and North America, however, insurers are still in the midst of the storm, trying to figure out how to survive and what business as usual looks like in unusual circumstances. COVID-19 will continue to pose a financial threat to the insurance business, resulting in pandemic-related losses, reduced investments, and losses on invested assets. However, certain common elements are beginning to emerge for insurers all around the world as they work to overcome these uncertainties.

The subject of financial performance has received significant attention from scholars in the various areas of

business and strategic management (Liargovas & Skandalis, 2010). It has also been the primary concern of business practitioners in all types of organizations since financial performance has implications for an organization's health and ultimately its survival (Liargovas & Skandalis, 2010).

Risk management has traditionally been focused on controlling and ensuring regulatory compliance rather than improving financial performance (Bank, 2004). Risk management, on the other hand, frequently leads to improved financial performance since regulatory compliance and risk control allow the firm to save money. Bank (2004) emphasized that through controlling risks, managers are able to raise the firm's value while assuring its continuous profitability. Therefore, the current study investigates the effect of risk management on the financial performance of listed insurance companies in Sri Lanka. Thus, this study examines the effect of different categories, underwriting risk, market risk, liquidity risk, and operational risk on the financial performances of the listed insurance companies in Sri Lanka.

2. Literature review

Insurance is a risk transfer mechanism that ensures full or partial financial composition for the loss or damage. According to the investigation of the (Malik, 2011), insurance fulfils a significant role in promoting commercial and infrastructural business. From the latest perspective, it enhances financial and social stability, mobilizes and channels saving, supports trade, commercial and entrepreneurial activity and improves the quality of the lives of individuals, organizations, and the overall wellbeing in a county.

Studies have identified that insurance companies are playing the role of transferring risk channelling funds from one unit to the other (financial intermediation) such as general insurance companies and life insurance companies respectively. The notion of risk management theory entails investigating the many methods through which corporations and people acquire funds, as well as how funds are distributed to projects while taking into account the risks involved. The agency theory, stakeholders' theory, and optimal capital structure theory are the theories discussed in this section.

Anshoria (2007) defines performance as the organization's ability to acquire and manage resources in a variety of ways in order to build a competitive advantage. As with any company, profitability is a key determinant for deciding whether to invest. There are two profit margins to consider for an insurance company: premium / underwriting income and investment income Babbal and Santomero (1997). Underwriting income is any revenue derived from issuing insurance policies. By averaging the premium's growth rates of several past years, you can determine the growth trends. Risk management factors can have a positive or negative impact on a company's financial performance. The following are the empirical finding investigated by different researchers (both academicians and practitioners).

Empirical literature shows how risk management factors have an effect on the performance of the companies, such as Underwriting risk, Market risk, Operational risk, Liquidity risk, Firm size, and Type of insurance. For this study, these factors have been selected because they are the most appropriate ones for the Sri Lanka context, among many factors affecting the financial performance of insurance companies. A swell as these factors can be

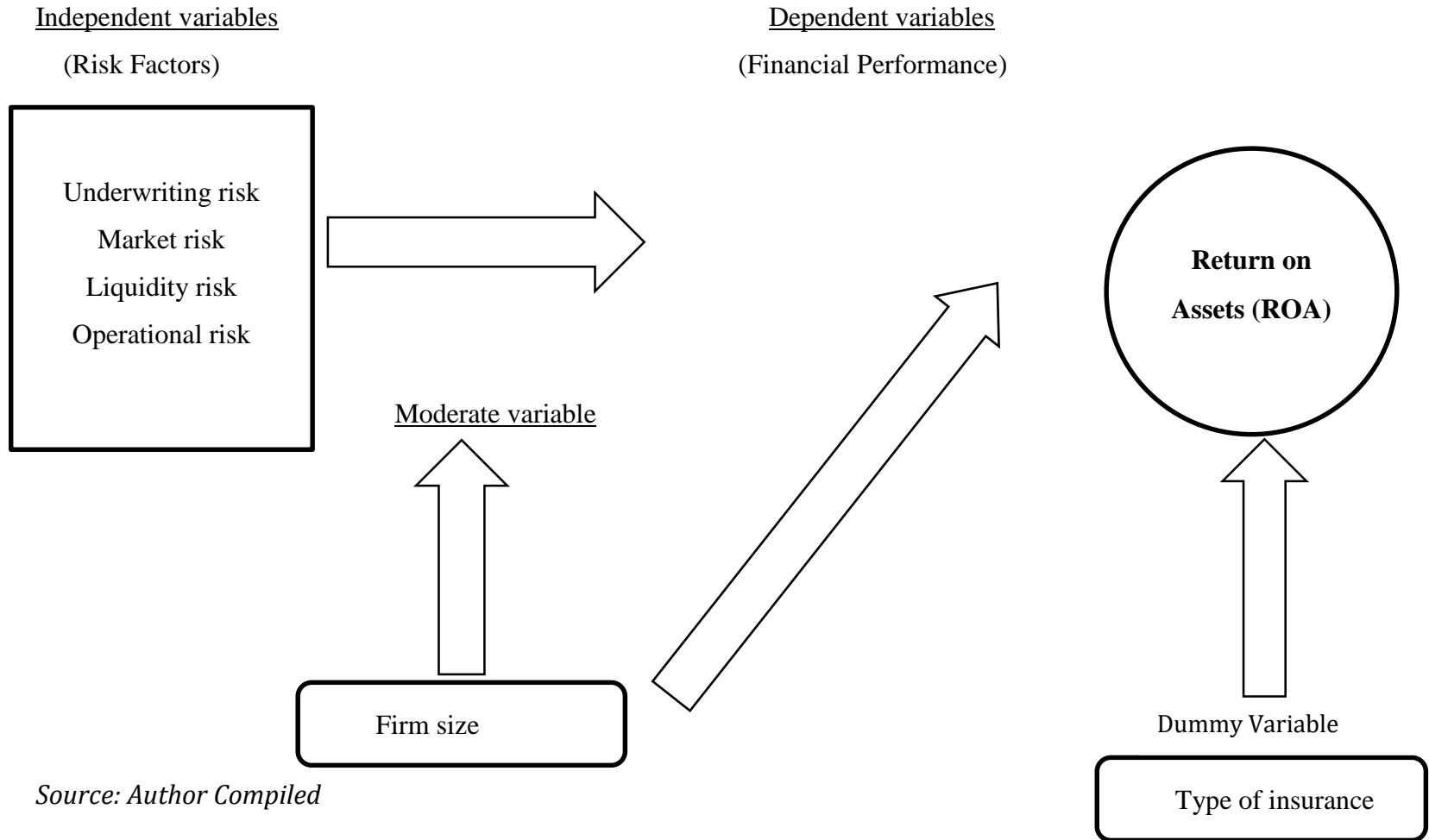
easily measured by using the data that is afforded by the financial statement of the insurance companies in Sri Lanka.

3. Methodology

The main objective of this study is to explore the impact of risk management parameters on the performance of Sri Lankan listed insurance companies. The population, sample, data collection method, and data analysis method are all key topics discussed in the explanation. The defining of essential variables, the conceptual model, the development of hypotheses, and operationalization are all explored.

3.1. Conceptual Framework

Figure 3.1.1: Conceptual Framework



Source: Author Compiled

3.2. Hypotheses testing

The study has formulated the following hypotheses to achieve the objectives of the study.

H₁: There is a significant impact of underwriting risk, market risk, liquidity risk, operational risk, firm size on the financial performance of listed insurance companies.

H₂: firm size moderate the relationship between underwriting risk, market risk, liquidity risk, operational risk, firm size and the financial performance of listed insurance companies.

3.3. Regression analysis

The goal of this type of analysis is usually to forecast or estimate the value of one variable based on the value of another variable. The regression influence between the dependent and independent variables can be formulated in this study. A basic linear regression will be provided by this model. As a result, it was expected in this research that the independent variables would have a linear connection with the other variables. One goal of regression analysis is to come up with a strategy for predicting the dependent variable's value. The regression model always indicates by how much the independent variable would affect the dependent variable. A linear regression was performed to investigate the degree of impact of risk management parameters on insurance company performance. The "dependent variable" is return on assets (ROA), whereas the "independent variables" are underwriting ratio, market ratio, liquidity ratio, and operational ratio. The significance of the coefficient was

determined using the 'P' value. The following is a representation of a linear regression model.

$$ROA = \beta_0 + \beta_1(UW) + \beta_2(MK) + \beta_3(LQ) + \beta_4(OP) + \beta_5(FS) + \beta_6(TY. In) + \beta_7(Uw*fs) + \beta_8(Mk*fs) + \beta_9(Lq*fs) + \beta_{10}(Op*fs) + e \text{ - Equation 01}$$

3.4. Operationalization

Table 3.4.1: Operationalization

VARIABLE	MEASURES	SOUECES
Underwriting risk (UW)	<u>underwriting and net acquisition expenses</u> Earned premium	(BaahAyeKusi, 2019)
Marketing risk (MK)	<u>profit after tax</u> Ordinary shares on issue	(Isaac Kibet Kiptoo, 2021)
Liquidity risk (LQ)	<u>Current assets</u> Current liability	(OMASETE, 2014)
Operational risk (OP)	<u>Net earned premiums</u> Total assets	(Isaac Kibet Kiptoo, 2021)
Size (FS)	Log of total assets	(BaahAyeKusi, 2019)
Return on Assets	<u>Net profit after tax</u> Total assets	(malik, 2011)
Type of insurance	General and life insurance	(IRCSL, 2018)

(Dummy variable)

Source: Author Compiled

3.5. Data, Data Collection Method & Study Period

A research technique is a systematic and ordered approach to data collecting and analysis. A data collection was used in this investigation. Secondary sources will be used to get information. The study's time frame is the most recent five years, commencing in 2015 and ending in 2020. The data were collected from, published annual reports of selected listed insurance companies during the 06-year period between 2015 and 2022 and from published reports of the insurance regulatory commission of Sri Lank (IRCSL)

4. Results and discussion

Table 4.1: Descriptive statistics

Variable	Mean	Std. Dev.	Minimum	Maximum
Uw risk	0.1638889	0.1434541	0.02	0.62
Mk risk	13.31422	17.41645	0.07	70.99
Lq risk	1.453667	1.370571	0.13	9.06
Op risk	0.3466667	0.1718635	0.02	0.8
Firm size	19.16967	8.014111	13.96	50.41
TY.IN (dummy)	0.7111111	0.4557854	0	1

ROA	0.1882222	0.1747716	0.01	0.68
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Source: Author Compiled

Table 4.1 shows, the descriptive statistics for all variables, including response and explanatory factors. The descriptive statistics are based on 06-year data from 15 insurance firms with 90 observations. The average (mean) profitability as evaluated by ROA is about 18.82% and the standard deviation for ROA is about 17.47%, implying that there are large differences in profitability values across the insurance companies included in this study. The minimum value of ROA is 1% and the maximum value is 68%, indicating that the selected sample contains both low-profit-making and high-profit-making enterprises. In six years the mean value of underwriting risk is 0.16 and the standard deviation is 0.14. the minimum value of underwriting risk is 0.02 and the maximum value 0.62. The market risk has a mean value of 13.31 and a standard deviation of 17.41. Furthermore, the minimum value of 0.07 and maximum value of 70.99 illustrate that there is a large range between the market ratio values. The liquidity ratio has a mean value of 1.45 and a standard deviation of 1.37. Furthermore, the minimum value of 0.13 and maximum value of 9.06 illustrate that there is a large range between the liquidity ratio values, and working capital management policies may differ from insurance companies with high liquidity ratios. The mean value of the operational risk is 0.34. there are significant differences between the operational values, as shown in the table. the standard deviation value is 0.17 and operational risk maximum value is 0.80 and the minimum value is 0.02. Size has a mean value of 19.16. As can be seen in the table above, there is significant diversity in size among the sample insurance businesses, owing to the fact that the standard deviation is 8.01,

indicating that both medium and large companies are included in the sample.

Table 4.2: Correlation matrix

Variable	Uw risk	Mk risk	Lq risk	Op risk	Firm size	Ty.in (d.v.)	ROA
Uw risk	1.0000						
Mk risk	0.2736	1.0000					
Lq risk	-0.0335	-0.1308	1.0000				
Op risk	0.0305	-0.1675	0.1897	1.0000			
Firm size	-0.2533	-0.2017	-0.0841	0.0529	1.0000		
TY. IN (d. v.)	-0.1940	-0.2850	-0.0431	-0.4973	-0.2972	1.0000	
ROA	0.0796	-0.2823	0.1598	0.1241	0.2206	0.0175	1.000

Source: Author Compiled

The company underwriting risk was positive and correlated with returns on assets and correlated significantly with the coefficient of 0.0796 at a significant level of 1%. The company market risk, was negative and correlated with returns on assets and correlated significantly with the coefficient of -0.2823 at a significant level of 1%. The company liquidity risk was positive and correlated with returns on assets and correlated significantly with the coefficient of 0.1598 at a significant level of 1%. The companies' operational risk was positive and correlated with

returns on assets and correlated significantly with the coefficient of 0.1241 at a significant level of 1%. The firm size was positive and correlated with returns on assets and correlated significantly with the coefficient of 0.2206 at a significant level of 1%. The type of insurance was positive and correlated with returns on assets and correlated significantly with the coefficient of 0.0175 at a significant level of 1%.

Table 4.3: Empirical model testing

Test: Ho: difference in coefficients not systematic

$$\text{Chi2}(0) = (b-B)'[v_b-v_B]^{-1}(b-B)$$

Prob. >chi2 = 0.000

Source: Author Compiled

The likelihood value is less than the 0.05 level, based on the above results. As a result of the Hausman test, the null hypothesis that the random effect model is acceptable was rejected, and the alternative hypothesis that the fixed-effect model is appropriate was accepted. As a result, the analysis shows the results of the fixed-effect model.

Table 4.4: Results of the panel regression

Variable	coefficient	Std. error	t-statistic	Prob.
C	0.492173	0.2503352	1.97	0.054
Uw risk	1.020822	0.3471135	2.94	0.005

Mk risk	0. 0065261	0. 0019394	3. 37	0. 001
Lq risk	-0. 1722759	0. 0505672	-3. 41	0. 001
Op risk	0. 3477536	0. 1715833	2. 03	0. 047
Firm size	-0. 0064928	0. 0137059	-0. 47	0. 637
TY.IN (d.v)	-0. 4246178	0. 0774227	-5. 48	0. 000
Uw*fs	-0. 0276096	0. 0191697	-1. 44	0. 155
Mk*fs	-0. 0002945	0. 0001034	-2. 85	0. 006
Lq*fs	0. 0098871	0. 0030379	3. 25	0. 002
Op*fs	-0. 0164727	0. 0129983	-1. 27	0. 210

Source: Author Compiled

The statistical significance of the three hypotheses was determined using panel multiple regression at the 95 percent confidence level ($\alpha = 0.05$) and 90 percent confidence level ($\alpha = 0.10$). When considering the corporate underwriting, the above table shows the coefficient of 1.0208 and the probability is 0.005. The results indicate that underwriting risk positively and significantly effect on insurance firm's performances. Considering the market risk, the coefficient is 0.0065 and the probability is 0.001, indicating a positive and significant impact. Liquidity risk is negatively affect with the coefficient of -0.1722 and the likelihood is 0.001. The operational risk positively and significantly effects on the insurance firm profitability, the coefficient is 0.3477 and the probability is 0.047 in this table. Considering the corporate firm size, the coefficient is -0.0064 and the probability is 0.637. The moderate effect of firm size on the relationship between underwriting risk and firm performances the coefficient is -0.0276 and the likelihood is 0.155, indicating an insignificant impact. In contrast, the moderate

effect of firm size on the relationship between market risk and firm performances is significant coefficient at 5% significant level. The moderate effect of firm size on the relationship between liquidity and firm performances also significant at 5% level. However, the moderate effect of firm size on the relationship between operational risk and firm performances is not significant.

The underwriting risk probability value is 0.005, which is less than 0.05. that is The findings revealed that underwriting risk has a positive significant impact on the return on assets of commercial and service enterprises listed in Sri Lanka. As a result, at a 5% level of significance, the hypothesis that underwriting risk had significant effect on return on asset of commercial and service enterprises in Sri Lanka was accept. The market risk probability value is 0.001, which is less than 0.05. that is The findings revealed that market risk has a positive significant impact on the return on assets of commercial and service enterprises listed in Sri Lanka. As a result, at a 5% level of significance, the hypothesis that market risk had significant effect on return on asset of commercial and service enterprises in Sri Lanka was accept. The liquidity risk coefficient is -0.1722, which is statistically significant with a p-value of 0.001, which is less than 0.05. The findings revealed that liquidity risk has a significant negative impact on the return on equity of commercial and service enterprises listed in Sri Lanka. As a result, at a 5% level of significance, the null hypothesis that liquidity risk had no significant effect on return on asset of commercial and service enterprises in Sri Lanka was rejected. (Susan Kerubo Onsongo). The operational risk coefficient was ($\beta = 0.34775$, $p = 0.047 < 0.05$). The findings revealed that operational risk had a statistically significant beneficial effect on the return on equity of Sri Lankan listed insurance companies. According to the findings on operational risk, an increase in operational risk led to an increase in firm performance as measured by

ROA. The firm size probability value is 0.047, which is less than 0.05. that is The findings revealed that firm size has a positive significant impact on the return on assets of commercial and service enterprises listed in Sri Lanka. As a result, at a 5% level of significance, the hypothesis that firm size had a significant effect on return on asset of commercial and service enterprises in Sri Lanka was accept. The interaction between firm size with market risk and liquidity risk are significant. Accordingly, the all the selected independent variables show an impact on the financial performances of the insurance companies except the firm size, however, firm size has a moderate effect only with the relationship between market and liquidity risk financial performances of the insurance companies.

5. Conclusion

The impact of risk factors on insurance company performance was investigated in this study. As a result, the researcher examined the impact of risk variables on insurance businesses' financial performance using a variety of parameters. As a result, underwriting risk, marketing risk, liquidity risk, operational risk, firm size, moderate variable and kind of insurance are all important elements affecting insurance company success in Sri Lanka. For the analysis, 15 companies in the listed insurance industry were included in the study. Descriptive statistics such as correlation analysis, hausman test, and regression have been used to investigate the impact of risk variables on financial performance. According to the findings, underwriting risk, market risk, and operational risk all have a positive and significant impact on the profitability of insurance businesses in Sri Lanka. Liquidity risk show a negative and significant impact on the profitability of insurance businesses in Sri Lanka, whereas the size of the

firm as a moderate variable affect the financial performance via market risk and liquidity risk.

This study made the following recommendations based on the findings of the retrospective analysis. The study discovered that underwriting risk has a significant impact on the performance of listed insurance companies. As a result, Sri Lanka's listed insurance companies should consider reducing their costs and claims through appropriate estimating pricing and valuation technology, while taking into account the risk of specific sectors and catastrophic events. At the same time, they must charge a reasonable premium for insurance policies that provide extensive coverage. Furthermore, insurance companies should provide sufficient diversification of the insurance policy portfolio in order to earn higher premiums that can cover other losses when they occur. As a result, Sri Lanka's listed companies should pay close attention to these areas in order to reduce the risk of reinsurance for their performance. Market risk management has a positive and significant impact on financial performance, according to the findings. According to the data, effective investment selections raise the proportion of investment income to average investments, resulting in improved financial performance. To improve performance, insurance companies should guarantee that their investments are properly managed. According to the findings, liquidity risk has a significant impact on the performance of listed insurance companies. As a result, insurance companies should consider diversifying their investment portfolio by investing their passive funds in a variety of industries. As a result, listed insurance companies should properly implement this order by developing and implementing an appropriate investment portfolio management strategy that can boost their returns. The

findings imply that good management of a firm's operations results in lower operating expenses, which leads to an increase in the proportion of net premiums to total assets, which improves a firm's performance. To cut expenses and improve financial performance, insurance companies should employ efficient operations management procedures. Future studies could expand the empirical model by considering more risk categories and the sample size. Furthermore, more research into the general insurance business might be also interested in the same area of study.

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