



Research Paper

The Impact of Insurance-Specific Risk on Firm Performance of Listed Insurance Companies in Sri Lanka

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Abstract

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Insurance-specific risk includes challenges and uncertainties specific to the operations and functioning of insurance companies. The study therefore investigates the effect of these insurance-specific risks on the profitability of listed insurance companies in Sri Lanka over 11 years (2012-2022) with a sample size of 27 firms. Three variables, such as reinsurance, technical provisions, and underwriting risks, have been used to measure insurance-specific risk as independent variables. The Return on Equity (ROE) and Return on Assets (ROA) were used to measure firm performance as the dependent variable. The study is based on the Ex-Post Facto Research Design, which uses data already collected. The study used secondary data from their annual reports. The results of the fixed effect regression model showed that the technical provision risk and reinsurance risks had a negative and significant impact on ROE, while the underwriting risk had a negative and insignificant impact on ROE. The study concludes that the best model for the evaluation of Insurance firm performance is ROE rather than ROA. Due to the arguments, ROE and ROA are both considered performance indicators where ROA is not significant with variables. The study recommends that insurance companies in Sri Lanka should make sufficient provision for outstanding claims by conducting an adequate assessment of their liabilities and also taking into account experience to develop a comprehensive procedure for effectively monitoring and controlling their outstanding claims. Further, listed insurance companies in Sri Lanka will consider their reinsurance policies and risk retention ratios and listed insurance companies need to enhance their ability to cover most incurred claims by themselves.

Keywords: Profitability, Re-insurance Risk, Technical Provision, Underwriting Risk

1. Introduction

Financial institutions and insurance companies play a crucial role in a country's economy by offering diverse financial services. They provide essential support for economic growth and progress through underwriting policies (Malik, 2011). Risk refers to the likelihood of unanticipated or unfavourable outcomes. Companies face three types: financial, non-business, and business. Business risks optimize investor value, non-business risks involve political and economic instability, and financial risk involves monetary loss (Mallam Fali et al., 2020). Insurance businesses face interlinked risks in core activities like pricing, underwriting, claim management, and reinsurance management. Risk management provides appropriate protection and reduces costs associated with these risks, ensuring business viability (Wani & Dar, 2015). Insurance-specific risks, including underwriting, claim, product development, and reinsurance risks, a significant financial risk that can trigger financial damage in an insurance firm. Insurance-specific risk is a significant issue in the Sri Lankan and global insurance sectors, leading to business mergers and suspensions. Poor management of insurance-specific risk has resulted in the collapse of some firms, causing loss of equity and employment. For instance, Union Assurance General Ltd amalgamated with Fair First Insurance Ltd in 2017 was suspended (Amarasena, 2021). Sun Insurance PLC (2008) and Investment and Allied Insurance PLC (2014) were suspended in Nigeria, (Mallam Fali et al., 2020). To improve financial performance, insurance companies should maintain optional levels of underwriting, claims, and reinsurance. Previous empirical studies on insurance-specific risks and firm performance have produced contradictory results, and further research is needed to understand its impact on Sri Lanka's insurance sector.

Based on the identification and justification of the above problems, the study explores the effects of underwriting, technical provision, and reinsurance risk on the performance of listed insurance companies in Sri Lanka. The research objective of this paper is to examine the impact of insurance-specific risk on the performance of listed insurance companies in Sri Lanka. Most previous research has focused on this topic in other countries. The study provides empirical insights into insurance-specific risks affecting Sri Lankan listed insurance companies' performance over eleven years (2022-2012), providing valuable information for policymakers and offering suggestions for risk management techniques, ultimately benefiting managers and stakeholders in improving insurance companies' performance. Given the above, therefore, the following research question was developed,

RQ01 – How does Insurance Specific risk impact the firm performance of listed insurance companies in Sri Lanka?

Based on the research question, following research objectives were formulated.

- To identify the impact of underwriting risk on the Return on Asset (ROA), and Return on Equity (ROE) of listed insurance companies in Sri Lanka.
- To identify the impact of technical provision risk on the Return on Asset (ROA), and Return on Equity (ROE) of listed insurance companies in Sri Lanka.
- To identify the impact of reinsurance risk on the Return on Asset (ROA), and Return on Equity (ROE) of listed insurance companies in Sri Lanka.

The findings of this study will contribute to the risk management literature in various ways. Firstly, the study provides empirical evidence on the impact of insurance-specific risks on the firm performance of listed insurance companies. Secondly, the study covers a period

of 11 years (2022-2012) which is the period that represents remarkable changes in the economy of Sri Lanka.

2. Literature Review

This chapter explores the theoretical framework and empirical reviews of previous studies on insurance-specific risk and firm performance. The study was done by applying the following theories: Modern Portfolio Theory and Enterprise Risk Management Theory. Modern Portfolio Theory (MPT) was founded by Markowitz in 1952. The hypothesis of the theory suggests that an investor could potentially increase his projected return while reducing risk volatility by investing in a diversified asset portfolio that had various price fluctuations in a given (Kiptoo et al., 2021). The theory of enterprise risk management was developed by (Mikes, 2006). According to the theory, an organization can deal with risks by treating each risk independently, segmenting them into different parts and dispersing them from one field, or combining many risks within a coordinated and strategically determined framework

Underwriting is the process of evaluating a subject, person, business, profession, or entity to determine if it is an acceptable risk and determining the rate the insured will receive (Daniel, 2017). According to Adams and Buckle (2003), underwriting risk measures insurers' efficiency by comparing gross claims to written premiums, indicating the adequacy of their underwriting performance. Technical provision is a crucial aspect of an insurance company's portfolio, as it helps determine the amount of liabilities and solvency of the company. Inadequate or excessive technical provisions may lead to inappropriate underwriting decisions and may misrepresent the company's financial status. Therefore, establishing accurate technical provisions is essential for the insurer's financial stability (Selimovi, 2003). Reinsurance involves one insurance company compensating another for losses covered by policies issued. Without reinsurance, the primary insurer would have to pay for all losses. Reinsurance also helps to spread risk and protect insurers from catastrophic losses that could cause financial ruin (Soye and Adeyemo, 2017).

2.1 Underwriting Risk

Underwriting is the process of assessing the insurance subject, whether it be a person, profession, property, business, or other entity, and deciding whether or not to insure it. An insurer is responsible to its current policyholders to ensure that the insurer can meet all the contractual obligations of its existing policies (Daniel, 2017). Sound underwriting guidelines are important for the financial performance of an insurer. Generally, a negative connection between the underwriting risk and the insurers' financial performance can be expected. If an excessive underwriting risk is taken, the organization's stability may be impacted by higher expenses.

2.2 Technical Provision Risk

Technical provision can be explained as there is a chance of inadequate technical provisions or unnecessary provisions being kept unjustifiably to satisfy the insurance commitments and to settle all potential claims coming from policyholders and other creditors arising throughout the insurer's insurance plan portfolio. For instance, most insurance companies collect premiums and keep outstanding claims and unearned premiums reserves. Outstanding claims reserve is considered riskier than ordinary long-term corporate debt (Shiu, 2004).

The probability of technical requirement is determined by the protection/safety ratio and defined as a risk of inadequate technical provisions or unjustifiably excessive provisions.

The protection ratio can be expressed as claims outstanding about the equity ratio (Daniel, 2017).

2.3 Reinsurance Risk

Reinsurance is a transaction whereby one insurance (the reinsurer) company accepts to indemnify another insurance company (The reinsured or primary company) against all or part of the loss that the latter is secured by one or more policies that it has issued for this service, primary company, if not reinsured, pays the reinsurer. With reinsurance, no insurer is financially burdened beyond its ability to pay (Soye and Adeyemo, 2017). According to Reshid (2015), Insurance companies typically purchase reinsurance coverage to stabilize earnings, expand the underwriting capacity, and provide protection against catastrophic losses. Because the cost of reinsurance can be higher than the actuarial price of the risk transferred Daniel (2017) adapted the measurement, which measured reinsurance risk as premium ceded over total assets.

2.4 Firm Size

The size of a firm determines the amount of debt that the firm can access for investments or project financing. Large firms take advantage of economies of scale and use of average production costs. Because they are efficient in their operations and capable of investing in sophisticated technologies. Ababu (2022) mentioned the instability of smaller firms, most financial institutions are reluctant to give credit to these smaller firms. When approaching potential investors, firm size is a proxy for reputation. The natural logarithm of total assets is used to calculate firm size (Kulathunga et al., 2018).

2.5 Leverage

According to the Capital structure theory, debt financing is favourable to companies when they deliver tax shields. Therefore, the increase in debt will increase the value of the firm up to a certain level. Financial leverage would increase external control because debt holders will thoroughly monitor the capital structure to protect the funds that they invested in Hutchinson and Gul (2004). Financial leverage is measured by dividing total debt by total assets (Pathirawasam and Wickremasinghe, 2012).

2.6 Firm Performance

Performance is a subjective metric that assesses a company's use of resources to boost revenue and can be used to evaluate various companies within or across industries, such as the insurance industry, which significantly impacts economic growth. Siddiqua and Parvin (2017) proposed that the ROA approach is the most suitable method for calculating profitability in insurance companies, as it is the most relevant measurement for assessing a company's performance, as it is the profit before tax divided by total assets. However, according to Sultan (2014) the importance of ROE in assessing a company's profitability, as it considers decisions about operating, investing, financing, and taxation. ROE is determined by calculating profits per unit of capital and this ratio is specifically utilized in this process. In terms of profitability, a higher is considered as better performance.

2.7 Theoretical Background

Modern Portfolio Theory (MPT) was established in 1952 by Markowitz, focusing on investing in diversified asset portfolios to increase projected returns while reducing risk volatility. It divides risk into systemic and unsystematic risk categories, with systematic risk being inherent instability in businesses or markets. Diversification and specialized risk management

techniques can help minimize unsystematic risk, a key finding of MPT (Kiptoo et al., 2021). Enterprise risk management, developed by Mikes (2006), focuses on three options for organizations: handling individual risks, dividing risks into different segments, or integrating multiple risks into a well-planned framework. Successful companies have a long-term competitive advantage by effectively managing risks structurally and procedurally. This approach helps key decision-makers to optimize returns and achieve strategic goals. For financial institutions, such as insurance companies, this theory provides a comprehensive framework for investigating risks unique to the insurance industry.

2.8 Review of Empirical Studies

Burca and Batrinca (2014) studied Romanian insurance companies and found a positive correlation between reinsurance risk and firm performance, while underwriting risk negatively impacted financial performance. Daniel (2017) revealed that Ethiopian insurance companies found that financial risk significantly impacted their performance from 2000 to 2015. The study used unstructured interviews, documentary documentation, regression analysis, panel simulation techniques, and E-view8 applications. Reinsurance risk, technical requirements risk, and underwriting risk had significant negative effects. Mallam Fali et al., (2020) found, Nigerian insurance companies found that underwriting risks and technical specifications significantly impact profitability. Re-insurance risk has an insignificant impact. The study recommends that Nigerian insurance companies create thorough procedures that consider experience and conduct sufficient liability assessments to effectively monitor and control outstanding claims. The research was conducted over ten years from 2009 to 2018. Amarasena (2021) mentioned that the Sri Lankan insurance companies found that reinsurance negatively impacts their performance. The study assessed underwriting profit and return on assets using retention ratio, net claims ratio, net commission ratio, and ceded reinsurance ratio. The study also found that the retention ratio has a negative correlation. To improve performance, the study suggests effective management of underwriting processes and claim costs.

3. Methodology

This study investigates the impact of insurance-specific risk on the performance of Colombo Stock Exchange (CSE) listed insurance companies using a descriptive research design. The study uses theoretical and empirical literature reviews to analyze insurance-specific risk, firm performance, firm size, and leverage as independent and dependent variables. The study surveyed 27 insurance companies in Sri Lanka's insurance industry from 2012 to 2022, focusing on their operations and target population. The entire population of 27 is considered as a sample for the study.

This study uses secondary data from annual reports of ten insurance firms listed on the CSE. The research utilized secondary data from audited annual reports and IRCSL handbooks to analyze insurance firms' net income, liabilities, assets, equity, claims, premium earned, outstanding, and premium ceded. Descriptive, correlation, and regression analyses are used to analyze the data in the study. The valuation was completed through the STATA software.

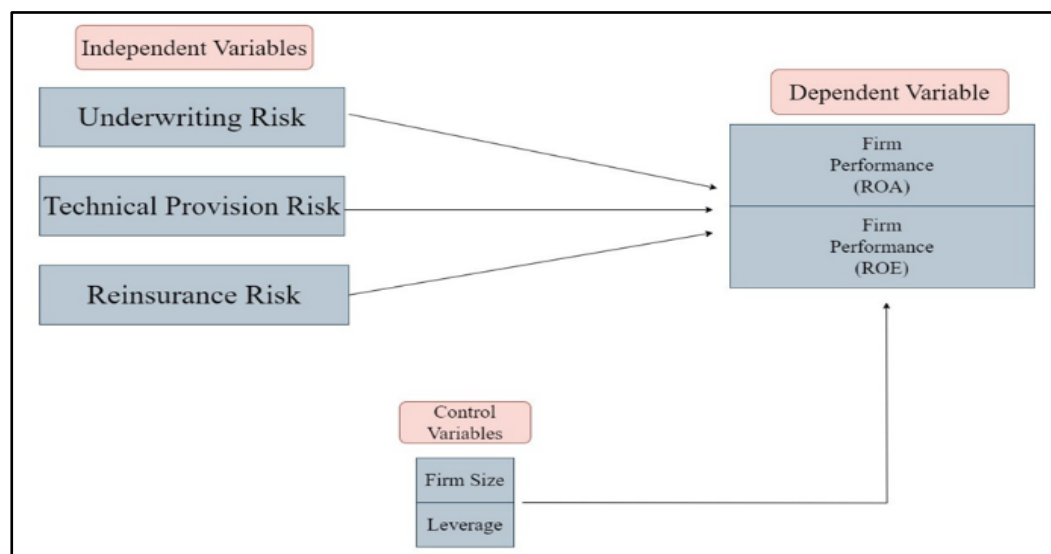


Figure 1. Conceptual Framework
Source: Author Created (2023)

In the view of the study, the following research hypotheses were developed.

H₁: - There is a significant impact of underwriting risk on the return on asset (ROA) of listed insurance companies in Sri Lanka.

H₂: - There is a significant impact of claim risk on the return on asset (ROA) of listed insurance companies in Sri Lanka.

H₃: - There is a significant impact of reinsurance risk on the return on asset (ROA) of listed insurance companies in Sri Lanka.

H₄: - There is a significant impact of underwriting risk on the return on equity (ROE) of listed insurance companies in Sri Lanka.

H₅: - There is a significant impact of claim risk on the return on equity (ROE) of listed insurance companies in Sri Lanka.

H₆: - There is a significant impact of reinsurance risk on the return on equity (ROE) of listed insurance companies in Sri Lanka.

Based on studies and previous scholarly findings operationalization table was developed and mentioned below.

Table 1. Operationalization

Category	Variable	Measurement	Sources
Independent Variables	Underwriting Risk	$Underwriting\ risk = \frac{Claim\ Incurred}{Premium\ Earned}$	Adams & Buckle.(2003)
	Technical Provision Risk	$Technical\ provision\ risk = \frac{Claim\ Outstanding}{Total\ Equity}$	Daniel.(2017)
	Reinsurance Risk	$Reinsurance\ risk = \frac{Premium\ Ceded}{Total\ Asset}$	Daniel.(2017)
Control Variable	Firm Size	$Total\ Assets$	Kulathunga et al.,(2018) (Pathirawasam & Wick-remasinghe.(2012)
	Leverage	$Leverage = \frac{Total\ Liabilities}{Total\ Asset}$	
Dependent Variable	Return on asset	$Return\ on\ asset = \frac{Profit\ before\ tax}{Total\ Asset}$	Siddiqua & Parvin.(2017) Gibson.(2009)
	Return on equity	$Return\ on\ equity = \frac{Net\ income}{Total\ Equity}$	

Source: Author Compiled (2023)

The following model was developed to determine the relationship between the variables.

$$ROE_{it} = \beta_0 + \beta_1 UR_{it} + \beta_2 TPR_{it} + \beta_3 RR_{it} + \beta_4 FS_{it} + \varepsilon_i$$

$$ROA_{it} = \beta_0 + \beta_1 UR_{it} + \beta_2 TPR_{it} + \beta_3 RR_{it} + \beta_4 FS_{it} + \varepsilon_i$$

3. Results

Table 2 summarizes descriptive results for all the variables used in this study, including the number of observations, mean, standard deviation, and minimum and maximum observations.

Table 2. Summary of Statistics

Variables	No of Obs	Mean	Std deviation	Min	Max
ROE	101	0.13820	0.12094	-0.26161	0.34181
ROA	101	0.05063	0.03771	-0.02017	0.12456
UR	101	0.43846	0.19464	0.02424	0.92587
TPR	101	0.08560	0.10372	-0.03239	0.33875
RR	101	0.04482	0.04308	0.00423	0.13178
Leverage	101	0.65853	0.14737	0.02358	0.85561
Firm Size	101	19.41885	2.47293	15.17014	23.14066

Source: Author Compiled (2023)

According to the table above, the firms' performance was measured by ROE and ROA. It shows that a sample of listed insurance companies in Sri Lanka achieved an average net profit of ROE 13.81% & ROA 5.06% over the past eleven years, from 2012 to 2022. Concerning underwriting risk, the mean of incurred claims to earned premium ratio was 43.84%. This reveals that, on average, most insurance companies of the sample paid 43.84% of claims incurred out of the total premium earned per year. Technical provision risk shows that the average value and standard deviation are 8.5% and 10.37%. It also indicates a low dispersion from the mean. the average value and standard deviation of re-insurance risk are 44.82% and 43.07%. It also indicates a moderate dispersion from the mean. The results also show a minimum value of 0.042% and a maximum value of 13.17%. According to control variables, the table shows that leverage has a mean value of 65.85% with a standard deviation of 14.73%. Firm size is measured with a natural logarithm of total assets. The average value and standard deviation are 19.41% and 2.47%. It also indicates a low deviation from the mean value.

The basic assumption of the classical linear regression model is that the data set must have a normal distribution. The skewness and kurtosis analysis were performed to test the normality of the data set in this study. For data to be normal, the skewness value should be within the ± 2 , and the kurtosis value should not exceed 5. Initially, all the outliers were winsorized to keep the normality assumption valid in this study. The following hypotheses were formulated to test the normality of the data set (Table 3).

Null hypothesis (H_0) = The data set is normally distributed.

Alternative hypothesis (H_1) = The data set is not normally distributed.

Based on the results, the Skewness value is less than two, and Kurtosis value is not more than 5 for all the variables in this study. Therefore, it failed to reject the null hypothesis, meaning the data set is normally distributed according to the normality assumption.

Table 3. Skewness and Kurtosis Analysis (Normality)

Variables	No of Obs	Mean	Std deviation	Variance	Skewness	Kurtosis
ROE	119	0.13820	0.12094	0.01463	-0.14345	3.14468
ROA	119	0.05063	0.03771	0.00142	0.17139	2.48665
UR	119	0.43846	0.19464	0.03788	0.08164	2.18573
TPR	119	0.08560	0.10372	0.01076	1.06797	2.97777
RR	119	0.04482	0.04308	0.00186	0.99919	2.57865
Leverage	119	0.65853	0.14737	0.02172	-0.92245	4.87709
Firm Size	119	19.41885	2.47293	6.11540	-0.09396	1.45647

Source: Author Compiled (2023)

The classical assumption of the OLS regression model reveals that the explanatory variables are not perfectly correlated. Correlation matrix, VIF & tolerance can be used to test

multicollinearity. This study used variance inflation factor (VIF) to test multicollinearity (Table 4).

Table 4. VIF Test (Multicollinearity)

Variables	VIF	1/VIF
TPR	2.33	0.428434
UR	1.89	0.529131
Log_FirmSize	1.88	0.532538
Leverage	1.47	0.678467
RR	1.12	0.892393
Mean VIF	1.74	

Source: Author Compiled (2023)

According to Mallam Fali et al., (2020); VIF value of 5 and above for a small sample reveals multicollinearity in the estimates. According to Table 04, VIF values are less than 5 for all the independent & control variables, and the highest variance inflation factor (VIF) is 1.74. Therefore, there is no multicollinearity issue in this study.

If the error term is correlated with the error term in the previous time period, it is called Autocorrelation. The best regression model should be free from autocorrelation problems, which means no autocorrelation between disturbances. The following hypothesis is developed to detect autocorrelation in the model. This study employed the Wooldridge test to measure autocorrelation.

Null hypothesis (H_0) = No autocorrelation between disturbance

Alternative hypothesis (H_1) = There is autocorrelation between disturbance

According to the result of the Wooldridge test for the model that estimates the firm performance by the return on equity, the p-value is significant at the 5% level, which means that it accepted the null hypothesis. Therefore, there is autocorrelation between the error terms and the cluster option dealing with the serial correlation problem. However, the model that used return on assets to measure the firm's performance indicates that the p-value is insignificant at the 5% level. Hence, it failed to reject the null hypothesis, meaning there is no autocorrelation between the error terms (Table 5 & 6).

Table 5. Wooldridge Test for Autocorrelation

Regression Model - ROE

Wooldridge test for autocorrelation in panel data
H0: no first-order autocorrelation
F (1, 9) = 13.612
Prob > F = 0.0050

Source: Author Compiled (2023)

Table 6. Wooldridge Test for Autocorrelation

Regression Model - ROA

Wooldridge test for autocorrelation in panel data
H0: no first-order autocorrelation
$F(1, 9) = 3.227$
Prob > F = 0.1060

Source: Author Compiled (2023)

Due to the panel nature of the data, panel analysis was performed using the Hausman test to decide on selecting a fixed or random effect model. The following hypotheses are developed to run the Hausman test.

Null hypothesis (H_0) = Random model is appropriate.

Alternative Hypothesis (H_1) = Random model is not appropriate.

Table 7. Hausman test (Regression Model - ROE)

Test Summary	Chi-Sq. Statistic	Prob.
Hausman Test	14.96	0.0105

Source: Author Compiled (2023)

Table 8. Hausman test (Regression Model - ROA)

Test Summary	Chi-Sq. Statistic	Prob.
Hausman Test	3.94	0.5582

Source: Author Compiled (2023)

The results show that at a 5% significance level, the prob>chi2 is 0.0105, which is significant, indicating that it rejects the null hypothesis. Thus, the Hausman test selected fixed effect ideal for the model, which employed return on equity to measure firm performance. The results show that the prob>chi2 is 0.5582, which is insignificant, indicating that it failed to reject the null hypothesis. Thus, the Hausman test selected random effect, which is ideal for the model that employed return on assets to measure firm performance (Table 7 & 8).

The table below shows the correlation matrix among the firm performance of listed insurance companies and independent variables such as underwriting risk, technical provision risk, re-insurance risk, firm size, and leverage of the sampled insurance firms. Correlation measures the degree of linear relation between two or more variables. The correlation coefficient values always range between +1 and -1, and it describes whether the relationship between variables is a perfect positive association or a perfect negative association Daniel (2017) (Table 9).

Table 9. Correlation Matrix

	ROE	ROA	UR	TPR	RR	Leverage	Firm Size
ROE	1.0000						
ROA	0.7544	1.0000					
UR	-0.1204	0.0123	1.0000				
TPR	-0.0374	-0.0361	0.6769	1.0000			
RR	0.0849	-0.0298	0.2741	0.2551	1.0000		
Leverage	0.2590	-0.0496	0.0479	0.0244	-0.0720	1.0000	
Firm Size	-0.3221	-0.0241	0.2957	0.4681	0.0621	-0.4768	1.0000

Source: Author Compiled (2023)

The re-insurance risk and leverage have a positive correlation with return on equity, which indicates that when re-insurance risk and leverage increase, at the same time, the performance of listed insurance companies will also increase. The table shows coefficient estimates of correlation as -0.0374, -0.1204, -0.3221, and 0.0849, 0.2590 for technical provisions risk, underwriting risk, firm size, re-insurance risk, and leverage, respectively.

This table presents the regression result of insurance-specific risk variables and firm performance of listed insurance companies in Sri Lanka.

Table 10. Regression Analysis

Dependent Variables

Independent Variable	Firm Performance (ROE)				Firm Performance (ROA)		
	Estimates	Standard errors	t-values		Estimates	Standard errors	t-values
UR	-0.0497	0.0537	0.3780		0.0022	0.0221	0.9220
TPR	-0.5173	0.1055	0.001**		-0.1079	0.0532	0.0430
RR	-1.4995	0.2685	0.000**		-0.0962	0.1075	0.3710
Leverage	0.6281	0.1253	0.001**		0.0072	0.0392	0.8550
Log_FirmSize	-0.0676	0.0223	0.014**		0.0029	0.0035	0.4050
Cons	1.1660	0.4856	0.0400		0.0003	0.0778	0.9970

Source: Author Compiled (2023)

Underwriting risk negatively impacts profitability in insurance companies, with a coefficient of -.049 and a p-value of 0.378, suggesting that any increase or decrease in risk does not significantly affect profitability. The result is in line with Mukino (2018) and opposed to Mwangi and Murigu (2015), and Daniel (2017) who found that underwriting risk has a positive insignificant impact on the financial performance of insurance companies in Kenya and underwriting risk has a negative and statistically significant effect on Ethiopia insurance companies' performance. Reinsurance risk significantly impacts the profitability of insurance companies in Sri Lanka, decreasing it by 149%. This is due to insurers with low retention limits acting as brokers of reinsurers, potentially handing over more premiums to reinsurers.

Table 11. Summary of hypothesis Testing (Regression Model – ROE)

	Variables	Accepted/Rejected
H ₁	Underwriting Risk	Rejected
H ₂	Technical Provision Risk	Accepted
H ₃	Reinsurance Risk	Accepted

Source: Author Compiled (2023)

Table 12. Summary of hypothesis Testing (Regression Model - ROA)

	Variables	Accepted/Rejected
H ₄	Underwriting Risk	Rejected
H ₅	Technical Provision Risk	Rejected
H ₆	Reinsurance Risk	Rejected

Source: Author Compiled (2023)

Additionally, insurers who cede more premiums to diversify their risk portfolio may become less profitable. The loss of investment income associated with reinsurance contracts outweighs the potential benefits of risk reduction. These findings agree with Sogon (2018) and Lee & Lee (2012), who found that reinsurance risk has a negative and significant impact on profitability (ROE). The finding is in line with portfolio theory as well. The study reveals that an increase in technical provisions risk can reduce the firm performance of insurance companies by 51%, affecting profitability and shareholder returns. This is particularly relevant in the Sri Lankan context, where insufficient technical provisions on outstanding claims can negatively impact financial performance. This finding agrees with Mallam Fali et al., (2020); Daniel (2017), and Reshid (2015), who found that technical provision risk has a negative and significant influence on profitability.

The study reveals that reinsurance and technical provision risk have a negative impact on the return on assets of listed insurance companies in Sri Lanka, while underwriting risk has a positive effect, suggesting that specific risks do not significantly affect these companies' returns. The summary results of hypotheses given below.

4. Conclusions

The study found that underwriting risk in Sri Lanka has a positive and insignificant impact on ROA & ROE, but not on ROE. Technical provisions risk negatively affects firm performance, with no significant impact on return on assets but a significant impact on ROE. Reinsurance risk has a negative and significant impact on insurance companies' profitability, with no significant impact on return on assets but a significant impact on ROE.

The analysis reveals that technical provision risk significantly impacts ROE in Sri Lanka, resulting in a decrease in the company's return compared to the shareholder's fund. Recommendations include adjusting the level of technical provisions for outstanding claims and increasing awareness of claim liabilities. Reinsurance risk significantly impacts the ROE of listed insurance companies in Sri Lanka, reducing earnings and shareholder's equity. To maintain a high retention ratio and cover most incurred claims, companies must enhance their ability to handle reinsurance contracts, especially in high-risk portfolios with foreign currency payments. The study reveals that underwriting risk negatively impacts ROE and profitability, suggesting that Sri Lankan listed insurance companies should minimize underwriting costs using appropriate pricing and valuation techniques.

This research focuses on insurance companies in Sri Lanka from 2012-2022, specifically those listed on the CSE. It suggests future research should consider other insurance sectors and macroeconomic factors. The study used two models measuring firm performance, mainly qualitative, and could be improved by incorporating macroeconomic factors. The data was collected manually, and future research could use both qualitative and quantitative variables, such as interviews with underwriters. The study only considered the impact of insurance-specific risk on the performance of the listed insurance companies. However, it can be recommended for future researchers to further assess insurance-specific risk on the performance of insurance companies incorporating macroeconomic factors. As an example, the impact of pricing practices and the underwriting risk on firm performance.

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