FIRM SIZE AND THE PERFORMANCE OF NEPALESE NON-LIFE INSURERS: A MODERATION ANALYSIS

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ABSTRACT

This study aims to analyze the direct effect of Premium Growth Rate (PGR), Solvency Ratio (SR), Inflation (INF) and Gross Domestic Growth Rate (GDP) along with moderating effect of Size of business in terms of Total Assets (TA) in Return on Assets (ROA) and Return on Equity (ROE). The sampling method used is purposive and data of five non-life insurance companies from 2015 to 2022A.D. has been taken for study. The statistical analysis method used is descriptive statistics, correlation and multiple regression analysis. The result showed that PGR, INF and GDP has positive and significant effect on ROA whereas insignificant effect on ROE. The solvency ratio has negative and significant effect on ROA but insignificant effect on ROE. TA moderated the effect of solvency ratio on ROA.

KEYWORDS: Financial Performance, Non-Life Insurance, Premium, Solvency Ratio.

1. INTRODUCTION

Financial institutions are the financial intermediaries that channelize funds and transfer funds from deficit unit to surplus unit which contributes in fund mobilization. Their efficiency results in economic growth whereas insolvencies can bring negative consequences in the economy. In the line for contributing economic growth of the county, insurance industry is taken as one of the significant part as nations financial system, Its performance has significant impact on other sectors of the country and also on the development of the country (Gunawardhane et al., 2022).

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Performance represents a complex concept. It is the output of the activity and measures of assessing corporate performance is decided on the basis of types of an organization and reasons or objectives of evaluation. There are various models to study and analyze the performance. But there is no universal set for performance evaluation. Abebe and Abera (2019) suggest that the financial performance of insurance companies is influenced by both internal factors, such as firm-specific characteristics, and external factors, including the macroeconomic environment.

Banarjee (2018) identified the significant impact of leverage, size and growth in gross written premium on the firm profitability, GDP has a positive and significant whereas inflation has a negative and significant impact on profitability and a significant effect of premium growth rate on ROA but Daree (2016) identified premium growth rate is negatively correlated with ROA. The negative and negligible impact of growth rates on the ROA has been noted by Boyjoo and Ramesh (2017), but Daree's findings in 2016 show GDP to have a positive correlation with return on investment.

The debt ratio with ROA and ROE was shown to be negatively correlated by Morara and Bongani in 2021. Mazviona et al., (2017), Sumaira and Amjad (2013) and Lee (2012) stated that financial leverage is positively related with profitability in non-life insurance companies. Ayalew 2019 results have shown that leverage and the rate of inflation are negatively and significantly related to profitability. This type of contradictory results seeks for further study and investigation. Also, the studies of effect of moderating variables on financial performance of non-life insurance companies are rarely done. The aim of the study is to fill this gap by looking at PGR, SR, INF and GDP as a key factor for nonlife insurance companies' profitability. The sizes of business, as well as the overall assets, are considered to be moderate variables.

2. REVIEWOF LITERATURE

In the context of relevant theories, a significant contribution was made by Markowitz in 1952, which has since played a pivotal role in financial institutions, particularly in banks, non-bank financial institutions, and insurance (Nzongang & Atemnkeng, 2006). According to Markowitz's theory, there exists a positive correlation between the risk and the expected return of a financial asset. Consequently, investors are encouraged to select portfolios that offer the highest return while minimizing risk to the greatest extent possible.

The MM theory advocates that the value of firm tend to be independent on debt balance of the company and is instead mainly affected by the number of project investments with positive net present value (Obim, Anake & Awara, 2014). Theory second was developed due to limitations in theory I which had the assumptions of perfect capital market, brokerage cost, tax absence and symmetric information. It was developed as a suit to real world situation which included the better assumptions of tax payment by companies, bankruptcy and information is not symmetrical. It stated that cost of equity has direct correlation with the leverage level (Corporate Finance Institute, 2021)

In their research, Abebe and Abera (2019) identified several key determinants of financial performance, including capital adequacy, liquidity, size, age, loss, and leverage. They observed positive correlations between size, capital adequacy, age, and liquidity with Return on Assets (ROA), while loss ratio, leverage, GDP, and inflation showed negative correlations with ROA. On the other hand, when examining Return on Equity (ROE), they found that capital adequacy,

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liquidity, loss ratio, leverage, GDP, and inflation were negatively correlated, except for size and age, which showed positive correlations with ROE. Ultimately, the study emphasized the significant positive impact of company size, measured by total assets, on both ROA and ROE.

In the study conducted by Daare (2016), the significant factors influencing the profitability of insurance companies in India were examined, including company size, liquidity, and inflation. Among these variables, size, loss ratio, liquidity, age, and GDP exhibited positive correlations with Return on Assets (ROA), while capital adequacy, premium growth, and inflation displayed negative correlations with ROA. The study underscored the importance of firm-specific factors, such as age and liquidity, as the most influential determinants of insurance companies' profitability in India, with inflation also identified as a statistically significant macroeconomic factor impacting ROA.

Septina's (2022), proved that the claims ratio has a notable impact on both Return on Assets (ROA) and Return on Equity (ROE). Additionally, the risk-based capital ratio significantly influenced ROA. However, the premium growth ratio, GDP, and inflation did not demonstrate a significant effect on ROE. On the other hand, Ayalew's (2019) research findings concluded that company size, liquidity ratio, and efficiency showed statistically significant and positive relationships with profitability, while leverage and inflation exhibited negative and significant relationships with ROA.

Thirupathi and Balamurugan (2022) evaluated the performance of Indian public non-life insurance companies, considering variables such as capital adequacy, assets quality, risk retention ratio, management soundness, earning and profitability analysis, and financial soundness. The study highlighted the need for improvements in liquidity management and emphasized that the financial performance of these companies largely depended on policyholder assurance and trust.

Tsvetkova et al. (2021) discovered that Return on Assets (ROA) displayed a positive correlation with the size of the company, liquidity ratio, and claim ratio, while inflation and premium growth rate exhibited negative correlations with ROA. Risal (2020) established that higher leverage was linked to lower performance, and liquidity fluctuations had no impact on the financial performance of Nepalese non-life insurance companies. Meanwhile, Pradhan and Dahal (2021) demonstrated that insurance premium, current ratio, and solvency ratio showed positive relationships with earnings per share, and premium growth rate had a positive association with ROA. However, solvency ratio, size of the firm, and current ratio exhibited an inverse relationship with ROA.

As per the discussion of the above section and to explore the financial performance of Nepalese insurance companies, ROA and ROE as Dependent variables, premium growth rate, solvency ratio, inflation, gross domestic product as independent variables are set for conceptual framework. In addition, size of the insurance companies (total assets) has considered as moderating variable the following conceptual framework has been developed relative to objective of the study:

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Figure 1: conceptual framework of the study

Definition of variables

Table 1 Summary of variables used in the study

Study variables	Definition
Return on Assets (ROA)	Net Income/Total assets
Return on Equity (ROE)	Net Income/Total equity
Premium Growth Rate(PGR)	Premium (cuurent year – last year) 100%
	last year premium * 100%
Solvency Ratio(SR)	Total liabilities/Total Assets
Inflation (INF)	General annual inflation rate
Gross Domestic Growth	yearly gross domestic product
Rate(GDP)	
Size of Firm(SIZ)	Natural logarithm of total asset

3. METHODOLOGY

The study employed purposive sampling to select the sample units from a seven-year period, resulting in a final sample of 5 non-life insurance companies. Secondary data were collected by reviewing their annual reports. The dependent variables used to measure financial performance were return on assets and return on equity. The study considered firm-specific factors, such as premium growth rate and solvency ratio, along with external variables like inflation and GDP growth rate, as independent variables. Additionally, moderating variables, including the age of the firm and the size of the firm in terms of total assets, were included.

The gathered data form insurance companies has been analyzed by using descriptive statistics, correlations analysis, and multiple linear regression with help of SPPS software. Based on hypothesis without moderating effect multiple regression model is:

 $ROA = \beta_0 + \beta_1 (PGR)_{it} + \beta_2 (SR)_{itt} + \beta_3 (IFR)_{it} + \beta_4 (GDP)_{it} + e_{it} \dots (Model \ 1)$ $ROE = \beta_0 + \beta_1 (PGR)_{it} + \beta_2 (SR)_{it} + \beta_3 (IFR)_{it} + \beta_4 (GDP)_{it} + e_{it} \dots (Model \ 2)$ Based on hypothesis with moderating effect multiple regression model is:

 $ROA = = \beta_0 + \beta_1 (PGR*SZ)_{it} + \beta_2 (SR*SZ)_{it} + \beta_3 (IFR*SZ)_{it} + \beta_4 (GDP*SZ)_{it} + e_{it}....(Model 3)$ $ROE = = \beta_0 + \beta_1 (PGR*SZ)_{it} + \beta_2 (SR*SZ)_{it} + \beta_3 (IFR*SZ)_{it} + \beta_4 (GDP*SZ)_{it} + e_{it}....(Model 4)$ Where, $\beta 0 = \text{coefficient of Intercept (Constant)} \qquad \beta 1 = \text{coefficient of premium growth rate}$ $\beta 2 = \text{coefficient of solvency} \qquad \beta 3 = \text{coefficient of inflation rate}$ $\beta 4 = \text{coefficient of GDP growth rate} \qquad e = \text{The Error Term}$ $ROA = \text{Return on Assets Ratio} \qquad \text{ROE} = \text{Return on Equity Ratio}$

GDP = Gross Domestic product rate

= Solvency Ratio PGR	= Premium Growth rate
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IFR = Inflation rate

SR

SZ = company size

4. RESULTSAND ANALYSIS

The result derived from the study has been presented for discussion in the following sections:

4.1. Descriptive Analysis of Study Variables

Variables	PGR	SR	INF	GDP	ROA	ROE
Mean	23.409	2.56	5.67	5.45	7.778	12.32
Median	15.852	2.906	4.6	6	7.74	12.94
Std. Dev	16.869	2.56	0.79	0.88	1.63	2.71
Max	54.72	3.33	9.5	8.2	10.45	16.11
Min	7.262	1.48	3.5	2.12	5.406	8.64

 Table 2: Descriptive statistics of study variables

Table 2 shows the summary of descriptive statistics which is presents the mean, median, standard deviation, maximum and minimum of independent Variables (premium growth rate, solvency ratio, inflation, GDP) and dependent variables (ROA and ROE) from 35 Observations (Five non-life insurance data of seven years 2072/73-2078/79). The descriptive statistics of premium growth rate presented in the Table 2depicts the mean value 23.409 and median 15.852. The maximum and minimum current ratio were 57.42 and 7.262 respectively. Whereas a standard deviation of 7.262 was available in the selected period of the study. The second independent variable was solvency ratio and its descriptive statistics indicate an average of 2.56 during the selected period. The solvency ratio are ranging from the maximum of 3.33 to minimum 1.49. The standard deviation of solvency ratio indicated in the above table was 2.56. The third variable was inflation rate and the above table depicts a mean value of 5.67 and median 4.6 under the study period. The

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minimum and maximum values of variable inflation are 9.5 and 3.5 respectively, and standard deviation is 0.79. The next variable was Gross Domestic Growth. Its mean, median, standard deviation, maximum and minimum values were 5.45, 6, 0.88, 8.2 and 2.12 respectively. The average ROA and ROE for the non-life insurance sector as a whole was 7.778 and 12.32 respectively. Median were 7.74 and 12.94 respectively. The standard deviation, maximum and minimum values of ROA were 1.63, 10.45 and 5.406 respectively. And standard deviation, maximum and minimum ROE were 2.71, 16.11 and 8.64 respectively.

4.2. Correlation between variables

Correlation coefficients indicate the strength and direction of relationships between variables. Larger values represent stronger relationships, while smaller coefficients suggest weaker relationships. The sign of the coefficient reveals the direction of the relationship: a positive sign indicates a positive relationship, while a negative sign signifies an opposite relationship.

	ROA	PGR	SR	INF	GDP	ROE
ROA	1.000					
PGR	0.601	1.000				
SR	-0.4548	0.304	1.000			
INF	0.5524	0.644	0.3791	1.000		
GDP	0.519	0.1753	-0.619	0.0403	1.000	
ROE	0.895	0.6559	-0.444	0.384	0.645	1.000

Table 3: Correlation between variables

(Source: SPPS Software)

As indicated in Table 3, the correlation test shows that return on assets (ROA) is positively correlated with the premium growth rate, with a value of 0.601. This positive correlation suggests that higher premium growth rates are linked to lower return on assets. On the other hand, solvency displays a negative correlation with return on assets, with a value of -0.4548, indicating that an increase in the firm's solvency leads to a decrease in return on assets. Furthermore, inflation exhibits a positive correlation with ROA, with a value of 0.5524, implying that higher inflation rates correspond to an increase in return on assets. Similarly, the Gross Domestic Product (GDP) demonstrates a positive relationship with return on assets, represented by a value of 0.519, suggesting that higher GDP growth is associated with higher return on assets.

Furthermore, ROE demonstrates positive correlation with premium growth rate, as indicated by a value of 0.6559. This positive relationship signifies that higher premium growth rates are linked to higher return on equity. Conversely, solvency shows a negative relation with ROE, with a value of -0.444, implying that an increase in solvency results in a decrease in return on equity. Moreover, inflation and GDP both display positive relationships with ROE, with correlation coefficients of 0.384 and 0.645, respectively. Lastly, ROA and ROE themselves found positive relationship, with a correlation coefficient value of 0.895.

4.3. Regression results

The regression results in Table 4displays the effect of internal and external factors on the financial performance of non-life insurance companies in Nepal.

Table 4: Model summary of Model 1

Model	R Square	Adjusted Square	R	Std. error of estimate
ROA	0.986319	0.9863		0.33093

(Source: SPPS Software)

Table 5: ANOVA Table of Model 1

						Remark
	df	SS	MS	F	Sig.	S
Regression	4	15.79131	3.947827	36.04832	0.027174	Sig
Residual	2	0.21903	0.109515			
Total	6	16.01034				

(Source: SPPS Software)

Table 6: Regression output of ROA Model without moderator

Variables	Coefficient	Std. error	t-statistics	Sig.
Constant	10.03	0.966	10.385	0.009145
CR	0.055	0.011	4.92	0.0388
SR	-2.04	0.274	-7.465	0.0174
INF	0.434	0.087	4.95	0.0383
GDP	-0.14	0.084	-1.65	0.2402

(Source: SPPS Software)

Based on Table 6, the output of first model is:

ROA= 10.03 + 0.055*PGR- 2.04 *SR+0.434*INF -0.14*GDP+0.33093

The effect of premium growth rate on general insurance's ROA can be seen from the regression coefficient value of PGR (β 1) of 0.0055, a significance of 0.038 (<0.05). Thus premium growth rate effect on general insurance's ROA, so hypothesis H1 is accepted.

Effect of SR on ROA can be seen from the regression coefficient value of SR (β 2) of -2.04 with a significance of 0.01 (<0.05). Thus SR affect the general insurance's ROA, and the hypothesis H3 is accepted.

Similarly, the effect of INF on ROA can be seen from the regression coefficient value of INF ((β 3) of 0.434 with a significance of 0.03 ((<0.05). Thus INF affect the general insurance's ROA, and the hypothesis H5 is rejected. And the effect of GDP on ROA can be seen from the regression coefficient value of GDP (β 4) of -0.14 with a significance of 0.24 (> 0.05). Thus GDP does not affect the general insurance's ROA, and the hypothesis H7 is rejected.

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In addition, Table 4shows the model summary of Model 1. The value of R Square (R^2) 0.9863 or which means that the variability of the dependent variable that the independent variable can explain is 98.63%. This shows that PGR, SR, INF and GDP (together) explained the non-life insurance company's ROA by 98.63%. In comparison, the rest (100% - 98.63% = 1.37%) is influenced by other variables outside this regression equation or variables that are not examined. In ANOVA result in Table 5value of F is 36.048 which reaches significance with the value 0.027 less than 0.05. Hence, significant relationship exists between ROA and selected variables.

Table 7: Model summary of Model 2

Model	R Square	Adjusted Square	R	St. error of estimate
ROE	0.907286	0.721859		1.432714

(Source: SPPS Software)

Table 8: ANOVA Table of Model 2

	df	SS	MS	F	Sig.	Remarks
Regression	4	40.17438	10.0436	4.892944	0.176832	Insig.
Residual	2	4.105339	2.052669			
Total	6	44.27972				

(Source: SPPS Software)

Variables	Coefficient	Std. error	t-statistics	Sig.
Constant	13.913	4.183	3.326	0.079
PGR	0.12	0.048	2.469	0.132
SR	-2.38	1.188	-2.009	0.18
INF	0.202	0.379	0.533	0.646
GDP	0.103	0.366	0.2809	0.805

(Source: SPPS Software)

Based on regression Table 9, the output of second model is:

ROE= 13.919+0.12*PGR -2.387 *SR+0.202*INF+0.103*GDP+1.4327

The impact of PGR on ROE can be seen from the regression coefficient value of PGR (β 1) of 0.12, a significance of 0.132(>0.05). Thus, PGR has no effect on general insurance's ROE, so hypothesis H2 is rejected. The impact of SR on the non-life insurance company's ROE can be seen from the regression coefficient value of SR ((β 2) of -2.387 with a significance of 0.182 (> 0.05). This result resulted SR does not affect the general insurance's ROE, and the hypothesis H4 is rejected.

The effect of INF on ROE can be seen from the regression coefficient value of INF ((β 3) of 0.202 with a significance of 0.646 (> 0.05). Thus INF does not affect the general insurance's ROE, and the hypothesis H6 is rejected.

The effect of GDP on the non-life insurance company's ROE can be seen from the regression coefficient value of GDP ((β 4) of 0.103 with a significance of 0.805 (>0.05). Thus SR does not affect the general insurance's ROE, and the hypothesis H8 is rejected.

Table 7shows the model summary of Model 2. The value of R Square (R^2) 0.907 or which means that the variability of the dependent variable that the independent variable can explain is 90.7%. This shows that PGR, SR, INF and GDP (together) influence the non-life insurance company's ROE by 90.7%. In comparison, the rest (100% - 90.7% = 9.3%) is influenced by other variables outside this regression equation or variables that are not examined. In ANOVA result in Table 8value of F is 4.89 which reaches significance with the value 0.176 more than 0.05. Hence, insignificant relationship exists between ROE and selected variables.

Model	R Square	Adjusted Square	R	Standard estimate	error	of
3	0.9803	0.9410		0.3966		

Table 10: Model summary of Model 3

(Source: SPPS Software)

 Table 11: ANOVA Table of Model 3

	df	SS	MS	F	Sig.
Regression	4	15.69565	3.923912	24.93839	0.038924
Residual	2	0.314688	0.157344		
Total	6	16.01034			

(Source: SPPS Software)

Table 12: Regression output of ROA model with size of the firm as moderator

Variables	Coefficient	Std. error	t-statistics	Sig.
Constant	9.5404	1.202	7.936	0.015
PGR*TA	0.0115	0.003	3.657	0.067
SR* TA	-0.217	0.039	-5.505	0.031
INF* TA	0.049	0.012	4.022	0.056
GDP* TA	-0.011	0.0015	0.725	0.543

(Source: SPPS Software)

Based on regression Table 12, the output of third model is:

ROA= 9.540+0.011PGR*TA-0.217SR*TA +0.049INF*TA-0.011GDP*TA+0.3966

The size of the insurance company (TA) moderates the effect of PGR on ROA by 0.067(>0.05). Thus TA do not moderate the effect of PGR on ROA, so hypothesis H9 is rejected. TA moderated the relationship between SR and ROA by 0.031(<0.05). Thus TA moderate the effect of SR on ROA, so hypothesis H11 is accepted. TA moderates the effect of INF on ROA by 0.056 (>0.05). Thus, TA do not moderate INF on ROA, so Hypothesis H13 is rejected. And TA moderated the effect of GDP on ROA by 0.543(>0.05). So, TA do not moderate the effect of

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GDP on ROA and hypothesis H15 is rejected. Table 10 shows the model summary of Model 3. The value of R Square (R^2) 0.9803 or which means that the variability of the dependent variable that the independent variable can explain is 98.03%. In comparison, the rest (100% - 97.51% = 1.97%) is influenced by other variables outside this regression equation or variablesthat are not examined. In ANOVA result in Table 11value of F is 24.938 which reaches significance with the value 0.038 less than 0.05. Hence, significant relationship exists between ROA and moderated variables.

Table 13: Model summary of Model 4

Model	R Square	Adjusted Square	R	Std. error of estimate
4	0.9153	0.7460		0.1368

(Source: SPPS Software)

Table 14: ANOVA Table of Model 4

	df	SS	MS	F	Sig.	Remarks
Regressio	4	40.53197	10.13299	5.407502	0.162113	Insig.
n						
Residual	2	3.747753	1.873877			
Total	6	44.27972				

(Source: SPPS Software)

Table 15: Regression output of ROE model with size of the	firm as moderator
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Variables	Coefficient	Std. error	t-statistics	Sig.
Constant	16.190	4.148	3.903	0.05
PGR*TA	0.029	0.0109	2.709	0.113
SR* TA	-0.319	0.136	2.346	0.1435
INF* TA	0.021	0.042	0.502	0.665
GDP* TA	-0.015	0.052	0.290	0.793

(Source: SPPS Software)

Based on regression Table 15, the output of sixth model is:

ROE= 16.190+0.029PGR*TA-0.319SR*TA +0.021INF*TA-0.015GDP*TA+11.94241

The size of the non-life insurance company (TA) moderates the effect of PGR on ROE by 0.113 (>0.05). Thus TA does not moderate the effect of PGRR on ROE, so hypothesis H10 is rejected. TA moderated the relationship between SR and ROE by 0.1435 (>0.05). Thus TA do not moderate the effect of SR on ROE, so hypothesis H12 was rejected. TA moderates the effect of INF on ROE by 0.665 (>0.05). Thus, TA do not moderate INF on ROE, so Hypothesis H14 is rejected. And TA moderated the effect of GDP on ROA by 0.793(>0.05). So, TA moderates the effect of GDP on ROE and hypothesis H16 is also rejected. Table 13shows the model summary of Model 4. The value of R Square (R^2) 0.9153 or which means that the variability of the dependent variable that the independent variable can explain is 91.53%. In comparison, the rest

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(100% - 91.53% = 8.47%) is influenced by other variables outside this regression equation or variables that are not examined. In ANOVA result in Table 14 value of F is 5.407 which reaches significance with the value 0.162 more than 0.05. Hence, insignificant relationship exists between ROE and moderated variables.

4.4. DISCUSSIONS

The current study's findings revealed a positive relationship between Premium Growth Rate (PGR) and Return on Assets (ROA), which aligns with the results of Tsvetkova (2018) and Banarjee (2018). Moreover, PGR demonstrated a positive and significant relationship with profitability. However, the study also indicated a negative correlation between the Solvency Ratio (SR) and ROA, consistent with Ayalew's (2019) findings. Similarly, the positive relationship between inflation and ROA in Nepalese non-life insurance companies is in line with the results of Daare (2016), and the positive association between GDP and ROA aligns with studies by Doumpal (2015) and Banarjee (2018) conducted in an international context.

Regarding Return on Equity (ROE), the correlation coefficient between PGR and ROE showed a positive relationship, while the correlation between the Solvency Ratio and ROE demonstrated a contrasting relationship. These results are consistent with the findings of Morara and Bongani (2022). Additionally, inflation's positive correlation with ROE is in line with the results of Septina (2022), and the positive relation between GDP and ROE aligns with Banerjee's (2018) findings.

In terms of regression moderation analysis, when examining the moderating effect of total assets using regression, it was found that total assets moderated the effect of SR on ROA, with a significant p-value coefficient. However, total assets did not moderate the effect of PGR, GDP, and inflation on ROA. Similarly, using regression analysis, it was revealed that total assets did not moderate the effect of premium growth, solvency ratio, inflation, and GDP on ROE.

5. CONCLUSIONS AND IMPLICATIONS

The main objective of the research was to analyze the impact of Premium Growth Rate (PGR), Solvency Ratio (SR), Inflation (INF), and Gross Domestic Product (GDP) on the financial performance of non-life insurance companies in Nepal, specifically focusing on Return on Assets (ROA) and Return on Equity (ROE). The results revealed that PGR, inflation, and GDP positively and significantly influenced ROA, while they had a positive but insignificant effect on ROE. Conversely, the solvency ratio had a negative and significant impact on ROA but a negative and insignificant effect on ROE. Moreover, the study found that the size of the firm played a moderating role in the relationship between the solvency ratio and ROA.

The implications of these findings are of great importance to various stakeholders, particularly insurance companies and regulatory bodies. For insurance companies, understanding the factors influencing their financial performance is crucial in making informed decisions, including the introduction of new insurance products to maintain competitiveness in the market. Policyholders will also benefit from gaining insights into the drivers of financial performance in general insurance companies in Nepal, which will aid them in making better economic decisions.

As for future research, the study suggests considering qualitative factors and other quantitative variables such as efficiency, compliance with regulations, number of policyholders, age of the

firm, interest rate, loss ratio, claim ratio, liquidity ratio, and capital adequacy. Moreover, employing different sampling methods, extending the study period, and utilizing additional statistical tools are recommended for more comprehensive and in-depth analysis.

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