Factors Affecting the Profitability of Non-Life Insurance Companies in Nepal

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Abstract

This study examines the determinants of profitability of Nepalese insurance companies. Return on assets and return on equity are the dependent variables. The selected independent variables are firm size, liquidity, age of firms, financial leverage, growth rate of premiums, and volume of capital. The study is based on secondary data of 13 insurance companies with 104 observations for the study period from 2013/14 to 2020/21. The data were collected from the annual reports of Rastriya Beema Authority, reports published by Ministry of Finance and annual reports of selected Nepalese insurance companies. The regression models are estimated to test the significance and effect of firm specific factors on the profitability of Nepalese non-life insurance companies.

The study showed that liquidity ratio has a negative impact on return on assets and return on equity. It means that increase in liquidity ratio leads to decrease in return on assets and return on equity. In addition, volume of capital has a positive impact on return on assets and return on equity. It shows that higher the volume of capital, higher would be the return on assets and return on equity. Similarly, firm size has a positive impact on return on assets and return on equity. It shows that larger the firm size, higher would be the return on assets and return on equity. Furthermore, firm age has a positive impact on return on assets and return on equity. It means that increase in the age of the firms leads to increase in the return on assets and return on equity. Likewise, premium growth rate has a positive impact on return on assets and return on equity. It means that higher the premium growth rate, higher would be the return on assets and return on equity. In contrast, leverage ratio has the negative impact on return on assets. It indicates that higher the leverage ratio, lower would be the return on assets and return on equity.

Keywords: return on asset, return on equity, firm size, liquidity, age of firms, financial leverage, growth rate of premiums, volume of capital

1. Introduction

The business world without insurance is unsustainable since risky business may not have the capacity to retain all kinds of risks in this ever changing and uncertain global economy (Ahmed *et al.,* 2011). Insurance enhances the economy through promoting financial stability, mobilizing savings, facilitating trade and commerce, enabling risk management, encouraging loss mitigation, fostering efficient capital allocation, substituting the complement of government social security programs (Ajao and Ogieriakhi, 2018). Without insurance, business is difficult, and companies lack the

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capacity to manage risk in this time of greater global uncertainty (Burca and Batrinca, 2014). Insurance companies provide risk transfer and mitigation services to businesses and individuals, which helps to reduce the overall level of risk in the economy. This can lead to increased investment and economic activity, as businesses and individuals are more likely to take risks when they know that they are protected against financial losses. Insurance companies help to promote financial stability by providing a cushion against economic shocks. Insurance companies can foster innovation by providing risk capital to businesses that are developing new products or services. This can help to promote economic growth by creating new markets and industries. It helps to mobilize savings from businesses and individuals and channel them into long-term investments. This can help to promote economic growth by providing businesses with the capital they need to invest in new projects and create jobs. The insurance industries provide long term funds for the infrastructure of development and strengthen the risk-taking ability of the country. A well-developed insurance market paves way for efficient resource allocation through the transfer of risk and mobilization of savings (Nimer et al., 2015).

Sasidharan *et al.* (2020) found that firm size, capital adequacy, and reinsurance dependency have significant positive relationships with profitability of insurance company. Greene and Segal (2004) argued that the performance of insurance companies in financial terms is normally expressed in net premium earned, profitability from underwriting activities, annual turnover, return on investment and return on equity. Likewise, Ahmed *et al*. (2011) found that performance of Pakistan life insurance companies is determined by size, risk and leverage. Pervan *et al.* (2012) assessed the factors affecting the profitability of the insurance companies between 2005 and 2010. By using a dynamic panel model with GMM estimator, the study showed a significant negative influence of the loss ratio on profitability. Similarly, the study also showed a significant positive influence of age, market share and past performance on current performance. Chen and Wong (2004) showed that profitability of insurance companies decreased with the increase in equity ratio. The study also found that size, investment, liquidity is the important determinants of financial health of insurance companies.

Almajali *et al.* (2012) analyzed the insurance companies listed on the Amman Stock Exchange during 2002-2007. The study showed that liquidity, leverage, company size and management competence index have a significant positive effect on financial performance of the insurers. Likewise, Moro and Anderloni (2014) investigated the influence of specific factors on insurance performance in 198 European insurance companies between 2002 and 2014. The study concluded that asset size and diversification negatively affect ROA, while reserves dimension and asset turnover positively impact the performance

of insurance companies. Similarly, Hidayat and Firmansyah (2017), using a sample of 15 Islamic insurance companies in Indonesia between 2011 and 2015, showed that the board of directors has no significant impact on the performance of the company. However, leverage, institutional ownership and managerial ownership have significant effect on profitability. Further, Mazviona *et al.* (2017) found that liquidity has a positive and significant impact on profitability of insurance companies.

Liquidity for insurance companies shows the ability of insurers to pay current liabilities, which have the nature of operating expenses or payment of compensation in case of damage (Kripa, 2016). Abdeljawad *et al.* (2020) revealed that liquidity has positive and significant relationship with insurance companies' profitability. Similarly, Ngunguni *et al.* (2020) found liquidity has positive and significant relationship with performance measured by return on assets. Likewise, Tsvetkova *et al.* (2021) revealed that liquidity positively affect the firm performance. Liquidity has a positive and significant relationship with return on assets (Olowokudejo and Ajijola, 2022). Isayas and Yitayaw (2020) found assets tangibility as positive and significant predictor of the firm performance. Similarly, Ben Dhiab (2021) determined the profitability is most significantly and positively affected by the asset's tangibility of the firm.

Bunyaminu *et al.* (2022) found the claim ratio and retention ratio have a profound adverse impact on return on asset. Likewise, claim ratio and expense ratio negatively and significantly affect profitability in term of return on equity. In contrast, firm size has negative and insignificant relationship with both return on assets and return on equity. Likewise, Lalon and Das (2022) stated tangibility of assets as most significant and positive drivers of bank profitability. There is a positive and significant relationship between tangibility of the assets and profitability measured in term of return on assets and return on equity (Shiferaw and Gujral, 2022). Company size and the liquidity ratio are positively and insignificantly associated with profitability of Saudi insurance companies (Ben Dhiab, 2021). Likewise, Shahi and Agnihotri (2022) found assets tangibility and firm size have positive while leverage have negative relationship with profitability of insurance companies. Moreover, liquidity has negative and insignificant relationship meanwhile firm size has positive and insignificant relationship in performance.

Liquidity of the bank indicates that there should be balance between inflow and outflow of the cash. If bank is unable to follow or maintain the equilibrium, it ultimately leads to the liquidity risk. Liquidity risk arises when banking and financial institution is unable to fulfill the present demand of the customers. When the liquidity risk increases, there is a high possibility of bankruptcy. Liquidity plays vital role in determining the effectiveness of

firms. Thus, it is necessary for firms to maintain a balanced liquidity ratio in order to meet their short-term liabilities (Bhunia, 2010). Weersainghe and Perera (2013) examined the determinants of profitability of commercial banks in Sri Lanka. The study concluded that the liquidity is negatively related to the commercial bank's profitability. Moreover, Dawood (2014) assessed the factors influencing the profitability of commercial banks in Pakistan for the period 2009-2012. The study found that liquidity has a negative relationship with the profitability of the commercial banks. Khan and Ali (2016) analyzed the impact of liquidity on profitability of commercial banks in Pakistan. The study found that liquidity has a positive relationship with profitability. Furthermore, Hirindu (2017) concluded that liquidity is an insignificant determinant and has a negative relationship with bank profitability. Likewise, Mahdi and Abbes (2018) assessed the relationship between capital, risk and liquidity in the context of Islamic and conventional banks in MENA region. The study found that net interest margin has positive impact on the liquidity of the banking industry. Parvin *et al.* (2019) analyzed the effect of liquidity and bank size on the profitability of commercial banks in Bangladesh. The study concluded that there is a positive significant impact of liquidity on the profitability of the banks.

In the context of Nepal, Jaishi and Poudel (2021) investigated the capital structure and financial performance of Nepalese insurance companies. The study showed that there is a positive impact of liquidity ratio on firm's performance. In addition, Hamal (2020) concluded that the profitability of Nepalese non-life insurance companies increases with the increase in liquidity but decreases with the increase in leverage. However, the study established an insignificant relationship of firm size, firm age and total debt with profitability. Dahal *et al.* (2020) examined the liquidity management and financial performance of Nepalese insurance companies. The results showed that insurance premium has positive impact on return on assets and earnings per share. It means that increase in insurance premium leads to increase in return on assets and earnings per share. Likewise, firm size has positive impact on return on assets and earnings per share. It indicates that increase in firm size leads to increase return on assets and earnings per share. Likewise, Sah and Magar (2021) found a positive and significant impact of firm size and assets tangibility on return on assets of Nepalese insurance companies.

The above discussion shows that empirical evidences vary greatly across the studies on the determinants of profitability of insurance companies. Though there are above mentioned empirical evidences in the context of other countries and in Nepal, no such findings using more recent data exist in the context of Nepal. Therefore, in order to support one view or the other, this study has been conducted.

The main purpose of the study is to analyze the determinants of profitability of Nepalese non-life insurance companies**.** Specifically, it examines the relationship of firm size, liquidity ratio, age of firm, financial leverage, growth rates of premiums and volume of capital with return on assets and return on equity of Nepalese non-life insurance companies.

The remainder of this study is organized as follows. Section two describes the sample, data and methodology. Section three presents the empirical results and the final sections draws the conclusion.

2. Methodological aspects

The study is based on the secondary data which were collected from 13 Nepalese non-life insurance from 2013/14 to 2020/21, leading to a total of 104 observations. The study employed convenience sampling method. The main sources of data are collected from the annual reports of respective non-life insurance companies and the report published by Rastriya Beema Authority. This study is based on descriptive as well as causal comparative research designs. Table 1 shows the list of non-life insurance for the study along with the study period and number of observations.

Table 1

List of non-life insurance for the study along with the study period and number of observations

S.N.	Name of companies	Study Period	Observation
1	United Insurance Company Limited	2013/14-2020-21	8
2	Premier Insurance Company Limited	2013/14-2020-21	8
3	Neco Insurance Limited	2013/14-2020-21	8
4	Sagarmatha Insurance Company Limited	2013/14-2020-21	8
5	Prabhu Insurance Limited	2013/14-2020-21	8
6	IME General Insurance Company Limited	2013/14-2020-21	8
7	Prudential Insurance Limited	2013/14-2020-21	8
8	Lumbini General Insurance Company Limited	2013/14-2020-21	8
9	Ajod Insurance Company Limited	2013/14-2020-21	8
10	Sihhhartha Insurance Company Limited	2013/14-2020-21	8
11	Sanima General Insurance Company Limited	2013/14-2020-21	8
12	Shikhar Insurance Company Limited	2013/14-2020-21	8
13	NLG Insurance Company Limited	2013/14-2020-21	8
Total number of observations			**104**

Thus, the study is based on the 104 observations.

The model

The model used in this study assumes that the profitability of insurance firms depends upon firm size, liquidity ratio, age of firm, financial leverage, growth rates of premiums and volume of capital. Therefore, the model takes the following form:

Profitability = *f* (FS, LIQ, AGE, LEV, GRP and VOC)

More specifically, the given model has been segmented into the following models:

$$ROA_{it} = \beta_0 + \beta_1 FS_{it} + \beta_2 LIQ_{it} + \beta_3 AGE_{it} + \beta_4 LEV_{it} + \beta_5 GRP_{it} + \beta_6 VOC_{it} + e_{it}$$

$$ROE_{it} = \beta_0 + \beta_1 FS_{it} + \beta_2 LIQ_{it} + \beta_3 AGE_{it} + \beta_4 LEV_{it} + \beta_5 GRP_{it} + \beta_6 VOC_{it} + e_{it}$$

Where,

ROA = Return on assets as measured by the ratio of net income to total assets, in percent.

ROE = Return on equity as measured by the ratio of net income to total equity, in percent.

FS = Size of the firms as measured by the market value of equity, in Rs.

LIQ = Liquidity ratio as measured by the ratio of current assets to current liabilities, in percent.

AGE = Age of firm as measured by the years of incorporation of the company, in years.

LEV = Financial leverage as measured by the ratio of total debt to total equity, in percent.

GRP = Growth rate of premiums as measured by the values of gross written premiums, in percent.

VOC = Volume of capital as measured by the lending cost of the insurance firms, in percent.

The following section describes the independent variables used in this study along with the hypothesis formulation:

Firm size

Larger businesses are more likely to succeed because of increased diversification supports. Opeyemi (2019) stated that firms try to increase its firm's size and it has always been an important factor to determine a firm's profitability, to improve performance and be competitive in the market. Moreover, Al-Shami (2008) found significant positive relationship between firm size and profitability. Likewise, Lamuda (2017) found that firm size has

a significant positive relationship with firm's performance measured by ROE. Firm's size possesses a strong relationship with return on equity (Homaidi *et al*., 2021). Based on it, this study develops the following hypothesis:

H_1: There is a positive relationship between firm size and profitability.

Liquidity ratio

Abubakar *et al.* (2018) investigated the effect of firm's characteristics on the financial performance of listed insurance companies in Nigeria. The study revealed a significant negative relationship between liquidity and financial performance of insurance companies. Companies with more liquidity provides better performances resulting in increase in ability to pay off short-term debt and make money (Boadi *et al.*, 2013). Similarly, Zaitoun and Alqudah (2020) found a significant and positive relationships with liquidity and financial distress of the firms. In addition, Chen and Wong (2004) showed that liquidity ratios have positive effect on the bank's profitability. Based on it, this study develops the following hypothesis:

H_2: There is a positive relationship between the liquidity ratios and firm profitability.

Age of firm

Tsvetkova *et al.* (2021) investigated the relationship between age of business and profitability. The study found a significant positive relationship with age of business and profitability. Mehari and Aemiro (2013) examined the firm specific factors that determine insurance companies' performance in Ethiopia. The study found that firm's age is statistically significant with return on equity. Likewise, Margaretha and Supartika (2016) suggested that firm age and profitability possess positive and insignificant relationship. Similarly, Tailab (2014) found that age of firms has a positive and significant impact on profitability i.e., ROA. Based on it, this study develops the following hypothesis.

H_3: There is a positive relationship between age of company and firm profitability.

Financial leverage

Flaminin (2009) found negative and statistically significant relationship between financial leverage and profitability of firms. Athanasoglou et al. (2008) examined the relationships between financial leverage and profitability. The study stated that an increase in the leverage has a negative impact on financial performance of insurance firms. In addition, Wani and Dar (2015) examined the effects of insurance company's specific factors (age of

company, size of company, volume of capital, leverage ratio and loss ratio) on profitability denoted by return on assets (ROA). The study showed a negative and significant relationship between financial leverage and firm profitability. Moreover, Cekrezi (2015) found a negative and significant relationship with profitability. Based on it, this study develops the following hypothesis:

H_4: There is a negative relationship between financial leverage and firm profitability.

Growth rate of premiums

Malik (2011) examined the relationship between growth rate of premiums and profitability. The study revealed a statistically significant and positive association between a growth rate of premiums and profitability. Increasing premium growth would be advantageous because it increases revenue for the company. Berhe and Kaur (2015) found that the growth of premium positively influences the growth of life insurance companies' assets in Ethiopia. Similarly, Greene and Segal (2004) indicated that gross premiums have a positive relationship with the stability of insurance companies. Furthermore, Rumelt (1982) showed that the premium growth is statistically significant and positively related to return on assets. Based on it, this study develops the following hypothesis:

H_5: There is a positive relationship between growth rates of premiums and firm profitability.

Volume of capital

Benali and Fekri (2017) investigated the relationship between insurance profitability and volume of capital. The results showed a statistically significant and positive relationships between volume of capital and profitability. Similarly, Ranaweera and Weerasinghe (2020) examined the determinants of profitability of Insurance Companies in Sri Lanka. The study showed that there is a significant and positive relationship between profitability and volume of capitals. In addition, Malik (2011) examined the relationship between volume of capital and return on assets (ROA) for Pakistan insurance industry. The study found a positive and statistically significant relationship between volume of capital and return on assets. Nevertheless, Ali-Shami (2008) found a positive and significant relationship between volume of capital and profitability. Similarly, Ahmeti and Iseni (2022) found statistically significant and positive relationships between volume of capital and profitability. Based on it, this study develops the following hypothesis:

H_6: There is a positive relationship between volume of capital and firm profitability.

3. Results and discussion

Descriptive statistics

Table 2 presents the descriptive statistics of the selected dependent and independent variables during the period 2013/14 to 2020/21.

Table 2

Descriptive statistics

This table shows the descriptive statistics of dependent and independent variables of 13 Nepalese non-life insurance companies for the study period from 2013/14 to 2020/21. The dependent variables are ROA (Return on assets as measured by the ratio of net income to total assets, in percent) and ROE (Return on equity as measured by the ratio of net income to total equity, in percent). The independent variables are FS (Size of the firms as measured by the market value of equity, in Rs), LR (Liquidity ratio as measured by the ratio of current assets to current liabilities, in percent), AGE (Age of firm as measured by the years of incorporation of the company, in years), LEV (Financial leverage as measured by the ratio of total debt to total equity, in percent), GRP (Growth rate of premiums as measured by the values of gross written premiums, in percent), and VOC (Volume of capital as measured by the lending cost of the insurance firms, in percent).

Variables	Minimum	Maximum	Mean	Std. deviation
ROA	-2.83	12.05	5.66	3.36
ROE	-17.29	41.53	15.98	10.13
FS	13.14	24.57	21.04	1.91
LR	0.82	5.6	2.04	0.87
AGE	6	28	18.76	5.50
LEV	0.34	4.31	1.73	0.82
GRP	-27.24	74.72	24.27	20.67
VOC	13.14	21.92	20.14	1.79

Source: SPSS output

Correlation analysis

Having indicated the descriptive statistics, Pearson's correlation coefficients are computed and the results are presented in Table 3.

Table 3

Pearson's correlation coefficients matrix

This table shows the bivariate Pearson's correlation coefficients of dependent and independent variables of 13 Nepalese non-life insurance companies for the study period from 2013/14 to 2020/21. The dependent variables are ROA (Return on assets as measured by the ratio of net income to total assets, in percent) and ROE (Return on equity as measured by the ratio of net income to total equity, in percent). The independent variables are FS (Size of the firms as measured by the market value of equity, in Rs), LR (Liquidity ratio as measured by the ratio of current assets to current liabilities, in percent), AGE (Age of firm as measured by the years of incorporation of the company, in years), LEV (Financial leverage as measured by the ratio of total debt to total equity, in percent), GRP (Growth rate of premiums as measured by the

values of gross written premiums, in percent), and VOC (Volume of capital as measured by the lending cost of the insurance firms, in percent).

Variables	ROA	ROE	FS	LR	AGE	LEV	GRP	VOC
ROA	1							
ROE	0.896**	1						
FS	0.375**	0.247*	1					
LR	-1.990*	-0.280**	-0.202*	1				
AGE	0.174	0.062	0.393**	-0.312**	1			
LEV	-0.123	0.115	-0.110	-0.079	-0.0504	1		
GRP	0.019	0.020	-0.269**	0.168	-0.156	0.087	1	
VOC	0.367**	0.203*	0.963**	-0.108	0.340**	-0.278**	-0.278**	1

Note: The asterisk signs (**) and (*) indicate that the results are significant at one percent and five percent levels respectively.

Table 3 shows that liquidity has a negative relationship with return on assets. It means that increase in liquidity ratio leads to decrease in return on assets. Similarly, firm age has a positive relationship with return on assets. It shows that increase in firm age leads to increase in return on assets. Moreover, leverage ratio has a negative relationship with return on assets. It indicates that increase in leverage ratio leads to decrease in return on assets. In addition, growth rate of premiums has a positive relationship with return on assets. It shows that higher the growth rate of premiums, higher would be the return on assets. Moreover, volume of capital has a positive relationship with return on assets. It shows that higher the volume of capital of the bank, higher would be the return on assets. In addition, firm size has a negative relationship with return on assets. It indicates that increase in firm size leads to decrease in return on assets.

Similarly, the result also shows that liquidity has a negative relationship with return on equity. It means that increase in liquidity ratio leads to decrease in return on equity. Similarly, firm age has a positive relationship with return on equity. It shows that increase in firm age leads to increase in return on equity. Moreover, leverage ratio has a negative relationship with return on equity. It indicates that increase in leverage ratio leads to decrease in return on equity. In addition, growth rate of premiums has a positive relationship with return on equity. It shows that higher the growth rate of premiums, higher would be the return on equity. Moreover, volume of capital has a positive relationship with return on equity. It shows that higher the volume of capital of the bank, higher would be the return on equity. In addition, firm size has a negative relationship with return on equity. It indicates that increase in firm

size leads to decrease in return on equity.

Regression analysis

Having indicated the Pearson's correlation coefficients, the regression analysis has been carried out and results are presented in Table 4 and Table 5. More specifically, Table 4 shows the regression results of firm size, liquidity ratio, age of firm, financial leverage, growth rates of premiums and volume of capital with return on assets of Nepalese insurance companies.

Table 4

Estimated regression results of firm size, liquidity ratios, age of firms, financial leverage, growth rate of premiums and volume of capital on return on assets of non-life insurance companies

The results are based on panel data of 13 commercial banks with 104 observations for the period of 2015/16 to 2021/22 by using the linear regression model and the model is $ROA_{it} = \beta_0 + \beta_1 FS_{it} + \beta_2 LIQ_{it} + \beta_3 AGE_{it} + \beta_4 LEV_{it} + \beta_5 GRP_{it} + \beta_6 VOC_{it} + e_{it}$, where, the dependent variable is ROA (Return on assets as measured by the ratio of net income to total assets, in percent). The independent variables are FS (Size of the firms as measured by the market value of equity, in Rs), LR (Liquidity ratio as measured by the ratio of current assets to current liabilities, in percent), AGE (Age of firm as measured by the years of incorporation of the company, in years), LEV (Financial leverage as measured by the ratio of total debt to total equity, in percent), GRP (Growth rate of premiums as measured by the values of gross written premiums, in percent), and VOC (Volume of capital as measured by the lending cost of the insurance firms, in percent).

Model	Intercept	Regression coefficients of						Adj. R_bar^2	SEE	F-value
		FS	LR	AGE	LEV	GRP	VOC			
1	-8.22 (2.39)*	0.16 (4.066)**						0.13	3.13	16.53
2	7.24 (8.63)**		-0.77 (0.044)					0.03	3.31	4.15
3	3.67 (3.13)**			0.10 (1.78)				0.02	3.33	3.15
4	6.54 (8.42)**				-0.50 (1.25)			0.05	3.35	1.56
5	5.59 (10.85)**					0.03 (0.19)		0.01	3.38	0.04
6	-8.24 (2.34)*						0.70 (3.97)**	0.12	3.15	15.69
7	-6.25 (1.69)	0.614 (3.72)**	-0.50 (1.37)					0.14	3.12	9.27
8	-6.25 (1.68)	0.617 (3.48)**	-0.50 (1.33)	0.003 (0.042)				0.13	3.14	6.12
9	-4.99 (1.28)	0.597 (3.35)**	-0.55 (1.43)	0.05 (0.08)	-0.40 (1.05)			0.13	3.13	4.87
10	-6.73 (1.67)	0.66 (3.64)**	-0.62 (1.63)	0.03 (0.05)	-0.45 (1.17)	0.03 (1.62)		0.15	3.11	4.48
11	-7.03 (1.62)	0.50 (0.6)	-0.64 (1.60)	0.001 (0.02)	-0.382 (0.76)	0.03 (1.62)	0.18 (0.19)	0.14	3.12	3.70

Notes:

i. Figures in parenthesis are t-values.
ii. The asterisk signs (**) and (*) indicate that the results are significant at one percent and five percent level respectively.
iii. Return on assets is the dependent variable.

Table 4 shows that the beta coefficients for liquidity are negative with return on assets. It indicates that liquidity has a negative impact on return on assets. This finding is consistent with the findings of Abbas *et al.* (2021). The beta coefficients for firm size are positive with return on assets. It indicates that firm size has a positive impact on return on assets. This finding is similar to the findings of Sari and Murni (2017). Similarly, the beta coefficients for leverage ratio are negative with return on assets. It indicates that leverage ratio has a negative impact on return on assets. This finding is consistent with the findings of Abubakar (2015). Likewise, the beta coefficients for growth rates of premiums are positive with return on assets. It indicates that growth rates of premium have a positive impact on return on assets. This finding is similar to the findings of Munangi and Bongani (2020). Similarly, the beta coefficients for volume of capital are positive with return on assets. It indicates that volume of capital has a positive impact on return on assets. This finding is similar to the findings of Afriyie and Akotey (2012).

Table 5 shows the estimated regression results of firm size, liquidity ratio, age of firms, financial leverage, growth rates of premiums and volume of capital on to return on equity of non-life insurance companies of Nepal.

Table 5

Estimated regression results of firm size, liquidity ratio, age of firms, financial leverage, growth rates of premiums and volume of capital on to return on equity of non-life insurance companies of Nepal

The results are based on panel data of 13 commercial banks with 104 observations for the period of 2015/16 to 2021/22 by using the linear regression model and the model is $ROE_{it} = \beta_0 + \beta_1 FS_{it} + \beta_2 LIQ_{it} + \beta_3 AGE_{it} + \beta_4 LEV_{it} + \beta_5 GRP_{it} + \beta_6 VOC_{it} + e_{it}$, where, the dependent variable is ROE (Return on equity as measured by the ratio of net income to total equity, in percent). The independent variables are FS (Size of the firms as measured by the market value of equity, in Rs), LR (Liquidity ratio as measured by the ratio of current assets to current liabilities, in percent), AGE (Age of firm as measured by the years of incorporation of the company, in years), LEV (Financial leverage as measured by the ratio of total debt to total equity, in percent), GRP (Growth rate of premiums as measured by the values of gross written premiums, in percent), and VOC (Volume of capital as measured by the lending cost of the insurance firms, in percent).

Model	Intercept	Regression coefficients of						Adj. R_bar^2	SEE	F-value
		FS	LR	AGE	LEV	GRP	VOC			
1	-11.58 (1.074)	1.31 (2.57)**						0.05	9.86	6.58
2	22.66 (9.16)**		-3.28 (2.93)**					0.06	9.77	8.60
3	13.83 (3.87)**			0.12 (0.63)				0.06	10.16	0.39
4	13.51 (5.77)**				1.42 (1.16)			0.03	10.11	1.36
5	15.74 (10.15)**					0.01 (0.20)		0.09	10.18	0.04
6	-7.19 (0.64)						1.15 (2.08)*	0.03	9.97	4.34
7	-0.46 (0.4)	1.05 (2.07)*	-2.81 (2.50)*					0.09	9.61	6.59
8	-0.23 (0.02)	1.26 (2.33)*	-3.14 (2.70)**	0.21 (1.09)				0.10	9.61	4.80
9	-4.74 (0.4)	1.34 (2.45)*	-2.98 (2.55)**	0.20 (1.04)	1.44 (1.23)			0.11	9.58	3.99
10	-8.56 (0.69)	1.47 (2.64)*	-3.14 (2.68)**	0.20 (1.02)	1.34 (1.14)	0.06 (1.16)		0.11	9.56	3.47
11	-9.84 (0.74)	0.81 (0.32)	-3.24 (2.61)**	0.19 (0.96)	1.61 (1.04)	0.06 (1.17)	0.73 (0.26)	0.12	9.61	2.88

Notes:

i. Figures in parenthesis are t-values.
ii. The asterisk signs (**) and (*) indicate that the results are significant at one percent and five percent level respectively.
iii. Return on equity is the dependent variable.

Table 5 shows that the beta coefficients for liquidity are negative with return on equity. It indicates that liquidity has a negative impact on return on equity. This finding is consistent with the findings of Abbas *et al.* (2021). The beta coefficients for firm size are positive with return on equity. It indicates that firm size has a positive impact on return on equity. This finding is similar to the findings of Sari and Murni (2017). Similarly, the beta coefficients for leverage ratio are positive with return on equity. It indicates that leverage ratio has a positive impact on return on equity. This finding is consistent with the findings of Abubakar (2015). Likewise, the beta coefficients for growth rates of premiums are positive with return on equity. It indicates that growth rates of premium have a positive impact on return on equity. This finding is similar to the findings of Munangi and Bongani (2020). Similarly, the beta coefficients for volume of capital are positive with return on equity. It indicates that volume of capital has a positive impact on return on equity. This finding is similar to the findings of Afriyie and Akotey (2012).

4. Summary and conclusion

Insurance firms are important financial intermediaries that plays a greater role in economic development of any country. Uncertainty can be a major obstacle to economic growth. Insurance can help to reduce uncertainty

by providing businesses and individuals with financial protection against unexpected events. This can make it easier for businesses to invest and grow, and it can make it easier for individuals to plan for the future. Insurance can help to promote investment by providing businesses with the capital they need to invest in new projects. This can lead to increased economic growth, as new investments create jobs and stimulate economic activity.

The study attempts to examine the determinants of the profitability of Nepalese non-life insurance companies. The study is based on secondary data of 13 commercial banks with 104 observations for the period from 2013/14 to 2020/21.

The study showed that firm size, age of firms, growth rates of premiums and volume of capital have positive impact on return on assets and return on equity of non-life insurance companies in Nepal. However, liquidity ratio and financial leverage have negative impact on return on assets. Larger insurance companies tend to be more profitable than smaller companies. This is because they have economies of scale, which allow them to operate more efficiently. The amount of debt that an insurance company uses can have a significant impact on its profitability. Too much debt can lead to financial problems, while too little debt can limit the company's ability to grow. The study concluded that firm size and volume of capital are the most influencing factor that explains the changes in the return on assets. The study concluded that liquidity ratio and firm size are the most influencing factor that explains the changes in the return on equity of non-life insurance companies in Nepal.

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