
IMPACT OF FIRM SPECIFIC FACTORS ON FINANCIAL PERFORMANCE OF LIFE INSURANCE COMPANIES IN NEPAL

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Abstract

The financial performance of life insurance companies determines the company's ability to generate revenues and manage assets, liabilities and the financial interests of its stakeholders. However, there are limited studies discoursing major determinants of companies' financial performance. To fulfill the gap, this study aimed to determine the effects of various firm-specific factors - firm size, liquidity ratio, short-term debt, long-term investment and firm age - on financial performance of life insurance companies in Nepal. The dependent variables influencing financial performance considered were return on assets (ROA) and return on equity (ROE). The study was based on secondary data of seven life insurance companies studied over a period of ten years, from 2009/10 to 2018/19. The data were collected from the financial statements published annually by the selected life insurance companies, Insurance Board of Nepal and Nepal Stock Exchange. In order to derive the impacts of firm-specific variables on ROA and ROE, descriptive statistics, correlation analysis and regression models were used. The study identified size and long-term investment to have negative and statistically significant relationship with financial performance. It also showed that higher the age of the company, the more difficult it will be to accumulate profit. The most influencing factors for the financial performance in Nepalese life insurance companies were firm size and long-term investment. Whereas, the explanatory power of liquidity seemed feeble. The findings elucidated that over-investment in long-term investments should be critically considered as it can have adverse effect on future profitability of the companies. Similarly, life insurance companies should increase their size only after careful examination over financial performance as it can result in diseconomies of scale and reduce the firm's profitability.

Keywords: *financial performance, size, liquidity, investment, age*

Introduction

Life insurance companies, at large, play a critical role in ensuring overall financial and economic stability in the nation (Karim & Jhantana, 2005) and provide a wide range of benefits from ensuring individual financial security to facilitating large scale social security (OECD, 2000). Life insurance companies help individuals to hedge risks by sharing among multiple people. They provide financial compensation when any unforeseen circumstance occurs, but that is just a small part of how these institutions supplement to the welfare enhancement of the economy (Ghimire, 2014). Life insurance companies are widely known for diverting consumer spending into savings.

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These savings are invested in important and profitable projects throughout the nation (Royal Bank of Canada, 1956). Life insurance companies are thus, one of the major contributors of infrastructural development and financial market development of any nation. Correspondingly, life insurance companies also possess significant number of shareholders and are responsible for maximizing their wealth. Therefore, these companies are accountable for the smooth functioning of financial markets along with the overall economy.

Improved performance of life insurance companies is of utmost importance to policyholders, shareholders, regulating authorities, financial markets and the society. Their future profitability holds immense importance for financial stability of both the household and the overall financial sector (European Central Bank, 2009). The abysmal performance of any one company in the industry can cost huge financial losses to the overall economy. The priority of many individuals has thus been shifted towards identifying the determinants of profitability in life insurance companies. Studies in this area did not get precedence in the past, however the number of studies conducted in this regard has been increasing. Charumati (2012) found that the profitability of life insurance companies is positively and significantly influenced by the size of the firm and its liquidity. The study also revealed that factors like leverage, premium growth, and capital investment had a negative impact on the life insurers of India.

Ngwili (2014) conducted a study on life insurance companies operating in Kenya and concluded that there exists a positive and significant relationship between liquidity and profitability, measured by ROA, of such firms. On the basis of the findings, the study also recommended managers to investment more in liquid assets. Dey, Adhikari and Bardhan (2015) analyzed and concluded that there exists a positive and significant relationship between size and profitability, measured by ROE, of insurance companies. However, the study concluded that the relationship between profitability and leverage and capital was negative.

A similar study conducted in Albania (Kripa & Ajasllari, 2016) determined that growth rate, current liabilities, liquidity and fixed asset are the main factors affecting profitability – measured by ROA - of insurance companies. The study also conveyed a negative relationship of liquidity, current liabilities and fixed asset with profitability. The study concluded that size and capital investment were insignificant in determining profitability. Jan, Khan and Muhammad (2016) conducted a study to measure the impact of debt on profitability. Their study concluded that there is a significant yet negative relationship of short-term debt, long-term debt and total debt of companies with ROA.

Mazviona, Dube and Sakahuhwa (2017) conducted a study on determining the performance of insurance companies operating in Zimbabwe. In their analysis they found that while liquidity has a positive and significant impact on profitability of insurance companies, the impact of size and capital investment was negative yet significant. The empirical results of a study conducted in Nigeria, showed a positive relationship of profitability with age of insurance companies. On the contrary, it depicted a significant yet inverse relationship of firm size and growth rate with profitability of the insurance companies. The study attributes the negative relationship to the diseconomies of scale that occurred due to uncontrolled increase of size of insurance companies in the country (Ajao & Ogieriakhi, 2018).

Hussaine and Joo (2019) studied the impact of micro-economic factors on profitability of life-insurance companies in India. The study depicted that liquidity, loss ratio, investment, operating

margin and tangibility had significant impact in determining profitability of life insurance companies. However, the findings illustrated an insignificant relationship between leverage and size with profitability. Abdeljawad and Dwaikat (2019) revealed that both age and size of the company has a positive and significant relationship with profitability, denoted by ROA and ROE of life insurance companies. The results also showed an insignificant relationship between liquidity, leverage and expense with profitability of the firm. Almajali and Shamsuddin (2019) conducted a study to identify the influence of capital structure of Jordan based insurance companies on their profitability. The conducted study concluded that short-term debt and long-term debt have positive correlation with ROE. The study also reveals a positive relation of leverage position of firms with profitability.

As portrayed by the literatures presented above, numerous studies have been conducted with the aim to determine the factors that influence the profitability of life insurance companies. However, the derived results vary as per the change in countries. This implies that, one model of determining profitability cannot be replicated in all circumstances.

In the context of Nepal, life insurance companies contribute considerably to the economy in terms of increasing domestic savings, enhancing financial stability, funding long term development projects and creating employment. Despite the importance of finding the factors that influence profitability of Nepalese life insurance companies, the sector has received minimal attention (Ghimire, 2015). Effective utilization of funds by insurance companies in Nepal can help unleash tremendous opportunities. Sakhuja (2003) also pointed out that the potential of insurance companies in Nepal are huge. In this regard, it is important for insurance companies to identify the factors that could help them earn ample profit and grow. Ghimire (2014) identified an insignificant relationship between the age of the firm and its profitability.

The study conducted by (Poudel, 2019) depicted a negative relation of liquidity with return on asset (ROA), whereas, factors like firm size, age and leverage had a positive relation. Similarly, the study depicted a negative relationship between liquidity and return on equity (ROE) and a positive relationship between firm size, age, leverage and tangibility. The regression analysis of the study identified firm size to be the most influential while determining profitability of insurance companies.

Financial performance is a general measure of a firm's overall financial health over a given period. The financial performance identifies how well a company generates revenues and manages its assets, liabilities, and the financial interests of its stakeholders. However, there are limited studies conducted for determining the major determinants of companies' financial performance. This study thus aims to analyze and classify the firm-specific factors that determines the financial performance of life insurance companies in Nepal. It focuses on analyzing the impact of firm size, liquidity, short term debt, long term investment and firm age on return on asset (ROA) and return on equity (ROE) of the life insurance companies. The study is divided into four sections. The first section constitutes introduction and literature review, section two provides a brief explanation on the sample, data and methodology. In section three and four, empirical findings and the derived conclusion has been presented respectively.

Methodology

The pooled cross-sectional data were used to examine the impacts of firm specific variables on financial performance in Nepalese life insurance companies. The study has employed descriptive and causal research designs adopting the regression model as used by Pradhan et al (2019). The target population of the study comprises all the life insurance companies listed in Nepal Stock Exchange Ltd. (NEPSE), which have been in operation for the last 10 years. Even though, 19 life insurance companies were in operation by mid-July 2019(Ashadh end, 2076), the sampling frame of the study consists of seven companies. The quantitative data for firm size, liquidity, short term debt, long term investment, firm age, return on asset (ROA) and return on equity (ROE) were collected from the financial statements of sample companies, Insurance Board of Nepal and Nepal Stock Exchange from 2009/10 to 2018/19. The study has employed descriptive statistics to describe the characteristics of firm specific variables and financial performance, whereas correlation analysis has been adopted to identify the direction and magnitude of relationship between different pair of variables. The regression analysis has been used to analyze the impacts of independent variables on financial performance. The different assumptions, normality and multicollinearity, of ordinary least square (OLS) regression have been tested prior to running the models. The list of life insurance companies selected for the study, along with the study period and total number of observations made are presented in the following table.

Table 1

Sample Nepalese life insurance companies selected for the study

| S.N. | Life Insurance Company | Study Period | Observations |
|------|---|-----------------|--------------|
| 1 | Asian Life Insurance Company Limited (ALICL) | 2009/10-2018/19 | 10 |
| 2 | Gurans Life Insurance Company Limited (GLICL) | 2009/10-2018/19 | 10 |
| 3 | Life Insurance Corporation Nepal Limited (LICN) | 2009/10-2018/19 | 10 |
| 4 | Nepal Life Insurance Company Limited (NLICL) | 2009/10-2018/19 | 10 |
| 5 | National Life Insurance Company Limited (NLICL) | 2009/10-2018/19 | 10 |
| 6 | Prime Life Insurance Company Limited (PLIC) | 2009/10-2018/19 | 10 |
| 7 | Surya Life Insurance Company Limited (SLICL) | 2009/10-2018/19 | 10 |

In order to examine the empirical effect of independent variables on financial performance of life insurance companies of Nepal, the following regression models are used:

Model 1:

$$ROA = \beta_0 + \beta_1 LSIZE + \beta_2 LQ + \beta_3 LSTD + \beta_4 LLINV + \beta_5 AGE + e$$

Model 2:

$$ROE = \beta_0 + \beta_1 LSIZE + \beta_2 LQ + \beta_3 LSTD + \beta_4 LLINV + \beta_5 AGE + e$$

Table 2*Variables and their measurement under the study*

| Variables | Notion | Expected priori sign | Measurement |
|-----------------------|--------|----------------------|--|
| Dependent variables | | | |
| Return on assets | ROA | | Net income divided by total assets |
| Return on equity | ROE | | Net income divided by total equity |
| Independent variables | | | |
| Firm size | LSIZE | Positive | The natural logarithm of total assets |
| Liquidity ratio | LQ | Positive | Currents assets divided by current liabilities |
| Short term debt | LSTD | Negative | The natural logarithm of short-term debt |
| Long term investment | LLTINV | Negative | The natural logarithm of long term investment |
| Firm age | AGE | Positive | Age of the company in years |

Firm Size

The size of the company can be measured by many variables, but most studies use total assets to measure the size of the company (Omondi & Muturi, 2013). It is believed that firms which are larger in size are better positioned to earn higher profit, as a result of greater economies of scale (Kripa & Ajasllari, 2016). A positive relationship between financial performance and size of insurance companies have been found by (Abdeljawad & Dwaikat, 2017; Dey, Adhikari & Bardhan, 2015; Almajali, Alamro, & Al-Soub, 2012). Henceforth, the following hypothesis has been developed for this study.

H1: There is a positive relationship between the size and financial performance of life insurance companies in Nepal.

Liquidity

Liquidity can be defined as the ratio which illustrates the ability of insurance companies to pay off its current liabilities (Kripa & Ajasllari, 2016). It includes cash flow from net premiums, investment returns and liquidation of assets (Chen & Wong, 2004). There are numerous studies

conducted with the objective to identify the relationship between liquidity and profitability of the insurance companies. Studies conducted by (Boadi, Antwi & Lartey, 2013; Ngwili, 2014; Hussaine & Joo, 2019; Mazviona & Sakahuhwa, 2017) concluded in their studies that there is a positive relationship between liquidity ratio and profitability of insurance companies. Henceforth, the following hypothesis has been developed for this study.

H2: There is a positive relationship between the liquidity and financial performance of life insurance companies in Nepal.

Short-term Debt

Short-term debt can also be referred to as current liabilities and indicates the funding structure of a firm. Chen and Wong (2004) concluded that there is negative but statistically significant relationship between debt and financial performance of insurance companies, and the findings were confirmed by (Jan, Khan & Muhammad, 2016) also. Henceforth, the following hypothesis has been developed for this study.

H3: There is a negative relationship between the short term debt and financial performance of life insurance companies in Nepal.

Long Term Investment

Long-term investment represents the capital investment of the firm - stocks, bonds, real estate – which it plans to hold for more than a year. Huge capital investment tends to have a negative implication on the future profitability of the firm (Li, 2004). Mazviona and Sakahuhwa (2017) have determined that financial performance of insurance company is negatively influenced by its long-term capital investment. Henceforth, the following hypothesis has been developed for this study.

H4: There is a negative relationship between the long term investment and financial performance of life insurance companies in Nepal.

Firm Age

Illaboya and Ohiokha (2016) defined the age of a firm as the number of years of incorporation of a company. Abdeljawad and Dwaikat (2017) conducted a study to identify the influence of age on profitability of insurance companies. It revealed that age the company has a positive and significant relationship with financial performance when measured in terms of both ROA and ROE. Henceforth, the following hypothesis has been developed for this study.

H5: There is a positive relationship between the age and financial performance of life insurance companies in Nepal.

Data Analysis and Results

Descriptive Statistics

Table 3 outlines the descriptive statistics of dependent and independent variables from the data derived from seven selected life insurance companies operating in Nepal during the period 2009/10-2018/19.

Table 3

Summary of Descriptive Statistics

The table consists of the summary of descriptive statistics of dependent and independent variables from the data derived from seven selected life insurance companies during the period 2009/10-2018/19. The dependent variables are ROA (return on asset defined as net income divided by total asset, in percentage) and ROE (return on equity defined as net income divided by total equity, in percentage). Similarly, the independent variables are, SIZE (size defined as the total asset of the firm, in million), LQ (liquidity defined as total assets divided by total current liabilities, in times), STD (short-term debt defined as the total short term debt of the company, in million), LTINV (long term investment as defined by the total long term investment, in million), and AGE (age defined as the number of years the firm had operated).

| Variables | Minimum | Maximum | Mean | Std. Deviation |
|-----------|---------|----------|------------|----------------|
| ROA | -0.69 | 9.83 | 2.0730 | 1.75163 |
| ROE | -0.82 | 12.23 | 2.3709 | 2.11511 |
| SIZE | 360.27 | 72417.84 | 13110.0191 | 15658.81501 |
| LQ | 1.56 | 1518.62 | 37.6420 | 184.00334 |
| STD | 0.19 | 2324.06 | 409.4183 | 518.49118 |
| LTINV | 0.00 | 41581.08 | 5940.4708 | 8613.14761 |
| AGE | 3.00 | 32.00 | 12.6716 | 7.57065 |

Table 3 illustrates that return on assets ranges from a minimum negative 0.69 to a maximum 9.83, leading to an average of 2.07 percent. Similarly return on equity ranges from a minimum negative 0.82 to a maximum 12.23, leading to an average of 2.37 percent. the descriptive statistics of the major variables derived from all 36 sample enterprises. The table depicts that an average size of Nepalese life insurance companies is 13110.0191million with average liquidity ratio of 37.64 times. The minimum age at the beginning of study period seems to be three years leading to a maximum age of 32 years, with an average 5940.4708 million long term investment by Nepalese life insurance companies.

Correlation

Table 4 depicts the correlation coefficients of dependent and independent variables of seven life insurance companies analyzed by the study. The table presents Pearson's correlation coefficient.

Table 4**Pearson's Correlation Coefficient for dependent and independent variables**

The following table depicts the bivariate Pearson's correlation coefficient between dependent and independent variables of selected life insurance companies operating in Nepal. It was analyzed with the data collected for the period of 2009/10-2018/19. The dependent variables are ROA (return on asset defined as net income divided by total asset, in percentage) and ROE (return on equity defined as net income divided by total equity, in percentage). Similarly, the independent variables are, SIZE (size defined as the total asset of the firm, in million), LQ (liquidity defined as total assets divided by total current liabilities, in percentage), STD (short term debt defined as the total short term debt of the company, in million), LTINV (long term investment as defined by the total long term investment, in million), and AGE (age defined as the number of years the firm had operated).

| Variables | ROA | ROE | SIZE | LQ | STD | LTINV | AGE |
|------------------|------------|------------|-------------|-----------|------------|--------------|------------|
| ROA | 1.000 | | | | | | |
| ROE | 0.969** | 1.000 | | | | | |
| SIZE | -0.314** | -0.315** | 1.000 | | | | |
| LQ | 0.064 | 0.047 | -0.101 | 1.000 | | | |
| STD | -0.332** | -0.340** | 0.766** | -0.114 | 1.000 | | |
| LTINV | -0.334** | -0.343** | 0.908** | -0.096 | 0.728** | 1.000 | |
| AGE | -0.278* | -0.315** | 0.523** | -0.131 | 0.348** | 0.457** | 1.000 |

Note: The asterisk signs (**) and (*) indicate that the results are significant at 1 percent and 5 percent level respectively.

Table 4 depicts a positive relationship between liquidity and financial performance of life insurance companies in Nepal. Liquidity tends to impact both ROA and ROE of the firm positively. This implies that optimal level of liquidity holding is an important financial decision for life insurance companies in Nepal as the ability of insurance companies to pay current liabilities and maintain liquid assets, assures better financial performance.

Other variables - firm size, short term debt, long term investment and age of the firm - have a negative relationship with ROA and ROE. The optimal capital structure theories depict that profitability increases with the increase in debt level, however, after exceeding the optimal ratio, the debts will have a negative impact on the financial performance. Similarly, bigger and old life insurance companies have more difficulty in making profit. Long term investment confirms that the companies have less liquid asset and thus, it tends to have a negative impact on the immediate profitability of the firm.

The table also depicts that, while firm size, short-term debt, long term investment and age, have a negative significant relationship with financial performance, but the liquidity of the firm has a positive insignificant relationship with financial performance.

Regression

This section presents the conclusions derived from regression analysis. To be more concise, it represents the regression results of size, liquidity, short-term debt, long term investment and age on ROA and ROE of life insurance companies in Nepal.

Table 5

Estimated regression results of size, liquidity, short term debt, long term investment and age on ROA.

The results have been derived from linear regression analysis of seven life insurance companies, studied over a period of ten years (2009/10-2018/19). The model is, $ROA = \beta_0 + \beta_1 LSIZE + \beta_2 LQ + \beta_3 LSTD + \beta_4 LLTINV + \beta_5 AGE + e$. The dependent variable is ROA (return on asset defined as net income divided by total asset, in percentage). Similarly, the independent variables are, LSIZE (the natural logarithm of the total asset of the firm, in million), LQ (liquidity defined as total assets divided by total current liabilities, in times), LSTD (the natural logarithm of the total short term debt of the company, in million), LLTINV (the natural logarithm of the long term investment as defined by the total long term investment, in million), and AGE (age defined as the number of years the firm had operated).

| Dependent variable: return on assets (ROA) | | | | | | |
|--|---------------------|--------------------|----------------------|---------------------|--------------------|----------------------|
| Regression | (1) | (2) | (3) | (4) | (5) | (6) |
| Intercept | 7.442 (5.639)* | 2.050 (9.331)** | 3.951 (5.081)** | 4.404 (5.690)* | 2.889 (7.115)* | 4.313 (5.469)** |
| LSIZE | -0.611 (-4.112)* | | | | | |
| LQ | | 0.001 (0.515) | | | | |
| LSTD | | | -0.356 (-2.505)** | | | |
| LLTINV | | | | -0.313 (-3.118)* | | -0.262 (-2.088)** |
| AGE | | | | | -0.064 (-2.337) | -0.023 (-0.676) |
| Adjusted R2 | 0.194 | 0.000 | 0.074 | 0.117 | 0.063 | 0.109 |
| SEE | 1.572 | 1.761 | 1.686 | 1.646 | 1.695 | 1.653 |
| F-value | 16.910 | 0.265 | 9.725 | 9.725 | 5.460 | 5.050 |

Note: Figures in parentheses are t-values. The asterisk signs (**) and (*) indicate that the results are significant at 1 percent and 5 percent level respectively.

Table 5 shows the regression results after regressing ROA on firm specific variables. In model 1 after introducing LSIZE as independent variable and by controlling other variables, the impact is found negative with the coefficient of 0.611 and significant at 99 percent confidence level with 19.4 percent explanatory power. The beta value in model 2 exhibits that there exists a positive but statistically insignificant relationship between liquidity and ROA. Null value of adjusted R square depicts that there is no explanatory power of liquidity towards ROA. It indicates that an increase

in liquid asset has no role to improve the financial performance of life insurance companies operating in Nepal. The model 3 exhibits that the solo explanatory power of LSTD is found 7.4 percent with the negative beta value 0.356 and significant at 95 percent confidence level. In model 4, after introducing LLTINV as independent variable and by controlling other variables, the impact is found negative with the coefficient of 0.313 and significant at 99 percent confidence level with explaining variation of 11.7 percent. The beta value of model 5 is negative 0.064 but statistically insignificant with adjusted R square 6.3 percent. In model 6, introducing LLTINV and AGE together by controlling other variables, the impact of long-term investment is found negative and statistically significant at 95 percent confidence level. The F-value of model six 5.050 is significant at 95 percent level of confidence which shows that model is fit. Likewise, adjusted R-square of 0.109 shows that 10.90 percent of financial performance can be explained by the long-term investment and firm age. All the models except model 2 are seem to be fit. Prior to running the OLS regression model, the study has tested the normality and multicollinearity to fulfill the assumption of the model used.

Table 6

Estimated regression results of size, liquidity, short term debt, long term investment and age on ROA.

The results have been derived from linear regression analysis of seven life insurance companies, studied over a period of ten years (2009/10-2018/19). The model is, $ROE = \beta_0 + \beta_1 LSIZE + \beta_2 LQ + \beta_3 LSTD + \beta_4 LLTINV + \beta_5 AGE + e$. The dependent variable is ROE (return on equity defined as net income divided by total equity, in percentage). Similarly, the independent variables are, LSIZE (the natural logarithm of the total asset of the firm, in million), LQ (liquidity defined as total assets divided by total current liabilities, in times), LSTD (the natural logarithm of the total short term debt of the company, in million), LLTINV (the natural logarithm of the long term investment as defined by the total long term investment, in million), and AGE (age defined as the number of years the firm had operated).

| Dependent variable: Return on assets (ROE) | | | | | | | | |
|--|-------------------------|-----------------------|-------------------------|-------------------------|---------------------|--------------------------|--------------------------|-------------------------|
| Regression | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Intercept | 8.729 (5.451) * | 2.350 (8.851) * | 4.712 (5.034) * | 5.459 (5.932) * | 3.486 (7.196)* | 5.684 (5.661)* * | 5.322 (5.688)* * | 8.664 (4.571) * |
| LSIZE | -0.724 (- 4.013)* | | | | | | | -0.712 (- 2.861)* |
| LQ | | 0.001 (0.381) | | | | | | |
| LSTD | | | -0.044 (- 2.594)* | | | -0.125 (-0.576) | | |
| LLTINV | | | | -0.414 (- 3.475)* | | -0.356 (- 2.264)** | -0.338 (- 2.286)** | |
| AGE | | | | | -0.088 (-2.677)* | | -0.034 (-0.861) | -0.003 (-0.065) |

| | | | | | | | | |
|-------------|--------|-------|-------|--------|-------|-------|-------|-------|
| Adjusted R2 | 0.186 | 0.000 | 0.080 | 0.144 | 0.085 | 0.135 | 0.140 | 0.174 |
| SEE | 1.908 | 2.129 | 2.029 | 1.957 | 2.022 | 1.967 | 1.961 | 1.923 |
| F-value | 16.105 | 0.145 | 6.727 | 12.074 | 7.166 | 6.141 | 6.384 | 7.931 |

Note: Figures in parentheses are t-values. The asterisk signs (**) and (*) indicate that the results are significant at 1 percent and 5 percent level respectively.

Table 6 depicts the regression results after regressing ROE on firm specific independent variables. In model 1 after introducing LSIZE as independent variable and by controlling other variables, the impact is found negative with the coefficient of 0.724 and significant at 99 percent confidence level with 18.6 percent explaining variation. The model 2 exhibits that there exists a positive but statistically insignificant relationship between liquidity and ROA with the beta coefficient of 0.001. Null value of adjusted R square depicts that there is no explanatory power of liquidity towards ROA. It indicates that an increase in liquid asset cannot ensure the improvement in the financial performance. The model 3 exhibits that the individual explanatory power of LSTD is found 8 percent with the negative beta coefficient 0.044 and significant at 99 percent confidence level. In model 4, after introducing LLTINV as independent variable and by controlling other independent variables, the impact is found negative with the coefficient of 0.414 and significant at 99 percent confidence level with explaining variation of 14.4 percent. The beta coefficient of model 5 is negative 0.088 but statistically insignificant with adjusted R square 8.5 percent. In model 6, introducing LSTD and LLTINV together by controlling other independent variables, the impact of long-term investment is found negative and statistically significant at 95 percent confidence level with adjusted R square 13.5 percent. In model 7, after introducing LLTINV and AGE together as independent variables and by controlling other variables, the impact is found negative for both but statistically significant at 95 percent confidence level for LLTINV with negative beta 0.338 and adjusted R square explaining variation of 14 percent. The F-value of model eight 7.931 is significant at 99 percent level of confidence which shows that model is fit. Likewise, adjusted R-square of 0.174 shows that 17.4 percent of ROE can be explained by the firm size and firm age of life insurance companies operating in Nepal. All the models except model 2 are seem to be fit. Prior to running the OLS regression model, the study has tested the normality and multicollinearity to fulfill the assumption of the model used.

Discussion

The study adopted correlation and ordinary least square (OLS) regression model to analyze the relationship and impacts of firm specific variables – firm size, liquidity, short-term debt, long-term investment and firm age – on financial performance measured by ROA and ROE. The study reveals feeble relationship and a negligible explanatory power of liquidity towards ROA. The study findings are not consistent with (Kripa & Ajasllari, 2016; Charumati, 2012; and Ngwili, 2014) which observed a positive impact of liquidity on profitability. The study also illustrates that size has negative and statistically significant relationship with ROA. Similar results have been derived from the study conducted by (Mazviona & Sakahuhwa, 2017; Ajao & Ogieriakhi, 2018), but contrasts with the study conducted by (Kripa & Ajasllari, 2016; Abdeljawad & Dwaikat, 2017; Dey, Adhikari & Bardhan, 2015; Almajali, Alamro, & Al-Soub, 2012). Further, the study identifies that long-term investment has negative and insignificant relationship with the

profitability, which is consistent with (Ghimire, 2014; Kripa & Ajasllari, 2016). Firm age of life insurance companies has negative but insignificant impact on ROA. This result is inconsistent with the finding of (Abdeljawad & Dwaikat, 2017). Short-term debt or higher portion of current liabilities of the firm also has a negative impact on the profitability of the insurance companies. This result consistent with (Chen & Wong, 2004; Jan, Khan & Muhammad, 2016).

The study reveals the very weak relationship and almost no explanatory power of liquidity towards ROE. This result is not similar with the (Boadi, Antwi & Lartey, 2013; Hussaine & Joo, 2019; Mazviona & Sakahuhwa, 2017) who found positive relationship of liquidity with ROA. The study depicts a negative and significant relationship of size which is similar to the results of (Mazviona & Sakahuhwa, 2017; Ajao & Ogieriakhi, 2018), but contrasts with the study conducted by (Kripa & Ajasllari, 2016; Abdeljawad & Dwaikat, 2017; Dey, Adhikari & Bardhan, 2015; Almajali, Alamro, & Al-Soub, 2012), short-term debt, long-term investment and age of the firm with financial ROE individually, and the findings are consistent with the studies conducted by (Jan, Khan & Muhammad, 2016). However, the firm age does not have a significant but yet a negative relationship with ROE of life insurance companies operating in Nepal, which is inconsistent with the finding of (Abdeljawad & Dwaikat, 2017). The study has identified that an increase in size, short-term debt, long-term investment and age inversely affects the ROE of life insurance companies, consequently decreasing the profitability.

Conclusion

Life insurance companies are an essential component of a nation as it plays a crucial role in ensuring overall financial and economic stability. The future profitability of insurance industry holds immense importance for maintaining financial stability of the overall financial sector. It has thus become imperative to determine the factors that influence the financial performance of these firms. While such studies did not get precedence in the past, over the last few years, the number of studies conducted in this regard has been increasing. However, the derived results vary as per the change in countries. This implies that, one model of determining financial performance cannot be replicated in all circumstances. Despite the scenario, the studies that help determine factors that have significant impact on financial performance of life insurance companies in Nepal is minimal. This study is thus designed with the aim of determining the effect of various firm-specific factors - firm size, liquidity ratio, short-term debt, long-term investment and firm age on financial performance – measured by ROA and ROE - of life insurance companies operating in Nepal.

The study concludes that the most influencing factors for the financial performance in Nepalese life insurance companies are firm size and long-term investment. Along the same line, over-investment in long-term investments should be critically considered as it can have adverse effect on future profitability of life insurance companies. Life insurance companies should increase their size only after careful examination over financial performance as it can result in diseconomies of scale and reduce the firm's profitability. Further, it also concludes that the financial performance decreases moderately with the increase in short term debt and operational years in Nepalese life insurance companies. Thus, in order to optimize profit, the companies should focus on the management of their total asset, long-term investment, current assets and current liabilities. The study sheds light upon the fact that life insurance companies that operate in Nepal benefit more when they maintain liquid assets. The increase in observations in secondary data or the inferences drawn from the respondents might have brought the conclusive effect of liquidity on financial

performance. The future research studies may focus on using panel data analysis including other factors such as loss ratio, operating margin, premium growth, and tangibility as independent variables.

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