Antecedents of Profitability of Non-Life Insurance Companies: Nepalese Perspective

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ABSTRACT

Current study aims to investigate the determinants that has impacted on non-life insurance companies' profitability in Nepalese scenario. Four industries were selected as sample purposively. The data from 2011/12 to 2020/21 AD have been incorporated. The study has chosen to use a descriptive and correlational research design. The firm size, price earnings ratio, earnings per share, and claim paid are the predictors and profitability proxied by ROA was the predicted variable. The study found that the most prominent determinants for profitability in non-life insurance companies are EPS and company size. The PE ratio and claims paid have been found as less prioritized factors of the predicted variable.

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Introduction

The strong insurance companies support economic growth by boosting the nation's capacity to take on risk and supplying long-term funding for infrastructure development. The insurance companies are essential in both developed as well as developing countries to promote economic expansion, to effective allocation of the resources, to lower the transaction costs, to increase the liquidity, to make investment economics of scale easier, and to spread financial losses (Sah & Magar, 2021). The major detrimental factors of profitability for insurance industries are financial leverage and size in the context of Nepal (Bhattarai, 2020). In all sorts of nations, the insurance companies are a significant player of financial service sector, helping to promote economic expansion, effective resource allocation, lower transaction costs, increase liquidity, enable parsimonies of gauge in investment, and distribute financial losses (Sah & Magar, 2021). A large number of policy surrender is due to mistrust over the financial sustainability of insurer is the poor case of liquidity stress that an insurer can encounter (Kamau & Njeru, 2016). Insurance companies are in the same line of banking institutions by minimizing risk through pooling (Daare, 2016). The liquidity risk refers to a risk of inadequate convertible resources to pay expenditures created from different sources such as; policies, potentiality of losses (Kamau & Njeru, 2016). As a results, financial institutions are channelizing financial resources and transfer resources and transfer risk from one monetary element to another monetary elements for assisting in agreement and trade (Saeed & Khurram, 2015). The liquidity, capital structure, macroeconomic indicators, and other firm-specific features of the insurance industry have been used in the study of Zubairi (2013). The firm's sales are positively correlated with market portfolio. The degree of operating leverage is embedded in the intrinsic business risk and a significant portion of cross-sectional variation in the excess return in dollar is explained by the intrinsic business risk and the degree of financial leverage (Abid & Mseddi, 2004). The management of liquidity and liquid assets focuses on cash inflows and outflows. It also focuses on a trade-off between liquidity versus investment of surplus cash in order to improve the profitability (Kontus & Mihanovic, 2019).

Ahmadinia et al., (2012) stated that the choosing appropriate ratio evaluating advantages and disadvantages of debt ratio while maintaining same level of assets and investment goals based on static trade-off theory. The debt to equity ratio is determined by weighing the costs and benefits of various debt levels. Naveed et al., (2011) argued that the performance and transfer of risk of financial intermediaries have influenced to economic growth. However, a systematic risk may be created by their insolvency which affect adversely to the entire economy. If the premium received are low, the profit might be low that will not be able to cover even fixed interest charges. (Naveed et al., 2010). In the absence of financial intermediaries such as insurance companies, the world would be unstable therefore Abhor (2008) confirmed the increase of insurance companies exponentially across the world. The companies which are managing debt resources are able to maintain high level of financial leverage. The performance of firm depends on the capacity of insurers’ in acquiring and allocating the resources in various conducts for creating a competitive edge (Iswatia & Anshoria, 2007).
Empirical research suggested that firm level factors like company size, premium growth, risky nature of the firm, and macro-economic factors such as gross domestic products, exchange rate and lending ratio determines the financial performance, capital structure, and level of leverage of the firms (Amidu, 2007; Abhor, 2008). However, static trade-off theory suggests that bigger organizations have less chances of insolvency so they can manage debt financing. Amidu (2007) supported to this nation assuming that the diversified nature of larger firms hinders to be insolvent. An excellent performance indicates how effectively and efficiently management use the resources of the company, which benefits the entire economy of the nation (Naser & Mokhtar, 2004). According to Mseddi and Abid (2004) concluded that the financial leverage has a significant impact on a company's value. This means that as the various levels of leverage of American businesses increase, so does the company's worth, which is evident given the advantages of debt as capital. Eljelly (2004) discovered that the relationship between liquidity and profitability is more evident in firms with high current ratios and longer cash conversion cycles. The study found that the cash conversion cycle or the cash gap is of more essential measure of liquidity than current ratio that affects the profitability at the industry level. The size variable has significant impact on profitability at the industry level. Chen and Wong (2004) presented that more investment is possible only through money available for investment and return on investment which is coined as motivation, in order to stay strong in the face of increasing demand for claim payments, insurance companies have understood in recent years that they must develop appropriate working capital management practices (Abid & Mseddi, 2004).

In practice every developed and developing state, the insurance market would be a significant player in the financial sector. It fosters investment, distributes financial losses, reduces transaction costs, allocates resources efficiently, increases economic growth, and creates liquidity (Das et al., 2003). Financial performance focuses on factors directly related to the financial performance presented through financial report. A firm's results are measured in different aspects such as; productivity, profitability and market premium (Walker, 2001). Lastly, as the company's solvency is ultimately linked to profitability and liquidity, a more thorough evaluation of the typology should take into account all three facets; profitability, liquidity, and solvency. In order to illustrate the association between the variables in the study, different multidimensional pattern of relationship between firm performance and its detrimental factors were developed (Ostroff & Schmitt, 1993). Based on the given literature backdrops, the study aimed over the detrimental factors of performance of non-life insurance companies in Nepal.

Literature Review

Rejda (2007) stated the principles that had included the elements of a legal contract, insurable interest, highest level of good faith, assignment and nomination, premium and return of premium as the foundation of life insurance contract. Non-life insurance is a social tool that offers monetary compensation for the consequences of bad luck (Hansell, 1999). Non-life insurance is important since it offers better investment opportunities and financial security, as noted by Feyen et al., (2011). Non-life insurance
also improves policyholders' quality of life by relieving them of fear, uncertainty, and anxiety. Naveed et al., (2011) shown that economic growth is negatively affected by the effectiveness and risk transfer of financial intermediaries, while inability of intermediaries to provide solvency could lead to a systemic crisis with negative effects on the entire economy. Chen and Wong (2004) claimed that accessibility of funds and new investment depend on the high profit margin. Kozak (2011); Brown and Henderson (2007); Al-Shami (2013) and Swiss Re (2008) have undertaken the study in determining the profitability of non-life insurance companies. Similarly, Wright and Smith (1992) have undertaken research to determine the factors affecting the profitability of non-life insurance companies. Most of studies considered total assets to represent the firm size (Omondi & Muturi, 2013).

The influential factor for the profitability is considered to the firm size because they can be positioned in the market, can operated in economies of scale, and earn higher profit (Flamini et al., 2015). The insurer’s main sources of liquidity included net premium income, investment income, and asset liquidation (Chen & Wong, 2004). In insurance business, liquidity and profitability showed positive relationship (Naveed et al., 2011) while the negative connotation was found between liquidity and profitability (Chen & Wong, 2004). Malik (2011) revealed a significant association between growth rate and profitability measures. Though, the vintage of the company was not found as the significant predictor of profitability. According to Talat and Asghar (2013), non-life insurers' performance was adversely correlated with risk and leverage, while profitability was favorably connected with size, investment, past year performance, and age of the business. Leverage, liquidity, size, and competency of management index have been demonstrated by Almajali et al., (2012) to have a beneficial influence on the performance of financial institutions. Razak et al., (2021) concluded that the performance of the insurer was inversely correlated with leverage. Alharbi (2019) shown the beneficial correlation between profitability, efficiency, and human capital. Charumathi (2012) demonstrated how the size and liquidity of non-general insurance businesses were impacted by the financial activities' profitability. Yuvaraj and Abate (2013) concluded that the capital, the size, the ratio of growth in liquidity, and the leverage were the primary factors for profitability in insurance sector of Ethiopia. Pierce et al., (2013) revealed that the operating leverage was considered as an important factor for profitability although an insurance company's financial leverage and liquidity had an adverse relationship with it. Joseph et al., (2013) found a positive relationship among the insurance company's profit and its gross written premiums. Daniel and Tilahun (2012) found that the ratio of loss (claim) was inversely correlated with profitability.

Mirie and Cyrus (2014) concluded that the performance of any company is determined by the earning assets and investment yield. Arif and Showket (2015) revealed that the liquidity risk, size, and volume of capital were the significant predictors of financial performance of non-life insurance companies in India. However, the financial performance is adversely related to management, solvency, and underwriting risks. Moro and Anderioni (2014) concluded that the reinsurance had no effect on the financial performance of insurers. Berhe and Kaur (2017) found that size, capital
adequacy, liquidity ratio, leverage, and GDP growth rate were the important factors of profitability of insurers. The market share, inflation rate, leverage ratio, and loss ratio were not the good predictor of profitability in the context of insurance business. Risal (2018) found that the level of employee engagement in the insurers determines the profitability of the company irrespective of other factors.

Almajali (2018) recommended that the financial performance mostly depends on the insurers’ assets. Maria and Ghiorghe (2019) concluded that insurance companies as the component of financial system enhances the economic growth and stability. Thus, the analysis of financial performance is suitable in the macroeconomic context. The leverage, size, growth of gross written premiums, underwriting risk, risk retention ratio, and claim paid are considered as the detrimental factors of financial performance in Romania insurance sector. Hamal (2020) concluded that the increase in leverage would decrease the profitability of insurers in Nepal. Bhattarai (2020) revealed that the profitability in Nepalese insurance market was influenced by the size and the leverage. Sah and Magar (2021) demonstrated that return on assets was positively impacted by firm size. Pandey and Risal (2021) concluded that knowledge of the fundamental dynamics of customer preferences, service providers, acceptability, and health insurance product pricing were essential for the successful implementation of health insurance coverage in Nepal. Risal et al., (2022) revealed that insurance companies had played a significant role as a component of financial system for the development of socio-economic sector of the country. Isayas (2022) concluded that the profitability of banks was positively impacted by size, liquidity, asset tangibility, capital adequacy, leverage, and real GDP growth rate.

**Hypotheses**

**H1:** There is a positive association between firm size and return on assets.

**H2:** There is a positive association between the earnings per share and return on assets.

**H3:** There is a positive association between the price earnings ratio and return on assets.

**H4:** There is a positive association between claim paid and return on assets.

**Research Methodology**

The study had adopted explanatory and correlational research design. Insurance Authority of Nepal (NIA) (2022) had reported 14 non-life insurance companies listed in Nepal. The four non-life insurance companies were purposefully chosen as the sample of the study using purposive sampling method. The four non-life insurance firms were chosen based on the profit earned and expansion of branch i.e. business expansion. The data were collected from the annual reports. The data was obtained from the annual reports (2011/12 to 2020/21) for 10 years. Descriptive and inferential statistics were used in the study to analyze the data using SPSS. Ratio analysis, a financial tool, had also been applied. The correlation and regression analysis were used to assess the relationship and impact of independent variables on dependent variable.

**Model Specifications**

\[ \text{ROA} = a + B_1FS_1 + B_2PER_2 + B_3EPS_3 + B_4CP_4 + e \]
Table 1: Literature Matrix

<table>
<thead>
<tr>
<th>Authors</th>
<th>Major Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malik (2011)</td>
<td>The ratio of leverage, solvency margin and inflation found negative relationship with profitability.</td>
</tr>
<tr>
<td>Almajali et al., (2012)</td>
<td>The leverage, liquidity and insurance premium had positive effect on the performance.</td>
</tr>
<tr>
<td>Lee &amp; Lee (2012)</td>
<td>The underwriting, ROA, line of business concentration, ROI, and liquidity ratio were the significant predictors of financial performance.</td>
</tr>
<tr>
<td>Charumathi (2012)</td>
<td>Liquidity, scale, and leverage are the major predictor of financial activities in non-general insurance businesses' profitability.</td>
</tr>
<tr>
<td>Daniel &amp; Tilahun (2012)</td>
<td>Profitability had a negative relationship with the ratio of loss (claim) and leverage. The main indicators of Ethiopian insurance performance were size, claim ratio, leverage ratio, and tangibility.</td>
</tr>
<tr>
<td>Talat &amp; Asghar (2013)</td>
<td>The leverage and earnings were negatively related with performance of non-life insurers.</td>
</tr>
<tr>
<td>Yuvaraj &amp; Abate (2013)</td>
<td>The two most significant variables influencing the profitability were; ratios of leverage and liquidity in Ethiopia.</td>
</tr>
<tr>
<td>Pierce et al., (2013)</td>
<td>The insurers profitability was negatively impacted by operating costs, financial leverage, and firm size and positively impacted by operating leverage.</td>
</tr>
<tr>
<td>Mirieand &amp; Cyrus (2014)</td>
<td>Financial performance is determined by the earning assets and investment yield.</td>
</tr>
<tr>
<td>Moro &amp; Anderioni (2014)</td>
<td>The performance had not been leveraged by the insurance.</td>
</tr>
<tr>
<td>Arif &amp; Showket (2015)</td>
<td>Financial performance of non-life insurers in India was positively influenced by liquidity risk and negatively correlated with solvency risk.</td>
</tr>
<tr>
<td>Rajiben (2016)</td>
<td>The result had shown the insignificant impact of ROA on profitability.</td>
</tr>
<tr>
<td>Berhe &amp; Kaur (2017)</td>
<td>Profitability is mostly determined by the liquidity ratio.</td>
</tr>
<tr>
<td>Almajali (2018)</td>
<td>Financial performance is led by increase in company assets.</td>
</tr>
<tr>
<td>Maria &amp; Ghiorghe (2019)</td>
<td>The profitability is determined by the leverage, size, growth in gross written premiums, underwriting risk, risk retention ratio, and claims paid in Romanian insurers.</td>
</tr>
<tr>
<td>Alharbi (2019)</td>
<td>Human capital performance is the important factor of profitability.</td>
</tr>
<tr>
<td>Hamal (2020)</td>
<td>Liquidity increment is the major predictor of Profitability in Nepalese non-life insurance business.</td>
</tr>
<tr>
<td>Bhattarai (2020)</td>
<td>The primary factors influencing profitability in insurance businesses in Nepal were their size and level of financial leverage.</td>
</tr>
<tr>
<td>Sah &amp; Magar (2021)</td>
<td>Return on assets is determined by the firm size.</td>
</tr>
<tr>
<td>Razak et al., (2021)</td>
<td>Insurer’s performance is adversely related to leverage in the financial sector.</td>
</tr>
<tr>
<td>Isayas (2022)</td>
<td>Bank profitability was positively impacted by leverage, real GDP growth rate, capital adequacy, asset tangibility, firm size, and liquidity ratio. Banks’ profitability was negatively impacted by the firm age and the inflation rate.</td>
</tr>
</tbody>
</table>

Source: Previous Review of Literatures
Figure 1: Conceptual Framework
Source: Almajali et al., (2012); Danial & Tilahun (2012); Talat & Asghar (2013); Pierce et al., (2013); Maria & Ghiorghe (2019); Bhattarai (2020); Sah & Magar (2021); and Isayas (2022).

Results

Descriptive Analysis

Table 2 shows that the high deviation is found in terms of firm’s size in non-life insurance companies in Nepal. It indicated non-uniformity in their business. The price-earning ratio’s value ranged from negative to highly positive, suggesting that it is not just a useful indicator for assessing the performance of non-life insurers in Nepal. Similar findings are obtained with earnings per share, which ranged from negative to positive. It had indicated that the non-life insurers did not act in unison. The claims paid is not found uniform in the study.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Min.</th>
<th>Max.</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>FS</td>
<td>366.31</td>
<td>14835.70</td>
<td>2234.87</td>
<td>2397.86</td>
</tr>
<tr>
<td>PER</td>
<td>-3.63</td>
<td>71.96</td>
<td>20.71</td>
<td>16.58</td>
</tr>
<tr>
<td>EPS</td>
<td>-54.26</td>
<td>106.39</td>
<td>38.32</td>
<td>24.84</td>
</tr>
<tr>
<td>CP</td>
<td>79.17</td>
<td>4378.26</td>
<td>789.70</td>
<td>862.17</td>
</tr>
<tr>
<td>ROA</td>
<td>-7.14</td>
<td>23.98</td>
<td>8.45</td>
<td>5.86</td>
</tr>
</tbody>
</table>

Source: Annual Reports of Sampled Insurers

Correlation Analysis

The association between return on assets and price earnings ratio, claim paid, business size, and earnings per share are investigated using the Bivariate Pearson's Correlation analysis.
Table 3: Correlation Matrix (ROA)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Ln_EPS</th>
<th>Ln_CP</th>
<th>Ln_FS</th>
<th>PER</th>
<th>ROA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ln_EPS</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ln_CP</td>
<td>-</td>
<td>1</td>
<td></td>
<td>0.133</td>
<td></td>
</tr>
<tr>
<td>P-value</td>
<td>0.419</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ln_FS</td>
<td>-</td>
<td>.717*</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P-value</td>
<td>0.750</td>
<td>0.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PER</td>
<td>-</td>
<td>.581*</td>
<td>.451*</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>P-value</td>
<td>0.264</td>
<td>.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROA</td>
<td>.681*</td>
<td>-</td>
<td>-</td>
<td>0.142</td>
<td>0.11</td>
</tr>
<tr>
<td>P-value</td>
<td>0.000</td>
<td>0.382</td>
<td>0.162</td>
<td>0.49</td>
<td></td>
</tr>
</tbody>
</table>

**. Coefficient is significant at 1 percentage level of significance (2-tailed).**

Source: SPSS Output

The association between return on assets and price earnings ratio, claim paid, size, and earnings per share is shown in Table 3. With a magnitude of 0.681, a significant positive and substantial link between earnings per share and return on assets is found in the study. The return on assets is negatively correlated with the claim paid, business size, and price earnings ratio, with respective magnitudes of 0.142, 0.226, 0.111, and 0.079. There is no discernible association between return on assets and claims paid, size, and price earnings ratio.

Regression Analysis

The impact of price earnings ratio, size, claim paid, and earnings per share on return on assets is examined using multiple linear regression analysis.

Model Specifications.

\[ ROA = \alpha + \beta_1FS + \beta_2PER + \beta_3EPS + \beta_5CP + \mu \]

Table 4: Impact Analysis of PER, EPS, CP, and FS on ROA.

<table>
<thead>
<tr>
<th>R Squar e</th>
<th>Adjusted R Square</th>
<th>SE of the Estimate</th>
<th>F</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>.767</td>
<td>.588</td>
<td>.511</td>
<td>3.75</td>
<td>7.61</td>
</tr>
</tbody>
</table>

Model Coefficient t-value

1 (Constant) 18.592 1.059 .298

PER .001 .023 .982

EPS 7.646 5.715 .000

CP 1.328 1.305 .201

FS -2.753 -2.097 .044

Source: SPSS Output

Table 4 depicts that the return on asset had been explained by 58.80 percent by earnings per share, price earnings ratio, claim paid and firm size. The adjusted R-square for the model is 0.511 with the standard error of estimate of 3.75. The F-statistic of 7.611 is significant at 5 percent level of significance indicated the fitness of the model. The beta coefficient of price earnings ratio is 0.001 which indicates no effect on return on assets. Likewise, having 7.646 beta coefficient, the
earnings per share have strongest effect on return of assets. The analysis indicated that one unit increase in earnings per share would lead to 7.646 unit increase in return on assets. The beta coefficient of claim paid is 1.328 indicates that one unit increase in claim paid would lead to 1.328 unit increase in return on assets. The firm size has beta coefficient of -2.753 means that one unit increase in firm size would lead to 2.753 unit decrease in return on assets. The corresponding p-value of earnings per share and firm size are 0.000 and 0.044 respectively. Thus, earning per share and firm size have significant impact on return on assets.

Table 5: Test of Hypothesis

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: There is a positive association between company size and return on assets.</td>
<td>Accept</td>
</tr>
<tr>
<td>H2: There is a positive association between earnings per share and return on assets.</td>
<td>Accept</td>
</tr>
<tr>
<td>H3: There is a positive association between price earnings ratio and return on assets.</td>
<td>Reject</td>
</tr>
<tr>
<td>H4: There is a positive association between claim paid and return on assets.</td>
<td>Reject</td>
</tr>
</tbody>
</table>

Source: SPSS Output and Data Analysis Results

Discussions and Conclusions

Return on assets and earnings per share are positively correlated. This finding is similar to the study findings of Almajali (2018); Berhe and Kaur (2017); and Maria and Ghiorghe (2019). The results is contradicted to the findings of Rajiben's (2016). Moreover, strong relationship was found between return on assets and earnings per share. This result is in line with the study findings of Malik (2011). Likewise, negative relationship was discovered among return on assets and the claims paid, size, and price earnings ratio. The results align with the findings of Razak et al., (2021). Moreover, there is no substantial correlation between return on assets and claim paid, business size, or price earnings ratio. This conclusion is corroborated by Malik's (2011) findings. This discovery, however, conflicts with the findings of Almajali et al., (2012) as well as Talat and Asghar (2013). According to Lee and Lee (2012), business size found to be the important factors for predicting profitability. As a result, this result conflicts with the conclusions of this investigation. Similarly, low correlation was found between return on assets and claims paid, size, and price earnings ratio. The results are in the vein of Daniel and Tilahun (2012) findings. Thus, given the facts, it is evident that earnings per share and company size are the two major determinants of the profitability of Nepalese non-life insurers.

Implications

Earning per share and firm size had significant impact of return on assets. For Nepalese non-life insurers to remain profitable and continuous growth, the optimization in earnings per share and size is must, which would be the major implication for policy makers in Nepal. Since, the price-earnings ratio is not found as a good detrimental factor of profitability, insurers need not to consider price earnings ratio while taking decision. Thus, the policy level authority and managers of non-life insurers should concern on this subject matter. It follows that cutting back on operating costs is essential to increase the profitability of Nepalese non-life insurers. Study in the similar area can be undertaken changing the population or taking more data
base so that the study finding can further be robustly tested and more concretely generalized.

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