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# Corporate Governance Quality and Earnings Management in Nepalese Insurance Companies

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## Abstract

The study examines the effect of corporate governance quality on earnings management in Nepalese insurance companies. Return on assets and return on equity are selected as the dependent variables. The selected independent variables are board size, independent director, women director, government ownership, foreign ownership and insurance size. The study is based on secondary data of 15 insurance companies with 105 observations for the period from 2015/16 to 2021/22. The data were collected from the annual reports of the selected insurance companies and annual report published by Rastriya Beema Authority. The regression models are estimated to test the significance and effect of corporate governance quality on the earnings management of Nepalese insurance companies.

The study showed that independent director has a positive impact on return on assets and return on equity. It implies that increase in number of independent directors in board leads to increase in return on assets and return on equity. Similarly, women director has a negative impact on return on assets and return on equity. It implies that increase in number of women directors in board leads to decrease in return on assets and return on equity. However, board size has a negative impact on return on assets and return on equity. It means that increase in board size leads to decrease in return on assets and return on equity. Similarly, government ownership has a negative impact on return on assets and return on equity. It shows that increase in government ownership leads to decrease in return on assets and return on equity. Similarly, foreign ownership has a positive impact on return on assets and return on equity. It implies that increase in foreign ownership leads to increase in return on assets and return on equity.

*Keywords:* board size, independent director, women director, government ownership, foreign ownership, insurance size, return on equity, return on assets

## 1. Introduction

Corporate governance is crucial to build a marketplace trust and attract investors in the corporation, as well as, corporate governance encourage investors' confidence by ensure the existence of independent board of

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directors. Moreover, it helps provide a high level of confidence degree which is very necessary for the whole market operation, as it considers adherence to business ethics principles (Guo and Kga, 2012). Firms' governance plays an important role in preventing accounting frauds and firms which have a weak governance structure being more prone to accounting frauds. Further, the failure in preventing these scams has fueled many debates on the effectiveness of current corporate governance rules, principles, structures and mechanisms. Butt and Hasan (2009) stated that corporate governance as a philosophy and mechanism that entails processes and structure which facilitates the creation of shareholder value through management of corporate affairs in such a way that ensures the protection of the individual and collective interest of all the stakeholders. A key component of the system for assessing an organization's effectiveness and the dependability of its management is corporate governance. In order to increase competitiveness and performance, firms constantly search for new business prospects, particularly in the current dynamic and globalized economic climate (Suhaimi *et al*., 2017). Poor corporate governance, including lack of responsibility for work, lack of risk management skills, low corporate social responsibility, tax non-compliance and weak internal control, pose risks to the organization that reduces its reputation and increase fraud and moral hazard in the organization

Corporate governance is fundamentally connected to avoiding manipulation of financial records, and reducing the agency problem. The board of directors is responsible for keeping a watch on the firms and management activities and secures the interest and apprehensions of all the shareholders regarding their interest in the firm's profitability. They are responsible for acquiring the best management professionals from diverse human capital pool to keep up with the pace of the corporate competitive environment. There are number of boards' diversity mechanisms and constructs i.e., board size, board composition, board education level, boards gender diversity, non-executives' directors, executives directors which ultimately contribute towards the firm performance and success. Abbadi et al. (2016) investigated the effect of corporate governance quality on earnings management in Jordan. Using a panel data set of all industrial and service firms listed on Amman Stock Exchange (ASE) during the period 2009-2013, the results showed that earnings management is affected negatively by overall categories of governance index represented by board of director, board meeting, Audit and nomination and compensation committee. Furthermore, results suggested that corporate governance quality has increased over time. Buallay et al. (2017)

assessed the impact of corporate governance on firm performance of listed companies in Saudi stock exchange for the period from 2012 to 2014. The found that the governance level was 61.4% in Saudi stock exchange which is considered high. The results of the study test indicated that there is no significant impact for corporate governance adoption on firm's operational and financial performance in the listed companies in Saudi stock exchange. By testing the Tobin's Q model, the study also concluded that there's no significant impact for ownership of the largest shareholder and independency of board of directors on firm's market performance. The study also found a significant impact of ownership and the size of the board of directors on firm's performance.

One of the aims of good corporate governance is to mitigate residual losses (Safari et al, 2015). Ahmed and Hamdan (2015) explored the impact of corporate governance on firm performance in Bahrain listed companies on sample of 42 companies for the period from 2007 to 2011 using the ROE measure. The results showed that corporate governance is significantly correlated to firm performance. Onakoya et al. (2014) explored the impact of corporate governance practices on bank performance in Nigeria. The study found that ownership structure and the board size are positively related to return on equity. However, ownership structure and the board size are negatively associated with return on assets. Similarly, there is no effect of board structure on corporate governance practice. In addition, Mohammed (2012) explored the effect of corporate governance mechanisms on Nigerian banks performance. The study that corporate governance is associated significantly with banks performance. As well as, the study found that loan deposit ratios and poor asset quality are negatively affecting the banks performance. In Sri Lanka, Guo and Kga (2012) assessed the impact of corporate governance practice on firm performance. The study found that size of board is negatively associated with the firm value. Moreover, Brav *et al.* (2008) explained that organizational and business performance areas vary depending on the type of business, the nature of its activity, and the degree of management in focusing on those areas that depend on attaining goals. The application of corporate governance in banks is crucial for enhancing performance by; increasing the bank's ability to draw in deposits: As investors and dealers increasingly take into account a bank's commitment to applying the principles of governance when making hiring and investment decisions, banks that do so have a competitive advantage over those that do not in order to raise capital and improve their ability to compete over the long term and the application of corporate governance which enables

banks to strengthen sound risk management and improve the effectiveness of resource allocation.

Fallatah and Dickins (2012) investigated the relationship between corporate governance characteristics and firm performance in Saudi-listed companies on sample of 292 observations for the period from 2006 to 2009 using the Tobin's Q measure. The results showed that corporate governance and firm value (measured as Tobin's Q and market value of equity) are positively related. In line with this study, Al-Ghamdi and Rhodes (2015) assessed the family ownership, corporate governance and performance in Saudi listed companies on sample of 792 observations for the period from 2006 to 2013. The analysis showed that ownership has a significant positive relationship if measured by Tobin's Q. Similarly, there is a strong relationship between performance and ownership if performance is measured as by Tobin's Q. However, Al-Matari et al. (2012) examined the relationship between internal corporate governance mechanisms and firm performance as measured by Tobin's in Saudi Arabia. The findings did not add value to firm performance in Saudi companies and are not in line with the agency theory. Moving to GCC countries Khamis et al. (2015) analyzed the relationship between ownership structure and corporate performance in Bahraini listed companies on sample of 42 for 5 years from 2007-2011. The analysis showed that institutional ownership has a negative relationship on company performance if measured by Tobin's Q. However, the study found that managerial ownership has a positive effect on performance.

In the context of Nepal, Regmi et al. (2023) revealed that board meeting and board size have positive impact on market capitalization. However, leverage, female in board of directors, female members in audit committee and board independence have negative impact on market capitalization. The study also showed that leverage, board meeting and board size have positive impact on return on equity. In addition, female in board of directors, female members in audit committee and board independence have negative impact on return on equity. The study concluded that gender diversity plays vital role in determining the firm value in Nepalese commercial banks. The study also concluded that female in board of directors is the most influencing factor that influences the firm value in terms of return on equity of Nepalese commercial banks. Dahal et al. (2023) revealed that board size has a positive impact on return on assets and return on equity. It means that increase in board size leads to increase in return on assets and return on equity. Likewise, institutional ownership has a positive impact on return on assets and return on equity. It

shows that higher the institutional ownership, higher would be the return on assets and return on equity. Similarly, government ownership has a negative impact on return on assets and return on equity. It shows that higher the government ownership, lower would be the return on assets and return on equity. Further, private ownership has a negative impact on return on assets. It shows that higher the private ownership, lower would be the return on assets. In addition, private ownership has a positive impact on return on equity. It shows that higher the private ownership, higher would be the return on equity. Devkota *et al.* (2022) examined the impact of corporate governance and ownership structure on the performance of Nepalese commercial banks. The results showed that leverage ratio has a negative impact on return on assets. The study also showed that board independence, government ownership, firm size, board size and firm age have positive impact on return on assets. Similarly, Khatri *et al.* (2022) examined the impact of board structure and ownership structure on firm performance in Nepalese commercial banks. The study showed that the independent variables leverage ratio has a negative impact on return on assets.

The above discussion shows that empirical evidences vary greatly across the studies on the corporate governance quality and earnings management in 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 objective of this study is to analyze the impact of corporate governance quality on earnings management of Nepalese insurance companies. Specifically, it examines the relationship of board size, independent director, women director, government ownership, foreign ownership and insurance size with return on assets and return on equity of Nepalese 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 gathered from 15 Nepalese insurance companies for the study period from 2015/16 to 2021/22, leading to a total of 105 observations. The study has employed purposive sampling method. The main sources of data include the annual reports of the selected insurance companies and annual 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 insurance companies selected for the study along with the study period and number of observations.

Table 1

**List of insurance companies selected for the study along with study period and number of observations**

| S. N. | Name of the insurance companies | Study period | Observations |
|---|---|---|---|
| 1 | Shikhar Insurance Company Limited | 2015/16 - 2021/22 | 7 |
| 2 | Nepal Life Insurance Company Limited | 2015/16 - 2021/22 | 7 |
| 3 | NECO Insurance Company Limited | 2015/16 - 2021/22 | 7 |
| 4 | Himalayan Everest Insurance Company Limited | 2015/16 - 2021/22 | 7 |
| 5 | Prabhu Mahalaxmi Life Insurance Limited | 2015/16 - 2021/22 | 7 |
| 6 | Reliable Nepal Life Insurance Limited | 2015/16 - 2021/22 | 7 |
| 7 | The Oriental Insurance Company Limited | 2015/16 - 2021/22 | 7 |
| 8 | Life Insurance Corporation Nepal Limited | 2015/16 - 2021/22 | 7 |
| 9 | IME Life Insurance Company Limited | 2015/16 - 2021/22 | 7 |
| 10 | NLG Insurance Company Limited | 2015/16 - 2021/22 | 7 |
| 11 | Siddharth Insurance Limited | 2015/16 - 2021/22 | 7 |
| 12 | Surya Life Insurance Company Limited | 2015/16 - 2021/22 | 7 |
| 13 | Prime Life Insurance Company Limited | 2015/16 - 2021/22 | 7 |
| 14 | Sun Nepal Life Insurance Company Limited | 2015/16 - 2021/22 | 7 |
| 15 | National Life Insurance Company Limited | 2015/16 - 2021/22 | 7 |
| **Total number of observations** | | | **105** |

Thus, the study is based on 105 observations.

*The model*

The model used in the study assume that earnings management depends upon the corporate governance quality of Nepalese insurance companies. The dependent variables selected for the study are return on assets and return on equity. Similarly, the selected independent variables are board size, independent director, women director, government ownership, foreign ownership and insurance size. Therefore, the model takes the following forms:

$$ROA = \beta_0 + \beta_1 BS + \beta_2 FD + \beta_3 ID + \beta_4 IS + \beta_5 GOV + \beta_6 FO + e_{it}$$

$$ROE = \beta_0 + \beta_1 BS + \beta_2 FD + \beta_3 ID + \beta_4 IS + \beta_5 GOV + \beta_6 FO + e_{it}$$

Where,

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

ROE= Return on equity as measured by the ratio of total net profit to shareholders equity, in percentage.

BS= Board size as measured by the number of directors on the board, in numbers.

FD= Female director as measured by the number of female directors in the board, in numbers.

IS= Insurance size as measured by total assets of insurance companies, Rs in millions.

ID= Independent director as measured by the number of independent directors on the board, in numbers.

GO= Government ownership is a dummy variable which is measured as '0' if there is no government ownership and '1' as if there is foreign ownership.

FO= Foreign ownership is a dummy variable which is measured as '0' if there is no foreign ownership and '1' as if there is foreign ownership.

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

*Board size*

Aygun et al. (2014) assessed the effects of corporate ownership structure and board size on earnings management in Turkey. The study found that larger boards are associated with lower earnings management. Githaiga et al. (2022) stated that when the number of directors on a company's board increases, the likelihood of earnings management decreases. A larger board is more likely to have directors with a wider range of skills and experience, which can help to identify and prevent earnings management. Moreover, a larger board is more likely to have the time and resources to monitor management's activities, which can deter earnings management. Larger board is more likely to have a greater proportion of outside directors, who are not beholden to management and are therefore more likely to be objective in their oversight. (Abobakr and Elgiziry, 2017). Based on it, the study develops following hypothesis:

$H_1$: There is a negative relationship between board size and earnings management.

*Independent directors*

Klein (2002) revealed that independent directors may be more likely

to go along with management's earnings management practices if they are compensated with higher levels of cash or stock options. According to Diab et al. (2023), banks with more independent boards tend to exhibit lower levels of risk-taking, better oversight of management, and stronger financial performance. This, in turn, contributes to greater resilience and stability in the face of economic shocks and financial crises. One of the key mechanisms underlying this positive relationship is the enhanced monitoring role played by independent directors. Abdul Rahman and Ali (2006) revealed that independent directors may be more likely to agree to earnings management practices if they believe that these practices are in the best interests of the company. For example, independent directors may agree to earnings smoothing if they believe that this will help to stabilize the company's stock price and make the company more attractive to potential investors. Based on it, the study develops following hypothesis:

$H_2$: There is a positive relationship between independent director and earnings management.

*Women director*

Arioglu (2020) assessed the affiliations and characteristics of female directors and earnings management in Turkey. The study found negative relationship between female directors and earnings management in Turkey. Moreover, Abdullah and Ismail (2016) found that companies with more women on their boards were less likely to engage in earnings management practices such as accrual-based earnings management and real earnings management. The study also found that companies with more women on their boards were less likely to have their financial statements restated due to accounting irregularities. Arun et al. (2015) revealed that companies with more women on their boards are less likely to engage in earnings management practices. This is likely due to the fact that women directors tend to be more risk-averse, more independent, and more focused on long-term value creation than their male counterparts. Mnif and Cherif (2021) showed a negative association between female directors and earnings management in the organization. Based on it, the study develops following hypothesis:

$H_3$: There is a negative relationship between women director and earnings management.

*Government ownership*

Adhiambo and Lisiolo (2018) assessed the relationship between ownership and earnings management of Chinese listed companies. The study found a negative association between state ownership and earnings management of Chinese listed companies. According to Capalbo et al. (2018), government ownership often emphasizes long-term value creation rather than short-term profit maximization. This long-term perspective may discourage earnings management practices that focus on meeting quarterly or annual targets. Liu et al. (2014) examined the institutional incentives and earnings quality and also the influence of government ownership in China. The study found that banks with government ownership had lower levels of earning quality. Based on it, the study develops following hypothesis:

$H_4$: There is a negative relationship between government ownership and earnings management.

*Foreign ownership*

Farouk and Bashir (2017) examined the relationship between ownership structure and earnings management of listed conglomerates in Nigeria. The study found a positive relationship between foreign ownership and earnings management of listed conglomerates in Nigeria. According to Maswadeh (2018), foreign investors may be more tolerant of earnings management practices, especially if they perceive them as a means of achieving short-term financial targets. Additionally, foreign investors may be less effective in monitoring management's activities and preventing earnings management due to cultural differences, information asymmetries, or institutional weaknesses in the host country. Similarly, Andries et al. (2020) assessed ownership structure and earnings management in Malaysian listed companies. The study found that foreign ownership is positively associated with earnings management in Malaysian listed companies. Based on it, the study develops following hypothesis:

$H_5$: There is a positive relationship between foreign ownership and earnings management.

*Insurance size*

Larger insurance companies have more resources and opportunities to engage in earnings management. They have more complex financial structures and more sophisticated accounting systems, which can make it easier to hide earnings management practices. They also have more discretion over their

accounting choices, which can be used to manipulate earnings (Nwoye et al., 2021). Alqirem et al. (2020) examined the ownership structure, earnings manipulation, and organizational performance in the case of Jordanian insurance organizations. The study found that insurance companies with larger assets has better earning management. Larger insurance companies may be more likely to engage in earnings management to achieve other goals. They may use earnings management to smooth out their earnings, which can make the company appear more stable and less risky to investors. They may also use earnings management to boost their stock price, which can benefit executives and other shareholders (Fodio et al., 2013). Based on it, the study develops following hypothesis:

$H_6$: There is a positive relationship between insurance size and earnings management.

## 3. Results and discussion

*Descriptive statistics*

Table 2 presents the descriptive statistics of selected dependent and independent variables during the period 2015/16 to 2021/22.

This table shows the descriptive statistics of dependent and independent variables of 15 Nepalese insurance companies for the study period from 2015/16 to 2021/22. The dependent variables are ROA (Return on assets as measured by the ratio of total net profit to total assets, in percentage) and ROE (Return on equity as measured by the ratio of total net profit to shareholders equity, in percentage). The independent variables are BS (Board size as measured by the number of directors on the board, in numbers), IS (Insurance size as measured by total assets of insurance companies, Rs in millions), FD (Female director as measured by the number of female directors in the board, in numbers), ID (Independent director as measured by the number of independent directors on the board, in numbers), FO (Foreign ownership is a dummy variable which is measured as '0' if there is no foreign ownership and '1' as if there is foreign ownership) and GO (Government ownership is a dummy variable which is measured as '0' if there is no government ownership and '1' as if there is foreign ownership).

| Variables | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|
| **ROA** | 0.45 | 4.58 | 1.25 | 0.54 |
| **ROE** | -20.20 | 505.11 | 17.50 | 42.59 |
| **BS** | 5.00 | 8.00 | 6.55 | 0.90 |
| **FD** | 0.00 | 2.00 | 0.67 | 0.57 |
| **ID** | 0.00 | 1.00 | 0.84 | 0.37 |
| **IS** | 18.92 | 25.48 | 21.97 | 1.28 |
| **FO** | 0.00 | 1.00 | 0.54 | 0.50 |
| **GOV** | 0.00 | 1.00 | 0.54 | 0.50 |

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 15 Nepalese insurance companies for the study period of 2015/16 to 2021/22. The dependent variables are ROA (Return on assets as measured by the ratio of total net profit to total assets, in percentage) and ROE (Return on equity as measured by the ratio of total net profit to shareholders equity, in percentage). The independent variables are BS (Board size as measured by the number of directors on the board, in numbers), IS (Insurance size as measured by total assets of insurance companies, Rs in millions), FD (Female director as measured by the number of female directors in the board, in numbers), ID (Independent director as measured by the number of independent directors on the board, in numbers), FO (Foreign ownership is a dummy variable which is measured as '0' if there is no foreign ownership and '1' as if there is foreign ownership) and GO (Government ownership is a dummy variable which is measured as '0' if there is no government ownership and '1' as if there is foreign ownership).

| Variables | ROA | ROE | BS | FD | ID | IS | FO | GOV |
|---|---|---|---|---|---|---|---|---|
| **ROA** | 1 | | | | | | | |
| **ROE** | 0.125 | 1 | | | | | | |
| **BS** | -0.454** | -0.038 | 1 | | | | | |
| **FD** | -0.296** | -0.058 | 0.673** | 1 | | | | |
| **ID** | 0.210** | 0.183* | -0.277** | -0.41 | 1 | | | |
| **IS** | 0.171* | 0.009 | -0.204* | -0.308** | 0.433** | 1 | | |
| **FO** | 0.010 | 0.115 | 0.003 | 0.007 | -0.007 | 0.087 | 1 | |
| **GOV** | -0.111 | -0.046 | 0.370** | 0.466** | -0.134 | -0.149 | 0.187* | 1 |

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

Table 3 shows that foreign ownership is positively correlated to return on assets. It shows that increase in foreign ownership leads to increase in return on assets. Similarly, women director is negatively correlated to return on assets. It implies that increase in female board directors in the board leads to decrease in return on assets. However, there is a negative relationship between government ownership and return on assets. It shows that increase in government ownership leads to decrease in return on assets. Similarly, board size is negatively correlated to return on assets. It means increase in board size leads to decrease in return on assets. However, there is a positive relationship between insurance size and return on assets. It means that increase in assets size leads to increase in return on assets. However, there is a positive

relationship between independent director and return on assets. It means that increase in independent directors leads to decrease in return on assets.

On the other hand, board size is negatively correlated to return on equity. It means increase in board size leads to decrease in return on equity. However, there is a positive relationship between insurance size and return on equity. It means that increase in assets size leads to increase in return on equity. However, there is a positive relationship between independent director and return on equity. It means that increase in independent directors leads to decrease in return on equity. Similarly, foreign ownership is positively correlated to return on equity. It shows that increase in foreign ownership leads to increase in return on equity. Similarly, women director is negatively correlated to return on equity. It implies that increase in female board directors in the board leads to decrease in return on equity. However, there is a negative relationship between government ownership and return on equity. It shows that increase in government ownership leads to decrease in return on equity.

*Regression analysis*

Having indicated the Pearson's correlation coefficients, the regression analysis has been carried out and the results are presented in Table 4 and Table 5. More specifically, Table 4 shows the regression results of board size, independent director, women director, government ownership, foreign ownership and insurance size on return on assets of Nepalese insurance companies.

Table 4

**Estimated regression results of board size, independent director, women director, government ownership, foreign ownership and insurance size on return on assets**

The results are based on panel data of 15 insurance companies with 105 observations for the period 2015/16 to 2021/22by using linear regression model. The model is ROA= $\beta_0$ + $\beta_1$ BS + $\beta_2$ FD + $\beta_3$ ID + $\beta_4$ IS + $\beta_5$ GOV + $\beta_6$ FO + $e_{it}$ where the dependent variable is ROA (Return on assets as measured by the ratio of total net profit to total assets, in percentage). The independent variables are BS (Board size as measured by the number of directors on the board, in numbers), IS (Insurance size as measured by total assets of insurance companies, Rs in millions), FD (Female director as measured by the number of female directors in the board, in numbers), ID (Independent director as measured by the number of independent directors on the board, in numbers), FO (Foreign ownership is a dummy variable which is measured as '0' if there is no foreign ownership and '1' as if there is foreign ownership) and GO (Government ownership is a dummy variable which is measured as '0' if there is no government ownership and '1' as if there is foreign ownership).

| Model | Intercept | Regression coefficients of | | | | | | Adj. $R\_bar^2$ | SEE | F-value |
|---|---|---|---|---|---|---|---|---|---|---|
| | | BS | FD | ID | IS | FO | GOV | | | |
| 1 | 32.264 (8.863)** | -1.475 (6.946)** | | | | | | 0.029 | 37.396 | 48.247 |
| 2 | 35.160 (6.326)** | | -0.576 (3.900)* | | | | | 0.082 | 40.807 | 15.207 |
| 3 | 170.890 (3.006)* | | | 6.981 (2.702)* | | | | 0.038 | 41.177 | 7.302 |
| 4 | 23.652 (5.414)** | | | | 0.135 (2.177)* | | | 0.023 | 42.226 | 4.741 |
| 5 | 17.782 (4.384)* | | | | | 0.010 (0.122) | | 0.006 | 42.724 | 0.015 |
| 6 | 31.551 (2.983)* | | | | | | -0.075 (1.400) | 0.006 | 42.463 | 1.960 |
| 7 | 30.184 (5.822)** | -1.584 (5.507)* | -0.104 (0.565) | | | | | 0.226 | 34.477 | 24.179 |
| 8 | 319.706 (6.499)** | -2.137 (7.714)** | -0.310 (1.822) | 13.213 (5.913)** | | | | 0.363 | 33.981 | 31.260 |
| 9 | 281.165 (5.233)* | -2.046 (7.287)** | -0.194 (1.072) | 11.121 (4.405)* | 0.104 (1.756) | | | 0.372 | 33.851 | 24.4118 |
| 10 | 280.766 (5.189)* | -2.045 (7.258)** | -0.193 (1.062) | 11.108 (4.377)* | 0.105 (1.749) | 0.006 (0.085) | | 0.368 | 33.961 | 19.410 |
| 11 | 274.871 (4.928)* | -2.051 (7.252)** | -0.165 (0.859) | 10.983 (4.292)* | 0.105 (1.755) | 0.001 (0.015) | -0.023 (0.454) | 0.365 | 16.126 | 16.126 |

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 insurance size are positive with return on assets. It indicates that insurance size has a positive impact on return on assets. This finding is similar to the findings of Alqirem et al. (2020). Similarly, the beta coefficients for foreign ownership are positive with return on assets. It indicates that foreign ownership has a positive impact on return on assets. This finding is consistent with the findings of Maswadeh (2018). Likewise, the beta coefficients for government ownership are negative with return on assets. It indicates that government ownership has a negative impact on return on assets. This finding is similar to the findings of Adhiambo and Lisiolo (2018). Similarly, the beta coefficients for board size are negative with return on assets. It indicates that board size has a negative impact on return on assets. This finding is consistent with the findings of Githaiga et al. (2022). Similarly, the beta coefficients for independent director are negative with return on assets. It indicates that independent director has a negative impact on return on assets. The findings are similar with the findings of Klein (2002).

Table 5 shows the regression results of board size, independent director, women director, government ownership, foreign ownership and insurance size on return on equity of Nepalese insurance companies.

Table 5

**Estimated regression results of board size, independent director, women director, government ownership, foreign ownership and insurance size on return on equity**

The results are based on panel data of 15 insurance companies with 105 observations for the period 2015/16 to 2021/22by using linear regression model. The model is ROE= $\beta_0 + \beta_1$ BS + $\beta_2$ FD + $\beta_3$ ID + $\beta_4$ IS + $\beta_5$ GOV + $\beta_6$ FO + $e_{it}$ where the dependent variable is ROE (Return on equity as measured by the ratio of total net profit to shareholders equity, in percentage). The independent variables are BS (Board size as measured by the number of directors on the board, in numbers), IS (Insurance size as measured by total assets of insurance companies, Rs in millions), FD (Female director as measured by the number of female directors in the board, in numbers), ID (Independent director as measured by the number of independent directors on the board, in numbers), FO (Foreign ownership is a dummy variable which is measured as '0' if there is no foreign ownership and '1' as if there is foreign ownership) and GO (Government ownership is a dummy variable which is measured as '0' if there is no government ownership and '1' as if there is foreign ownership).

| Model | Intercept | Regression coefficients of | | | | | | Adj. $R\_bar^2$ | SEE | F-value |
|---|---|---|---|---|---|---|---|---|---|---|
| | | BS | FD | ID | IS | FO | GOV | | | |
| 1 | 48.492 (3.387)* | -0.396 (0.474) | | | | | | 0.005 | 147.08 | 0.225 |
| 2 | 40.560 (2.027)* | | -0.368 (0.730) | | | | | 0.003 | 146.93 | 0.532 |
| 3 | 512.798 (2.604)* | | | 20.952 (2.341)* | | | | 0.027 | 144.69 | 5.482 |
| 4 | 51.521 (3.374)* | | | | 0.026 (0.119) | | | 0.006 | 147.617 | 0.014 |
| 5 | 41.270 (2.973)* | | | | | 0.407 (1.455) | | 0.007 | 146.20 | 2.118 |
| 6 | 51.107 (2.028)* | | | | | | -0.007 (0.060) | 0.006 | 147.184 | 0.004 |
| 7 | 40.480 (1.985)* | -0.025 (0.022) | -0.399 (0.553) | | | | | 0.009 | 147.406 | 0.265 |
| 8 | 554.571 (2.640)* | -1.007 (0.852) | -0.765 (1.054) | 23.461 (2.459)* | | | | 0.022 | 145.09 | 2.198 |
| 9 | 718.200 (3.129)* | -1.138 (1.155) | -1.234 (1.594) | 32.286 (2.994)** | 0.439 (1.733) | | | 0.034 | 144.603 | 2.407 |
| 10 | 691.637 (3.010)* | -1.340 (1.120) | -1.174 (1.518) | 31.397 (2.913)** | 0.400 (1.573) | 0.380 (1.337) | | 0.039 | 144.235 | 2.293 |
| 11 | 712.472 (3.007)* | -1.320 (1.099) | -1.273 (1.556) | 31.838 (2.929)** | 0.402 (1.577) | 0.404 (1.384) | -0.081 (0.378) | 0.034 | 144.640 | 1.924 |

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 insurance size are positive with return on equity. It indicates that insurance size has a positive impact on return on equity. This finding is similar to the findings of Fodio et al. (2013). Similarly, the beta coefficients for foreign ownership are positive with return on equity. It indicates that foreign ownership has a positive impact on return on equity. This finding is consistent with the findings of Andries

et al. (2020). Likewise, the beta coefficients for government ownership are negative with return on equity. It indicates that government ownership has a negative impact on return on equity. This finding is similar to the findings of Liu et al. (2014). Similarly, the beta coefficients for board size are negative with return on equity. It indicates that board size has a negative impact on return on equity. This finding is consistent with the findings of Abobakr and Elgiziry (2017). Similarly, the beta coefficients for independent director are negative with return on equity. It indicates that independent director has a negative impact on return on equity. The findings are similar with the findings of Diab et al. (2023).

## 4. Summary and conclusion

The performance of individual companies working in different industries is an important indicator of how well the whole economy is doing. Insurance companies are fundamental financial institutions that play significant roles which encompass, in addition to facilitating the transfer of funds, financial losses indemnity and reduction of uncertainty that people and businesses face.

This study attempts to analyze the impact of corporate governance quality on earnings management of Nepalese insurance companies. The study is based on secondary data of 15 insurance companies with 105 observations for the study period from 2015/16 to 2021/22.

The study showed that board size, women director and government ownership have negative impact on return on assets and return on equity. However, independent director, foreign ownership and insurance size have positive impact on return on assets and return on equity. The study showed that corporate governance quality has a significant influence on earnings management of Nepalese insurance companies. Likewise, the study concluded that board size followed by women director is the most influencing factor that explains the changes in the return on assets. Likewise, the study also concluded that the most dominant factor that determines the return on equity in the context of Nepalese insurance companies is independent director.

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