# Gender Diversity, Audit Committee and Efficiency in Nepalese Commercial Banks

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## Abstract

The study examines the gender diversity, audit committee and efficiency in Nepalese commercial banks. The dependent variables selected for the study are return on assets and earnings per share. The selected independent variables are board size, gender diversity, independent directors, audit committee size, total assets and bank age. The study is based on secondary data of 11 commercial banks with 110 observations for the study period from 2013/14 to 2022/23. The data were collected from Banking and Financial Statistics published by Nepal Rastra Bank, publications and websites of Nepal Rastra Bank (NRB) and annual reports of the selected commercial banks. The correlation coefficients and regression models are estimated to test the significance and importance of gender diversity and audit committee characteristics on the efficiency of Nepalese commercial banks.

The study showed that board size has a positive effect on return on assets and return on equity. It means that higher the number of directors on the board, higher would be the return on assets and return on equity. Similarly, gender diversity has a negative effect on return on assets and return on equity. It means that increase in proportion female directors on board leads to decrease in return on assets and return on equity. The results of the study also shows that audit committee has a positive effect on return on assets and return on equity. It implies that larger the size of audit committee, higher would be the return on assets and return on equity. However, independent director has a negative effect on return on assets. It indicates that increase in number of independent directors on the board leads to decrease in return on assets. Similarly, total assets have a positive effect on return on equity. It implies that increase in total assets of the bank leads to increase in return on equity.

*Keywords*: board size, gender diversity, independent directors, audit committee size, total assets, return on assets, bank age

## 1. Introduction

Corporate governance attributes influence various aspects of a company’s operations, decision-making processes, and relationships with stakeholders, all of which ultimately contribute to its financial performance and long-term success. Effective corporate governance structures ensure that risks are identified, assessed, and managed appropriately. Companies with strong governance practices are better equipped to navigate uncertainties, reducing the likelihood of financial losses due to unforeseen risks. Corporate governance frameworks provide guidelines for strategic decision-making

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processes. Boards of directors, with their oversight role, can contribute valuable insights and expertise, ensuring that strategic decisions are aligned with the company's long-term financial objectives (Agyei-Mensah, 2018). The size of the board of directors is a vital corporate governance structure, which is crucial to the management of any organization and essential in monitoring corporate governance effectiveness (Ntim and Soobaroyen, 2013). Board size is the overall number of directors, non-executive and executive, in the firm. Since the directors of companies are alleged to affect organizational performance, it is very essential to ascertain the appropriate board size of a company. The company's decision to adopt a specific corporate governance mechanism is controlled by numerous factors, including the entity's fundamental characteristics, board attributes and other corporative variables (Osundina et al., 2016). Governance mechanisms adopted by banks are used for improving organizational performance, contributing to new and existing market shares and improving the knowledge of business roles and obligation. Zabri et al. (2016) stated that the board is a very important corporate governance framework. The board performs important and critical roles in each company Although there is no standard board size, the Central Bank code prescribes a minimum of five and a maximum of twenty directors. Some businesses choose a small board size with the expectation that control will be effective and decision-making will be quicker, while some prefer the larger board size with the belief that it will lead to an expansion of expertise because more knowledge as well as skills are available (Hussainey and Wang, 2010).

Gender-diverse teams bring a wider range of perspectives, experiences, and approaches to problem-solving and decision-making. In the context of banking, this diversity can lead to innovative solutions, better risk management, and more informed strategic decisions, ultimately enhancing financial performance. Gender diversity within leadership and decision-making roles can enhance risk management practices and compliance with regulatory requirements. Diverse perspectives can lead to more robust risk assessments, improved governance structures, and better adherence to ethical standards, reducing the likelihood of costly legal and reputational risks. Banks that prioritize gender diversity and inclusion are often perceived more positively by investors, customers, and other stakeholders. A strong commitment to diversity can enhance the bank's reputation, differentiate it from competitors, and attract socially conscious investors, leading to improved financial performance over the long term. Chijoke-Mgbame et al. (2020) examined the effects of female representation and the proportion of female representation on corporate boards and audit committees on financial performance in an African context where institutions are weak. Employing a panel of 77 firms, the results showed that female board representation exerts a positive and significant influence on firm financial performance. The study also found that the performance effect of gender diversity is stronger for firms with two or more female directors, suggesting that building a critical mass of female representation enhances firm financial performance. Further analysis indicates that the inclusion of females on the audit committee appears to have a positive impact on firm financial performance. Omotoye et al. (2021) discovered the association between various audit committee and board attributes and the market performance of listed deposit money banks in Nigeria. The study intended to determine the influence of audit committee size, gender diversity, expertise, board size and board shareholding on market performance (measured by Tobin Q of twelve (12) banks listed on the Nigerian Stock Exchange from 2013 to 2017. The results concluded that there is a negative association between audit committee size, board size and Tobin Q. There was a positively significant impact of audit committee gender diversity and audit committee expertise on Tobin Q. The study showed a positive but insignificant influence of board shareholding on market performance. The results imply that weakness in governance structures might lead to lower market performance.

In achieving good governance, an audit committee has a crucial responsibility of overseeing reporting processes and ensuring credibility and transparency in the reports. The major goal is to immunize the quality of presented financial reports and other roles and functions include ensuring that financial statements are prepared according to implemented standards, overseeing the interactions among the management, employees and external auditors, facilitating principles and managing risk management processes (Zraiq and Fadzil, 2018). The audit committee effectiveness construct is dimensional and subjective to diverse features such as independence, size, diversity, membership mix, meetings and financial expertise (Mohiuddin and Karbhari, 2010). Too large a committee may lead to inefficiencies, including difficulty in reaching consensus or increased bureaucracy. Moreover, a bloated committee may struggle to maintain confidentiality, especially concerning sensitive financial information. Ultimately, the optimal size of an audit committee depends on various factors, including the organization's size, complexity, industry, and regulatory requirements. It's essential for organizations to carefully consider these factors when determining the size of their audit committee to ensure effective governance oversight.

Audit committee size is an important element for the committee to properly oversee governance activities. The number of available members will probably assist in overcoming issues in the course of corporate reporting (Li et al., 2012). The selection of a female audit committee member may be seen as critical information for market participants. Female members are capable of improving firm governance through their conservative and ethical qualities (Ibrahim and Al Harasees, 2019). Zraiq and Fadzil (2018) assessed the effect of an audit committee on firm performance and found that smaller committees with more exposure and knowledge are positively significant to firm performance. Similarly, the study also showed that the size of the audit committee has an important correlation with performance. Moreover, Afza and Nazir (2014) showed that there is a significant negative relationship between the size of an audit committee and firm performance because there is little room for flexibility in a larger committee. A smaller committee can concentrate expertise more effectively. Each member may bring a unique skill set to the table, allowing for a deeper understanding of complex financial and governance issues. This concentrated expertise can enhance the committee's ability to identify risks, assess controls, and provide strategic guidance. Smaller audit committees can often make decisions more efficiently compared to larger committees. With fewer members, communication can be streamlined, leading to quicker responses to emerging issues and more effective decision-making processes.

In the context of Nepal, Budhathoki and Adhikari (2024) examined the impact of corporate governance on corporate firm vale of Nepalese commercial banks. The major conclusion of this study is that that board size has a positive relationship with earning per share and market capitalization. Similarly, financial leverage has a negative relationship with earning per share. In contrast, financial leverage has a positive relationship with market capitalization. Likewise, female board of director has a negative relationship with earnings per share. However, female board of director has a negative relationship with market capitalization. Further, audit committee has a positive relationship with earnings per share and market capitalization. In addition, board independence has a negative relationship with earnings per share and market capitalization. Moreover, corporate size has a positive relationship with earning per share and market capitalization. Further, bank age has a positive relationship with earning per share and market capitalization. Likewise, the study concluded that audit committee followed by board size is the most influencing factor that explains the changes in the earning per share in the context of Nepalese commercial banks. Similarly, the study also concluded that financial leverage followed by bank age is the most influencing factor that explains the changes in market capitalization in the context of Nepalese commercial banks. DC and Basnet (2024) examine the impact of ownership structure and board structure on the performance of non-financial institutions of Nepal. The major conclusion of this study is that board size has a positive relationship with return on equity and return on assets. Similarly, board independence has a positive relationship with return on equity and return on assets. Likewise, gender inclusive on board has a positive relationship with return on equity and return on assets. It indicates that presence of female director in the board leads to increase in return on equity and return on assets. Further, existence of audit committee on board has a positive relationship with return on equity and return on assets. It indicates that increase in audit committee members leads to increase in return on equity and return on assets. Similarly, the study also concluded that existence of audit committee on board followed by board independence is the most influencing factor that explains the changes in return on assets in the context of Nepalese non-financial institutions. Adhikari (2023) examined the corporate governance and bank performance in Nepal. The study revealed that female board member and firm size have significant impact on return on equity but board size and audit committee meeting have an insignificant impact on return on equity. The study also showed that there is a positive relationship between female board and return on equity.

The above discussion shows that empirical evidences vary greatly across the studies on the gender diversity, audit committee and bank efficiency. Though there are above-mentioned empirical evidence 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 major objective of the study is to examine the gender diversity, audit committee and efficiency in Nepalese commercial banks. Specifically, it examines the relationship of board size, gender diversity, independent directors, audit committee size, total assets and bank age on return on assets and return *on* equity in the context of Nepalese commercial banks.

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 section draws the conclusion.

**2. Methodological aspects**

The study is based on the secondary data which were collected from 11

Nepalese commercial banks from 2013/14 to 2022/23, leading to a total of 110 observations. The study employed convenience sampling method. The main sources of data collected from the Bank Supervision Report published by Nepal Rastra Bank (NRB) and annual reports of the selected commercial banks. This study is based on descriptive as well as causal comparative research designs. Table 1 shows the list of commercial banks selected for the study along with the study period and number of observations.

Table 1

**List of commercial banks selected for the study along with study period and number of observations**

| S. N. | Name of the banks | Study period | Observations |
|---|---|---|---|
| 1 | Agricultural Development Bank Limited | 2013/14 - 2022/23 | 10 |
| 2 | Everest Bank Limited | 2013/14 - 2022/23 | 10 |
| 3 | NIC Asia Bank Limited | 2013/14 - 2022/23 | 10 |
| 4 | Machhapuchchhre Bank Limited | 2013/14 - 2022/23 | 10 |
| 5 | Himalayan Bank Limited | 2013/14 - 2022/23 | 10 |
| 6 | Nepal Bank Limited | 2013/14 - 2022/23 | 10 |
| 7 | Nepal SBI Bank limited | 2013/14 - 2022/23 | 10 |
| 8 | Prime Commercial Bank Limited | 2013/14 - 2022/23 | 10 |
| 9 | Standard Chartered Bank Nepal Limited | 2013/14 - 2022/23 | 10 |
| 10 | Siddhartha Bank Limited | 2013/14 - 2022/23 | 10 |
| 11 | Sanima Bank Limited | 2013/14 - 2022/23 | 10 |
| **Total number of observations** | | | **110** |

Thus, the study is based on 110 observations.

*The model*

The model used in this study assumes that bank efficiency depends upon gender diversity, audit committee. The dependent variables selected for the study are return on assets and return on equity. Similarly, the selected independent variables are board size, gender diversity, independent directors, audit committee size, total assets and bank age. Therefore, the models take the following forms:

$$ROA = \beta_0 + \beta_1 BS_{it} + \beta_2 GD_{it} + \beta_3 ID_{it} + \beta_4 ACS_{it} + \beta_5 TA_{it} + \beta_6 AGE_{it} + e_{it}$$

$$ROE = \beta_0 + \beta_1 BS_{it} + \beta_2 GD_{it} + \beta_3 ID_{it} + \beta_4 ACS_{it} + \beta_5 TA_{it} + \beta_6 AGE_{it} + e_{it}$$

Where,

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

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

BS= Board size as measured by the number of board members, in numbers

GD= Gender diversity as measured by the number of females in the board as a director, in numbers.

ID= Independent directors as measured by the number of directors in the board as an external, in numbers.

ACS= Audit committee size as measured by the number of audit committee members, in numbers.

TA= Total assets as measured by the total assets of the banks, Rs in billion.

AGE= Age of the bank, in years.

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

*Board size*

Manini and Abdillahi (2015) examined the impact of corporate governance mechanisms on banks' profitability based on the annual reports on 42 banks in Kenya in 2014. Using multiple regression analysis, the results showed that audit committee size, board gender diversity, and bank capital did not significantly impact profitability, while board size negatively influenced financial performance, and bank size had a positive association with financial performance. Shungu et al. (2014) investigated the impact of corporate governance on the performance of commercial banks in Zimbabwe. Using descriptive statistics, unit root test, correlation matrix, Granger Causality Test (GCT), and regression analysis, the findings exhibited positive correlation between board composition, diversity, and commercial bank performance, but a negative correlation between board size, committees, and bank performance. Omotoye et al. (2021) explored the association between various audit committee and board attributes and the market performance of listed DBM in Nigeria. Using fixed and random regression analysis, the study found a negative significant association between audit committee size, board size, and Tobin's Q. Based on it, this study develops the following hypothesis:

$H_1$: There is a negative relationship between board size and bank efficiency.

*Gender diversity*

Chijoke-Mgbame et al. (2020) examined how the presence and percentage of women on corporate boards and audit committees impact financial performance within an African context characterized by weak institutions. Taking ROA and Tobin's Q as proxies for financial performance, the major findings were female board representation and having females on the audit committee positively impacted firm financial performance, especially with two or more female directors. Provasi and Harasheh (2020) inspected the impact of female board representation on corporate financial and sustainability performance of 40 companies of the FTSE-MIB index for 3 years 2016-2018. The results showed that increasing female representation on boards associated with better corporate sustainability and ethical scores. However, exceeding the optimal gender quota level can have negative impact on sustainability performance. Ong'ayi and Odari (2023) evaluated the relationship between board diversity and performance of commercial banks in Nairobi County. With sample size of 328 using ANOVA, t-test, Pearson correlation, p-values, and coefficient of determination, the results exhibited functional background, age diversity, board members independence, and gender diversity positively impact commercial banks' performance. Based on it, this study develops the following hypothesis:

$H_2$: There is a positive relationship between gender diversity and bank efficiency.

*Independent directors*

Olatunji and Stephen (2011) examined the effects of the proportion of non-executive directors on the profitability of the listed banks in Nigeria. The findings revealed a negative but significant relationship exists between return on equity and non-executive directors. The study concluded that the negative association is likely to be because non-executive directors are too busy with other commitments and are only involved with the company business on a part-time basis. Adeabah et al. (2018) examined the efficiency of banks under board gender diversity and determinants of bank efficiency. Using descriptive statistics, correlation matrix, and panel regression model, the results showed that board independence and powerful CEOs have negative effects on bank efficiency. Islam and Islam (2022) investigated the association between board independence, directors' ownership, and organizational profitability of listed nonfinancial enterprises on the Dhaka Stock Exchange between 2015 and 2019. Using generalized method of moments (GMM), the study reveals that board independence has a negative and significant effect on profitability. Based on it, this study develops the following hypothesis:

$H_3$: There is a negative relationship between independent directors and bank efficiency.

*Audit committee size*

Agyemang (2020) analyzed the performance of 8 banks listed on the Ghana stock exchange over 5-year period (2014-2018). With return on equity and return on assets as financial indicators, the results exhibited that audit committee size, expertise, and experience were positively correlated to return on equity, while audit committee independence and gender diversity showed negative correlation with both metrics. Garcia-Sanchez et al. (2016) scrutinized whether gender diversity on board and financial expertise on audit committee affect accounting conservatism in banking sector. The study unveiled that female and financial expert in banks had positive impact on accounting conservatism and earnings quality, with a stronger impact in strict regulatory environment. Moreover, Mustapha et al. (2020) examined the effect of audit committee effectiveness on audit fee of listed deposit money banks in Nigeria. The data from 12 banks' annual reports between 2012 and 2018 were analyzed using random-effect regression analysis in an ex-post facto research design. The study showed that audit committee expertise, diligence, and gender diversity have a significant positive impact on audit fees for listed deposit money banks in Nigeria. Dongol (2021) investigated the impact of corporate governance on financial performance of Nepalese commercial banks. The results gained through regression analysis depicted that larger board and audit committee size and lower frequency of board meeting, proportion of institutional ownership led to better efficiency in commercial banks. Based on it, this study develops the following hypothesis:

$H_4$: There is a positive and significant relationship between audit committee size and bank efficiency.

*Total assets*

Ruslan et al. (2019) analyzed the mediating role of bank efficiency in the effect of bank size on bank profitability during 2010-2017. The data analysis technique in this study is path analysis (path analysis) with the help of AMOS software (Analysis of Moment Structure). The results of the study found that bank size has a positive and significant effect on bank efficiency. Similarly, bank size has a positive and not significant effect on bank profitability. Hirindu Kawshala (2017) examined the effect of bank specific factors of profitability in Sri Lankan domestic commercial banks. The regression results revealed that size, capital ratio and deposit ratio are significant and positively related to bank profitability. Velnampy and Nimalathasan (2010) assessed the effect of the firm size on profitability of virtually all the branches of Bank of Ceylon (BOC) and Commercial Bank of Ceylon Ltd (CBC). The results showed that there is a positive relationship between Firm size and Profitability in Commercial Bank of Ceylon Ltd. Based on it, this study develops the following hypothesis:

$H_5$: There is a positive relationship between total assets and bank efficiency.

*Bank age*

Sanyaolu et al. (2019) investigated banks' specific and macroeconomic determinants of profitability of ten listed deposit money banks in Nigerian Stock Exchange from 2008 to 2017 using fixed effect regression. The result revealed that capital adequacy, nonperforming loan, loan to total asset and size have significant positive effect on profitability, while age was found to exert significant but negative effect on profitability. Majumdar (1997) examined size and age as determinants of profitability of 1020 firms in India. The finding revealed that age has significant negative influence on profitability, while size has significant positive influence on profitability. Similarly, Dogan (2013) assessed firm size and profitability of 200 firms by gathering data from the annual reports of the sampled banks from 2008 to 2011. The result of the regression analysis revealed that size has significant positive effect on profitability. The findings related to leverage and age as control variables showed negative but significant influence on profitability. Based on it, this study develops the following hypothesis:

$H_6$: There is a negative relationship between bank age and bank efficiency.

## 3. Results and discussion

*Descriptive statistics*

Table 2 presents the descriptive statistics of selected dependent and independent variables during the period 2013/14 to 2022/23.

Table 2

**Descriptive statistics**

This table shows the descriptive statistics of dependent and independent variables of 11 Nepalese commercial banks for the study period of 2013/14 to 2022/23. The dependent variables are ROA (Return on assets as measured by the ratio of net income to total assets, in percentage) and ROE (Return on equity as measured by the ratio of net income to total shareholders' equity, in percentage). The independent variables are BS (Board size as measured by the number of board members, in numbers), GD (Gender diversity as measured by the number of females in the board as a director, in numbers), ACS (Audit committee size as measured by the number of audit committee members, in numbers), ID (Independent directors as measured by the number of directors in the board as an external, in numbers), TA (Total assets as measured by the total assets of the banks, Rs in billion) and AGE (Age of the bank, in years).

| Variables | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|
| ROA | 0.47 | 3.12 | 1.57 | 0.52 |
| ROE | 3.78 | 69.56 | 15.14 | 6.95 |
| BS | 5.00 | 10.00 | 7.08 | 1.21 |
| ID | 0.00 | 2.00 | 0.53 | 0.51 |
| GD | 0.00 | 2.00 | 0.58 | 0.59 |
| AGE | 11.00 | 73.00 | 33.96 | 19.65 |
| TA | 0.084 | 364.08 | 124.55 | 8.36 |
| ACS | 23.00 | 67.00 | 27.48 | 7.30 |

Source: SPSS Software

*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 11 Nepalese commercial banks for the study period from 2013/14 to 2022/23. The dependent variables are ROA (Return on assets as measured by the ratio of net income to total assets, in percentage) and ROE (Return on equity as measured by the ratio of net income to total shareholders' equity, in percentage). The independent variables are BS (Board size as measured by the number of board members, in numbers), GD (Gender diversity as measured by the number of females in the board as a director, in numbers), ACS (Audit committee size as measured by the number of audit committee members, in numbers), ID (Independent directors as measured by the number of directors in the board as an external, in numbers), TA (Total assets as measured by the total assets of the banks, Rs in billion) and AGE (Age of the bank, in years).

| Variables | ROA | ROE | BS | ID | GD | AGE | TA | ACS |
|---|---|---|---|---|---|---|---|---|
| ROA | 1 | | | | | | | |
| ROE | 0.664** | 1 | | | | | | |
| BS | 0.026 | 0.189 | 1 | | | | | |
| ID | -0.011 | 0.221* | -0.289** | 1 | | | | |
| GD | -0.065 | -0.290** | -0.244* | 0.465** | 1 | | | |
| AGE | -0.077 | -0.072 | 0.479** | 0.008 | 0.071 | 1 | | |
| TA | -0.358** | 0.039 | -0.194* | 0.550** | 0.437** | 0.369** | 1 | |
| ACS | 0.309** | 0.014 | -0.130 | 0.089 | 0.332** | -0.056 | -0.100 | 1 |

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

Table 3 shows that board size has a positive correlation with return on assets. It means that higher the number of directors on the board, higher would be the return on assets. Similarly, gender diversity has a negative correlation with return on assets. It means that increase in proportion female directors on board leads to decrease in return on assets. The results of the study also shows that audit committee has a positive correlation with return on assets. It implies that larger the size of audit committee, higher would be the return on assets. Likewise, bank age has a negative correlation with return on assets which indicates that increase in the age of the bank leads to decrease in return on assets. However, independent director has a negative correlation with return on assets. It indicates that increase in number of independent directors on the board leads to decrease in return on assets. Similarly, total assets have a negative correlation with return on assets. It implies that increase in total assets of the bank leads to decrease in return on assets.

On the other hand, board size has a positive correlation with return on equity. It means that higher the number of directors on the board, higher would be the return on equity. Similarly, gender diversity has a negative correlation with return on equity. It means that increase in proportion female directors on board leads to decrease in return on equity. The results of the study also shows that audit committee has a positive correlation with return on equity. It implies that larger the size of audit committee, higher would be the return on equity. Likewise, bank age has a positive correlation with return on equity which indicates that increase in the age of the bank leads to increase in return on equity. However, independent director has a positive correlation with return on equity. It indicates that increase in number of independent directors on the board leads to increase in return on equity. Similarly, total assets have a positive correlation with return on equity. It implies that increase in total assets of the bank leads to increase in return on equity.

*Regression analysis*

Having indicated the Pearson's correlation coefficients, the regression analysis has been carried out and results are presented in Table 4. More specifically, it shows the regression results of board size, gender diversity, independent directors, audit committee size, total assets and bank age on return on assets in the context of Nepalese commercial banks.

Table 4

**Estimated regression results of board size, gender diversity, independent directors, audit committee size, total assets and bank age on return on assets**

The results are based on panel data of 11 commercial banks with 110 observations for the period of 2013/14-2022/23 by using the linear regression model and the model is $ROA = \beta_0 + \beta_1 BS_{it} + \beta_2 GD_{it} + \beta_3 ID_{it} + \beta_4 ACS_{it} + \beta_5 TA_{it} + \beta_6 AGE_{it} + e_{it}$ where, the dependent variable is ROA (Return on assets as measured by the ratio of net income to total assets, in percentage).

The independent variables are BS (Board size as measured by the number of board members, in numbers), GD (Gender diversity as measured by the number of females in the board as a director, in numbers), ACS (Audit committee size as measured by the number of audit committee members, in numbers), ID (Independent directors as measured by the number of directors in the board as an external, in numbers), TA (Total assets as measured by the total assets of the banks, Rs in billion) and AGE (Age of the bank, in years).

| Model | Intercept | Regression coefficients of | | | | | | Adj. R_bar² | SEE | F-value |
|---|---|---|---|---|---|---|---|---|---|---|
| | | BS | ID | GD | AGE | TA | ACS | | | |
| 1 | 3.10 (16.53)** | 0.06 (0.55) | | | | | | 0.01 | 0.78 | 0.31 |
| 2 | 3.25 (37.47)** | | -0.16 (1.61) | | | | | 0.02 | 0.77 | 2.58 |
| 3 | 3.25 (37.47)** | | | -0.16 (1.62) | | | | 0.02 | 0.77 | 2.63 |
| 4 | 3.27 (37.60)** | | | | -0.19 (1.93) | | | 0.03 | 0.77 | 3.71 |
| 5 | 3.09 (27.54)** | | | | | -0.12 (1.18) | | 0.004 | 0.78 | 1.40 |
| 6 | 3.11 (24.97)** | | | | | | 0.08 (0.77) | 0.004 | 0.78 | 0.60 |
| 7 | 3.12 (16.78)** | 0.08 (0.83) | -0.17 (1.72) | | | | | 0.01 | 0.77 | 1.64 |
| 8 | 3.07 (16.75)** | 0.16 (1.53) | -0.22 (2.13)* | -0.24 (2.26)* | | | | 0.05 | 0.76 | 2.83 |
| 9 | 3.04 (16.45)** | 0.19 (1.75) | -0.09 (0.61) | -0.22 (2.12)* | -0.17 (1.14) | | | 0.06 | 0.76 | 2.46 |
| 10 | 3.07 (16.45)** | 0.11 (0.81) | -0.10 (0.66) | -0.21 (1.99)* | -0.18 (1.17) | -0.14 (1.09) | | 0.06 | 0.75 | 2.21 |
| 11 | 3.07 (16.36)** | 0.11 (0.72) | -0.10 (0.64) | -0.21 (1.98)* | -0.18 (1.12) | -0.14 (1.08) | 0.001 (0.01) | 0.05 | 0.76 | 1.82 |

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 board size are positive with return on assets. It indicates that board size has a positive impact on return on assets. This finding is similar to the findings of Zraiq and Fadzil (2018). Similarly, the beta coefficients for gender diversity are negative with return on assets. It indicates that gender diversity has a negative impact on return on assets. This finding is similar to the findings of Ong'ayi and Odari (2023). Likewise, the beta coefficients for audit committee size are positive with return on assets. It indicates that audit committee size has a positive impact on return on assets. This finding is consistent with the findings of Dongol (2021). In addition, the beta coefficients for total assets are negative with return on assets. It indicates that total assets have a negative impact on return on assets. This finding contradicts with the findings of Velnampy and Nimalathasan (2010). Moreover, the beta coefficients for independent directors are negative with return on assets. It indicates that independent directors have a negative impact on return on assets. This finding is similar to the findings of Afza and

Nazir (2014).

Table 5 shows the regression results of board size, gender diversity, independent directors, audit committee size, total assets and bank age on return on equity in the context of Nepalese commercial banks.

Table 5

**Estimated regression results of board size, gender diversity, independent directors, audit committee size, total assets and bank age on return on equity**

The results are based on panel data of 11 commercial banks with 110 observations for the period of 2013/14-2022/23 by using the linear regression model and the model is ROA = $\beta_0 + \beta_1 BS_{it} + \beta_2 GD_{it} + \beta_3 ID_{it} + \beta_4 ACS_{it} + \beta_5 TA_{it} + \beta_6 AGE_{it} + e_{it}$ where, the dependent variable is ROE (Return on equity as measured by the ratio of net income to total shareholders' equity, in percentage). The independent variables are BS (Board size as measured by the number of board members, in numbers), GD (Gender diversity as measured by the number of females in the board as a director, in numbers), ACS (Audit committee size as measured by the number of audit committee members, in numbers), ID (Independent directors as measured by the number of directors in the board as an external, in numbers), TA (Total assets as measured by the total assets of the banks, Rs in billion) and AGE (Age of the bank, in years).

| Model | Intercept | Regression coefficients of | | | | | | Adj. R_bar² | SEE | F-value |
|---|---|---|---|---|---|---|---|---|---|---|
| | | BS | ID | GD | AGE | TA | ACS | | | |
| 1 | 1.68 (14.24)** | 0.14 (1.41) | | | | | | 0.02 | 0.50 | 2.00 |
| 2 | 1.56 (27.64)** | | 0.06 (0.58) | | | | | 0.01 | 0.50 | 0.34 |
| 3 | 1.57 (29.89)** | | | -0.14 (1.39) | | | | 0.03 | 0.50 | 1.94 |
| 4 | 1.60 (28.51)** | | | | -0.19 (1.88) | | | 0.03 | 0.50 | 3.51 |
| 5 | 1.57 (21.56)** | | | | | 0.04 (0.41) | | 0.01 | 0.50 | 0.17 |
| 6 | 1.70 (21.63)** | | | | | | 0.24 (2.40)* | 0.05 | 0.49 | 5.71 |
| 7 | 1.70 (14.16)** | 0.14 (1.33) | 0.04 (0.36) | | | | | 0.001 | 0.50 | 1.06 |
| 8 | 1.69 (13.96)** | 0.10 (0.91) | 0.06 (0.55) | -0.12 (1.10) | | | | 0.003 | 0.50 | 1.11 |
| 9 | 1.66 (13.73)** | 0.06 (0.50) | 0.14 (0.89) | -0.10 (0.92) | -0.27 (1.72) | | | 0.02 | 0.49 | 1.59 |
| 10 | 1.67 (13.59)** | 0.09 (0.71) | 0.13 (0.86) | -0.09 (0.85) | -0.27 (1.73) | 0.07 (0.51) | | 0.02 | 0.50 | 1.32 |
| 11 | 1.66 (14.02)** | 0.08 (0.57) | 0.21 (1.39) | -0.10 (0.94) | -0.38 (2.45)* | 0.11 (0.91) | 0.33 (2.69)** | 0.08 | 0.48 | 2.37 |

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 board size are positive with return on equity. It indicates that board size has a positive impact on return on equity. This finding is similar to the findings of Shungu et al. (2014). Similarly, the beta coefficients for gender diversity are negative with return on equity. It indicates that gender diversity has a negative impact on return on equity. This finding is similar to the findings of Chijoke-Mgbame et al. (2020). Likewise, the beta coefficients for audit committee size are positive with return on equity. It indicates that audit committee size has a positive impact on return on equity. This finding is consistent with the findings of Agyemang (2020). In addition, the beta coefficients for total assets are positive with return on equity. It indicates that total assets have a positive impact on return on equity. This finding contradicts with the findings of Ruslan et al. (2019). Moreover, the beta coefficients for independent directors are positive with return on equity. It indicates that independent directors have a positive impact on return on equity. This finding is similar to the findings of Islam and Islam (2022).

## 4. Summary and conclusion

Effective corporate governance structures influence multiple aspects of a company's operations, decision-making processes, and stakeholder relationships. By ensuring transparency, accountability, strategic alignment, and risk management integration, governance practices contribute to financial performance and long-term success. Specifically, in the context of liquidity management, strong governance ensures that risks are identified, assessed, and managed appropriately, safeguarding the company's financial stability and resilience.

This study attempts to analyse the gender diversity, audit committee and efficiency in Nepalese commercial banks. The study is based on secondary data of 11 commercial banks with 110 observations for the period from 2013/14 to 2022/23.

The major objective of the study is to examine the gender diversity, audit committee and efficiency in Nepalese commercial banks. Specifically, it examines the relationship of board size, gender diversity, independent directors, audit committee size, total assets and bank age on return on assets and return on equity in the context of Nepalese commercial banks.

The major conclusion of this study is that gender diversity, independent directors, total assets and bank age have negative effect on return *on* equity in the context of Nepalese commercial banks. Moreover, board size and audit committee size have positive effect on return on assets in the context of Nepalese commercial banks. A larger board typically brings together individuals with diverse expertise and experience. This diversity can lead to better decision-making processes and strategic oversight, which in turn can enhance the efficiency of the bank's operations. Similarly, the study also concluded that larger board and audit committee can provide the expertise, diversity, and resources needed to effectively monitor the bank's operations, ensure compliance with regulations, and optimize performance.

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