Impact of Corporate Governance on the Effectiveness of Companies in the Nepalese Service Sector

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Abstract

This study examines the impact of corporate governance on the effectiveness of companies in Nepalese service sector. Return on assets and operational efficiency are selected as the dependent variables. The selected independent variables are board size, board independence, board meeting, audit committee size, audit committee meeting, and company size. The study is based on secondary data of 10 commercial banks with 100 observations for the period from 2012/13 to 2021/22. The data were collected from Banking and Financial Statistics published by Nepal Rastra Bank and annual reports of the selected commercial banks. The correlation coefficients and regression models are estimated to test the significance and importance of corporate governance on the effectiveness of companies in Nepalese service sector.

The study showed that board size has a positive impact on return on assets and operational efficiency. It indicates that larger the board size, higher would be the return on assets and operational efficiency. Similarly, board independence has a positive impact on return on assets and operational efficiency. It indicates that increase in number of independent directors on the board leads to increase in return on assets and operational efficiency. Likewise, board meeting has a positive impact on return on assets and operational efficiency. It indicates that increase in number of board meeting leads to increase in return on assets and operational efficiency. Further, audit committee size has a positive impact on return on assets and operational efficiency. It indicates that increase in audit committee size leads to increase in return on assets and operational efficiency. In addition, audit committee meeting has a positive impact on return on assets and operational efficiency. It indicates that increase in audit committee meeting leads to increase in return on assets and operational efficiency. Likewise, company size has a positive impact on return on assets and operational efficiency. It indicates that larger the company size, higher would be the return on assets and operational efficiency.

Keywords: board size, board independence, board meeting, audit committee size, audit committee meeting, and company size, operational efficiency, return on assets

1. Introduction

The concept of corporate governance has gained significant public interest due to its apparent importance in maintaining the economic health of

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corporations. During financial crises, regulators, governments, and academics have shown heightened enthusiasm for examining corporate governance to bolster investors' confidence and attract more funding to businesses (LaPorta *et al.*, 2000). Corporate governance encompasses how an organization is managed, its corporate and other structures, culture, policies and strategies, and the ways in which it deals with its various stakeholders (Barrett, 2002). The need for corporate governance arises because of the separation of management and ownership in the modern corporations. Since, corporate governance is used to run companies and the board of directors is responsible for governance and the development of a company's strategy (Pass, 2004). It is expected that corporate performance is affected by corporate governance attributes. However, it should be noted that performance measurements might include other attributes rather than corporate governance mechanisms. Performance measurement provides the information needed to assess the extent to which an organization delivers value and achieves excellence. This definition also relates well to the balanced scorecard. The usual four scorecard dimensions include financial, customer, internal processes, innovation and learning are implied: financial aspects are included in "delivering value", customers and stakeholders are key to the definition, while internal processes, innovation and learning are central to the way organizations are managed (Moullin, 2007).

Al Manaseer *et al.* (2012) examined the impact of corporate governance dimensions (Board size, board composition, Chief Executive Officer (CEO) status, and foreign ownership) on the performance of Jordanian Banks. The study revealed a positive relationship between corporate governance dimensions: the number of outside board members and foreign ownership and Jordanian banks' performance whereas, board size and the separation of the role of CEO and chairman have negative relationship with performance. Similarly, Vo and Nguyen (2014) examined the relationship between corporate governance and firm performance. The study found that board independence and proportion of independent members have positive impact on firm performance. Likewise, Guluma (2021) investigated the impact of corporate governance (CG) measures on firm performance and the role of managerial behavior in the relationship between CG mechanisms and firm performance using a Chinese-listed firm. The study showed that ownership concentration and product market competition have positive and significant impact on firm performance measured by ROA and TQ. Further, Ballout (2020) examined the extent of the impact of corporate governance on the effectiveness of companies in the Jordanian service sector. The study showed a positive and statistically significant relation of ownership concentration on effectiveness measures. The study also found a statistically significant commitment to the implementation of CG principles in companies above average in terms of concentration of ownership and the independence of the board of directors. In addition, Kankan *et al.* (2023) examined the influence of corporate governance practices and international orientation on the performance of SMEs in a developing country based on the hand- collected data from 270 SMEs in Ghana in 2022. The study showed that international orientation has positively and significantly moderates the relationship between corporate governance and firm performance. The study also showed that engaging in the international market offers new knowledge to SMEs in developing countries. Therefore, investors and the government should develop strategies and policies that support the internationalization of SMEs in developing countries. Similarly, Al-Homaidi *et al.* (2019) found that board size, board composition, board diligence, audit committee composition, and company age have significant impact on EPS, while audit committee size, audit committee diligence, and institutional ownership have somewhat of an insignificant influence with EPS.

Ngilamele (2019) analyzed the impact of corporate governance on firm value. The study showed that board size, board independency, managerial ownership and institutional ownership have no impact on the firm value. Similarly, Promsen (2015) found that in both firms with and without other comprehensive income (OCI), and the control variables including total assets, leverage ratio and earnings before interest and tax are significantly associated with firm value. Likewise, Hossain and Tohidul Alam (2019) examined the impact of corporate governance and financial leverage on firm value. The result showed that audit committee, board size, CEO duality, and financial leverage are negatively related to the firm value. Moreover, Yu *et al.* (2017) stated that good governance of Chinese firms significantly increases firm value only in competitive industries. Likewise, Iujin *et al.* (2020) found that private equity (PE) investment can raise firm value as well as affect management behavior at the macro level. Ley *et al.* (2019) studied the board characteristics, investors' confidence and firm value of Malaysian companies. The study found that role of investors' confidence in the relationship between board characteristics and firm value indicates that investors' confidence plays significant role between CEO duality and firm value. Okumu (2015) found that corporate governance attributes have significant influence on return on assets while corporate governance attributes have an insignificant influence on market to book value ratio as measures of firm value. Similarly, Mitra and Bakshi (2017) examined the impact of corporate governance on profitability of banks. The study revealed that the existence of independent directors does not bear any significant relationship with any variable representing performance and profitability of listed banks. Additionally, the duality of chairman and managing director position in banks have significant positive impact on return on assets and capital adequacy ratio and negative effect on net non-performing assets. Likewise, Pucheta-Martínez *et al.* (2018) reported that female institutional directors on boards enhance corporate performance, but when they reach a certain threshold on boards (11.72 %), firm value decreased. The study also stated that in line with female institutional directors, pressure-resistant female directors on boards also increase firm value, but only up to a certain figure (12.71 % on boards), above which they have a negative impact on firm performance.

Anh and Anh (2020) investigated the impact of corporate governance on firm performance. The study revealed that size of board and block-holder ownership, affect the financial performance of Vietnamese firms. Likewise, Sheikh and Karim (2015) found that board size is significantly and positively related to ROA, ROE and MBR. The study also found that board composition is positively related to ROA, ROE and EPS while negatively related to MBR. Furthermore, Uddin *et al.* (2021) revealed that when the board structure is familiarly and politically affiliated and led by CEO-duality, the firm value is decreased. The study also revealed that the inclusion of dynamic professionals and independent members in the board structure increased the firm value. Further, Kartika (2021) assessed the corporate social responsibility and firm value. The study found that good corporate governance has a positive impact on firm value. Moreover, Lakkanawanit *et al.* (2022) showed that the proportion of majority shareholder and firm size plays a key role of value creation in this group. Likewise, Heraniah (2022) revealed that board gender has a positive but an insignificant relationship with firm value as proxied by Tobin's Q, while board size has a positive and significant relationship with firm value, whereas board meetings have negative and an insignificant relationship with firm value. Abang *et al.* (2022) showed that board meetings, board skill and gender diversity individual provisions of corporate governance are significantly and positively associated with capital budget realization ratio (CBRR). The study also showed that aggregate corporate governance disclosure index, board sub-committees, board size and independent non-executive directors are positive but insignificantly related to CBRR. Likewise, Pham *et al.* (2021) examined the effect of governance characteristics on corporate performance. The result revealed that two main components of corporate governance, namely board gender diversity and block holder ownership tend to foster firm performance. Furthermore, Indrawati and Hanif (2023) revealed that neither the capital structure nor GCG have any impact on the company's ability to control its profitability. Likewise, Pamungkas *et al.* (2023) showed that corporate governance affects firm value, corporate governance affects financial performance. The study also showed that corporate governance also affects company value with financial performance as an intervening variable.

In the context of Nepal, Bhattarai *et al.* (2017) examined the effect of corporate governance on financial performance of bank in Nepal during the period from 2010 to 2015. The study showed that board size has a negative impact on financial performance of commercial bank in Nepal whereas audit committee size and portion of independent directors have positive impact on financial performance of commercial bank in Nepal. Similarly, Khanal (2023) analyzed the relationship of corporate governance structure with performance of banks. The study revealed that board size, CEO duality and corporate governance need are important corporate governance mechanism in order to their relative importance that enhances the performance of the banks. Likewise, Goet (2022) analyzed the impact of bank-specific characteristics on the financial performance of listed commercial banks in Nepal. The result revealed that board size, firm size, foreign ownership, and credit to deposit ratio have positive impact on financial performance. Further, Chand (2020) showed that board member size and return on equity have negative impact on earnings per share whereas number of independent directors has a negative impact on earnings per share. Lamichhane (2018) examined the corporate governance and financial performance in Nepal. The study found that size of the assets and debt ratio have negative impact on firm performance and ownership concentration has no relationship with firms' financial performance. Similarly, Subedi (2018) assessed the role of corporate governance on the performance of insurance companies of Nepal. The study found that board size has a negative impact on return on assets while firm size and firm ownership have positive impact on return on assets and return on equity.

Poudel and Hovey (2012) determined the corporate governance and efficiency in Nepalese commercial banks. The study found that bigger board size and lower proportion of institutional ownership led to better efficiency in the commercial banks. Likwise, Yadav *et al.* (2016) examined the effect of board size, audit committee and board meetings on firm performance in Nepalese enterprises. The study revealed that audit committee independence, audit committee have positive relationship with return on equity and return on assets. However, the study also revealed that there is a negative but significant impact of board size on return on equity. Bhandari *et al.* (2014) examined the effect of board size, board composition, and ownership structure on bank performance. The result found that corporate governance, board size and board independence have significantly impact on bank performance. Likewise, Bhattrai (2017) found that the board size has a negative impact on financial performance of commercial banks in Nepal whereas audit committee size and portion of independent directors have positive impact on financial performance of commercial banks in Nepal.

The above discussion shows that empirical evidences vary greatly across the studies on the impact of corporate governance on the effectiveness of companies in the service sector. 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 major objective of the study is to examine the impact of corporate governance on the effectiveness of companies in the Nepalese service sector. Specifically, it examines the relationship of board size, board independence, board meeting, audit committee size, audit committee meeting, and company size with effectiveness of companies in the Nepalese service sector.

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 gathered from 10 commercial banks for the period of 2012/13 to 2021/22, leading to a total of 100 respondents. The study employed stratified sampling method. The main sources of data include Banking and Financial Statistics published by Nepal Rastra Bank and annual report of respective banks. Table 1 shows the list of commercial banks for the study along with the study period and number of observations.

Table 1

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

S. N.	Name of the banks	Study period	Observations
1	Everest Bank Limited	2012/13-2021/22	10
2	Prime Commercial Bank Limited	2012/13-2021/22	10
3	Citizens Bank International Limited	2012/13-2021/22	10
4	Nepal SBI Bank Limited	2012/13-2021/22	10
5	Machhapuchchhre Bank Limited	2012/13-2021/22	10
6	NMB Bank Limited	2012/13-2021/22	10
7	Sanima Bank Limited	2012/13-2021/22	10
8	Standard Chartered Bank Nepal Limited	2012/13-2021/22	10
9	Siddhartha Bank Limited	2012/13-2021/22	10
10	Nabil Bank Limited	2012/13-2021/22	10
Total number of observations			**100**

Source: Annual Reports

Thus, the study is based on 100 observations.

The model

The model used in this study assumes that corporate governance depends upon effectiveness of company. The dependent variables selected for the study are operational efficiency and return on assets. Similarly, the selected independent variables are board size, board independence, board meeting, audit committee size, audit committee meeting, and company size. Therefore, the model takes the following form:

$$ROA = \beta_0 + ß_1 BS + ß_2 BM + ß_3 BI + ß_4 ACS + ß_5 ACM + ß_6 CS + e_{it}$$

$$OE = \beta_0 + ß_1 BS + ß_2 BM + ß_3 BI + ß_4 ACS + ß_5 ACM + ß_6 CS + e_{it}$$

Where,

ROA = Return on asset as measured by net profit after tax to total assets, in percentage.

OE = Operational efficiency as measured by the ratio of operating expense to operating income, in percentage.

BS = Board size as measured by the total members on board, in number.

BM = Board meeting as measured by the number of meetings held in a year, in number.

BI = Board independence as measured by the number of independent directors, in number.

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

ACM = Audit committee meeting as measured by the number of audit committee meetings held in a year, in numbers.

CS = Company size as measured by the number of branches of the respected organization.

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

Board size

Board size is defined as a total number of members serving on a firm's board. Shukla *et al.* (2020) examined the impact of board size on the accounting returns and the asset quality of Indian banks. The study found that board size has a positive impact on accounting return measured by return on assets. Similarly, Boussenna (2020) analyzed the board of directors' size and firm performance: Evidence from non-financial French firms listed on CAC 40. The study revealed that board size should be between 13 to 17 members in order to achieve good performance for non-financial firms. Likewise, Qadorah and Fadzil (2018) showed that board size is significantly and positively correlated to return on assets. Further, Yahaya and Awen (2020) found that board size has a significant and positive impact on operational efficiency. Based on it, this study develops the following hypothesis:

H_1: There is a positive relationship between board size and effectiveness of companies.

Board meeting

A board meeting is a formal meeting of the board of directors of an organization. Cai *et al.* (2023) examined the remote board meetings and board monitoring effectiveness: Evidence from China. The study found that there is a positive relationship between board meeting and effectiveness of the companies. Similarly, Faulkner *et al.* (2020) showed that board meeting has a positive and significant impact on effectiveness of companies. Likewise, Alshirah *et al.* (2023) revealed that board meeting increases the effectiveness of the companies. Further, Gold and Aifuwa (2022) stated that regular board meeting improves the effectiveness of companies. Based on it, this study develops the following hypothesis:

H_2: There is a positive relationship between board meeting and effectiveness of companies.

Board independence

Dang *et al.* (2023) found that board independence has a positive and significant impact on company's effectiveness. Similarly, Mukyala *et al.* (2020) revealed that board independence has a positive impact on return on assets. Likewise, Karki *et al.* (2023) revealed that board independence has a positive impact on company's effectiveness measured by return on assets and operational efficiency. However, Kumar and Singh (2012) argued that board independence has an insignificant but positive impact on company's effectiveness. Furthermore, Brown and Caylo (2006) found that there is no relationship between board independence and return on assets. Based on it, this study develops the following hypothesis:

H_3: There is a positive relationship between board independence and effectiveness of companies.

Audit committee size

Rochmah Ika and Mohd Ghazali (2012) examined the audit committee effectiveness and timeliness of reporting: Indonesian evidence. The study found that audit committee size is a significant factor which ensure timely submission of financial report for the effectiveness of the company. Similarly, Aanu *et al.* (2014) analyzed the effectiveness of audit committee and firm financial performance in Nigeria. The study found that audit committee size has a positive impact on return on assets. Likewise, Shatnawi *et al.* (2021) showed that medium audit committee size has a positive and significant impact on effectiveness of the company. In contrast, Fariha *et al.* (2022) revealed audit committee size has a negative impact on effectiveness of the company. Based on it, this study develops the following hypothesis:

H_4: There is a positive relationship between audit committee size and effectiveness of companies.

Audit committee meeting

Ngo and Le (2021) showed that frequency of audit committee meeting has a positive impact on company's effectiveness. Similarly, Huang and Thiruvadi (2010) revealed that there is a positive and significant relationship between audit committee meeting and company's effectiveness. Likewise, Yadav *et al.* (2016) examined the audit committee effectiveness and performance of

Saudi Arabia listed companies. The study revealed that frequency of audit committee meeting has a positive impact on return on assets. Further, Al-Matari *et al.* (2012) found that there is a positive relationship between audit committee meeting and return on assets. Based on it, this study develops the following hypothesis:

H_5: There is a positive relationship between audit committee meeting and effectiveness of companies.

Company size

Smaller company size is more efficient than the larger company size to obtain higher effectiveness. Lestari and Mustika (2019) found that there is a positive and significant relationship between company size and return on assets. However, Hertina (2021) examined the influence of current ratio, debt to equity ratio and company size on return on assets. The study found that company size has a negative impact on return on assets. Similarly, Lumapow and Tumiwa (2017) showed that company size has a positive and significant impact on company's effectiveness. Based on it, this study develops the following hypothesis:

H_6: There is a positive relationship between company size and effectiveness of companies.

3. Results and discussion

Descriptive statistics

Table 2 presents the desscriptive statistics of selected dependent and independent variables during the period 2012/13 to 2021/22.

Table 2

Descriptive statistics

This table shows the descriptive statistics of dependent and independent variables of 10 Nepalese commercial banks for the study period of 2012/13 to 2021/22. The dependent variables are ROA (Return on asset as measured by net profit after tax to total assets, in percentage) and OE (Operational efficiency is measured by the ratio of operating expense to operating income, in percentage). The independent variables are BS (Board size is measured as total members on board, in number), BM (Board meeting is measured as the number of meetings held in a year, in number), BI (Board independence is measured as the number of independent directors, in number), ACS (Audit committee size is measured as the number of audit committee members, in numbers), ACM (Audit committee meeting is measured as the number of audit committee meetings held in a year, in numbers), and CS (Company size is measured as the number of branches of the respected organization).

Variables	Minimum	Maximum	Mean	S.D.
ROA	0.49	3.98	1.71	0.54
OE	0.13	1.54	0.48	0.29
BS	5.00	12.00	7.14	1.41
BI	0.00	6.00	1.00	1.16
BM	4.00	40.00	20.40	8.21
ACS	1.00	5.00	3.27	0.79
ACM	4.00	27.00	10.77	5.28
CS	12.00	248.00	86.61	55.62

Source: SPSS Output

Correlation analysis

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

Table 3

Pearson's correlation coefficient matrix

This table shows the correlation coefficients of dependent and independent variables of 10 Nepalese commercial banks for the study period of 2012/13 to 2021/22. The dependent variables are ROA (Return on asset as measured by net profit after tax to total assets, in percentage) and OE (Operational efficiency is measured by the ratio of operating expense to operating income, in percentage). The independent variables are BS (Board size is measured as total members on board, in number), BM (Board meeting is measured as the number of meetings held in a year, in number), BI (Board independence is measured as the number of independent directors, in number), ACS (Audit committee size is measured as the number of audit committee members, in numbers), ACM (Audit committee meeting is measured as the number of audit committee meetings held in a year, in numbers), and CS (Company size is measured as the number of branches of the respected organization).

Variables	ROA	OE	BS	BI	BM	ACS	ACM	CS
ROA	1							
OE	0.039	1						
BS	0.019	0.030	1					
BI	0.125	0.169	0.006	1				
BM	0.212	0.449^{**}	0.004	0.335^{**}	1			
ACS	0.041	0.416^{**}	0.002	0.209^{*}	0.283^{**}	1		
ACM	0.207	0.133	0.502^{**}	0.066	0.180	0.136	1	
CS	0.465^{**}	0.499^{**}	0.102	0.118	0.457^{**}	0.054	0.253^{*}	1

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

Table 3 shows that board size has a positive relationship with return on assets. It indicates that larger the board size, higher would be the return on assets. Similarly, board independence has a positive relationship with return on assets. It indicates that increase in number of independent directors on the board leads to increase in return on assets. Likewise, board meeting has a positive relationship with return on assets. It indicates that higher frequency of board meeting leads to increase in return on assets. Further, audit committee size has a positive relationship with return on assets. It indicates that increase in audit committee members leads to increase in return on assets. In addition, audit committee meeting has a positive relationship with return on assets. It indicates that higher the audit committee meeting, higher would be the return on assets. Likewise, company size has a positive relationship with return on assets. It indicates that larger the company size, higher would be the return on assets.

Similarly, board size has a positive relationship with operational efficiency. It indicates that larger the board size, higher would be the operational efficiency. Similarly, board independence has a positive relationship with operational efficiency. It indicates that increase in number of independent directors on the board leads to increase in operational efficiency. Likewise, board meeting has a positive relationship with operational efficiency. It indicates that higher frequency of board meeting leads to increase in operational efficiency. Further, audit committee size has a positive relationship with operational efficiency. It indicates that increase in audit committee members leads to increase in operational efficiency. In addition, audit committee meeting has a positive relationship with operational efficiency. It indicates that higher the audit committee meeting, higher would be the operational efficiency. Likewise, company size has a positive relationship with operational efficiency. It indicates that larger the company size, higher would be the operational efficiency.

Regression analysis

Having analyzed the Pearson's correlation coefficients, the regression analysis has been carried out and the results are presented in Table 4. More specifically, it presents the regression results of board size, board independence, board meeting, audit committee size, audit committee meeting, and company size on return on assets.

Table 4

Estimated regression results of board size, board independence, board meeting, audit committee size, audit committee meeting, and company size on return on assets

The results are based on panel data of 10 Nepalese commercial banks with 100 observations for the period of 2012/13 to 2021/22 by using the linear regression model and the model is ROA $= \beta_0 + \beta_1 BS + \beta_2 BM + \beta_3 BI + \beta_4 ACS + \beta_5 ACM + \beta_6 CS + e_{it}$ where, the dependent variable is ROA (Return on asset as measured by net profit after tax to total assets, in percentage). The independent variables are BS (Board size is measured as total members on board, in number), BM (Board meeting is measured as the number of meetings held in a year, in number), BI (Board independence is measured as the number of independent directors, in number), ACS (Audit committee size is measured as the number of audit committee members, in numbers), ACM (Audit committee meeting is measured as the number of audit committee meetings held in a year, in numbers), and CS (Company size is measured as the number of branches of the respected organization).

Model	Intercept	Regression coefficients of						Adj. R_bar^2	SEE	F-value
		BS	BI	BM	ACS	ACM	CS			
1	0.129 (0.075)	0.002 (0.010)						0.009	0.172	0.034
2	0.068 (2.841)**		0.136 (4.244)**					0.141	0.163	16.011
3	0.042 (1.565)			0.154 (4.635)**				0.165	0.163	21.480
4	0.007 (0.114)				0.145 (2.141)*			0.033	0.171	4.582
5	0.211 (7.449)**					0.104 (2.967)**		0.070	0.173	8.802
6	0.046 (1.624)						0.002 (4.113)**	0.133	0.124	12.219
7	0.049 (1.616)							0.107	0.112	13.190
8	0.120 (5.156)**							0.011	0.103	2.156
9	0.041 (0.579)	0.000 (0.012)		0.154 (4.608)*				0.156	0.122	10.616
10	0.189 (2.511)*	0.003 (0.322)				0.104 (2.97)**		0.062	0.109	4.214
11	0.061 (0.709)	0.008 (0.717)						0.006	0.121	1.310
12	0.001 (0.033)			0.116 (3.153)**			0.001 (2.682)**	0.205	0.105	9.925
13	0.037 (0.462)	0.001 (0.058)		0.152 (4.264)**				0.148	0.149	7.158
14	0.009 (0.313)		0.100 (3.091)**			0.121 (3.424)**		0.222	0.131	9.825

Notes:

i. Figures in parenthesis are t-value
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 consistent with the findings of Shukla *et al.* (2020). Similarly, the beta coefficients for board independence are positive with return on assets. It indicates that board independence has a positive impact on return on assets. This finding is consistent with the findings of Mukyala *et al.* (2020). Likewise, the beta coefficients for board meeting are positive with return on assets. It indicates that board meeting has a positive impact on return on assets. This finding is inconsistent with the findings of Alshirah *et al.* (2023). Further, 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 Aanu *et al.* (2014). Moreover, the beta coefficients for audit committee meeting are positive with return on assets. It indicates that audit committee meeting has a positive impact on return on assets. This finding is similar to the findings of Yadav *et al.* (2016). Similarly, the beta coefficients for company size are positive with return on assets. It indicates that company size has a positive impact on return on assets. This finding is similar to the findings of Lestari and Mustika (2019).

Table 5 shows the estimated regression results of board size, board independence, board meeting, audit committee size, audit committee meeting, and company size on operational efficiency.

Table 5

Estimated regression results of board size, board independence, board meeting, audit committee size, audit committee meeting, and company size on operational efficiency

The results are based on panel data of 10 Nepalese commercial banks with 100 observations for the period of 2012/13 to 2021/22 by using the linear regression model and the model is $OE = \beta_0 + ß_1 BS + ß_2 BM + ß_3 BI + ß_4 ACS + ß_5 ACM + ß_6 CS + e_{it}$ where, the dependent variable is OE (Operational efficiency is measured by the ratio of operating expense to operating income, in percentage). The independent variables are BS (Board size is measured as total members on board, in number), BM (Board meeting is measured as the number of meetings held in a year, in number), BI (Board independence is measured as the number of independent directors, in number), ACS (Audit committee size is measured as the number of audit committee members, in numbers), ACM (Audit committee meeting is measured as the number of audit committee meetings held in a year, in numbers), and CS (Company size is measured as the number of branches of the respected organization).

Model	Intercept	Regression coefficients of						Adj. R_bar²	SEE	F-value
		BS	BI	BM	ACS	ACM	CS			
1	0.023 (0.394)	0.007 (0.914)						0.002	0.136	0.835
2	0.033 (1.741)		0.073 (2.852)**					0.064	0.131	8.134
3	0.028 (1.250)			0.071 (2.600)**				0.052	0.132	6.761
4	0.001 (0.020)				0.078 (1.479)			0.011	0.135	2.188
5	0.103 (4.608)**					0.045 (1.621)		0.015	0.135	2.626
6	0.020 (0.878)						0.001 (2.871)**	0.065	0.131	8.245
7	0.025 (1.033)							0.044	0.133	5.781
8	0.062 (3.430)**							0.000	0.136	0.989
9	0.017 (0.294)	0.006 (0.829)		0.070 (2.559)*				0.050	0.132	3.714
10	0.016 (0.243)	0.003 (0.415)			0.070 (1.226)			0.003	0.135	1.172
11	0.049 (0.828)		0.008 (0.991)			0.046 (1.661)		0.015	0.135	1.804
12	0.021 (0.376)			0.001 (0.072)				0.035	0.133	2.865
13	0.023 (0.341)	0.011 (1.328)						0.007	0.135	1.380
14	0.025 (0.394)	0.005 (0.655)	0.008 (0.144)	0.066 (2.240)*	0.0180 (0.304)	0.031 (1.102)	0.001 (2.309)*	0.041	0.133	2.485

Notes:

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

Table 5 shows that the beta coefficients for board size are positive with operational efficiency. It indicates that board size has a positive impact on operational efficiency. This finding is consistent with the findings of Yahaya and Awen (2020). Similarly, the beta coefficients for board independence are positive with operational efficiency. It indicates that board independence has a positive impact on operational efficiency. This finding is consistent with the findings of Karki *et al.* (2023). Likewise, the beta coefficients for board meeting are positive with operational efficiency. It indicates that board meeting has a positive impact on operational efficiency. This finding is inconsistent with the findings of Alshirah *et al.* (2023). Further, the beta coefficients for audit committee size are positive with operational efficiency. It indicates that audit committee size has a positive impact on operational efficiency. This finding is consistent with the findings of Shatnawi *et al.* (2021). Moreover, the beta coefficients for audit committee meeting are positive with operational efficiency. It indicates that audit committee meeting has a positive impact on operational efficiency. This finding is similar to the findings of Huang and Thiruvadi (2010). Similarly, the beta coefficients for company size are positive with operational efficiency. It indicates that company size has a positive impact on operational efficiency. This finding is similar to the findings of Lumapow and Tumiwa (2017).

4. Summary and conclusion

The concept of corporate governance has gained significant public interest due to its apparent importance in maintaining the economic health of corporations. During financial crises, regulators, governments, and academics have shown heightened enthusiasm for examining corporate governance to bolster investors' confidence and attract more funding to businesses. Corporate governance encompasses how an organization is managed, its corporate and other structures, culture, policies and strategies, and the ways in which it deals with its various stakeholders. The need for corporate governance arises because of the separation of management and ownership in the modern corporations. The theory of agency argues that the managers may behave opportunistically to maximize their own welfare. Since, corporate governance is used to run companies and the board of directors is responsible for governance and the development of a company's strategy.

This study attempts to examine the impact of corporate governance on the effectiveness of companies in the Nepalese service sector. This study is based on the secondary data gathered from 10 Nepalese commercial banks for the study period from 2012/13 to 2021/22.

The study showed that board size, board independence, board meeting, audit committee size, audit committee meeting, and company size have positive effect on return on assets and operational efficiency. It indicates that higher the board size, board independence, board meeting, audit committee size, audit committee meeting, and company size, higher would be the return on assets and operational efficiency. Likewise, the study concluded that board meeting followed by audit committee size is the most influencing factor that explains the changes in the return on assets in the context of companies in the Nepalese service sector. Similarly, the study also concluded that audit committee size followed by board independence is the most influencing factor that explains the changes in operational efficiency in the context of companies in the Nepalese service sector.

References

Aanu, O. S., I. F. Odianonsen, and O. I. Foyeke, 2014. Effectiveness of audit committee and firm financial performance in Nigeria: an empirical analysis. *Journal of Accounting and Auditing* 4(1), 1-11.

Abang, A. O. G., V. Tauringana, D. Wang, and L. O. Achiro, 2022. Corporate governance and financial performance of state-owned enterprises in Kenya. *International Journal of Business in Society* 22(4), 798-820.

Al Manaseer, M. F., R. M. Al-Hindawi, M. A. Al-Dahiyat, and I. I. Sartawi, 2012. The impact of corporate governance on the performance of Jordanian banks. *European Journal of Scientific Research* 67(3), 349-359.

Al-Homaidi, E. A., A. Faozi, and A. Ahmad, 2019. Impact of corporate governance mechanisms on financial performance of hotel companies: Empirical evidence from India. *African Journal of Hospitality, Tourism and Leisure* 8(2), 1-21.

Al-Matari, Y. A., A. K. Al-Swidi, and F. H. B. Fadzil, 2012. Audit committee effectiveness and performance of Saudi Arabia listed companies. *Wulfenia Journal* 19(8), 169-188.

Alshirah, M. H., A. F. Alshira'h, and A. Lutfi, 2023. Board effectiveness and its effect on return on equity as a proxy of firms' evidence from emerging markets. *Journal of Namibian Studies: History Politics Culture* 33(4), 4020-4033.

Anh, P. D., and H. T. P. Anh, 2020. Does corporate governance structure matter for firm financial performance? A system GMM panel analysis for Vietnam. *Journal of International Economics and Management* 20(1), 1-17.

Ballout, O. M. K., 2020. The extent of the impact of corporate governance on the effectiveness of companies in the Jordian service sector. *Academy of Strategic Management Journal* 19(1), 1-10.

Barrett, P., 2002. Achieving better practice corporate governance in the public sector. *Australian National Audit Office* 1(1), 1-51.

Bhandari, T. B., S. Amatya, S. Aryal, and S. Shrestha, 2014. Effect of board size, board composition, and ownership structure on bank performance: A case of Nepal. *Nepalese Journal of Corporate Governance* 1(1), 71-86.

Bhattarai, H., S. Abhi, and U. Premalatha, 2017. Effect of corporate governance on financial performance of bank in Nepal. *Multidisciplinary Research* 2(1), 97-

110.

Bhattrai, H., 2017. Effect of corporate governance on financial performance of bank in Nepal. *Zenith International Journal of Multidisciplinary Research* 7(3), 97-110.

Boussenna, H., 2020. Board of directors' size and firm performance: Evidence from Non-Financial French Firms Listed on CAC 40. *Studies in Business and Economics* 15(2), 46-61.

Brown, L. D., and M. L. Caylor, 2006. Corporate governance and firm valuation. *Journal of Accounting and Public Policy* 25(4), 409-434.

Cai, X., F. Jiang, and J. K. Kang, 2023. Remote board meetings and board monitoring effectiveness: Evidence from China. *The Review of Financial Studies* 36(11), 4318-4372.

Chand, S., 2020. Corporate governance and performance of Nepalese commercial banks. *Journal of Finance* 2(1), 128-139.

Dang, G. T. T., A. N. Huu, and T. P. Nguyen, 2023. Impact of corporate governance on firm value: Empirical evidence from Vietnam. *Vietnam Journal of Management* 3(2), 60-76.

Fariha, R., M. M. Hossain, and R. Ghosh, 2022. Board characteristics, audit committee attributes and firm performance: empirical evidence from emerging economy. *Asian Journal of Accounting Research* 7(1), 84-96.

Faulkner, N., B. Wright, A. Lennox, M. Bismark, J. Boag, S. Boffa, and P. Bragge, 2020. Simulation-based training for increasing health service board members' effectiveness: a cluster randomized controlled trial. *BMJ open* 10(12), 34-49.

Goet, J., 2022. The impact of corporate governance on Nepalese commercial banks' financial performance. *Journal of Management* 5(1), 24-38.

Gold, N. O., and H. O. Aifuwa, 2022. Board meeting and sustainability reporting of banks in Nigeria. *Copernican Journal of Finance and Accounting* 11(3), 49-67.

Guluma, T. F., 2021. The impact of corporate governance measures on firm performance. *Future Business Journal*, 7(5), 20-30.

Heraniah, N. O., 2022. The effect of board characteristics on firm value of listed banks in Kenya. *Journal of Management Science* 21(5), 88-95.

Hertina, D., 2021. The influence of current ratio, debt to equity ratio and company size on return on assets. *Turkish Journal of Computer and Mathematics Education* 12(8), 1702-1709.

Hossain, M. S., and M. TohidulAlam, 2019. The impact of corporate governance and financial leverage on firm value: Evidence from non-financial firms listed in Dhaka stock exchange. *Journal of Business* 12(2), 67-68.

Huang, H. W., and S. Thiruvadi, 2010. Audit committee characteristics and corporate fraud. *International Journal of Public Information Systems* 6(1), 71-82.

Indrawati, R., and F. Hanif, 2023. The effect of good corporate governance, capital structure on financial performance with profit management as mediation: A case study in the health industry. *International Journal of Science Review* 5(1), 171-190.

Iujin, L., R. Gupta., L. Haihong, and S. Qiang, 2020. Private equity characteristics, corporate governance and firm value: Empirical evidence from small and medium-sized enterprises. *Asian Economic Journal* 34(2), 163-183.

Kankan, W., N. Alessa, K. Marah, K. Kyeremeh, E. S. Ansah, and V. Tawiah, 2023. The impact of corporate governance and international orientation on firm performance in SMEs: Evidence from a developing country. *Sustainability* 15(6), 1-16.

Karki, A., A. Nepali, A. Pandit, A. K. Mahato, and A. Joshi, 2023. Female presence in corporate governance, firm performance, and the moderating role of family ownership: A case of Nepalese commercial banks. *Nepalese Journal of Finance* 10(1), 15-35.

Kartika, I., 2021. Corporate governance, corporate social responsibility and firm value: Evidence from Indonesia. *International Journal of Business Economics* 3(1), 64-81.

Khanal, K., 2023. Corporate Governance and its Impact on Financial Performance of Nepalese Commercial Banks. *Asian Journal of Multidimensional Research* 12(7), 4-16.

Kumar, N., and J. P. Singh, 2012. Outside directors, corporate governance and firm performance: Empirical evidence from India. *Asian Journal of Finance and Accounting* 4(2), 39-48.

Lakkanawanit, P., N. Soradee, N. Dachprom, B. Musidaeng, P. Suwannarat, P. Sangkhanukit, P. Paothongkam, T. Swatdikun, and S. Thammachot, 2022.

The impact of corporate governance on firm value: Evidence from the stock exchange of Thailand. *Journal of Science, Technology, and Social Sciences* 21(2), 18-29.

Lamichhane, P., 2018. Corporate governance and financial performance in Nepal. *NCC Journal* 3(1), 108-120.

LaPorta, R., F. Lopez-de-Silanes, A. Shleifer, and R. Vishny, 2000. Investor protection and corporate governance. *Journal of Financial Economics* 58(2), 3-27.

Lestari, I. R., and R. Mustika, 2019. Analysis of size, return on assets, debt to equity ratio, and total asset turnover against the value of companies in large trade sector companies in production and consumer goods listed on the Indonesia stock exchange. *International Journal of Business Studies* 3(2), 72-77.

Ley, L., F. Hashim, and Z. Embong, 2019. Board characteristics, investors' confidence and firm value: Malaysian evidence. *Asian Journal of Accounting and Governance* 12(1), 169-181.

Lumapow, L. S., and R. A. F. Tumiwa, 2017. The effect of dividend policy, firm size, and productivity to the firm value. *Research Journal of Finance and Accounting*, 8(22), 20-24.

Mitra, S., and A. Bakshi, 2017. Impact of corporate governance on profitability of banks: A study on listed Indian banks. *Journal of Management Control* 32(1), 5-36.

Moullin, M., 2007. Performance measurement definitions: Linking performance measurement and organizational excellence. *International Journal of Health Care Quality Assurance* 20(3), 181-183.

Mukyala, V., L. Rono, and C. Lagat, 2020. Corporate governance and firm value: a comparative study of companies listed on the Nairobi and Uganda securities exchange. *Journal of Finance and Accounting* 4(6), 11-17.

Ngilamele, G. R. N. R., 2019. The impact of corporate governance on firm value of mining companies that are listed in Indonesian stock exchange. *Indonesian Journal of Management* 3(9), 23-35.

Ngo, D. N. P., and A. T. H. Le, 2021. Relationship between the audit committee and earning management in listed companies in Vietnam. *The Journal of Asian Finance, Economics and Business* 8(2), 135-142.

Okumu, F. O., 2015. Corporate governance and firm value for firms listed at the

Nairobi securities exchange. *Journal of Management and Economics* 22(13), 35-47.

Pamungkas, I. D., P. Purwantoro, M. P. Sari, and H. Hersugondo, 2023. Corporate Governance and financial performance on firm value: The case of Indonesia. *Indonesian Journal of Accounting* 20(12), 92-103.

Pass, C., 2004. Corporate governance and the role of non-executive directors in large UK companies: An empirical study. *The International Journal of Business in Society* 4(2), 52-63.

Pham, A. D., A. T. Hoang, and M. T. Le, 2021. The effect of governance characteristics on corporate performance: An empirical Bayesian analysis for Vietnamese publicly listed companies. *Data Science for Financial Econometrics* 1(1), 597-612.

Poudel, R. P., and M. Hovey, 2012. Corporate governance and efficiency in Nepalese commercial banks. *International Review of Business Research Papers* 9(4), 53-64.

Promsen, W., 2015. Value relevance of corporate governance on firm value in the comprehensive income context. *Journal of Finance and Accountancy* 12(3), 22-37.

Pucheta, M. C., I. Beloms, and G. Olcina, 2018. Female institutional directors on boards and firm value. *Journal of Business Ethics* 15(2), 343-363.

Qadorah, A. A. M., and F. H. B. Fadzil, 2018. The relationship between board size and CEO duality and firm performance: Evidence from Jordan. *International Journal of Accounting, Finance and Risk Management* 3(3), 16-20.

Rochmah Ika, S., and N. A. Mohd Ghazali, 2012. Audit committee effectiveness and timeliness of reporting: Indonesian evidence. *Managerial Auditing Journal* 27(4), 403-424.

Shatnawi, S. A., D. M. Eldaia, A. Marei, and S. A. Aaraj, 2021. The relationship between audit committee characteristics on accounting-based performance (ROA and ROE) as a measure of performance evidence from Jordan. *International Journal of Business and Digital Economy* 2(2), 15-27.

Sheikh, N. A., and S. Karim, 2015. Effects of internal governance indicators on performance of commercial banks in Pakistan. *Pakistan Journal of Social Sciences* 35(1), 77-90.

Shukla, A., S. Narayanasamy, and R. Krishnakumar, 2020. Impact of board size on the accounting returns and the asset quality of Indian banks. *International Journal of Law and Management* 62(4), 297-313.

Subedi, S. D., 2018. Role of corporate governance on the performance of insurance companies of Nepal. *Journal of Business and Social Sciences Research* 3(2), 151-164.

Vo, D. H., and T. M. Nguyen, 2014. The impact of corporate governance on firm performance: empirical study in Vietnam. *International Journal of Economics and Finance* 6(6), 1-13.

Yadav, R., R. Pandey, R. Poudel, R. K. Chaudary, and S. Pokhrel, 2016. Effect of board size, audit committee and board meetings on firm performance in Nepalese enterprises. *Nepalese Journal of Business* 3(1), 135-146.

Yahaya, O. A., and B. I. Awen, 2020. Bank-specific attributes and operational efficiency: Evidence from efficient-structure hypothesis. *Journal of Business and Social Review in Emerging Economies* 6(3), 1087-1098.

Yu, Z., J. Li, and J. Yang, 2017. Does corporate governance matter in competitive industries? Evidence from China. *Pacific-Basin Finance Journal* 43(5), 238-255.