Impact of Corporate Governance on Financial Risk of Nepalese Commercial Banks

Padam Dhakal, Pragya Neupane, Prakash Joshi, Radhika Adhikari, Rakesh Shah and Rebika Sunuwar*

Abstract

The study examines the impact of corporate governance on financial risk of Nepalese commercial banks. Non-performing loan and cash reserve ratio are selected as the dependent variables. The selected independent variables are board size, audit committee, ownership structure, leverage, board independence, and foreign capital. The study is based on secondary data of 13 commercial banks with 104 observations for the period from 2015/16 to 2022/23. 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 impact of corporate governance on financial risk of Nepalese commercial banks.

The study showed that board size has a negative impact on non-performing loans and cash reserve ratio. It indicates that larger the board size, lower would be the non-performing loans and cash reserve ratio. Similarly, audit committee size has a negative impact on non-performing loans and cash reserve ratio. It indicates that higher the audit committee size, lower would be the non-performing loans and cash reserve ratio. Likewise, board independence has a negative impact on non-performing loans and cash reserve ratio. It indicates that higher the board independence, lower would be the non-performing loans and cash reserve ratio. Further, foreign capital has a negative impact on non-performing loans and cash reserve ratio. It indicates that higher the foreign capital, lower would be the non-performing loans and cash reserve ratio. However, leverage has a positive impact on non-performing loans and cash reserve ratio. It indicates that higher the leverage, higher would be the non-performing loans and cash reserve ratio. Likewise, ownership structure has a positive impact on non-performing loans cash reserve ratio. It indicates that higher the ownership structure, higher would be the non-performing loans and cash reserve ratio.

Keywords: board size, audit committee, ownership structure, leverage, board independence, foreign capital, non-performing loan, cash reserve ratio

1. Introduction

Corporate governance is essential in maintaining and improving public confidence in the banking system. It ensures that banks manage their assets and liabilities responsibly, demonstrating their commitment to depositors, shareholders, and other stakeholders. Given the competition, high regulation, agency problems, and high information asymmetry in the banking sector, there is a heightened concern about corporate governance (Nworji *et al.,* 2011). Effective governance practices are vital for achieving and maintaining public trust and confidence, critical to the banking sector and the broader economy's proper functioning. Since the banking system plays a significant role in the economy, corporate governance is crucial, and risk management is indispensable. Good corporate governance structures encourage banks to create value through entrepreneurship, innovation, development, and

* Mr. Dhakal, Ms. Neupane, Mr. Joshi, Ms. Adhikari, Mr. Shah and Ms. Sunuwar are Freelance Researchers, Kathmandu, Nepal.

exploration while providing accountability and control systems that match the risks involved (Nocco and Stulz, 2006). Corporate governance is essential for sustaining and enhancing public trust in the banking system by demonstrating its capability to effectively manage assets and liabilities and fulfill commitments to depositors, shareholders, and other stakeholders. The banking sector's competitive environment, stringent regulations, agency problems, and high information asymmetry contribute to heightened scrutiny of corporate governance practices. In Nepal, corporate governance in the banking sector is often viewed as weak and insufficient, with a significant factor being the lack of awareness regarding the need for a robust corporate governance framework. Poor governance results from inadequate risk management and accountability.

Every organization seeks competitive profit through diverse portfolio investments, but this must align with governance aspects, a major challenge in today's corporate world. The 1997-1998 economic crises in Asian countries underscored the importance of corporate governance in the banking sector (Adnan *et al.,* 2011). Good corporate governance strengthens property rights, minimizes transaction and capital costs, and fosters capital market development (Claessens and Fan, 2002). Risk can be defined in various ways, such as reductions in firm value due to changes in fundamental business environment factors or uncertainties affecting firm value or performance, including the likelihood of different outcomes (Raghavan, 2015). Financial risk specifically pertains to potential losses arising from financial variables. This can include market risks like interest rate risk, foreign exchange risk, and credit risk, or internal business risks such as liquidity and capital risk. Grove *et al.* (2011) examined how corporate governance affected financial risk before the financial crisis, using data from 236 public commercial banks. The study revealed that higher leverage is negatively associated with financial risk and loan quality, while CEO duality, board size, and average director age have negative relationships with financial risk.

Otieno (2012) investigated the impact of corporate governance on financial risk in Kenya's commercial banks, using a cross-sectional and analytical research design. The study showed that bank stability, financial risk, and the bank's ability positively influenced liquidity in challenging market conditions, as determined by SPSS, Spearman correlation, and multiple regression analysis. Similarly, Shungu *et al.* (2014) analyzed the effect of corporate governance on financial risk in Zimbabwe's commercial banks, using data from 2009 to 2012 for a sample of five banks. The multi-regression analysis indicated that board composition and diversity are positively correlated to financial risk, while board size and internal committees are negatively associated with financial risk. Likewise, Katuse *et al.* (2013) examined the influence of corporate governance on financial risk using data from the banking sector for the period 2005-2013. The multiple regression analysis revealed a significant positive relationship between board size and financial risk, as well as a positive impact of boards of directors on financial risk in commercial banks. Further, Manini and Abdillahi (2015) investigated the effect of corporate governance on bank financial risk, analyzing data from annual reports of 42 Kenyan banks for 2009-2015. The study revealed an insignificant but positive impact of audit committee size, board gender diversity, or bank capital on financial risk. However, board size has a negative impact on financial risk, whereas bank size is positively associated with financial risk. Similarly, Trinh *et al.* (2015) analyzed how corporate governance factors impact capital risk, credit risk, and liquidity risk in Vietnamese commercial banks using data from 26 joint-stock commercial banks for 2009-

2013. The study found that board size, foreign capital, information disclosure, and stakeholder involvement have significant impact on financial risk. Likewise, Hazaea (2020) investigated the impact of various factors on financial risk in Yemeni commercial banks, using data from 42 valid questionnaires out of 50 distributed. The study revealed that internal audit standards, auditor independence, and governance quality significantly impacted financial risk, whereas audit committee size and meeting frequency have an insignificant impact on financial risk.

Islam *et al.* (2021) examined the impact of Shariah supervisory board and Shariah audit committee on CSR adoption at Islamic banks. The study showed that strong support from the SSB and an effective SAC are strongly correlated with and significantly influenced CSR adoption in banks. Similarly, Haddad *et al.* (2021) assessed the impact of audit committee quality on financial risk in conventional and Islamic banks before and during the subprime crisis, using data from 112 banks across America, Asia, Africa, and Europe for 2010-2019. The study indicated that audit committee reduced financial risk for both conventional and Islamic banks, positively influencing conventional banks and affecting Islamic banks differently. Likewise, Kalluru (2009) investigated the impact of ownership on financial risk in Indian commercial banks from 1995 to 2007, using secondary data. The study found a significant differences in financial risk among state-owned banks (SOBs), with privately owned banks (PBs) appearing more profitable and risk-taking than both development and SOBs. The results also indicated that bank capital and demand deposits are positively associated with financial risk, while loans have negative association. In contrast, bank size, growth rate, and ownership structure are negatively correlated to bank risk. Further, Barry *et al.* (2011) examined the relationship between ownership structures and risk in privately owned versus publicly held banks, analyzing secondary data and annual reports. The study showed a significant and positive relationship between ownership structure and financial risk in the banking sector. Similarly, Kapur and Gualu (2012) investigated how ownership structure affects financial risk in Ethiopian commercial banks, using data from eight banks covering 2001-2008. The study found that ownership structure positively influenced financial risk. Additionally, asset quality, capital adequacy, and liquidity are also positively associated with financial risk. Likewise, Faith (2017) assessed the impact of leverage on financial and business risks among listed deposit money banks in Nigeria, using secondary data from audited financial statements spanning 2007-2016. The study indicated a significant positive relationship between financial risk and the degree of financial leverage, as well as between business risk and both financial and operating leverage. However, the degree of total leverage has no significant impact on total risk whereas both operating and financial leverage have positive impact on business and financial risks.

Gadzo and Asiamah (2018) analyzed the link between leverage and financial risk in unlisted banks in Ghana from 2006 to 2016. The study showed a positive relationship between leverage and financial risk indicators such as return on assets, return on equity, and profit rate. Additionally, firm size is found to have a significant and positive relationship with financial risk. Similarly, Mennawi (2020) assessed how liquidity, credit, and financial leverage risks affect the financial risk of Islamic banks in Sudan using a panel dataset of 143 observations from 13 banks for 2008-2018. The study found that credit risk and financial leverage significantly but negatively impacted the financial risk of Sudanese banks, while liquidity risk, measured by the ratio of liquid assets to total assets, has a significant and positive impact on financial risk. Likewise, Pathan *et al.* (2007) investigated the impact of board size and the

proportion of independent directors on the financial risk of Thai commercial banks, using panel fixed-effect models from 1999 to 2003. The study revealed a statistically significant negative relationship between board size and financial risk, while a positive relationship is found between the proportion of independent directors and financial risk.

Chan and Lee (2010) examined the influence of board size and composition on financial risk and profit efficiency in Malaysian commercial banks from 2000 to 2009, using data envelopment analysis (DEA). The study found that independent directors are positively associated with cost efficiency, but board size has no significant impact on financial risk or profit efficiency. Similarly, Muiruri (2014) assessed how corporate governance practices impact the financial risk of Kenyan commercial banks from 2005 to 2014, employing a quantitative and exploratory approach. The results indicated that board independence is positively correlated to financial risk, while board size has a negative correlation with financial risk whereas gender diversity on the board have an insignificantly impact on financial risk. Likewise, Xu (2018) examined the effect of foreign capital on the financial risk of Chinese listed commercial banks from 2010 to 2018. The results indicated a significant positive impact of foreign capital participation on the financial risk. Further, Kukaj *et al.* (2020) assessed the financial risk of domestic versus foreign banks in Kosovo's banking sector during 2008-2018. The study found that return on equity and profit margin positively influenced return on assets, while the net sales to net assets ratio negatively affected financial risk whereas foreign capital is positively associated with financial risk. In addition, Qiao *et al.* (2022) investigated the impact of foreign capital on financial risk in Kenya's banking industry, focusing on the 11 commercial banks listed on the Nairobi Securities Exchange from 2007 to 2016. The study found a strong correlation between financial risk and credit risk, while market risk and liquidity have negative relationship with financial risk.

In the context of Nepal, Chalise (2014) examined the relationship between corporate governance, stakeholder interactions, and corporate reputation on financial risk. The study revealed that financial risk positively affects a bank's reputation and corporate governance is positively correlated to financial risk. Likewise, Pradhan *et al.* (2019) investigated how various corporate governance factors influence the risk associated with non-performing loans in Nepalese commercial banks. The study indicated a positive relationship between corporate governance and the risk of non-performing loans.

The above discussion shows that empirical evidences vary greatly across the studies on the impact of corporate governance on financial risk of commercial banks. 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 financial risk of Nepalese commercial banks. Specifically, it examines the relationship of board size, audit committee, ownership structure, leverage, board independence, and foreign capital with financial risk 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 gathered from 13 Nepalese commercial banks for the period of 2015/16 to 2022/23, leading to a total of 104 observations. The study employed convenience 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 Commercial Banks	Study time Period	Observations
1	Agricultural Development Bank Limited	2015/16-2022/23	8
2	Citizens Bank International Limited	2015/16-2022/23	8
3	Standard Chartered Bank Limited	2015/16-2022/23	8
4	Rastriya Banijya Bank Limited	2015/16-2022/23	8
5	Prime Commercial Bank Limited	2015/16-2022/23	8
6	Global IME Bank Limited	2015/16-2022/23	8
7	Himalayan Bank Limited	2015/16-2022/23	8
8	Siddhartha Bank Limited	2015/16-2022/23	8
9	Machhapuchchhre Bank Limited	2015/16-2022/23	8
10	Nabil Bank Limited	2015/16-2022/23	8
11	Sanima Bank Limited	2015/16-2022/23	8
12	Nepal Bank Limited	2015/16-2022/23	8
13	Nepal SBI Bank Limited	2015/16-2022/23	8
Total number of observations			**104**

Source: Annual Reports

Thus, the study is based on 104 observations.

The model

The model estimated in this study assumes that financial risk depends upon corporate governance. The selected dependent variables are non-performing loan and cash reserve ratio. Similarly, the selected independent variables are board size, audit committee, ownership structure, leverage, board independence, and foreign capital. Therefore, the model takes the following from:

$$NPL_{it} = \beta_0 + \beta_1 BS_{it} + \beta_2 AC_{it} + \beta_3 OS_{it} + \beta_4 LEV_{it} + \beta_5 BI_{it} + \beta_6 FC_{it} + e_{it}$$

$$CRR_{it} = \beta_0 + \beta_1 BS_{it} + \beta_2 AC_{it} + \beta_3 OS_{it} + \beta_4 LEV_{it} + \beta_5 BI_{it} + \beta_6 FC_{it} + e_{it}$$

Where,

NPL = Non-performing loan as measured by the ratio of non-performing loans to total loans,

in percentage.

CRR = Cash reserve ratio as measured by the ratio of reserve requirement to bank deposits, in percentage.

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

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

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

OS = Ownership structure as measured by the proportion of shares hold by public, in percentage.

LEV = Leverage as measured by the ratio of total debt to total equity, in times.

FC = Foreign capital as measured by the proportion of capital of investor from foreign countries, in percentage.

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

Board size

Pathan *et al.* (2007) found that there is a significant but negative relation between board size and financial risk. Similarly, Katuse *et al.* (2013) suggested that there is a negative but significant relationship of board size with financial risk. Likewise, Manini and Abdillahi (2015) concluded that board size has negative influence on financial risk. In addition, Sarkar and Sarkar (2018) showed that board independence and board size have significant but negative correlation with financial risk. Based on it, this study develops the following hypothesis:

H_1: There is a negative relationship between board size and financial risk.

Audit committee size

Platt and Platt (2012) stated that audit committee size has a significant relationship with financial risk. Similarly, Bedard and Gendron (2010) suggested that audit committee size has a negative relation with financial risk. However, Zraiq and Fadzil, (2018) stated that audit committee size are negatively correlated to financial risk. In addition, Dalton *et al.* (1999) reported a negative relationship between audit committee size and financial risk. Furthermore, Aldamen *et al.* (2012) found a significant but negative relationship between audit committee size and financial risk. Based on it, this study develops the following hypothesis:

H_2: There is a negative relationship between audit committee size and financial risk.

Ownership structure

Barry *et al.* (2011) showed that public ownership structure has a positive and significant relationship with financial risk. Similarly, Kapur and Gualu (2012) revealed that public ownership has a positive relationship with financial risk. Likewise, Han and Suk (1998)

showed that public ownership structure has a positive impact on corporate financial risk. Further, Chaganti and Damanpour (1991) noted a positive link between public ownership and financial risk. Based on it, this study develops the following hypothesis:

H_3: There is a positive relationship between ownership structure and financial risk.

Leverage

Berger and Di Patti (2006) found that there is a positive relationship between debt asset ratio and financial risk. Similarly, Ahmad *et al.* (2015) concluded that there is a significant positive relationship between financial leverage (total debt to total assets) and the financial risk of the firm. Likewise, Datta and Mahmud (2018) revealed that there is a positive relationship between debt to asset and financial risk. Based on it, this study develops the following hypothesis:

H_4: There is a positive relationship between leverage and financial risk.

Board independence

Cruz *et al.* (2014) found a significant negative relationship between board independence and loan loss provision. Similarly, Deng and Wang (2006) revealed that the proportion of independent directors have a negative relation with non-performing loan. Likewise, Daily and Dalton (1994) reported a negative relationship between board independence and financial risk. In addition, Hsu and Wu (2014) found a significant but negative relationship between independent directors and loan loss provision. Furthermore, Hillman and Dalziel (2003) stated that board independence has an insignificant relationship with financial risk. Based on it, this study develops the following hypothesis:

H_5: There is a negative relationship between board independence and financial risk.

Foreign capital

The term 'foreign capital' is a comprehensive term and includes any inflow of capital in home country from abroad. Salhi and Boujelbene (2012) indicated that the participation of foreign dependent investors has a positive impact on credit risk management. In contrast, Saif-Alyousfi (2022) revealed that foreign capital has a negative relationship with financial risk. In addition, Xu (2018) found that foreign capital has a significant but negative relationship with financial risk. In addition, Kukaj *et al.* (2020) revealed that foreign capital has a negative but significant relationship with financial risk. Based on it, this study develops the following hypothesis:

H_6: There is a negative relationship between foreign capital and financial risk.

3. Results and discussions

Descriptive statistics

Table 2 presents the descriptive statistics of selected dependent and independent variables during the period 2015/16-2022/23.

Table 2

Descriptive statistics

This table shows the descriptive statistics of dependent and independent variables of 13 Nepalese commercial banks for the study period of 2015/16 to 2022/23. The dependent variables are NPL (Non-performing loan as measured by the ratio of non-performing loans to total loans, in percentage) and CRR (Cash reserve ratio as measured by the ratio of reserve requirement to bank deposits, in percentage). The independent variables are BS (Board size as measured by the total number of directors on the board, in numbers), ACS (Audit committee size as measured by the number of audit committee members, in numbers), BI (Board independence as measured by the number of independent directors on the board, in numbers), OS (Ownership structure as measured by the proportion of shares hold by public, in percentage), LEV (Leverage as measured by the ratio of total debt to total equity, in times), and FC (Foreign capital as measured by the proportion of capital of investor from foreign countries, in percentage).

Variables	Minimum	Maximum	Mean	Std. Deviation
NPL	0.01	6.66	1.66	1.66
CRR	2.89	36.21	15.17	10.11
BS	5.00	10.00	6.80	1.11
ACS	2.00	5.00	3.09	0.37
OS	15.00	95.08	50.71	20.89
LEV	0.21	0.99	0.844	0.14
BI	0.00	2.00	0.91	0.35
FC	0.00	75.00	16.80	25.21

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 coefficients matrix

This table shows the correlation coefficients of dependent and independent variables of 13 Nepalese commercial banks for the study period of 2015/16 to 2022/23. The dependent variables are NPL (Non-performing loan as measured by the ratio of non-performing loans to total loans, in percentage) and CRR (Cash reserve ratio as measured by the ratio of reserve requirement to bank deposits, in percentage). The independent variables are BS (Board size as measured by the total number of directors on the board, in numbers), ACS (Audit committee size as measured by the number of audit committee members, in numbers), BI (Board independence as measured by the number of independent directors on the board, in numbers), OS (Ownership structure as measured by the proportion of shares hold by public, in percentage), LEV (Leverage as measured by the ratio of total debt to total equity, in times), and FC (Foreign capital as measured by the proportion of capital of investor from foreign countries, in percentage).

Variables	NPL	CRR	BS	ACS	OS	LEV	BI	FC
NPL	1							
CRR	-0.134	1						
BS	-0.292**	-0.223**	1					
ACS	-0.028	-0.258**	0.066	1				
OS	0.409**	0.241**	-0.353**	-0.089	1			
LEV	0.074	0.201	0.182*	-0.092	-0.046	1		
BI	-0.162	-0.067	-0.002	-0.056	0.009	-0.106	1	
FC	-0.313**	-0.307**	-0.339**	-0.063	-0.093	0.171	-0.226**	1

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

respectively.

Table 3 shows that there is a negative relationship between board size and non-performing loans. It indicates that larger the board size, lower would be the non-performing loans. Similarly, there is a negative relationship between audit committee size and non-performing loans. It indicates that increase in audit committee size leads to decrease in non-performing loans. Likewise, there is a positive relationship between ownership structure and non-performing loans. It indicates that higher the proportion of shares hold by public, higher would be the non-performing loans. Further, there is a positive relationship between leverage and non-performing loans. It indicates that higher the leverage ratio, higher would be the non-performing loans. In addition, there is a negative relationship between board independence and non-performing loans. It indicates that increase in number of independent directors leads to decrease in non-performing loans. Moreover, there is a negative relationship between foreign capital and non-performing loans. It indicates that increase in foreign capital leads to decrease in non-performing loans.

Similarly, there is a negative relationship between board size and cash reserve ratio. It indicates that larger the board size, lower would be the cash reserve ratio. Similarly, there is a negative relationship between audit committee size and cash reserve ratio. It indicates that increase in audit committee size leads to decrease in cash reserve ratio. Likewise, there is a positive relationship between ownership structure and cash reserve ratio. It indicates that higher the proportion of shares hold by public, higher would be the cash reserve ratio. Further, there is a positive relationship between leverage and cash reserve ratio. It indicates that higher the leverage ratio, higher would be the cash reserve ratio. In addition, there is a negative relationship between board independence and cash reserve ratio. It indicates that increase in number of independent directors leads to decrease in cash reserve ratio. Moreover, there is a negative relationship between foreign capital and cash reserve ratio. It indicates that increase in foreign capital leads to decrease in cash reserve ratio.

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, audit committee, ownership structure, leverage, board independence, and foreign capital on non-performing loan of Nepalese commercial banks.

Table 4

Estimated regression results of board size, audit committee, ownership structure, leverage, board independence, and foreign capital on non-performing loan

The results are based on panel data of 13 Nepalese commercial banks with 104 observations for the period of 2015/16 to 2022/23 by using the linear regression model and the model is $NPL_{it} = \beta_0 + \beta_1 BS_{it} + \beta_2 AC_{it} + \beta_3 OS_{it} + \beta_4 LEV_{it} + \beta_5 BI_{it} + \beta_6 FC_{it} + e_{it}$ where, the dependent variable is NPL (Non-performing loan as measured by the ratio of non-performing loans to total loans, in percentage). The independent variables are BS (Board size as measured by the total number of directors on the board, in numbers), ACS (Audit committee size as measured by the number of audit committee members, in numbers), BI (Board independence as measured by the number of independent directors on the board, in numbers), OS (Ownership structure as measured by the proportion of shares hold by public, in percentage), LEV (Leverage as measured by the ratio of total debt to total equity, in times), and FC (Foreign capital as measured by the proportion of capital of investor from foreign countries, in percentage).

Model	Intercept	Regression coefficients of						Adj. R_bar2	SEE	F-value
		BS	ACS	OS	LEV	BI	FC			
1	1.312 (1.343)	-0.438 (3.087)**						0.076	1.598	9.527
2	2.050 (1.490)		-0.438 (3.087)**					0.009	1.669	0.08
3	2.050 (1.490)			0.032 (4.530)**				0.159	1.524	20.48
4	0.007 (0.007)				1.963 (1.657)			0.017	1.65	2.744
5	1.332 (2.854)**					-0.357 (0.747)		0.004	1.672	0.558
6	2.090 (11.477)**						-0.025 (4.190)**	0.138	1.54	17.55
7	2.090 (11.477)**	-0.443 (3.102)**	-0.213 (0.499)					0.070	1.60	4.850
8	2.322 (1.362)	-0.258 (1.794)	-0.317 (0.787)	0.028 (3.695)**				0.173	1.51	8.190
9	0.549 (0.282)	-0.257 (1.809)	-0.277 (0.694)	0.028 (3.746)**	1.964 (1.825)			0.192	1.49	7.120
10	0.336 (0.166)	-0.244 (1.676)	-0.253 (0.626)	0.028 (3.719)**	2.018 (1.847)	-0.195 (0.439)		0.185	1.51	5.620
11	4.256 (2.136)*	4.256 (2.136)*	-0.350 (0.957)	0.037 (5.244)**	0.894 (0.883)	-0.672 (1.629)	-0.030 (4.820)**	0.337	1.36	9.630

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. Non-performing loan is the dependent variable.

Table 4 shows that the beta coefficients for board size are negative with non-performing loans. It indicates that board size has a negative impact on non-performing loans. This finding is similar to the findings of Pathan *et al.* (2007). Similarly, the beta coefficients for audit committee size are negative with non-performing loans. It indicates that audit committee size has a negative impact on non-performing loans. This finding is consistent with the findings of Platt and Platt (2012). Likewise, the beta coefficients for ownership structure are positive with non-performing loans. It indicates that ownership has a positive impact on non-performing loans. This finding is similar to the findings of Barry *et al.* (2011). Further, the beta coefficients for leverage are positive with non-performing loans. It indicates that leverage has a positive impact on non-performing loans. This finding is consistent with the findings of Berger and Di Patti (2006). In addition, the beta coefficients for board independence are negative with non-performing loans. It indicates that board independence has a negative impact on non-performing loans. This finding is similar to the findings of Cruz *et al.* (2014). Moreover, the beta coefficients for foreign capital are negative with non-performing loans. It indicates that foreign capital has a negative impact on non-performing loans. This finding is similar to the findings of Salhi and Boujelbene (2012).

Table 5 presents the regression results of board size, audit committee, ownership structure, leverage, board independence, and foreign capital on cash reserve ratio of Nepalese commercial banks.

Table 5

Estimated regression results of board size, audit committee, ownership structure, leverage, board independence, and foreign capital on cash reserve ratio

The results are based on panel data of 13 Nepalese commercial banks with 104 observations for the period of 2015/16 to 2022/23 by using the linear regression model and the model is $CRR_{it} = \beta_0 + \beta_1 BS_{it} + \beta_2 AC_{it} + \beta_3 OS_{it} + \beta_4 LEV_{it} + \beta_5 BI_{it} + \beta_6 FC_{it} + e_{it}$ where, the dependent variable is CRR (Cash reserve ratio as measured by the ratio of reserve requirement to bank deposits, in percentage). The independent variables are BS (Board size as measured by the total number of directors on the board, in numbers), ACS (Audit committee size as measured by the number of audit committee members, in numbers), BI (Board independence as measured by the number of independent directors on the board, in numbers), OS (Ownership structure as measured by the proportion of shares hold by public, in percentage), LEV (Leverage as measured by the ratio of total debt to total equity, in times), and FC (Foreign capital as measured by the proportion of capital of investor from foreign countries, in percentage).

Model	Intercept	Regression coefficients of						Adj. R_bar2	SEE	F-value
		BS	ACS	OS	LEV	BI	FC			
1	1.370 (0.225)	-2.031 (2.308)*						0.040	9.908	5.325
2	6.490 (0.801)		-7.018 (2.695)**					0.057	9.820	7.261
3	9.260 (3.632)**			0.117 (2.504)*				0.049	9.865	6.272
4	9.260 (3.632)**				0.117 (2.504)*			0.005	10.141	0.467
5	9.930 (3.581)**					-5.864 (2.062)*		0.031	9.940	4.250
6	17.240 (15.10)**						-0.123 (3.254)**	0.085	9.674	10.590
7	18.140 (1.898)	-1.883 (2.194)*	-6.645 (2.593)**					0.091	9.642	6.174
8	38.009 (3.758)**	-3.105 (3.647)**	-7.332 (3.071)**	0.185 (4.172)**				0.215	8.961	10.404
9	43.337 (3.710)**	-2.767 (3.270)**	-7.453 (3.114)**	0.185 (4.172)**	5.901 (0.914)			0.214	8.969	7.999
10	49.275 (4.205)**	-2.767 (3.270)**	-7.978 (3.393)**	0.185 (4.172)**	5.901 (0.914)	-5.874 (2.277)*		0.248	8.755	7.734
11	37.200 (2.965)**	-1.796 (1.944)	-7.680 (3.337)**	-7.680 (3.337)**	4.117 (0.646)	-7.344 (2.828)**	-0.092 (2.358)*	0.282	8.556	7.675

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. Cash reserve ratio is the dependent variable.

Table 5 shows that the beta coefficients for board size are negative with cash reserve ratio. It indicates that board size has a negative impact on cash reserve ratio. This finding is similar to the findings of Katuse *et al.* (2013). Similarly, the beta coefficients for audit committee size are negative with cash reserve ratio. It indicates that audit committee size has a negative impact on cash reserve ratio. This finding is consistent with the findings of Bedard and Gendron (2010). Likewise, the beta coefficients for ownership structure are positive with cash reserve ratio. It indicates that ownership has a positive impact on cash reserve ratio. This finding is similar to the findings of Chaganti and Damanpour (1991). Further, the beta coefficients for leverage are positive with cash reserve ratio. It indicates that leverage has a positive impact on cash reserve ratio. This finding is consistent with the findings of Ahmad *et al.* (2015). In addition, the beta coefficients for board independence are negative with cash reserve ratio. It indicates that board independence has a negative impact on cash reserve ratio. This finding is similar to the findings of Deng and Wang (2006). Moreover, the beta coefficients for foreign capital are negative with cash reserve ratio. It indicates that foreign capital has a negative impact on cash reserve ratio. This finding is similar to the findings of Saif-Alyousfi (2022).

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 financial risk of Nepalese commercial banks. This study is based on the secondary data of 13 Nepalese commercial banks, leading to a total of 104 observations.

The major conclusion of this study is that board size, audit committee size, board independence, and foreign capital have negative impact on non-performing loans and cash reserve ratio. It indicates that higher the board size, audit committee size, board independence, and foreign capital, lower would be the non-performing loans and cash reserve ratio. However, leverage and ownership structure have positive impact on non-performing loans cash reserve ratio. It indicates that higher the leverage and ownership structure, higher would be the non-performing loans and cash reserve ratio. Similarly, the study also concluded that ownership structure followed by foreign capital is the most influencing factor that explains the changes in the non-performing loans in the context of Nepalese commercial banks. Likewise, the study also concluded that foreign capital followed by audit committee size is the most influencing factor that explains the changes in the cash reserve ratio in the context of Nepalese commercial banks.

References

Adnan, M. A., S. N. N. Htay, Rashid, H. M. A., and A. L. M. Meera, 2011. A panel data analysis on the relationship between corporate governance and bank efficiency. *Journal of Accounting*, 1(1), 1-15.

Ahmed, F., I. Awais, and M. Kashif, 2018. Financial leverage and firms' performance: Empirical evidence from KSE-100 Index. *Etikonomi* 17(1), 45-56.

Aldamen, H., K. Duncan, S., Kelly, R. McNamara, and S. Nagel, (2012). Audit committee characteristics and firm performance during the global financial crisis. *Accounting and Finance* 52(4), 971-1000.

Barry, T. A., L. Lepetit, and A. Tarazi, 2011. Ownership structure and risk in publicly held and privately owned banks. *Journal of Banking and Finance*, 35(5), 1327-1340.

Bedard, J., and Y. Gendron, 2010. Strengthening the financial reporting system: can audit committees deliver. *International Journal of Auditing* 14(2), 174-210.

Berger, A. N., and E. Di Patti, 2006. Capital structure and firm performance: A new approach to testing agency theory and an application to the banking industry. *Journal of Bank Finance* 30(8),

1065-1102.

Chalise, M, 2014. Impact of corporate social responsibility on corporate governance and reputation in Nepalese commercial banks. *Journal of Development and Administrative Studies*, 22(2), 27-36.

Chan, S. G., and T. H. Lee, 2010. Corporate governance, board diversity and bank efficiency: the case of commercial banks in Malaysia. *Journal of Economies and Administrative Studies*, 1(1), 27-30.

Claessens, S., and J. P. Fan, 2002. Corporate governance in Asia: a survey. *International Review of Finance*, 3(2), 71-103.

Cruz P., M. M., Lizano, and E. M., Madrid, 2014. Corporate governance and accuracy level of financial distress prediction models. *International Business and Economic Research Journal* 13(20), 1619-1625.

Dalton, D. R., C. M. Daily, J. L. Johnson, and A. E. Ellstrand, 1999. Number of directors and financial performance: A meta-analysis. *Academy of Management Journal* 42(6), 674-686.

Datta, C. K., and A. Al Mahmud, 2018. Impact of capital adequacy on profitability under Basel II Accord: Evidence from commercial banks of Bangladesh. *European Journal of Business and Management* 10(8), 48-58.

Deng, X., and Z. Wang, 2006. Ownership structure and financial distress: evidence from public-listed companies in China. *International journal of management* 23(3), 486-497.

Faith, I., 2017. Effect of leverage on business risk and finance risk of listed deposit banks in Nigeria. *Journal of Management* 4(2), 16-27.

Gadzo, S. G., and S. K. Asiamah, 2018. Assessment of the relationship between leverage and performance: an empirical study of unlisted banks in Ghana. *Journal of Economics and International Finance* 10(10), 123-133.

Grove, H., L. Patelli, L. M. Victoravich, and P. Xu, 2011. Corporate governance and performance in the wake of the financial crisis: evidence from US commercial banks. *An International Review* 19(5), 418-436.

Haddad, A., A. El Ammari, and A. Bouri, 2021. Impact of audit committee quality on the financial performance of conventional and Islamic banks. *Journal of Risk and Financial Management* 14(4), 176.

Hazaea, S. A., J. Zhu, N. Alsharabi, S. F. Khatib, and L. Yueying, 2020. On the effectiveness of audit committee characteristics in commercial banks: evidence from Yemen. *Journal of Critical Review* 7(18), 2096-2115.

Hillman, A. I., and T. Dalziel, 2003. Boards of directors and firm performance: Integrating agency and resource dependence perspectives. *Academy of Management Review* 28(3), 383-396.

Hsu, H. H., and C. Y. H. Wu, 2014. Board composition, grey directors and corporate failure in the UK. *British Accounting Review* 46(3), 215-227.

Islam, K. M., M. S. Sadekin, M. Rahman, M. Chowdhury, and A. Haque, 2021. The impact of Shariah supervisory board and Shariah audit committee on CSR adoption at Islamic banks. *Journal of Asian Finance, Economics and Business* 8(3), 479-485.

Kalluru, S. R., 2009. Ownership structure, performance and risk in Indian commercial banks. *IUP Journal of Applied Finance* 15(8), 13-15.

Kapur, D., and A. K. Gualu, 2012. Financial performance and ownership structure of Ethiopian commercial banks. *Journal of Economics and International Finance* 4(1), 1-8.

Katuse, P., K. K. Kiambati, P. Ngugi, and A. Waititu, 2013. Role of board size on financial performance of commercial banks. *International Journal of Management* 1(1), 22-45.

Kukaj, H., F. Morina, and V. Misiri, 2020. Profitability analysis of banks: Comparative study of domestic and foreign banks in Kosovo. *Journal of Accounting and Economics* 1(1), 37-40.

Manini, M. M., and U. A. Abdillahi, 2015. Corporate governance mechanisms and financial performance of commercial banks in Kenya. *IOSR Journal of Business and Management* 17(3), 25-40.

Mennawi, A. N. A., 2020. The impact of liquidity, credit, and financial leverage risks on financial performance of Islamic banks: a case of Sudanese banking sector. *Risk and Financial Management* 2(2), 59-60.

Nocco, B. W., and R. M. Stulz, 2006. Enterprise risk management: Theory and practice. *Journal of Applied Corporate Finance* 18(4), 8-20.

Nworji, I. D., O. Adebayo, and A. O. David, 2011. Corporate governance and bank failure in Nigeria: Issues, challenges and opportunities. *Research Journal of Finance and Accounting* 2(2), 1-19.

Pathan, S., M. Skully, and J. Wickramanayake, 2007. Board size, independence and performance: An analysis of Thai banks. *Asia-Pacific Financial Markets* 14(3), 211-227.

Platt, H., and M. Platt, 2012. Corporate board attributes and bankruptcy. *Journal of Business Research* 65(8), 1139-1143.

Pradhan, R. S., M. K. Shah, N. Bhandari, N. P. Mahato, N. Adhikari, and N. Bam, 2019. The impact of corporate governance on efficiency of Nepalese commercial banks. *Business Governance and Society* 1(1), 351-376.

Qiao, H., W. Zhang, and Y. Liu, 2022. Research on the influence of foreign capital introduction on financial risk in banking industry. *Journal of Management* 1(1), 1-9

Saif-Alyousfi, A. Y., 2022. FDI inflows and bank deposits: evidence from 18 MENA economies. *Competitiveness Review: An International Business Journal* 32(6), 880-914.

Salhi, B., and Y. Boujelbene, 2012. Effect of the Internal Banking Mechanisms of Governance on the Risk-talking by the Tunisian Banks. *International Journal of Economics, Finance and Management* 1(1), 8-13.

Sarkar, J., and S. Sarkar, 2018. Bank ownership, board characteristics and performance: Evidence from commercial banks in India. *International Journal of Financial Studies* 6(1), 17-29.

Shungu, P., H. Ngirande, and G. Ndlovu, 2014. Impact of corporate governance on the performance of commercial banks in Zimbabwe. *Mediterranean Journal of Social Sciences* 5(15), 93-93.

Trinh, T. H., T. T. Duyen, and N. T. Thao, 2015. The impact of corporate governance on financial risk in Vietnamese commercial banks. *International Journal of Economics and Finance* 7(7), 123-130.

Xu, T., 2018. Can foreign capital participation enhance commercial banks market efficiency? *Journal of Economics* 29(1), 24-31.

Zraiq, M., and F. Fadzil, 2018. The impact of audit committee characteristics on firm performance: Evidence from Jordan. *Such Journal of Application Science Research* 1(5), 39-42.