The Effect of Corporate Governance Attributes on Risk Management Practices of Nepalese Commercial Banks

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Abstract

The study examines the effect of corporate governance attributes on risk management practices of Nepalese commercial banks. Non-performing loan and operational risk are selected as the dependent variables. The selected independent variables are board size, board diversity, audit committee, risk management committee, board meetings, and leverage. The study is based on secondary data of 15 commercial banks with 105 observations for the period from 2015/16 to 2021/22. The data were collected from Banking and Financial Statistics published by Nepal Rastra Bank, publications and websites of Nepal Rastra Bank (NRB) and annual reports of the selected commercial banks. The correlation coefficients and regression models are estimated to test the significance and importance of corporate governance on the risk management practices of Nepalese commercial banks.

The study showed that risk management committee has a negative impact on non-performing loan and operational risk. It implies that increase in number of directors in risk management committee leads to decrease in non-performing loan and operational risk. Similarly, audit committee size has a negative impact on non-performing loan and operational risk. It implies that increase in audit committee size leads to decrease in non-performing loan and operational risk. However, leverage ratio has a positive impact on operational risk. It means that increase in leverage ratio leads to increase in operational risk. Similarly, board meeting has a positive impact on non-performing loan and operational risk. It shows that increase in board meeting leads to increase in non-performing loan and operational risk. Similarly, board diversity has a positive impact on non-performing loan and operational risk. It implies that increase in female board directors leads to increase in non-performing loan and operational risk.

Keywords: board size, board diversity, audit committee, risk management committee, board meetings, and leverage, non-performing loan, operational risk

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1. Introduction

Corporate governance and risk management are crucial aspects of the banking industry, ensuring the stability, integrity, and sustainable growth of commercial banks. Corporate governance is the system of rules, practices, and processes used to direct and manage a company. It is a set of principles and standards that ensure that a company is managed in the best interests of its shareholders and other stakeholders (Rustam and Narsa, 2021). Risk management is the process of identifying, assessing, and managing potential risks to an organization. It is a critical component of corporate governance because it helps to ensure that the company is aware of and prepared for potential risks. By focusing on these corporate governance attributes, companies can improve their risk management practices and reduce their exposure to risk (Aebi et al., 2012). Good corporate governance and risk management can help to increase shareholder value by reducing the risk of financial losses and by improving the company's overall performance. The board of directors has the ultimate responsibility for risk management. It should ensure that there is a robust risk management framework in place and that it is being effectively implemented. A company with good corporate governance and risk management is more likely to have a good reputation, which can attract customers, investors, and employees. Companies with good corporate governance and risk management are less likely to be subject to regulatory fines or penalties (Florio and Leoni, 2017).

Corporate governance is a series of processes, policies, customs, regulations, and institutions determining guidance, control, and management of an institution or corporation. it comprises the impact amongst stakeholders involved in the purposes of corporate management. Corporate Governance is a structure handling company management in such wise it offers continuous long-term economic values for stakeholders and shareholders. Risk managements a procedure of anticipation towards risks to prevent unwanted outcomes such as organizational losses (Firmansyah, 2022). Risks are particular events which are potentially disadvantageous, and risk management is a series of methods and procedures employed to identify, monitor, and evaluate risks prevention arising from all banking activities. Relying on the agency theory and the financial intermediation theory, Jallali and Zoghlami (2022) examined to what extent risk governance would improve corporate governance and risk management effectiveness. The study especially investigated the mediating role that would have the risk governance mechanisms in explaining both of the following relationships: the corporate governance–the banks' performance, and the risk management–the banks' performance. The study findings illustrated the significant role of risk governance mechanisms in improving both corporate governance and risk management's effectiveness.

Especially, this study found that risk governance is fully explaining the corporate governance–bank performance relationship, but risk governance would explain partially the risk management–bank performance relationship. Further, findings suggested that the internal corporate governance mechanisms seem to be more relevant than the external ones in improving the sample bank performance, and that risk management mechanisms seem to impede rather the sample bank performance.

In developing countries, the banking industry is crucial to the growth and development of the economy since it provides financial intermediation and encourages investment. Effective corporate governance and risk management frameworks have become more and more necessary as the industry has developed over time. The guiding principles of corporate governance in banks are openness, responsibility, and good management. Sanni and Abdul (2012) examined corporate governance and bank risk taking of the Nigerian banking sector. The study showed that bank ownership and the number of times board held meeting in a given year affected bank risk taking negatively. The study also found that there was no significant effect of board size and board composition on bank risk taking. There is a need to coordinate and strengthened corporate governance agencies to enhance sound performance in the banking sector. Gharbi and Othmani (2023) examined the relationship between board diversity and bank's risk-taking ability in banks. The results showed that females take more risks than males, which are grown from the bottom level of the firm and now in the panel of directors. However, females are bound to follow the guidelines of the firm which lessen the firm risk level. Ilhan Nas and Kalaycioglu (2016) examined the effects of the board composition, board size and CEO duality on export performance in Turkey. The study found that CEO presence in board of directors, banks board composition and board size have a significant and positive impact on the risk management, while the diversity of the board was negatively related. Shungu et al. (2014) examined the impact of corporate governance on financial risk of commercial banks in Zimbabwe. The study found that there is positive association between board composition, board diversity and financial risk. Moreover, the study found that there is negative relationship between board diversity, board size and financial risk. Yahaya and Yakubu (2022) analyzed the relationship between corporate governance, risk management, and bank performance. Board size, gender diversity, role duality, risk management committee and audit committee were used as independent variables. The results showed that board size and risk management committee are negatively and significantly associated with NPL. Similarly, the size of audit committee and gender diversity are negatively and significantly associated with NPL.

In the context of Nepal, Magar (2023) examined the effect of corporate governance attributes on risk management practices of Nepalese commercial banks. The study found that board size, board diversity, and audit committee were positively associated with risk management practices, while board meeting, risk management committee, and leverage were negatively associated with risk management practices. Similarly, Adhikari (2022) examined the impact of risk management committee oversight on bank performance in Nepal. The study found that banks with a risk management committee had lower non-performing loans and higher return on assets. The study also found that the effectiveness of the risk management committee was positively related to the number of meetings held and the experience of the committee members. Moreover, Chand (2023) investigated the relationship between board size and non-performing loans (NPLs) in commercial banks in Nepal. The study found that a larger board size was associated with a higher NPL ratio. The study also found that the relationship between board size and NPLs was stronger for banks with lower levels of capital. Khanal (2023) examined the effect of board size on non-performing loans in Nepal. The study found that board size has a positive and significant effect on non-performing loans. It implies that larger boards may be less effective at monitoring management and may be more likely to approve risky loans. Likewise, Shrestha (2022) examined the effectiveness of risk management committee in commercial banks of Nepal. The study found that the presence of a risk management committee was positively associated with the effectiveness of risk management practices. The study also found that the size of the risk management committee was positively associated with its effectiveness. In addition, Bhattarai (2021) examined the impact of risk management committee independence on non-performing loans in commercial banks of Nepal. The study found that a more independent risk management committee was associated with lower levels of non-performing loans. Further, Chaulagain (2020) examined the impact of risk management committee experience on bank performance in Nepal. The study found that risk management committee experience had a positive impact on bank performance. Banks with more experienced risk management committees had lower non-performing loans and higher return on assets.

The above discussion shows that empirical evidences vary greatly across the studies concerning on the effect of corporate governance attributes on risk management practices 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 main purpose of the study is to analyze the effect of corporate governance attributes on risk management practices of Nepalese commercial banks. Specifically, it examines the relationship of board size, board diversity, size of audit committee, size of risk management committee, leverage and number of board meetings with nonperforming loan and operational risk in the context of Nepalese commercial banks.

The remainder of this study is organized as follows. Section two describes the sample, data and methodology. Section three presents the empirical results and the final sections draws the conclusion.

2. Methodological aspects

The study is based on the secondary data which were gathered from 15 Nepalese commercial banks for the study period from 2015/16 to 2021/22, leading to a total of 105 observations. The study has employed purposive sampling method. The main sources of data include Banking and Financial Statistics published by Nepal Rastra Bank, reports published by Ministry of Finance and the annual report of respective banks. This study is based on descriptive as well as causal comparative research designs. Table 1 shows the list of commercial banks selected for the study along with the study period and number of observations.

Table 1

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

S.N.	Name of the banks	Study period	Observations
1	Citizens Bank International Limited	2015/16-2021/22	7
2	Agricultural Development Bank Limited	2015/16-2021/22	7
3	Everest Bank Limited	2015/16-2021/22	7
4	Global IME Bank Limited	2015/16-2021/22	7
5	Himalayan Bank Limited	2015/16-2021/22	7
6	Laxmi Bank Limited	2015/16-2021/22	7
7	Prabhu Bank Limited	2015/16-2021/22	7
8	NIC Asia Bank Limited	2015/16-2021/22	7
9	Nepal SBI Bank Limited	2015/16-2021/22	7
10	Nepal Bank Limited	2015/16-2021/22	7
11	Prime Commercial Bank Limited	2015/16-2021/22	7
12	Sanima Bank Limited	2015/16-2021/22	7
13	NMB Bank Limited	2015/16-2021/22	7
14	Machhapuchchhre Bank Limited	2015/16-2021/22	7
15	Rastriya Banijya Bank Limited	2015/16-2021/22	7
Total number of observations			105

Thus, the study is based on 105 observations.

The model

The model used in the study assume that nonperforming loan and operational risk depends upon the corporate governance attributes of Nepalese commercial banks. The dependent variables selected for the study are non-performing loans and operational risk. Similarly, the selected independent variables are board size, board diversity, size of audit committee, size of risk management committee, number of board meetings and leverage. Therefore, the model takes the following forms:

$$NPL = \beta_0 + \beta_1 BS + \beta_2 BD + \beta_3 AC + \beta_4 RMC + \beta_5 BM + \beta_6 LEV + e_{it}$$

$$BOPM = \beta_0 + \beta_1 BS + \beta_2 BD + \beta_3 AC + \beta_4 RMC + \beta_5 BM + \beta_6 LEV + e_{it}$$

Where,

NPL= Nonperforming loan as measured by the ratio of gross non-performing loan to total loans, in percentage.

BOPM= Operational risk as measured by the ratio of total operating expenses to the net operating income, in percentage.

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

BD= Board diversity as measured by the proportion of female directors to the total directors of the board.

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

RMC= Risk management committee as measured by the number of members in the risk management committee of the bank, in numbers.

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

LEV= Leverage as measured by the ratio of total debt to total assets of the bank, in percentage.

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

Board size

Board size is the number of directors on the board. Pathan et al. (2007) found that board size has a positive and significant impact on bank risk taking. Larger boards may be more likely to have members with different interests and priorities. This can make it difficult to reach consensus on important decisions, which can also increase the risk of making poor decisions. Similarly, Tanna et al. (2011) assessed the effect of board size and composition on the efficiency of UK banks. The study demonstrated that larger boards tend to take a high level of risk. Huang and Chia-Jane (2015) showed that smaller boards are associated with riskier firm policy choices and consequently greater firm risk. Cheng (2008) examined that corporate performance and value become less variable as a firm's board of directors grows larger. Based on it, the study develops following hypothesis:

H_1: There is positive relationship between board size and banking risk.

Board diversity

Board diversity is the proportion of female directors to the total directors of the board. This means that banks with more diverse boards are more likely to have higher NPLs. Burke (2000) found significant positive correlation between the number of women directors and revenue, risk and profit margins for Canadian firms. Issa et al. (2021) found a positive association between board diversity and NPLs is stronger for banks with larger asset sizes. Diverse boards can be more effective at monitoring management. This can help to reduce the risk of management taking on too much risk. Farag and Mallin (2017) found there is positive association between board diversity and NPLs. Diverse boards may be more likely to have independent directors. Independent directors are less likely to be influenced by management and are more likely to challenge management's decisions. This can help to reduce the risk of making poor decisions (Khatib et al., 2021). Based on it, the study develops following hypothesis:

H_2: There is positive relationship between board diversity and banking risk.

Audit committee

Audit committee is the number of members in the audit committee of the bank. Sun and Liu (2014) documented that audit committee effectiveness increases risk management effectiveness which will help to lowers the bank risk. Moreover, Kallamu and Saat (2015) found a negative relationship between size of audit committee and NPL. The study also showed that audit committees provide independent oversight of the bank's management. They can challenge management's decisions and make sure that they are not taking on too much risk. Similarly, Samoei and Rono (2016) found that audit committee size has significant impact on risk management and firm performance. The presence of audit members reduces financial misreporting and enhance quality of monitoring. Based on it, the study develops following hypothesis:

H_3: There is negative relationship between audit committee and banking risk.

Risk management committee

Risk management committee (RMC) is the number of members in the risk management committee of the bank. The theory of corporate risk management claims that the main objective of risk-management monitoring is to protect firms from potentially costly circumstances that might create financial distress (Kallamu, 2015). An effective risk management system assists firms to achieve business goals and objectives, enhance financial reporting quality and also safeguard firms' reputation (Subramaniam et al., 2009). Elamer and Benyazid (2018) showed a negative association between the characteristics of the risk committee (i.e., presence, scale, flexibility, and meetings) and the financial risk. The RMC can help to develop and implement risk mitigation strategies that will help to reduce the likelihood and impact of NPLs. These strategies may include things like setting lending limits, conducting due diligence on borrowers, and monitoring loan performance (Abubakar et al., 2018). Based on it, the study develops following hypothesis:

H_4: There is negative relationship risk management committee and banking risk.

Board meeting

Board meeting is the number of board level meetings held in a fiscal year. Ghosh et al. (2010) suggested that improved quality of board oversight of managers and financial reporting process, high frequency of board meetings and high attendance rate of directors lead to improved quality of risk management. Abidi et al. (2022) concluded that there is negative relationship between number of board meetings and banking risk. Board meetings provide an opportunity for the board of directors to challenge management's decisions and make sure that they are not taking on too much risk. In addition, Donaldson and Davis (1994) found that board meeting frequency, firm size and financial leverage have significant negative effect on the credit risk of banks. Based on it, the study develops following hypothesis:

H_5: There is a negative relationship between board meeting and banking risk.

Leverage

Leverage is the use of debt to finance an investment. When a bank uses debt to finance its assets, it is essentially borrowing money to make loans. This can increase the bank's return on equity, but it also increases the bank's risk. As a result, banks with higher leverage tend to be more conservative in their lending practices. They are less likely to make risky loans, and they are more likely to hold more reserves. This can help to reduce the bank's risk exposure and protect its shareholders (Gadzo and Asiamah, 2018). Chen (2020) investigated impact of financial leverage on bank risk. The study showed that the impact of financial leverage on bank risk is negative. Similarly, Mennawi (2020) reveled that financial leverage has a significant negative impact on the financial risk of Islamic banks in Sudan. Based on it, the study develops following hypothesis:

H_6: There is negative relationship between leverage and banking risk.

3. Results and discussion

Descriptive statistics

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

Table 2

Descriptive statistics

This table shows the descriptive statistics of dependent and independent variables of 15 Nepalese commercial banks for the study period from 2015/16 to 2021/22. The dependent variables are NPL (Nonperforming loan as measured by the ratio of gross non-performing loan to total loans, in percentage) and BOPM (Operational risk as measured by the ratio of total operating expenses to the net operating income, in percentage). The independent variables are BS (Board size as measured by the number of directors on the board, in numbers), BM (Board meetings as measured by the number of meetings held by board, in numbers), BD (Board diversity as measured by the proportion of female directors to the total directors of the board), AC (Audit committee size as measured by the number of audit members, in numbers), RMC (Risk management committee as measured by the number of members in the risk management committee of the bank, in numbers) and LEV (Leverage as measured by the ratio of total debt to total assets of the bank, in percentage).

Variables	Minimum	Maximum	Mean	Std. Deviation
NPL	0.01	8.83	1.59	1.53
BOPM	0.20	0.65	0.43	0.08
BS	5.00	11.00	6.99	1.13
BD	0.00	1.00	0.54	0.50
AC	2.00	5.00	3.11	0.56
RMC	3.00	7.00	4.29	0.69
BM	12.00	102.00	35.30	17.39
LEV	0.55	0.95	0.88	0.04

Correlation analysis

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

Table 3

Pearson's correlation coefficients matrix

This table shows the bivariate Pearson's correlation coefficients of dependent and independent variables of 15 Nepalese commercial banks for the study period of 2015/16 to 2021/22. The dependent variables are NPL (Nonperforming loan as measured by the ratio of gross non-performing loan to total loans, in percentage) and BOPM (Operational risk as measured by the ratio of total operating expenses to the net operating income, in percentage). The independent variables are BS (Board size as measured by the number of directors on the board, in numbers), BM (Board meetings as measured by the number of meetings held by board, in numbers), BD (Board diversity as measured by the proportion of female directors to the total directors of the board), AC (Audit committee size as measured by the number of audit members, in numbers), RMC (Risk management committee as measured by the number of members in the risk management committee of the bank, in numbers) and LEV (Leverage as measured by the ratio of total debt to total assets of the bank, in percentage).

Variables	NPL	BOPM	BS	BD	AC	RMC	BM	LEV
NPL	1							
BOPM	0.256**	1						
BS	0.124	-0.215*	1					
BD	0.135	0.332**	-0.126	1				
AC	-0.181	-0.233*	0.243*	-0.052	1			
RMC	-0.294**	-0.134	0.223*	0.116	0.433**	1		
BM	0.539**	0.121	-0.018	0.134	-0.076	-0.136	1	
LEV	-0.164	0.081	-0.145	-0.207*	-0.341**	0.047	-0.047	1

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

Table 3 shows that board meeting is positively correlated to non-performing loan. It shows that increase in board meeting leads to increase in non-performing loan. Similarly, board diversity is positively correlated to non-performing loan. It implies that increase in female board directors leads to increase in non-performing loan. However, there is a negative relationship between risk management committee and non-performing loan. It implies that increase in number of directors in risk management committee leads to decrease in non-performing loan. Similarly, board size is positively correlated to non-performing loan. It means increase in board size leads to increase in non-performing loan. However, there is a negative relationship between audit committee size and non-performing loan. It means that increase in audit committee size leads to decrease in non-performing loan. However, there is a negative relationship between leverage ratio and non-performing loan. It means that increase in leverage ratio leads to decrease in non-performing loan.

On the other hand, board meeting is positively correlated to operational risk. It shows that increase in board meeting leads to increase in operational risk. Similarly, board diversity is positively correlated to operational risk. It implies that increase in female board directors leads to increase in operational risk. However, there is a negative relationship between risk management committee and operational risk. It implies that increase in number of directors in risk management committee leads to decrease in operational risk. Similarly, board size is negatively correlated to operational risk. It means increase in board size leads to decrease in operational risk. However, there is a negative relationship between audit committee size and operational risk. It means that increase in audit committee size leads to decrease in operational risk. However, there is a positive relationship between leverage ratio and operational risk. It means that increase in leverage ratio leads to increase in operational risk.

Regression analysis

Having indicated Pearson's correlation coefficients, the regression analysis has been carried out and the results are presented in Table 4 and

Table 5. More specifically, Table 4 shows the regression results of board size, board diversity, audit committee, risk management committee, board meeting, and leverage on non-performing loan (NPL) of Nepalese commercial banks.

Table 4

Estimated regression results of board size, board diversity, audit committee, risk management committee, board meetings, and leverage on non-performing loan

The results are based on panel data of 15 commercial banks with 105 observations for the period 2015/16-2021/22 by using linear regression model. The model is $NPL = \beta_0 + \beta_1 BS + \beta_2 BD + \beta_3 AC + \beta_4 RMC + \beta_5 BM + \beta_6 LEV + e_{it}$ where the dependent variable is NPL (Nonperforming loan as measured by the ratio of gross non-performing loan to total loans, in percentage). The independent variables are BS (Board size as measured by the number of directors on the board, in numbers), BM (Board meetings as measured by the number of meetings held by board, in numbers), BD (Board diversity as measured by the proportion of female directors to the total directors of the board), AC (Audit committee size as measured by the number of audit members, in numbers), RMC (Risk management committee as measured by the number of members in the risk management committee of the bank, in numbers) and LEV (Leverage as measured by the ratio of total debt to total assets of the bank, in percentage).

Model	Intercept	Regression coefficients of						Adj. R_bar^2	SEE	F-value
		BS	BD	AC	RMC	BM	LEV			
1	0.421 (0.45)	0.168 (1.271)						0.006	1.534	1.616
2	1.370 (6.195)**		0.414 (1.378)					0.009	1.532	1.901
3	3.142 (3.372)**			-0.497 (1.868)				0.023	1.520	3.489
4	4.398 (4.831)**				-0.653 (3.119)**			0.077	1.477	9.792
5	-0.088 (0.305)					0.048 (6.492)**		0.283	1.302	42.148
6	6.83 (2.2)*						-5.912 (1.688)	0.017	1.524	2.85
7	-0.15 (0.018)	0.194 (1.466)	0.469 (1.599)					0.020	1.523	2.035
8	1.826 (1.651)	0.241 (1.809)*		-0.616 (2.271)*				0.044	1.503	3.420
9	2.938 (2.592)*	0.270 (2.101)*			-0.752 (3.559)**			0.107	1.453	7.234
10	-1.360 (1.633)	0.081 (1.626)				0.048 (6.572)**		0.295	1.291	22.733
11	5.386 (1.585)	0.139 (1.045)					-5.375 (1.519)	0.018	1.524	1.973
12	1.383 (1.218)	0.265 (1.989)*	0.454 (1.54)	-0.607 (2.252)*				0.057	1.493	3.101
13	6.27 (2.350)				-0.487 (2.718)*	0.044 (6.239)**	-4.691 (1.628)	0.338	1.251	18.674
14	5.447 (1.661)	0.280 (2.510)*	0.265 (1.021)	-0.388 (1.46)	-0.481 (2.322)*	0.043 (6.108)**	-4.732 (1.466)	0.373	1.217	11.318

Notes:

i. Figures in parenthesis are t-values.

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

iii. Nonperforming loans is the dependent variable.

Table 4 shows that the beta coefficients for risk management committee are negative with non-performing loan. It indicates that risk management committee has a negative impact on non-performing loan. This finding is similar to the findings of Elamer and Benyazid (2018). Similarly, the beta coefficients for audit committee are negative with non-performing loan. It indicates that audit committee has a negative impact on non-performing loan. This finding is consistent with the findings of Kallamu and Saat (2015). Likewise, the beta coefficients for board diversity are positive with non-performing loan. It indicates that the board diversity has a positive impact on non-performing loan. This finding is similar to the findings of Burke (2000). Similarly, the beta coefficients for board size are positive with non-performing loan. It indicates that the board size has a positive impact on non-performing loan. This finding is consistent with the findings of Tanna et al. (2011). However, the beta coefficients for leverage ratio are negative with non-performing loan. It indicates that leverage ratio has a negative impact on non-performing loan. This finding is similar to the findings of Chen (2020).

Table 5 shows the estimated regression results of board size, board diversity, audit committee, risk management committee, board meetings, and leverage on operational risk in the context of Nepalese commercial banks.

Table 5

Estimated regression results of board size, board diversity, audit committee, risk management committee, board meetings, and leverage on operational risk

The results are based on panel data of 15 commercial banks with 105 observations for the period 2015/16-2021/22 by using linear regression model. The model is BOPM = $\beta_0 + \beta_1$ BS + β_2 BD+ β_3 AC + β_4 RMC + β_5 BM + β_6 LEV + e_{it} where the dependent variable is BOPM (Operational risk as measured by the ratio of total operating expenses to the net operating income, in percentage). The independent variables are BS (Board size as measured by the number of directors on the board, in numbers), BM (Board meetings as measured by the number of meetings held by board, in numbers), BD (Board diversity as measured by the proportion of female directors to the total directors of the board), AC (Audit committee size as measured by the number of audit members, in numbers), RMC (Risk management committee as measured by the number of members in the risk management committee of the bank, in numbers) and LEV (Leverage as measured by the ratio of total debt to total assets of the bank, in percentage).

Model	Intercept	Regression coefficients of						Adj. R_bar²	SEE	F-value
		BS	BD	AC	RMC	BM	LEV			
1	0.553 (10.361)**	-0.017 (2.236)*						0.037	0.087	4.999
2	0.403 (33.017)**		0.059 (3.57)**					0.101	0.084	12.743
3	0.551 (11.409)**			-0.037 (2.435)*				0.045	0.087	5.930
4	0.510 (9.307)**				-0.017 (1.375)			0.008	0.088	1.889
5	0.413 (20.949)**					0.001 (1.239)		0.005	0.089	1.535
6	0.286 (1.572)						0.168 (0.820)	0.003	0.089	0.672
7	0.502 (9.436)**	-0.014 (1.904)*	0.055 (3.347)**					0.124	0.083	8.347
8	0.623 (9.807)**	-0.013 (1.721)		-0.031 (1.967)*				0.063	0.086	4.503
9	0.592 (8.665)**	-0.015 (1.973)*			-0.012 (0.919)			0.036	0.087	2.917
10	0.531 (9.423)**	-0.017 (2.219)*				0.001 (1.222)		0.042	0.087	3.258
11	0.456 (2.327)*	-0.016 (2.129)*					0.105 (0.516)	0.030	0.087	2.615
12	0.570 (9.102)**	-0.010 (1.402)	0.054 (3.350)**	-0.030 (1.988)*				0.148	0.082	7.043
13	0.315 (1.662)				-0.016 (1.255)	0.001 (1.101)	0.191 (0.935)	0.009	0.088	1.298
14	0.362 (1.623)	-0.008 (1.116)	0.060 (3.430)**	-0.017 (0.927)	-0.013 (0.926)	0.000 (0.613)	0.223 (1.017)	0.140	0.082	3.813

Notes:

i. Figures in parenthesis are t-values.

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

iii. Operational risk is the dependent variable.

Table 5 shows that the beta coefficients for risk management committee are negative with operational risk. It indicates that risk management committee has a negative impact on operational risk. This finding is similar to the findings of Kallamu (2015). Similarly, the beta coefficients for audit committee are negative with operational risk. It indicates that audit committee has a negative impact on operational risk. This finding is consistent with the findings of Samoei and Rono (2016). Likewise, the beta coefficients for board diversity are positive with operational risk. It indicates that the board diversity has a positive impact on operational risk. This finding is similar to the findings of Farag and Mallin (2017). Similarly, the beta coefficients for board size are negative with operational risk. It indicates that the board size has a negative impact on operational risk. This finding is consistent with the findings of Pathan et al. (2007). However, the beta coefficients for leverage ratio are positive with operational risk. It indicates that leverage ratio has a positive impact on operational risk. This finding is similar to the findings of Mennawi (2020).

4. Summary and conclusion

Corporate governance and risk management are crucial aspects of the banking industry, ensuring the stability, integrity, and sustainable growth of commercial banks. In Nepal, the banking industry is crucial to the growth and development of the economy since it provides financial intermediation and encourages investment. Effective corporate governance and risk management frameworks have become more and more necessary as the industry has developed over time. The guiding principles of corporate governance in Nepalese commercial banks are openness, responsibility, and good management.

The study attempts to examine the effect of corporate governance attributes on risk management in Nepalese commercial banks. This study is based on secondary data of 15 commercial banks in Nepal for the study period from 2015/16 to 2021/22, leading to a total of 105 observations.

The study showed that board size, board diversity and board meeting have positive impact on nonperforming loan. Similarly, audit committee, risk management committee and leverage have a negative impact on nonperforming loan. Moreover, the study showed that leverage, board diversity and board meeting have positive impact on operational risk. Similarly, board size, audit committee and risk management committee have a negative impact on operational risk. The study concluded that a well-functioning risk management committee can help to reduce NPLs by identifying and assessing risks, developing and implementing risk mitigation strategies, and monitoring the effectiveness of those strategies. The study also concluded that board meeting following by risk management committee is the most influencing factor that explains the changes in nonperforming loan of Nepalese commercial banks.

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