Determinants of Lending Behavior in Nepalese Commercial Banks

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Abstract

The study examines the determinants of lending behavior in Nepalese commercial banks. Loans and advances and credit to deposit ratio are selected as the dependent variables. The selected independent variables are volume of deposit, bank size, liquidity ratio, lending interest rate, inflation rate and cash reserve ratio. The study is based on secondary data of 15 commercial banks in Nepal with 105 observations for the study period from 2015/16 to 2021/22. The data were collected from Banking and Financial Statistics published by Nepal Rastra Bank, publications, website of Nepal Rastra Bank (NRB), Ministry of Finance and annual report of selected commercial banks. The correlation coefficients and regression models are estimated to test the significance and importance of different factors on the lending behavior of Nepalese commercial banks.

The study showed that volume of deposit has a positive impact on loans and advances. It means that increase in volume of deposit leads to increase in loans and advances. Likewise, bank size has a positive impact on loans and advances. It means that increase in bank assets size leads to increase in loans and advances. In addition, liquidity ratio has a negative impact on loans and advances. It shows that higher the liquidity ratio, lower would be the loans and advances. In contrast, lending interest rate has a positive impact on loans and advances and credit to deposit ratio. It indicates that increase in lending interest rate leads to increase in loans and advances and credit to deposit ratio. In addition, inflation rate has a positive relationship with loans and advances and credit to deposit ratio. It indicates that increase in inflation rate leads to increase in loans and advances and credit to deposit ratio.

Keywords: loans and advances, credit to deposit ratio, volume of deposit, bank size, liquidity, lending interest rate, inflation rate, cash reserve ratio

1. Introduction

The availability of external funding, especially access to long-term credit and costs of credit, influences firms' investments level in an economy. Economies that have a profitable banking sector are better able to withstand negative shocks and contribute to the stability of the financial system. One of the key terms essential to the survival of economic systems is the concept

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of bank profitability. A stable and healthy banking sector contributes to economic prosperity. Lending is a major driver of economic activities of households, firms and governments, which stir economic growth and development of any nation. In lending, banks act as an intermediary between those who supply funds and those in need of money as loans (Al-Kilani and Kaddumi, 2015). Bank lending can be on short, medium or long-term basis. The major service rendered by the commercial bank to their customer includes lending to individual, firms and government to aid their economic activities for the development and growth of the national economy. Lending can be fund based and non-fund based. Bank soundness is the bank's ability to carry out operational activities and be able to properly fulfill all obligations in accordance with existing regulations (Yuliawati and Dana, 2020).

Bank lending is determined by macro-economic factors and bank-specific factors, which include inflation, exchange rate, capital, economic growth, management efficiency and bank profitability (Kim *et al.,* 2017). Commercial banks play essential roles in an economy primarily by providing required funds for economic activities. Commercial banks do grant loans and advances to individuals; business organizations as well as government in order to enable them embark on investment and development activities as a means of aiding their growth in particular and contributing toward the economic development of a country in general. Lending is affected by different factors, including interest rate, liquidity, inflation, exchange rate, capital, and economic growth (Akinlo and Oni, 2015). Hutabarat *et al*. (2022) examined the operating cost against operating income, net interest margin, capital adequacy ratio and loan to deposit ratio on bank profitability. The study concluded that operating cost against operating income, net interest margin, capital adequacy ratio and loan to deposit ratio have significant positive effect on ROA. Anggriani and Muniarty (2020) stressed that banks should lower the level of non-performing loan to increase return on assets suggesting a negative relationship between non-performing loan and profitability. Moreover, Setiawan and Nupus (2021) examined the effect of capital adequacy ratio and loan to deposit ratio on banking profitability. The study concluded that loan to deposit ratio (LDR) has a positive and significant influence on bank profitability.

Lending is not as simple as taking money and then just giving it back. Banks should consider many relevant factors that are likely to determine the borrower's ability and willingness to repay. The main factors that they should consider are the risk associated with the borrower and the bank borrower relationship. An increase in demand for credit facilities will lead to high

interest rates and vice versa (Ewert *et al.*, 2000). According to Estrella and Mishkin (1996), the bank lending channel is based on the special role that banks play within the financial system in solving problems of asymmetric information and other imperfections in credit markets. Often, banks serve as financial intermediaries that provide funds to certain borrowers who do not have access to credit markets. Imperfections are reflected in the size of external finance premium, which is the difference between the costs of the externally generated funds of a firm (through issuing equity or debt) and its internally generated funds (retained earnings). The surplus spending units to deficit spending units cannot be overemphasized with regards to its contributions to growth in developing countries. As bank lending is the major source of generating earnings and it involves remarkable amount of risk, banks should be careful in analyzing the various determinants of bank lending behaviour. The banks' lending behaviors has shed more light in the economic development and sustainable environment of the developing countries (Alkhazaleh, 2017). Commercial banks have played a significant role as a financial pulling in mobilizing funds among the sectors such as private households, business firms, and the government. Investment activities, business expansion, and industrial development depend largely on the funds, without which a country's economy will be stagnant and even worse the economy is going to be in catastrophe. Apparently, lending activity is the core business of commercial banks that contributes the largest income proportion to the banks (Latif *et a*l., 2019).

Sheriff and Amoako (2014) showed that fundamental macroeconomic indicators such as inflation and fiscal deficit have contributed to the high interest rate spread in Ghana. Similarly. Bawumia *et al*. (2005) revealed that factors including lending risk, public sector borrowing, low savings rates, inflation and exchange rates play critical roles in the systemic rise of interest rate spread in Ghana. The major threat to financial stability arises from an increased bank lending following credit growth and inflation pressures. Asamoah and Adu (2016) analyzed the determinants of the bank lending rate in Ghana using annual time series data from 1970 to 2013. The study showed a long-run equilibrium relationship between the average lending rate charged by commercial banks and its determining factors. In the long run, bank lending rates in Ghana are positively influenced by nominal exchange rates and Bank of Ghana's monetary policy rate but negatively influenced by fiscal deficit, real GDP and inflation. The study also found positive dependence of the bank lending rate on exchange rates, and the monetary policy rate both in the short and long run. Mbao *et al*. (2014) examined the determinants of

bank lending rates in Zambia. The study found negative association between lending rates and profitability (return on assets). Moreover, ROA has negative significant impacts on lending interest rates (Al-Qudah, 2021). Similarly, net interest margin (NIM) has a negative impact on loan interest rates for working capital loans (Christianti, 2020). Moreover, Rawat (2014) found that there is a positive and significant impact of CRR on loans and advance. John and Nwachukwu (2017) examined the relation between cash reserve ratio and commercial bank credit in Nigeria. The study showed that the cash reserve requirement has a significant positive impact on the volume of loan advances over the years. Djiogap and Ngomsi (2012) suggested that banks whose assets size is large have the higher capacity of lending. Bank size has positive and statistically significant influences on commercial banks' lending in Ethiopia (Malede, 2014). Moreover, Amidu (2014) assessed the determinants of bank lending in the context of Africa countries. The study claimed that bank size positively influences bank lending.

Marshal and Onyekachi (2014) found that there is a positive relationship between loan and advances and banks performance. Ozurumba (2016) found that loans and advances to total assets has a positive relationship with bank profitability. Similarly, Nwanna and Oguezue (2017) found that loan loss provision and loans and advances have positive and non-significant effect on profitability. In addition, Shanko *et al.* (2019) revealed that loan and advance has a statistically significant and positive relationship with banks' profitability. Likewise, Afolabi et al. (2020) revealed a significant positive relationship between total loans and advances and returns on assets. Further, Goet (2021) revealed that there is positive correlation of bank earnings with loan and advances. Pandya (2015) found that there exists statistically significant and positive relationship between credit to deposit ratio and ROA. Similarly, Berger (1995) found a positive relationship between the ratios of credit to asset and returns on equity. Furthermore, Sharifi and Akhter (2016) found that credit to deposit ratio has positive impact on public sector bank's financial performance. Likewise, Harun (2016) showed that loan to deposit ratio has a positive and significant effect on ROA. Additionally, Gnawali (2018) found that loan to deposit ratio has a positive relationship with the profitability of banks in Nepal. In addition, Rashid *et al.* (2020) found a statistically significant connection between ROA. Further, Al Zaidanin and Al Zaidanin (2021) indicated that the loan to deposit ratio has a considerable positive influence on financial performance.

In the context of Nepal, Bhattarai (2019) found that liquidity ratio,

interest rate spread, and exchange rate were significant in determining lending behavior of Nepalese commercial banks. Timsina (2016) found that the gross domestic product and liquidity ratio of banks have significant impact on bank lending behavior in Nepal. Khati (2020) examined the relationship between the liquidity and the profitability of commercial banks in Nepal. The study revealed that credit-deposit ratio has positive but insignificant relationship with return on assets and has negative and insignificant relationship with return on equity. Neupane (2020) investigated the key determinants of profitability of Nepalese commercial banks. The findings showed that bank size and credit-deposit ratio have significant effect on return on assets.

The above discussion shows that empirical evidences vary greatly across the studies concerning on the determinants of lending behavior of 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 determinants of lending behavior in the context of Nepalese commercial banks. Specifically, it examines the relationship of volume of deposit, bank size, liquidity ratio, lending interest rate, inflation rate cash reserve ratio with loans and advances 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 convenience sampling method. The main source of data includes Banking and Financial statistics published by Nepal Rastra Bank, report published by Ministry of Finance and the annual report of respective banks. The study is based on descriptive as well as casual 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 banks selected for the study along with the study period and number of

observations

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

Thus, the study is based on the 105 observations.

The model

The model used in the study assumes that lending behavior of Nepalese commercial banks depends upon volume of deposit, bank size, liquidity ratio, lending interest rate, inflation rate, and cash reserve ratio. Therefore, the model takes the following forms:

$$LOA_{it} = \beta_0 + \beta_1 VOD_{it} + \beta_2 BS_{it} + \beta_3 LR_{it} + \beta_4 LIR_{it} + \beta_5 IR_{it} + \beta_6 CRR_{it} + e_{it}$$

$$CD_{it} = \beta_0 + \beta_1 VOD_{it} + \beta_2 BS_{it} + \beta_3 LR_{it} + \beta_4 LIR_{it} + \beta_5 IR_{it} + \beta_6 CRR_{it} + e_{it}$$

Where,

LOA = Loans and advances of banks, Rs in billion.

CD = Credit to deposit ratio as measured by the ratio of total loans to total deposits, in percentage

VOD = Volume of deposit of banks, Rs in billion.

BS = Bank size as measured by total assets, Rs in billion.

LR = Liquidity ratio as measured by the ratio of current assets to current liabilities, in times.

LIR = Lending interest rate, in percentage.

IR = Inflation rate as measured by the consumer index, in percentage.

CRR = Cash reserve requirement ratio, in percentage.

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

Volume of deposit

Bank deposits is the amount of money placed into bank through savings accounts, current accounts and fixed deposits. Akinyomi (2014) revealed that volume of deposit has a significant and positive relationship with loan and advances. Furthermore, there is significant effect of the volume of deposits on bank lending (Alkhazaleh, 2017). Omosola et al. (2018) revealed that there is positive relationship between credit to the private sector and total deposits. Total deposit has both short run and long run impact on total credit to the private sector (Michael, 2020). Moreover, there is a positive and significant relationship between bank deposit and total bank lending for economic growth (Izuagie, 2022). Based on it, this study develops the following hypothesis.

H_1: There is a positive relationship between volume of deposit and bank lending.

Bank size

According to Alkhazaleh (2017), bank size has a positive and significant relationship with loan and advances. Similarly bank size has a positive and significant association with loans and advances (Latif et al., 2019). Regarding the impact of bank size on lending behavior, literatures in the area more in general tend to suggest that bank size positively influence commercial bank lending. In addition, Haseeb *et al.* (2019) found that bank size is a significant determinant of bank lending (net loans and unused commitments). Likewise, Diriba (2020) found that bank size has positive but statistically insignificant effect on lending behavior. Based on it, this study develops the following hypothesis.

H_2: There is a positive and significant relationship between bank size and bank lending.

Liquidity ratio

The proportion of the balance with NRB and balance with bank and financial institutions and total assets has been used for the proxy of liquidity. The liquidity is the prominent factors for the lending behavior. Dang (2021) revealed that bank liquidity has a negative impact on lending behavior, supporting the importance of improving the buffer stock of liquid assets to develop core banking operations. According to Makanile and Pastory (2022), there is a statistically significant relationship between the liquidity and the lending of banks. Furthermore, bank stable liquidity position has a significant negative relationship with bank lending to private sector (Anees *et al.,* 2023). Okisai *et al.* (2023) assessed liquidity ratio has a negative and negligible effect on economic development. In addition, Ozsuca (2022) revealed that bank liquidity impacts negatively on credit supply. There is a statistically significant adverse effect of both credit risk and liquidity on bank lending (Alkhazaleh, 2017). Liquidity ratio has negative relationship with bank credit to private sector (Omosola et al., 2018). Based on it, this study develops the following hypothesis.

H_3: There is a negative relationship between liquidity ratio and bank lending.

Lending interest rate

Lending interest rate is the ratio of total interest income to total loans and advances. According to Rafika *et al.* (2023), the interest rate has a negative and significant effect on LDR. Makanile and Pastory (2022) revealed that interest rate contributed insignificantly to the overall lending behavior of the banks. Similarly, Boungou (2021) found that interest has a negative impact on bank lending. Araka *et al.* (2021) revealed that interest rate regulation and loan lending policies have a significant negative effect on financial performance of commercial banks in Kenya. Bank borrower significantly affects lending interest rate (Forgha *et al.,* 2018). Furthermore, there is a significant relationship between interest rate and agricultural output (Ita *et al.,* 2020). Likewise, Al-Qudah (2021) found that interest rate had a negative significant impact on lending. Based on it, this study develops the following hypothesis.

H_4: There is a negative relationship between interest rate and bank lending.

Inflation rate

Inflation in the economy has a significant effect on lending behavior of banks. Similarly, inflation rate positively influences the bank lending behaviour

(Tomak, 2013). Likewise, Al-Kilani and Kaddumi (2015) showed that there is a positive impact of inflation on banks loans and advances. According to Ekanayake and Azeez (2015), inflation rate positively with the prime lending rate. In addition, Awdeh (2017) found that inflation boost bank credit to the resident private sector. Alkhazaleh (2017) revealed that Inflation determining the level of lending. Based on it, this study develops the following hypothesis.

H_5: There is a positive relationship between inflation rate and bank lending.

Cash reserve ratio

Reserve requirement is one of the most well-known and commonly used monetary instruments in the world. Gbuabor *et al.* (2019) found that cash reserve ratio has an insignificant negative impact on Credit to Small and Medium Scale Enterprises (SMEs) in both short run and long run in Nigeria. Similarly, cash reserve requirement, discount rate, and liquidity have a negative and significant effect to bank credit to the private sector (Dlamini and Mashau, 2023). In addition, Olarinde *et al*. (2015) revealed that cash reserve requirement has a significant negative influence on loan and advances. Based on it, this study develops the following hypothesis.

H_6: There is a positive relationship between cash reserve ratio and bank lending.

3. Results and discussion

Table 2 present the descriptive statistics of selected dependent and independent variables during the period of 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 LOA (Loans and advances of banks, Rs in billion) and CD (Credit to deposit ratio as measured by the ratio of total loans to total deposits, in percentage). The independent variables are VOD (Volume of deposit of banks, Rs in billion), BS (Bank size as measured by total assets, Rs in billion), LR (Liquidity ratio as measured by the ratio of current assets to current liabilities, in times), LIR (Lending interest rate, in percentage), IR (Inflation rate as measured by the consumer index, in percentage) and CRR (Cash reserve requirement ratio, in percentage).

Variables	Minimum	Maximum	Mean	Std. Deviation
LOA	10.09	11.43	10.95	0.21
CD	58.46	96.69	85.07	7.68
VOD	8.55	11.46	10.91	0.53
BS	7.74	11.55	10.99	0.57
LR	0.01	1.21	0.08	0.14
LIR	6.56	15.37	10.53	1.77
IR	4.10	9.90	6.39	2.04
CRR	3.05	36.21	14.08	9.27

Source: SPSS output

Correlation analysis

Having indicated the descriptive statistics, Pearson's correlation coefficients are computed and the result 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 of 15 Nepalese commercial banks for the study period from 2015/16 to 2021/22. The dependent variables are LOA (Loans and advances of banks, Rs in billion) and CD (Credit to deposit ratio as measured by the ratio of total loans to total deposits, in percentage). The independent variables are VOD (Volume of deposit of banks, Rs in billion), BS (Bank size as measured by total assets, Rs in billion), LR (Liquidity ratio as measured by the ratio of current assets to current liabilities, in times), LIR (Lending interest rate, in percentage), IR (Inflation rate as measured by the consumer index, in percentage) and CRR (Cash reserve requirement ratio, in percentage).

Variables	LOA	CD	VOD	BS	LR	LIR	IR	CRR
LOA	1							
CD	0.193*	1						
VOD	0.351**	-0.175	1					
BS	0.442**	-0.132	0.702**	1				
LR	-0.080	-0.365**	-0.001	-0.001	1			
LIR	0.173	0.330**	-0.025	0.034	0.151	1		
IR	0.367**	0.039	0.129	0.120	0.121	0.015	1	
CRR	0.034	0.097	0.207*	0.096	0.038	0.143	-0.065	1

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

The table shows that volume of deposit has a positive relationship with loans and advances. It means that increase in volume of deposit leads

to increase in loans and advances. Likewise, there is a positive relationship between bank size and loans and advances. It means that increase in bank assets size leads to increase in loans and advances. In addition, liquidity ratio has a negative relationship with loans and advances. It shows that higher the liquidity ratio, lower would be the loans and advances. However, there is a positive relationship between lending interest rate and loans and advances. It indicates that increase in lending interest rate leads to increase in loans and advances. In addition, inflation rate has a positive relationship with loans and advances. It indicates that increase in inflation rate leads to increase in loans and advances. Further, this study shows that there is a positive relationship between cash reserve ratio and loans and advances. It means that higher the cash reserve ratio, higher would be the loans and advances.

Similarly, the result also shows that volume of deposit has a negative relationship with CD ratio. It means that increase in volume of deposit leads to decrease in CD ratio. Likewise, there is a negative relationship between bank size and CD ratio. It means that increase in bank size leads to decrease in CD ratio. Similarly, liquidity ratio has a negative relationship with CD ratio. It means higher the liquidity ratio; higher would be the CD ratio. In contrast, lending interest rate has a positive relationship with CD ratio. It shows that higher the lending interest rate, higher would be the CD ratio. In addition, there is a positive relationship between inflation rate and CD ratio. It indicates that increase in inflation rate leads to increase in CD ratio. Further, this study shows that there is a positive relationship between cash reserve ratio and CD ratio. It indicates that increase in cash reserve ratio leads to increase in CD ratio.

Regression analysis

Having indicated the Pearson's correlation coefficients, the regression analysis has been carried out and the results are presented in Table. More specifically, it shows the regression results of volume of deposit, bank size, liquidity ratio, lending interest rate, inflation rate and cash reserve ratio with loans and advances of Nepalese commercial banks.

Table 4

Estimated regression results of volume of deposit, bank size, liquidity ratio, lending interest rate, inflation rate and cash reserve ratio with loans and advances

The results are based on panel data of 15 commercial banks with 105 observations for the period of 2015/16-2021/22 by using the linear regression model and the model is LOAit = β0

+ β1 VODit + β2 BSit+ β3 LRit+ β4 LIRit + β5 IRit + β6 CRRit + eit where, the dependent variable is LOA (Loans and advances of banks, Rs in billion). The independent variables are VOD (Volume of deposit of banks, Rs in billion), BS (Bank size as measured by total assets, Rs in billion), LR (Liquidity ratio as measured by the ratio of current assets to current liabilities, in times), LIR (Lending interest rate, in percentage), IR (Inflation rate as measured by the consumer index, in percentage) and CRR (Cash reserve requirement ratio, in percentage).

Model	Intercepts	Regression coefficients of						Adj. R_bar^2	SEE	F-value
		VOD	BS	LR	LIR	IR	CRR			
1	9.402 (23.063)**	0.142 (3.807)**						0.115	0.204	14.494
2	9.133 (25.033)**		0.165 (4.990)**					0.187	0.195	24.959
3	10.963 (446.131)**			-0.116 (0.811)				0.003	0.212	0.655
4	10.732 (85.409)**				0.021 (1.786)			0.021	0.211	3.184
5	10.706 (165.680)**					0.039 (4.004)**		0.126	0.203	16.022
6	10.942 (284.829)**						0.001 (0.348)	0.009	0.217	0.122
7	9.010 (21.874)**	0.033 (0.650)	0.144 (3.089)**					0.183	0.192	12.614
8	9.021 (21.860)**	0.033 (0.658)	0.144 (3.071)**	-0.110 (0.847)				0.180	0.191	8.624
9	8.819 (18.934)	0.039 (0.780)	0.138 (2.972)**	-0.076 (0.584)	0.019 (1.743)			0.197	0.190	7.367
10	8.798 (21.985)**	0.028 (0.588	0.131 (3.004)**	-0.021 (-0.169)	0.019 (1.861)	0.033 (3.708)**		0.287	0.187	9.382
11	8.786 (21.603)**	0.030 (0.612)	0.131 (2.965)**	0.020 (-0.158)	0.019 (1.858)	0.033 (3.658)**	0.001 (0.191)	0.280	0.189	7.754

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. Loans and advances are the dependent variable.

Table 4 shows that the beta coefficients for volume of deposit are positive with loans and advances. It indicates that volume of deposit has a positive impact on loans and advances. This finding is similar to the findings of Akinyomi (2014). Similarly, the beta coefficients for bank size are positive with loans and advances. It indicates that bank size has a positive impact on loans and advances. This finding is inconsistent with the findings of Alkhazaleh (2017). Similarly, the beta coefficients for liquidity ratio are negative with loans and advances. It indicates that liquidity ratio has a negative impact on loans and advances. This finding contradicts with the findings of Omosola *et a*l. (2018). Likewise, the beta coefficients for lending interest rate are positive with loans and advances. It indicates that lending interest rate has a positive impact on loans and advances. This finding is consistent with the findings of Rafika *et al*. (2023). Similarly, the beta coefficients for inflation rate are positive with loans and advances. It indicates that inflation rate has a positive impact on

loans and advances. This finding is similar to the findings of Ekanayake and Azeez (2015).

Table 5 shows the regression results of volume of deposit, bank size, liquidity ratio, lending interest rate, inflation rate, cash reserve ratio with credit to deposit ratio of Nepalese commercial banks

Table 5

Estimated regression results of volume of deposit, bank size, liquidity ratio, lending interest rate, inflation rate, cash reserve ratio with credit to deposit ratio

The results are based on panel data of 15 commercial banks with 105 observations for the period of 2015/16-2021/22 by using the linear regression model and the model is CDit = β0 + β1 VODit + β2 BSit+ β3 LRit+ β4 LIRit + β5 IRit + β6 CRRit + eit where, the dependent variable is CD (Credit to deposit ratio as measured by the ratio of total loans to total deposits, in percentage). The independent variables are VOD (Volume of deposit of banks, Rs in billion), BS (Bank size as measured by total assets, Rs in billion), LR (Liquidity ratio as measured by the ratio of current assets to current liabilities, in times), LIR (Lending interest rate, in percentage), IR (Inflation rate as measured by the consumer index, in percentage) and CRR (Cash reserve requirement ratio, in percentage).

Model	Intercepts	Regression coefficients of						Adj. R_bar^2	SEE	F-value
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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. CD ratio is the dependent variable.

Table 5 shows that the beta coefficients for volume of deposit are negative with CD ratio. It indicates that volume of deposit has a negative impact on CD

ratio. This finding is similar to the findings of Izuagie (2022). Similarly, the beta coefficients for bank size are negative with CD ratio. It indicates that bank size has a negative impact on CD ratio. This finding is similar to the findings of Haseeb *et al.* (2019). Likewise, the beta coefficients for liquidity ratio are negative with CD ratio. It indicates that liquidity ratio has a negative impact on CD ratio. This finding is consistent with the findings of Makanile and Pastory (2022). Moreover, the beta coefficients for lending interest rate are positive with CD ratio. It indicates that lending interest rate has a positive impact on CD ratio. This finding is similar to the findings of Awdeh (2017). Similarly, the beta coefficients for inflation rate are positive with CD ratio. Likewise, the beta coefficients for cash reserve ratio are positive with CD ratio. It indicates that cash reserve ratio has a positive impact on CD ratio. This finding is inconsistent with the findings of Gbuabor *et al.* (2019).

4. Summary and conclusion

Banking institutions are companies that specialize in financial intermediation, which involves distributing excess liquidity among various economic participants. Bank lending is the primary source of revenue for banks, and it looks to be the riskiest component of banking due to the variety of hazards involved.

This study attempts to analyze the determinants of lending behavior of Nepalese commercial banks. The study is based on secondary data of 15 commercial banks with 105 observations for the period from 2015/16 to 2021/22.

The study showed that volume of deposit, bank size, lending interest rate, inflation rate and cash reserve ratio have positive impact on loans and advances. However, liquidity ratio has a negative impact on loans and advances. Similarly, the study showed that volume of deposit, bank size and liquidity have a negative impact on CD ratio of Nepalese commercial banks. However, lending interest rate, inflation rate and cash reserve ratio have positive impact on CD ratio. Finally, the study concluded that bank size followed by inflation rate are the most influencing factors that explain the changes in the lending behavior in terms of loans and advances. Likewise, the study also concluded that the most dominant factor that explains the lending behavior in term of CD ratio is liquidity ratio followed by lending interest rate in the context of Nepalese commercial banks.

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