

Determinate of Lending Behavior of Joint Venture Banks in Nepal

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Abstract

The purpose of this research is to examine the lending behavior of Joint venture banks in Nepal. The independent factors in this study are AQR, CAR, ROA, CRR, BS, GDP, and inflation rate, and dependent variable in this research is TL. The secondary data was used from the annual reports of all joint venture banks throughout a five-year period, from 2017 to 2021. Using SPSS 25 version, descriptive as well as causal-comparative research designs have been useful to analyze and interpret this data. For the sample, all seven Joint Venture banks are utilized. It is best to employ the purposive sampling technique. It has been demonstrated how independent variables affect the dependent variable using multiple linear regression models. The findings indicate that CRR and BS have considerable positive effects on TL and significant favorable effects but CAR has negative and significant effect on TL. The effects of AQR, ROA, GDP, and inflation on TL are negligible. Similarly, AQR, CAR, and inflation have been negatively related to TL but ROA, CRR, BS, and GDP have been positively related to lending.

Keywords: Assets Quality Ratio, Capital Adequacy Ratio, Cash Reserve Ratio, Joint Venture Bank, Lending Behavior & Return on Assets,

Introduction

The study examined industry- and bank-specific elements that affect listed Nepalese joint venture bank's lending behavior for the five-year period from 2017 to 2021. Lending is the temporary borrowing of money from a lender. Lending occurs when one person agrees to lend other person money, property, or other valuable items. After the loan matures, the borrower pays the lender back with the principal plus any additional funds (Magoma, Mbwambo, Doboga, 2022). With better loan distribution, every financial institution performs better. Similar to an auto loan, home loan, small, and middle enterprise loan, school loan, etc., a lender transfers the money to the borrower for their various needs.

The usage of lending and borrowing is distinct. Borrowing contrasts with lending, which refers to taking something and using it before returning it after a predetermined amount of time? Lending typically involves the transfer of funds for brand-new projects with the intention of returning at the maturity time with an additional sum. Procedures for paying interest on loans are on a monthly, quarterly, and annual basis.

Financial institutions should engage in lending. It is true that the entire economy is growing critically. It is the most crucial method for advancing corporate growth and global economic

development. Loans can be classified as either secured or unsecured. Unsecured loans are given out based solely on the lender's financial standing and lack of collateral, as opposed to secured loans, which are given out in exchange for a collection of valuable properties.

The most crucial lending tenet is the liquidity of every financial institution. Because all liquidity is generated by consumer savings, the banking sector only uses brief periods for lending. They can therefore withdraw and deposit whenever suggests. The 5Ps and 5Cs, which stand for product, place, price, protection, profit, character, capacity, capital, collateral, and conditions, were followed in lending behavior.

Commercial banks are essential in allocating the nation's finite resources. After earning enough money to cover the costs of running their banks' day-to-day operations, banks periodically transfer money from depositors to investors. (2013, Ongore and Kusa).

The commercial banks are the most crucial factor in allocating financial resources and mobilizing savings. Due to the functions played by commercial banks, they eventually become a significant contributor to economic development and growth (Olusanya, 2012).

Basically, for money lending, banks adhere to five key principles. Liquidity: Without liquidity, any financial institution cannot function properly, which is crucial for the banking sector. Banks make short-term loans, but the general public can withdraw their money at any time. The idea of safety is another. If a borrower fails to make a timely loan payment, the bank faces bankruptcy. The way a loan is paid back depends on the borrower's capacity, position, environment, and financial standing. Diversity comes next. Any financial institution should monitor their lending portfolio. Portfolio increased profits while reducing risk. The most crucial lending premise is stability. Commercial banks always invest funds in stocks with a high degree of price stability and only in reputable companies. Last one is profitability. It is the fundamental principle of lending. The bank wishes for sure a fair and stable return on investment.

This study's objective is to deepen our comprehension of the elements that influence commercial lending behavior. By pass, substandard, questionable, and loss, lending was evaluated. Joint venture banks discover the ideal method to accomplish their lending repayment obligations in various ways. What element has a direct impact on the lending practices of the banking sector?

Examining the elements that influence Joint venture commercial banks' lending behavior is the goal of this study. The evolution of the financial and economic systems depends heavily on lending. Understanding how both External and internal variables influence lending decisions is a goal of commercial banks. It has a direct impact on profitability. As a result, there is a conceptual gap regarding whether lending behavior influences commercial banks in a positive or negative way using both internal and external factors. In this field many research have been conducted, but the previous research has not included the variables like, capital adequacy ratio, assets quality ratio, cash reserve ratio, and return on equity. Therefore, this research aims to fulfill the gap of such research.

This study is composed mostly of six parts. An introduction to lending is provided in Section I. The literature is reviewed in Section II. In Section III, the conceptual framework is explained. The research techniques are covered in Section IV. Section V presents the data analysis and, finally, the study's conclusion.

Review of Literature

Alkhazaleh (2017) evaluated the factors that may derive the commercial bank's lending: evidence from Jordan. View to explain the impact of some factors determining the lending. Data collection from selected banks' annual reports and penal data was used from 2010 to 2016 for only seven years. This study shows the impact of the independent variable on a dependent variable using regression analysis. The independent variables are ROA, BS, CR, liquidity, deposit, investment, inflation, GDP, and money supply (M2) and bank lending was dependent. The study's major finding was ROA, BS, CR, inflation, GDP, and money supply had statistically significant impacts on lending and other independent variables liquidity, deposit, and investment were statistically insignificant.

Bhattarai (2019) found determinants of commercial banks' lending behavior in Nepal. View to explore the effect of banks identifies the internal and external factors that determine lending behavior. Panel data was used for the analysis of ten sample banks out of 28. The study period was only six years from 2012/13 to 2017/18. Descriptive as well as causal-comparative research design was used for analysis. The dependent variable was a total loan and advance; the independent variable was interest rate spread, cash reserve ratio, exchange rate, and inflation. The finding of the study was exchange rate and inflation is significant relations but interest rate spread and cash reserve ratio are negative and insignificant correlations between total loans and advances. In regression analysis exchange rate and inflation were statistically significant but interest rate spread and cash reserve ratio was statistically insignificant.

Zandi, Haseeb, Widokarti, Ahmed, & Chankosan (2019) studied factors affecting lending behavior toward crisis prevention. View to examine the behavior of lending in ASEAV economics. The sample was only five banks from 2011 to 2017. Panel data were used for regression analysis of the impact of an independent variable on the dependent variable. Independent variables were annual growth rate, GDP, inflation, bank size, liquidity ratio, risk, ROA, and ROE. The major finding of the study was GDP, inflation, and risk significant impact on total loans and advance and liquidity, ROA, ROE, and bank size were insignificant.

Bhattarai (2020) studied bank lending determinants: evidence from Nepalese commercial banks. View to determine the lending of commercial banks. Secondary data was used for analysis by the annual report to a selected commercial bank and economic survey. The sample was ten commercial banks from 2012/13 to 2016/17 only five years. The total observation was fifty. Descriptive as well as causal-comparative research design was used. Independent variables were bank size, liquidity, investment portfolio; cash reserve ratio, deposit to capital, GDP, and inflation. The correlation was used for the relationship between

independent variables on the dependent variable and regression was used for the impact of independent variables on the dependent variable. The major finding of the study cash reserve ratio, bank size, and GDP were positively correlated and liquidity, investment portfolio, and inflation were negatively correlated with lending. Similarly, all internal independent variables were significant but external variables were insignificant.

Arintoko (2021) studied to examine the symmetric and asymmetric effects of lending. In this study was used monthly penal data for regression analysis. The study period from 2012 to 2020 was only nine years. Descriptive as well as causal-comparative research design was used for the analysis of the impact of lending. Independent variables were NPL, CAR, OEOI, and LAR and total loan and advance was the dependent variable. The major finding of the study was all independent variables directly impact on lending. All independent variables were significant impact on lending behavior.

Goet (2021) studied the effect of determinants of lending behavior on loans and advances in joint venture commercial banks in Nepal. Looked to investigate the bank-specific and macroeconomic factors that affect lending behavior. Panel data was used from 2013/14 to 2019/2020. The sample was only four joint venture banks selected out of seven commercial banks. All data was used secondary collected from the annual report of sample banks. Regression and correlation analysis was used to show the relation and impact of dependent and independent variables. Independent variables were total deposit, cash reserve ratio, and interest rate spread. The total deposit was a positive and significant relationship with total loan and advance but other variables were a negative correlation. The major finding of the study of IR and LNTD was significant and other variables were insignificant. It shows all independent variables were not determined by lending behaviors

Affandi, Afar, Ismail, & Shukur (2021) investigated banking lending behavior: evidence from the Malaysian dual banking system to investigate the internal and external factors influencing bank lending behavior. A total population of 24 commercial banks was selected sampling only fifteen commercial banks. The study period was only nine years from 2010 to 2018. This study used descriptive as well as causal-comparative research design. The correlation was used for the interrelationship between the independent variable on the dependent variable and the regression was used for the impact of the independent variable on the dependent variable. Independent variables were size, deposit, GDP, and inflation, and the dependent variable was total loan and advance. The major finding of the study deposit, size, and GDP were positively correlated with lending and inflation was negatively correlated. Similarly, Deposit, size, and GDP were significant impacts on dependent variables and inflation was the insignificant impact on lending.

Askab, Bulut, Cepni, & Yilmaz (2022) found does climate change affects bank lending behavior. View to examine how banks adjust credit supply in areas with higher exposure to climate risk utilizing. Independent variables were loan growth, harmful particles post, NPL, deposit growth, branching GDP, foreign trade, and electricity consumption. The finding of this study was persuasion impact on banking sectors. The lending behavior to reduce the amount of lending to polluted areas. Which highlight the update of beliefs about climate risk ?

Magoma, Mbwambo, & Doboga (2022) investigated to determine factors influencing bank lending behavior in Tanzania. The sample was selected from listed banks in Tanzania only seven commercial banks. Panel data were used for the analysis of the sample banks' annual reports. The study period from 2016 to 2020 is only five years. Regression and correlation are used for analysis for showing the relation and impact of the independent variable on the dependent variable. Independent variables were assets quality, liquidity, capital adequacy, and bank size are internal and GDP and inflation are external variables. The major finding of the study was capital adequacy, bank size, and asset quality was positively correlated with total loan and advance but liquidity, GDP, and inflation rate are negatively correlated with total loan and advance. Similarly, capital adequacy and bank size are a significant impact on total loan and advance but other independent variables were an insignificant impact on total loan and advance.

Research Methodology

Both a descriptive and a causal-comparative research design are used in this study. Assets quality ratio (AQR), capital adequacy ratio (CAR), bank size (BS), return on assets (ROA), cash reserve ratio (CRR), gross domestic product (GDP), inflation (INF), and total loan and advance (TL) are the particular variables. Total loan and advance (TL) is the outcome variable. The study's foundation is secondary data drawn exclusively from joint venture commercial banks between 2017 and 2021. Purposive sampling is used to choose the samples. All information is gathered from publicly available yearly reports of sample banks. Seven joint venture banks operate in Nepal: Nepal SBI Bank, Everest Bank, NABIL Bank, Standard Charter Bank, Nepal Bangladesh Bank, Himalayan Bank, and NMB Bank. With the use of inferential and descriptive statistics such as mean standard deviation, coefficient of variance, correlation, and multiple regressions, these data are examined and understood. SPSS version 25 and Microsoft Excel 10 are used for this analysis.

The Model

The study's econometric model is expressed:

$$y = \alpha + \beta x + \varepsilon$$

Where:

Y stands for "outcome variable," "is constant," "is the explanatory variable coefficient," "x" stands for "explanatory variable vector," and "a" stands for "error term." Regression model illustration:

$$TL_{it} = \beta_0 + \beta_1 AQR_{it} + \beta_2 CAR_{it} + \beta_3 ROA_{it} + \beta_4 CRR_{it} + \beta_5 BS_{it} + \beta_6 GDP_{it} + \beta_7 INF_{it} + \varepsilon_{it}$$

Where:

TL_{it} = total loan and advance for the bank during t period.

AQR_{it} = assets quality ratio for the bank during t period.

CAR_{it} = capital adequacy ratio for the bank during t period.

ROA_{it} = the return on assets for the bank during t period

CRR_{it} = the cash reserve ratio for the bank during the t period

BS_{it} = bank size for the bank during the t period.

GDP_{it} = gross domestic product

INF_{it} = inflation rate

e_{it} = error terms β_0 = intercept

β_1, β_7 = coefficient parameters.

Results and Discussion

Descriptive Statistics

Table 1 in the analysis of joint venture banks in Nepal from 2016–17 to 2020–21 contains descriptive data for the variables used. The statistics consist of mean, SD, CV, as well as minimum and maximum values.

Table 1

Descriptive Analysis of Variables

Variables	N	Minimum	Maximum	Mean	Std. Deviation	CV
TL	35	4.35	26.03	15.10	7.39	0.49
AQR	35	0.03	2.68	0.65	0.63	0.96
CAR	35	10.98	22.99	14.93	3.20	0.21
ROA	35	-0.19	2.69	1.61	0.72	0.45
CRR	35	3.50	19.71	9.43	4.77	0.51
BS	35	4.85	29.50	16.19	7.64	0.47
GDP	35	-8.20	17.17	-1.31	8.02	-6.10
INF	35	3.60	6.10	4.58	0.85	0.19

Note: Annual report of sample banks

Table 1 show that the minimum value of TL is 4.35, the maximum value is 26.03, the mean value is 15.10, the standard deviation value is 7.39 and CV is 0.49 it shows that the total loan and advance of sample banks increase until the maximum value of 26.03. It means banking lending behavior is a high fluctuation on the market. Similarly, the minimum value of AQR is 0.03, the maximum value is 2.68, the mean value is 0.65, the standard deviation is 0.36 and the CV is 0.96. Likewise, the CAR of the bank's minimum value is 10.98, the maximum value is 22.99, and the average mean value is 14.93. Returns on assets' maximum, minimum and mean values are 2.69, -0.19, and 1.61 respectively. Moreover, the cash reserve ratio's minimum, maximum, and mean values are 3.50, 19.71, and 9.43 respectively. The bank size minimum, maximum, and mean values are 4.85, 29.50, and 16.19 respectively. Similarly, in the case of the external variable of GDP and inflation, the mean value of GDP shows negative but inflation is positive. The analysis shows that the minimum function on assets quality ratio and highly fluctuation on bank size.

Correlation Analysis

The correlation matrix demonstrates how the independent and dependent variables are related. The correlation coefficients for loan and advance, assets quality ratio, capital adequacy ratio, return on assets, cash reserve ratio, size of the bank, GDP, and inflation are all shown in Table 2.

Table 2

Correlations Coefficient between Independent and Dependent Variables.

Variables	TL	AQR	CAR	ROA	CRR	BS	GDP	INF
TL	1							
AQR	-.124	1						
CAR	-.475**	-.096	1					
ROA	.152	.129	.295	1				
CRR	.38**	-.164	.336*	.356*	1			
BS	.988**	-.122	-.507**	.104	.233	1		
GDP	.102	-.349*	-.260	-.456**	-.092	.132	1	
INF	-.005	.037	.088	-.025	-.058	.003	.222	1

Note: Annual report of sample banks

Table 2 shows that the capital adequacy ratio is negative and significantly related to loan and advance but cash reserve ratio and bank size are positively and significantly related to loan and advance ratio. This means that an increase in cash reserve ratio and bank size results in also increase in the total loan and advance but the capital adequacy ratio is negatively related to loan and advance. If the capital adequacy ratio increase that effectively decreases the loan and advance and decreases the capital adequacy ratio that effectively increases the loan and advance. This result is consistent with the study of Magoma, Mbwambo, & Doboaya (2022), Bhattarai (2020), and Arintoko (2021) contradiction with Bhattarai (2019), Goet (2021), Zandi, Haseed, Widekarti, Ahmed, & Chaksan (2019), Alkhazaleh (2017), and Affandi, Afar Ismail, & Shukur (2021) but all related empirical review consistent with bank size. However, asset quality ratio and inflation are negatively correlated with loans and advances. This means if increase the quality of the asset ratio and inflation effectively decreases the loan and advance. The result is similar to the study of Magoma, Mbwambo, & Doboaya (2022) and contradicts the result of Zandi, Haseed, Widekarti, Ahmed, & Chaksan (2019). Similarly, return on assets and GDP are positively correlated with loans and advances. This means increasing the ROA and GDP also increases the loan and advance.

Regression Analysis

Table 3

Regression Analysis Between Independent and dependent variables

Variables	B	Std. Error	T	Sig.	Tolerance	VIF
(Constant)	-.113	1.566	-.072	.943		
AQR	-.082	.315	-.259	.797	.769	1.300
CAR	-.111	.082	-1.341	.002	.432	2.314
ROA	.249	.298	.834	.411	.644	1.553

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CRR	.163	.046	3.556	.001	.631 1.585
BS	.907	.032	28.428	.000	.506 1.977
GDP	-.016	.028	-.591	.559	.612 1.634
INF	.060	.218	.277	.784	.876 1.142
$R^2 = 0.94$	Adj. $R^2 = 0.92$		F. stat. =255.647	P = 0.0000	

Dependent variable: LT

The regression coefficients of the independent and dependent variables are displayed in Table 3. This table demonstrates that the modified R square value is 0.92, which indicates that the selected independent variables, such as AQR, CAR, ROA, CRR, BS, GDP, and inflation, are explained TL by 92% of the remaining 10% by other variables. The F. Sign is also 0.000. This indicates that the study's overall model is significant and that the variables could be tested using the OLS. All variables' variance inflation factors vary from 1.300 to 1.977, indicating no multicollinearity issues. Every VIF value is lower than 10. It denotes that there is no relationship between the independent variables and those changes in one independent variable do not affect the value of another independent variable. The capital adequacy ratio has a detrimental and statistically significant impact on the loans and advances of joint venture banks in Nepal at a 1% level of significance. So, for every unit increase in CAR, loans, and advances from Nepal's joint venture banks decline by 0.082 units. The cash reserve ratio and bank size also have positive, statistically significant effects on the loans and advances made by joint venture banks in Nepal at a 1% level of significance. This indicates that an increase of one unit in CRR and BS results in an increase of 0.163, while an increase of 0.907 units in loan and advance has a similarly large impact. Compared to the dependent variable, other independent factors are not significant. The result is consistent with Magoma, Mbwambo, & Doboaya (2022) and contradicts Haseed, Widekarti, Ahmed, & Chaksan (2019).

Conclusion

This study aims to investigate how lending behavior of joint venture banks in Nepal affected by AQR, CAR, ROA, CRR, BS, GDP, and inflation. Many studies on the lending practices of Nepalese commercial banks and joint venture banks have been conducted. Applying the descriptive and inferential statistics the study discovered that whereas CRR and BS have a large and favorable impact on lending behavior on a 1% level of significant, and CAR has a significant but unfavorable impact in overall. The importance of AQR, ROA, GDPS, and inflation is minimal. The findings of this research are consistent with the cash reserve ratio concept, and bank size having a positive and capital adequacy ratio having a negative impact but assets quality ratio, return on assets, GDP, and inflation do not support the hypothesis of this study. It shows all independent variables were not determined by lending behaviors.

Implication for Future Research

This study's only focus is on the factors that influence joint venture banks in Nepal's lending behavior. Using the same dependent variables as well as the additional independent

variables like, non – performing loans, total loan to deposit ratio, return on equity and multiplier the researcher can further find the results. This study uses the statistical tools to analyze and interpret the data but the future researcher can also use the mathematical and financial tools taking the same dependent and independent variables. Only five years data has been used in this research, it can also collect the data for long period. Future studies can look into the factors that development banks, financing firms, microfinance, and other financial institutions that are mentioned in the NEPSE use to determine their lending behavior.

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