

Effect of Loan-Loss Provisions on Loan Growth of Selected Private Commercial Banks in Bangladesh

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Abstract

Non-performing loans (NPLs) exacerbate banks' overall profitability and it becomes a matter of concern for the banking sector. Under the guidance of BASEL III, banks maintain loan loss provisions as a shield to accommodate the expected loss out of NPLs. However, this provision blocks banks' fund for lending purpose and thus creates a hindrance in earnings. The current study focuses on this issue and examines the impact of loan loss provision on banks' loan growth and to understand which factors can drive up the efficient credit management to mitigate the NPLs problem for the commercial banks. Taking 25 private commercial banks listed in DSE has been taken as sample, a multiple regression analysis has been done through the SPSS software to identify whether loan loss provision significantly influence the loan growth or not. The results show that profitability, deposit growth, liquidity and GDP growth positively influence the loan growth of selected private commercial banks and these relations are statistically significant. Conversely, Capital Adequacy Ratio and lending rate have significant negative influence on the loan growth. We found no significant impact of loan loss provision (LLP) on credit growth. The limitation of this study is that it has been conducted by considering the overall provision for loan losses. Further investigation can be done splitting the provision into general and specific provision.

Keywords

Commercial Banks, Credit Risk, Growth, Loan Loss Provision, Loans.

INTRODUCTION

Commercial Bank acts as a middleman in the financial sector between depositors and borrowers. More specifically, they collect money in the form of deposits and lend it to other businesses or individuals to earn from them. The profit or loss of a bank is calculated as the difference between the interest that the bank has earned and the interest it has paid. Loans are regarded as the primary source of revenue for banks since they enable other players in the economy to continue operation by providing the capital they need. However, there is always a possibility that the lender does not receive the installment of borrowed money eventually making the loan a non-performing loan (NPLs). It has been observed that, in these types of cases, borrowers become defaulted and the full amount of loan remains unrecovered. NPLs are those particular assets of the bank from which the bank is unable to generate any further incoming cash flow for loan repayment [1]. A nonperforming loan is considered one of the leading causes of bank failure. To protect the banking industry against NPLs, many credit policies have been implemented, whereas the Loan loss provision (LLP) system is treated as the most beneficial instrument and considered as a protection to adjust the expected loss that may arise due to non-payment of bank's loan installments [2]. A bank will report the loan loss provision on the profit and loss statement and will create a loan loss reserve that appears on the balance sheet when a loan loss is anticipated. Any amount kept in the form of loan loss reserve lowers the loan balance when the entire principal and interest amount on the loan seems uncollectible. In an attempt to minimize financial risk, banks often retain the

necessary provisions against their unclassified and non-performing loans (NPLs) from their operational profits. However, by weakening investors' confidence in the banking industry, the non-performing loan (NPL) problem is one of the main reasons for the economic slowdown [1]. The problem of non-performing loans (NPLs) has drawn more and more attention from academics in the past few years. The global banking industry is constantly concerned about rising economies such as Bangladesh due to their higher non-performing loan (NPL) rates [3].

The use of loan loss provision is not only surrounded by NPL or bank hedging techniques regarding bad loans. Banks also use this tool for income-soothing purposes. The component of loan loss provisions can be two types. The first one is the Discretionary loan loss provision and the other is the non-discretionary loan loss provision. If we consider the discretionary component, sometimes management use the loan loss provisions for their own objectives. Researchers identified different managerial motives behind the discretionary actions. Managers deliberately understate the loan loss provisions the year in which the income of the banks seems to be low due to other factors and thus smoothen the income pattern of the bank over time [4]. Thus, bank managers utilize the tool of discretionary loan loss provisions for managing capital, smoothing income level, signaling, and tax management purposes. Conversely, non-discretionary loan loss provisions, on which bank managers do not have any control, are determined by bank's credit risk and macroeconomic factors which affect banks' loan portfolios [5]. It has been observed that developing countries emphasize non-discretionary loan loss provisions due to its important micro-prudential role in bank regulation whereas general

provision acts as macro-prudential instrument [6]. Specific provisions and general provisions are distinguished in Basel II. General provision is identified considering overall credit risk in the business environment, including loan losses that cannot be properly measured. On the other hand, specific provision is identified considering real loan losses that have materialized or that can be reasonably measured. This part of loan loss provision has a direct linkage with the banks' survival specially, with large loan portfolio. This is because large amount of loan losses could have serious consequences for bank stability. In contrast to discretionary provisions, non-discretionary provisions are readily visible in bank financial statements.

Therefore, it is a burning question at the recent time to analyze the effect of LLP on banks operation and this study focuses on that issue. The analysis will facilitate the policyholders to adopt credit management strategies that will facilitate banking sector growth. However, the research is conducted on a sample consisting of 15 private commercial banks in Bangladesh. Further analysis can be done on all the banks operating in the economy.

LITERATURE REVIEW

A number of studies have focused on the credit risk management of banks, like [7] [8] [9]. [10] mentions that inefficient credit risk management can lead a bank to financial crisis. According to [11] and [12], bankruptcy issue in banking industry may be enhanced due to ineffective credit management and poor asset quality resulting from relaxed credit standards, poor portfolio risk management and lack of attention on changes in economic conditions. [13] [14] [15] have discussed about the credit management strategy of banking industry in Bangladesh. [16] found relationship between bank specific variables and bank lending behavior. Some researchers have focused on the variables affecting the level of credit risk faced by banks in different countries, like [17] in Srilanka, [18] in Bulgaria, [19] in Benin, [20] in Ghana, [21] in Kososvo, [22] in Uganda. In some of these studies, credit risk has been measured through non-performing loans as a proportion of total loans while others consider the provision against loan loss as a proportion of total loans as the indicator of credit risk. The researchers in these studies have linked credit risk with various bank specific and macroeconomic variables.

Over the last three decades, a good number of researches has been conducted on the procyclicality of loan loss provisions (LLP). Most of these studies has been done over cross-country dataset. [23] mention that the backward-looking loan loss provision amplifies growth in lending in Europe except in Spain. Consistent to this work, focusing on developed and emerging countries (like the United States, European countries, Japan, Central & South America and South & East Asia) over the period of 1995-2008, [5] found that loan loss provisions that is kept following the backward-looking system significantly impact loan growth in all the countries they consider, excepting Japan. In addition, their

results further establish that emerging countries have stronger procyclical effect of backward-looking loan loss provisioning than the developed countries. [24] found that higher discretionary provisions increase loan growth for large banks in Indonesia. [25] examines the determinants of bank lending in three Pacific Island Countries—Fiji, Vanuatu, and the Solomon Islands. Conducting an analysis over 15 commercial banks and 6 credit institutions, they showed that credit risk negatively affects bank credit growth. [26] examining a sample from 12 OECD countries, found negative relation of loan loss provision with bank credit.

However, along with loan loss provision, researchers have considered many banks specific as well as macroeconomic variables to explain banking lending behavior. [25] showed that customer deposits, core capital, banks' size, and profitability have a positive relation with loan growth while interbank deposit is negatively related in Fiji, Vanuatu, and the Solomon Islands. [27] found in Nigeria banks' lending is positively affected by deposit, investment portfolio and GDP of the economy. [28] found significant positive impact of bank size, deposit growth and GDP growth on Vietnamese banks' lending behavior. [29] [30] found CAMEL rating, capital requirement index, official supervisory power index and market discipline index as effective variables over loan growth in European banks.

At the recent time, non-performing loan has become an acute problem for banking industry in Bangladesh. [3] mentioned that the loan default problem is increasing in banking industry of the country at an alarming rate. They found a volatile trend of credit growth for the overall banking industry. [31] has mentioned the non-performing loan issue as a foremost hindrance for the banking industry expansion. [13] [32] [33] have analyzed the credit risk management of banks. [34] discusses the trend of non-performing loan in the country. [31] identifies factors determining the non-performing loans of the banks. [35] have discussed the effect of non-performing loan on bank profitability. [36] discusses the impact of loan loss provision against non-performing loans on banks profitability in Bangladesh. The current study focuses on whether the loan loss provision maintained against non-performing loan affect the bank credit growth.

OBJECTIVE OF THE STUDY

The main objective of the study is

- i. To analyze the effect of loan loss provision on the loan growth of selected private commercial banks in Bangladesh.
- ii. To identify whether the other bank specific factors and macroeconomic variables also create any significant impacts on bank's lending behavior.

METHODOLOGY

This research examines an analysis titled the effect of loan loss provisions on the loan growth of selected private commercial banks in Bangladesh. The study demonstrates the significance of some bank specific factors that directly

influence the loan portfolio of the banks along with two macroeconomic factors. Multiple Regression analysis has been conducted considering growth rate of loan as dependent variable and Bank size (ln value of total assets), Capital Adequacy (equity capital to RWA), Profitability (ROE), Deposit growth (% change in deposit), Loan loss provision to total loan (LLP), Liquidity (Deposit to Total Loan ratio), GDP growth rate and Lending rate as independent variables. In order to describe the data, initially a summary of descriptive statistics has been done to calculate the mean and standard deviation of each variable. Then a multicollinearity test has been conducted to ensure that there is no dependency exists within those independent variables along with the Durbin-Watson Test to examine the autocorrelation. Accordingly, the study is conducted based on the Multiple Regression model presented in equation:

$$\text{Loan growth} = \text{Constant} + \beta_1 * \text{Size} + \beta_2 * \text{CAR} + \beta_3 * \text{ROE} + \beta_4 * \text{DepositGr} + \beta_5 * \text{LLP} + \beta_6 * \text{Liquidity} + \beta_7 * \text{GDP} + \beta_8 * \text{Lending Rate} + \text{Error}$$

Sources of Data

The study is mainly focused on a quantitative approach and uses secondary data. Last five years information was obtained through secondary sources, such as the annual report of selected 25 private commercial banks from the year of 2018 to 2022. The study includes a total of 125 observations for the 25 sample banks for a period of five years. To collect the information of macroeconomic factors such as inflation and GDP growth; Bangladesh Bank’s website, Lanka Bangla financial portal, International Monetary Fund (IMF), Asian Development Bank also have been used.

Data Analysis Tools

At first the collected data was plotted on Microsoft Excel spreadsheet and then Statistical software SPSS 22 is used to perform all the tests and models.

DESCRIPTIVE STATISTICS

The following table (Table 1) shows the descriptive statistics of the selected variables. Based on the data obtained in the Table, it can be noted that the average loan growth of that selected PCBs is 11.26% during the last 5 years with a standard deviation of 6.6%. The Banks are maintaining an average Capital Adequacy Ratio of 13.86% presents that the sample banks maintain their capital above the minimum statutory requirement because as per the Basel III agreement, the minimum CAR is 10.5%. If we look at the profitability of the banks, the Average ROE of the selected banks is 10.92%, explains that banks offer a good return to their shareholders though the average value of ROE is below the world average. The world average in 2021 based on 136 countries is 13.44% (source: The Global Economy.com). The average deposit growth of the selected banks is 10.60% with a standard deviation of 6% which is below the annual deposit growth of banking sector in Bangladesh because, the annual growth of deposit in banking sector was 10.26% with a standard deviation of 7%. On an average these banks are maintaining a poor provisioning system as the average of loan loss provision to total loan ratio is only 0.86% which is a matter of concern for the banking industry in Bangladesh. The average liquidity which is measured through loan to deposit ratio shows a result of 0.94 times. The average GDP growth of 6.54% for last five years and the average lending rate of all banks is 8.38%.

Table 1. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Size	125	24.92890	28.23970	26.6340312	.44380534
CAR	125	.10030	.17930	.1385624	.01674606
ROE	125	.00081	.21501	.1092493	.03878061
DepositGR	125	-.05632	.32865	.1025762	.07029680
LLP_loan	125	.00041	.02487	.0085627	.00453652
Liquidity	125	.74	1.13	.9434	.08511
GdpGR	125	.03400	.07900	.0654000	.01609698
Interest	125	7.09	9.95	8.3800	1.17573
LoanGR	125	-.08247	.40171	.1126562	.06614372
Valid N (listwise)	125				

EMPIRICAL RESULTS AND ANALYSIS

Multi-Collinearity Test

Before analyzing the output of regression, it is necessary to check whether the data used for regression contains any multicollinearity problem or not. A multicollinearity problem

arises when independent variables are perfectly or near perfectly or highly correlated (either positive or negative) with each other [3]. To determine if there is a multicollinearity issue in, the VIF (Variance Inflation Factor) test is used here.

Table 2 shows that, the study is free from multicollinearity problem as no strong relation exists between the independent

variables. Generally, multicollinearity problem exists when the value of VIF is more than 10. A VIF less than 5 for a particular variable expresses a low correlation of that predictor with other variables. The output shows that, there is no collinearity problem among the independent variables.

Table 2. Collinearity Diagnostics for Multi-Collinearity Test

Variables	Tolerance	VIF
Size	0.847	1.181
CAR	0.898	1.113
ROE	0.711	1.407
Deposit Growth	0.874	1.144
LLP	0.685	1.459
Liquidity	0.822	1.217
GDP	0.753	1.328
Interest	0.743	1.346

Source: Author's calculation

Results of Regression Model

The result of regression analysis is presented in Table 3 below. The result shows that the more than 50% variation (50.7%) in bank credit growth is explained by the undertaken determinant variables. The significance value of the model is 0.000 which shows that the model fits at 1% significance level. To check the autocorrelation, Durbin Watson Test has been conducted. The Durbin Watson (DW) statistic is a test for autocorrelation in the residuals from regression analysis which is considered as the best renowned auto correlation test. The value of the test of the current study is found as 1.872 which is quite closer to 2 and indicates that the model does not face autocorrelation problem.

The result of the regression model indicates the relation between each of the independent variables with loan growth. Among the explanatory variables, size of banks, profitability, deposit growth, loan loss provision, liquidity and GDP are found to have positive impact on loan growth. [27], [25] and [37] had similar findings. The findings show that larger banks have more credit growth though the result is not statistically significant. Similarly, banks with higher profitability, better deposit collection and more liquidity are able to extend more credit. Deposit is the main source of fund for a commercial bank. Therefore, it is expected that as banks are able to attract more deposits, they have more fund available to extend loans. Besides, profit earned by a bank makes the bank stronger and the bank can use the earned profit to provide loans leading to an acceleration to the loan growth. As an economy achieves development which is reflected through the growth rate of GDP, the investment opportunity in the economy increases and income level increases, creating more demand for bank loans. However, the positive effect of loan loss provision does not match with previous studies on the same field. This finding shows that banks which maintain more loan loss provisions are more capable of achieving growth in lending.

Loan loss provision is a precaution against problematic loans. So, it is considered as a credit management technique of banks. Therefore, higher loan loss provision also indicates more cautiousness of banks' regarding credit management as along with keeping provision against non-performing loans, sometimes banks maintain extra provisions to handle any unexpected situation in future. Thus, banks which are more careful, are also efficient to handle the borrowers and distribute more loans. But this finding is not very strong as it lacks statistical significance.

Table 3. Results of Regression Analysis

Variables	Standardized Beta Value	Significance Value
Size	0.020	0.775
CAR	-0.212***	0.003
ROE	0.180**	0.021
Deposit Growth	0.615***	0.000
LLP	0.033	0.677
Liquidity	0.213***	0.004
GDP	0.186**	0.015
Lending Rate	-0.240***	0.002
R Square	0.507***	0.000
Durbin Watson	1.872	

On the other hand, capital adequacy ratio and bank lending rate have significant negative impact on credit growth. Capital adequacy ratio shows the amount of equity capital as a proportion of risk weighted assets. Maintaining high ratio reduces the growth in loans of banks. The lending rate also shows negative impact which is expected, as banks increase their lending rate, the available loans become expensive for the borrowers and may potential borrowers avoid taking bank loans. As a result, bank loans face a downward trend.

CONCLUSION

Credit risk has become a major concern for commercial banks in Bangladesh at the recent time. Many banks are facing increasing trend in the amount of non-performing loans in the country. To handle the situation, banks are required to maintain provision in the expectation of possible loss out of distributed loans. Banks maintain two types of provision, general and specific provision. This loan loss provision, though is a credit management technique of banks, blocks loanable funds and therefor may hamper the credit behavior of banks. The current paper focuses on this issue in respect of commercial banks of Bangladesh. The study collects data from 15 commercial banks in the country over the period 2018-2022. Considering 6 bank specific variables and 2 macroeconomic variables, a regression analysis has been done where the study measures how these variables affect the growth rate of loans of the selected banks. The results show that the loan loss provision does not have any

significant impact on banks credit growth. That means as banks maintain provision against expected loan losses, have no significant impact on the lending behavior. Rather the growth of bank credit is accelerated by the profitability, deposit growth and liquidity of banks. The GDP growth rate of economy also improves the lending growth. On the other hand, capital adequacy ratio and lending rate of economy have negative impact on lending growth. The findings of this study will facilitate the bank policymakers to understand the pattern of lending growth of the banking sector of Bangladesh and the fact that keeping such provision does not hamper the lending behavior of banks. Rather this research would acknowledge the policymakers about the variables which influences the growth of bank credit. However, as the loan loss provision is found to be insignificant in affecting the loan growth, further analysis can be done on this issue by segregating the general provision and specific provision of banks.

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