IMPACT OF CREDIT RISK MANAGEMENT ON FINANCIAL PERFORMANCE

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ABSTRACT

Due to the fact that the banking industry has a broad impact on many other industries, banks must assess the numerous risks involved with its operation in order to enhance their financial performance. Credit risk is a major factor in the company's financial health. The purpose of this study is to examine how credit risk affects the financial performance of 13 of India's largest commercial banks. The major goal is to see whether CAR and NPA have a substantial influence on banks' ROE. There are two independent indicators for credit risk, Net NPA and Capital Adequacy Ratio that are used to assess the performance of the banks (CAR). The 10-year data for each bank is tested using several statistical approaches, such as regression and correlation.

KEYWORDS: Credit risk, financial performance, Commercial banks

INTRODUCTION

Commercial banks are very important to any country's economic activity and development because of their leading position in accelerating these processes. According to Barth, Caprio, and Levine (2000), a banking system that isn't performing efficiently inhibits economic progress and exacerbates poverty, whereas a well-functioning banking system outpaces economic growth, eliminating the core causes of poverty. Their job as a financial middleman is analogous to that of blood vessels in the human body. [1]

It's impossible to ignore the significance of banking services and the role they play in the economy. For the most part, commercial banks' services and functions for the business sector are of essential significance. A substantial part of the financial world's daily operations is dependent on banks, including the payment and receipt of transactions, as well as making up for any shortfall in money necessary to complete a transaction or carry out any other kind of commercial activity. [2]

When a person or organization has enough money to invest, they can operate a business, but what happens if they don't? Commercial banks are in the business of receiving deposits and disbursing cash to those who need it, therefore this is the period when banks may help by providing credit. At this point, the bank offers them with credit in order to keep their company

running smoothly. [3]

"Has your business ever needed funding for seasonal or unanticipated short-term credit needs?" was a common question from Kashyap, Rajan, and Stein (2002). If this is the case, where does the company begin its search for funding to meet these demands? More than 70% of those polled said that a bank was their primary source of funding for business expenses of this kind. [4]

In light of this new information, it is apparent than ever that banks are critical to the supply of credit to investors. Although loan facilitation has been and continues to be a critical component of commercial banks across the world, it is particularly true in emerging and transition economies, where capital markets are less well-developed and structured. [5]

LITERATURE REVIEW

HOSSAIN MOHAMMAD YEASIN (2022) the research intends to examine the effect of credit risk management on the financial performance of commercial banks in Bangladesh since credit risk affects the banking sector in Bangladesh. By applying panel regression analysis, four parameters influencing financial performance of Bangladeshi commercial banks were identified and studied in the study. The research methodology used a deductive research approach, which focused on six commercial banks in Bangladesh with data from 2010 to 2019. Use of Return on Assets (ROA) as a measure of Bank performance, along with NPL, Capital Adequacy ratio (CAR), and Loan to Deposit Ratio (LDR) as a measure of credit risk are used in this research. NPL and CAR were shown to have a negative and statistically significant influence on the financial performance of commercial banks using panel data regression analysis. There was no statistically significant influence on commercial banks' financial performance when it came to the Loan to Deposit Ratio (LDR). As a result, the financial health of commercial banks is being harmed by credit risk. [6]

MAURICE OLOBO (2021) the purpose of the research was to determine the impact of South Sudan's banks' Credit Risk Management Practices. These procedures were examined in terms of Credit Risk Identification (CRI), Risk Assessment (CRA) and Control (CRC) (CRC). A cross-sectional survey of 124 people from seven different Juba-based banks was used to gather the data for this research. Surveys and interviews were conducted using standardized questionnaires and interview guides to collect data. According to the findings of the research, there is a substantial relationship between risk management methods and bank performance (r = 0.959; the p-value is less than 0.01). At r = 0.932 at p-value = 0.000 and r = 0.977 at p-value = 0.000, the outcomes of credit risk assessment, credit risk identification and credit risk control were all significant. According to the findings of the research, an increase in CRI, CRA, and CRC by a single unit enhanced bank performance by 35.8%, 25.3%, and 37.1%. CRA (= 0.253 and p=0.000) and CRI (= 0.358) seemed to promote asset book growth, whereas CRC (= 0.371 and p=0.000) had an impact on asset quality. [7]

RASA, RAHMANULLAH (2021) to explore how credit risk affects the profitability of commercial banks in Afghanistan. This research uses the Fixed Effects estimator on balance

panel data from six domestic private commercial banks for the period 2014-2018 because of the restricted data available. Size is a bank-specific denominator in the research; ROAA and ROAE are measures of profitability; and NIM is profitability metric. In this research, ROAA and ROAE were shown to have a substantial negative influence on LLRTL, although NIM had a beneficial effect. The data also show that TLTA has a considerable beneficial impact on NIM, but a negligible negative impact on ROAA and a negligible positive impact on ROAE. The research found that TLTD has a negative influence on ROAA, ROAE, and NIM, although only on NIM is it statistically significant. Size has a strong and considerable negative impact on all profitability measures, according to this research. It is encouraging to see that NIM's profitability is higher than the average for the Afghan banking industry, as shown by a mean comparison of profitability. Credit management, asset management efficiency, and business model effectiveness may all improve the profitability of commercial banks in Afghanistan according to the conclusions of this research. [8]

ESTHER YUSUF ENOCH (2021) Banks must deal with a lack of information when evaluating loan applications in order to properly screen prospective borrowers. It's difficult, if not impossible; to analyze the crucial data required assessing the entrepreneur's dedication and the possibility of the company. Banks are put at risk as a result of this. As a result, prior to making any loans, careful thought should be given to credit management. We relied on both primary and secondary sources in our study. From a population of 52 credit officers, we use multi-stage sampling to pick 21 responses. Descriptive and inferential statistics were employed to assess the data acquired and to test the hypotheses, while questionnaires were utilized to collect data from respondents. Regression analysis and basic percentages were utilized in this study. The statistical methods described above were implemented with the assistance of the statistical programmed SPSS (Statistical Package for Social Science). In order to boost profitability, microfinance institutions need to improve their credit risk management mechanisms. This is because, when effectively implemented, it reduces the proportion of payments that go unpaid. [9]

SYED MUHAMMAD HAMZA (2017) Credit risk management has a significant influence on the performance of commercial banks in Pakistan, according to this research. We were able to leverage secondary data from the SBP survey reports, government websites, and the Korea Stock Exchange to develop a solid research proposal. The pooled regression approach has been used to examine the influence of credit risk management on two performance measures.. The data showed that credit risk management had a negative correlation with bank performance. An examination of return on assets (ROA) found that the CAR, Loan loss provision Ratio (LLPR), the liquidity Ratio (LR), and the Non-performing Loan Ratio (NPLR) (ROA). While the LLPR, liquidity ratio, and Non-performing loan ratio all have a negative influence on the return on assets, the capital adequacy ratio (CAR), loan and advances (LAR) and SIZE all have a favorable effect. The CAR, LAR, and LLPR factors all have a substantial influence on ROE when it comes to ROE. The LLPR, NPLR, and LR variables have a negative effect on the dependent variable, whereas the CAR, LAR, and SIZE variables have a positive effect. [10]

METHODOLOGY

Sample Size:

The total number of observations taken into account in order to achieve the study's goals is referred to as the sample. Based on the market share of each bank in the Indian banking industry, a total of 13 banks from 2009 to 2018 were included in the study. This includes 7 private sector banks and 6 public sector banks. These banks account for 89.92 percent of the overall market share. Choosing a large enough sample size is critical to ensuring the validity and correctness of this study's findings.

Data collection:

Thirteen commercial banks' Net NPA percentage, Capital Adequacy Ratio, and Return on Equity were tracked from March 31, 2009, to March 31, 2018. The annual reports of the banks and the website of money control are used to gather the information (Money Control, n.d.). One-third of the 13 banks in the study are public sector ones (SBI, SBI of Baroda and IDBI) and three-quarters of them are private sector ones (HDFC, ICICI Bank, RBL, Kotak Mahindra, Axis and IndusInd). The research is based on a representative sample of these 13 institutions.

Statistical tools:

E-Views software was utilized to conduct the study, which employed correlation and regression to assess the influence and link of the factors on each other and the financial performance of the institutions.

DATA ANALYSIS

The correlation and regression models have been applied to each of the 13 banks, and the results have been shown below:

Descriptive statistics:

Table 1: Descriptive Statistics

	CAR	NET NPA	ROE
Mean	0.152498	0.020140	0.101857
Median	0.143050	0.009993	0.125762
Maximum	0.560000	0.166910	0.255193
Minimum	0.090000	0.000149	-0.388400
Std. Dev.	0.053144	0.027113	0.103249

Skewness	4.841835	2.648896	-2.124574
Kurtosis	33.63080	11.40483	8.619411
Jarque-Bera	5590.106	534.6667	268.8456
Probability	0.00000	0.00000	0.00000
Sum	19.82480	2.618189	13.24142
Sum sq. dev.	0.364340	0.094829	1.375185
Observation	130	130	130

According to the mean values, CAR has the greatest average ratio among the other variables. ROE is the most volatile of the three variables measured by standard deviation. There are no skewness numbers for the variables except ROE, which indicates that they are all positively-skewed.

Correlation between NPA and Return on Equity:

H0: When it comes to commercial banks, there is no association between NPA and ROE (Return on Equity)

H1: In commercial banks, there is a strong association between NPA and ROE (Return on Equity).

Table 2: Correlation between NPA and Return on Equity

S. No.	Name of the banks	r value	Nature
	Public sector banks:		
1	State Bank of India	-0.948478	High Negative
2	Bank of Baroda	-0.939696	High Negative
3	IDBI	-0.988290	High Negative
4	Canara Bank	-0.939258	High Negative
5	Punjab National Bank	-0.961063	High Negative
6	Bank of India	-0.9692489	High Negative

	Private sector banks:		
7	HDFC Bank	-0.4229760	Moderate Negative
8	ICICI Bank	-0.5325686	Moderate Negative
9	Kotak Mahindra Bank	-0.5690458	Moderate Negative
10	Axis Bank	-0.9606344	High Negative
11	IndusInd Bank	-0.7481475	High Negative
12	Yes Bank	-0.6243185	High Negative
13	RBL Bank	0.34344366	Moderate Positive

In the second table, the association between NPA and ROE of commercial banks is shown. The association between NPA and ROE for all banks was found to be strong, according to the research. 8 commercial banks (r -0.7) and HDFC Bank, ICICI Bank, Kotak Mahindra Bank, and Yes Bank (r -0.7>r> -0.5) have a substantial negative connection. RBL is the only bank that has a somewhat good association with other banks. The null hypothesis is therefore discarded in favor of the alternative hypothesis, according to which there is a strong link between NPA and Roe For commercial banks, we may deduce that the association between NPA and ROE is negative.

Correlation between CAR and Return on Equity

H0: No connection can be found between commercial banks' CAR and their Return on Equity (ROE).

H1: CAR and commercial banks' Return on Equity (ROE) have a strong relationship.

Table 3: Correlation between Car and Return on Equity

S. No.	Name of the banks	r value	CAR (10-year average)	Nature
	Public sector banks:			
1	State Bank of India	0.309150	13.064	Moderate Positive
2	Bank of Baroda	0.641473	13.441	Moderate Positive

3	IDBI	0.650093	12.188	Moderate Positive
4	Canara Bank	0.744809	12.553	High Positive
5	Punjab National Bank	0.922913	12.319	High Positive
6	Bank of India	0.0642965	11.895	Low Positive
	Private sector banks:			
7	HDFC Bank	-0.0990048	16.048	Low Negative
8	ICICI Bank	-0.0958798	17.833	Low Negative
9	Kotak Mahindra Bank	-0.4121181	17.913	Moderate Negative
10	Axis Bank	-0.4575360	15.077	Moderate Negative
11	IndusInd Bank	-0.0180904	15%	Low Negative
12	Yes Bank	-0.3022230	17.18	Moderate Negative
13	RBL Bank	-0.6320972	24.237	Moderate Negative

Commercial banks' CAR and Return on Equity (ROE) are shown in table 3. There is a strong association between CAR and ROE for all banks, according to the data. Nevertheless, the connection is favorable for all of India's public sector banks, namely the State-run State Bank of India and the private sector banks like the IDBI and Canara banks as well as the Punjab National Bank and Bank of India. According to this comparison, the association is reliant on CAR of the banks, as shown by the 10-year average. There is a negative link between banks with a CAR of less than 15%, and a positive correlation between banks with a CAR of more than 15%,

Regression analysis of NPA and ROE

H0: NPA does not have a substantial influence on commercial banks' Return on Equity (ROE).

H1: the financial institutions' return on equity is significantly affected by nonperforming assets (NPA).

Table 4: Regression Analysis of NPA and ROE

S. No.	Name of the banks	Coefficient	p-value	Nature
	Public sector banks:			
1	State Bank of India	-4.086878	0.0000	Significant, Negative
2	Bank of Baroda	-5.259988	0.0001	Significant, Negative
3	IDBI	-3.094809	0.0000	Significant, Negative
4	Canara Bank	-4.013771	0.0001	Significant, Negative
5	Punjab National Bank	-4.216310	0.0000	Significant, Negative
6	Bank of India	-4.659039	0.0000	Significant, Negative
	Private sector banks:			
7	HDFC Bank	-5.264149	0.2233	Insignificant, Negative
8	ICICI Bank	-0.756115	0.1130	Insignificant, Negative
9	Kotak Mahindra Bank	-3.569033	0.0860	Insignificant, Negative
10	Axis Bank	-5.011120	0.0000	Significant, Negative
11	IndusInd Bank	-6.290125	0.0128	Significant, Negative
12	Yes Bank	-5.874145	0.0537	Significant, Negative
13	RBL Bank	3.609364	0.3312	Insignificant, Positive

NPA and ROE for 13 commercial banks are shown in Table 4. A substantial and negative effect on ROE was found for State Bank of India, Bank of Baroda, Bank of India, Canara Bank... and so on at a 5% significant level therefore we reject the null hypothesis. There is no evidence to support the null hypothesis for HDFC bank, ICICI bank (India), RBL bank (India), or Kotak Mahindra bank (India). But the only bank with a positive influence on ROE is RBL Bank. Banks' ROEs are negatively affected by NPAs, according to this study. As a consequence, the company's profitability suffers as their NPA rises.

Regression analysis of CAR and ROE

H0: Commercial banks' Return on Equity (ROE) is not affected by CAR.

H1: CAR has a substantial effect on commercial banks' Return on Equity (ROE).

Table 5: Regression Analysis of Car and Roe

S. No.	Name of the banks	Coefficient	p-value	Nature
	Public sector banks:			
1	State Bank of India	2.4012	0.3847	Insignificant, Positive
2	Bank of Baroda	6.664620	0.0456	Insignificant, Positive
3	IDBI	07.8755	0.0419	Insignificant, Positive
4	Canara Bank	05.2259	0.0135	Significant, Positive
5	Punjab National Bank	10.3092	0.0001	Significant, Positive
6	Bank of India	-0.943958	0.8599	Insignificant, Negative
	Private sector banks:			
7	HDFC Bank	-0.1850	0.7855	Insignificant, Negative

8	ICICI Bank	-0.1905	0.7922	Insignificant, Negative
9	Kotak Mahindra Bank	-0.6594	0.2366	Insignificant, Negative
10	Axis Bank	-1.9286	0.1837	Insignificant, Negative
11	IndusInd Bank	-0.028908	0.9604	Insignificant, Negative
12	Yes Bank	-0.618897	0.2623	Insignificant, Negative
13	RBL Bank	-0.124591	0.0499	Significant, Negative

CAR and ROE are shown in a regression in Table 5 for 13 commercial banks. We reject the null hypothesis since CAR has a substantial influence on ROE at a 5% significant level for Canara Bank, Punjab National Bank, and RBL Bank. Other Indian banks, such as State Bank of India, Baroda bank, ICICI bank and Kotak Mahindra bank have a little influence on the country's economy. We conclude that the null hypothesis is correct. These results demonstrate that CAR has a negligible and negative influence on banks' ROE. Due to the banks' CAR being relatively stable over time, this might be the reason.

CONCLUSION

Among the research's stated goals is to investigate the relationship and effect of credit risk on commercial banks' financial performance and profitability in India. Using correlation and regression analysis, E-views was utilized to build a link between the years 2009-2018 after the data was collected. A rise in non-performing assets (NPA) leads to a decline in the profitability of commercial banks, as shown by the empirical data, because of the considerable and negative influence on NPA of ROE. Financial Performance would be negatively impacted as a result of the company's lower profitability. Second, the Return on equity is negatively impacted by the Capital adequacy ratio, notwithstanding its small size. This illustrates that the CAR has a detrimental effect on the banks' profitability even if it has no direct impact on their profitability. A 15 percent capital adequacy ratio is shown to be the best number, with anything higher putting a company at danger of negatively impacting its long-term profitability and financial

performance. The study focuses primarily on the banking industry and the financial performance consequences of the factors. Due to their negative effect, non-performing assets under credit risk management should be given greater attention by the company's management; this is preferable to an overly focused attention on the capital adequacy ratio. If the company's capital adequacy ratio falls below 12-15%, the company may see a decrease in financial performance.

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