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Impact of Credit Risk Management on Financial Performance of Commercial Banks

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ABSTRACT: *Banking is an important sector that affects various other sectors simultaneously thus with the motive to improve their financial Performance the banks need to look into various risk associated with its operation. One of the risks that affects its financial condition to a large extent is credit risk. This research paper aims to analyse the impact of credit risk on financial Performance of the top 13 commercial banks of India. The main objective is to determine whether there is a significant impact of CAR and NPA on the ROE of the banks. In order to measure the Performance of the banks, one dependent variable ROE is considered and two independent variables for credit risk is taken i.e., Net NPA and Capital Adequacy Ratio (CAR). Various statistical tools such as regression and correlation are used to conduct the test for the 10-year data for each of the banks.*

KEY WORD: *Non-performing assets, Banking sector, Return on Equity, Capital Adequacy Ratio*

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I. INTRODUCTION

The banking sector has been growing rapidly due to the security market and has become very complex over the years. Thus, they face multiple risks related to the compound operations that the banking industry is involved in. Unsuccessful credit risk management is one of the serious problems faced by the banks in spite of the fact that credit lending is the chief activity. Thus, bank management need to focus more on the risk management in order to maintain the Performance of the banks. The regulatory authority has designed Basel 1, Basel 2, Basel 3 as comprehensive measures to improve the risk, regulation and supervision in this sector.

As per the Basel Committee "Credit risk is most simply defined as the potential that a bank borrower or counterparty will fail to meet its obligations in accordance with agreed terms. The goal of credit risk management is to maximise a bank's risk-adjusted rate of return by maintaining credit risk exposure within acceptable parameters."

Different analysis has been determined related to the impact of credit risk management on the profitability of the banks in different countries however they conclude that the impact changes from country to country based on the regulations. This research is based on determining the relation between the credit risk management and financial Performance in the Indian context.

II. LITERATURE REVIEW

Various researches have been done in this field some survey has been done on the articles, journals, authors to establish the concepts.

(Das, 2010), pointed out in his research that the increase in the credit facility in developing countries like India is required. Though an increased growth of credit may lead to High NPA. But however, the continuous follow up of the sanctioned loan is necessary to ensure that no diversion is recurring.

(Saxena, 2013), advised the banks to maintain provisions for doubtful loans with the help from debt recovery tribunals and upgrading the status of NPA'S. The article also specified about the banks NPA percentage and specifies that all banks have less than 3% while only State Bank of India is the largest contributor with 3.5%.

(Rani, 2015), in her research studies about the impact of NPA on the financial performance of private and public sector banks. For the purpose she did the regression analysis and discovered that there is a significant impact of NPA as all the null hypothesis were rejected for the 8 sample banks considered for this research.

(Elbadry, 2016), in his article researcher used various independent and dependant variables namely Capital adequacy ratio, provisions, leverage ratios etc. the final results of the article indicate a positive effect of capital adequacy, provision, leverage and asset utilization ratio on operation risk while it was negative in the case of liquidity risks for south Arabia Banks

(Abel, 2016), found out that the profitability of banking sector of Zimbabwe was affected by liquidity risk management, credit risk management, asset composition management, expense management and size. It was also found that the profitability of banks can further be improved by improving the quality of assets. The study confirms that the managers of banks have a significant role in shaping the profitability of the sectors.

(Muhamet, 2016), specified in their article about the importance of credit risk management in carrying out the primary functions and its impact on the overall profitability of the commercial banks in Kosovo. Based on the beta coefficient it was concluded that NPLR has a great impact on the profitability than the RAR. The analysis was based on the data of 2006-2015 for Four major Banks using multivariate analysis.

(Ishaka & Ismail, 2016), concluded in this article that Return on Assets has an indirect relationship with the Total Loan to Total Deposit (TLTD) and Non- Performing Loan to Total Loan (NPLTL). The research is based on the three listed commercial banks in Bursa, Malaysia.

(Singh, 2016), stated that NPA has increased by three folds in last 10 decades and thus became a major concern of the Indian Banks. The article portrays that the major causes leading the NPA'S are the ineffective recovery, non-standardised process. In the end the author recommends the banks to restructure their loans and follow up closely on person who have been granted loans. As for RBI the author suggests to upgrade the existing standards for grading and credit appraisal.

(Sufi Faizan Ahmed, 2015), studied the credit risk management and loan performance of micro finance banks of Pakistan. The purpose of paper was to evaluate the impact of credit risk management on the loan performance. Credit terms and policy, client appraisal was taken as the variables that were used to measure the credit.

(Yadav, 2011), in his article studied the trend of gross no-performing assets of public sector bank and concluded that it has shown an increasing trend till 2001. It showed that the present condition of NPA affects the profitability of the public sector banks by 50% and its impact tends to increase with other banking variables.

(Sharma, 2016), found the impact of NPA (gross and net) on the profitability of banks (ROA, ROI and net interest margin) using the regression analysis. It showed the result that there is a significant relationship between the variables. Thus, the impact is said to be existing between the profitability and the NPA of Indian Scheduled Bank.

(Ganesan, 2013), found that the major concern for the State Bank of India in terms of NPA is the agriculture sector whether in terms of the size of loans, inconsistency trend or intervention of government in terms of their loan granting policies. The research explains the reason of high level of NPA as these factors and other natural calamities make it difficult for the banks to recover loans from this sector in specific.

Research Gap: There hasn't been enough study done in order to understand the factors that are affecting the growth rate and the financial Performance of the banks. Moreover, the few researches which are being done in this field are limited to very limited number of banks. Banks are an important sector that affects various other sectors simultaneously thus with the motive to improve their financial Performance the banks need to look into various determinants. This research will thus help us to understand the extent to which NPA and CAR are affecting the banks and the extent to which the credit is extended

III. OBJECTIVES:

- To study the relationship between Capital adequacy, NPA and the financial condition of commercial banks.
- To determine the impact of Capital adequacy on financial Performance of banks.
- To determine the impact of NPA on financial Performance of banks.

IV. DATA AND METHODOLOGY:

4.1. Sample Size:

Sample refers to the total number of observations that are considered for meeting the objectives of the research. The sample size selected for the research is 13 banks from 2009-2018 including 7 private sector banks and 6 public sector banks based on the market share of each of the banks in the Indian Banking sector. The total market share covered by these banks is 89.92%. The selection of sample size is important because it helps in increasing the accuracy and validity of the results obtained through this research.

4.2. Data collection:

The Net NPA %, Capital Adequacy Ratio and Return on Equity for 13 commercial banks have been collected from 31/03/2009 to 31/03/2018. The data is collected from the individual annual reports of the banks and website of money control (Money Control, n.d.). The research is based on the sample of 13 banks which consists of 7 private sector banks i.e. HDFC bank, ICICI Bank, Yes Bank, RBL Bank, Kotak Mahindra Bank, Axis Bank and IndusInd Bank and 6 public sector banks namely State Bank of India, Bank of Baroda, Bank of India, Canara Bank, IDBI, Punjab National Bank.

4.3. Statistical tools:

The statistical tools used for the research are correlation and regression through E-Views software to determine the impact and relation that the variables have on each other and the financial Performance of the banks.

V. ANALYSIS AND INTERPRETATION:

The correlation and regression models have been used for the 13 banks separately and the results of them has been discussed below:

5.1. 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

The mean values indicate that CAR has the highest average ratio among the studied variables. Standard deviation, as a measure of volatility, indicates that ROE is the most volatile of the 3 variables. The skewness figures indicate that except ROE all the variables are positively skewed showing the positive ratio from these variables.

5.2. Correlation between NPA and Return On Equity:

H_0: There is no correlation between NPA and Return on Equity (ROE) of commercial banks
H_1: There is a significant correlation between NPA and Return on Equity (ROE) of commercial banks.

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

Source: the analysis done by the author using E-Views Software

The table 2 shows the correlation between NPA and Return on Equity (ROE) of commercial banks. Based on the analysis it shows that there is a high degree of correlation between the NPA and return on equity for all the banks. There is a high negative correlation ($r < -0.7$) for 8 commercial banks and moderate negative correlation ($-0.7>r> -0.5$) for HDFC Bank, ICICI Bank, Kotak Mahindra Bank and Yes Bank. Out of all banks RBL is the only bank with moderate positive correlation. Thus, we reject the null hypothesis and accept the alternate hypothesis which states that there is a significant correlation between NPA and Roe
Therefore, we can conclude that the correlation between NPA and ROE for the commercial banks is negative.

5.3. Correlation between CAR and Return on Equity

H_0: There is no correlation between CAR and Return on Equity (ROE) of commercial banks
H_1: There is a significant correlation between CAR and Return on Equity (ROE) of commercial banks.

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

Source: the analysis done by the author using E-Views Software

The table 3 shows the correlation between CAR and Return on Equity (ROE) of commercial banks. Based on the analysis it shows that there is a significant correlation between CAR and ROE for all the banks. However, the correlation is positive for all public sector banks i.e. State Bank of India, Bank of Baroda, IDBI, Canara Bank, Punjab National Bank and Bank of India whereas it is negative for the remaining Public sector banks.

When compared with the 10-year average of CAR, it shows that the; correlation is dependent on the CAR of the banks. The banks with less than 15% CAR have negative correlation while banks with Average CAR more than or equal to 15% have positive correlation.

5.4. Regression analysis of NPA and ROE

H_0: There is no significant impact of NPA on Return on Equity (ROE) of commercial banks

H_1: There is a significant impact of NPA on Return on Equity (ROE) of commercial banks

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

Source: the analysis done by the author using E-Views Software

Table 4 shows the regression between NPA and ROE for 13 commercial banks. The impact of NPA on ROE shows a significant and negative impact for State Bank of India, Bank of Baroda, Bank of India, Canara Bank, IDBI, Punjab National Bank, Yes Bank Axis Bank and IndusInd Bank at 5% significant level thus we reject the null hypothesis. While HDFC bank, ICICI Bank, RBL Bank, Kotak Mahindra Bank, shows insignificant impact and results in rejection of null hypothesis. However, RBL Bank is the only bank which shows positive impact on ROE. Overall this shows that there is a significant and negative impact of NPA on the ROE of the banks. Thus, increase in NPA results in decrease of profits for the company.

5.5. Regression analysis of CAR and ROE

H_0: There is no significant impact of CAR on Return on Equity (ROE) of commercial banks

H_1: There is a significant impact of CAR on Return on Equity (ROE) of commercial banks

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

Source: the analysis done by the author using E-Views Software

Table 5 shows the regression between CAR and ROE for 13 commercial banks. The impact of CAR on ROE shows a significant impact for Canara Bank, Punjab National Bank and RBL Bank at 5% significant level thus we reject the null hypothesis. While all the other banks namely State Bank of India, Bank of Baroda, Bank of India, IDBI, Yes Bank, Axis Bank, IndusInd Bank, HDFC bank, ICICI Bank and Kotak Mahindra Bank shows insignificant impact. Thus, we accept null hypothesis.

Overall this shows that there is an insignificant and negative impact of CAR on the ROE of the banks. This could be due to the fact that the CAR of the banks remains comparatively constant over the years.

VI. CONCLUSION

In the objectives of the research it has been specified that the motive of the research is to find out the relation and impact of credit risk on the financial Performance and profitability of commercial banks of India. After the data collection E-views was used to establish the relationship using correlation and regression analysis for the year 2009-2018.

The empirical findings firstly show that there is a significant and negative impact of NPA of ROE of the commercial bank that is subsequent increase in NPA leads to reduction in the profitability of the banks. However, the larger reduction in the profitability of the company would hamper the financial Performance as well.

Secondly, there is an insignificant yet negative impact of Capital adequacy ratio on the Return on equity. This shows that even though the CAR does not directly impact the profitability of the banks but it has negative influence as it adds on to the banks' risk composition. Further through this research the optimum value of capital adequacy ratio is determined as 15% beyond which the risk impacts the profitability and financial Performance in the long run.

The research concentrates majorly on the banking sector and the implications the variables have on the financial Performance. Therefore, the conclusion is that the management should concentrate more on the Non-Performing Asset under credit risk management as they have negative impact while capital adequacy ratio does not show significant impact, it is advisable that they should not focus much on this aspect. Rather the management should only ensure that the capital adequacy ratio remains between 12-15% beyond which the companies might face certain inPerformance financially.

VII. SCOPE OF FURTHER STUDIES

This research also opens up a wide scope for the new topics related to this area of research. The researcher on the basis of this research can use more indicators in order to establish the impact in a more dynamic term. Moreover, similar researches can be conducted in determining the impact on other types of risks associated with banks apart from credit risk.

BIBLIOGRAPHY:

[1]. Abel, S. (2016). DETERMINANTS OF BANKING SECTOR PROFITABILITY IN ZIMBABWE. *INTERNATIONAL JOURNAL OF ECONOMICS AND FINANCIAL ISSUES*, 20.

[2]. (2017-18). *Annual Report.* AXIS Bank.

[3]. Das, S. (2010). Management of Non-Performing Assets In Indian Public Sector Banks With Special Reference To Jharkhand. *Indira Gandhi Institute of Development Research*.

[4]. Elbadry, A. (2016). Bank's financial Performance and risk management. *Journal of Islamic Accounting and Business Research*, 27.

[5]. Ganesan, D. (2013). Non-Performing Assets: A study of State Bank of India. *Asia pacific Journal of Research*.

[6]. Ishaka, I., & Ismail, N. (2016). Credit Risk Management and Profitability of Bank Listed on Bursa Malaysia. *International Symposium & Exhibition on Business and Accounting 2016*, 7.

[7]. *Money Control*. (n.d.). Retrieved from Money Control website: http://www.moneycontrol.com

[8]. Muhamet, A. (2016). The Effect of Credit Risk Management on Banks' Profitability in Kosovo. *European Journal of Economic Studies*, 25.

[9]. Rani, R. (2015). NPA AND FINANCIAL PERFORMANCE OF PUBLIC AND PRIVATE BANKS: AN EMPIRICAL INVESTIGATION. *Airo International Research Journal* , 20.

[10]. Saxena, S. (2013). Management of Non Performing Assets in Banks—An Overview. *Global Journal of Management and Business Studies*, 10.

[11]. Sharma, S. (2016). Measuring the Impact of Non-Performing Assets on the Profitability of Indian Scheduled Commercial Banks. *IOSR Journal of Economics and Finance*.

[12]. Singh, V. R. (2016). A Study of Non-Performing Assets of Commercial Banks and it's recovery in India. *Annual Research Journal of SCMS, Pune* , 16.

[13]. Sufi Faizan Ahmed, Q. A. (2015). Credit Risk Management and Loan Performance: Empirical Investigation of Micro Finance Banks of Pakistan. *International Journal of Economics and Financial Issues*, 6.

[14]. Yadav, M. S. (2011). Impact of Non-performing Assets on the profitability and productivity of Indian Scheduled Banks. *Asian Forum of Business Education Journal*.

Dr Sangeetha R., et. al. "Impact of Credit Risk Management on Financial Performance of Commercial Banks." *International Journal of Business and Management Invention (IJBMI)*, vol. 10(07), 2021, pp. 17-22. Journal DOI- 10.35629/8028