A Credit Risk Management in Public and Private Sector Banks

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Abstract : **Credit risk management in banks is important to maintain credit risk exposure within proper and acceptable parameters. Credit risk arose due to borrower's failure to repay a loan or meet contractual obligations which creates possibilities of loss. For measurement of credit risk management researcher has used data of Non-performing assets, Credit adequacy ratio and Return on Asset of 10 years of Top five public and private sector bank based on their assets on balance sheet for year 2018-19. To measure credit risk efficiency of public and private sector banks, researcher has done regression analysis between NPA, CAR and ROA. Research reveals that there is significant relation between credit risk management and bank performance. Credit risk management can help us to determine banks performance level and their credit efficiency.**

Key Words - Credit Risk Management, Public Sector Bank, Private Sector Bank, Bank Performance.

I. INTRODUCTION

Banks are the major stakeholder of economic development as they play an important role in handling the savings of the public. The Indian banking system has been well organized and systematized which support it to react proactively and dynamically. Banking industry has been divided into major three categories: 1) Commercial banks 2) Regional Rural Banks 3) Co-operative Sector banks. Commercial banks play role of intermediaries between borrowers and lenders to generate profit out of it. It is very important function of economy that why it should be done with utmost care and due diligence. Public deposits and granted loan and advances form a major assets and liabilities to the banks. Loans and advances are always associated with risk. Nonpayment of these loans and advances leads to bank crisis and perform as economic development blockage. These kinds of situation have been faced in past by world economies in term of Subprime crisis.

Credit risk incurve due to borrower's failure to repay a loan or meet contractual obligations which creates possibilities of loss. Traditionally, Non- recipience of owed principal and interest referred as credit risk. Credit risk can create interruption of cash flows and increase costs for collection of funds. Additional cash can used to provide cover to credit risk. It's almost impossible to predict that who will not follow the obligation of loans and advances, but proper assessment and credit risk management can reduce the impact of loss. Interest payments are reward to the banks for accepting possible credit risk from loans and advances. There is inherence of credit risk to lend money to the businesses whose operations are closely associated with market risk variables. That necessitate the banks to manage the credit risk. So, it's important that any banks credit check department work properly and check each borrower's credit profile thoroughly. Credit risk can be reduced by tightening of credit norms, credit insurance, derivatives, etc.

II. REVIEW OF LITERATURE

Harendra Singh & Prof.(Dr.) Anil Vashisht (2019) in their study titled "Credit Risk management in Banking Sector" has find out that there is no significant difference between how Public sector banks and private sector banks manage the NPA's in their banks using Primary and Secondary Data which comprises Bank visit, Asking the queries, if any from the manager or from any person of credit risk management department, Using a questionnaire, Reports from RBI, Business newspapers and magazines, Web sites of different banks, Books of credit risk management and management of NPAs, Different Journals etc. and Analysed by using T-test as a statistical tool.

Dalvi Madhukar & Shelankar Mitali (2018) has measure the Impact of Credit Risk Management on the Financial Performance of selected Public and Private Sector Banks in India. Data for study obtained by taking average of five years figures of financial performance indicator namely Net Profit Margin (NPM) and credit risk management indicators viz. Capital Adequacy Ratio (CAR), Credit Deposit Ratio (CDR). Data has been analysed by using Regression Model. Researcher conclude that Public sector banks have low credit risk and negative profitability whereas private sector banks have high credit risk and high profitability.

Ms. Champa Ramkrishna Parab & Dr. M. R. Patil (2018) has made efforts to identify Relation between Credit Risk and Public and Private Banks' Performance in India using Secondary Data for the period from 2000-01 to 2015-16 and the annual reports have been retrieved from the websites of public and private banks. 40 Indian Banks have been selected for the purpose of study, of which 24 are public banks and 16 are private banks. Researcher has used data of Dependent Variable, Independent Variable and Control Variables which has been analysed using Correlations and Regression Analysis Tools. Study conclude that efficient and effective performance of the banking industry of a country over a period of time is the indication of financial stability of a nation and the extent to which banks extending credit to the public for productive purposes accelerates the process of development.

Viqar-U-Nissa & Mushtaq A Darzi (2017) has try to measure the Impact of Credit Risk Management on Performance of Banks using capital adequacy ratio, net non-performing assets, net NPA ratio (i.e. percentage of net NPA to net advances), profit figures, earning per share (EPS) and average return on assets (ROA) which has been collected from the annual reports, financial statements and Basel III disclosures of HDFC Bank. Study conclude that the non-performing assets ratio has an inverse relationship with the performance and efficiency measures of the bank which indicates that the lower the NPA ratio, the better the performance of the bank.

Izzaamirah Ishak, Noraini Ismail, Nurulhuda Ahmad Razali, Rositah Bakar & Hamidah Ramlan (2016) have measure the Credit Risk Management and Profitability of Bank Listed on Bursa Malaysia using Return on Equity (ROE) and Return on Asset (ROA) as the indicator of the profitability in the regression analysis, Whereas, the traditional credit risk ratios which is Total Loan to Total Assets (TLTA), Total Loan to Total Deposit (TLTD) and Non- Performing Loan to Total Loan (NPLTL) as the indicator of credit

risk and measure the amount of credit level of the banks. They came to conclusion that the credit risk management indicator, which is TLTA, TLTD and NPLTL has significant impact on the profitability measure.

Saeed MS & Zahid N (2016) made an attempt to measure the Impact of Credit Risk on Profitability of the Commercial Banks of UK. Data of the dependent variables like ROE (Return on Equity) and ROA (Return on Assets) and the independent variables like credit risk variables, bank size, growth, and leverage are used, it has been analyzed using linear regression model and correlation. It Conclude that, There're not any major negative association between bank profitability and credit risk variables. However, few minor negative relationships indicate that credit risk improves bank profitability.

Asha Singh (2015) made an attempt to identify Effect of Credit Risk Management on Private and Public Sector Banks in India. Researcher has collected Secondary data from RBI bulletins, published by RBI, Govt. of India, Reports published by National Institute of Bank Management, Annual reports of various banks, publications and notifications of RBI, Reports published by Indian Bank Association (IBA) etc. and Analyze data using two-way regression model. The study concludes that there is a significant relationship between bank performance (in terms of return on assets) and credit risk management (in terms of loan performance).

M.Rajeswari (2014) has done a A Study on Credit Risk Management in Scheduled Banks Which have used Primary Data and Secondary Data. Primary Data has been collected through mailed questionnaires. Samples has been collected through Convenience Sampling and Analyzed by using Percentage Analysis and Chi-Square Test. Result of the Study Conclude that the goal of credit risk management is to maximize a bank's risk adjusted rate of return by maintaining credit risk exposure within acceptable parameters.

A.Singh (2014) made efforts to identify Performance of Credit Risk Management in Indian Commercial Banks. Researcher had collected data of ROA, Net NPAs and CAR of Public and Private Sector banks from annual report of RBI since 2003 to 2013. The researcher has conducted correlation and linear regression test between ROA & NPA and ROA & CAR of public and private sector banks. This study shows that there was a significant relationship between bank performance (in terms of return on asset) and credit risk management (in terms of nonperforming asset).

III. Research Objective

- **Primary Objectives**
  - To identify the relationship between financial performance and credit risk management of public sectors banks and private sectors banks in India.
- **Secondary Objective**
  - To analyse NPAs position of Private Sector Banks and their risk management
  - To analyse the relationship between credit risk management and bank efficiency.
  - To analyse total loans and advances, return on assets (ROAs) Position in Banks

IV. Research Methodology

3.1 Problem Statement

It is difficult to identify that weather public or private sector manages the credit risk efficiently and its impact on performance of the banks.

3.2 Research design

Descriptive research method has been used in this research because it requires the analysis of NPA, CAR, ROA. Research required detail analysis of quantitative data of NPA & CAR to find out their relationship with the ROA to measure the performance of public and private sector banks. This all features are provided in descriptive research.

3.3 Data collection

This research has been done using Secondary source of data. Top five Public and Private sector bank's NPA, CAR & ROA Data of 10 year has been collected to do so. Data has been collected from MoneyControl and Various organization's Annual Reports.

3.4 Sampling Method

Top five Public and Private sector bank based on their assets on balance sheet of FY 2018-19 has been selected for Data Collection.

3.5 Data Analysis Tool

Regression analysis, Trend, Correlation has been used to analyze the collected data.

3.6 Hypothesis

H_0 = Credit Risk Management has a significant impact on the bank performance.

H_1 = Credit Risk Management has a no impact on the bank performance.

V. Data Analysis & Interpretation

Table 1 Comparison of ROA, Net NPA & CAR of Private Sector Bank

Year	ROA(%)	NPA(%)	CAR(%)
2018-19	1.022	1.424	16.8
2017-18	1.234	2.038	17.2
2016-17	1.432	1.88	16.2
2015-16	1.604	1	16.2
2014-15	1.854	0.658	16.4
2013-14	1.852	0.528	16.6

2012-13	1.78	0.378	17.4
2011-12	1.736	0.352	17.2
2010-11	1.706	0.444	17.2
2009-10	1.726	0.874	18.2

Table 1 is showing Average percentage of five private Sector bank's (which are HDFC, ICICI, AXIS, YES, KOTAK MAHINDRA BANK) Return on Assets (ROA), Net Non-performing Asset, Credit Adequacy Ratio for 10 Years.

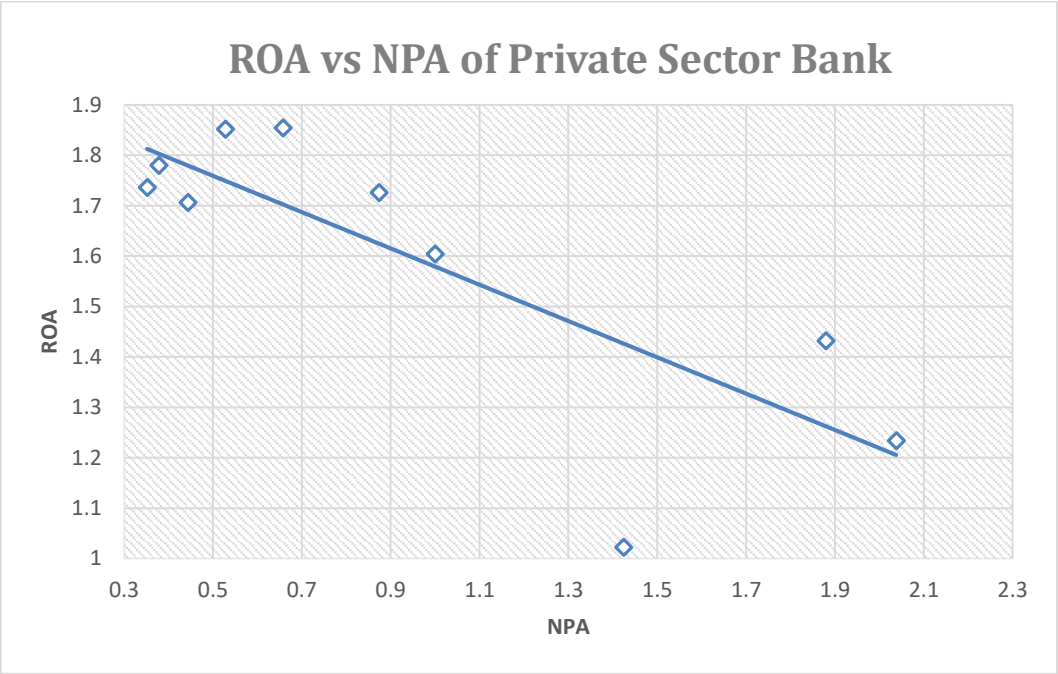

Figure 1. ROA vs NPA of Private Sector Bank

The equation of straight-line relating ROA and NPA was estimated as: ROA = (1.939652817) + (-0.360330844) * NPA using the 10 observation in this dataset. The y-intercept, When NPA was Zero Estimated value of ROA has 1.939652817 with Standard Error of 0.10641809. When NPA change by One Unit, Estimated ROA change by -0.360330844 with Standard Error of 0.094597902.

Table 2 Run Summary

Parameter	Value	Parameter	Value
Dependent variable	ROA	Rows Processed	10
Independent Variable	NPA	Rows used in Estimation	10
Frequency variable	None	Rows with X Missing	0
Weight Variable	None	Rows with Freq. Missing	0
Intercept	1.9396528	Rows Prediction Only	0
5Slope	-0.3603308	Sum of Frequencies	10
R-Squared	0.64458787	Sum of Weights	10
Correlation	-0.8028623	Coefficient of variation	0.175146158
Mean Square Error	0.03118814	Square Root of MSE	0.176601651

Table 2 shows the value of R-Squared, the proportion of the variation in ROA that could be accounted for by variation in NPA, was 0.644587872. The correlation between ROA and NPA was 0.8028623.

Table 3 Descriptive statistics

Parameter	Dependent	Independent
Variable	ROA	NPA
Count	10	10
Mean	1.5946	0.9576
Standard Deviation	0.279288063	0.622288822
Minimum	1.022	0.352
Maximum	1.854	2.038

Table 3 Shows, in case of Dependent Variable, the standard deviation = 0.279288063, Minimum Value = 1.022 and Maximum Value = 1.854 whereas in case of independent variable, the standard deviation = 0.622288822, Minimum Value = 0.352 and Maximum Value = 2.038.

Table 4 Regression estimation

Parameter	Intercept B (0)	Slope B (1)
Regression Coefficients	1.939652817	-0.360330844
Lower 95% Confidence Limit	1.694252261	-0.578473997
Upper 95% Confidence Limit	2.185053372	-0.142187692
Standard Error	0.10641809	0.094597902
Standardized Coefficient	0	-0.8028623
T Value	18.22672082	-3.809078624
Prob Level (T Test)	0	0.005169407
Reject H0(Alpha = 0.0500)	Yes	No
Regression of Y on X	1.939652817	-0.360330844

Table 4 shows, a significance test that the slope was zero resulted in a t-value of -3.809078624. The significance level of this t-test was 0.005169407. Since 0.005169407 > 0.0500, the hypothesis that the slope was zero was not rejected.

The estimated slope was -0.360330844. The lower limit of the 95% confidence interval for the slope was -0.578473997 and the upper limit was -0.142187692. The estimated intercept was 1.939652817. The lower limit of the 95% confidence interval for the intercept was 1.694252261 and the upper limit was 2.185053372.

It also shows the least-squares estimates of the intercept and slope followed by the corresponding standard errors, confidence intervals, and hypothesis tests. These results were based on several assumptions.

Table 5 Analysis of variance

Source	DF	Sum of Squares	Mean Square	F-Ratio	Prob. Level
Slope	1	0.452511258	0.452511258	14.50908	0.005169
Error	8	0.249505142	0.031188143		
Adj. Total	9	0.7020164			

Estimated Model

ROA = (1.939652817) + (-0.360330844) * (NPA)

Table 5 shows the F-Ratio for testing whether the slope was zero, the degrees of freedom, and the mean square error. The mean square error, which estimated the variance of the residuals, was used extensively in the calculation of hypothesis tests and confidence intervals.

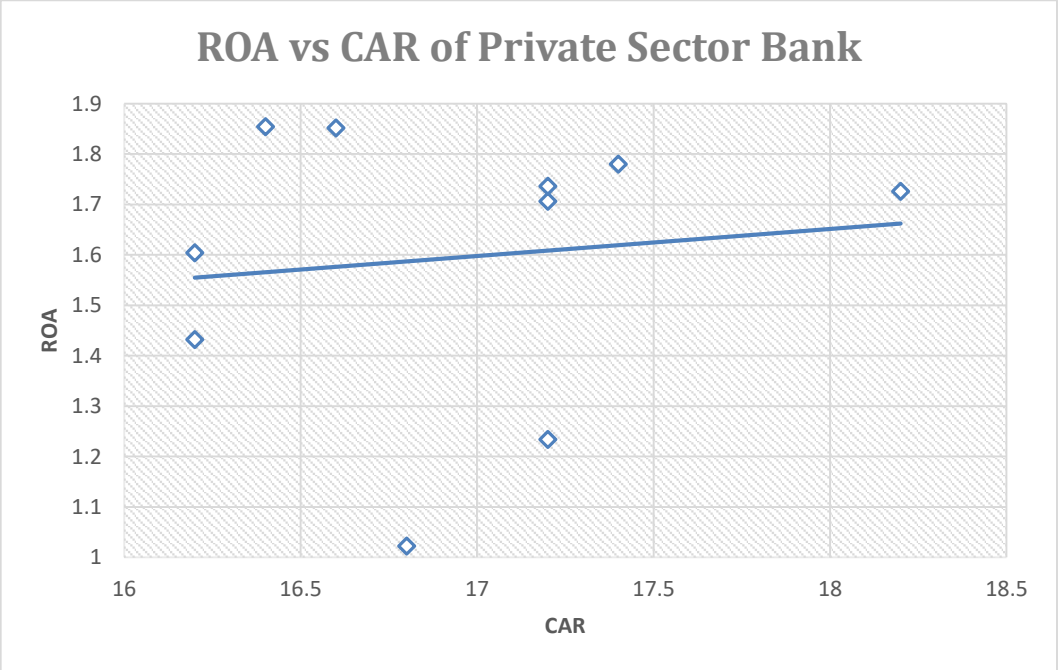

Figure 2. ROA vs CAR of Private Sector Bank

The equation of straight-line relating ROA and CAR was estimated as: ROA = (0.68722361) + (0.053564132) * CAR using the 10 observation in this dataset. The y-intercept, When CAR was Zero Estimated value of ROA has 0.68722361 with Standard Error of 2.655463865. When NPA change by One Unit, Estimated ROA change by 0.053564132 with Standard Error of 0.156660854.

Table 6 Run Summary

Parameter	Value	Parameter	Value
Dependent variable	ROA	Rows Processed	10
Independent Variable	CAR	Rows used in Estimation	10
Frequency variable	None	Rows with X Missing	0
Weight Variable	None	Rows with Freq. Missing	0
Intercept	0.68722361	Rows Prediction Only	0
Slope	0.053564132	Sum of Frequencies	10

R-Squared	0.014402463	Sum of Weights	10
Correlation	0.120010264	Coefficient of variation	0.175146158
Mean Square Error	0.086488204	Square Root of MSE	0.294088769

Table 6 shows the value of R-Squared, the proportion of the variation in ROA that could be accounted for by variation in CAR, was 0.014402463. The correlation between ROA and CAR was 0.120010264.

Table 7 Descriptive statistics

Parameter	Dependent	Independent
Variable	ROA	CAR
Count	10	10
Mean	1.5946	0.197877628
Standard Deviation	0.279288063	0.625744002
Minimum	1.022	16.2
Maximum	1.854	18.2

Table 7 Shows, in case of Dependent Variable, the standard deviation = 0.279288063, Minimum Value = 1.022 and Maximum Value = 1.854 whereas in case of independent variable, the standard deviation = 0.625744002, Minimum Value = 16.2 and Maximum Value = 18.2.

Table 8 Regression estimation

Parameter	Intercept B (0)	Slope B (1)
Regression Coefficients	0.68722361	0.053564132
Lower 95% Confidence Limit	-5.436287045	-0.307696446
Upper 95% Confidence Limit	6.810734264	0.414824709
Standard Error	2.655463865	0.156660854
Standardized Coefficient	0	0.120010264
T Value	0.258796069	0.341911398
Prob Level (T Test)	0.802326842	0.741225957
Reject H0(Alpha = 0.0500)	No	No
Regression of Y on X	0.68722361	0.053564132

Table 8 shows, a significance test that the slope was zero resulted in a t-value of 0.341911398. The significance level of this t-test was 0.741225957. Since 0.741225957 > 0.0500, the hypothesis that the slope was zero was not rejected.
The estimated slope was 0.053564132. The lower limit of the 95% confidence interval for the slope was -0.307696446 and the upper limit was 0.414824709. The estimated intercept was 0.68722361. The lower limit of the 95% confidence interval for the intercept was -5.436287045 and the upper limit was 6.810734264.
It also shows the least-squares estimates of the intercept and slope followed by the corresponding standard errors, confidence intervals, and hypothesis tests. These results were based on several assumptions.

Table 9 Analysis of variance

Source	DF	Sum of Squares	Mean Square	F-Ratio	Prob. Level
Slope	1	0.010110765	0.010110765	0.116903404	0.741225957
Error	8	0.691905635	0.086488204		
Adj. Total	9	0.7020164			

Estimated Model

ROA = (0.68722361) + (0.053564132) * CAR

Table 9 shows the F-Ratio for testing whether the slope was zero, the degrees of freedom, and the mean square error. The mean square error, which estimated the variance of the residuals, was used extensively in the calculation of hypothesis tests and confidence intervals.

Table 10 Comparison of ROA, Net NPA & CAR of PSB

Year	ROA(%)	NPA(%)	CAR(%)
2018-19	-0.39	4.776	11.8
2017-18	-0.758	7.64	11.2
2016-17	0.152	5.894	12.4
2015-16	-0.478	6.338	11.8
2014-15	0.472	2.816	11.8
2013-14	0.618	2.184	11.6
2012-13	0.846	1.994	12.4
2011-12	0.996	1.362	13.6
2010-11	1.124	0.93	13.4
2009-10	1.106	1.028	13.6

Table 10 is showing Average percentage of five public Sector bank's (which are SBI, BOB, PNB, CANARA and BOI) Return on Assets (ROA), Net Non-performing Asset, Credit Adequacy Ratio for 10 Years.

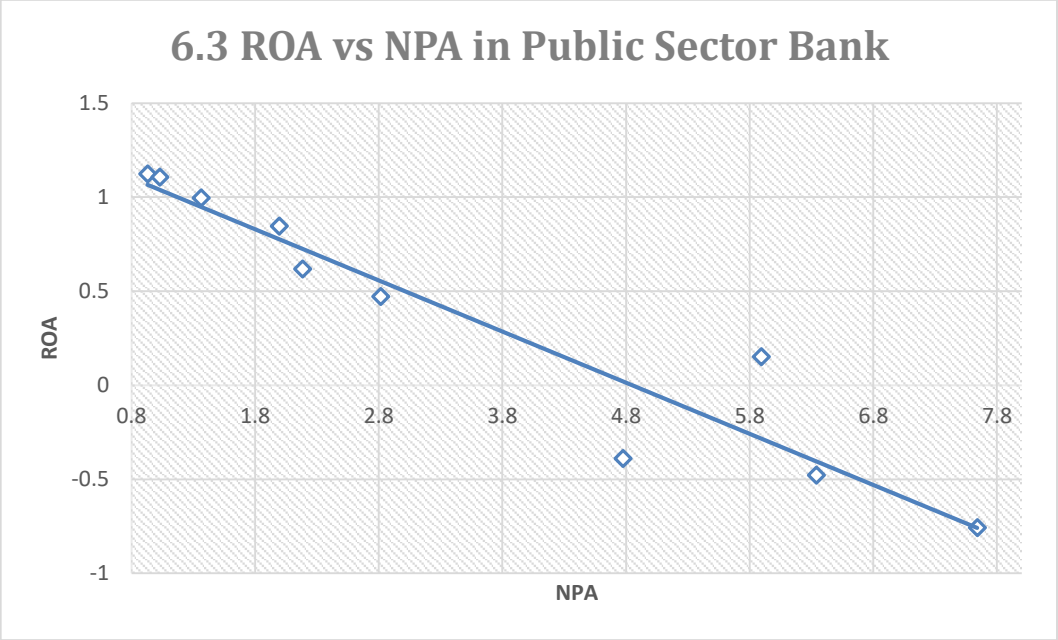

Figure 3 ROA vs NPA in Public Sector Bank

The equation of straight-line relating ROA and NPA was estimated as: ROA = (1.320096643) + (-0.272094458) * NPA using the 10 observation in this dataset. The y-intercept, When NPA was Zero Estimated value of ROA has 1.320096643 with Standard Error of 0.126929435. When NPA change by One Unit, Estimated ROA change by -0.272094458 with Standard Error of 0.03020916.

Table11 Run Summary

Parameter	Value	Parameter	Value
Dependent variable	ROA	Rows Processed	10
Independent Variable	NPA	Rows used in Estimation	10
Frequency variable	None	Rows with X Missing	0
Weight Variable	None	Rows with Freq. Missing	0
Intercept	1.320096643	Rows Prediction Only	0
Slope	-0.27209446	Sum of Frequencies	10
R-Squared	0.910239816	Sum of Weights	10.0000
Correlation	-0.95406489	Coefficient of variation	0.175146157657
Mean Square Error	0.049560745	Square Root of MSE	0.222622427

Table 11 shows the value of R-Squared, the proportion of the variation in ROA that could be accounted for by variation in NPA, was 0.910239816. The correlation between ROA and NPA was -0.954064891.

Table 12 Descriptive statistics

Parameter	Dependent	Independent
Variable	ROA	NPA
Count	10	10
Mean	0.3688	3.4962
Standard Deviation	0.700568785	2.456456065
Minimum	-0.758	0.93
Maximum	1.124	7.64

Table 12 Shows, in case of Dependent Variable, the standard deviation = 0.700568785, Minimum Value = -0.758 and Maximum Value = 1.124 whereas in case of independent variable, the standard deviation = 2.456456065, Minimum Value = 0.93 and Maximum Value = 7.64.

Table 13 Regression estimation

Parameter	Intercept B (0)	Slope B (1)
Regression Coefficients	1.320096643	-0.272094458
Lower 95% Confidence Limit	1.027396841	-0.341756907
Upper 95% Confidence Limit	1.612796446	-0.202432009
Standard Error	0.126929435	0.03020916
Standardized Coefficient	0.0000	-0.954064891
T Value	10.40024042	-9.007018184
Prob Level (T Test)	0.0000	0.0000
Reject H0(Alpha = 0.0500)	Yes	Yes
Regression of Y on X	1.320096643	-0.272094458

Table 13 shows, a significance test that the slope was zero resulted in a t-value of -9.007018184. The significance level of this t-test was 0.0000. Since 0.0000 < 0.0500, the hypothesis that the slope was zero was rejected.
The estimated slope was -0.272094458. The lower limit of the 95% confidence interval for the slope was -0.341756907 and the upper limit was -0.202432009. The estimated intercept was 1.320096643. The lower limit of the 95% confidence interval for the intercept was 1.027396841 and the upper limit was 1.612796446.
It also shows the least-squares estimates of the intercept and slope followed by the corresponding standard errors, confidence intervals, and hypothesis tests. These results were based on several assumptions.

Table 14 Analysis of variance

Source	DF	Sum of Squares	Mean Square	F-Ratio	Prob. Level
Slope	1	4.020683642	4.020683642	81.12637656	0.0000
Error	8	0.396485958	0.049560745		
Adj. Total	9	4.4171696			

Estimated Model

ROA = (1.320096643) + (-0.272094458) * NPA

Table 14 shows the F-Ratio for testing whether the slope was zero, the degrees of freedom, and the mean square error. The mean square error, which estimated the variance of the residuals, was used extensively in the calculation of hypothesis tests and confidence intervals.

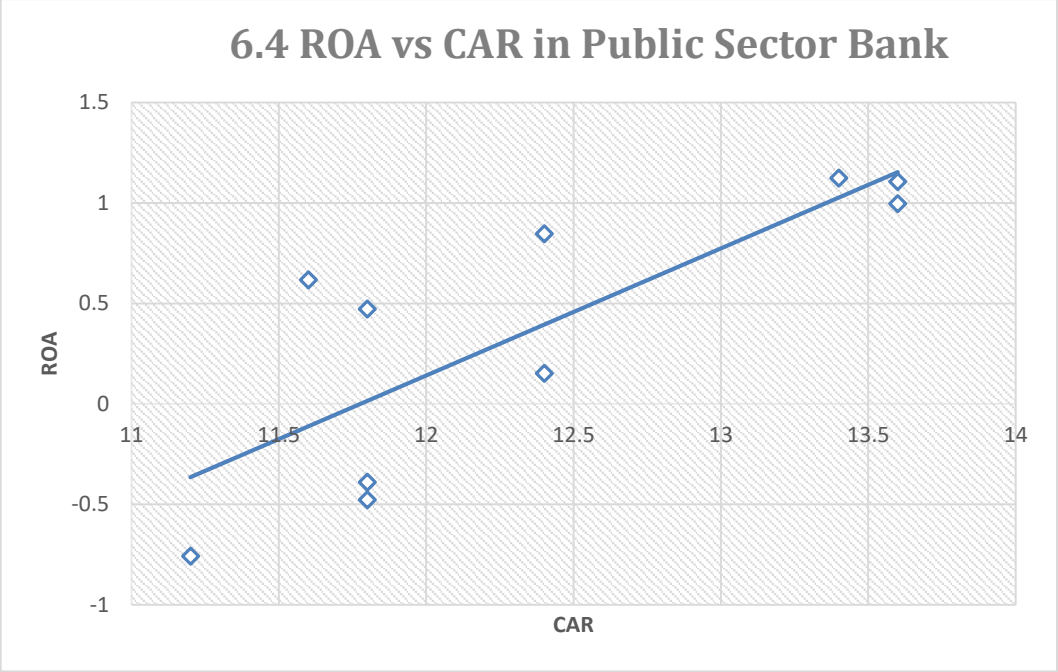

Figure 4 ROA vs CAR in Public Sector Bank

The equation of straight-line relating ROA and NPA was estimated as: ROA = (-7.456009112) + (0.633075171) * CAR using the 10 observation in this dataset. The y-intercept, When NPA was Zero Estimated value of ROA has -7.456009112 with Standard Error of 2.091784467. When NPA change by One Unit, Estimated ROA change by 0.633075171 with Standard Error of 0.168850502.

Table 15 Run Summary

Parameter	Value	Parameter	Value
Dependent variable	ROA	Rows Processed	10
Independent Variable	CAR	Rows used in Estimation	10
Frequency variable	None	Rows with X Missing	0
Weight Variable	None	Rows with Freq. Missing	0
Intercept	-7.456009112	Rows Prediction Only	0
Slope	0.633075171	Sum of Frequencies	10
R-Squared	0.637310377	Sum of Weights	10.0000
Correlation	0.798317216	Coefficient of variation	0.1751461576570927
Mean Square Error	0.200257697	Square Root of MSE	0.447501616756856

Table 15 shows the value of R-Squared, the proportion of the variation in ROA that could be accounted for by variation in NPA, was 0.637310377. The correlation between ROA and NPA was 0.798317216.

Table 16 Descriptive statistics

Parameter	Dependent	Independent
Variable	ROA	CAR
Count	10	10
Mean	0.3688	12.36
Standard Deviation	0.700568785	0.883427668
Minimum	-0.758	11.2
Maximum	1.124	13.6

Table 16 Shows, in case of Dependent Variable, the standard deviation = 0.700568785, Minimum Value = -0.758 and Maximum Value = 1.124 whereas in case of independent variable, the standard deviation = 0.883427668, Minimum Value = 11.2 and Maximum Value = 13.6.

Table 17 Regression estimation

Parameter	Intercept B (0)	Slope B (1)
Regression Coefficients	-7.456009112	0.633075171
Lower 95% Confidence Limit	-12.27967274	0.243705214
Upper 95% Confidence Limit	-2.632345481	1.022445128
Standard Error	2.091784467	0.168850502
Standardized Coefficient	0.0000	0.798317216
T Value	-3.564425126	3.749323583
Prob Level (T Test)	0.007353146	0.00562968
Reject H0(Alpha = 0.0500)	Yes	Yes
Regression of Y on X	-7.456009112	0.633075171

Table 17 shows, a significance test that the slope was zero resulted in a t-value of 3.749323583. The significance level of this t-test was 0.00562968. Since 0.00562968 < 0.0500, the hypothesis that the slope was zero was rejected.
The estimated slope was 0.633075171. The lower limit of the 95% confidence interval for the slope was 0.243705214 and the upper limit was 1.022445128. The estimated intercept was -7.456009112. The lower limit of the 95% confidence interval for the intercept was -12.27967274 and the upper limit was -2.632345481.
It also shows the least-squares estimates of the intercept and slope followed by the corresponding standard errors, confidence intervals, and hypothesis tests. These results were based on several assumptions.

Table 18 Analysis of variance

Source	DF	Sum of Squares	Mean Square	F-Ratio	Prob. Level
Slope	1	2.815108024	2.815108024	14.05742733	0.00562968
Error	8	1.602061576	0.200257697		
Adj. Total	9	4.4171696			

Estimated Model
ROA = (-7.456009112) + (0.633075171) * CAR
Table 18 shows the F-Ratio for testing whether the slope was zero, the degrees of freedom, and the mean square error. The mean square error, which estimated the variance of the residuals, was used extensively in the calculation of hypothesis tests and confidence intervals.

VI. FINDINGS

- Public Sector bank having constantly higher Net NPA than Private Sector Bank. In year 2018-19 Public sector banks have Net NPA of 4.776% which is 3.352% higher than Private sector banks.
- Private Sector bank having constantly higher CAR than Public Sector Bank. In year 2018-19 Private sector banks have CAR 16.8% which is 5% higher than Public sector banks.
- Private Sector bank's ROA is Constantly reducing from last 5 Years. Private sector banks ROA is 1.604% in year 2015-16 which reduce by 0.582% and reached at 1.022%.
- Public Sector bank made a negative ROA in years 2015-16, 2017-18, 2018-19.

VII. CONCLUSION

This study concludes that there is significant relation between bank performance and the credit risk management which means Greater the risk management better the performance. Net NPA is higher in public sector banks which should be countered to increase bank performance. Private banks are better in dealing with Net NPA. Private banks have higher CAR, to compete with those public sector banks must improve their CAR and increase their performance. There is direct but inverse relation between Net NPA and ROA and CAR and ROA are also associated with each other which accept our null hypothesis and indicate that credit risk management has significant impact on bank performance.

VIII. RECOMMENDATION

- Public sector banks have to improve their CAR to increase ROA and compete with Private sector banks.

Ways by which banks can improve CAR:

- Selling Assets
- Reducing loans allocations

➢ Public sector banks need to control their Net NPA because it impacts their overall ROA.

Measures should be taken to Control Net NPA:

- Preventive management
  - ✓ Assessment,
  - ✓ Provisioning,
  - ✓ Recovery, and
  - ✓ Prevention of fresh NPAs
- Curative management would be necessary for controlling NPAs.
  - ✓ SARFAESI ACT, 2002
  - ✓ Debt Recovery Tribunals
  - ✓ Lok Adalat
  - ✓ Compromise Settlement
  - ✓ Credit Information Bureau