



A Study on The Effect of Non-Performing Assets on The Profitability of Selected Public-Sector Banks and Private-Sector Banks

¹ Dr. Shivaraja M., ² Dr. K. C. Prashanth

¹ Assistant Professor, Department of Management, Government First Grade College, Nanjangud, Karnataka, India

² Associate Professor, Department of Studies in Business Administration, Vijayanagara Sri Krishnadevaraya University, Ballari, Karnataka, India

Email - shivamurali2017@gmail.com

Abstract : The main aim of any business is to maximize the profits banking sector is not exception to it. The main banking business to borrow the deposits from public and lend loans to the public. In the process of lending banks will not make always profits out of lending but there may be loans accounts will slip into NPA. NPA means the borrower fails to make Principal and interest payments (term loans), interest (operative limit) within the 90 days of loan it will become NPA. Currently the banking industry suffered from huge losses, which is due to huge NPA. Every bank has to keep provisions for NPA accounts. These provisions have to written off from profits earned by banks. That is why some of the big public sector banks and private sector banks profitability has been decreased drastically. Some of public sector banks instead of making profits they have incurred losses, which is due to huge NPA provisions. For June 2019 total amount of NPA of banks in india is stood at Rs 8,97,355 crores which consists PSB's NPA amounted to Rs 7,89,725 crores and private sector banks at Rs 1,07,630 Crores¹. The main aim of this article is to study the impact of NPA's on profitability of selected Public sector and Private sector Banks in India. To examine correlation between NPA's and Profitability parameters of banks such as ROA, ROE, NIM and also to test the various hypothesis assumptions in order to prove that any effect of NPA on profitability of banks. The data is analyzed using descriptive statistics; simple regression model and correlation by using SPSS software and the Return on Assets (ROA), Return on equity (ROE) and NIM was employed as a key financial variable, and NPA was used as an independent variable. The data and analysis show that NPAs have a negative influence on the financial performance of public sector banks over the study period.

Key Words: Public sector banks, Private sector banks, Return on Assets, Return on Equity, Non performing assets, Net interest margin.

1. INTRODUCTION :

Banking industry plays a very important role in the economic development of our country. Banks lend money to different sectors of the economy, including agriculture, industry, services, associated businesses, infrastructure, retail, and so on. Due to fraudulent and misappropriation funds done by the borrowers, banking industry struggled with huge NPA's and big ticket loans have slip into NPA category, some borrowers become willful defaulters. The impact of NPA on banking financial health severely negatively affected on profitability and risk adjusted capital of banks.

The implications of NPAs would include a decrease in interest revenue, a high level of provisioning, a strain on profitability, a gradual fall in ability to meet steady increases in costs, and increased pressure on net interest margin (NIM), lowering competitiveness, Continuous evaporation of capital resources, as well as greater difficulties in augmenting capital resources.



NON-PERFORMING ASSETS

An asset, including a leased asset, becomes non-performing when it ceases to generate income for the bank² A NPA is termed as a loan or an advance where-

1. There is interest or instalment or both overdue for more than 90 days in respect of a term loan,
2. The account remains 'out of order' with respect to an Overdraft or Cash Credit,
3. A bill overdue for more than 90 days wherein the bill is purchased and discounted,
4. The instalment on principal or interest keeps overdue for crop season/s usually 180 Days.

Further the banks, can categorise an account as NPA if the interest due and charged is not paid for within 90 days.

CLASSIFICATION OF NPA

1. **Substandard Assets-** an asset which has remained as NPA for less than 12 months is termed as a Substandard Assets.
2. **Doubtful Assets-** any asset, which remained in the first category i.e. as a substandard asset for time duration of 12 months, is a Doubtful Asset.
3. **Loss Assets-** When a loss has been recognized by the external auditor or internal auditor or the banks or on inspection by the RBI but the same has not been written off in totality then it is called a Loss Asset³.

TYPES OF NON-PERFORMING ASSETS

GROSS NPA

Gross NPA as the literal meaning suggests is the total of the loan assets that comes in the category of NPA as per the RBI on the date of making the Balance Sheet. It shows the real quantity and quality of the loans given. The ratio for calculating the same is- $\text{Gross NPAs Ratio} = \text{Gross NPAs} / \text{Gross Advances}$.

NET NPA

Net NPA on the other hand is the actual current burden, which is being imposed on the banks. The general custom in India, which prevails today, is that the Balance Sheets have a heavy sum of NPA the recovery of which is time consuming. And the Central Bank has very strict guidelines about the same which have to be followed. The ratio to calculate the same is as follows- $\text{Net NPAs} = \text{Gross NPAs} - \text{Provisions on Gross Advances}$.

2. REVIEW OF LITERATURE :

Kiran and Jones (2016) conducted a study on the "Effect of NPA on Profitability of Public Sector Banks." Their research aimed to explore the relationship between Non-Performing Assets (NPA) and bank profitability while comparing the performance of at least five banks in the industry. They collected secondary data from sources like the Reserve Bank of India (RBI), publications, and journals. Data analysis in their study involved the use of graphs, correlation, and regression. The findings suggested that major banks can withstand NPA losses, whereas smaller banks may struggle, and public sector banks face more significant NPA challenges. Surprisingly, an increase in the NPA level did not appear to have a significant impact on the profitability of banks (Kiran & Jones, 2016).

Singh (2018) published a study on the "Effect of NPA on Bank Profitability." The primary objective of this research was to examine the relationship between NPA and the profitability of different types of banks, including public, private, and foreign banks. Singh collected secondary data from sources such as IBA journals, RBI publications, and various journals. The analysis involved the use of line charts and correlations. According to the study, there was a decrease in profit growth for all banks in 2016, but the situation improved in 2017, with the exception of State Bank of India (SBI) and its associates. Foreign and private banks were the only ones able to maintain profitability throughout the entire period. The research also revealed that a high level of NPAs indicated a substantial risk of loan defaults, which had a negative impact on bank profitability and liquidity (Singh, 2018).



Jha and Hui et al. (2015) found a negative association between non-performing loans, capital adequacy ratios, and returns on assets. Similarly, non-performing loans, capital adequacy ratios, and returns on equity all displayed negative relationships. The research also showed a positive association between the total loan-to-total deposit ratio and returns on assets and a positive relationship between returns on equity (Jha & Hui, 2015).

Miller and Noulas (1997) discovered an inverse relationship between credit risk and profitability, indicating that higher credit risk was associated with increased levels of loan loss provisions, which, in turn, affected a bank's profit-maximizing capacity (Miller & Noulas, 1997).

In their study titled "Analysis of Non-Performing Assets in Public Sector Banks of India," Pradip Kumar Samanta and Payel Roy (2017) examined and found a strong correlation between Gross NPA and Net Profit. They also emphasized the importance of adhering to transparency in disclosure norms to maintain investor trust (Samanta & Roy, 2017).

Abhay Jaiswal and Chanchala Jain (2016) conducted a comparative study titled "A Comparative Study of Financial Performance of SBI and ICICI Banks in India." They found that SBI had lower bad debts compared to ICICI Bank due to its extensive branch network, which allowed it to cover the advances given, ultimately reducing bad debts at SBI (Jaiswal & Jain, 2016).

3. OBJECTIVES OF THE STUDY

- To Study the impact of Non-Performing assets on profitability of banks.
- To compare and establish relationship NPA Level of Private sector and Public sector banks
- To give suggestions to improve assets quality and managing of NPA level of banks

4. HYPOTHESIS OF THE STUDY

- H_{01} : There is no significant impact of NPA on ROA of Indian Public sector banks
- H_{02} : There is no significant impact of NPA on ROE of Indian Public sector banks
- H_{03} : There is no significant impact of NPA on NIM of Indian public sector banks
- H_{04} : There is no significant impact of NPA on ROA of Indian Private sector banks
- H_{05} : There is no significant impact of NPA on ROE of Indian private-sector banks
- H_{06} : There is no significant impact of NPA on NIM of Indian Private sector banks
- H_{07} : There is no significant difference in NPA level between Public and Private sector banks.

5. SCOPE OF THE STUDY

- The analysis is focused only on 20 banks consists of top 10 banks from public sector and top 10 banks from private sector banks.
- The selection of banks under the study is based on market capitalization of BSE Stock index of respective banks.
- Due to time constraint, we could select 10 banks each sector for study.
- Parameters of profitability of banks taken as NIM, ROA, ROE.

6. RESEARCH METHODOLOGY

Source of Data: The study based on secondary data collected through Dion Global Solutions Limited hosted at website name called www.moneycontrol.com. RBI Reports on Trend and Progress of Banking in India for various years, websites and a book on banking have been referred during the study.

Sample Size - The sample size for the number of banks are taken as 20 banks which consists of 10 banks from public sector and another 10 banks from Private sector for analysis of study.

Sample size chosen Method - The sample size of the banks for collecting secondary data are chosen based on market capitalization on BSE from Top 10 Banks from Public sector and Top 10 Banks from Private sector.

Period of study: The period of study covers for 5 years from financial year 2015 to 2019.

Calculation methodology:

Correlation formula used as



$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n\sum x^2 - (\sum x)^2][n\sum y^2 - (\sum y)^2]}}$$

Liner Equation
 $Y = \alpha + \beta X + \epsilon$

used as

7. ANALYSIS AND INTERPRETATION OF DATA

To give clear picture of financial performance of banks these variables considered as profitability indicators such as ROA, ROE, NIM and Credit risk is consider as NPA level of bank under the study. A brief descriptive statistics of public sector banks namely mean, standard deviation, minimum, maximum values computed for sample observations of top 10 public sector banks & Top 10 private sector banks in India for 5 years period separately are summarized in table 1 & Table 2.

Table : 1 Descriptive Statistics of Public sector banks

	N	Minimum	Maximum	Mean	Std. Deviation
ROA	50	-3.35	1.87	-.3074	.96012
ROE	50	-134.70	10.21	-9.9582	25.32017
PSB NPA	50	.00	13.10	5.7500	2.59333
NIM	50	1.44	2.74	2.1232	.30801
Valid N (listwise)	50				

Source: The researcher has computed through SPSS

Table :2 Descriptive Statistics of Private Sector banks

	N	Minimum	Maximum	Mean	Std. Deviation
ROA	50	.03	1.76	1.2022	.44246
ROE	50	.43	18.41	11.9012	3.89198
NIM	50	2.05	3.98	3.0930	.47331
PRIVATE SECTOR BANKS NPA	50	.12	4.89	1.1908	1.02126
Valid N (listwise)	50				

CORRELATION ANALYSIS FOR PSBS

Correlation is the relationship between two sets of variables used to describe or predict information. Therefore, the **correlation coefficient** is the degree in which the change in a set of variables is related. This means that we are trying to find out if the two variables have a correlation at all, how strong the correlation is and if the correlation is positive or negative.

Table 3. Correlation Matrix among Dependent and Independent Variables of the PSBs

		ROA	ROE	NIM	PSB NPA
ROA	Pearson Correlation	1	.809**	.176	-.346**
	Sig. (1-tailed)		.000	.111	.007
	N	50	50	50	50
ROE	Pearson Correlation	.809**	1	.229	-.404**
	Sig. (1-tailed)	.000		.055	.002
	N	50	50	50	50
NIM	Pearson Correlation	.176	.229	1	-.494**
	Sig. (1-tailed)	.111	.055		.000
	N	50	50	50	50
PSB NPA	Pearson Correlation	-.346**	-.404**	-.494**	1



	Sig. (1-tailed)	.007	.002	.000	
	N	50	50	50	50

** . Correlation is significant at the 0.01 level (1-tailed).

Source: Computation through SPSS

The above table 3 represents that the NPA's of Public sector banks negatively correlated with ROA, ROE, and NIM. It is observed that correlation is significant at significance level of 0.01 hence there is a negative relationship between NPA and ROA, ROE, NIM.

Table 4. Correlation Matrix among Dependent and Independent Variables of the Private Sector Banks

		ROA	ROE	NIM	PRIVATE SECTOR BANKS NPA
ROA	Pearson Correlation	1	.899**	.621**	-.433**
	Sig. (1-tailed)		.000	.000	.001
	N	50	50	50	50
ROE	Pearson Correlation	.899**	1	.411**	-.580**
	Sig. (1-tailed)	.000		.002	.000
	N	50	50	50	50
NIM	Pearson Correlation	.621**	.411**	1	-.261*
	Sig. (1-tailed)	.000	.002		.034
	N	50	50	50	50
PRIVATE SECTOR BANKS NPA	Pearson Correlation	-.433**	-.580**	-.261*	1
	Sig. (1-tailed)	.001	.000	.034	
	N	50	50	50	50

** . Correlation is significant at the 0.01 level (1-tailed).
 * . Correlation is significant at the 0.05 level (1-tailed).

Source: Computation through SPSS

The above table 4 represents that the NPA's of private sector banks negatively correlated with ROA, ROE, and NIM. It is observed that between ROA, ROE & NPA correlation is significant at significance at level of 0.01 and Between NIM & NPA correlation is significant at level of 0.05. Hence there is a negative relationship between NPA and ROA, ROE, NIM of Private sector banks.

SIMPLE LINER REGRESSION MODEL:

The regression model is stated below and the following symbols were used to identify the respective variables. The general model is as follows $Y = \alpha + \beta X + \epsilon$

- Where Y = dependent variables - Profitability indicators (ROA, ROE and NIM)
- X = Independent variable- Non Performing Assets (NPA's)
- α = Intercept
- β = X's slop or coefficient
- ϵ = Error term

Hypothesis 1

H0₁: There is no significance impact of NPA on ROA of Indian Public sector banks

Regression analysis is a commonly applied data analysis technique for measuring the linear relationships between 2 or more variables (Hair *et al.*, 2003).

Table 5. Regression Coefficients of the PSBs (Dependent Variable: ROA)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.428	.316		1.356	.181
	PSB NPA	-.128	.050	-.346	-2.551	.014

Source: Computation through SPSS

From the table 5 the regression equation is $ROA = 0.428 - 0.128 NPA$



The beta coefficients to be used in this study are unstandardized coefficients. The results indicate that a unit change in the NPA causes a decrease of -0.128 unit changes in the ROA. The result shows that for the independent variable NPA, The probability of t statistics -2.551 for b coefficient is p value 0.014, which is less than the level of significance of 0.05. Therefore, we reject the Null hypothesis (H_{01}). Hence we accept alternative hypothesis It is concluded that there is significant impact of NPA on ROA of public sector banks.

Hypothesis 2

H₀₂ : There is no significance impact of NPA on ROE of Indian Public sector banks

Regression analysis is a commonly applied data analysis technique for measuring the linear relationships between 2 or more variables (Hair *et al.*, 2003).

Table 6. Regression Coefficients of the PSBs (Dependent Variable: ROE)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	12.739	8.117		1.569	.123
	PSB NPA	-3.947	1.289	-.404	-3.062	.004

Source: Computation through SPSS

From the table 6 the regression equation is $ROE = 12.739 - 3.947 NPA$

The beta coefficients to be used in this study are unstandardized coefficients. The results indicate that a unit change in the NPA causes a decrease of -3.947 unit changes in the ROA. The outcome shows that for the independent variable NPA, The probability of t statistics -3.062 for b coefficient is p value 0.004, which is less than the level of significance of 0.05. Therefore, we reject the Null hypothesis (H_{02}). Hence, we accept alternative hypothesis it is concluded that there is significant impact of NPA on ROE of public sector banks.

Hypothesis 3

H₀₃ : There is no significance impact of NPA on NIM of Indian Public sector banks.

Regression analysis is a commonly applied data analysis technique for measuring the linear relationships between 2 or more variables (Hair *et al.*, 2003).

Table 7. Regression Coefficients of the PSBs (Dependent Variable: NIM)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.461	.094		26.226	.000
	PSB NPA	-.059	.015	-.494	-3.941	.000

Source: Computation through SPSS

From the table 7 the regression equation is $ROE = 2.461 - 0.059 NPA$

The beta coefficients to be used in this study are unstandardized coefficients. The results indicate that a unit change in the NPA causes a decrease of -0.059 unit changes in the NIM. The result shows that for the independent variable NPA, The probability of t statistics -3.941 for b coefficient is p value 0.000, which is less than the level of significance of 0.05. Therefore, we reject the Null hypothesis (H_{03}). Hence, we accept alternative hypothesis it is found that there is significant impact of NPA on NIM of public sector banks.

Hypothesis 4

H₀₄: There is no significance impact of NPA on ROA of Indian Private sector banks

Regression analysis is a commonly applied data analysis technique for measuring the linear relationships between 2 or more variables (Hair *et al.*, 2003).

Table 8. Regression Coefficients of the Private sector banks (Dependent Variable: ROA)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.425	.088		16.186	.000
	PRIVATE SECTOR BANKS NPA	-.187	.056	-.433	-3.325	.002

Source: Computation through SPSS



From the table 8 the regression equation is $ROA = 1.425 - 0.187 NPA$

The beta coefficients to be used in this study are unstandardized coefficients. The results indicate that a unit change in the NPA causes a decrease of -0.187 unit changes in the ROA. The result shows that for the independent variable NPA, The probability of t statistics -3.325 for b coefficient is p value 0.000, which is less than the level of significance of 0.05. Therefore, we reject the Null hypothesis (H_{04}). Hence, we accept alternative hypothesis it is found that there is significant impact of NPA on ROA of Private sector banks.

Hypothesis 5

H₀₅: There is no significance impact of NPA on ROE of Indian Private sector banks

Regression analysis is a commonly applied data analysis technique for measuring the linear relationships between 2 or more variables (Hair *et al.*, 2003).

Table 9. Regression Coefficients of the Private sector banks (Dependent Variable: ROE)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	14.533	.700		20.760	.000
	PRIVATE SECTOR BANKS NPA	-2.210	.448	-.580	-4.931	.000

Source: Computation through SPSS

From the table 9 the regression equation is $ROE = 14.533 - 2.210 NPA$

The beta coefficients to be used in this study are unstandardized coefficients. The results indicate that a unit change in the NPA causes a decrease of -2.210 unit changes in the ROE. The result shows that for the independent variable NPA, The probability of t statistics -4.931 for b coefficient is p value 0.000, which is less than the level of significance of 0.05. Therefore, we reject the Null hypothesis (H_{05}). Hence, we accept alternative hypothesis it is found that there is significant impact of NPA on ROE of Private sector banks.

Hypothesis 6

H₀₆: There is no significance impact of NPA on NIM of Indian Private Sector banks

Regression analysis is a commonly applied data analysis technique for measuring the linear relationships between 2 or more variables (Hair *et al.*, 2003).

Table 10. Regression Coefficients of the Private sector banks (Dependent Variable: NIM)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.237	.101		32.083	.000
	PRIVATE SECTOR BANKS NPA	-.121	.065	-.261	-1.869	.068

Source: Computation through SPSS

From the table10 the regression equation is

$$NIM = 3.237 - 0.121 NPA$$

The beta coefficients to be used in this study are unstandardized coefficients. The results indicate that a unit change in the NPA causes a decrease of -0.121 unit changes in the NIM. The result shows that for the independent variable NPA, The probability of t statistics -1.869 for b coefficient is p value 0.068, which is more than the level of significance of 0.05. Therefore, we fail to reject the Null hypothesis (H_{06}). Hence, we accept Null hypothesis it is found that there is no significant impact of NPA on NIM of Private sector banks.

Hypothesis 7

H₀₇: There is no significance difference of NPA level between Public sector and Private sector banks

Table 11 Correlation matrix between PSB's NPA and Private sector banks NPA



		PSB NPA	PRIVATE SECTOR BANKS NPA
PSB NPA	Pearson Correlation	1	.176
	Sig. (1-tailed)		.111
	N	50	50
PRIVATE SECTOR BANKS NPA	Pearson Correlation	.176	1
	Sig. (1-tailed)	.111	
	N	50	50

Source: Computation through SPSS

The above table 11 represents that the NPA's of Public sector banks Positively correlated with NPA's of Private sector banks. It is observed that correlation is significant at significance level of 0.111 that is more than 0.05 level of significance. Therefore we fail to reject the H_{07} , hence it is found that there is no significance difference between NPA of PSB's and NPA of Private sector banks.

8. FINDINGS OF THE STUDY :

- The study revealed that there is negative correlation between NPA of public sector banks and profitability indicators such as ROA, ROE, NIM of public sector banks with significance level at 0.01.
- It is found that that the NPA's of private sector banks negatively correlated with ROA, ROE, and NIM. It is observed that between ROA, ROE & NPA correlation is significant at significance at level of 0.01 and Between NIM & NPA correlation is significant at level of 0.05. Hence there is a negative relationship between NPA and ROA, ROE, NIM of Private sector banks.
- The result of (H_{01}) shows that for the independent variable NPA, The probability of t statistics -2.551 for b coefficient is p value 0.014, which is less than the level of significance of 0.05. Therefore, we reject the Null hypothesis (H_{01}). Hence, we accept alternative hypothesis it is found that there is significant impact of NPA on ROA of public sector banks.
- The outcome of (H_{02}) shows that for the independent variable NPA, The probability of t statistics -3.062 for b coefficient is p value 0.004, which is less than the level of significance of 0.05. Therefore, we reject the Null hypothesis (H_{02}). Hence, we accept alternative hypothesis it is establish that there is significant impact of NPA on ROE of public sector banks.
- The test of (H_{03}) found that for the independent variable NPA, The probability of t statistics -3.941 for b coefficient is p value 0.000, which is less than the level of significance of 0.05. Therefore, we reject the Null hypothesis (H_{03}). Hence, we accept alternative hypothesis it is found that there is significant impact of NPA on NIM of public sector banks.
- The outcome of (H_{04}) found that for the independent variable NPA, The probability of t statistics -3.325 for b coefficient is p value 0.000, which is less than the level of significance of 0.05. Therefore, we reject the Null hypothesis (H_{04}). Hence, we accept alternative hypothesis it is found that there is significant impact of NPA on ROA of Private sector banks.
- The result of (H_{05}) shows that for the independent variable NPA, The probability of t statistics -4.931 for b coefficient is p value 0.000, which is less than the level of significance of 0.05. Therefore, we reject the Null hypothesis (H_{05}). Hence, we accept alternative hypothesis it is found that there is significant impact of NPA on ROE of Private sector banks.
- The result of (H_{06}) shows that for the independent variable NPA, The probability of t statistics -1.869 for b coefficient is p value 0.068, which is more than the level of significance of 0.05. Therefore, we fail to reject the Null hypothesis (H_{06}). Hence, we accept Null hypothesis it is found that there is no significant impact of NPA on NIM of Private sector banks.
- It is found that correlation is significant at significance level of 0.111 that is more than 0.05 level of significance. Therefore we fail to reject the H_{07} , hence it is found that there is no significance difference between NPA of PSB's and NPA of Private sector banks.

9. SUGGESTIONS

REDUCING NPA AND INCRESING PROFITABILITY OF BANKS

- Banks should regularly monitor the NPA account and implement certain safeguards during fresh sanction, yearly review/renewal/enhancement of restrictions.



- Rehabilitation of viable units, rephrasing loan instalments as needed, and applying for CGTMSE/ECGC claim settlement.
- Compromise settlements like One Time Settlement (OTS), Out of Court Settlement (OCS), writing off non-recoverable assets are parts of the process involved in reducing NPAs.
- Other strategies of lowering NPAs include recovering NPA accounts through Lok Adalat, DRT, SARFAESI processes, and initiating a civil suit to collect dues.
- Detecting early symptoms of illness, such as effective Scrutiny of periodic statements, interviews with the borrower, study of the borrower's account with the bank, and discussions with co-bankers may be useful in spotting the early symptoms of the unit's illness.
- Cross-selling of third-party products like as insurance, mutual funds, government bonds, credit cards, and so on in order to generate non-interest income for banks, which will be added back to total profit.
- Banks will earn commissions on financial advising services such as project assessments, loan syndication, wealth management, capital restructuring, and portfolio management.

10. CONCLUSION

The research study was undertaken to determine the association between non-performing assets and bank profitability. It is determined that there is a negative association between NPA in both the public and private sectors and bank profitability in terms of ROA, ROE, and NIM. It has been discovered that both public and private sector banks have a considerable influence of NPA on ROE and ROA. In the case of private sector banks, however, there is no significant impact of NPA on NIM. There is no significant difference between NPA of public sector banks and NPA of private sector banks.

REFERENCES

1. Kiran, K. P., & Jones, & T. M. (2016). Effect of Non Performing Assets on the Profitability of Banks-a Selective Study. *International Journal of Business and General Management (IJBGM)*, 5(2), 53–60. <https://www.researchgate.net/publication/340633871>
2. Singh, H. (2018). Impact of Non-Performing Assets on the Profitability of Banks., RESEARCH REVIEW *International Journal of Multidisciplinary*, 03(06), 500–503.
3. Jha, S., and X. Hui, (2015). A comparison of financial performance of commercial banks: A case study of Nepal. *African Journal of Business Management*, 6 (25), 7601-7611.
4. Miller, S.M., and A. G. Noulas, (1997). Portfolio mix and large-bank profitability in the USA *Applied Economics*, 29(4), 505-512
5. Pradip Kumar Samanta, Payel Roy (2017), “Analysis of Non Performing Assets in Public Sector Banks of India”, *International Journal of Management*, Vol 8, Issue1, January 2017
6. Abhay Jaiswal, Chanchala Jain (2016), “A Comparative Study of Financial Performance of SBI and ICICI Banks in India”, *International Journal of Scientific Research in Computer Science and Engineering*, Vol 4, Issue 3, June 2016.

Websites :

- www.cnbctv18.com/finance/private-banks-report-10th-straight-quarterly-rise-in-bad-loans-care-ratings-429252
- https://rbi.org.in/scripts/BS_ViewMasCirculardetails.aspx?id=7357#21
- https://rbi.org.in/scripts/BS_ViewMasCirculardetails.aspx?id=7357