



## IMPACT OF NPA ON PROFITABILITY PERFORMANCE OF SELECT PUBLIC AND PRIVATE SECTOR BANKS IN INDIA

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### ABSTRACT

#### KEYWORDS:

*Non Performing Assets,  
Net Profit, Correlation,  
Regression*

**JEL Classification:** G2, G21

*This study endeavors to determine the impact of NPA on Profitability Performance of the select Public and Private Sector Banks in India. The objectives of the study are to measure the relationship between NPA and profitability of the select banks and to determine the impact of NPA on Net Profit of the select banks. For the study, five Public and Private Sector Banks were selected based on purposive sampling method on the basis of market capitalization. The study applied Correlation analysis to measure the relationship and Regression analysis to determine the impact of NPA on profitability. The study found that there is a significant impact of NPA on Net Profits in select Public Sector Banks during the study period.*

### INTRODUCTION

The banking sector plays a pivotal role in the economic development of our country. It forms the core of the financial sector of an economy. The core business of banking is to collect deposits from the public and lending it to individuals and organizations. Accepting deposits do not involve any loss. But, lending business always involves much risk because the borrower may not be able to repay the loan within the stipulated time. Earlier, the banks did not bother about asset quality rather they concentrated on expanding the branches, generating employees and lending to priority sector. As a result, the asset quality of the banks started reducing day by day and the pressure of Non Performing Assets became a major concern for the banks. Nowadays banks have become very cautious in extending loans because of the rising nonperforming assets. A recent report by CARE rating revealed that India has been ranked fifth on the list of countries with highest Non Performing Assets and is on top position among the BRICS nation with 9.9 percent ratio. As of June 2017, more than Rs 7 lakh crore worth loans are classified as Non Performing Assets in India. Gross Non-Performing Assets in India are expected to have a rise of Rs 9.5 lakh crore by March 2018. This figure translates to near 10 percent of all loans given. When unrecognized assets are added it would be 15-20 percent of total loans given. Non Performing Assets is not good and can result in crashing of economy as happened in the United States of America in the year 2008.

### NON PERFORMING ASSET - CONCEPT

Non-Performing Asset (NPA) refers to an asset when it does not generate any income for the bank. Bank's assets are the loans given to the customers. If customers don't pay either interest or principal the loan turns into Bad Loan or Non Performing Assets. As per the current norm, if a loan remains overdue for a period more than 90 days, it is categorized as Non Performing Assets. Overdue is a situation where the loan is not paid by the due date fixed by the bank.

Assets of the Banks are classified into four categories. They are Standard Assets, Sub-standard Assets, Doubtful Assets and Loss Assets. Standard asset refers to those assets which do not carry more than normal risk attached to the banking business. These assets are considered to be Performing assets. Sub-standard asset refers to those assets which remain as an NPA for a period less than or equal to 12 months. Doubtful asset refers to those assets which remain as an NPA for a period exceeding 18 months. These assets are so weak that their liquidation is highly improbable. An asset that is an NPA for a period more than 36 months is called Loss Assets. Based on RBI guidelines, banks determine the recovery of a bad debt based on the assets pledged by the borrower and provide the non-recoverable portion as provision accounting for loss in Profit and Loss Statement. If the assets quality is worse, then the provision coverage ratio will be higher.

## LITERATURE REVIEW

**Biswanath Sukul (2017)**, in his study entitled "Non Performing Assets (NPAs): A Comparative Analysis of selected Private Sector Banks" examined and found that NPA is increasing by leaps and bounds in ICICI bank and he also said that proper evaluation of projects and adherence of proper credit appraisal techniques will lead to reduction in NPA.

**Abhay Jaiswal, Chanchala Jain (2016)**, in their study entitled "A Comparative Study of Financial Performance of SBI and ICICI Banks in India" examined and found that SBI has lower bad debts when compared to ICICI bank because SBI has many branches which make it enable to cover the advance given which in turn reduces the bad debts of SBI.

**Pradip Kumar Samanta, Payel Roy (2017)**, in their study entitled "Analysis of Non Performing Assets in Public Sector Banks of India", examined and found that there is a high correlation between Gross NPA and Net Profit and to retain the investors trust transparency in disclosure norms should adhere.

## STATEMENT OF THE PROBLEM

Non Performing assets have emerged as a serious threat to the banking industry in India as it affects the performance, financial soundness, and profitability of the banks. Further, NPA is one of the indicators to assess the soundness of banking sector. They, unfortunately, impact the banks by reducing their profits in the form of provisions and it also reduces their lending capacity. The banks' inability

### Public Sector Banks:

- State Bank of India
- Punjab National Bank
- Bank of Baroda
- Canara Bank
- Bank of India

### Private Sector Banks:

- HDFC Bank
- ICICI Bank
- Kotak Mahindra Bank
- Axis Bank
- IndusInd Bank

## Statistical Tools Used

Mean and Standard deviation has been calculated to know the average performance and Co-efficient of Variation has been calculated to know the stability in the performance of the banks. Correlation Analysis has been used to find the

relationship between NPA and Net Profit, while Regression Analysis has been used to determine the impact of NPA on Net Profit of the select banks.

## OBJECTIVES OF THE STUDY

1. To measure the relationship between NPA and profitability of the select banks.
2. To determine the impact of NPA on Net Profit of the select banks.

## METHODOLOGY OF THE STUDY

### Sources of Data

The study has used data from secondary sources which are collected mainly from the Annual reports of the select top five Public and Private sector Banks in India and also from various journals and Web sites.

### Sampling Design

The Public and Private sector Banks for this study were selected based on purposive sampling method, among the Banks listed with the stock exchange, top 5 Public and Private sector Banks in India were taken for the study on the basis of market capitalization. The study period is from 2012-13 to 2016-17.

The following are the selected sample banks:

relationship between NPA and Net Profit, while Regression Analysis has been used to determine the impact of NPA on Net Profit of the select banks.

## ANALYSIS AND INTERPRETATION

**Table 1**  
**Gross NPA to Gross advances ratio of select Public Sector Banks in India from 2012-13 to 2016-17**  
**(Ratios in Percentage)**

YEAR	SBI	PNB	BOB	CANARA	BOI
2012-13	4.75	4.27	2.40	2.57	2.99
2013-14	4.95	5.25	2.94	2.49	3.15
2014-15	4.25	6.55	3.71	3.89	5.39
2015-16	6.50	12.90	9.99	9.40	13.07
2016-17	6.90	12.53	10.46	9.63	13.22
<b>MEAN</b>	<b>5.47</b>	<b>8.30</b>	<b>5.90</b>	<b>5.59</b>	<b>7.56</b>
<b>S D</b>	<b>1.037</b>	<b>3.678</b>	<b>3.558</b>	<b>3.239</b>	<b>4.635</b>
<b>CV</b>	<b>18.97</b>	<b>44.31</b>	<b>60.32</b>	<b>57.88</b>	<b>61.28</b>

Source: Compiled and computed from Annual Reports of banks

Table 1 reveals the Gross NPA to Gross advances ratio of select Public Sector Banks in India. PNB has the highest mean ratio of 8.30, followed by BOI with 7.56. BOB

and Canara have a mean ratio of 5.90 and 5.59. SBI has the lowest mean ratio of 5.47, with a Coefficient variance of 18.97 percent. This shows that there is a consistency in Gross NPA to gross advances ratio.

**Table 2****Gross NPA to Gross Advances ratio of select Private Sector Banks in India from 2012-13 to 2016-17  
(Ratios in Percentage)**

YEAR	HDFC	ICICI	KOTAK MAHINDRA	AXIS	INDUSIND
2012-13	0.95	3.22	1.3	1.20	1.03
2013-14	0.98	3.03	1.6	1.34	1.12
2014-15	0.93	3.78	1.6	1.43	0.81
2015-16	0.94	5.82	2.1	1.75	0.87
2016-17	1.05	8.74	2.6	5.42	0.93
<b>MEAN</b>	<b>0.97</b>	<b>4.91</b>	<b>1.84</b>	<b>2.22</b>	<b>0.95</b>
<b>SD</b>	<b>0.043</b>	<b>2.152</b>	<b>0.458</b>	<b>1.606</b>	<b>0.111</b>
<b>CV</b>	<b>4.46</b>	<b>43.76</b>	<b>24.92</b>	<b>72.09</b>	<b>11.66</b>

Source: Compiled and computed from Annual Reports of banks

Table 2 shows the Gross NPA to Gross advances ratio of select Private Sector Banks in India. ICICI has the highest mean ratio of 4.91, followed by Axis with 2.22. Kotak Mahindra has a mean ratio of 1.84. HDFC and IndusInd have the lowest mean ratio of 0.97 and 0.95. HDFC has the lowest

Coefficient variance of 4.46 percent. This shows that there is a consistency in Gross NPA to gross advances ratio.

**RELATIONSHIP BETWEEN NET NPA AND NET PROFITS OF SELECT PUBLIC AND PRIVATE SECTOR BANKS****Table 3****Net Profit and Net NPA of the Select Public Sector Banks from 2012-13 to 2016-17****(Rs. in Crores)**

Year	SBI		PNB		BOB		CANARA		BOI	
	Net Profit	Net NPA	Net Profit	Net NPA	Net Profit	Net NPA	Net Profit	Net NPA	Net Profit	Net NPA
2012-13	14105	28782	4748	7236	4480	4192	2872	5278	2749	5947
2013-14	10891	31096	3343	9916	4541	6034	2438	5965	2719	7417
2014-15	13102	27590	3062	15396	3398	8069	2702	8740	1708	13517
2015-16	9951	55807	-3974	35422	-5395	19406	-2812	20832	-6089	27996
2016-17	10484	58277	1325	32702	1383	18080	1121	21648	-1558	25305
<b>Mean</b>	<b>11707</b>	<b>40310</b>	<b>1700</b>	<b>20134</b>	<b>1681</b>	<b>11156</b>	<b>1264</b>	<b>12493</b>	<b>-92</b>	<b>16036</b>
<b>SD</b>	<b>1609</b>	<b>13730</b>	<b>3039</b>	<b>11704</b>	<b>3718</b>	<b>6329</b>	<b>2129</b>	<b>7240</b>	<b>3388</b>	<b>9071</b>
<b>CV</b>	<b>13.74</b>	<b>34.06</b>	<b>178.68</b>	<b>58.12</b>	<b>221.13</b>	<b>56.72</b>	<b>168.4</b>	<b>57.95</b>	<b>-3674.2</b>	<b>56.56</b>
<b>Correlation</b>	<b>-0.788</b>		<b>-0.866</b>		<b>-0.849</b>		<b>-0.778</b>		<b>-0.930</b>	

Source: Compiled and computed from Annual Reports of banks

Table 3 reveals the correlation of select Public Sector Banks in India. The Correlation for SBI (-0.788), PNB (-0.866), BOB (-0.849), CANARA (-0.778) and BOI (-0.930)

depicts that Net Profit and Net NPA are negatively correlated. This shows that when NPA is at an increasing level, there will be a downfall in the Net Profit of the banks.

**Table 4****Net Profit and Net NPA of the Select Private Sector Banks from 2012-13 to 2016-17****(Rs. in Crores)**

Year	HDFC		ICICI		KOTAK		AXIS		INDUSIND	
	Net Profit	Net NPA	Net Profit	Net NPA	Net Profit	Net NPA	Net Profit	Net NPA	Net Profit	Net NPA
2012-13	6726	468	8325	2230	1360	311	5179	704	1061	136
2013-14	8478	820	9810	3297	1502	573	6217	1024	1408	184
2014-15	10215	896	11175	6255	1865	609	7357	1316	1793	210
2015-16	12296	1320	9726	13296	2089	1261	8223	2522	2286	321
2016-17	14549	1843	9801	25451	3411	1718	3679	8626	2867	438
<b>Mean</b>	<b>10453</b>	<b>1069</b>	<b>9767</b>	<b>10106</b>	<b>2045</b>	<b>894</b>	<b>6131</b>	<b>2838</b>	<b>1883</b>	<b>258</b>
<b>SD</b>	<b>2758</b>	<b>472</b>	<b>902</b>	<b>8589</b>	<b>730</b>	<b>517</b>	<b>1600</b>	<b>2958</b>	<b>639</b>	<b>109</b>
<b>CV</b>	<b>26.38</b>	<b>44.16</b>	<b>9.23</b>	<b>84.99</b>	<b>35.68</b>	<b>57.83</b>	<b>26.10</b>	<b>104.2</b>	<b>33.92</b>	<b>42.14</b>
<b>Correlation</b>	<b>0.984</b>		<b>0.156</b>		<b>0.936</b>		<b>-0.627</b>		<b>0.986</b>	

Source: Compiled and computed from Annual Reports of banks

Table 4 depicts the correlation of select Private Sector Banks in India. The Correlation for AXIS (-0.627) shows a negative correlation between Net Profit and Net NPA. Whereas, HDFC (0.984), ICICI (0.156), KOTAK (0.936) and INDUSIND (0.986) depicts that Net Profit and Net NPA are positively correlated. This shows that an increase in Net Profit will be followed by an increase in NPA.

## IMPACT OF NPA ON THE NET PROFIT OF THE SELECT PUBLIC AND PRIVATE SECTOR BANKS

H01: There is no significant impact of NPA on Net Profit of select Public Sector Banks

### Regression Analysis of select Public Sector Banks

**Table 5**  
**Model Summary and ANOVA Output**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.
1	.941 <sup>a</sup>	.886	.848	1865.49072	23.289	.017 <sup>b</sup>

- a. Dependent Variable: net profit  
b. Predictors: (Constant), net npa

Table 5 shows the Regression analysis of select Public Sector Banks. Net profit and NPA are positively correlated, and the strength of the relationship is strong at .941. R<sup>2</sup> value (.886) states that NPA has 88.6 percent impact on Net Profit of the select Public Sector Banks. The P-value of F-test is 0.017, which is less than the significant level of

0.05. Hence, the null hypothesis is rejected and it can be concluded that there is a significant impact of NPA on Net Profit of select Public Sector Banks.

H02: There is no significant impact of NPA on Net Profit of select Private Sector Banks

### Regression Analysis of select Private Sector Banks

**Table 6**  
**Model Summary and ANOVA Output**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.
1	.569 <sup>a</sup>	.323	.098	3876.03104	1.434	.317 <sup>b</sup>

- a. Dependent Variable: net profit  
b. Predictors: (Constant), net npa

Table 6 reveals the Regression analysis of select Private Sector Banks. Net profit and NPA are moderately correlated, and the strength of the relationship is moderate at .569. R<sup>2</sup> value (.323) states that NPA has 32.3 percent impact on Net Profit of the select Private Sector Banks. The P-value of F-test is 0.317, which is more than the significant level of 0.05. Hence, the null hypothesis is accepted and it can be concluded that there is no significant impact of NPA on Net Profit of select Private Sector Banks.

only be controlled. Though many studies were conducted on NPA management, it is also important to understand the impact of NPA on the profitability of the banks. Hence, an attempt has been made to study the impact of NPA on profitability performance of the select Public and Private Sectors in India. The study found that there is a significant impact of NPA on Net Profits in select Public Sector Banks during the study period.

## REFERENCES

## FINDINGS

1. SBI and HDFC have the lowest CV value of 18.97 percent and 4.46 percent respectively, which means that there is a consistency in Gross NPA to Gross advances ratio.
2. Correlation analysis of Net Profit and Net NPA reveals that all the select Public Sector banks are negatively correlated and all the select Private Sector banks are positively correlated except for Axis Bank.
3. Regression Analysis results show that there is a significant impact of NPA on Net Profits in select Public Sector Banks and there is no significant impact of NPA on Net Profits in select Private Sector Banks in India during the study period.

## CONCLUSION

Banking companies are exposed to different types of risks by doing their core business, especially while lending loans. This leads to increase in Non Performing Assets. Non Performing Assets is a huge problem for a developing nation like India. Lately, the government has been taking steps like NPA ordinance which empowers RBI to directly intervene in Non Performing Assets. Even though complete eradication of NPAs is perhaps not possible in banking business it can

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