NPA and Its Effects on Profitability of SBI – An Empirical Study

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Abstract: The incidence of NPA is the focal threat of banking sector. The Non-Performing Assets (NPAs) problem is one of the foremost and the most formidable problems that have shaken the whole banking sector in India like an earthquake. Like a cancer worm, it has been eating the banking system from within, since long. It has grown like a cancer and has infected every limb of the banking system. It has an effect on profitability and liquidity along posing threat on asset quality and survival of banks. The NPAs are considered as an important parameter to judge the performance and financial health of banks. The growing NPAs have been a cause of concern for the entire banking industry. Researcher has tried to study the impact of NPA on the profitability of State Bank of India(SBI).

Key words: Non Performing Assets, Gross NPA Ratio, Net NPA Ratio, ROE, ROA, Profitability.

1. INTRODUCTION:

The banking system plays an important and praiseworthy role in the development and growth of the economy. The banking system mobilizes the funds from the surplus units and circulates them to the deficit sectors for their fruitful and efficient utilization. The Indian banking sector consists of Public Sector Banks, Private Sector Banks and Foreign Sector Banks. The money is advanced in the form of loans and advances by these banks to earn interest income and get repayment of principal at periodic intervals as per the contractual obligations between the lender and the borrower. The assets which are unable to meet the commitment of payment within a specified period from due date is called Non Performing Asset or Non Standard Asset. The NPAs are measured as one of the important concern to determine the performance and financial health of banks. Nowadays the mounting NPAs have been a major cause of concern for the entire banking industry. Due to wrong credit appraisal and incompetent recovery mechanism, banks have been staggering under sky-scraping bad debts.

1.1. NON PERFORMING ASSETS:

An account is stated as NPA as per RBI norms which is based on the recovery of instalments and interest on loans and advances and other aspects. The updated norms as per **RBI guidelines** to declare the account as NPA are as follows:-

If An asset, including a leased asset stops to generate income for the bank. , it will become non-performing

- A Non Performing Asset (NPA) is an advance where;
- Installment of principal and/ or Interest of a term loan remain **unpaid** for a period of more than 90 days ,
- An Overdraft/Cash Credit (OD/CC) account stays **'out of order'**, if the outstanding balance remains   in overabundance of the sanctioned limit/drawing power continuously. If there are no credits continuously for 90 days as on the date of Balance Sheet or credits are not adequate to cover the interest debited during the same period, these accounts should be treated as 'out of order' even if the outstanding balance in the principal operating account is less than the sanctioned limit / drawing power.
- The bill purchased and discounted stays overdue for a term of more than 90 days,
- For short duration crops , if the interest or/and installment of principal remains unpaid for two crop seasons,
- For long duration crops, the installment of principal and/or interest keep on overdue for one Crop season,
- The amount of liquidity facility remains due for more than 90 days, regarding a securitisation transaction carry out as per the guidelines on securitisation dated February 1, 2006.
- In respect, the overdue receivables of derivative transactions representing positive mark-to-market value of a derivative contract remains outstanding for a period of 90 days from the specified due. The abovementioned RBI Guidelines for Loans and Advances applicable from 31-3-2004.

2. REVIEW OF LITERATURE:

Bhatia, (2007), in his research paper, "Non-Performing Assets of Indian Public, Private and Foreign Sector Banks: An Empirical Assessment", discussed an empirical method to the analyzethe NPAs of private, public and foreign sector banks in India.In his paper he intended to find the fundamental factors which impacted NPAs of banks. According to him, a model comprising of two factors, viz., bank-specific parameters and macroeconomic factors, is developed and the behavior of NPAs in the three categories of banks can observed.

Kaur and Saddy**(2011)**, in their research paper entitled "A Comparative Study of Non-Performing Assets of Public and Private Sector Banks" made an attempt to clarify the concept of NPA, the magnitude of NPAs, the factors contributing to NPAs, reasons contributing to high NPAs and its impact on Indian banking operations. Besides this, they have also discussed capital to RWA ratio of Private and Public sector banks, management of credit risk and suggestionsfor controlling the threat of NPAs.

Ashok Khurana and Mandeep Singh(2010), in their study stated that issue of mounting NPAs is a challenging to public sector banks. The study found that the asset wise classification of PSBs is in right direction and there is significant variation in the recovery of NPAs in the different sector. The research observed that PSBs should not be loaded with the twin object of profitability and social welfare.

Renu Jatana (2009) analyzed the impact of NPAs on profitability of public sector banks and private sector banks with special reference and comparison of four banks like SBBJ, Oriental Bank of commerce, ICICI Bank and Bank of Rajasthan. Lastly she concluded that among the four selected banks ICICI was performing well in managing the NPA as regard their profitability in comparison to other banks.

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Rajesh Chakrabharti and Gaurav Chawla (2004) suggested an increasingly popular methodology of Data Envelopment Analysis to evaluate the relative efficiency of Indian Banks in comparison with Foreign Banks. The study suggested on a value basis, the foreign banks, as a group, had been considerably more efficient than all other bank groups, followed by the Indian Private Banks. From the quantitative performance aspect private banks supersede the other bank group. The study emitted its views on regulatory mechanism as a cause for poor performance aspects like poor quality of goods is a cause of NPA and emphasizing the level of profitability and in performance.

3. OBJECTIVES OF THE STUDY:
Proposed study is intended to investigate the impact of NPA on the Profitability of SBI.

4. HYPOTHESIS OF THE STUDY :
H_1 **:** There is a significant impact of Gro ss NPA on Net Profit.
H_2 **:** There is a significant impact of Net NPA on Net Profit.
H_3 **:** There is a significant impact of Gross NPA Ratio on Return on Equity.
H_4 **:** There is a significant impact of Net NPA Ratio on Return on Equity.
H_5 **:** There is a significant impact of Gross NPA Ratio on Return on Assets.
H_6 **:** There is a significant impact of Net NPA Ratio on Return on Assets.

5. RESEARCH DESIGN:
Research design is descriptive and empirical. The present study is an analytical study. The study is designed to be a narrative study with appropriate analytical discussions presented in tune with the proposed objectives. The study tries to look to what extent NPA had impacted profitability of SBI.

5.1. TIME PERIOD OF THE STUDY:
In the present study, research data was secondary in nature which is taken from the year 2016-17 to 2020-21.

5.2. DATA BASE, STATISTICAL TOOLS AND TECHNIQUES:
Study is based on secondary data. Information have been collected from annual reports of SBI, journals, articles, newspapers and relevant government websites. The data obtained has been analyzed using appropriate statistical measures/ techniques like percentages, averages, Standard Deviation. In the present study, correlation and regression was used to determine the impact and its significance of NPA on profitability in SBI.

6. DATA ANALYSIS AND INTERPRETATION:

Researcher made an attempt to see the impact of Gross and Net NPA on the profitability of SBI with Coefficient of Correlation (r) and its significance by t test. Pearson correlation is used as a measure of the STRENGTH of a relationship between two variables. However, any relationship should be evaluated for its SIGNIFICANCE as well as its strength. A relationship can be **strong** and yet **not** significant. Conversely, a relationship can be **weak** but **significant.** Bivariate Regression analysis is also used to predict the values of dependent variable Net Profit, ROE and ROA on the values of independent variable Gross NPA and Net NPA. To ascertain the impact of NPA, the following were taken into consideration during the reference period.

1. Net Profit
2. Return on Equity (%)
3. Return on Assets (%)

6.1. IMPACT OF NPA ON NET PROFIT:

Generally, there is negative impact of NPA on Net Profit. The table illustrates the impact of NPA on Net Profit for SBI.

Table - 1

GROSS NPA, NET NPA AND NET PROFIT OF SBI

(Rs. in Crore)

Year	SBI		
	Net Profit (Rs.)	**GNPA (Rs.)**	**Net NPA (Rs.)**
2016-17	10,484	179166.62	97656.82
2017-18	-6,547	225104.51	111523.3
2018-19	862	173588.54	66044.07
2019-20	14,488	150130.73	52126.72
2020-21	20,410	128168.54	37119.1
Mean	**7939.4**	**171231.8**	**72894**
Std. Deviation	**10779.85**	**36299.05**	**31078.39**

Source: Annual Report of SBI, Various issues
Impact of Gross NPA on Net Profit
H$_1$: There is a significant impact of Gross NPA on Net Profit.

Hypothesis	Regression weights	Beta Coefficient (R)	R^2	F	t value	p value	Hypothesis supported
H$_1$	GNPA→NP	0.928	.861	18.541	-4.306	.023	Yes

Note: p <0.05. GNPA: Gross NPA; NP: Net Profit

The hypothesis tests if Gross NPA carries a significant impact on Net Profit. Table showed that Pearson correlation between GNPA and Net Profit of SBI was found negative, strong, very high and statistically significant. (r = 0.928, p<.05). This signifies that increase in GNPA lead to decrease in Net Profit .The dependent variable NP was regressed on predicting variable Gross NPA. Gross NPA significantly predicted NP, F(1,3) = 18.541, p value<.05 and Calculated t value is more than the table value i.e. 2.306 at 8 d.f. which signifies that there is significant impact of Gross NPA on Net Profit (b= .928, p

<.05). These results clearly indicate the negative affect of Gross NPA. Moreover, Table shows that R^2 = .861portrays 86.1% of the variance in Net Profit can be accounted for Gross NPA.

6.2. IMPACT OF NET NPA ON NET PROFIT:
H_2 : There is a significant impact of Net NPA on Net Profit.

Hypothesis	Regression weights	Beta Coefficient	R^2	F	t value	p value	Hypothesis supported
H_1	NNPA→NP	0.769	.591	4.336	-2.082	.129	No

The hypothesis tests whether Net NPA holds a significant impact on Net Profit. Table showed that Pearson correlation between NNPA and Net Profit of SBI was found negative, strong, high and statistically insignificant. (r = -0.769, p>.05). This signifies that increase in NNPA lead to decrease in Net Profit . The dependent variable NP was regressed on predicting variable Net NPA. Net NPA significantly predicted NP, F(1,3) = 4.336, p value>.05 and Calculated t value is less than the table value i.e. 2.306 at 8 d.f. which signifies that there is no significant impact of Net NPA on Net Profit (b= .769, p >.05). These results clearly indicate the negative affect of Net NPA. Moreover, Table shows that R^2 = .591portrays 59.1% of the variance in Net Profit can be accounted for Net NPA.

6.3. IMPACT OF GROSS NPA ON ROE:
H_3 : There is a significant impact of Gross NPA Ratio on ROE.

Table - 2

GROSS NPA RATIO, NET NPA RATIO AND NET ROE OF SBI

(in %)

Year	Gross NPA Ratio	Net NPA Ratio	ROE
2016-17	9.04	5.15	7.25
2017-18	10.85	5.69	-3.78
2018-19	7.43	2.97	0.48
2019-20	6.07	2.23	7.74
2020-21	4.95	1.5	9.94
Mean	**7.67**	**3.51**	**4.33**
Std. Deviation	**2.35**	**1.83**	**5.75**

Source: Annual Report of SBI, Various issues

Hypothesis	Regression weights	Beta Coefficient	R^2	F	t value	p value	Hypothesis supported
H_1	GNPAR→ROE	0.771	.594	4.393	-2.096	.127	No

The hypothesis tests if Gross NPA Ratio carries a significant impact on ROE. Table showed that Pearson correlation between GNPA Ratio and ROE of SBI was found negative, strong, high and statistically insignificant. ($r = -0.771$, $p > .05$). This signifies that increase in GNPA lead to decrease in ROE. The dependent variable ROE was regressed on predicting variable Gross NPA. Gross NPA significantly predicted ROE, $F(1,3) = 4.393$, p value$>.05$ and Calculated t value is less than the table value i.e. 2.306 at 8 d.f. which signifies that there is insignificant impact of Gross NPA on ROE ($b= .771$, $p >.05$). These results clearly indicate the negative affect of Gross NPA. Moreover, Table shows that $R^2 = .594$portrays 59.4% of the variance in ROE can be accounted for Gross NPA.

6.4. IMPACT OF NET NPA ON ROE:
H_3 : There is a significant impact of Net NPA Ratio on ROE.

Hypothesis	Regression weights	Beta Coefficient	R^2	F	t value	p value	Hypothesis supported
H_1	NNPAR→ROE	0.628	.395	1.955	-1.398	.127	No

The hypothesis tests whether there is a significant impact of Net NPA Ratio on ROE. Table showed that Pearson correlation between NNPA Ratio and ROE of SBI was found negative, moderate and statistically insignificant.   ($r = -0.628$, $p>.05$). This signifies that increase in NNPA Ratio lead to decrease in ROE. The dependent variable ROE was regressed on predicting variable Net NPA Ratio. Net NPA Ratio insignificantly predicted ROE, $F(1,3) = 1.955$, p value$>.05$ and Calculated t value is less than the table value i.e. 2.306 at 8 d.f. which signifies that there is insignificant impact of Net NPA Ratio on ROE ($b= .628$, $p >.05$). These results clearly indicate the negative affect of Net NPA. Moreover, Table shows that $R^2 = .395$ portrays 39.5% of the variance in ROE can be accounted for Net NPA.

6.5. IMPACT OF GROSS NPA ON ROA:
H_5 : There is a significant impact of Gross NPA Ratio on ROA.

Table - 3

GROSS NPA RATIO, NET NPA RATIO AND NET ROA OF SBI

(in %)

Year	Gross NPA Ratio	Net NPA Ratio	ROA
2016-17	9.04	5.15	0.41
2017-18	10.85	5.69	-0.19
2018-19	7.43	2.97	.02
2019-20	6.07	2.23	0.38
2020-21	4.95	1.5	0.48
Mean	**7.67**	**3.51**	**0.22**
Std. Deviation	**2.35**	**1.83113**	**0.29**

Source: Annual Report of SBI, Various issues

Hypothesis	Regression weights	Beta Coefficient	R^2	F	t value	p value	Hypothesis supported
H_1	GNPAR→ROA	0.719	0.517	3.208	-1.791	.171	No

The hypothesis tests whether there is a significant impact of Gross NPA Ratio on ROA. Table showed that Pearson correlation between GNPA Ratio and ROA of SBI was found negative, moderate and statistically insignificant. ($r = -0.719$, $p>.05$). This signifies that increase in GNPA Ratio lead to decrease in ROA. The dependent variable ROA was regressed on predicting variable Gross NPA Ratio. Gross NPA Ratio insignificantly predicted ROE, $F(1,3) = 3.208$, p value $>.05$ and Calculated t value is less than the table value i.e. 2.306 at 8 d.f. which signifies that there is insignificant impact of Gross NPA Ratio on ROA($b= .719$, $p >.05$). These results clearly indicate the negative affect of Gross NPA Ratio. Moreover, Table shows that $R^2 = .517$ portrays 51.7% of the variance in ROA can be accounted for Gross NPA Ratio.

6.6. IMPACT OF NET NPA ON ROA:
H_6 : There is a significant impact of Net NPA on ROA.

Hypothesis	Regression weights	Beta Coefficient	R^2	F	t value	p value	Hypothesis supported
H_1	NNPAR→ROA	0.565	0.319	1.406	-1.186	.321	No

The hypothesis tests whether there is a significant impact of Net NPA Ratio on ROA. Table showed that Pearson correlation between NNPA Ratio and ROE of SBI was found negative, moderate and statistically insignificant. ($r = -0.565$, $p>.05$). This signifies that increase in NNPA Ratio lead to decrease in ROE. The dependent variable ROE was regressed on predicting variable Net NPA Ratio. Net NPA Ratio insignificantly predicted ROA, $F(1,3) = 1.406$, p value $>.05$ and Calculated t value is less than the table value i.e. 2.306 at 8 d.f. which signifies that there is insignificant impact of Net NPA Ratio on ROA ($b= .565$, $p >.05$). These results clearly indicate the negative affect of Net NPA. Moreover, Table shows that $R^2 = .319$ portrays 31.9% of the variance in ROA can be accounted for Net NPA Ratio.

7. FINDINGS AND CONCLUSION:
NPA has impacted the profitability but it is found insignificant. Impact of NPA was not established on the profitability of Bank. This was against to usual established observations. After probing into these trends the following related observations justified special mention:
(a)   It is true that NPAs is one of the factors influencing the size of the profitability but not the sole factor of it.
(b)   The trends relating to the items of incomes and expenditure which are indirectly connected to NPAs, reveals the positive contribution to step up the profitability of the banks. Hence, it may be interpreted that the impact of NPAs was overshadow by the improved indicators of these items.
(c)   The magnitude of NPAs seems to be insignificant against the high scale turnover of business of the select banks. However, still there was a vast scope for improving profitability through better NPA management practices.
Hence, it is the high time for the banks to take solemn steps to curb NPA. If the banks do not take effective measures even now, the condition of NPA will turn out to be hazardous for the economy as the problem of NPA is related to supply of money and its circulation. So, the role of banking sector is of immense significance to make India more prosperous and self reliant.

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