A CRITICAL EVALUATION OF PROFITABILITY OF SBI AND ITS ASSOCIATES IN RELATION TO NPA

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Abstract

The improvements in asset quality and a reduction in non-performing assets were the primary objectives enunciated in the reform measures. In this context, the present research critically evaluates the trend in movement of non-performing assets of SBI and its associates in India during the period 2005 to 2017, thereby facilitating an evaluation of the effectiveness of NPA management in the post-millennium period. To achieve the stated objectives, secondary data are utilized. Statistical packages like Microsoft Excel and SPSS were used to analyze the data and to generate inferences. The research utilized statistical techniques such as correlation, regression and ANOVA to explain the causes of NPA. The research findings highlighted the need for improvements in NPA management in SBI and its associates. Though the PSBs were able to curtail their NPA during the first half of the study period, the trend has reversed in the second half especially since the global financial crisis during 2007. In a highly competitive, diverse and sophisticated banking environment, NPA can be effectively managed through incorporating more proactive measures, notably an improvement in the credit evaluation, appraisal and monitoring system of banks.

Key Words: Non-performing Assets, Credit Evaluation, Monitoring System, Banking Environment

Introduction

The banking sector in India plays an important role in the growth of an economy. Through its intermediary activities, the banking sector fosters the production, distribution, exchange and consumption processes in the economic system. It stimulates the flow of funds in the economy and fuels economic growth. The efficiency of the banking system thus determines the pace of development of the economy. Similar to any other business enterprise, the efficiency of a bank is evaluated based on profitability and quality of assets it possesses. But, unlike other commercial ventures, Indian banking has social commitments integrated into its operations.

The banking system in India has had to achieve the goals of equitable income distribution, balanced regional economic growth and the reduction and elimination of private sector monopolies in trade and industry. In the post-independence period, the banking sector has played an important role in supporting the government to achieve its objectives through deposit mobilization, mass branch networking, priority sector lending and employment generation, etc. Achieving such societal objectives resulted in imposing extensive regulations by the government, which in turn hampered the productivity of Indian banking during the pre-liberalization era. An evaluation of the Indian banking industry during the pre-liberalization era revealed the presence of several shortcomings which crept into the financial system over the years, notably reduced productivity, deteriorated asset quality and efficiency and increased cost structure due to the backwardness of the technologies. Among these deficiencies, policy makers identified the erosion of asset quality as the most significant obstacle for the development of a sound and efficient banking sector.

Literature Review

- **Kiran K. Prasanth & Jones T. Mary (2016)** conducted a study on "Effect of Non-Performing Assets in the Profitability of Banks - A Selective Study". The objective of the study was to establish the correlation between NPAs and net profits of banks. The period of the study was 2005-2014. They found that the banks are having non-performing assets in their balance sheets. The large banks are able to maintain the losses by NPAs but small banks are not able to recover them. Public sector banks are facing more issues relating to the NPAs.

- **Rao Mayur and Patel Ankita (2015)** conducted a study on "A Study on Non-Performing Assets Management With Reference To Public Sector Banks, Private Sector Banks And Foreign Banks In India" with the objectives to analyze and interpret various NPA related ratios for aggregates of Public Sector, Private Sector and Foreign Banks in India from 2009-2013. They have used statistical tools like least square method and ANOVA. They conclude that Public sector, Private Sector and Foreign Banks do not have significant difference between the year 2009- 2013.

- **Gandhi Kalpesh (2015)** in his research on "Non-Performing Assets: A study of State Bank of India" examined the trends of gross and net NPA during 2010 to 2014. He found NPAs have been increasing whether gross or net in terms of rupees, NPAs have been increasing whether gross or net in terms of percentage too. This research revealed that NPAs for the SBI have been rising since 2010 which is a serious matter note for the bank and the bank should take some strict actions to avoid it.

- **Das Sulagna and Dutta Abhijit (2014)** conducted a research on "A Study on NPA of Public Sector Banks in India" and revealed in detail, whether there is any difference in the NPA occurrence between the various banks during the period of the study. A study was done on the State Bank of India and its associates, and the other public sector banks, based on the secondary data, from the annual reports of 6 years starting from 2008 to 2013. An attempt is made to analyze the data through statistical tool, ANOVA. The study finds out that there is no significant deference between the means of NPA of the banks at five percent level of significance.

- **Swamy (2001)** studied the comparative performance of different bank groups from 1995-96 to 1999-2000. An attempt was made by the researcher to identify factors which could have led to changes in the position of individual banks in terms of their share in the overall banking industry. He concluded that in many respects nationalized public sectors banks were better than private banks. They are even better than foreign banks.

- **Amandeep (1991)** attempted to estimate profit and profitability of Indian nationalized banks and to study the impact of priority sector lending, credit policies, geographical expansion, industrial sickness, competition, deposit composition, establishment expenses, ancillary income, spread and burden on bank profitability. For this purpose, trend analysis, ratio analysis and regression analysis were used.

Objectives of the Study:

The following are the objectives of the study:

- To study the financial performance of SBI and its associates
- To measure the impact of NPAs on profitability of SBI and its associates

Hypotheses of the Study:

The following hypotheses are set for this research.

- H_0^1:- There is no statistically significant relationship between changes in NPAs level and net profit of SBI and its associates.

- H_1^1:- There is statistically significant relationship between changes in NPAs level and net profit of SBI and its associates.
- H_0^2:- There is no significant impact of NPAs on Return on Assets of SBI and its associates.
- H_1^2:- There is significant impact of NPAs on Return on Assets of SBI and its associates.
- H_0^3:- There is no significant impact of NPAs on Return on Equity of SBI and its associates.
- H_1^3:- There is significant impact of NPAs on Return on Equity of SBI and its associates.
- H_0^4:- There is no significant relationship between changes in NPAs level and Return on Advances of SBI and its associates.
- H_1^4:- There is significant relationship between changes in NPAs level and Return of Advances of SBI and its associates.
- H_0^5:- There is no significant relationship between changes in NPA level and Net Interest Margin of SBI and its associates.
- H_1^5:- There is significant relationship between changes in NPAs level and Net Interest Margin of SBI and its associates.

Research Gap

From the review of literature it was found that different studies have been made on NPA of banking industry, but not many studies have been done on SBI and its associates. During the study period from 2005 to 2017, a few studies have been made on SBI and its associates. So the present scenario of net NPA of SBI and its associates was not deal with by the above researchers.

Research Methods

Sources of data: - The present study is based on secondary data. Following were the major sources of data for this study:

- Statistical Tables Relating to Public Sector Banks in India for various years published by the Reserve Bank of India
- Various Issues of the Report on Trends and Progress of Banking in India published by the Reserve Bank of India
- Annual Reports of State Bank of India, various issues
- Website of the Reserve Bank of India

Period of the Study: - According to the availability of data, a period of 13 years starting from 2005 to 2017 has been considered for the analysis of data.

Tools and Techniques used: - Statistical tools and techniques such as percentages, ratios, Regression Model and ANOVA are used in this study. Statistical packages like SPSS, NumXL and XLSTAT are used for the data processing.

Limitations of the Study

The study has the following limitations and is based on certain assumptions:

- The study is limited to only 13 years period (i.e. 2004-05 to 2016-17).
- The study is limited to the published secondary data of annual reports of RBI, Reserve Bank of India Publications, various issues of Economic Review of RBI, Statistical Tables Relating to Public Sector Banks in India and Indian Banker's Association Bulletins, Reserve Bank of India's Report on Trend and Progress in Banking.

Financial Performance of SBI and its Associates

The financial performance of State Bank of India and its associates has become a fascinating topic for conversation, comment and debate. There is growing evidence of concern by the authorities on the declining profitability of the banking system due to unsecured loans and advances. The RBI suggests various methods to reduce the unsecured loans and advances with changes in the social and economic objective of Indian commercial banks particularly of State Bank of India and its associates. The approach of policy makers towards profitability has changed with the result that low profits have become a fact of life. Therefore, it is high time to concentrate on analysis of the profitability performance.

Source: Reserve Bank of India

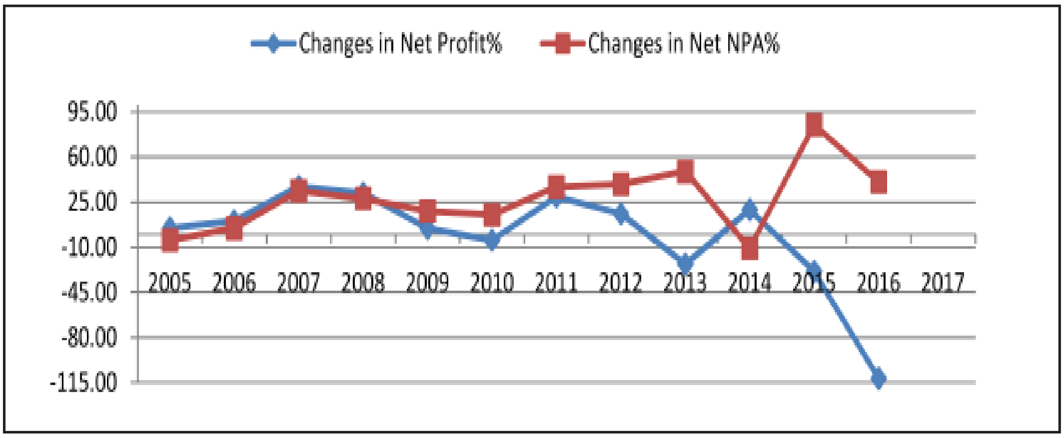
Table 1 contains data related to the Net NPA and Net Profit of SBI and its associates from 2005 to 2017. It also shows the change in non-

Table 1 - Net NPA and Net Profit of SBI and its Associates (Amount in Million)

YEAR	NNPA	Changes in NNPA (%)	Net Profit	Changes in Net Profit (%)
2005	63629	-	56759	-
2006	60721	-4.57	59565	4.94
2007	63593	4.73	65720	10.33
2008	85089	33.80	90058	37.03
2009	108691	27.74	118957	32.09
2010	128303	18.04	124326	4.51
2011	147906	15.28	118629	-4.58
2012	202366	36.82	153336	29.26
2013	281007	38.86	177833	15.98
2014	418151	48.80	136686	-23.14
2015	372777	-10.85	163020	19.27
2016	688944	84.81	115894	-28.91
2017	969322	40.70	-13827	-111.93

performing assets and net profit. From the table it is found that the percentage change in net NPA has been increased to a great extent in the year 2016 (84.81%) in comparison to 2006 (-4.57%), whereas the changes in net profit has been showing the positive result in 2006 (4.94%) in comparison to 2016 (-28.91%). It is clear that in the year 2008 percentage change in Net NPA and net profit has increased by 33.80% and 37.03% respectively Finally it can be stated that change in Net NPA has no significant impact on Net Profit. But in 2017 the trend of net profit is -111.93% whereas the change in Net NPA is showing positive result i.e. 40.70%.

Figure 1- Trend of Percentage Change in Net NPA and Net Profit



Source: Self Compiled

Figure-1 shows the trend of percentage change in Net NPA and Net Profit. It is showing fluctuating trend from 2006 to 2017. The percentage change in Net NPA in 2006 was negative (-4.57) in comparison to the 2017 i.e. 40.70%. But on the other side the percentage change in Net Profit in 2006 was positive (4.94%) in comparison to the 2017 i.e. -111.93%. That means NPA of SBI and its associates has been increasing year by year along with Net Profit.

Table 2 - NET NPA AND PROFITABILITY RATIOS OF SBI AND ITS ASSOCIATES (Amount in Percentage)

YEAR	NNPA	ROI	ROE	ROADV	NIM
2005	1.40	8.39	18.76	7.49	3.27
2006	1.20	7.86	16.92	7.77	3.22
2007	0.87	6.81	16.31	8.47	2.79
2008	0.80	7.11	17.21	9.55	2.49
2009	0.70	6.77	17.74	9.89	2.39
2010	1.02	6.33	15.92	8.93	2.36
2011	0.99	6.72	14.11	8.84	2.84
2012	1.64	7.80	16.00	10.27	3.25
2013	1.96	8.08	15.29	9.90	2.98
2014	2.95	8.37	10.03	9.51	2.87
2015	2.50	8.00	10.56	9.35	2.81
2016	3.48	7.97	6.78	8.79	2.60
2017	11.61	7.26	-0.69	8.29	2.39

Source: Self Compiled

Table 2 shows the ratio of Net NPA, Return on Investment, Return on Equity, Return on Advances and Net Interest Margin of SBI and its associatesfor the study period. From the analysis, it is found that the Net NPA percentage has been consistently increasing from 2005 (1.4%) to 2017 (11.61%), whereas Return on Investment has been showing a fluctuating trend from 2005 (8.39%) to 2011 (6.72%) and after that the Return on Investment showing a increasing trend up to 2014 (8.37%). Then it has been showing a decreasing trend up to 2017 (7.26%). The trend of Return on Equity has been fluctuating from 2005 (18.76%) to 2015 (11.56%). After that the Return on Equity percentage is decreasing in a constant trend and shows -0.69% in 2017, whereas the Return on Advances has been increasing constantly from 2005 (7.49%) to 2009 (9.89%). After that the trend of Return on Equity has been decreasing from 2013 (9.90%) to 2017 (8.29%). It is also clear from Table 2 that the Net Interest Margin has been showing a decreasing trend from 2005 (3.27%) to 2010 (2.36%). Then it increases to 3.25% in 2012. After that the trend of Net Interest Margin has been decreasing from 2013 (2.98%) to 2017 (2.39%).

Impact of NPAS on Different Profitability Ratios of SBI and its Associates

At the macro level, NPAs have directly affected the supply of credit and decreased capital formation, arresting the economic activity in the country. And at the micro level, increasing the level of NPAs has affected the profitability and performance of the bank. The interest income is decreasing and there is an increase in the provisions of the banks. It also affects the capital base and competition of the banks. Due to increase in the level of NPAs there is an increase in the cost of credit, which made Indian businessmen uncompetitive as compared to other countries. It has made banks risk averse and squeezed genuine Small and Medium enterprises from accessing competitive credit. Net Profit and different profitability ratios namely return on assets, returns on advances, return on investment, return on equity and net interest margin is compared with NNPAs to examine the impact of NPAs on profitability of Public Sector Banks.

Table 3 - Correlation Result of Net NPA and Net Profit

SUMMARY TABLE	
Multiple R	0.266437818
R Square	0.070989111
Adjusted R Square	-0.013466425
Standard Error	52921.25219
Observations	13

Source: Self Compiled

Table 3 shows the value of the correlation coefficient between Net NPA and Net Profit is 0.26; means there is a low degree of correlation. This shows that the Net NPA and Net Profit move in the same direction. As per the table the coefficient of determination (R Square) is 0.07, indicating that only 7 percent of the variations in the Net Profit are explained by the Net NPA.

H_0^1: There is no significant relationship between changes is Net Non-performing Assets and Net Profit of SBI and its Associates.

H_1^1: There is significant relationship between changes is Net Non- performing assets and Net Profit of SBI and its Associates.

Table4 - ANOVA and Regression Model

Model	Degrees of Freedom	Sum of Square	Mean Square	F	Significance F
Regression	1	2354094218	2354094218	0.840550126	0.378901556
Residual	11	30807248270	2800658934		
Total	12	33161342489			

Model	Coefficients	Standard Error	t Stat	P-value
Constant	119080.256	21125.39869	5.63682881	0.000151756
Net NPA	-0.050435056	0.055011146	-0.916815208	0.378901556

Source: Self compiled

Net Profit = 119080.25 + -0.0504*NNPA + ei

The above estimated regression equation indicates that the Net NPA is negatively related to the Net Profit as the coefficient is negative i.e. -0.05. The result shows that if the Net NPA goes up by one per cent, the Net Profit would go down by -0.05 per cent. It indicates that the impact of Net NPA upon the Net Profit is not that much which significant. Here the calculated significance value i.e. p-value (0.37) is greater than 0.05, means Null hypothesis (H_0^1) will be accepted. Then it can be concluded that the Net NPA is not making a significant unique contribution to the Net Profit of SBI and its associates.

Table 5 - Correlation result of Net NPA ratio and ROI

SUMMARY TABLE	
Multiple R	0.110912119
R Square	0.012301498
Adjusted R Square	-0.077489275
Standard Error	0.72101798
Observations	13

Source: Self Compiled

Table 5 shows that the result of correlation between Net NPA and Return on Investment of SBI and its associates i.e. is 0.11 which means there is a very low degree of correlation between Net NPA and ROI. As per the table the coefficient of determination (R Square) is 0.01 which shows that only 1 percent of the variations in the Return on Investment are explained by the Net NPA.

H_0^2: There is no significant impact of Net Non-performing Assets on Return on Investment of SBI and its Associates.

H_1^2: There is significant impact of Net Non-performing Assets on Return on Investment of SBI and its Associates.

Table 6 - ANOVA and Regression Model

Model	df	SS	MS	F	Significance F
Regression	1	0.071222709	0.071222709	0.137001807	0.718307912
Residual	11	5.718536209	0.519866928		
Total	12	5.789758918			

Model	df	SS	MS	F	Significance F
Regression	1	0.071222709	0.071222709	0.137001807	0.718307912
Residual	11	5.718536209	0.519866928		
Total	12	5.789758918			

Source: Self compiled

Net Profit =7.4339 + 0.0265*NNPA + ei

The above estimated regression equation indicates that the Net NPA is positively related to the Return on Investment as the coefficient is positive (0.02). The result shows that if the Net NPA goes up by one per cent, the Return on Investment would go up by only 0.02 per cent. The results indicate that the impact of Net NPA upon the Return on Investment is not significant. Here the calculated significance value i.e. p-value (0.71) is greater than 0.05 which means Null hypothesis ($H0^2$) will be accepted. Thus, it can be concluded that the Net NPA is not having a significant unique impact on Return on Investment of SBI and its associates.

Table 7 -Correlation result of Net NPA ratio and ROE

Summary Table	
Multiple R	0.90846288
R Square	0.825304805
Adjusted R Square	0.809423423
Standard Error	2.397385506
Observations	13

Source: Self Compiled

Table 7 shows correlation between Net NPA and Return on Equity is 0.90 which means a very high degree of correlation exists between them.

As per Table 3.1, the coefficient of determination (R Square) is 0.82 which shows that 82 per cent of the variations in the ROE are explained by the Net NPA. It can be concluded that the change in net NPA ratio have significant relationship with Return on Equity in comparison to the other profitability majors.

H_0^3: There is no significant impact of Net Non-performing Assets on Return on Equity of SBI and its Associates.

H_1^3: There is significant impact of Net Non-performing Assets on Return on Equity of SBI and its Associates.

Table 8 - ANOVA and Regression Model

Model	df	SS	MS	F	Significance F
Regression	1	298.6770468	298.6770468	51.96681472	1.73293E-05
Residual	11	63.22202992	5.747457265		
Total	12	361.8990767			

Model	Coefficients	Standard Error	t Stat	P-value
Constant	17.56949308	0.876112991	20.0539123	5.19218E-10
Net NPA	-1.717975137	0.238316343	-7.208801199	1.73293E-05

Source: Self Compiled

Return on Equity = 17.5694+ -1.7179*NNPA + ei

The above estimated regression equation indicates that the Net NPA is negatively related to the Return on Equity as the coefficient is negative (-1.71). The result shows that if the Net NPA goes up by one per cent, the Return on Equity would go down by -1.71 per cent. The results indicate that the impact of Net NPA upon the Return on Equity is significant. Here the calculated significance value i.e. p-value (1.73) is greater than 0.05, which means that Null hypothesis (H_0^3) will be accepted. Thus it can be concluded that there is no significant impact of Net NPA on Return on Equity of SBI and its associates.

Table 9 - Correlation result of Net NPA ratio and ROADV

Summary Table	
Multiple R	0.206598789
R Square	0.042683059
Adjusted R Square	-0.044345753
Standard Error	0.861555255
Observations	13

Source: Self Compiled

Table 9 shows the correlation between Net NPA and Return on Advances of SBI and its associates is 0.20. This means there is a low degree of correlation between Net NPA and Return on Advances. As per Table 4.1, the coefficient of determination (R Square) is 0.04 which shows that only 4 percent of the variations in the Return on Advances are explained by the Net NPA.

H_0^4: There is no significant impact of Net Non-performing Assets on Return on Advances of SBI and its Associates.

H_1^4: There is significant impact of Net Non-performing Assets on Return on Advances of SBI and its Associates.

Table10 - ANOVA and Regression Model

Model	df	SS	MS	F	Significance F
Regression	1	0.364048088	0.364048088	0.490447452	0.498272604
Residual	11	8.16505203	0.742277457		
Total	12	8.529100117			

Model	Coefficients	Standard Error	t Stat	P-value
Constant	9.146248125	0.31485122	29.0494289	9.46184E-12
Net NPA	-0.059978462	0.085644423	-0.700319536	0.498272604

Source: Self Compiled

Return on Advances = 9.1462+ -0.0599*NNPA + ei

The above estimated regression equation indicates that the Net NPA is negatively related to the Return on Advances as the coefficient is negative (-0.05). The result shows that if the Net NPA goes up by one per cent, the Net Profit would go down by -0.05 per cent. The results indicate that the impact of Net NPA upon the Return on Advances is not much significant. Here the calculated significance value i.e. p-value (0.49) is more than 0.05, means Null hypothesis (H04) will be accepted. Finally, Net NPA is not having a significant impact on the Return on Advances of SBI and Its Associates.

Table11 - Correlation result of Net NPA ratio and NIM

SUMMARY TABLE	
Multiple R	0.945149921
R Square	0.893308373
Adjusted R Square	0.883609134
Standard Error	0.245450382
Observations	13

Source: Self Compiled

From Table 11 it is found that the correlation between Net NPA and Net Interest Margin is 0.94. This means that there is a very high degree of correlation between Net NPA and Net Interest Margin. As per the table the coefficient of determination (R Square) is 0.89 which shows that 89 per cent of the variations in the Net Interest Margin are explained by the Net NPA.

H_0^5: There is no significant impact of Net Non-performing Assets on Net Interest Margin of SBI and its Associates.

H_1^5: There is significant impact of Net Non-performing Assets on Net Interest Margin of SBI and its Associates.

Table 12 - ANOVA and Regression Model

Model	Df	SS	MS	F	Significance F
Regression	1	5.548699122	5.548699122	92.10087388	1.11349E-06
Residual	11	0.662704791	0.06024589		
Total	12	6.211403912			

Model	**Coefficients**	**Standard Error**	**t Stat**	**P-value**
Constant	4.346977053	0.098822375	43.98778158	1.02304E-13
Net NPA	-0.280866452	0.029266312	-9.59692002	1.11349E-06

Source: Self Compiled

Net Interest Margin = 4.3469+ -0.2808*NNPA+ ei

The above estimated regression equation indicates that the Net NPA is negatively related to the Net Interest Margin as the coefficient is negative (-0.28). The result shows that if the Net NPA goes up by one per cent, the Net Interest Margin would go down by -0.28 per cent. The results indicate that the impact of Net NPA upon the Net Interest Margin is not significant. Here the calculated significance value i.e. p-value (1.11) is greater than 0.05. This means that Null hypothesis (H05) will be accepted. Thus, it can be concluded that the Net NPA is not having a significant impact of the Net Interest Margin of SBI and its associates.

Findings

The following findings were based on the analysis of second objective.

- The amount of NPA has increased from Rs. 63629 million to Rs. 969322 million whereas Net Profit of SBI and its associates have decreased from Rs.56759 million to Rs.-13827 million during the period (2005-2017).
- From the analysis it is found that increase in Net NPA of SBI and its associates do not have any significant impact on its net profit, Return on Equity, Return on Investment, Return on Advances and Net Interest Margin.

Suggestions

- To improve the efficiency and profitability, the NPAs have to be scheduled. Various steps have been taken by the government to reduce the NPAs. It is impossible to have zero percentage NPAs. But at least Indian banks should take care to ensure that they give loans to creditworthy customers.

The following are recommendations to tackle the problem of NPAs of banking industry.

- Proper selection of borrowers and follow-ups required to get timely payment
- Good management needed on the side of banks to decrease the level of NPA
- At the same time categorization of standard accounts should be done into A, B, C based on actual recovery of interest and installments due. This will help a focused and strengthened monitoring.
- Advances provided by banks need to be done by pre-sanctioning evaluation and post disbursement control so that NPA can decrease.
- Bank should adhere to "Know Your Customer" norms for identification of borrower, guarantor and verification of their addresses to minimize the risk of default in case of housing sector lending. In respect of agricultural advances, recovery camp should be organized during the harvest season.

Conclusion

The economic growth of every country depends on the proper functioning of financial system of the country. The financial system mainly comprises banking sector. NPAs reflect the overall performance of the banks. The NPAs have always been a big worry for the banks in India. The Indian banking sector faced a serious problem of NPAs. A high level of NPAs suggests high probability of a large number of credit defaults that affect the profitability and liquidity of banks. Despite having huge losses from NPAs, SBI is able to maintain profitability, liquidity and goodwill of the bank because it is also having other sources of income to recover losses. But small banks are not able to do so.

Now-a-days our government is concentrating in developing our economy which needs huge financial resources. Thus the GDP of India will only grow if the required funds will be invested in the economy which gives rise to faster growth in the economy. Thus, banking sector should now mainly focus on effective management of NPAs to increase their profitability and thereby provide as much funds as possible to the industry.

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