"IMPACT OF NON PERFORMING ASSETS ON THE INTEREST RATES IN THE ECONOMY"

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ABSTRACT
With the problem of rising NPAs in the Indian Banking System, the banks are facing serious problems in terms of new credit creation, reduced profitability and liquidity, decline in investors and shareholders confidence and so on. During the past five years, Non Performing Assets has seen unprecedented growth. The cumulative NPAs in the Indian Banking System has piled up over 10 lakh crore as on the March 2018 quarter. The rising NPAs pose serious problem to both the economy and the banks themselves. Some of the areas where NPAs cause an impact are such as: GDP of the economy, inflation, money flow in the economy, interest rates in the economy and so on. This study aims to determine the impact of the lending rates of the banks caused by the Non Performing Assets of those banks.
Keywords: NPAs, Indian Banking System, Credit, Profitability, Liquidity, GDP

INTRODUCTION

During the recent years Non Performing Assets (NPAs) have grown substantially and have become a major concern for the banking system in India and made the Indian government set aside a huge amount of Rs. 2.11 lakh crore for the purpose of capital restructuring of the banks. Non Performing Assets are those assets which do not generate any revenue for the banks. An asset, which may be a loan or an advance, becomes a Non Performing Asset if the stipulated payment on principal or interest has remained due for a period of 90 days. As on 30 September 2017, the gross NPAs in the Indian banking system stood at a whopping amount of Rs. 8.29 lakh crore and have continued to grow substantially. As NPAs necessitates banks to set aside a huge amount as provisions, it reduces the profitability of the banks.

The problem of NPAs gets translated into the need for banks to maintain high capital adequacy ratio, reduced profitability of the banks, reduced liquidity position of the banks, increased lending rates, reduced interest rates on deposits, loss of shareholder's confidence on the banks, reduced public confidence on banks, credit contraction and so on. A research paper authored by Prof. D.S. Rathore, Dr. Sangeeta Malpani and Sunita Sharma titled "Non Performing Assets of Indian Banking System and its Impact on Economy" establishes their findings in the following way: due to the burden of increasing NPAs, the banks are finding a tough time to

give new loans to the customers and has lead to the credit contraction which may cause economic slowdown.

Public sector banks are the ones worst hit by the problem of NPAs. State Bank of India, IDBI bank, Punjab National Bank, Bank of Baroda, and Indian Overseas Bank constitute the major part of the NPAs in the banking system. Banks recover the NPAs loss by reducing the interest rates on deposits. On the other hand, we observed that the burden of NPAs have also impacted the lending rates of the banks and this was the main reason for choosing the topic as our study area.

REVIEW OF LITERATURE

1. (Sah, A STUDY ON NON PERFORMING ASSETS OF THE INDIAN BANKS, 2017)

The study depicts the trend of gross NPAs from the financial year 2003-04 to 2014-15 among the public sector banks and the private sector banks in India, tries to analyse the impact caused by NPAs on the performance of the banks and the steps taken by the government to deal with the problem of NPAs. The gross NPAs are been on the rising trend since the financial year 2009-10 till 2014-15 for the public sector banks. In case of private banks the amount of NPAs have been decreasing from 2003-04 till 2012-13. The study has established that NPAs reduce the income from net interest earned, reduces the profitability of the banks, affect the recycling of bank credit, causes instability in the liquidity positions of the banks. Indian government has amended SARFAESI Act and DRT Act to enable the efficiency in the recovery of NPAs.

2. (SS, K, & VV, 2016) author of Empirical Analysis on Asset Quality of Indian Banking Industry- Nonperforming Assets to Advances:

The study focuses on the comparison between NPAs of the public, private and foreign banks and scheduled banks. The study was conducted for the period 2001-02 to 2012-13. The study observed major part of the NPAs in the Indian Banking System is from Public sector banks. The trend of NPAs observed in the private banks was mixture of increasing and decreasing trend. In case of foreign banks, the amount of NPAs was low compared to public and private sector banks. The study concludes that there has been huge increase in the advances over the last 12 years from 2001-02 to 2012-13.

3. (Kumar, 2018) author of A Study on Non Performing Assets of Indian Banks: Trend and Recovery:

The study aims to inspect the concept of NPAs in the Indian Banking context, analyses the trend of NPAs and the various recovery channels of NPA and the period covered for the study is 17 years starting from the calendar year 2000-2017. The study establishes that the cumulative NPAs have been increasing from the year 2000 and there have been only few instances where NPAs have decreased. The decrease in NPAs during the period 2000-2005 has been owed to the setting up of the Asset Reconstruction Corporation of India (ARCIL), which was major boost for the banks to recover their NPAs. Thereafter, there has been increase in the NPAs year on year and the reason attributed to the trend is that due to hardening of the interest rates by the banks.

The major recovery channels with which the banks recover their NPAs are such as: Lok Adalats, Debt Recovery Tribunals and SARFAESI Act. Another way through which the banks recover their stressed assets is through selling those assets to Asset Reconstruction Companies (ARC).

4. (Rangan, 2012) author of Examining the Relationship between higher Interest rates and Non Performing Assets of Banks- Evidence from Indian Banking System:

The study was carried out to determine if there were any relationship between the higher interest rates and the amount of Non Performing Asset. The major focus of the study was State Bank of India. The study emphasized that there were strong statistical implications which lead to the conclusion that there is a correlation between Non Performing Assets and the rising interest rates. The t-test was used for hypothesis testing and the test lead to the rejection of null hypothesis (There is no change in the NPAs due to higher interest rates). The study also suggested that the other reasons for the higher interest rates were due to sanguine business climate, deliberate non payment of debts, lack of financial discipline, weak legal system and so on.

5. (Prasanna, Thenmozhi, & Rana, 2014) author of Determinants of Non Performing Advances in Indian Banking System:

The study inspects the determinants of Non Performing Assets in the Indian Banking system for a period of 12 years. The study has considered the macroeconomic variables such as GDP, Repo rates of RBI, stock market index and so on and bank specific features on how these factors affect the Non Performing Assets in the economy. The inferences drawn from the study is that the macroeconomic variables such as GDP, growth in per capita income, stock market index, volatility are inversely related to the NPA ratios. On the other hand, higher interest rate and exchange rates result in higher Non Performing Assets. Among the bank specific variables the inefficiency ratio had significant positive impact on the NPAs. The study recommended that effective operational management at bank level helps to reduce the burden of NPAs.

RESEARCH DESIGN

STAETEMENT OF PROBLEM:

The rising NPAs have caused a heavy stress on the Indian Banking system. NPAs are rising substantially over the past few years. For the year ending March 2018 the gross NPAs stood at 10 lakh crore which has risen at a rate of 16% from the quarter ending December 2017. The burden of increasing NPAs has impact on the various aspects such as capital requirements of the banks, profitability, liquidity, interest rates and so on. Higher NPAs pose the threat on the revenue generation of the banks and impacts the lending rates of the banks. The major ambit of the study focuses on to what extent the NPAs of a particular bank impacts the lending rates of those banks.

SOURCES OF DATA:

The study is mainly dependent on the secondary data and no primary data is involved. The data for the study is collected through various websites of the banks, research papers relevant for the study, journals and other secondary sources.

SAMPLES USED FOR THE STUDY:

The sample chosen for the study is the leading listed public sector banks and the top 5 listed public sector banks based on market capitalization are chosen as follows:

- State Bank of India (SBI).
- Bank of Baroda (BOB).
- Industrial Development Bank of India (IDBI).
- Canara Bank.
- Central Bank of India (CBI).

The entire study is based on the above banks and the period covered for the study is for 5 years starting from Financial Year 2013-14 to Financial Year 2017-18.

VARIABLES FOR THE STUDY:

The variables used for the study are:

- Non Performing Assets of the relevant banks:
  The Non Performing Assets of the above banks are collected through their websites for the five financial years from 2013-14 to financial year 2017-18.
- Base Interest Rates of the relevant banks:
  Base interest rates are the benchmark rates below which the banks cannot lend the funds. The base rates for the chosen banks are collected from their websites and other finance websites such as bankbazaar.com, myloancare.com etc.

HYPOTHESIS FORMULATION:

The null hypothesis and alternate hypothesis for the study are formulated as under:

Null Hypothesis (H_0): Increase in Non Performing Assets causes Base (Interest) rates to increase.

Alternate Hypothesis (H_a): Increase in Non Performing Assets does not cause Base (Interest) rates to increase.

DATA ANALYSIS TOOLS:

The tool used for analysing data is “Microsoft Excel” and the technique adopted for studying the impact of NPA on the interest rates is “Correlation analysis” and “Regression analysis”.

1. Correlation technique is used to determine the impact of Non Performing Assets on the Base (Interest) rates.

2. Regression analysis using excel is done for the purpose of hypothesis testing.

LIMITATIONS OF THE STUDY:

The limitations of the study are:

- The study concentrates only on the leading public sector banks and does not consider the private banks and foreign banks.
- The study is for only the limited period i.e. 5 years from financial year 2013-14 to financial year 2017-18 and it does not consider the period prior to financial year 2013-14.

DATA ANALYSIS AND INTERPRETATION

The hypothesis testing was done through regression analysis by considering Non Performing Assets as independent variable and Base (Interest) rates as dependent variable. The results of the regression analysis of the individual banks are interpreted as under:

1. State Bank of India: The output obtained through regression analysis is depicted as under:

a. Hypothesis testing:

The hypothesis was assessed based on the P- values. The significance level i.e. α was fixed at 5% (0.05). I f P- value less than 0.05, reject null hypothesis and accept alternate hypothesis. The p- value we got by running the data of the bank was 0.03 which is depicted as under:

	Standard Error	*t Stat*	*P-value*
Intercept	0.205790864	49.40078603	0.00
Non performing assets (Rs. In Crores)	0.00	-3.78	**0.03**

Hence based on the P-value, the null hypothesis is rejected and alternate hypothesis is accepted.

b. Determination of Correlation coefficient:

The impact was assessed using "Multiple R" factor which is the correlation coefficient. The below table shows the Multiple R factor:

Regression Statistics	
Multiple R	0.91
R Square	0.83
Standard Error	0.22
Observations	5.00

The Multiple R is at 0.91.

2. Bank of Baroda: The output obtained through regression analysis is depicted as under:

a. Hypothesis testing:

The hypothesis was assessed based on the P- values. The significance level i.e. α was fixed at 5% (0.05). I f P- value less than 0.05, reject null hypothesis and accept alternate hypothesis. The p- value we got by running the data of the bank was 0.03 which is depicted as under:

	Standard Error	*t Stat*	*P-value*
Intercept	0.44067947	24.98096946	0.000140651
Non performing assets (Rs. In Crores)	0.00	-4.02	**0.03**

Hence based on the P-value, the null hypothesis is rejected and alternate hypothesis is accepted.
b. . Determination of Correlation coefficient:
The impact was assessed using "Multiple R" factor which is the correlation coefficient. The below table shows the Multiple R factor

Regression Statistics	
Multiple R	0.92
R Square	0.84
Standard Error	0.44
Observations	5.00

The Multiple R is at 0.92.

3. Industrial Development Bank of India: The output obtained through regression analysis is depicted as under:
a. Hypothesis testing:
The hypothesis was assessed based on the P- values. The significance level i.e. α was fixed at 5% (0.05). I f P- value less than 0.05, reject null hypothesis and accept alternate hypothesis. The p- value we got by running the data of the bank was 0.003 which is depicted as under:

	Standard Error	*t Stat*	*P-value*
Intercept	0.221982945	48.75634706	0.00
Non performing assets (Rs. In Crores)	0.00	-8.66	0.003

Hence based on the P-value, the null hypothesis is rejected and alternate hypothesis is accepted.
b. Determination of Correlation coefficient:
The impact was assessed using "Multiple R" factor which is the correlation coefficient. The below table shows the Multiple R factor:

Regression Statistics	
Multiple R	0.98
R Square	0.96
Standard Error	0.26
Observations	5.00

The Multiple R is at 0.98.

4. Canara Bank: The output obtained through regression analysis is depicted as under:
a. Hypothesis testing:
The hypothesis was assessed based on the P- values. The significance level i.e. α was fixed at 5% (0.05). I f P- value less than 0.05, reject null hypothesis and accept alternate hypothesis. The p- value we got by running the data of the bank was 0.04 which is depicted as under:

	Standard Error	*t Stat*	*P-value*
Intercept	0.67773568	15.90008384	0.000540907
Non performing assets (Rs. In Crores)	0.00	-2.62	0.04

Hence based on the P-value, the null hypothesis is rejected and alternate hypothesis is accepted.
b. Determination of correlation coefficient: The impact was assessed using "Multiple R" factor which is the correlation coefficient. The below table shows the Multiple R factor:

Regression Statistics	
Multiple R	0.83
R Square	0.70
Standard Error	0.72
Observations	5.00

The Multiple R is at 0.83.

5. Central Bank of India: The output obtained through regression analysis is depicted as under:
a. Hypothesis testing:
The hypothesis was assessed based on the P- values. The significance level i.e. α was fixed at 5% (0.05). I f P- value less than 0.05, reject null hypothesis and accept alternate hypothesis. The p- value we got by running the data of the bank was 0.04 which is depicted as under:

	Standard Error	*t Stat*	*P-value*
Intercept	0.65124285	17.45471786	0.000409849
Non performing assets (Rs. In Crores)	0.00	-3.65	0.04

Hence based on the P-value, the null hypothesis is rejected and alternate hypothesis is accepted.
b. Determination of correlation coefficient: The impact was assessed using "Multiple R" factor which is the correlation coefficient. The below table shows the Multiple R factor:

Regression Statistics	
Multiple R	0.90
R Square	0.82
Standard Error	0.60
Observations	5.00

The Multiple R is at 0.90.

FINDINGS

The findings of the study are:

1. The null hypothesis (Rise in NPAs causes rise in Interest rates) is rejected as the P- values are less than 0.05, which is the significance level and alternate hypothesis (Rise in NPAs does not cause rise in interest rates) is accepted.
2. The increase in the amount of NPAs does not cause the base interest to rise, but they have an impact on the Base rates. This was inferred thorough the hypothesis testing.
3. The amount of NPAs in a bank significantly affects the Base (Interest) rates which has been determined through the correlation coefficient.
4. The change in NPAs causes the considerable changes in the interest rates of the bank.
5. The banks chosen as the sample all exhibit the similar kind of behaviour with respect to NPAs and Base rates.
6. Apart from NPAs, even other micro and macro economic factors have the impact on the Base (Interest) rates.

CONCLUSION

NPAs have been a major concern for the banks across the nation especially public sector banks. In spite of various recovery schemes proposed by the governments, the problem of NPAs doesn't seem to stop and it has effects on the various aspects of the economy such as GDP, Repo rates etc. The rising NPAs also seriously impacts the lending rates of the banks and due to failure to repay the loan, credit contraction happens, as a result the money supply in the economy takes a hit and in turn affects the inflation aspect in the economy. Some of the causes for the rising problem of NPAs are poor financial discipline among the borrowers, lack of proper recovery measures, lending to unworthy borrowers and so on.

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