

## **A Study of Non-Performing Assets (NPA) In Select Indian Public Sector Banks**

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**Abstract:** *Aside from being a huge growth driving force, banks also carry out a crucial role in developing a country's economy. Riddled with numerous financial risks, the banking sector faces the problems of operational risk, loan recovery risk, liquidity risk, credit risk, market risk, management risk, and interest risk. However, the risk of loan recovery is one of the most damaging one as it affects not only the efficient working of the bank but also the soundness of its financial position. While higher value of NPA necessitates the creation of provisions, resulting into a decrease in the general profitability of the banks; having a lower NPA value displays a strong credit appraisal system enabled by the bank. The banking business of India stands on a precarious balance when it comes to non-performing assets. Public sector banks, particularly, bears the heat of bad debts. Thus, it is essential for banks to manage NPAs in order to gain higher profitability and efficiency. The presented paper aims to understand the concept of NPA and to suggest some measures to reduce their ever increasing rate.*

**Keywords:-***NPA, Public sector banks, ANOVA, Gross NPA ratio*

**JEL:-***G21, G28, E44*

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### **I. Introduction**

Banks play an important function of mobilizing the savings of the public along with allocating and investing them in various economic sectors, that is, capital formation process. Thus, the banking sector is the heart of the financial structure of the economy. However, the proficiency with which capital formation is done directly correlates with the strength and growth of financial sector and socio-economic modification of the country. Therefore, various measures were taken by the Indian government to toughen the system of debt recovery.

As a result of the reporting of the Narasimham Committee I and II, certain financial reforms were carried out. Prudential directives were issued by RBI regarding the credit monitoring policies. The 'Recovery of Debts due to banks and other financial institutions Act' and the 'Securitization and Reconstruction of financial assets and Enforcement of security interest Act' were enforced by the Government of India in the year 1993 and 2002, respectively. Sadly, the above mentioned Acts failed to serve their cause, which is eminent from the swiftly rising level of NPAs. Various reasons such as limited knowledge of banking laws, attitude and approach of banks regarding loan lending and recovery, and contravention of Reserve Bank of India norms attributed towards their failure. As per the projected data in the RBI's Financial Stability Report, there is an increase from 7.6% to 8.5% of total loans advanced, from March'16 to March'17, in the Gross bad debts in the Commercial Banks.

An asset, including a leased asset, becomes non-performing when it ceases to generate income for the bank and is then termed as Non-Performing Asset (NPA). RBI has defined NPA as a credit facility in respect of which the interest and / or installment of principal has remained 'past due' for a specified period of time as stipulated by RBI, that is, 90 days. Apart from threatening the survival and asset quality, the existence of NPAs severely impacts the profitability and liquidity of the bank. Further ahead, it brings out the bank's credit risks by requiring the creation of high debt provisions and in turn reducing the profit margins of the bank. In more than two decades, since its emergence, rising levels of NPA have grievously impacted the economic growth of the nation. Currently, the Private Sector Banks are in a healthier position than the Public Sector Banks, where serious dents can be seen on their sustainability. If left unchecked, unrecovered loans or bad debts can result into economic and financial deterioration and worsen the investment climate of India. Thus, effective management of NPAs has become the need of the hour. Hence, the presented research provides an avenue to understand the concept of NPA and to suggest some measures to reduce their ever increasing rate.

## IDENTIFICATION OF NON-PERFORMING ASSETS

**Table 1:** Types of loans and its characters

| Nature of Facility                | Parameters  |
|-----------------------------------|---|
| Term Loan                         | Interest and/or installment of principal remain overdue beyond 90 days  |
| Overdraft/Cash Credit             | Becomes “out of order” when outstanding balance remains continuously in excess of the sanctioned limit/drawing power for period beyond 90 days .                |
| Bill Purchased/discounted         | Remains overdue beyond 90 days  |
| Crop Loans (short duration crops) | Installment of principal or interest thereon remains overdue for 2 crop seasons   |
| Crop Loans (Long duration crops)  | Installment of principal or interest thereon remains overdue for 1 crop season  |
| Securitization transactions       | Amount of liquidity facility remains outstanding beyond 90 days   |
| Derivative transactions           | Overdue receivables representing positive mark-to-market value of a derivative contract which remains unpaid beyond 90 days from specified due date for payment |
| Securitisation transaction        | Liquidity facility remains outstanding for more than 90 days  |

Source: <http://www.iibf.org.in/documents/IRAC.pdf>

## CLASSIFICATION OF ASSETS AND PROVISIONING NORMS

**Table 2:** Categories and Parameters of NPA

| No. | Category          | Classification of Assrts   | Provision Requirement  |
|-----|-------------------|--|--|
| 1.  | Substandard Asset | *Remained NPA for a period not less than or equal to one year.<br>*In such cases, the current net worth of the borrower or guarantor or market value of the security charged is not enough to ensure recovery of the bank's dues;<br>*Likely to sustain some loss if deficiencies are not corrected. | *15% of the sum of the net investment in The lease and the unrealized portion of finance income net of finance charge component.<br>*Additional 5% for unsecured exposure in respect of Infrastructure loan i.e. total 20%<br>*Additional 10% for unsecured lease exposure i.e. total 25%.   |
| 2.  | Doubtful Asset    | *Remained in substandard category beyond 1 year; *Recovery - highly questionable and improbable.   | *100% of the finance not secured by the realizable value of the leased asset. *Additional provision on the unrealised portion of finance income net of finance charge component of the secured portion as under:-<br>Period for which the advance remained in doubtful category and the provision (%):<br>-Up to one year is 25% provision,<br>-One to three years 40% provision,<br>-More than three years 100% |
| 3.  | Loss Asset        | *Asset considered uncollectible and of little value but not written off wholly by the bank.<br>*Continuance as bankable assets although it may have some salvage or recovery value.  | To be written off or 100% of the sum of the net investment in the lease and the unrealized portion of finance income net of finance charge component.  |

Source: <http://www.iibf.org.in/documents/IRAC.pdf>

## TYPES OF NON-PERFORMING ASSETS

### ➤ Gross NPA:

According to the Central Bank's directives, the totaled value of all loan asset accounts previously termed as NPA as on the date of Balance Sheet is considered as Gross NPA. It reveals the loan quality advanced by the banks and also uncovers the real NPA values. All the nonstandard assets like as sub-standard, loss and doubtful assets are included in it. The calculations are as follows:-

$$\text{Gross NPAs Ratio} = \text{Gross NPAs} / \text{Gross Advances}$$

### ➤ Net NPA:

The value of NPAs left, after deducting the provisions made from Gross NPAs, are termed as Net NPA. They reflect the actual amount of unrecovered debts of the banks.

The provision established as per the RBI rules are followed properly as the loan write off and recovery process is very cumbersome. As a result, the gap between gross and net NPA is generally huge. The calculations are as follows:

$$\text{Net NPAs Ratio} = \text{Gross NPAs} - \text{Provisions} / \text{Gross Advances} - \text{Provisions}$$

## MEASURES TO REDUCE NPAs IN INDIAN BANKS

Following the legal measures to recover NPAs:-

1. Debt Recovery Tribunals: These tribunals were created on recommendation of Narasimham Committee Report I (1991) to reduce the time taken for settlement of cases. There are currently five Debts Recovery Appellate Tribunals and thirty-three debt recovery tribunals across the country.

2. Securitisation Act 2002: It requires payment of debts to be made within sixty days by defaulters after notice have been issued to them by banks. Borrower without consent of seller can not sell the asset if notice is being issued to him. This act allows banks to take over the management and assets of the company or lender can change the management and sell the assets for recovery of their amounts. In this act, for recovery of advance due an Asset reconstruction Company is created.
3. Lok Adalats: Recovery of loans of small amounts is usually done through them. It deals with NPA amount up to Rs. 5 lakhs. It covers both non-suit and suit filed.
4. Compromise Settlement: It deals with advance of amount less than Rs. 10 crores. It covers cases for which suit have been filed and which are pending with DRTs and courts but it specifically excludes cases of fraud and willful default.
5. Credit Information Bureau: It maintains the information of the defaulters which can be used by all lending institutions. This information can be used to prevent further NPAs.
6. The Insolvency and Bankruptcy Code, 2016: It was introduced to resolve the insolvencies which were time consuming process. It requires insolvency resolution process to be started after request from debtor or creditors and it has to be completed within 180 days in case of Companies and within 90 days in case of Small companies, Startups (Other than partnership firms) and Other companies (Holding assets Rs 1 Crore). The above period can be extended by 90 days in case of companies and 45 days in second case. The separate tribunals are made to oversee insolvency resolution process i.e. National Company Law Tribunal for Companies and LLP and Debt Recovery Tribunal for Individuals and Partnerships.

Other measures to reduce NPAs are :-

1. Credit Appraisal and Monitoring : Policies regarding loan portfolios should be drafted and communicated to staff dealing at service point . Unbiased credit appraisal by bank branch officials , Review and renewal of loan accounts after certain time period , Communicating with borrowers and ascertainment of their financial position at each stage by the managers , Managers with adequate and up-to-date knowledge about the market conditions and weakness if any in credit monitoring and appraisal should be overcome through proper training , using acquired knowledge by employees and HRM .
2. Inspection and Credit Audit: It helps in discovering the credit irregularities and carrying out the required compliances so that NPA can be prevented through improving activity level and strengthening the security.
3. Risk Management: NPA can be prevented to much extent through Credit modeling, Credit MIS, Proper risk architecture, Independent risk evaluation, Complying the documented risk management policy, centralized data base.
4. Asset Management Companies: These Companies are required to be formed due to SARFESI Act for undertaking activities dealing with the asset reconstruction. It acquires distress assets from various financial institutions like banks and open markets.

## **B. LITERATURE REVIEW**

There is a plethora of existing literature on the issue of NPA in Indian banking sector. Numerous researchers have tried to uncover the reasons of emergence of NPAs, issues concerning them, their effect on banking business, and remedial measures to curb this problem. The presented paper attempts to add value to the already existing researches on this subject.

Dutta, A (2014) studied the rise of NPA in the Indian private and public sector banks, along with sector wise analyzes of NPAs. The data was gathered from secondary sources like- Report on Currency and Finance, RBI, report on Trend and Progress of Banking in India, RBI Economic Surveys of India, etc.

Das, S. (2010) aimed to discover the parameters resulting into creation of NPAs, and concluded that willful defaults, market failure, non-cooperation from banks, poor follow-up and supervision, poor Legal framework, diversion of funds, and lack of entrepreneurial skills.

Ahmad, Z., Jegadeeshwaran, M. (2013) analyzed causes for NPA and gathered secondary data for five years. Mean, CAGR, and ANOVA were used for analysis. The ranking of nationalized banks was done on the basis of their efficient NPA management.

Reddy, P.K. (2002) evaluated the management of NPA by other Asian countries and suggested measures to handle the ever rising issue of NPA from Indian economy's context.

Joseph, A. L. (2014) brought out the trends of NPA in banking sector, the external, internal, and other factors that majorly gives rise to NPA in the banking industry and suggested preventive measures.

Kamra, S. D. (2013) studied the emergence of NPAs in the selected nationalised banks namely Punjab National Bank (PNB), State Bank of India (SBI), and Central Bank of India (CBI). Furthermore, special reference has been given to the policies pursued by the banks for NPA management. Also, loan recovery strategies have also been discussed.

Arora, N., Ostwal, N. (2014) classified and compared the loan assets of private and public sector banks. The research concluded that NPAs are a threat for all the financial institutions and public sector banks are under the heat more than the Private sector banks.

Patnaik, B.C.M., Satpathy, I. (2012) attempted to find out the reasons for NPAs in working capital loans of Urban Co-operative banks. The researchers surveyed the borrowers through questionnaires, analyzed reasons, and suggested measures to solve the issue.

Bhatia, B.S., Waraich, S., Gautam, V. (2013) attempted to discover the impact of new product lines and trends in NPA against loan schemes in District Central Cooperative Bank of Punjab. Lastly, measures for improvement in NPA management were suggested.

Rajput, N., Gupta, M., Chauhan, A.K. (2012) found out the profitability indicators on NPA, causes of NPA, and the solution for the same. All empirical findings were concluded by employment of statistical tools like regression, data representation techniques, correlation, and DEA.

Ibrahim, M.S., Thangavelu, R. (2014) elaborated the concept of NPAs, elements of loan assets in various sectors of banking industry with the help of secondary data analysis.

Srinivas, K.T. (2013) studied the causes for advances and loans converting into NPA accounts in the Indian Commercial banking Sector and give a suitable solution to overcome the mentioned problem.

Rajput, N., Arora, A.P., Kaur, B. (2012) studied managing of NPAs of the Indian public sector banks with respect to stringent asset classification norms. The research attempted to follow the movement of the NPAs existing in Indian public sector banks and also evaluated the performance of the banks in non-performing assets management.

Rajaraman, I., Vasishtha, G. (2001) employed panel regression on the definitional uniform NPA secondary data for a five-year period ranging from 1999-2000. The study evaluated 27 public sector banks and researched variations within an asset class, having same nature on the operational efficiency and ownership dimension.

Gupta, B. (2012) attempted to study the concept of non-performing assets. The paper evaluated SBI and Associates, and public sector banks. The magnitude and prime reasons for rising NPA and evaluation of the operational performance in managing bad debts have been studied.

Rajput, N., Arora, A.P., Kaur, B. (2011) followed the emergence and trend of the NPAs in Indian public sector banks through the evaluation of the financial performance in NPA management.

Ganesan, D., Santhanakrishnan, R. (2013) undertook analysis and evaluation of the SBI's nonperformance assets from the year 2002.

Stuti, Bansal, S. (2013) presented the NPAs Trends and issues with analyzing and evaluating the Indian Private sector banks and Public Sector Bank's efficient management of NPAs by taking secondary data for the period ranging from 2003-04 and 2007-09.

## **OBJECTIVES**

- To study the concept of Non-Performing Assets
- To find the mean variation between Gross NPA Ratio of major Indian Public Sector banks
- To suggest some measures to overcome the problem of NPA in Indian Public Sector Banks

## **C. METHODOLOGY**

### **i. Sample and Time Period**

Gross NPA Ratio of 21 Public Sector Banks has been used for the purpose of this research. Leading Public Sector Banks were selected as the sample. The selected Public Sector Banks are as follows:

State Bank of India and Its Associates, Allahabad Bank, Andhra Bank, Bank of Baroda, Bank of India, Bank of Maharashtra, Canara Bank, Central Bank of India, Corporation Bank, Dena Bank, IDBI Bank Limited, Indian Bank, Indian Overseas Bank, Oriental Bank of Commerce, Punjab and Sind Bank, Punjab National Bank, Syndicate Bank, UCO Bank, Union Bank of India, United Bank of India and Vijaya Bank.

Aggregate data of gross NPA ratio for 11 years, 2005 to 2015, of the above banks has been analyzed.

### **ii. Data Collection**

The presented paper exhibits quantitative research. The secondary data was collected from the official website of Reserve Bank of India for the period ranging from 2005 to 2015. The existing research paper and books dealing with Indian banking system were also used for the study.

### **iii. Tools and Techniques**

The collected information has been tabulated, analyzed, and interpreted on the basis of statistical analysis. Data processing and analysis have been done both manually and by using computer.

The data collected were analyzed with the help of tools like Tabular Method, Ratios and ANOVA. Tables are used to represent the consolidated data. In this paper Gross NPA Ratios were calculated in excel worksheet through MS-Excel Data Analysis Tool.

The working is based on the actual figures and the details available at Reserve Bank of India's website.

**iv. Hypothesis**

In our study, following hypothesis is tested:

**H<sub>0</sub>:** There is no significant difference in mean variation between the Gross NPA Ratio of all sample banks.

**H<sub>1</sub>:** There is significant difference in mean variation between the Gross NPA Ratio of all sample banks.

**II. Analysis And Interpretation**

The Gross NPA Ratio for eleven years from 2005 to 2015 is analyzed using MS-Excel, and statistical tool, “Analysis of Variance” or ANOVA .

For the purpose of the study Analysis of Variance (ANOVA) one way has been used.

**Anova: Single Factor**

**Table 3:SUMMARY**

| <i>Groups</i> | <i>Count</i> | <i>Sum</i> | <i>Average</i> | <i>Variance</i> |
|---------------|--------------|------------|----------------|-----------------|
| Row 1         | 10           | 35.20482   | 3.520482       | 0.833305        |
| Row 2         | 10           | 30.89799   | 3.089799       | 2.440935        |
| Row 3         | 10           | 23.93137   | 2.393137       | 3.048242        |
| Row 4         | 10           | 23.69104   | 2.369104       | 0.809684        |
| Row 5         | 10           | 29.92259   | 2.992259       | 1.137525        |
| Row 6         | 10           | 32.56933   | 3.256933       | 2.314578        |
| Row 7         | 10           | 20.34063   | 2.034063       | 0.629537        |
| Row 8         | 10           | 43.61897   | 4.361897       | 3.150679        |
| Row 9         | 10           | 20.36804   | 2.036804       | 1.555709        |
| Row 10        | 10           | 31.38702   | 3.138702       | 2.789373        |
| Row 11        | 10           | 27.01076   | 2.701076       | 2.334727        |
| Row 12        | 10           | 21.94948   | 2.194948       | 1.688485        |
| Row 13        | 10           | 37.48797   | 3.748797       | 3.732386        |
| Row 14        | 10           | 32.28028   | 3.228028       | 2.142272        |
| Row 15        | 10           | 28.83488   | 2.883488       | 7.893122        |
| Row 16        | 10           | 34.79071   | 3.479071       | 2.567368        |
| Row 17        | 10           | 27.16951   | 2.716951       | 0.345536        |
| Row 18        | 10           | 37.30906   | 3.730906       | 2.054783        |
| Row 19        | 10           | 30.71788   | 3.071788       | 0.933506        |
| Row 20        | 10           | 47.16846   | 4.716846       | 8.186153        |
| Row 21        | 10           | 24.22949   | 2.422949       | 0.21617         |

**Table 4: ANOVA results of Gross NPA Ratio between Public Sector Banks**

| ANOVA                      |           |           |           |          |                |               |
|----------------------------|-----------|-----------|-----------|----------|----------------|---------------|
| <i>Source of Variation</i> | <i>SS</i> | <i>Df</i> | <i>MS</i> | <i>F</i> | <i>P-value</i> | <i>F crit</i> |
| Between Groups             | 102.8305  | 20        | 5.141523  | 2.125262 | 0.004827       | 1.626388      |
| Within Groups              | 457.2367  | 189       | 2.419242  |          |                |               |
| Total                      | 560.0671  | 209       |           |          |                |               |

From the above output we can see that the observed F-Value of 2.125262 is greater than Critical Value of 1.626388 and also p-value of 0.004827 is smaller than our alpha level of 0.05, so the null hypothesis should be rejected.

Since null hypothesis is rejected so we should accept the alternate hypothesis, it means that there is significant difference in mean variation between the Gross NPA Ratio of all sample banks for the period mentioned.

**III. Conclusion**

NPAs are the suction holes in our economy, gradually weakening and draining the financial capital and strength of the banking sector. Not only is this a financial problem of the nation but it has turned into a political menace as well. Pragmatic approach, strong loan monitoring and recovery measures, and structured NPA management policies should be employed by banks and other financial institutions to deter rising NPA. Public sector banks, in comparison to private sector banks, have more adverse situation when it comes to debt recovery. Therefore, it is of great importance that they exhibit more efforts to avoid creation of NPA accounts and should establish efficient and effective corrective actions.

The increasing NPAs of banks are a cause of major concern to the Indian banking sector and economy because NPAs negatively affects the performance of the banks by not only reducing the level of returns on its asset but also reducing profits as provisions are required to be made for them. The current study deals with NPA of the Public sector banks. A research was conducted on 21 banks, based on the secondary data obtained from the RBI publications for 11 years from 2005 to 2015. An attempt was made to analyze the data through statistical tool called ANOVA.

The major objective of the study was to find whether there exists any difference in mean variation between the Gross NPA ratios of the sample banks during the period of the study. The study reveals that there is a significant difference between the means of Gross NPA Ratios at 5% level of significance. Hence, we can conclude that the selected Indian banks have difference in their Gross NPA Ratios.

## **F. LIMITATIONS**

The paper, thus presented, has its scope limited to select Public Sector Banks in India only. The study done is confined to a period of eleven years. The basis for identifying NPAs has been taken from RBI publications. The study done is based on secondary data which might be manipulated. Further, for analysis, ANOVA have been used. The said research can be undertaken with employment of various different tools, different set of Banks and with a different time frame.

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