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A study on non performing assets management with reference to public sector banks, private sector banks and foreign banks in india

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ABSTRACT: Non Performing Assets (NPA‟s) are one of the major areas of concern for the Indian banking industry. Non-Performing Assets are like a double edged sword. They do not generate any income, whereas, the bank is required to make provisions such as assets. (Olekar and Talawar, 2012). NPAs do not just reflect badly in a bank‟s account books, they adversely impact the national economy. There are many research conducted on the topic of Non- Performing Assets (NPA) Management, concerning particular bank, comparative study of public and private banks etc. This paper considers the aggregate data of public sector, private sector and foreign banks and attempts to compare analyze and interpret the NPA management from the year 2009 -2013. On the conceptual side, it gives an overview of NPA, Types of NPA, causes and on the calculation side, it covers various NPA related ratios, use of Least square method for estimating Gross NPAs in the year 2014, and also application of ANOVA test to judge the presence of any significant difference between ratio of Gross NPA to Gross Advances. The findings reveals the percentage of Gross NPA to Gross advances is increasing for public banks, ratio of Loss Advances to Gross Advances are higher in foreign banks, the Estimated Gross NPA for 2014 is also more in public banks as compared to private and foreign banks and from the ANOVA test, it is concluded Ratio of Gross NPA to Gross Advances for public sector, private Sector and foreign Banks does not have significant difference between 2009 to 2013

Keywords: Non Performing Asset (NPA), Public Banks, Private Banks, Foreign Banks

1. INTRODUCTION

It has been argued by a number of economists that a well-developed financial system enables smooth flow of savings and investments and hence, supports economic growth (see King and Levine, 1993, Goldsmith, 1969). Banking industry is a major sector of the economy that has achieved renewed focus after financial sector reforms and the entry of private sector banks. This sector is the foundation of modern economic development. The primary function of banks is to lend funds as loans to various sectors such as agriculture, industry, personal and housing etc. and to receive deposits. Receiving deposit involves no risk, since it is the banker who owes a duty to repay the deposit, whenever it is demanded. On the other hand lending always involves much risk because there is no certainty of repayment. In recent times the banks have become very careful in extending loans, the reason being rising non-performing assets. Non-performing assets had been the single largest cause of frustration of the banking sector of India. Amongst the various desirable characteristics of a well-functioning financial system, the maintenance of a few non-performing assets (NPA) is an important one.

2. NON –PERFORMING ASSET- CONCEPT

A **Non-Performing Asset** (NPA) is defined 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.

In India, the definition of NPAs has changed over time. According to the Narasimham Committee Report (1991), those assets (advances, bills discounted, overdrafts, cash credit etc.) for which the interest and/or installment of principal remains due for a period of four quarters (180 days) should be considered as NPAs.

With an aim of moving towards the international best practices and ensuring greater transparency, a standard criterion of "90 days" overdue norm was fixed for identification of NPA from the FY ending March, 2004 in the Indian financial system. Thus, as per present convention, a non-performing asset refers to a loan or an advance where:

- Interest and/or installment of principal remain overdue for a period of more than 90 days in respect of a term loan,
- The account remains „out of order" for a period of more than 90 days, in respect of an Overdraft/Cash Credit (OD/CC),
- The bill remains overdue for a period of more than 90 days in the case of bills purchased and discounted,
- Interest and/or installment of principal remains overdue for two harvest seasons but for a period not exceeding two half years in the case of an advance granted for agricultural purposes, and
- Any amount to be received remains overdue for a period of more than 90 days in respect of other accounts

3. NORMS FOR ASSET CLASSIFICATION/ CLASSIFICATION OF NPA

The loan accounts in Banks are classified into four categories. Out of these four categories, the following three categories are considered as NPAs:-

a) Sub-standard Assets

Before 31 March 2001, sub-standard asset was classified as NPA for a period not exceeding two years but with effect from 31 March 2001, a sub-standard asset which has remained NPA for a period less than or equal to 18 months. With effect from 31 March 2005 the norms have been further squeeze and a sub-standard asset would be one, which has remained NPA for a period less than or equal to 12 months.

In such cases, the current net worth of the borrower/ guarantor or the current market value of the security charged is not enough to ensure recovery of the dues to the banks in full.

b) Doubtful Assets

Before 31 March 2001, doubtful asset was remained NPA for a period exceeding two years but with effect from 31 March 2001, it had remained NPA for a period exceeding 18 months. With effect from March 31, 2005, the norms have been further squeeze, and an asset would be classified as doubtful if it remained in the sub-standard category for 12 months.

c) **Loss Assets:**

A loss asset is one where loss has been identified by the bank or internal or external auditors or the RBI inspection but the amount has not been written off wholly. In other words, such an asset is considered uncollectible and of such little value that its continuance as a bankable asset is not warranted although there may be some salvage or recovery value.

However, only those advances are classified as loss assets where no security is available. In accounts where some security / ECGC /DICGC cover is available, these accounts are not reported under loss assets.

The fourth category of loan accounts, which is not included in NPA categories - is Standard Assets. Standard Asset is one which does not disclose any problems and which does not carry only normal risk attached to the business.

According to the RBI guidelines, as and when an asset becomes a NPA, such advances would be first classified. However, it needs to be noted that the asset classification is only for the purpose of computing the amount of provision that needs to be made with respect to bank advances.

4. CAUSES FOR NPA

Table 1. Causes for Non Performing Asset (NPA)

Borrower	Bank	Other
➢ Too ambitious Project ➢ Heavy borrowing ➢ Poor credit collection ➢ Poor quality management ➢ Willful Default ➢ Depend on Single customer ➢ Fail to bring required Fund ➢ Lack of Proper Planning	➢ Poor credit appraisal ➢ Non inspection of unit ➢ Defective lending process ➢ Lack of trained staff ➢ System overloaded ➢ Lack of commitment to recovery ➢ Lack of technical support ➢ Inefficient recovery system	➢ Lack of infrastructure ➢ Lack of Government support ➢ Government policies ➢ Changes related to Banking amendments ➢ Natural Calamities ➢ Recession and variation in economic conditions.

5. LITERATURE REVIEW

There are many studies conducted on the issue of Non Performing Asset Management in Indian Banks, following is the review of few literatures about the NPA Practices and Management conducted for Banks in India.

Narula and Singla (2014) evaluate the non – performing assets of Punjab National Bank and its impact on profitability & to see the relation between total advances, Net Profits, Gross & Net NPA. The study uses the annual reports of Punjab National Bank for the period of six years from 2006-07 to 2011-12. These papers conclude that there is a positive relation between Net Profits and NPA of PNB. It is because of the mismanagement on the side of bank.

Arora and Ostwal (2014) conducted study on "Unearthing the Epidemic of Non-Performing Assets: A Study of Public and Private Sector Banks" which deals with the concept of Non-performing assets and analyze the classification of loan assets of public and private sector banks. It also explores the comparison of loan assets of Public sector and private sector banks. The study concluded that private sectors improving due to decline in NPAs ratio compare to Public sector banks due to recovery management done in NPAs and suggest that there is need to check the NPAs of public sector banks so that Indian banking system becomes efficient.

Srinivas K T (2013) emphasis on identify the Non-performing assets at Commercial banks in India. This paper highlights the various general reasons which convert advances/ assets into NPA and also give suitable suggestion on findings to overcome the mentioned problem.

Sikdar and Makkad (2013) this paper provide insight on the role of NPA in risk frame work of selected Indian commercial banks and try to put forward the means of interpreting credit risk from existing levels of bank NPAs. Further, research highlights the significant steps taken and procedures implemented by major Indian commercial banks, within the public and private sector, towards recovery of loans and advances falls into the NPA bracket. The research for the present paper is based on extensive study of annual publications on performance of public sector and private sector commercial banks by the Indian Banks Association (IBA). Further, annual reports of commercial banks in focus for the year ending March 2012 have been studied. The study conclude that problem of NPAs can be tackled only with proper credit assessment and risk management mechanism.

Olekar and Talawar (2012) studied NPA management with reference to Karnatak central co-operative bank ltd., where they described conceptual data about NPA and on the other hand, they calculated few NPA related ratios and used trend projection method to predict next year advances for the bank. Their finding includes the considerable reduction of NPA for the bank and some suggestions for recovery of NPA.

Malyadri and Sirisha (2011) this study examine the NPA of Public Sector banks and Private sector banks of weaker sections for the period seven years in India. The secondary data compiled from Report on Trends and Progress of Banking in India, 2004-10 which has been analyzed by statistical tool such as percentages and compound Annual Growth rate. This study reveals that the public sector banks have achieved a greater penetration compared to the private sector banks.

Kaur and Saddy (2011) in the research paper entitled "A Comparative Study of Non-Performing Assets of Public and Private Sector Banks" an attempt is made to clarify the concept of NPA, the factors contributing to NPAs, the magnitude of NPAs, reasons for high NPAs and their impact on Indian banking operations. Besides capital to risk weight age assets ratio of Public and Private sector banks, management of credit risk and measures to control the threat of NPAs are also discussed.

Hosmani and Hudagi (2011) conducted study on "Unearthing the Epidemic of Non Performing Assets with Reference to Public Sector Banks in India" an empirical and descriptive in nature which shows the magnitude and trend of Public Sector banks in India and found that there is a slight improvement in the asset quality reflected by decline in the diverse NPA percentage. The study concluded that NPA is an important parameter for assessing financial performance of banks in terms of profitability, liquidity and economies of scale in operation and banks has to take timely action against degradation of good performing assets.

Meenakshi and Mahesh (2010) this exploratory paper examines the trends of NPAs at global level - One interesting observation is that most of the countries that fall under the higher „NPA/Total Loan" ratio Category are in the Asian region & Also examine India from various magnitudes and also identification of the problem & recovery mechanism to a great extent. It also show that NPA in the priority sector is higher than non – priority sector. The paper also discusses the role of joint liability groups (JLGs) or self help groups (SHGs) in enhancing the loan recovery rate.

6. OBJECTIVES OF THE STUDY

1. To study the concept, types, causes of Non Performing Assets (NPA) in Banks.
2. To analyze and interpret various NPA related ratios for aggregates of Public Sector, Private Sector and Foreign Banks in India from 2009-2013.
3. To use Least Square method for projecting the amount of NPA in the year 2014 for Public Sector, Private Sector and Foreign Banks in India and interpret the same.
4. To test that is there any significant differences between ratio of Gross NPA to Gross Advances for aggregates of Public Sector, Private Sector and Foreign Banks in India from 2009-2013.
5. To summarize the findings derived from the study.

7. HYPOTHESIS

Null Hypothesis (H_0): The Ratio of Gross NPA to Gross Advances for Public sector, Private Sector and Foreign Banks does not differ significantly from the year 2009 to 2013

Alternate Hypothesis (H_1): The Ratio of Gross NPA to Gross Advances for Public sector, Private Sector and Foreign Banks differ significantly from the year 2009 to 2013

8. METHODOLOGY OF STUDY

The Analysis in the paper is done on the total i.e. aggregate data starting from 2009 to 2013 for making comparison between Public sector Banks, Private Sector Banks and Foreign Banks on the overall basis. This helped us to derive the findings and conclusions -sector wise.

8.1 Population: Banking industry is taken for the study, where aggregate data related to NPA for Public sector Banks, Private Sector Banks and Foreign Banks is used.

8.2 Research Design

Descriptive research design is used for the study

8.3 Data Collection

Data used in the paper is secondary, which is compiled from Reserve Bank of India (RBI) website, and from review of Literature.

8.4 Data Analysis Tools

Tools include Ratio analysis, application of Least Square Method and use of SPSS.

8.5 Time- Period of the Paper

5year‟s Aggregate data from 2009 to 2013 is used for the study

9. ANALYSIS AND INTERPRETATION

9.1 Ratios Related to Non Performing Asset (NPA)

9.1.1 Total Gross NPA to Total Gross Advances

Table 2: Total Gross NPA to Total Gross Advances (Rs In Billions) As on 31st March

Bank Name	Year	Gross NPAs	Total Gross Advances	Percent Share
Public Sector Banks	2009	440.32	20,986.33	2.1
	2010	572.93	25,124.39	2.28
	2011	710.8	30,599.53	2.32
	2012	1,124.89	35,503.89	3.17
	2013	1,558.90	40,558.74	3.84
Private Sector Banks	2009	168.9	5,200.77	3.25
	2010	173.87	5,851.10	2.97
	2011	179.75	7,329.53	2.45
	2012	183.21	8,812.16	2.08
	2013	199.92	10,466.65	1.91
Foreign Banks	2009	72.94	1,697.14	4.3
	2010	71.28	1,674.39	4.26
	2011	50.65	1,993.21	2.54
	2012	62.92	2,347.32	2.68
	2013	79.72	2,686.12	2.97

(Source: http://www.rbi.org.in/scripts/PublicationsView.aspx?id=15501**)**

9.1.1.1 Interpretation:

The Ratio of Gross NPA to Gross Advances for Public sector banks is increasing and decreasing ratio of Private sector Banks, while the phenomenal decrease in ratio is observed for Foreign Banks too, it can be seen the ratio in Private sector banks for 2012 and 2013 as compared to other banks is less, showing the efforts taken by Private Banks.

9.1.2 Sub Standard Advances to Total Gross Advances

Table 3. Sub Standard Advances to Total Gross Advances (Rs in Billions) As on 31st March

Bank Name	Year	Sub-Standard Advances	Total Gross Advances	Percent Share
Public Sector Banks	2009	195.21	20,986.33	0.93
	2010	276.85	25,124.39	1.1
	2011	336.12	30,599.53	1.1
	2012	603.76	35,503.89	1.7
	2013	765.89	40,558.74	1.89
Private Sector Banks	2009	105.27	5,200.77	2.02
	2010	86.78	5,851.10	1.48
	2011	44	7,329.53	0.6
	2012	51.33	8,812.16	0.58
	2013	58.54	10,466.65	0.56
Foreign Banks	2009	58.74	1,697.14	3.46
	2010	49.3	1,674.39	2.94
	2011	18.65	1,993.21	0.94
	2012	20.78	2,347.32	0.89
	2013	28.82	2,686.12	1.07

(Source: http://www.rbi.org.in/scripts/PublicationsView.aspx?id=15501**)**

9.1.2.1 Interpretation:

The Ratio of sub- standard advances to Gross Advances is showing increasing trend for Public sectors against decreasing trend for Private sector Banks and also for Foreign Banks (except in 2013). Still the situation for Private Banks is better than other Banks, considering the ratio nearby 0.6 from three consecutive years starting from 2011.

9.1.3 Doubtful Advances to Total Gross Advances

Table 4. Doubtful Advances to Total Gross Advances (Rs in Billions) As on 31st March

Bank Name	Year	Doubtful Advances	Total Gross Advances	Percent Share
Public Sector Banks	2009	207.08	20,986.33	0.99
	2010	246.79	25,124.39	0.98
	2011	319.55	30,599.53	1.04
	2012	470.75	35,503.89	1.33
	2013	734.85	40,558.74	1.81
Private Sector Banks	2009	50.18	5,200.77	0.96
	2010	65.43	5,851.10	1.12
	2011	107.36	7,329.53	1.46
	2012	103.16	8,812.16	1.17
	2013	110.69	10,466.65	1.06
Foreign Banks	2009	10.04	1,697.14	0.59
	2010	14.41	1,674.39	0.86
	2011	21.13	1,993.21	1.06
	2012	22.32	2,347.32	0.95
	2013	27.51	2,686.12	1.02

(Source: http://www.rbi.org.in/scripts/PublicationsView.aspx?id=15501**)**

9.1.3.1 Interpretation:

The Ratio of Doubtful advances to Gross Advances for Public, Private and Foreign Sector Banks is showing increasing trend, while the ratio started decreasing since 2012 in case of Private Banks and some reduction is also observed in 2012 for Foreign Banks. Overall the situation of Foreign Banks is better against other Banks.

9.1.4 Loss Advances to Total Gross Advances

Table 5. Loss Advances to Total Gross Advances (Rs in Billions) As on 31st March

Bank Name	Year	Loss Advances	Total Gross Advances	Percentage
Public Sector Banks	2009	38.03	20,986.33	0.18
	2010	49.28	25,124.39	0.2
	2011	55.14	30,599.53	0.18
	2012	50.37	35,503.89	0.14
	2013	58.15	40,558.74	0.14
Private Sector Banks	2009	13.45	5,200.77	0.26
	2010	21.66	5,851.10	0.37
	2011	28.39	7,329.53	0.39
	2012	28.72	8,812.16	0.33
	2013	30.69	10,466.65	0.29
Foreign Banks	2009	4.16	1,697.14	0.25
	2010	7.57	1,674.39	0.45
	2011	10.87	1,993.21	0.55
	2012	19.82	2,347.32	0.84
	2013	23.39	2,686.12	0.87

9.1.4.1 Interpretation:

The Ratio of Loss Advances to Gross Advances is showing increasing trend in case of Foreign Banks and is fluctuating for Private Banks, while stabilized for Public Banks for 2012 & 2013. Overall it is observed the ratio of loss advances to Gross advances is lesser in Public Banks against other Banks.

9.2 Least Square method

9.2.1 Use of Least Square Method for Predicting Gross NPAs for 2014

Table 6 Public Sector Banks

Year	Y Gross NPAs (Rs. Billions)	X (Year - 2011)	XY	X^2
2009	440.32	-2	-880.64	4
2010	572.93	-1	-572.93	1
2011	710.8	0	0	0
2012	1,124.89	1	1124.89	1
2013	1,558.90	2	3117.8	4
	4,407.84		**2789.12**	**10**

n=5
Straight line Equation
y = a + b *x*

b= ΣXY / ΣX^2 = 278.912

a= Σy / n = 881.568
y = a + b ***x***
y= 881.568 + 278.912 ***x***

y 2014= 881.568 + 278.912(3)

y 2014 = Rs. 1718.304 Billion

9.2.1.1 Interpretation:

From the use of least square method the Gross NPA for Public Sector Banks will rise by Rs. 1718.304 Billion for the year 2014, which was 1,558.90 Billion for the year 2013.

9.2.2 Use of Least Square Method for Predicting Gross NPAs for 2014

Table 7 Private Sector Banks

Year	Y Gross NPAs (Rs. Billions)	X (Year - 2011)	XY	X^2
2009	168.9	-2	-337.8	4
2010	173.87	-1	-173.87	1
2011	179.75	0	0	0
2012	183.21	1	183.21	1
2013	199.92	2	399.84	4
	905.65		**71.38**	**10**

n=5
Straight line Equation
y = a + b *x*

b= ΣXY / ΣX^2 = 7.138

a= Σy / n = 181.13

y = a + b *x*
y= 181.13 + 7.138 ***x***
y 2014= 181.13 + 7.138(3)

y 2014 = Rs. 202.544 Billion

9.2.2.1 Interpretation:

From the use of least square method the Gross NPA for Private Sector Banks will rise by Rs. 202.544 Billion for the year 2014, which was 199.92 Billion for the year 2013.

9.2.3 Use of Least Square Method for Predicting Gross NPAs for 2014

Table 8 Foreign Banks

Year	Y Gross NPAs (Rs. Billions)	X (Year - 2011)	XY	X^2
2009	72.94	-2	-145.88	4
2010	71.28	-1	-71.28	1
2011	50.65	0	0	0
2012	62.92	1	62.92	1
2013	79.72	2	159.44	4
	337.51		**5.2**	**10**

n=5

Straight line Equation

$y = a + b\,x$

$b = \Sigma XY / \Sigma X^2 = 0.52$

$a = \Sigma y / n = 67.502$

$y = a + b\,x$

$y = 67.502 + 0.52\,\boldsymbol{x}$

y 2014= 67.502 + 0.52(3)

y 2014 = Rs. 69.062 Billion

9.2.3.1 Interpretation:

From the use of least square method the Gross NPA for Foreign Banks will rise by Rs. 69.062 Billion for the year 2014, which was 79.72 Billion for the year 2013.

9.3 Analysis of Variance (ANOVA)

Table 9 Ratio of Total Gross NPA to Total Gross Advances

Year	Public sector Bank	Private sector Bank	Foreign sector Bank
2009	2.1	3.25	4.3
2010	2.28	2.97	4.26
2011	2.32	2.45	2.54
2012	3.17	2.08	2.68
2013	3.84	1.91	2.97

Table 10. ANOVA for Ratio of Gross NPA to Gross Advances

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.805	2	.902	1.672	.229
Within Groups	6.478	12	.540		
Total	8.283	14			

H_0: The Ratio of Gross NPA to Gross Advances for Public sector, Private Sector and Foreign Banks does not differ significantly from the year 2009 to 2013

H_1: The Ratio of Gross NPA to Gross Advances for Public sector, Private Sector and Foreign Banks differ significantly from the year 2009 to 2013

9.3.1 Interpretation:

From the ANOVA test, it is found that the Sig. value is greater than 0.05, **so null hypothesis is not rejected**. That will conclude Ratio of Gross NPA to Gross Advances for Public sector, Private Sector and Foreign Banks does not have significant difference between the year 2009- 2013.

10. FINDINGS

1. The Ratio of Gross NPA to Gross Advances is decreasing for Private Sector Banks, which was 3.25 in 2009 , and has decreased to 1.91 and it is in better situation than Foreign banks and Public Banks
2. The Ratio of Sub- standard advances to Gross Advances is nearby 0.6 from three consecutive years starting from 2011 to 2013 for Private Banks and is better than Foreign banks and Public Banks
3. The Ratio of Doubtful advances to Gross Advances was having increasing trend for the Public Banks, Private Banks and Foreign Banks between 2009 -2011, still on the overall basis ratio was not greater than 1.06 for Foreign Banks, which was 1.81 for Public Banks and 1.46 for Private Banks on the upper side.
4. The Ratio of Loss Advances to Gross Advances is stable for Public Banks from two consecutive years 2012 and 2013 i.e. 0.14, against 0.18 in the year 2009.The ratio was greater in Foreign Banks, i.e. 0.87 in 2013.
5. From the least Square Method, the estimated NPA for the year 2014 is 1718.304 Billion for Public Sector Banks, for Private Sector Banks it may rise by Rs. 202.544 Billion for the year 2014 and in case of Foreign Banks it may rise by Rs. 69.062 Billion for the year 2014. The Highest NPA is predicted for Public Sector Banks in the year 2014.
6. From ANOVA test it is found, Ratio of Gross NPA to Gross Advances for Public sector, Private Sector and Foreign Banks does not have significant difference from 2009 to 2013, and it does not reject our null hypothesis.

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