

NPA Management Efficiency: A Comparative Study of New Private Sector Banks

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Abstract: NPAs have become a major problem for the banking sector in India. All the categories of SCBs have been encountering this problem since a long period of time. However the level of NPAs vary across different banks falling under different groups of SCBs. Moreover the efficiency with which they are dealing with this issue of NPAs also varies. So it is required to study their comparative efficiency in relation to NPA management. In this research paper different new private sector banks have been comparatively analyzed with respect to their efficiency in NPA management. For this purpose the statistical techniques of Growth Rate Analysis and Descriptive Analysis have been used.

Keywords: New private sector banks, NPA Management, Efficiency.

1. INTRODUCTION

The performance of a country's banks is indicated by the level of its NPAs. With increase in NPAs, there is a downfall in bank's performance. There is inverse relationship between NPAs and performance of banks. This crisis of NPAs is shattering the entire economy alongwith banking sector [1]. The credit risk of bankers and their competency in relation to allocation of resources can be judged from the level of their Non Performing Assets [2]. For efficient handling of NPAs, there is a great need for creating proper awareness about the negative impact of NPAs on profitability amongst bank staff, particularly the field officers [3]. The magnitude of NPAs of public sector banks is comparatively more than private sector banks [4]. Every aspect of the functioning of the banking industry, be it profitability, NPA management, customer service, risk management, human resource development etc. has to undergo the process of change for aligning with the international best practices [5]. A large amount of NPAs are towards big industrialists who have considerable influence in corridors of power [6]. Reduction of NPAs should be treated as an item of national priority to ensure strong and sustainable banking system [7]. Many small banks are merging with big banks to ensure their survivability in the competitive environment [8]. The bankers are required to regularly follow their customers to ensure the proper use of funds for the purpose to which it was meant. Moreover there should be frequent discussions with respect to NPAs with the employees in the banks and their recommendations in relation to measures of NPA recovery should be acknowledged to make them more concerned for reducing the adverse impact of NPAs [9].

2. RESEARCH METHODOLOGY

This research paper aims to make a comparative analysis of new private sector banks regarding their efficiency in NPA Management. For this purpose data regarding various parameters of NPAs have been collected for a time period of 10 years viz. from 2007-08 to 2016-17. Data have been collected from secondary sources of data i.e. various issues of Reports on Trends and Progress of Banking in India and Statistical Tables Relating to Banks in India. . Seven new private sector banks have been compared regarding various parameters of NPA management. To study their efficiency in NPA management, different variables used in this research work are the level of gross NPAs and net NPAs, additions in NPAs, recovery of NPAs, return on advances, gross NPA to gross advances ratio, net NPA to net advances ratio.

3. DATA ANALYSIS AND INTERPRETATION

Various new private sector banks are compared w.r.t. their NPA management efficiency using the techniques of growth rate analysis and descriptive analysis.

3.1 Growth in NPAs in New Private Sector Banks:

In this section exponential annual growth rate of Gross NPAs, Net NPAs, Additions in NPAs and Recovery of NPAs of new private sector banks have been calculated to make their comparative analysis. In general, the growth in NPAs is not considered as a positive signal for the development of the economy. The growth rate of Gross NPAs for new private sector banks is calculated with the help of Semi log model. In semi log model, the dependent variable is the natural log of the Gross NPA and the time in years is the independent variable. The Semi-log Model can be expressed below as:

$$\log y = \alpha + \beta (\text{time in years})$$

Where α is intercept and the slope coefficient β represents the growth rate of dependent variable w.r.t. time. The 'p' value of 't' statistic of the slope coefficient represents the significance of growth rate of dependent variable w.r.t. time. The results of semi log model w.r.t. Gross NPAs of the new private sector banks are shown below in table.

Table 1: Annual Growth Rate of Gross NPAs (in %)

Sr. No.	Bank	AGR of Gross NPAs	t-Statistic (p-value)	F-Statistic (p-value)	R- Square
1	YES BANK LTD.	34.2	4.077 (0.007)	16.622 (0.007)	0.735
2	KOTAK MAHINDRA BANK LTD	32.5	4.647 (0.001)	21.592 (0.001)	0.706
3	AXIS BANK	27.1	21.909 (0.000)	479.999 (0.000)	0.982
4	HDFC BANK	20.5	9.276 (0.000)	86.047 (0.000)	0.905
5	ICICI BANK	16.1	5.414 (0.000)	29.315 (0.000)	0.765
6	INDUSIND BANK	6.2	2.595 (0.029)	6.736 (0.029)	0.428
7	DCB BANK LIMITED	-1.6	-0.392 (0.704)	0.154 (0.704)	0.017

The results depicted in table 1 indicate that the 'p' value of 't' statistic for all the new private sector banks except DCB Bank is less than 5% level of significance. So, we can conclude that there exists significant AGR of Gross NPAs for all the new private sector banks except DCB Bank. It is also revealed by the results that the banks with the highest AGR of Gross NPAs are Yes Bank (34.2) and Kotak Mahindra Bank (32.5). The high AGR of Gross NPAs of these banks convey the lack of control on NPA by these banks. On the other hand, the banks with lowest level of AGR of Gross NPAs are Indusind Bank (6.2) and ICICI Bank (16.1). Their low level of AGR of Gross NPAs shows that they are managing their NPAs efficiently and effectively.

The above table 1 reveals that the 'p' value of 'F' statistic for all the new private sector banks except DCB Bank is less than 5% level of significance. It indicates that the Semi-log Model is statistically fit for all the new private sector banks except DCB Bank. The R² value in the results show the percentage of variance in the behaviour of Gross NPAs which can be explained by the time behaviour of Gross NPAs. For example, in case of Yes bank 73.5% of the AGR of Gross NPAs can be explained with the help of time behaviour of it. Similarly, in case of Kotak Mahindra Bank 70.6% of AGR of Gross NPAs can be explained with the help of its time behaviour.

After analysing comparatively the growth rate of Gross NPAs of various new private sector banks, the comparative analysis of growth rate of Net NPAs of different new private sector banks have been done using Semi log Model, the results of which are as follows:

Table 2: Annual Growth Rate of Net NPAs (in %)

Sr. No.	Bank	AGR of Net NPAs	t-Statistic (p-value)	F-Statistic (p-value)	R- Square
1	KOTAK MAHINDRA BANK LTD	30.3	3.638 (0.005)	13.233 (0.005)	0.595
2	HDFC BANK	20.2	5.014 (0.001)	25.143 (0.001)	0.736
3	AXIS BANK	17.8	10.427 (0.000)	108.72 (0.000)	0.924
4	YES BANK LTD.	15.3	1.164 (0.289)	1.354 (0.289)	0.184
5	ICICI BANK	9.2	2.176 (0.058)	4.734 (0.058)	0.345
6	DCB BANK LIMITED	-2.4	-0.402 (0.001)	0.161 (0.001)	0.182
7	INDUSIND BANK	-5.6	-1.347 (0.211)	1.816 (0.211)	0.168

The above table 2 indicates that there exist significant AGR of Net NPAs for 4 new private sector banks viz. Kotak Mahindra Bank, HDFC Bank, AXIS Bank and DCB Bank because the ‘p’ value of ‘t’ statistic for these new private banks is found to be less than 5% level of significance. The results show that the highest AGR of Net NPAs is found in case of Kotak Mahindra Bank (30.3) and HDFC Bank (20.2). Moreover the banks with lowest AGR of Net NPAs are found to be DCB Bank (-2.4) and AXIS Bank (17.8). Their low level of AGR of Net NPAs highlights the efficiency of these banks in dealing with the issue of NPA management.

Besides the AGR of Gross NPAs and Net NPAs, the AGR of Additions in NPAs is also calculated by Semi-log Model which is shown by the below mentioned table.

Table 3: Annual Growth Rate of Addition in NPAs (in %)

Sr. No.	Bank	AGR of Addition in NPAs	t-Statistic (p-value)	F-Statistic (p-value)	R- Square
1	YES BANK LTD.	41.8	3.95 (0.008)	15.602 (0.008)	0.722
2	AXIS BANK	33.6	8.248 (0.000)	68.021 (0.000)	0.883
3	KOTAK MAHINDRA BANK LTD	27.1	3.989 (0.003)	15.912 (0.003)	0.639
4	HDFC BANK	24.4	5.366 (0.000)	28.795 (0.000)	0.762
5	ICICI BANK	14.8	3.435 (0.007)	11.802 (0.007)	0.567
6	INDUSIND BANK	14.6	3.687 (0.005)	13.596 (0.005)	0.602
7	DCB BANK LIMITED	0.3	0.037 (0.971)	0.001 (0.971)	0.724

It is clear from the above table 3 that the ‘p’ value of ‘t’ statistic for all the new private sector banks except DCB Bank is less than 5% level of significance. Hence, there exist significant AGR for Additions in NPAs for all the new private sector banks except DCB Bank. The banks with highest AGR for Additions in NPAs are Yes Bank (41.8) and AXIS Bank (33.6). The high AGR for Additions in NPAs of these banks indicate their inefficiency in NPA management. On the other hand Indusind Bank (14.6) and ICICI Bank (14.8) have the lowest level of AGR for Additions in NPAs, thus conveying their efficiency in NPA management.

The Semi-log Model is also used to find out the AGR of Recovery of NPAs. Its results are shown in the following table 4.

Table 4: Annual Growth Rate of Recovery of NPAs (in %)

Sr. No.	Bank	AGR of Recovery of NPAs	t-Statistic (p-value)	F-Statistic (p-value)	R- Square
1	YES BANK LTD.	82.8	4.082 (0.010)	16.661 (0.010)	0.769
2	KOTAK MAHINDRA BANK LTD	27.6	8.052 (0.000)	64.843 (0.000)	0.891
3	AXIS BANK	26.4	11.256 (0.000)	126.707 (0.000)	0.934
4	HDFC BANK	20.1	2.749 (0.022)	7.56 (0.022)	0.457
5	ICICI BANK	9.9	1.06 (0.317)	1.124 (0.317)	0.111
6	INDUSIND BANK	4.7	1.06 (0.317)	1.124 (0.317)	0.141
7	DCB BANK LIMITED	1.4	0.347 (0.736)	0.121 (0.736)	0.013

The results shown in the above table 4 indicate that for 4 new private sector banks viz. Yes Bank, Kotak Mahindra Bank, AXIS Bank and HDFC Bank the ‘p’ value of ‘t’ statistic is less than 5% level of significance. Hence there exists significant AGR of Recovery of NPAs of these banks. The banks with highest AGR w.r.t. Recovery of NPAs are Yes Bank (82.8) and Kotak Mahindra Bank (27.6). The high level of AGR w.r.t. Recovery of NPAs reveals the efficiency of these banks in NPA management. On the other hand, the banks with low level of efficiency in NPA management are those with low level of AGR w.r.t. Recovery of NPAs and these are HDFC Bank (20.1) and AXIS Bank (26.4).

3.2 Descriptive Analysis of NPAs in New private Sector Banks:

In order to make the comparative analysis of new private sector banks regarding efficiency in NPA management more meaningful, the descriptive analysis of five variables viz. percentage increase in Gross NPAs, percentage recovery of Gross NPAs, return on advances, ratio of Gross NPAs to gross advances and ratio of Net NPAs to net advances have been done by the researcher. In the data analysis, the mean score, standard deviation, minimum and maximum values of these five variables have been computed. The results of data analysis for percentage increase in Gross NPAs are shown below in table 5.

Table 5: Descriptive Statistics of Percentage Increase in Gross NPAs

Sr. No.	Bank	Percentage Increase in Gross NPAs			
		Mean	Std. Deviation	Minimum	Maximum
1	YES BANK LTD.	294.7594	267.02993	79.94	832.33
2	HDFC BANK	158.2254	82.59302	76.97	376.34
3	KOTAK MAHINDRA BANK LTD	155.5007	202.25323	28.34	753.22
4	AXIS BANK	107.5177	54.66308	44.80	208.95
5	DCB BANK LIMITED	94.8487	148.46617	11.10	528.40
6	INDUSIND BANK	94.1242	39.91497	33.99	152.06
7	ICICI BANK	55.8403	24.37403	29.76	97.23

The results shown in table 5 indicate that all the new private sector banks have positive percentage increase in Gross NPAs on an average basis. It means the Gross NPAs of all the new private sector banks are increasing over a period of time but the banks with highest percentage increase in Gross NPAs are Yes Bank (294.7594) and HDFC Bank (158.2254). On the other hand the banks with lowest percentage increase in Gross NPAs are found to be ICICI Bank (55.8403) and Indusind Bank (94.1242). The less percentage increase in Gross NPAs of these banks shows that comparatively these banks are more efficient in NPA management.

To make this comparative study more meaningful the descriptive analysis of percentage recovery of Gross NPAs has been done which is depicted in the following table.

Table 6: Descriptive Statistics of Percentage Recovery of Gross NPAs

Sr. No.	Bank	Percentage Recovery of Gross NPAs			
		Mean	Std. Deviation	Minimum	Maximum
1	YES BANK LTD	94.0653	88.43848	0.00	258.45
2	HDFC BANK	71.2658	47.30208	15.97	144.97
3	DCB BANK LIMITED	66.3996	36.35967	19.10	127.40
4	INDUSIND BANK	55.9683	17.65634	27.11	87.70
5	KOTAK MAHINDRA BANK LTD	47.3138	37.45190	0.00	118.16
6	AXIS BANK	44.7589	13.55638	32.35	73.63
7	ICICI BANK	29.5955	20.10545	5.72	68.25

The results shown in the above table 6 reveal that the highest average percentage recovery of Gross NPAs is in case of Yes Bank (94.0653) and HDFC Bank (71.2658). The high average percentage recovery of Gross NPAs of these banks shows notwithstanding high percentage increase in Gross NPAs, these banks are making good efforts to recover their NPAs hence proving their comparative efficiency in NPA management. ICICI Bank (29.5955) and AXIS Bank (44.7589) have the lowest average percentage recovery of Gross NPAs thus revealing their comparative inefficiency in recovery of NPAs.

To judge the comparative efficiency of different new private sector banks in NPA management the data analysis has been done w.r.t. Return on Advances. The average high return on advances indicates efficiency in NPA Management whereas the average low return on advances indicates inefficiency in NPA management. The data analysis of this variable is shown below in table.

Table 7: Descriptive Statistics of Return on Advances

Sr. No.	Bank	Return on Advances			
		Mean	Std. Deviation	Minimum	Maximum
1	KOTAK MAHINDRA BANK LTD	12.8999	1.57262	10.40	15.50
2	INDUSIND BANK	11.9351	1.60066	9.13	14.13
3	HDFC BANK	11.1891	1.91656	7.68	14.96
4	DCB BANK LIMITED	10.9908	1.62857	8.09	13.47
5	YES BANK LTD.	10.6846	2.95072	3.04	13.63
6	ICICI BANK	9.4352	.77218	8.26	10.72
7	AXIS BANK	9.3792	1.00275	7.84	10.57

It is clear from the results disclosed in the above table 7 that Kotak Mahindra Bank (12.8999) and Indusind Bank (11.9351) have the higher average return on advances in comparison to other new private sector banks. Hence it shows that they are comparatively more efficient in managing NPAs. On the other side, AXIS Bank (9.3792) and ICICI Bank (9.4352) have lower average return on advances in comparison to other new private sector banks. Hence it shows that they are comparatively less efficient in managing NPAs.

In order to have a more clear vision of the comparative efficiency of various new private sector banks in NPA management, the descriptive analysis of Ratio of Gross NPAs to Gross Advances is done, the results of which are revealed by the table 8 mentioned below.

Table 8: Descriptive Statistics of Ratio of Gross NPAs to Gross Advances

Sr. No.	Bank	Ratio of Gross NPAs to Gross Advances			
		Mean	Std. Deviation	Minimum	Maximum
1	DCB BANK LIMITED	6.3852	4.78870	1.53	15.01
2	ICICI BANK	3.7601	1.51030	1.51	6.52
3	KOTAK MAHINDRA BANK LTD	2.1546	1.12818	.63	4.31
4	INDUSIND BANK	1.8457	1.04685	.81	3.53
5	AXIS BANK	1.3044	.30967	.81	1.98
6	HDFC BANK	1.2636	.36324	.85	1.98
7	YES BANK LTD.	.2229	.20468	0.00	0.68

The high average Gross NPA to Gross Advances Ratio is an indicator of inefficiency in NPA management. The results revealed in table 8 indicate that DCB Bank (6.3852) and ICICI Bank (3.7601) have comparatively higher average Gross NPA to Gross Advances ratio, thus indicating their comparative inefficiency in NPA management. Moreover comparatively the lower average Gross NPA to Gross Advances Ratio is shown by Yes Bank (0.2229) and HDFC Bank (1.2636), thus indicating that these banks are comparatively more efficient in NPA management.

The descriptive analysis of ratio of Net NPA to Net advances further elaborates the analysis of comparative efficiency of different new private sector banks in NPA management. The high average Net NPA to Net Advances Ratio is an indicator of comparative inefficiency in NPA management and vice-versa. The data analysis w.r.t. Net NPA to Net Advances Ratio is shown below in table 9.

Table 9: Descriptive Statistics of Ratio of Net NPAs to Net Advances

Sr. No.	Bank	Ratio of Net NPAs to Net Advances			
		Mean	Std. Deviation	Minimum	Maximum
1	DCB BANK LIMITED	2.2118	1.95297	0.57	6.34
2	ICICI BANK	1.3036	.52374	0.72	2.12
3	INDUSIND BANK	1.1527	1.01742	0.27	2.71
4	KOTAK MAHINDRA BANK LTD	1.1327	.72024	0.24	2.39
5	AXIS BANK	.5573	.34395	0.27	1.39
6	HDFC BANK	.3282	.14462	0.18	0.63
7	YES BANK LTD.	.0673	.09551	0.00	0.33

The results shown in the table 9 indicate that DCB Bank (2.2118) and ICICI Bank (1.3036) have the average Net NPA to Net Advances Ratio higher than other new private sector banks. It means they are comparatively less efficient in NPA management, whereas comparatively more efficiency in NPA management is revealed by Yes Bank (0.0673) and HDFC Bank (0.3282) because of their comparatively lower average Net NPA to Net Advances Ratio.

4. CONCLUSION

The overall comparative analysis of various new private sector banks regarding NPA management has been presented as below:

Most Efficient New Private Sector Banks Regarding NPA Management:

Group/Criterion	Variables covered	Names of Banks
I. Growth of NPAs	AGR of Gross NPAs, AGR of Net NPAs, AGR of Addition in NPAs, Percentage increase in Gross NPAs, Ratio of Gross NPAs to Gross Advances and Ratio of Net NPAs to Net Advances	HDFC Bank, ICICI Bank, IndusInd Bank
II. Efficiency regarding Recovery of NPAs	AGR of Recovery of NPAs and Percentage Recovery of Gross NPAs	Yes Bank, Kotak Mahindra Bank, HDFC Bank
III. Profitability in relation to NPA Management	Return on Advances	Kotak Mahindra Bank, IndusInd Bank, HDFC Bank

Most Inefficient New Private Sector Banks Regarding NPA Management:

Group/Criterion	Variables covered	Names of Banks
I. Growth of NPAs	AGR of Gross NPAs, AGR of Net NPAs, AGR of Addition in NPAs, Percentage increase in Gross NPAs, Ratio of Gross NPAs to Gross Advances and Ratio of Net NPAs to Net Advances	Kotak Mahindra Bank, Axis Bank, Yes Bank
II. Efficiency regarding Recovery of NPAs	AGR of Recovery of NPAs and Percentage Recovery of Gross NPAs	Axis Bank, ICICI Bank
III. Profitability in relation to NPA Management	Return on Advances	Axis Bank, ICICI Bank, Yes Bank

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