COMPARATIVE ANALYSIS OF FOREIGN BANKS WITH RESPECT TO NPA MANAGEMENT

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Abstract: Developed banking sector is a very strong pillar of economic growth of a nation. However the strength of this pillar starts depleting with rising status of NPAs. Banks are adopting different strategies to manage NPAs. This research paper focuses on management of NPAs by various foreign banks. An attempt has been made to find most efficient and most inefficient foreign banks with respect to their NPA Management. Data regarding Gross NPAs, Net NPAs, Addition in NPAs and Recovery of NPAs of various foreign banks for a period of 11 years viz. from 2006-07 to 2016-17 have been compiled and analysed using Semi-log Model.

Index Terms: NPA Management, NPAs, Foreign Banks, Efficiency

Introduction

Economic growth of a country leads to its development and prosperity. The pace of economic growth is dependent on the efficiency of existing financial system. Banking sector is the focal point of any financial system. All the components of financial system revolve around banking. To have sustained development of a nation, a robust financial system is needed and to have a robust financial system, well developed and efficient banking system is required. . In the Indian economy the LPG regime was started which had its impact on the banking sector. Many new private sector banks and foreign banks came into existence. The banks started focusing on providing quality services to their customers.

Statement of the Problem

The Indian Banking Industry had been facing the challenge of rising NPAs in late 80s. NPAs problem was one of the main problems that had jolted the entire banking industry in India. Like a cancer worm, it had been attacking the banking system from within, since long. NPAs had squeezed the supply line of credit to the potential borrowers there by having a negative impact on capital formation and interrupting the economic activity in the country. High level of NPAs were negatively affecting the profitability, liquidity and solvency position of the banking sector. Realising it Govt. of India appointed a Committee under the chairmanship of Mr. Narasimham in 1991 to recommend some measures to get out of this situation. Many of the reforms recommended by this committee were implemented in a phased manner which affected the NPAs of banking sector. Moreover banks themselves are using different strategies to manage their NPAs. Hence the need is to analyse the comparative efficiency of different banks in relation to management of NPAs.

This research paper aims to study and analyse the comparative efficiency of different foreign banks regarding NPA management

Research Methodology

Research can be defined as a systematic process of collecting and analyzing information, data and facts for the further advancement of knowledge. It is systematic and organized process of finding answers to some selected questions. The research question here is to know comparative efficiency of foreign banks regarding NPA management. To study their efficiency in NPA management, different variables used in this section of research work are the level of gross NPAs and net NPAs, additions in NPAs and recovery of NPAs. This study is mainly based on secondary data. The major portion of data has been extracted from Report on Trends and Progress of Banking in India and Statistical tables relating to banks in India as published by RBI. Secondary data has also been collected from articles and papers relating to NPAs published in different business journals, magazines, newspapers, periodicals and websites.. Data regarding Gross NPAs, Net NPAs, Addition in NPAs and Recovery of NPAs of various foreign banks for a period of 11 years viz. from 2006-07 to 2016-17 have been compiled and analysed. At present there are 44 foreign banks operating in India. However 29 foreign banks have been considered for the purpose of comparative study because these were in existence for the period of analysis i.e. 11 years (2006-07 to 2016-17). The Bi-variate Regression Model also known as Semi-log Model has been used to analyse data.

Data Analysis

In the study Annual Growth Rate (AGR) of Gross NPAs, Net NPAs, Additions in NPAs and Recovery of NPAs have been calculated to make their comparative analysis. The growth rate of Gross NPAs for foreign banks is calculated with the help of Bi-variate Regression Model, known as Semi- log Model. In Semi log Model, the dependent variable is natural log of the Gross NPAs and the time in years is the independent variable. The Bi-variate Regression 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 presence of significant growth rate of dependent variable w.r.t. time. The results of Semi log Model w.r.t. Gross NPAs of foreign 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	DBS BANK LTD.	79.4	9.782 (0.000)	95.696 (0.000)	0.941
2	AB BANK LIMITED	39.3	3.898 (0.011)	15.192 (0.011)	0.752
3	BANK INTERNASIONAL INDONESIA	38.6	0.981 (0.410)	0.976 (0.410)	0.062
4	MASHREQ BANK PSC	34.3	0.041 (0.963)	0.002 (0.963)	0.001
5	DEUTSCHE BANK AG	31.5	3.546 (0.006)	12.572 (0.006)	0.583
6	MIZUHO BANK LTD	27	2.489 (0.035)	6.193 (0.035)	0.408
7	STANDARD CHARTERED BANK	26.3	8.938 (0.000)	79.894 (0.000)	0.899
8	STATE BANK OF MAURITIUS LTD	17.8	3.379 (0.015)	11.421 (0.015)	0.656
9	BANK OF NOVA SCOTIA	14.3	0.893 (0.395)	0.798 (0.395)	0.081
10	BANK OF TOKYO-MITSUBISHI UFJ LTD	12.9	1.933 (0.085)	3.735 (0.085)	0.293
11	SONALI BANK	12.8	3.494 (0.007)	12.211 (0.007)	0.576
12	CTBC BANK	10.9	1.032 (0.332)	1.064 (0.332)	0.117
13	CITIBANK N.A.	10.2	2.514 (0.033)	6.322 (0.033)	0.413
14	HSBC BANK OMAN S.A.O.G.	8.1	13.214 (0.048)	174.598 (0.048)	0.994
15	HONGKONG AND SHANGHAI BANKING CORPN.LTD.	6.9	1.508 (0.166)	2.275 (0.166)	0.202
16	BARCLAYS BANK PLC	6.1	0.368 (0.726)	0.135 (0.726)	0.022
17	ROYAL BANK OF SCOTLAND N.V.	1.1	0.119 (0.908)	0.014 (0.908)	0.002
18	BANK OF BAHRAIN & KUWAIT B.S.C.	0.8	0.117 (0.910)	0.014 (0.910)	0.002
19	KRUNG THAI BANK PUBLIC COMPANY LIMITED	0.7	0.121 (0.860)	0.016 (0.860)	0.003
20	SHINHAN BANK	0.5	0.124 (0.920)	0.017 (0.920)	0.004
21	AMERICAN EXPRESS BANK	0.2	0.052 (0.959)	0.003 (0.959)	0.000
22	BANK OF AMERICA N.A.	-2.3	-0.138 (0.894)	0.019 (0.894)	0.003
23	BNP PARIBAS	-15.2	-3.337 (0.009)	11.133 (0.009)	0.553
24	CREDIT AGRICOLE	-16.8	-0.772 (0.462)	0.596 (0.462)	0.062
25	JP MORGAN CHASE BANK N.A.	-22.1	-3.476 (0.013)	12.085 (0.013)	0.668
26	ANTWERP DIAMOND BANK NV	-23.9	-1.274 (0.259)	1.623 (0.259)	0.245
27	ABU DHABI COMMERCIAL BANK	-29.2	-1.533	2.35	0.207

Sr. No.	Bank	AGR of Gross NPAs	t-Statistic (p-value)	F-Statistic (p-value)	R-Square
			(0.160)	(0.160)	
28	SOCIETE GENERALE	-31.9	-10.943 (0.000)	119.748 (0.000)	0.952
29	BANK OF CEYLON	-37.9	-7.305 (0.000)	53.364 (0.000)	0.856

The results shown in table 1 indicate that the 'p' value of 't' statistic for 13 foreign banks is less than 5% level of significance. So, we can conclude that there exists significant AGR of Gross NPAs for these foreign banks. It is also revealed by the results that the banks with the highest AGR of Gross NPAs are DBS Bank (79.4), AB Bank (39.3) and Deutsche Bank (31.5). The high AGR of Gross NPAs of these banks conveys the lack of control on NPA by these banks. On the other hand, the banks with lowest rather negative AGR of Gross NPAs are Bank of Ceylon (-37.9), Societe Generale (-31.9), JP Morgan Chase Bank (-22.1) and BNP Paribas Bank (-15.2). Their negative 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 13 foreign banks is less than 5% level of significance. It indicates that the Semi-log Model is statistically fit for these 13 foreign banks. The R^2 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 DBS bank 94.1% of AGR of Gross NPAs can be explained with the help of time behaviour of it. Similarly, in case of AB Bank 75.2% of AGR of Gross NPAs can be explained with the help of its time behavior.

After analysing comparatively the growth rate of Gross NPAs of various foreign banks, the comparative analysis of growth rate of Net NPAs of different foreign 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	DBS BANK LTD.	89.9	6.925 (0.000)	47.957 (0.000)	0.889
2	HSBC BANK OMAN S.A.O.G.	86.7	0.956 (0.527)	0.834 (0.527)	0.316
3	MIZUHO BANK LTD	66.0	7.688 (0.005)	59.109 (0.005)	0.952
4	AB BANK LIMITED	39.9	3.503 (0.017)	12.273 (0.017)	0.711
5	BANK OF BAHRAIN & KUWAIT B.S.C.	31.9	2.053 (0.070)	4.214 (0.070)	0.319
6	CREDIT AGRICOLE	27.9	0.923 (0.454)	0.851 (0.454)	0.299
7	SONALI BANK	27.5	3.648 (0.007)	13.307 (0.007)	0.625
8	DEUTSCHE BANK AG	26.9	1.354 (0.218)	1.835 (0.218)	0.208
9	STATE BANK OF MAURITIUS LTD	26.6	3.086 (0.027)	9.522 (0.027)	0.656
10	BANK OF TOKYO-MITSUBISHI UFJ LTD	17.8	1.642 (0.135)	2.697 (0.135)	0.231
11	JP MORGAN CHASE BANK N.A.	13.0	0.794 (0.485)	0.63 (0.485)	0.174
12	CTBC BANK	11.9	0.992 (0.354)	0.984 (0.354)	0.123
13	BANK INTERNASIONAL INDONESIA	9.3	0.866 (0.297)	0.768 (0.297)	0.214
14	HONGKONG AND SHANGHAI BANKING CORPN.LTD.	7.2	1.137 (0.285)	1.292 (0.285)	0.126
15	CITIBANK N.A.	6.7	1.281 (0.232)	1.642 (0.232)	0.154
16	BANK OF NOVA SCOTIA	2.3	0.3 (0.784)	0.09 (0.784)	0.029
17	AMERICAN EXPRESS BANK	2.2	0.586 (0.574)	0.344 (0.574)	0.041

Sr. No.	Bank	AGR of Net NPAs	t-Statistic (p-value)	F-Statistic (p-value)	R-Square
18	BANK OF AMERICA N.A.	2.1	0.487 (0.743)	0.247 (0.743)	0.035
19	KRUNG THAI BANK	1.9	0.463 (0.674)	0.341 (0.674)	0.037
20	MASHREQ BANK PSC	1.5	0.378 (0.421)	0.267 (0.421)	0.042
21	SHINHAN BANK	1.2	0.527 (0.567)	0.234 (0.567)	0.033
22	SOCIETE GENERALE	0.9	0.923 (0.714)	0.294 (0.714)	0.004
23	STANDARD CHARTERED BANK	0.7	0.122 (0.906)	0.015 (0.906)	0.002
24	BNP PARIBAS	-10.3	-0.378 (0.770)	0.143 (0.770)	0.125
25	ABU DHABI COMMERCIAL BANK	-12.2	-0.755 (0.484)	0.571 (0.484)	0.102
26	ROYAL BANK OF SCOTLAND N.V.	-12.2	-0.858 (0.413)	0.736 (0.413)	0.076
27	ANTWERP DIAMOND BANK NV	-21.5	-0.727 (0.543)	0.528 (0.543)	0.209
28	BARCLAYS BANK PLC	-33	-1.444 (0.199)	2.085 (0.199)	0.258
29	BANK OF CEYLON	-54.2	-2.073 (0.174)	4.299 (0.174)	0.682

The above table 2 indicates that there exist significant AGR of Net NPAs for 5 foreign banks because the 'p' value of 't' statistic for these 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 DBS Bank (89.9), Mizuho Bank (66.0) and AB Bank (39.9) . Moreover the banks with lowest AGR of Net NPAs are found to be State Bank of Mauritius (26.6) and Sonali Bank (27.5). Their low level of AGR of Net NPAs highlights the efficiency of these banks in dealing with the issue of NPA management.

Besides AGR of Gross NPAs and Net NPAs, AGR of Additions in NPAs is also calculated by Semi-log Model which is shown by the below mentioned table 3.

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	BANK OF NOVA SCOTIA	81.5	2.29 (0.106)	5.242 (0.106)	0.636
2	MIZUHO BANK LTD	68.2	3.793 (0.063)	14.383 (0.063)	0.878
3	BANK INTERNASIONAL INDONESIA	65.7	0.879 (0.452)	0.763 (0.452)	0.210
4	DBS BANK LTD.	64.2	4.614 (0.004)	21.288 (0.004)	0.784
5	BANK OF BAHRAIN & KUWAIT B.S.C.	63.2	5.048 (0.001)	25.484 (0.001)	0.739
6	BANK OF TOKYO-MITSUBISHI UFJ LTD	44.8	1.759 (0.360)	3.093 (0.153)	0.436
7	BARCLAYS BANK PLC	28.2	0.98 (0.360)	0.96 (0.360)	0.121
8	STATE BANK OF MAURITIUS LTD	27.5	0.77 (0.497)	0.594 (0.497)	0.165
9	BNP PARIBAS	27.1	0.729 (0.519)	0.531 (0.519)	0.156
10	STANDARD CHARTERED BANK	22.6	6.172 (0.000)	38.099 (0.000)	0.809
11	SONALI BANK	19.2	1.138	1.294	0.177

Sr. No.	Bank	AGR of Addition in NPAs	t-Statistic (p-value)	F-Statistic (p-value)	R-Square
			(0.299)	(0.299)	
12	CITIBANK N.A.	15.8	1.728 (0.118)	2.985 (0.118)	0.249
13	CTBC BANK	13.4	0.871 (0.433)	0.758 (0.433)	0.159
14	AMERICAN EXPRESS BANK	11.1	0.849 (0.421)	0.721 (0.421)	0.083
15	HSBC BANK OMAN S.A.O.G.	6.7	2.228 (0.156)	4.963 (0.156)	0.713
16	DEUTSCHE BANK AG	4.5	0.23 (0.824)	0.053 (0.824)	0.008
17	AB BANK LIMITED	1.2	0.074 (0.948)	0.005 (0.948)	0.003
18	CREDIT AGRICOLE	1.1	0.049 (0.965)	0.002 (0.965)	0.001
19	BANK OF AMERICA N.A.	0.9	0.042 (0.875)	0.003 (0.875)	0.004
20	KRUNG THAI BANK PUBLIC COMPANY LIMITED	0.8	0.039 (0.676)	0.027 (0.676)	0.002
21	MASHREQ BANK PSC	0.5	0.086 (0.983)	0.006 (0.983)	0.001
22	SHINHAN BANK	0.4	0.077 (0.896)	0.004 (0.896)	0.000
23	SOCIETE GENERALE	0.2	0.065 (0.589)	0.003 (0.589)	0.002
24	HONGKONG AND SHANGHAI BANKING CORPN.LTD.	-1.3	-0.153 (0.882)	0.023 (0.882)	0.003
25	JP MORGAN CHASE BANK N.A.	-10.7	-0.502 (0.666)	0.252 (0.666)	0.112
26	ABU DHABI COMMERCIAL BANK	-23.2	-0.972 (0.359)	0.945 (0.359)	0.106
27	ROYAL BANK OF SCOTLAND N.V.	-23.3	-1.522 (0.162)	2.317 (0.162)	0.205
28	BANK OF CEYLON	-82.5	-1.777 (0.174)	3.156 (0.174)	0.513
29	ANTWERP DIAMOND BANK NV	-32.1	-1.315 (0.414)	1.73 (0.414)	0.634

It is clear from the above table 3 that the 'p' value of 't' statistic for 3 foreign banks is less than 5% level of significance. Hence, there exist significant AGR for Addition in NPAs for these foreign banks. The bank with highest AGR for Addition in NPAs is DBS Bank (64.2). The high AGR for Additions in NPAs of this bank indicates its inefficiency in NPA management. On the other hand, Standard Chartered Bank (22.6) has the lowest level of AGR for Addition in NPAs, thus conveying its efficiency in NPA management.

The Semi-log Model is also used to find out 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	HSBC BANK OMAN S.A.O.G.	196.2	2.043 (0.178)	4.174 (0.178)	0.676
2	AB BANK LIMITED	68.2	5.608 (0.003)	31.451 (0.003)	0.946
3	BANK INTERNASIONAL INDONESIA	61.6	0.187 (0.882)	0.035 (0.882)	0.034
4	DBS BANK LTD.	56.7	2.186 (0.081)	4.778 (0.081)	0.489
5	BARCLAYS BANK PLC	49.4	2.287	5.229	0.466

Sr. No.	Bank	AGR of Recovery of NPAs	t-Statistic (p-value)	F-Statistic (p-value)	R-Square
			(0.062)	(0.062)	
6	MIZUHO BANK LTD	48.9	1.663 (0.157)	2.765 (0.157)	0.356
7	DEUTSCHE BANK AG	42.9	2.235 (0.052)	4.994 (0.052)	0.357
8	SONALI BANK	29.1	1.976 (0.096)	3.904 (0.096)	0.394
9	STATE BANK OF MAURITIUS LTD	24.4	1.882 (0.156)	3.541 (0.156)	0.541
10	BANK OF BAHRAIN & KUWAIT B.S.C.	22	2.1 (0.065)	4.41 (0.065)	0.329
11	CITIBANK N.A.	21.7	3.131 (0.026)	9.803 (0.026)	0.662
12	STANDARD CHARTERED BANK	14.9	4.087 (0.003)	16.702 (0.003)	0.651
13	BANK OF TOKYO-MITSUBISHI UFJ LTD	13.3	0.862 (0.417)	0.744 (0.417)	0.096
14	HONGKONG AND SHANGHAI BANKING CORPN.LTD.	4.6	0.522 (0.614)	0.273 (0.614)	0.029
15	AMERICAN EXPRESS BANK	4.3	0.341 (0.742)	0.116 (0.742)	0.014
16	KRUNG THAI BANK PUBLIC COMPANY LIMITED	4.1	0.472 (0.896)	0.234 (0.896)	0.021
17	MASHREQ BANK PSC	0.8	0.289 (0.743)	0.192 (0.743)	0.006
18	SHINHAN BANK	0.5	0.321 (0.895)	0.123 (0.895)	0.004
19	ANTWERP DIAMOND BANK NV	0.2	0.123 (0.767)	0.042 (0.767)	0.001
20	ROYAL BANK OF SCOTLAND N.V.	-2.4	-0.207 (0.840)	0.043 (0.840)	0.005
21	CREDIT AGRICOLE	-4.2	-0.174 (0.867)	0.03 (0.867)	0.004
22	BANK OF AMERICA N.A.	-5.5	-0.329 (0.764)	0.108 (0.764)	0.035
23	CTBC BANK	-5.7	-0.294 (0.776)	0.087 (0.776)	0.011
24	BNP PARIBAS	-12.3	-0.791 (0.459)	0.625 (0.459)	0.094
25	ABU DHABI COMMERCIAL BANK	-19.7	-1.337 (0.223)	1.787 (0.223)	0.203
26	SOCIETE GENERALE	-26.1	-1.871 (0.120)	3.5 (0.120)	0.412
27	JP MORGAN CHASE BANK N.A.	-38.4	-1.269 (0.252)	1.609 (0.252)	0.211
28	BANK OF NOVA SCOTIA	-40.1	-2.293 (0.056)	5.259 (0.056)	0.429
29	BANK OF CEYLON	-57.6	-3.895 (0.004)	15.167 (0.004)	0.628

The results shown in the above table 4 indicate that for 4 foreign banks the 'p' value of 't' statistic is less than 5% level of significance. Hence there exists significant AGR of Recovery of NPAs in case of these banks. The bank with highest AGR w.r.t. Recovery of NPAs is AB Bank (68.2). The high level of AGR w.r.t. Recovery of NPAs reveals the efficiency of this bank in NPA management. On the other hand, the bank with low level of efficiency in NPA management is that with low rather negative AGR w.r.t. Recovery of NPAs and this is Bank of Ceylon (-57.6).

CONCLUSION

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

Most Efficient Foreign 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	Bank of America, Shinhan Bank, Societe Generale Bank
II. Efficiency regarding Recovery of NPAs	AGR of Recovery of NPAs	Citi Bank, Standard Chartered Bank, AB Bank Ltd.

Most Inefficient Foreign 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	DBS Bank, AB Bank, Abu Dhabi Commercial Bank
II. Efficiency regarding Recovery of NPAs	AGR of Recovery of NPAs	HSBC Bank, Bank of Tokyo, Mashreq Bank

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