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Banking Sector in Post-Recession Era: A Study of Comparative Performance of Different Bank Groups in India

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Abstract:
Global financial crisis and economic downturn that began in December 2007, increased uncertainty and negatively affected the world wide economy and developed serious difficulties in terms of lapse of banking & financial institutions and plunging demand. However, amidst all this chaos, India's banking sector has been amongst the few to maintain resilience. Indian banking sector has not only been able to weather the storm of global recession, but its public sector segment has been able to moderate its impact on the Indian economy as well, compared to its peers among the foreign and private banks. A progressively growing balance sheet, higher pace of credit expansion, expanding profitability and productivity akin to banks in developed markets and lower incidence of Non Performing Assets have contributed to making Indian banking vibrant and strong. This study apprises the performance of Indian banking sector and compares different banking groups in terms of their performance through their Credit Deposit Ratio (CDR), Return on advances adjusted to cost of funds and NPAs during the period 2006 to 2013, which covers pre-recession era, the recession era and post recession era. The paper concludes that before the global recession foreign bank group was performing much better than other banking sectors. Private, Nationalized and SBI bank groups were keep on performing almost same, but certainly better than RRBs for all the period of study. But, Indian banks have to innovate to take advantage of the new business opportunities and at the same time ensure continuous assessment of risks.

Keywords : *Financial crisis, Indian banking sector, Credit Deposit Ratio, Assets, Return on advances, Non Performing Assets*

1. Introduction

Indian banking industry has been successful to a great extent with basic services which are imperative for any growing economy to provide to its citizens in order to move on the path of inclusive growth. With the institution of banking sector reforms, competition among the banks has increased as reducing barriers to entry of new private sector banks and foreign banks. The reforms have increased openness of the economy and improved freedom to operate in financial markets and introduced various policy measures to strengthen Indian banking. Consequently, different bank groups are operating at the different level of efficiency and profitability because of their in-built structural characteristics.

Many studies have been carried out to measure the efficiency of different bank groups of Indian Banking system. Prithwiraj Nath *et.al.* (2003) explored the linkage between strategic grouping and performance of the Indian banking sector. This study offers a framework to commercial banks to take policy decisions about their competitive positioning in the target market, develop long-term strategic focus and identify a benchmark for improving their performance. Shanmugam and Das (2004) attempted to measure the efficiency of different bank groups of the Indian scheduled commercial banks. The study showed that the state bank group and foreign banks are more efficient than their counterparts. Kumar and Sreeramulu (2007) study compared the performance of modern banks (foreign and new private sector bank) with traditional banks (public and old private sector banks) in terms of employee productivity and employee cost ratios. The study concludes that the performance of modern banks was much superior to traditional banks. Kusum *et. al.* (2008) found that foreign banks were most efficient in the banking sector and nationalized banks had lower efficiency. As per their index State Bank of India was not successful in leveraging its comparatively large market share to increase its efficiency. Priority sector lending, excessive bank investment in government securities had added to banks inefficiency. Uppal (2009) analyzed the paradigm shift in performance parameters of various types of banks and bank groups. The paper concludes that the PSBs are in dominant position in terms of total assets in all scheduled commercial banks. Rakhe (2010) analyzed the financial performance of foreign banks in comparison with other bank groups in India during 2002-03 to 2008-09. The study indicates that access to low cost funds, diversification of income and other income to fully finance the operating expenses are the important factors to the higher profitability of foreign banks vis-à-vis other bank groups in India. Author expressed that efficiency of fund management, generation of other income are the most important factor determining profitability in the banking system. However, as regards to the foreign banks, financial inter-linkages and financial performance of parent banks are also equally important.

Since the beginning of 2008, the financial market crisis has led to the collapse of major financial institutions and impacted upon the economic conditions of major markets around the world. The impact has been more profound on the industrialized economies in comparison to emerging markets. With the increase in globalization, from the era of global recession it is very important to know the impact on the performance of different bank groups in India and state of preparedness to overcome.

Global financial crisis and economic downturn that began in December 2007, increased uncertainty and negatively affected the world wide economy and developed serious difficulties in terms of lapse of banking & financial institutions and plunging demand. However, amidst all this chaos, India's banking sector has been amongst the few to maintain resilience. The Indian banks due to their conservative approach have not been much impacted (Goal & Bajpai, 2013). The Indian banking sector was largely insulated from the toxic elements of global finance partly because Indian banks were not integrated enough with the western financial system, which became a chief victim of adventurism in the financial product market (Venu, 2011). During the period of recession the global exposure of Indian banks is relatively very small, with international assets about 6% of the total assets (Vidyakala & Madhuvanthi, 2009).

A number of studies have conducted to study the background causes and impact of financial crisis. Whalen (2008), Labonte (2008), Myers and Sendanyoye (2009) reviewed the background and causes of the financial crisis and its effect. Fratianni and Marchionne (2009) illustrate the role of banks in the subprime financial crisis. They have pointed out some weaknesses of banking sector as the transfer of assets from the balance sheets of banks to the markets, the creation of complex and opaque assets, the failure of ratings agencies to properly assess the risk of such assets, and the application of fair value accounting augmented the impact of this financial crisis.

Many scholars like Shirai (2001), Trehan and Soni (2003), Roland (2004), Kumar (2007), Pulapre et. al. (2007) has carried out studies to assess the performance of Indian Banking sector in pre-recession era. A detailed study undertaken by the RBI in September 2007 on the impact of the subprime episode on the Indian banks had revealed that none of the Indian banks or the foreign banks, with whom the discussions had been held, had any direct exposure to the sub-prime markets in the USA or other markets.

Indian banks produced robust results even during the worst months of the crisis i.e. third quarter of 2008. Against an absolute decline in the profitability of non-financial corporate enterprises, the banking sector witnessed a jump of 43% in its profitability. The nonperforming assets as a ratio to gross advances have remained well within prudential norms. Further, with an average capital risk weighted assets ratio (CRAR) of 13%, Indian banks are well capitalized and better placed to weather the economic downturn (Kumar & Vashisht, 2009).

2. Research Methodology

The major variables used for the present study are amount of outstanding credit and deposits and assets of each banking sectors performing in India. For the purpose, data from 2006 to 2013 on quarterly basis have been collected from various volumes of Basic Statistical Returns of Scheduled Commercial Banks in India published by RBI. ANOVA test given by Kruskal-Wallis (1952) was applied to test the homogeneity of CD ratios among the bank groups. Wilcoxon (1945) Signed rank test was also applied to test CD ratios match pairs.

There are mainly five categories of bank groups operating in India. They are SBI and its Associate (SBI Gr), Other Nationalized Banks (NBs), Private Schedule Banks (PSBs), Foriegn Banks (FBs) and Regional Rural Banks (RRBs).

3. Result And Discussion

Since economic fundamentals of banks in India were sound with nearly no exposure to risky securities, they survived the initial scare. Economic share holding of any country by each of the bank groups is one of the important factors to be studied as they are different in their organization, regulation and approach of banking operations. Soon after the onset of global economic slowdown all the banks moved cautiously to open new branches.

Years	SBI&Gr	NBs	FBs	RRBs	PSBs	Total
2006	14196	35621	263	14764	6813	71657
	19.81	49.71	0.37	20.60	9.51	100.00
2007	14465	36927	276	14773	7363	73804
	19.60	50.03	0.37	20.02	9.98	100.00
2008	15621	38921	264	14825	8068	77699
	20.10	50.09	0.34	19.08	10.38	100.00
2009	16570	40576	279	15265	9112	81802
	20.26	49.60	0.34	18.66	11.14	100.00
2010	17861	42965	295	15548	10291	86960
	20.54	49.41	0.34	17.88	11.83	100.00
2011	18704	45450	301	15898	11764	92117
	20.30	49.34	0.33	17.26	12.77	100.00
2012	19573	50454	324	16629	13825	100805
	19.42	50.05	0.32	16.50	13.71	100.00

Table 1 : Offices of Commercial Banks in India - 2006 To 2012

Table 1 shows that nationalized bank group has largest contribution of branches nearly 50% in India followed by SBI and its associates and Regional Rural Banks (RRBs). Foreign bank branches contribution is very less only about 0.3%. Number of branches of bank groups is kept on increasing almost with the same acceleration.

	SBI&Gr	NBs	FBs	RRBs	PSBs	Total
2008	228605	436163	18227	63822	91952	838769
	27.25	52.00	2.17	7.61	10.96	100.00
2009	250238	435382	16624	64579	102589	869412
	28.78	50.08	1.91	7.43	11.80	100.00
2010	276171	451604	20807	65241	112205	926028
	29.82	48.77	2.25	7.05	12.12	100.00
2011	300628	475060	24240	79886	171071	1050885
	28.61	45.21	2.31	7.60	16.28	100.00
2012	285370	582029	21622	83382	202746	1175149
	24.28	49.53	1.84	7.10	17.25	100.00

Table 2 : Employees in Commercial Banks in India - 2008 To 2012

Table 2 reveals that nationalized bank group has largest portion of employees nearly 50% in India followed by SBI Grs. Foreign bank is having least portion of employees varying between 1.84% to 2.31%. Number of Employees in Schedule Commercial banks it is kept on increasing almost with the same acceleration.

Asset is also one of the important variables for the bank and its entire group to establish and perform in any of the economy of the country. It has also been observed that on the baking of their assets bank can absorb undesired shocks of the economy whether it may be during recession or in any other adverse situation. For the purpose we have a look at asset of each bank group from year 2006 to 2012 through figure 1 and it was observed that assets of all bank groups increased annually significantly. Most impressively annual growth in assets were maximum for foreign bank followed by nationalized banks, SBI and its associates, private sector banks and RRBs. It is quite interesting to see that assets of foreign bank group are more than RRBs whereas RRBs branch wise contribution to the economy is more than foreign bank branches. This clearly indicates that assets per branches for foreign banks are quite higher than other groups.

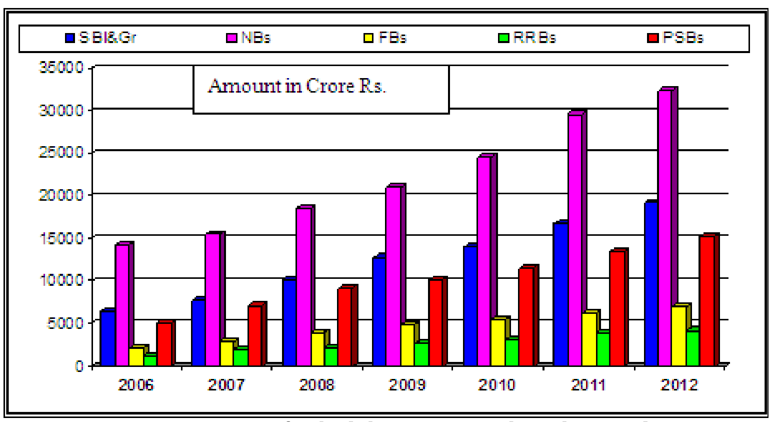

Figure 1: Asset of Schedule Commercial Banks in India

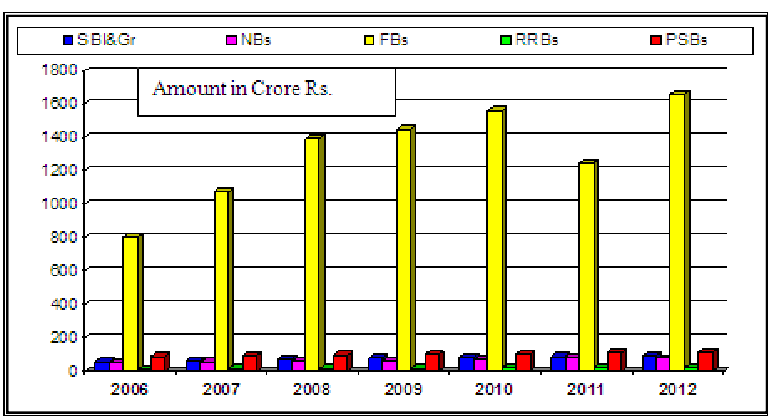

Figure 2 : Branch wise Asset of Schedule Commercial Banks in India

From the figure 2 it is also seen that apart from foreign bank branches other groups are having almost same assets. Foreign bank branches assets are about 16 times than other bank branches. With this inference it may be concluded that foreign banks had more safeguards to absorb economic shocks. Even after moderate increase in number of branches since the economic slowdown, foreign banks have expanded their asset base considerably because their main area of focus has been HNI clients with services such as wealth management and investment advisory.

Bank Group	2006	2007	2008	2009	2010	2011	2012
SBI Grs	1.03	1.09	1.12	1.02	0.91	1.01	1.09
NBs	1.03	1.04	1.08	1.03	1.00	1.02	1.10
FBs	1.79	1.81	2.09	1.99	1.05	1.04	1.15
PSBs	1.05	1.08	1.09	1.13	1.28	1.29	1.31

Table 3 : Return on Asset for different Bank groups in India - 2006 To 2012

Table 3 shows return on per unit of assets of each bank groups and it is clear that Return on Assets (ROA) declines in 2009 and 2010 as compared to period between 2006 to 2008 for all bank groups except private banks, which slightly increases. But in foreign bank groups ROA declined significantly from 2.09 to 1.99 in 2009 and 1.99 to 1.05 in 2010, which indicates that asset increment has not got benefited for foreign bank during 2009 and 2010. It can be also observed from this table that ROA per branch has started increasing for all the bank groups after 2010.

	SBI&Gr	NBs	FBs	RRBs	PSBs	Total
2006	4898.38	9957.68	1298.35	486.69	4028.68	20669.8
2007	5198.25	10254.29	1439.62	512.38	4385.67	21790.2
2008	5422.92	11797.76	1612.39	578.87	4758.13	24170.07
2009	6572.55	14367.70	1677.22	668.29	5191.38	28477.14
2010	7735.29	17379.25	1649.55	827.62	5859.98	33451.69
2011	8922.61	21598.03	1995.54	981.18	7259.11	40756.47
2012	10465.88	25151.71	2385.74	1163.90	8865.43	48032.66

Table 4 : Bank groups wise credit - 2006 To 2012
Amout in Billion Rs.

Table 4 shows bank group wise credit in India. From this table, it is clear that nationalized banks are having always highest share of credit followed by SBI and associates and private banks. RRB's always remained very low. It has been pointed out that though foreign banks have low share in total credit but their credit distribution per branch is way more than other banks groups.

	SBI&Gr	NBs	FBs	RRBs	PSBs	Total
2006	34.51	27.95	493.67	3.30	59.13	28.85
2007	35.94	27.77	521.60	3.47	59.56	29.52
2008	34.72	30.31	610.75	3.90	58.98	31.11
2009	39.67	35.41	601.15	4.38	56.97	34.81
2010	43.31	40.45	559.17	5.32	56.94	38.47
2011	47.70	47.52	662.97	6.17	61.71	44.24
2012	53.47	49.85	736.34	7.00	64.13	47.65

Table 5 : Per branch credit for different Bank groups - 2006 To 2012
Amout in Crore Rs.

Table 5 indicates credit per branch for different bank groups for the period between 2006 and 2012. This table shows that on an average foreign bank gave credit of Rs. 597.95 crore per branch from year 2006 to 2012 whereas other bank groups like nationalized bank gave Rs 37.04 crore per branch, SBI and its associates gave Rs. 41.33 crore per branch. Rural banks gave very less credit of Rs 4.79 crore per branch owning to their limited reach.

	SBI&Gr	NBs	FBs	RRBs	PSBs	Total
2006	6754.98	11098.84	1365.68	798.64	5864.28	25882.4
2007	7016.28	13261.98	1562.65	895.09	6198.29	28934.3
2008	7536.38	15618.91	1796.09	975.09	6572.99	32499.46
2009	9467.34	19377.23	2044.74	1185.70	7144.79	39219.8
2010	10186.66	23655.98	2281.86	1420.11	8065.69	45610.3
2011	11540.21	28649.24	2347.61	1636.95	9721.51	53895.52
2012	13198.69	32082.00	2707.65	1815.60	10978.49	60782.43

Table 6 : Bank groups wise Deposit - 2006 To 2012
Amout in Billion Rs.

Table 6 shows bank group wise deposit in India. From this table, it is clear that nationalized banks are having always highest share of deposit followed by SBI groups and private banks. RRB's always remained very low.

	SBI&Gr	NBs	FBs	RRBs	PSBs	Total
2006	47.58	31.16	519.27	5.41	86.07	36.12
2007	48.51	35.91	566.18	6.06	84.18	39.20
2008	48.25	40.13	680.34	6.58	81.47	41.83
2009	57.14	47.76	732.88	7.77	78.41	47.94
2010	57.03	55.06	773.51	9.13	78.38	52.45
2011	61.70	63.03	779.94	10.30	82.64	58.51
2012	67.43	63.59	835.69	10.92	79.41	60.30
Average	55.38	48.09	698.26	8.02	81.51	48.05

Table 7 : Per branch credit for different Bank groups - 2006 To 2012
Amout in Crore Rs.

Table 7 indicates deposit per branch for different bank groups for the period between 2006 and 2012. This table shows that on an average foreign bank has deposit of Rs. 698.26 crore per branch from year 2006 to 2012 whereas other bank groups like nationalized bank have Rs 48.09 crore per branch, SBI and its associates gave Rs. 55.38 crore per branch. Rural banks have very less deposit of Rs 8.02 crore per branch owning to their limited reach.
It has been pointed out that though foreign banks have low share in total deposit but their deposit distribution per branch is much more than other banks groups.

4. CD Ratio of different Bank Groups

The CD ratio is the proportion of loan-assets created by banks from the deposits received. The higher the ratio, the higher the loan-assets created from deposits. CD ratio reveals the efficiency with which the commercial and financial intermediaries are tapping savings from the available sources and channelizing these to various productive activities of the economy (Verma and Kumar, 2007)). The importance of sound financial system in mobilizing deposits and disbursing credit for productive utilization is well documented in studies such as Levine et. al. (1999), King and Levine (1993), Rajan and Zingales (2001), Jayaratne and Strahan (1996).

	SBI&Gr	NBs	FBs	RRBs	PSBs
2006	72.52	89.72	95.07	60.94	68.70
2007	74.09	77.32	92.13	57.24	70.76
2008	71.96	75.54	89.77	59.37	72.39
2009	69.42	74.15	82.03	56.36	72.66
2010	75.94	73.47	72.29	58.28	72.65
2011	77.32	75.39	85.00	59.94	74.67
2012	79.29	78.40	88.11	64.11	80.75

Table 8 : CD Ratio for different Bank groups - 2006 To 2012

From the table 8 it is clear that CD ratio for all the bank groups is not same for the entire period of study. It is clearly depicted that CD ratio of RRBs group remains always at the low level near to 60 per cent. Another important observation from the figure is that there is a significant difference between CD ratio of foreign banks and other bank groups during the period of study. It is also to be noted that CD ratio of foreign bank groups was significantly high before 2009. Subsequently, foreign bank group CD ratio came down to the level of other bank groups except RRBs.

Bank Group	N	Minimum	Maximum	Mean	Std. Deviation	Variance
SBI &Grs	7	69.42	79.29	74.36	3.1443	8.818
NBs	7	73.47	89.72	77.71	5.1498	3.077
FBs	7	72.29	95.07	86.34	6.9941	61.887
RRBs	7	56.36	64.11	59.46	2.3879	2.820
PSBs	7	68.70	80.75	73.23	3.5190	2.924
All India	7	72.61	79.86	75.73	2.5463	3.032

Table 9 : Descriptive statistics of CD ratio of bank groups

Table 9 shows descriptive statistics of CD ratio of different bank groups and all India as well and it is observed that foreign banks mean CD ratio was highest during the period of study along with highest variation whereas RRBs remained at the lowest mean CD ratio with lowest variation. Rest three bank groups mean CD ratio were almost same about 75$\pm$2 percent with low variation in comparison of foreign bank group. Mukherjee et. al. (2003) says that 70% of Indian PSBs are inefficient in utilizing their infrastructure, human resource and other capabilities for optimal service delivery.

Pair	Z	Asymp. Sig. (2-tailed)
SBI- FB	-3.021	0.003
SBI- RRBs	-5.261	0.000
SBI- PSB	-8.035	0.421
SBI - NB	-1.724	0.084
FB - RRBs	-5.261	0.000
FB - PSB	-3.934	0.003
FB - NB	-3.257	0.001
RRBs - PSB	-5.272	0.000
RRBs - NB	-5.272	0.000
PSB- NB	-1.413	0.156

Table 10: Wilcoxon signed rank test statistics of CD ratio for each pair of bank groups.

Wilcoxon signed rank test was applied to check whether distribution pattern of CD ratio of all each pair wise bank groups significantly different. From the table 10 it is depicted that SBI and its associates, private and nationalized bank groups are not significantly different whereas all other pairs are significantly different from each other. With this table it is observed that only foreign bank and RRBs are different in the banking sector. Foreign banks performed well may be because they had lot of assets per branch in comparison of other bank branches in India whereas RRBs performance in terms of CD ratio remained at the least. The possible reason may be due to low asset availability per branch.

Year	Public Sector Banks		Private Banks		Foreign Banks		All SBs	
	NPA	Total O/s	NPA	Total O/s	NPA	Total O/s	NPA	Total O/s
2006	413.79	10708.72	77.74	3037.94	20.90	988.62	512.43	14735.28
2007	386.01	13737.76	92.42	3918.70	24.52	1278.67	502.95	18935.13
2008	397.49	16963.34	129.76	4723.45	31.17	1630.00	556.95	23317.50
2009	440.39	21037.63	168.87	5196.56	72.29	1697.14	682.16	27884.24
2010	572.93	25124.39	173.87	5851.10	71.28	1674.39	818.08	32649.89
2011	710.80	30599.53	179.75	7329.53	50.65	1993.21	941.21	39922.28
2012	1124.89	35503.89	183.21	8812.16	62.92	2347.32	1371.02	46663.37
2013	1558.90	40558.74	199.92	10466.65	79.72	2686.12	1838.54	53711.51

Table 11: Bank group wise Non Performing Assets (NPA)

Comparison of bank performance in terms of NPA reflects the profitability of loan portfolios of banks since less NPA contributes to higher interest income. Importantly, how careful the banks have been using their discretion to give credit to unworthy borrowers. It has been observed that big banks collapse under the burden of high NPA and therefore it becomes highly relevant for banks to increase their profitability to sustain growth without under reporting nonperforming assets. From the table 10, it is seen that during the global turmoil of 2008 foreign banks saw sharp rise in NPA as percentage of credit outstanding. While foreign and private banks saw rise, nationalized banks and SBI group showed resilience in the face of global meltdown. This shows that Indian banks were much more careful in giving loans to customers.

5. Conclusion

On the basis of above results and discussions it may be concluded that competition has been observed in all bank groups for maintaining optimum CD ratio. Except RRBs all other bank groups strived to keep their CD ratio more than 70% during the period of study. Foreign banks could manage to keep CD ratio more than even 80 per cent for long time but just after recent global meltdown their CD ratio has started coming down and reached least in December 2009. Since then they have been trying to keep it as competitive as other Indian banking sector. RRBs always remained at low CD ratio with about 60% and hence not in the competition with other Indian banks. Asset per branch could be one of the affecting factors. Except foreign banks and RRBs all other banks remained competitive for the entire period of study but after recent global slowdown in 2008 foreign banks have also come into the competition of other banks. Indian banking industry has come off an age since the nationalization of banks. Banking has been the important factor behind the growth of Indian economy. While the good work of the banks can't be ignored, it must also be pointed out that the potential and scope for further improvement is immense. Banks have definitely achieved efficiency owning to the progressive policy of RBI but to stay competitive in the global arena they still have to cover a lot of ground.

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