

A Study of Profitability Analysis of Banking Industry in Post Reform Era

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Profitability is a measure of efficiency and control. It indicates the efficiency or effectiveness with which the operations of the business are carried on, whether it is, recording profitability for the past period or projecting profitability for the coming period. Measuring profitability is the most important measure of the success of the business. The economic reforms totally have changed the banking sector.

This paper attempts to study the performance of public, private and foreign banks in terms of Profitability in the post reform era. The objective of this study was overall profitability analysis of different banks groups based on the performances of profitability ratios like Ratio of operating costs to total assets, Ratio of net interest margin to total assets, Return on assets and Return on equity. In this study various statistical tools are used (i.e.,) Mean, Standard deviation, ANOVA test and post hoc tests have been used for data analysis. The results found that bank group wise performance depicts, that in case of Return on total asset foreign banks are ahead followed by new private banks, in case of operating cost to total asset ratio new private banks are the most efficient followed by old private banks.

Key words: Public banks, Private banks, Foreign Banks, Return on Assets, Return on Equity, Ratio of Net Interest Margin, Ratio of Operating Cost to Total Assets.

INTRODUCTION

The Indian financial landscape is dominated by the banking sector with banking flows accounting for over half of the total financial flows in the economy. Banks play a major role in not just purveying credit to the productive sectors of the economy but also as facilitators of financial inclusion. Although the Indian banking sector exhibited considerable resilience in the immediate aftermath of the global financial crisis, it has been impacted by the global and domestic economic slowdown over the last two years.

Sustained improvements in efficiency of the banking sector are desirable as they contribute towards (a) higher economic growth an efficient banking sector can render its basic function of mobilisation and allocation of resources more effectively aiding economic growth (Mohan, 2005); (b) mitigation of risks the more efficient the banking system, the more is the likelihood that it can withstand and absorb shocks. This link essentially stems from the ability of the banking sector to channel improvements in efficiency towards creating more capital buffers. In fact, studies find a negative and significant relationship between cost efficiency and the risk of a bank failure (Podpiera and Podpiera, 2005); (c) improved financial inclusion the more efficient the banking system, the more it can aid financial inclusion, particularly because it can make the delivery of banking services cost-effective and can thereby ensure that improved access to banking services results in improved usage (Chakrabarty, 2013).

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One of the major objectives of banking sector reforms initiated since the early 1990s has been to improve the operating efficiency and profitability of banks. As per the Basel II norms, banks should strive to achieve a cost to income ratio of 40 per cent, while of banks should be more than 1 per cent (RBI, 2008).

Profitability based measurement on the other hand can serve as a more robust and inclusive means to measure the performance by gauging the extent of operational efficiency as well as capturing the nuances of banks diversifying earnings through non-interest income activities and management of their costs.

The recent decline in economic growth has presented significant challenges to banks through rising impairment of assets, pressure on margins and volatility in noninterest income. In this demanding business environment, improved operational efficiency will help banks in standing up to the challenges and enable them to maintain their health and profitability.

A well developed banking system is a necessary precondition for economic development in a modern economy. The amount of earnings indicates the efficiency of the organization. The larger the profits, the more efficient and profitable the organization becomes. That is why profitability is considered, to a large extent, one of the main criteria to adjudge the extent to which the management has been successful in the effective utilization of the funds available with the enterprise.

REVIEW OF LITERATURE

In the financial literature also, several studies have addressed the question of bank efficiency and profitability. P N Joshi (1986) in his paper Profitability and Profit Planning in Banks analyzed the performance of Indian banks using Operating Profit as a measure of their efficiency. He concluded that profit alone in absolute terms could not be the criterion of better performance and hence must be

expressed as ratios. Buch (1997) asserted that foreign-owned banks used modern technology from and rely on the human capital of their parent banks, so that they would be expected to perform better than government-owned or domestic private banks in transitional economies. On similar lines, private banks would be expected to perform better than government-owned banks.

Bhattacharya (1997) studied the impact of increased competition due to the limited liberalization initiated before the deregulation of the nineties on the performance of the different categories of banks, using Data Envelopment Analysis. He found PSBs had the highest efficiency among the three categories, with foreign and private banks having much lower efficiencies. However, PSBs started showing a decline in efficiency after 1987, private banks showed no change and foreign banks showed a sharp rise in efficiency.

Narendra D. Jadhav (2003) in his article Perspective on Banking calculated important commercial bank parameters like net profits to total assets ratio, spread to total assets ratio, etc., from 1996-97 to 2003-04 on the lines of CAMEL Model and found that profitability of the banking system in India was accompanied by enhancement in asset quality.

Rammohan (2002, 2003) also used financial measures for comparing operational performance of different categories of banks over a period of time. However, most of the studies which look at the efficiency of Indian commercial banks concentrate on cost, profit, income or revenue efficiencies, using DEA as a technique of analysis.

Sarkar (1998), Kumbhakar and Sarkar (2003), Rammohan and Ray (2004) compared the revenue maximizing efficiency of public, private and foreign banks in India. They found that public sector banks were significantly better than private sector banks on revenue maximization efficiency, but between public sector banks and foreign banks the difference in efficiency was not significant.

Mittal and Dhade (2007) in their paper Profitability and Productivity in Indian Banks: A Comparative Study compared various categories of banks on their productivity and profitability using the tool of ratio analysis. They found that while there was no remarkable difference in the spread ratio, there was a significant difference in Burden ratio among the public sector and private sector & foreign banks and the key to profitability for the public sector banks was increased productivity.

OBJECTIVES OF THE STUDY

- 1) To highlight the various profitability analysis of public sector banks, private sector banks, foreign banks and different bank groups in post reforms era..
- 2) To analyze the overall profitability of banks (i.e.,) Ratio of operating costs to total assets, Ratio of net interest margin to total assets, Return on assets and Return on equity.

Period of the study

The study covers a period of 22 years from 1991-92 to 2012-2013 is taken for the study.

Sources of Data

The study relies on secondary data published by institutions and organizations concerned with commercial banks. The publications of the Reserve Bank of India Report on Trend and Progress of Banking in India (Annual), Report on Currency and Finance (Annual), RBI Bulletins (Monthly) and Hand Book of Statistics on Indian Economy, Statistical Tables Relating to Banks in India

Statistical Tools

In this study various statistical tools are used (i.e.,) Mean, Standard deviation, ANOVA test and Post Hoc test have been used for data analysis.

Scope of the study

The study is about the role of profitability analysis of different banks groups. It is mainly dealt with the Profitability ratios show a company's overall efficiency and performance. A variety of Profitability Ratios (Decision Tool) can be used to assess the financial health of a business.

Ratios taken for analysis:

1. Ratio of Operating Costs to Total Assets

$$(ROCTA) = \frac{\text{Operating Cost}}{\text{Total Assets}} \times 100$$

This ratio indicates the amount of operating costs expended per unit of assets. Lower the ratio, better it is.

2. Ratio of Net Interest Margin (NIM) to Total

$$\text{Asset} = \frac{\text{NIM}}{\text{Total Assets}} \times 100$$

It is defined as the difference between the total interest earned (including from such items as investments) and total interest expended (included from such items as inter-bank borrowings) normalized by assets. The benchmark for this ratio is more than 3 per cent.

3. Return on Assets (ROA) = $\frac{\text{Net Profit}}{\text{Total Assets}} \times 100$

It indicates as to how much profits a business unit (bank is able to generate per unit of its assets. Higher value of this ratio is indicative of higher profitability. The benchmark for return on asset is more than 1 per cent.

4. Return on Equity (ROE) = $\frac{\text{Net Profit}}{\text{Total Equity}} \times 100$

It is defined as net profit after tax to total equity capital. It is an indicator of efficiency with which capital is used by banking institution. This ratio is widely used by equity investors in their decision making. Higher value of the ratio is indicative of higher profitability. Its benchmark is more than 18 per cent.

LIMITATIONS OF THE STUDY

- 1) As the data are only secondary, i.e., they are collected from the published annual reports.
- 2) Due to limited span of time only profitability ratio is taken for the study.

Profitability Analysis

Table 1 shows the mean and standard deviation of the different ratios i.e NIM, ROPTA, ROA, ROE taken under study according to the different bank groups.

Table 1 Descriptive Analysis								
Ratios	NIM		ROPTA		ROA		ROE	
Bank Group	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
All public sector banks	2.7505	.28606	2.23273	.51477	.54045	.59794	9.03545	13.649764
Old private sector banks	2.7581	.39281	2.16095	.34372	.83810	.30691	15.1519	6.018690
New private sector banks	2.3988	.58729	1.92889	.29622	1.20889	.40960	14.1561	2.854341
All private sector banks	2.6433	.54390	2.13548	.32132	.98364	.32697	9.05182	12.368419
Foreign banks	3.7914	.30241	2.78545	.28997	1.32000	.94855	11.8268	14.968303
All commercial banks	2.8141	.23002	2.29409	.40099	.64682	.58833	15.4695	4.162398

Different bank groups were compared on Net interest margin by making use of one-way analysis of variance. The results obtained as a consequence of the application of one-way analysis of variance are shown in Table 2

Table 2 Annova Results					
NIM	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	23.109	5	4.622	25.583	.000
Within Groups	19.403	122	.162		
Total	42.512	127			

An examination of table 2 reveals that the main effect of bank groups was found to be significant at .001 level of significant difference in the net interest margin of five bank groups. As a consequence of significant F valuing 25.583 the mean net interest margin ratio of different bank groups was computed.

Table 3 Results of Post Hoc(Mean Differences)						
NIM	all public sector banks	old private sector banks	new private sector banks	all private sector banks	foreign banks	all commercial banks
old private sector banks	-.00764					
new private sector banks	.35163*	.35927*				
all private sector banks	.10712	.11476	-.24451			
foreign banks	-1.04097*	-1.03333*	-1.39261*	-1.14810*		
all commercial banks	-.06364	-.05600	-.41527*	-.17076	.97734*	

*. The mean difference is significant at the 0.05 level.

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The mean NIM values of different group of banks were compared by making use of Post-Hoc comparison method. An examination of above mentioned mean difference between NIM scores of different banks revealed that new private banks are the most efficient from the viewpoint of ratio of NIM to total asset while foreign banks have the highest spread from the viewpoint of ratio of NIM total assets. The other three banks fall in between the two extremes referring to new private banks and foreign banks.

Table 4 Annova Results					
ROCTA	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	9.469	5	1.894	10.893	.000
Within Groups	21.210	122	.174		
Total	30.679	127			

An examination of the values of F value (10.893) reported in the above Table 4 shows that it is significant at .000 level of significance. The higher level of significance of F value suggests that there is significant difference in mean ROCTA scores of different banks.

Table 5 Results of Post Hoc (Mean Differences)						
ROCTA	all public sector banks	old private sector banks	new private sector banks	all private sector banks	foreign banks	all commercial banks
old private sector banks	.071775					
new private sector banks	.303838*	.232063				
all private sector banks	.097251	.025476	-.206587			
foreign banks	-.552727*	-.624502*	-.856566*	-.649978*		
all commercial banks	-.061364	-.133139	-.365202*	-.158615	.491364*	

*. The mean difference is significant at the 0.05 level.

Interestingly, the new private bank revealed most effective ROCTA in comparison to the other four banks. Moreover, foreign banks revealed the least effective ROCTA even more than the average of all commercial banks. Currently, other operating expenses of PSBs continue to remain considerably lower than new private banks and foreign banks. This is largely due to the fact that they have not paid adequate attention to the physical infrastructure and the ambience at branches. However, this ratio is also expected to converge in the future.

An examination of table referring to return on asset a measure of profitability reveals significant value of F

for between bank groups. F value has been found to be significant at .005 level of significance. It implies that there is significant difference in return on asset, a measure of profitability so far as different banks are concerned. A comparison of mean ROA score by using Post-hoc comparison reveals that following information: Table 6 & 7.

An examination of mean difference and levels of significance reveals that Public sector banks had the lowest return on asset while foreign bank had the highest return on asset followed by new private bank. The public sector banks mean is less than the mean of all commercial banks.

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Table 6 Annova Results					
ROA	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	10.008	5	2.002	5.982	.000
Within Groups	40.823	122	.335		
Total	50.831	127			

Table 7 Results of Post Hoc(Mean Differences)						
ROA	all public sector banks	old private sector banks	new private sector banks	all private sector banks	foreign banks	all commercial banks
old private sector banks	-.297641					
new private sector banks	-.668434*	-.370794*				
all private sector banks	-.443182*	-.145541	.225253			
foreign banks	-.779545*	-.481905*	-.111111	-.336364		
all commercial banks	-.106364	.191277	.562071*	.336818	.673182*	

*. The mean difference is significant at the 0.05 level.

Return on equity is another index of profitability in addition to Return on asset as discussed earlier. It is significant to note that the results concerning return on equity is different from return on asset in the sense that F value for return on asset was highly significant while the F value for return on equity is insignificant as shown in Table 8. The level is .159.

Table 8 Annova Results					
ROE	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	860.171	5	172.034	1.621	.159
Within Groups	12944.604	122	106.103		
Total	13804.775	127			

Table 9 Results of Post Hoc(Mean Differences)						
ROE	all public sector banks	old private sector banks	new private sector banks	all private sector banks	foreign banks	all commercial banks
old private sector banks	-6.116450*					
new private sector banks	-5.120657*	.995794				
all private sector banks	-.016364	6.100087*	5.104293*			
foreign banks	-2.791364	3.325087	2.329293	-2.775000		
all commercial banks	-6.434091*	-.317641	-1.313434	-6.417727*	-2.775000	

*. The mean difference is significant at the 0.05 level.

The mean scores for return on equity reveals that there was not much difference in mean score of different bank groups in terms of effectiveness concerning return on equity.

Global Comparison

While we have made some progress on the productivity front, it is important to benchmark the Indian banking system against global productivity standards in order to get a better understanding of where we stand. While there has been a tangible improvement in our relative productivity levels on various parameters such as cost to income ratio, we still lag behind several of our peers from Asia and the developed world.

Table: 10 Indicators of Profitability and Efficiency, across Select Countries (Per cent)			
Country	Cost-to-income ratio	NIM	RoA
Select advanced countries			
USA	60.59	3.64	0.83
Japan	61.65	1.01	0.28
UK	67.79	1.09	0.16
Denmark	70.32	1.12	0.07
France	75.37	0.9	0.11
Germany	83.62	0.78	0.02
Italy	89.63	1.37	-1.1
BRICS			
China	38.48	2.74	0.77
India	44.53	3.02	0.95
Brazil	57.28	4.97	1.21
South Africa	57.34	2.76	1.1
Russia	90.03	3.93	1.27

FINDINGS OF THE STUDY

Public Sector Banks had the highest mean operating cost to income ratio followed and old private sector banks, which needs to be improved, as higher cost means lower efficiency. This can be done by computerizing the branches, which have not been

done so far. About 15 % branches of State bank group and 20% of nationalized banks need to be fully computerized and core-banking solution should be implemented promptly. This may increase the cost in the short run, but in the long run it will give immense benefits and reduce operating cost. As the operating cost will improve it will increase the spread, and hence profitability.

CONCLUSION

One of the major objectives of banking sector reforms initiated since the early 1990s has been to improve the operating efficiency and profitability of banks. Ratio of OPCA, NIM and ROA indicates that there has been a decline in OPCA and NIM for the system as a whole over this period, and also an improvement in ROA, albeit with some variations. As per the Basel II norms, banks should strive to achieve ROA of more than 1 per cent (RBI, 2008). In the decade of 2000s, India's performance compares favorably with these two benchmarks. Bank group wise performance depicts that in case of Return on total asset foreign banks are ahead followed by new private banks, in case of operating cost to asset ratio new private banks are the most efficient followed by old private banks. Thus, the standard accounting measures/ratios suggest a trend of improvement in the efficiency of the Indian banking sector over recent years.

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