



## Profitability of Indian Scheduled Commercial Banks: A Comparative Evaluation

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### Abstract

This study is designed to be an exploratory and diagnostic research. The basic objective of this study is to analyze the profitability of Indian scheduled commercial banks. Data have been collected from Data Release of Reserve Bank of India (2017), Statistical Table Relating to Banks in India and various Issues of RBI Bulletins. For assessing the profitability of banks, various statistical methods have been used, such as average, standard deviation, standard error, lower bound and upper bound. In addition to this, ANOVA test has been applied at 95% level of confidence for testing significant difference amongst the various types of incomes and profit through SPSS software. The study reveals a significant difference amongst three groups of banks in terms of interest income, non-interest income, net interest income, operating profit and return on assets. However, the difference was insignificant in terms of return on equity. Moreover, the foreign banks attained the highest net interest income, non-interest income, operating profit and return on assets, but the highest return on equity was attained by private sector banks.

**Key words:** Interest Income, Net Interest Income, Return of Assets, Return on Equity and ANOVA

**JEL Classification:** G21, G39

**Paper Classification:** Research Paper

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### Introduction

Scheduled commercial banks in India are one of the most important ingredients of existing financial system and around two-third of financial resources are accumulated and allocated by active participation of these banks. This industry had already seen various ups and downs before independence, but nationalization gave some boost and stability to this sector resulting in acceleration of economic growth, especially after reforms in 1991 and this step led the class banking to the mass banking, and the new private sector banks were allowed to run the banking business in India. Besides, following India's commitment to the WTO, foreign banks were also given permission to open more branches with effect from 1998-99. With the accelerated competition and high emphasis on profitability, the public sector banks started adopting economic-oriented model instead of social approach followed for decades. Thus, restructuring of public sector banks and the emergence of new private sector banks exacerbated

the professionalism in the banking sector, and this increased presence of the private and foreign banks during the last decade led to the competitive pricing of services, narrow spreads, and improvement in the quality of services. Consequently, the public sector banks (Nationalized banks and SBI Group), which had dominated the banking sector for decades, started feeling the heat of intense competition from private and foreign banks. But still banking industry is dominated by public sector banks for instance, almost two-third of deposits and advances are shared by public sector and only one-third is left for the private and foreign banks. Secondly, poor profitability of public sector banks, growing NPAs, nexus amongst banks officials, corporates and politician, and lack of consistency has always been major bottlenecks for this growing and vibrant industry. Furthermore, efficiency and profitability of banking sector has attained huge importance due to intense competition, high customer demand and accelerated reforms in India. Therefore, this study, is an attempt to measure the relative performance of Indian scheduled commercial banks on the basis of selected parameters viz. interest income, operating profit and return of assets etc.

### Review of Literature

Ramchandran, Ismail and Kavitha (2006) assessed the profitability of scheduled commercial banks in India. All the scheduled commercial banks were divided into three groups namely, SBI group, Nationalized Banks and Private Banks. The study identified certain prominent factors to the profitability of banks and some suggestions were also made to increase the profit of all groups of banks.

Yadav, M.S. (2007) in their study revealed that existing level of NPAs in public sector banks affects fifty percent of profitability of banks and this has led to the reduction in the productivity and efficiency of public sector banks in terms of business per employee and operating profit per employee. Kheechee, D.S. (2011) analyzed the comparative profitability of Indian scheduled commercial banks. Broadly, three parameters were selected viz. Return on Fund, Cost of Fund and Net Interest Margin. Net Interest Margin was very high in foreign banks followed by Private Banks and Nationalized Banks. The study revealed the significant difference amongst three groups of banks in terms of Return on Fund, Cost of Fund and Net Interest Margin. Ibrahim, M.S. (2011) revealed that scheduled commercial banks in India have significantly improved their financial performance, and improvement in Investment-Deposit Ratio and share of priority sector lending in total credit can lead to improvement in operational efficiency and profitability as well. Chaudhary, K. and Sharma, M. (2011) analyzed how efficiently Indian public sector banks and private sector banks manage their NPAs and reached on a conclusion that NPAs management in public sector banks was deteriorating continuously. Ayyappam, S. & Sakthivadivel, M. (2012) revealed that the compound growth rate of private sector banks was better than public sector banks and it was also identified that at current rate of growth, private sector banks can pose a challenge in the market place. Kumar, V. (2012) found that foreign banks on an average, were more efficient followed by private sector banks and public sector banks. The profitability of public sector banks was weak as compared to the other scheduled commercial banks. Bapat, D.M. (2013) assessed the growth, profitability and productivity for Indian public sector banks, and significant difference was observed amongst the scheduled commercial banks in terms of business per employee and profit per employee for four out of seven years. Rani, S. (2013) assessed the performance and growth of Indian scheduled commercial banks during the period from 2009 to 2012. The study found that during the global economic crisis, the Indian commercial banks maintained a positive trend for development. Makkar, A. & Singh, S. (2013)

compared the financial performance of Indian scheduled commercial banks. The study concluded that by and large, difference was not significant in terms of financial performance of the public and private sector banks in India. Naser, A. V. (2014) revealed that financial performance and employee efficiency of foreign banks, working in India is better than other commercial banks. The public sector banks revealed low profitability, but comparatively high stability. Haque, A. (2014) examined the comparative financial performance of commercial banks in India. The study included three parameters namely, Return on Assets, Return on Equity and Net Interest Margin. Besides, ANOVA technique was used to find out significant difference amongst the different groups of banks. The difference was insignificant amongst the selected groups of banks in terms of ROA and NIM, but difference was noticeable in terms of Return on Equity. Chirag and Thakarshibhai (2014) made a comparative analysis of profitability between public sector and private sector banks on the basis of selected parameters viz. Net Profit Margin, Return on Assets and Return on Long-term Fund. The study revealed a significant difference between private and public sector banks in terms of Net Interest Margin, Return on Long-term Fund and Return on Assets Ratio. Paul, P. (2015) assessed the working performance of all the commercial banks for the period of ten years from 2004 to 2013. The parameters selected for this study were Aggregate Deposit, Current-Deposit Ratio, Investment-Deposit Ratio and share of Scheduled Commercial Banks in the priority sector lending. Besides, the study revealed a significant improvement in the working performance. Malyadan.P. and Sirisha. S. (2015) examined the trend and progress on the basis of various parameters such as, Profit per Employee, Interest Income, Other Income and Return on Assets etc. This study found strong evidence that the private sector banks surpass the other group of banks and got the highest position in all the parameters, while public sector banks and foreign banks found lagging behind. Pallauvi and Sluja, R (2017) assessed the profitability of scheduled commercial banks in India. Some parameters were selected in order to examine the profitability such as, operating profit as percentage of working fund and net profit as a percentage of total deposit and total income. The study concluded that net profit to working fund is better than operating profit to working fund and net profit to total income is better than net profit to total deposit.

After reviewing the existing studies, it is concluded that the available studies are indecisive, incomplete and do not make the comparison of profitability amongst different groups of banks on the basis of parameters selected under this study, and that is why this study was further proceeded to fill the gap.

### **The specific objectives are:**

- 1) To examine the interest income, non-interest income, net interest income of three groups of scheduled commercial banks.
- 2) To analyze the operating profit, return on assets and return on equity of selected groups of banks.
- 3) To analyze the profitability of all the groups of banks on the basis of assessed parameters and draw final inferences.

### **Data and Methodology**

The present study is designed to be a diagnostic and exploratory research, and the secondary data have been taken into consideration for ten years from 2007-08 to 2016-17 and it is thoroughly based on quantitative analysis. All the scheduled commercial banks have been selected and

categorized in three groups namely, public sector banks, private sector banks and foreign banks. Besides, combined data have also been placed side by side for all the scheduled commercial banks.

Data have been collected from data release of Reserve Bank of India (2017), Statistical Table Relating to Banks in India (Bank Group-Wise Select Ratios of Scheduled Commercial Banks) and various Issues of RBI Bulletins. Furthermore, the collected data have been suitably re-arranged, classified and tabulated according to the requirement of this study.

Under this study, an attempt is made by the researcher to assess the profitability of scheduled commercial banks on the basis of selected parameters viz. Interest Income to Total Assets, Net Interest Income, Non-interest Income to Total Assets, Operating Profit to Total Assets, Return on Assets and Return on Equity.

### Hypotheses for the Study

Null Hypothesis  $H_{01}$ :The difference was not significant amongst three groups of banks in terms of interest income, non-interest income and net interest income.

Null Hypothesis  $H_{02}$ :The difference was not significant amongst three groups of banks in terms of operating profit, return on assets and return on equity.

Null Hypothesis  $H_{03}$ :The profitability of all the groups of scheduled commercial banks is uniform.

For assessing the collected data for all the scheduled commercial banks, some statistical methods have been used, such as Mean, Standard Deviation, and Standard Error, Lower Bound and Upper Bound. In addition to this, ANOVA test has been applied at 95% level of confidence for testing significant difference in terms of profit amongst three groups of banks through Excel and SPSS software.

### Result and Discussion

Table-1 shows the comparison of various ratios on the basis of mean value for the period under the investigation. Moreover, the tables given below are divided in two parts; Upper part reveals the data taken from RBI website and lower part shows an analysis in terms of mean, standard deviation and standard error etc.

**Table 1: Ratio of Interest Income to Total Assets (In %)**

Years	Public Banks	Private Banks	Foreign Banks	All SC Banks
2016-17	7.20	8.27	6.33	7.42
2015-16	7.74	8.63	6.67	7.88
2014-15	8.12	8.81	6.71	8.18
2013-14	8.31	8.90	6.60	8.32
2012-13	8.54	9.04	6.89	8.53
2011-12	8.55	8.71	6.67	8.45
2010-11	7.52	7.59	6.15	7.44
2009-10	7.46	7.60	5.99	7.37
2008-09	8.05	8.65	7.49	8.12
2007-08	7.80	8.42	7.65	7.92

95% Confidence Interval for Mean				
Mean	7.9290	8.4620	6.7150	7.9630
Std. Deviation	.46264	.50708	.52871	.43290
Std. Error	.14630	.16035	.16719	.13689
Lower Bound	7.5981	8.0993	6.3368	7.6533
Upper Bound	8.2599	8.8247	7.0932	8.2727
Minimum	7.20	7.59	5.99	7.37
Maximum	8.55	9.04	7.65	8.53

Note: The data for Tables 1 to 6 was collected from Reserve Bank of India (2017), Statistical Table Relating to Banks in India, [www.rbi.org.in/scripts/annualpublication.asp](http://www.rbi.org.in/scripts/annualpublication.asp)

The private sector banks attained the highest interest income to total assets i.e. 8.46 percent as compared to other scheduled commercial banks. The public sector banks got 7.92 percent followed by foreign banks 6.71 percent. Percentage of all scheduled commercial banks (7.96) was higher than public banks and foreign banks, but lesser than private sector banks. If analyzed consistency wise nationalized banks were found slightly more consistent (.4626) than private sector banks i.e. .5070. Comparatively, foreign banks had more variation in the interest income while all scheduled commercial banks had the lowest variation i.e. .4329. On both the parameters, foreign banks appeared to be the lowest performer i.e. less interest income and highest inconsistency.

**Table 2: Ratio of Net Interest Income to Total Assets (In %)**

Years	Public Banks	Private Banks	Foreign Banks	All SC Banks
2016-17	2.12	3.38	3.41	2.51
2015-16	2.23	3.41	3.59	2.58
2014-15	2.35	3.37	3.54	2.64
2013-14	2.45	3.31	3.54	2.70
2012-13	2.57	3.22	3.83	2.79
2011-12	2.76	3.09	3.89	2.90
2010-11	2.77	3.10	3.86	2.91
2009-10	2.29	2.90	3.96	2.54
2008-09	2.35	2.86	4.33	2.62
2007-08	2.35	2.67	4.33	2.58
95% Confidence Interval for Mean				
Mean	2.4240	3.1310	3.8280	2.6770
Std. Deviation	.21578	.25362	.32034	.14430
Std. Error	.06823	.08020	.10130	.04563
Lower Bound	2.2696	2.9496	3.5988	2.5738
Upper Bound	2.5784	3.3124	4.0572	2.7802
Minimum	2.12	2.67	3.41	2.51
Maximum	2.77	3.41	4.33	2.91

Table 2 shows net interest income, which is nothing but the difference between interest income and interest expenditures. Net interest margin was highest in case of foreign banks (3.82) followed by private sector banks (3.13) and public sector banks (2.42). Although private sector banks attained the highest interest income and foreign banks got the lowest interest income, in spite of that foreign banks emerged the best performer because of their cost efficiency. It has also been noted that net interest margin of all scheduled commercial banks (2.67) was lower than foreign banks and private banks, but it was higher than public sector banks. Hence, it can be realized that public sector banks have been lagging behind the foreign banks and private sector banks on the parameters of cost. Variation-wise, public sector banks (.215) were most consistent closely followed by private banks (.253) and foreign banks (.320).

**Table 3: Ratio of Non-Interest Income to Total Assets (In %)**

Years	Public Banks	Private Banks	Foreign Banks	All SC Banks
2016-17	1.20	1.88	1.95	1.42
2015-16	0.92	1.73	1.60	1.15
2014-15	0.91	1.72	1.99	1.15
2013-14	0.87	1.67	1.95	1.11
2012-13	0.87	1.62	1.83	1.09
2011-12	0.89	1.62	2.02	1.11
2010-11	0.99	1.64	2.38	1.21
2009-10	1.19	1.87	2.26	1.41
2008-09	1.25	1.82	3.68	1.57
2007-08	1.20	2.02	3.32	1.55
95% Confidence Interval for Mean				
Mean	1.0290	1.7590	2.2980	1.2770
Std. Deviation	0.1601	0.13412	0.67356	0.19032
Std. Error	0.05063	0.04241	0.213	0.06019
Lower Bound	0.9145	1.6631	1.8162	1.1409
Upper Bound	1.1435	1.8549	2.7798	1.4131
Minimum	0.87	1.62	1.6	1.09
Maximum	1.25	2.02	3.68	1.57

Table 3 reveals ratio of non-interest income to total assets. Foreign banks got the highest non-interest income in terms of mean value as compared to the private sector banks (1.75) and public sector banks (1.02). Non-interest income of all scheduled commercial banks (1.270) was higher than public sector banks, and lower than private banks and foreign banks. This difference clearly indicates that foreign banks and private sector banks have outperformed public sector banks not only in terms of primary banking activities, but also in secondary banking activities. Secondly, private sector banks were found the most consistent followed by public sector banks (0.160) and foreign banks (0.673) respectively.

Table 4 shows ratio of operating profit to total assets and operating profit is calculated by deducting operating expenditures from total income (Net Interest Income and Non-Interest Income). The foreign banks outperformed all the Indian banks (Private Banks and Public Banks) in terms of operating profit to total assets ratio i.e. 3.64 percent. Next is the place of private

sector banks 2.67 percent and public sector banks 1.82 percent. Even on this parameter public banks found lagging behind foreign banks and private sector banks. Mean value of all scheduled commercial banks was 2.13 percent, higher than public sector banks. Contrary to this, public sector banks (0.174) were found most consistent followed by private banks (0.227) and foreign banks (0.587).

**Table 4: Ratio of Operating Profits to Total Assets (In %)**

Years	Public Banks	Private Banks	Foreign Banks	All SC Banks
2016-17	1.68	3.02	3.27	2.11
2015-16	1.51	2.92	3.13	1.94
2014-15	1.70	2.86	3.36	2.00
2013-14	1.71	2.79	3.28	2.04
2012-13	1.87	2.64	3.33	2.13
2011-12	2.05	2.51	3.44	2.24
2010-11	2.05	2.58	3.52	2.26
2009-10	1.87	2.68	3.70	2.17
2008-09	1.96	2.46	4.97	2.32
2007-08	1.84	2.28	4.40	2.15
95% Confidence Interval for Mean				
Mean	1.824	2.674	3.64	2.136
Std. Deviation	0.17411	0.22761	0.58742	0.11937
Std. Error	0.05506	0.07198	0.18576	0.03775
Lower Bound	1.6994	2.5112	3.2198	2.0506
Upper Bound	1.9486	2.8368	4.0602	2.2214
Minimum	1.51	2.28	3.13	1.94
Maximum	2.05	3.02	4.97	2.32

**Table 5: Return On Assets (In %)**

Years	Public Banks	Private Banks	Foreign Banks	All SC Banks
2016-17	-0.10	1.30	1.62	0.35
2015-16	-0.07	1.50	1.45	0.40
2014-15	0.46	1.68	1.84	0.81
2013-14	0.50	1.65	1.54	0.81
2012-13	0.80	1.63	1.92	1.04
2011-12	0.88	1.53	1.76	1.08
2010-11	0.96	1.43	1.75	1.10
2009-10	0.97	1.28	1.26	1.05
2008-09	1.03	1.13	1.99	1.13
2007-08	1.00	1.13	2.09	1.12
95% Confidence Interval for Mean				
Mean	0.643	1.426	1.722	0.889
Std. Deviation	0.43202	0.20684	0.25681	0.29501

Std. Error	0.13662	0.06541	0.08121	0.09329
Lower Bound	0.3339	1.278	1.5383	0.678
Upper Bound	0.9521	1.574	1.9057	1.1
Minimum	-0.1	1.13	1.26	0.35
Maximum	1.03	1.68	2.09	1.13

Table 5 clearly indicates that foreign banks attained the highest return on assets i.e. 1.72 percent followed by private sector banks 1.42 percent, while public sector banks (0.643) got the lowest return on assets even lesser than all scheduled commercial banks i.e. 0.889 percent. Furthermore, it has also been noted that in last two financial years, 2016-17 and 2015-16, public sector banks got the negative return on assets i.e. -0.10 and -0.07 respectively, and these facts manifest the alarming situation in the public sector banks. Secondly, due to ups and downs in return on assets, public sector banks were found unstable i.e. 0.432 percent, while private sector banks and foreign banks were found comparatively stable i.e. 0.206 and 0.256 respectively. By and large, it can be inferred from the above analysis that public sector banks have been lagging behind the private sector banks and foreign banks.

**Table 6: Return On Equity(In %)**

Years	Public Banks	Private Banks	Foreign Banks	All SC Banks
2016-17	-2.05	11.87	9.12	4.16
2015-16	-3.47	13.81	8.00	3.58
2014-15	7.76	15.74	10.24	10.42
2013-14	8.48	16.22	9.03	10.69
2012-13	13.24	16.46	11.53	13.84
2011-12	15.33	15.25	10.79	14.60
2010-11	16.90	13.70	10.28	14.96
2009-10	17.47	11.94	7.34	14.31
2008-09	17.94	11.38	13.75	15.44
2007-08	17.13	13.43	16.05	15.98
95% Confidence Interval for Mean				
Mean	10.873	13.98	10.613	11.798
Std. Deviation	8.04534	1.87563	2.64153	4.57145
Std. Error	2.54416	0.59313	0.83533	1.44562
Lower Bound	5.1177	12.6383	8.7234	8.5278
Upper Bound	16.6283	15.3217	12.5026	15.0682
Minimum	-3.47	11.38	7.34	3.58
Maximum	17.94	16.46	16.05	15.98

Table 6 measures the return on equity in terms of mean value. The most efficient utilization of equity share holders fund was done by private sector banks since this sector has got the highest return on equity i.e. 13.98 percent followed by public sector banks (10.87). Besides, foreign banks on this parameter were found to be the lowest performer i.e. 10.61 percent only, and return for all scheduled commercial banks was 11.79 percent, higher than public banks and foreign banks. While public sector banks were ahead of foreign banks in terms of return on equity, but in 2016-

17 and 2015-16, this sector had to face negative return i.e. -2.05 and -3.47 percent respectively, and these negative facts had caused a huge variation in the return i.e. 8.045 percent, comparatively very high since variation in case of private banks (1.87) and foreign banks (2.64) was lesser than average of all scheduled commercial banks i.e. 4.571 percent.

**Table 7: Hypothesis Testing For Profitability (ANOVA)**

Parameters	Banks	Sum of Squares	DF	Mean Square	F	Sig.	Null
Ratio of Interest Income to Total Assets	Between Groups	16.544	3	5.515	23.514	.000	Rejected
	Within Groups	8.443	36	.235			
	Total	24.987	39				
Net Interest Income to Total Assets	Between Groups	11.379	3	3.793	64.751	.000	Rejected
	Within Groups	2.109	36	.059			
	Total	13.488	39				
Non-interest Income to Total Assets	Between Groups	9.425	3	3.142	23.554	.000	Rejected
	Within Groups	4.802	36	.133			
	Total	14.227	39				
Operating Profits to Total Assets	Between Groups	19.006	3	6.335	57.406	.000	Rejected
	Within Groups	3.973	36	.110			
	Total	22.979	39				
Return on Assets	Between Groups	7.269	3	2.423	25.345	.000	Rejected
	Within Groups	3.442	36	.096			
	Total	10.711	39				
Return On Equity	Between Groups	70.197	3	23.399	.974	.416	Accepted
	Within Groups	865.093	36	24.030			
	Total	935.290	39				

Table 7 reveals that the profitability of three groups of banks is not uniform or identical since hypothesis has been rejected for interest income, net interest income, non-interest income, operating profit and return of asset. However, framed assumption has been accepted for one parameter viz. return of equity, which shows insignificant difference amongst three groups of banks. In nutshell, foreign banks attained the highest profit followed by the private banks and public sector banks.

## Conclusion

The following inferences have been drawn from the above analysis.

Out of three categories of banks, private bank outperformed the foreign banks and public banks on the parameter of interest income, while foreign bank were found better than private banks and public banks on net interest income and non-interest income. However, private banks got the highest interest income, but foreign banks emerged as most cost-efficient banking institutions resulting into the highest net interest income. Besides, foreign banks managed secondary banking activities better than private banks and public banks since their non-interest income was also higher. By and large, public banks were found lagging behind private and foreign banks.

Second, the foreign banks performed better than private banks and public sector banks in terms of operating profit to assets ratio and return on assets ratio. While Indian banks (private and public banks) earned interest income more than foreign banks, but foreign banks succeeded and surpassed Indian banks in minimizing the interest expenditure and operating expenditures resulting into higher operating profit to assets and return on assets. Thus, the expenditure management in foreign banks is better than Indian private banks and public banks.

Thirdly, private banks have completely outperformed foreign banks and public banks on the parameters of return on equity, which marked efficient utilization of financial resources in general and borrowed fund in particular under private sector banks. Hence, it can be inferred that efficient financial management led the highest return on equity for private sector banks.

In nutshell, private banks performed better than public sector banks in terms of profitability and foreign banks were found better than Indian private banks for the same.

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