



# “MEASURING THE PROFITABILITY OF BANKING SECTOR”: A CASE STUDY OF SELECTED PUBLIC SECTOR BANKS IN INDIA

Dr. B Sharath Reddy

Assistant professor of commerce, Government Degree College, Medak, Medak (DIST), Telangana.

Email - [bsharathreddyjl@gmail.com](mailto:bsharathreddyjl@gmail.com)

**Abstract:** The study has emphasized on the assessment of profitability of selected public sector banks in India for the period of five years i.e. 2019-2023. The study used the four profitable parameters such as Return on Assets, Return on equity, Return on Advances, Return on Investments. The study examined the hypothesis by ANOVA-Single factor. The study found that, SBI and BOB have reported positive return on assets and equity during the study period, whereas, BOI and CBI have reported negative return on assets and equity during same period. In contrast, all banks have good returns on the advances and investment during the study period. The ANOVA result proved significant difference within and between selected banks in the parameters of Return on Assets and Return on equity which leads to acceptance of alternative hypothesis and rejection of null hypothesis. In contrast, ANOVA result found insignificant difference within and between selected banks in the parameters of Return on Advances and Return on Investments which leads to acceptance of null hypothesis and rejection of alternative hypothesis.

**Key Words:** Profitability, banking sector, public sector banks etc.

## 1. INTRODUCTION:

Money in the business is like a flow of blood in the human beings. The chief business every business is generating the profit which refers to the excess of revenue over its expenditure over a period of time. The earning profit assists the business organizations for survival, expansion, risk bearing capability and also to meet socio-economic objectives such as CSR etc. The profitability refers to the ability of the firm to generate profits from business operations over a specific period of time. The assessment of profits is very critical aspects in every sector including banking sector which deals with public funds and interest spread is major source of income. The profitability in banking sector increases its capability to meet future financial requirements and face unforeseen risks in the future. Therefore, profitability measurement is also very crucial in improving the other parameters such liquidity, solvency and capital adequacy etc. In banking sector profitability is measured in the parameters of Net interest margin, operating profit, profit after tax, return on assets, return on equity, return on advances and return on investments etc. However, in practices various research studies analyze the various parameters as per their objective of research.

The banking system in India evolved over several decades and well established. It has been serving the credit and banking needs of the economy. The banking ecosystem is providing impetus to economic growth and development of the country and catering to the specific and varied financial requirements of different customers and borrowers. The major role of banks is to intermediate resources from the depositor to the lender for their mutual benefit while allocating them in an efficient manner, thereby contributing to economic growth through enhanced efficiency in usage of resources. In India, banking sector in India is nature with monopolistic with participation of 137 Scheduled commercial banks(excluding co-operative and local area banks). The Scheduled commercial banks comprises of public sector, private sector, foreign banks, RRBs, small finance banks and payment banks. The Reserve Bank of India is regulatory of banking sector in India and governing by the Banking and Regulation Act 1949.



## 2. LITERATURE REVIEW:

**Tojiev Rakhmatilla Rakhmonovich (2021)** discussed the determinants of liquidity in commercial banks. The study classified the determinants of liquidity as internal and external. The internal factors comprises of bank management, customer base, bank image, asset quality, demands & liabilities status, fund rising opportunities, capital base and deposit quality. The external factors such as economic stability, political situation, banking legislation, bank development level etc.

**Lilly (2020)** study measured the liquidity position of five private sector banks in India for the period of 2009 to 2018. The sample size is selected by using judgemental sampling method. The used the ratios such as current ratio, liquidity ratio, absolute liquidity ratio and cash ratio. The study adopted descriptive technique and ANOVA technique. The selected banks are Axis Bank, HDFC Bank, ICICI Bank, Kotak Mahindra Bank and Karur Vysya Bank. The ANOVA result found the significance differences within liquidity ratio of selected banks in India for the study period.

**Muhammad Ashraf et al (2017)** examined the relationship between liquidity and profitability of banking sector in Pakistan for the period of ten years i.e, 2006-2015. The study selected ten banks as sample size. In the study, liquidity is measured in five parameters such as quick, current, cash, interest coverage and capital adequacy ratios and profitability is measured by three parameters such as ROA, ROE and EPS. The study examined relationship through using descriptive, correlation and regression. The study found the significant positive correlation between liquidity and profitability in banking sector.

**Zuzana Fungacove et al (2015)** opined that High Liquidity Creation Hypothesis” (HLCH) that a proliferation in the core activity of bank liquidity creation increases failure probability. The study examined that HLCH in the context of Russian banking, which provides a natural field experiment due to numerous failures experienced over the past decade. The study also found that high liquidity creation significantly increases the probability of bank failure. The study suggest that regulatory authorities can mitigate systemic distress and reduce the costs of bank failures to society through early identification of high liquidity creators and enhanced monitoring of their funding and investment activities.

## 3. RESEARCH METHODOLOGY:

**3.1 RESEARCH PROBLEM:** The profitability is the key driver for the survival and existence of every business organization. The measurement of profitability indicates ability of the firm to generate the profits out of business operations during a specific period. In banking sector, profitability measurement plays crucial role in increases the liquidity and solvency and capital adequacy of the firm. However, as compared to manufacturing institutions, profitability in banking sector is subject to high volatility due to reliance on the performance and repayment capability of corporate sector and individuals. Therefore, present study measured the profitability of selected public sector in India for the period of 2019-2024.

### 3.2 OBJECTIVES OF THE STUDY: The present study is aimed at

- The analyze the returns generated by the public sector banks on assets
- The evaluate the returns generated by the public sector banks on owner’s equity
- The assess the returns generated by the public sector banks on advances
- The analyze the returns generated by the public sector banks on investments

### 3.3 Hypothesis: The study formulated the following alternative hypotheses where null hypotheses are implied.

- *H<sub>1</sub>: There is significance difference in Return on assets within and between the selected public sector banks during the study period.*
- *H<sub>2</sub>: There is significance difference in Return on assets within and between the selected public sector banks during the study period.*
- *H<sub>3</sub>: There is significance difference in Return on assets within and between the selected public sector banks during the study period.*
- *H<sub>4</sub>: There is significance difference in Return on assets within and between the selected public sector banks during the study period.*



**4. RESEARCH METHODOLOGY:** The present study is empirical in nature and purely based on the secondary data. The data is collected from the RBI annual reports published in its website. In the study profitability is measured in four parameters such as Return on Assets, Return on Equity, Return on Advances and Return on Investments. The study period comprises of five years from 2018-19 to 2023-24. The study applied the financial ratios technique, averages, and ANOVA single factor technique to examine the hypothesis. In the study four public sector banks are selected by using Simple Random Sample technique. The selected banks are Bank of Baroda, Bank of India, Central Bank of India and State Bank of India.

**Table no 01: Profitability Parameters of Selected Banks during 2019-2023 (%)**

Return on Assets						
	2022-23	2021-22	2020-21	2019-20	2018-19	AVG
BOB	1.03	0.60	0.07	0.06	0.06	<b>0.36</b>
BOI	0.49	0.43	0.28	-0.43	-0.84	<b>-0.01</b>
CBI	0.44	0.30	-0.26	-0.35	-1.70	<b>-0.31</b>
SBI	0.96	0.67	0.48	0.38	0.02	<b>0.50</b>
<b>AVG</b>	<b>0.73</b>	<b>0.50</b>	<b>0.14</b>	<b>-0.09</b>	<b>-0.62</b>	<b>0.13</b>
Return on Equity						
	2022-23	2021-22	2020-21	2019-20	2018-19	AVG
BOB	15.33	8.93	1.11	0.84	0.97	<b>5.44</b>
BOI	7.05	6.75	4.83	-6.92	-14.37	<b>-0.53</b>
CBI	5.59	4.24	-4.12	-5.56	-30.56	<b>-6.08</b>
SBI	16.53	11.86	8.4	6.4	0.39	<b>8.72</b>
<b>AVG</b>	<b>11.13</b>	<b>7.95</b>	<b>2.56</b>	<b>-1.31</b>	<b>-10.89</b>	<b>1.88</b>
Return on Advances						
	2022-23	2021-22	2020-21	2019-20	2018-19	AVG
<b>BOB</b>	7.46	6.64	7.17	8.07	7.67	<b>7.40</b>
<b>BOI</b>	7.36	6.57	7.46	8.12	7.99	<b>7.50</b>
<b>CBI</b>	8.04	7.08	7.57	8.40	8.55	<b>7.93</b>
<b>SBI</b>	7.46	6.63	7.18	7.97	7.85	<b>7.42</b>
<b>AVG</b>	<b>7.58</b>	<b>6.73</b>	<b>7.34</b>	<b>8.14</b>	<b>8.01</b>	<b>7.56</b>
Return On Investments						
	2022-23	2021-22	2020-21	2019-20	2018-19	AVG
<b>BOB</b>	6.53	6.11	6.37	6.74	7.40	<b>6.63</b>
<b>BOI</b>	6.31	6.15	6.68	6.99	7.00	<b>6.63</b>
<b>CBI</b>	6.28	6.40	6.88	7.40	7.42	<b>6.88</b>
<b>SBI</b>	6.29	5.99	6.65	6.77	7.34	<b>6.61</b>
<b>AVG</b>	<b>6.35</b>	<b>6.16</b>	<b>6.64</b>	<b>6.97</b>	<b>7.29</b>	<b>6.69</b>

Source: Computed from RBI Reports 2019-2023

**TABLE 02: ANOVA RESULT**

	Source of Variation	SS	df	MS	F	P-value	F crit	Result
Return On Assets	Between Groups	4.39282	4	1.09	5.1748	0.008	3.055	<b>Significant</b>
	Within Groups	3.181675	15	0.21				
	Total	7.574495	19					
Return on Equity	Between Groups	5.11572	4	1.27	17.257	1.75	3.055	<b>Insignificant</b>
	Within Groups	1.1116	15	0.07				
	Total	6.22732	19					
Return on Advances	Between Groups	1184.091	4	296.02	4.475	0.01	3.055	<b>Significant</b>
	Within Groups	992.0922	15	66.13				
	Total	2176.183	19					
Return on Investment	Between Groups	3.34115	4	0.83	19.060	9.56	3.055	<b>Insignificant</b>
	Within Groups	0.65735	15	0.04				
	Total	3.9985	19					

Source:



## DESCRIPTION OF RESEARCH VARIABLES

**RETURN ON ASSETS:** Return on assets refers to money generated by utilization of company assets. This indicates ability of the firm in effective utilization of the firm's assets by generating sufficient returns. In Indian banking system, Return on assets for a bank group is calculated as weighted average of return on assets of individual banks in the group, weights being the proportion of total assets of the bank as percentage to total assets of all banks in the corresponding bank group.

**RETURN ON EQUITY:** Return on assets refers to the rate of return generated by the firm by using of its owner's equity. This indicates the profit generated by the firm by effective use of their owner's equity. In Indian banking system ROE is calculated as  $100 \times (\text{Net Profit for the year}) / [\text{average (Capital + Reserves and Surplus) for Current and Previous Years}]$ .

**RETURN ON ADVANCES:** The return on advances refers to the rate of return generated by the banks on their advances provided to the customers during a specific period of time. The return on advances is calculated as  $100 \times (\text{Interest/Discount on advances/bills}) / [\text{average (Advances) for Current and Previous Years}]$ .

**RETURN ON INVESTMENT:** Return on investments refers to the rate of return generated by the banks on their investment during a specific period of time. This is calculated as  $\text{Return on Investments} = 100 \times (\text{Income on Investments}) / [\text{average (Investments) for Current and Previous Years}]$ .

## 5. DISCUSSION ON RESULT:

**Return on Assets:** The study found that, among the selected banks SBI has reported highest average Return on Assets of positive 0.50 percentage during the study period whereas BOB has reported 0.36 percentage during the same period. In contrast, CBI has reported average negative Return on Assets of -0.31 percentage mainly due to huge negative returns in last three years. Similarly, BOI has been reported average negative of ROA of -0.01 percentage during the study period. The ANNOVA result proved the insignificant differences in Return on Assets within and between the groups of selected banks during the study period where P-value (0.008) is less than standard value of 0.05. This led to acceptance of alternative hypothesis and rejection of null hypothesis.

**Return on Equity:** The study found that, among the selected banks SBI has reported highest average Return on Equity of positive 8.72 percentage during the study period whereas BOB has reported 5.44 percentage during the same period. In contrast, CBI has reported average negative Return on Equity of -6.08 percentage mainly due to huge negative returns in last three years. Similarly, BOI has been reported average negative of ROE of -0.53 percentage during the study period. The ANNOVA result proved the significant differences in Return on Equity within and between the groups of selected banks during the study period where P-value (1.75) is more than standard value of 0.05. This led to acceptance of null hypothesis and rejection of alternative hypothesis.

**Return on Advances:** The study found that, among the selected banks CBI has reported highest average Return on Advances of 7.96 percentage during the study period whereas BOI has reported 7.40 percentage during the same period. Similarly, SBI has reported average Return on advances of 7.42 percentage and BOI has been reported average Return on advances of 7.40 percentage during the study period. The ANNOVA result proved the significant differences in Return on Advances within and between the groups of selected banks during the study period where P-value (0.01) is less than standard value of 0.05.

**Return on Investments:** The study found that, among the selected banks CBI has reported highest average Return on Investments of 6.88 percentage during the study period whereas BOB and BOI has reported 6.63 percentage during the same period. Similarly, SBI has reported average Return on advances of 6.61 percentage. The ANNOVA result proved the insignificant differences in Return on Investments within and between the groups of selected banks during the study period where P-value (9.56) is more than standard value of 0.05. This led to rejection of alternative hypothesis acceptance of null hypothesis.

## 6. CONCLUSION:

The study has emphasized on the assessment of profitability of selected public sector banks in India for the period of five years i.e. 2019-2023. The study used the four profitable parameters such as Return on Assets, Return on equity,



Return on Advances, Return on Investments. The study examined the hypothesis by ANOVA- Single factor. The study found that, SBI and BOB have reported positive return on assets and equity during the study period, whereas, BOI and CBI have reported negative return on assets and equity during same period. In contrast, all banks have good returns on the advances and investment during the study period. The ANOVA result proved significant difference within and between selected banks in the parameters of Return on Assets and Return on equity which leads to acceptance of alternative hypothesis and rejection of null hypothesis. In contrast, ANOVA result found insignificant difference within and between selected banks in the parameters of Return on Advances and Return on Investments which leads to acceptance of null hypothesis and rejection of alternative hypothesis.

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