PERFORMANCE ANALYSIS OF BANKS – A COMAPARATIVE STUDY OF PUBLIC SECTOR COMMERCIAL BANKS

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ABSTRACT

The study targets to analyses the performance of Public Sector Commercial Banks in India. Commercial Banks play an instrumental role in the expansion of an economy. Indian commercial banks are grouped as Public Sector Commercial Banks, Private Sector Commercial Banks and Foreign Commercial Banks. Both researchers have made an endeavor to assess the performance of business of Public Sector Commercial Banks in India. The study covers 10 Public Sector Commercial Banks of India. The study is depended on secondary data extracted through internet and books. Period of the study is three years from 2020-21 to 2022-23. Business and parameters of performance with important ratios of banking were utilised for study and it is concluded that SBI is leading in almost all the parameters.

Key words: Commercial Banks, Financial Analysis, Performance Evaluation, Public Sector Banks.

INTRODUCTION

In order to organize and to ensure a strong, hard and securing banking sector, business performance of the banks have to be analyzed and evaluated. The Banking sector is also regarded as an important component in the system of finance. The commercial banks are classified as Non-Scheduled and Scheduled banks, Foreign and Indian banks, Private and Public banks. The Indian banking sector is having a lengthy history. The first bank in India was Bank of Hindustan, which was set up in the year 1770. The year 1969 marked a pivotal year was important in the Indian history of commercial banking.

In the perspective of international trends of banking and achieving the requirements of finance in India, reforms on financial sector were established in the wake of economic liberalization and globalization in India. Many reforms were considered to enhance efficiency as well as stability of banks.

Many powerful measures were introduced to make an atmosphere where banks could response ideally to signals of market on the criteria of commercial consideration while the measures on strengthening aimed at diminishing the vulnerability of banks in the stage of fluctuations in the economic environment. A framework which is institutional in nature are required for conductive progress of banks. There are many astonishing changes happened in many banking segment in terms of implementation, particularly in domestic banks. Even after the reforms that took place in 1991, banks in public sector have been playing an important pivotal role in collection of deposits and lending of loans. However, the entry of foreign banks and private sector banks have provided a new atmosphere of banking that made public sector banks to improve the functioning and performance in the competitive environment.

REVIEW OF LITERATURE

The study on “An evaluation of financial performance of commercial banks” shows that the outcome in terms of profitability has an effective result on adequacy of capital and leverage in finance, however the result did not ratify the collaboration between profitability and performance of banks. Study too shows that implementation of higher ratio of capital adequacy will negatively changes the productivity of the banks. The result of oil and financial crisis may have altered bank’s financial leverage, which in turn negatively affected their profitability. (Pinto, P., Hawaldar, et,all (2017)).

Study on “Analysis of financial performance of selected commercial banks in India” found that financial result of private sector banks is relatively better than banks in the public sector throughout the study period. It examines the result of solvency, liquidity as well as efficiency on the productivity of the Indian commercial banks which are selected by employing the panel data estimations, viz. the Random Effect and Fixed Effect models. The empirical outcome from the panel data estimations showed that the solvency ratio, liquidity ratio, solvency ratio and turnover ratio are found to have significant as well as positive impact on the profitability of selected public sector and private sector banks, respectively which bears testimony to the data that productivity is the function of those ratios (Palamalai, S., and Britto, J. (2017)).

Commercial banks are strong pillar of any country. Banks play a pivotal role because they act as a link between those who have finance and those who required finance to invest on banks, but in countries who are in developing phase, the habit of mobilizing the country's resource has been a biggest complex task in those days *(Avneet Kaur 2012).*

In India after proposing liberalization, privatization and globalization in the year 1991, significant fluctuations have formed in banking sector. The financial result of any bank is measured through a number of key factors in quantitative terms. From the view point of investment decision, fundamental analysis which targets at developing an insight into the economic performance of the business is crucial. *(Gurpreet Kaur 2015).*

The operations of the commercial banks in public sector have been playing a predominant role in the advancement of any country. The results and patterns showed that when NPAs are considered, it is higher in public sector banks, but statistical tool named t-test showed that the results are not statistically significant *(K.S. Chaitra, V. Vasu 2018.)*

RESEARCH GAP

The above research articles are reviewed by both the researchers; outcome is that the current factors are not considered seriously by many past researchers for preparing a comparative study as well as analysis of commercial banks in public sector. Therefore, the current study is being undertaken by both researchers.

OBJECTIVES OF THE STUDY

Important goal of the study is to analyze the performance in business of various Commercial Banks in Public Sector of India.

- To compare level of efficiency of banks in managing operating expenses.
- To assess the productivity of commercial banks in the public sector according to return on assets.
- To weigh the performance of commercial banks in public sector on the basis of Net Performing Asset.
- To examine business per employee of various banks in public sector under study.
- To compare various banks in public sector on the context of profit per employee.

HYPOTHESIS

H_0: There is no significant variation in the operational results of Public Sector Commercial Banks in India based on the data.

SCOPE OF THE STUDY

Present study is aimed at analyzing the business productivity of Indian public sector commercial banks. According to the availability of information, 12 public sector commercial banks are operating in India. Here only 10 commercial banks in public sector have been identified in this study. Analysis are made between banks on the basis of investments, deposits, advances, total assets, net NPA, interest income, other income, operating expenses, operating profit, net profit, credit-deposit ratio, investment-deposit ratio, operating expenses as a percentage to total expenses, return on assets, capital adequacy ratio, net NPA as a percentage to net advances, business per employee and profit per employee. It is conducted on the basis of information which are quantifiable. Time Period for the study considered is 3 years starting from 2020-2023.

METHODOLOGY OF RESEARCH

Current study is relied on data collected from the annual reports of commercial banks in Public

Sector such as State Bank of India, Bank of Baroda, Central bank of India, Canara Bank, Indian Bank, Indian Overseas Bank, PNB, UCO Bank and Union Bank of India. Average or mean is used for evaluation and One-way ANOVA statistical tool is utilized for testing the said hypothesis.

LIMITATIONS OF THE STUDY

- Complete study is depended upon data from secondary sources.
- Quantitative aspects are only considered in the study and aspects in the nature of qualitative are completely neglected while comparing the performance of Indian commercial banks in public sector.

Analyzation and Interpretation of Data

Table 1: Business and productivity parameters of Indian Commercial Banks in Public Sector (Average of 3 years' data from 2020-21 to 2022-23) (Amt. in cr.)

Parameter	**Bank of Baroda**	**Bank of India**	**Canara Bank**	**Central Bank of India**	**Indian Bank**	**Indian Overseas Bank**	**Punjab National Bank**	**UCO Bank**	**Union Bank of India**	**State Bank of India (SBI)**
Deposits	986306.6	603504.8	907544.9	328809.4	463971.6	241799.6	985465.6	207731.9	802288.7	3658144
Investment	283876.8	173424.8	239982.8	143962.3	144112.5	91029.77	335205.6	93885.27	277477.8	2454261
Advances	724525.5	385137.1	591608.6	158617.8	316580.7	131099.2	624747.9	111771.1	522345.6	2502918
Total Assets	1197093	705821.8	1034843	370676.5	534854.2	278038.1	1135368	252342.7	936660	4491140
Net NPA	18913.71	12144.65	20453.7	9081.72	9101.22	5001.87	33567.91	4405.48	22962.43	38882.24
Interest Income	72120	40342.8	62541.9	23031.4	33122.4	17034	69832.7	14853.9	57980.7	265977
Other Income	11578.3	7144.53	13078.1	3240.32	5292.55	4607.34	11172.1	3132.07	9843.44	43093.8
Interest Expended	42,493	25,813	41,338	14,578	19,789	11,196	44,273	9,172	36,677	156,143
Operating Expenses	20,377	11,081	16,902	6,806	8,566	5,381	17,512	4,220	14,240	83,741
Operating Profit	20,828	10,593	17,379	4,888	10,060	5,064	19,220	4,594	16,908	69,187

Net Profit	2882	869	2000	-321	2568	-1995	1938	-447	1747	22191

Source: Compiled from https://www.iba.org.in/depart-res-stcs/key-bus-stcs.html

Table 1, presents data related to business productivity parameters of the selected public sector banks.

Deposits:

With regard deposits collected by the public sector banks, S.B.I. is leading all other banks (36,58,144 cr.) and next comes Bank of Baroda (9,86,306.6 cr.), Punjab National Bank (9,85,465.6 cr.). UCO bank has the least amount of (2,07,731.9 cr.) deposits collected.

Investments:

With regard to the Investments; State Bank of India obtains first place with 24,54,261.03cr. investment and it is followed by Punjab National Bank (3,35,205.59 cr.), Bank of Baroda (2,83,876.8 cr.). Indian Overseas Bank is ranked as lowest (91,029.77cr.) in terms of investment.

Advances:

S.B.I. is leading other banks in public sector with highest number of advances amounting to (25, 02,918 cr.) and next comes the turn of Bank of Baroda (7, 24,525.5 cr.), Punjab National Bank (624747.9 cr.). UCO Bank has the least amount of (1, 11,771.1 cr.) advances made.

Total Assets:

In terms of Total Assets; State Bank of India is leading with highest value of total assets amounting (44, 91,140 cr.) and it is followed by Bank of Baroda (72,120 cr.), Punjab National Bank (11, 35,368 cr.). UCO Bank has the least amount of (2, 52,342.7cr.) total assets.

Net NPA:

According to Net NPA of the public sector banks; UCO Bank has lowest amount of NPA (4,405.48 cr.) and it is followed by Indian Overseas Bank (5,001.87 cr.), Central Bank of India (9,081.72 cr.). State Bank of India has the highest amount of (38,882.24 cr.) Net NPA.

Interest Income:

With regard to Interest Income of various banks; S.B.I. has highest amount of interest income (2,65,977 cr.) and it is followed by Bank of Baroda (11,97,093 cr.), Punjab National Bank (69,832.7 cr.) UCO Bank has the least amount of (14,853.9 cr.) Interest Income.

Other Income:

According to Other Income of the public sector banks; State Bank of India is leading with highest amount of Other Income (43,093.8 cr.) and it is followed by Canara Bank (13,078.1 cr.), Bank of Baroda (11,578.3 cr.). UCO Bank has the least amount of (3,132.07 cr.) Other Income.

Interest Expended:

With regard to Interest Expended; UCO Bank is leading with least amount of Interest Expended (9,172 cr.) and it is followed by Indian Overseas Bank (11,196 cr.), Central Bank of India (14,578 cr.). State Bank of India has the highest amount of (1,56,143 cr.) Interest Expended.

Operating Expenses:

According to Operating Expenses of banks; UCO Bank is leading all other public sector banks, with least amount of Operating Expenses (4,220 cr.) and it is followed by Indian Overseas Bank (5,381 cr.), Central Bank of India (6,806 cr.).

State Bank of India has the highest amount of (83,741 cr.) Operating Expenses.

Operating Profit:

According to Operating Profit made by the public sector banks; State Bank of India is leading all other public sector banks with highest amount of Operating Profit (69,187 cr.) and it is followed by Bank of Baroda (20,828 cr.), Punjab National Bank (19,220 cr.). UCO Bank has the least amount of (4,594 cr.) Operating Profit.

Net Profit:

According to Net Profit made by the public sector banks; S.B.I. is leading with highest amount of Net Profit (22,191cr.) and next comes Bank of Baroda (2,882 cr.), Indian Bank (2,568 cr.). Indian Overseas Bank has the least amount of (-1,995 cr.) Net Profit.

Table 2: Financial Ratios of the Public Sector Banks (Average of 3 years' data from 2020-21 to 2022-23)

Parameters	Bank of Baroda	Bank of India	Canara Bank	Central Bank of India	Indian Bank	Indian Overseas Bank	Punjab National Bank	UCO Bank	Union Bank of India	State Bank of India (SBI)
Credit Deposit Ratio	73.43	63.91	65.7	48.23	69.67	54.2	63.84	53.75	65.97	66.15
Investment Deposit Ratio	28.75	28.73	26.68	43.84	31.14	37.6	34.05	45.29	34.49	33.49
Operating Exp. as % to Total Expenses	32.61	30.08	28.64	31.9	29.32	32.52	28.01	31.45	27.2	34.86
Return on Assets [%]	0.24	0.09	0.13	-0.1	0.46	-0.68	0.15	-0.19	0.07	0.51
Capital Adequacy Ratio-Basel III [%]	14.76	15.02	13.91	12.78	15.45	13.29	14.32	13.06	13.3	13.54
Net NPA as % to Net Advances	2.65	3.19	3.57	5.79	2.92	3.89	5.44	4.03	4.59	1.58
Business per	20.13	20.02	18.56	15.6	24	16.4	18.8	14.91	21.16	23.51

Employee										
Profit per Employee	3.59	1.58	1.87	-0.88	7.04	-7.7	2.06	-3.01	0.97	9

Source: Compiled from https://www.iba.org.in/depart-res-stcs/key-bus-stcs.html

Table 2: presents various financial ratios of the banks under study.

Ratio on Credit Deposit (%):

According to ratio on Credit Deposit, Bank of Baroda obtains the top rank (73.43%) and leading remaining public sector banks, and is followed by Indian Bank (69.67 %), State Bank of India (66.15 %). Central Bank of India has lowest ratio (48.23 %).

Investment Deposit Ratio (%):

As per the Investment Deposit Ratio, UCO Bank is leading (45.29 %) all other public sector banks and it is followed by Central Bank of India (43.84 %), Indian Overseas Bank (37.6 %). Canara Bank has the least (26.68 %) investment deposit ratio.

Operating Exp. as % to Total Expenses (%):

With reference to the Operating Exp. as % to Total Expenses, Union Bank of India has least percentage (27.2%)and leading all other public sector banks and it is followed by Punjab National Bank (28.01%), Canara Bank (28.64%). State Bank of India has the high percentage of (34.86%) Operating Exp. as percentage to Total Expenses.

Return on Assets (%):

According to Return on Assets ratio, State Bank of India Obtain the top rank (0.51 %) and it is followed by Indian Bank (0.46 %), Bank of Baroda (0.24 %). Indian Overseas Bank (-0.68 %) has the least percentage of Return on Assets ratio.

Capital Adequacy Ratio (%):

With regard to the Capital Adequacy Ratio, Indian Bank is leading with 15.45% ratio and it is followed by Bank of India (15.02%), Bank of Baroda (14.76%) and Central Bank of India has the least percentage of (12.78%) Capital Adequacy Ratio.

Net NPA as a Net Advances (%):

With regard to the Net NPA as a Net Advances Ratio, State Bank of India leading with least % of (1.58%) among all other public sector banks, and it is followed by Bank of Baroda (2.65%), Indian Bank (2.92%). Central Bank of India has the high percentage of (5.79%) Net NPA as a Net Advances Ratio.

Business per Employee (%):

According to Business per Employee, Indian Bank obtain top rank (24%) and it is followed by State Bank of India (23.51%), Union Bank of India (21.16%). UCO Bank has obtained lowest rank (14.91 %) in terms of Business per Employee ratio.

Profit per Employee (%):

According to Profit per Employee ratio, State Bank of India obtain top rank (9%) and it is followed by Indian Bank (7.04%), Bank of Baroda (3.59%). Indian Overseas Bank obtained last rank (-7.7%).

TESTING OF HYPOTHESIS

H_0: There is no significant difference in the business performance of Public Sector Commercial Banks in India.

In the research study, both researchers have used One Way ANOVA statistical tool for testing the hypothesis.

Table 3: One-way ANOVA

Source of variation	***SS***	***df***	***MS***	***F***	***P-value***	***F crit***
Deposits						
Between Groups	2.7435E+13	9	3.05E+12	72.86649	2.56E-13	2.392814
Within Groups	8.3669E+11	20	4.18E+10			
Total	2.8272E+13	29				
Investments						
Between Groups	3.4279E+12	9	3.81E+11	50.34711	8.69E-12	2.392814
Within Groups	1.513E+11	20	7.57E+09			
Total	3.5792E+12	29				
Advances						
Between Groups	1.3267E+13	9	1.47E+12	113.4839	3.51E-15	2.392814
Within Groups	2.598E+11	20	1.3E+10			
Total	1.3527E+13	29				
Total Assets						
Between Groups	4.4E+13	10	4.4E+12	83.99032	3.72E-15	2.296696
Within Groups	1.15E+12	22	5.24E+10			
Total	4.52E+13	32				
Net NPA						
Between Groups	4.36E+09	10	4.36E+08	17.99817	2.3E-08	2.296696
Within Groups	5.33E+08	22	24223344			
Total	4.89E+09	32				
Interest Income						
Between Groups	1.462E+11	9	1.62E+10	187.5975	2.55E-17	2.392814
Within Groups	1.731E+09	20	86563530			
Total	1.479E+11	29				
Other Income						
Between Groups	3.738E+09	9	4.15E+08	79.04994	1.17E-13	2.392814
Within Groups	105079383	20	5253969			
Total	3.843E+09	29				
Interest Expended						
Between Groups	5.147E+10	12	4.29E+09	177.2153	1.42E-17	2.277581

Within Groups	484064998	20	24203250			
Total	5.1954E+10	32				
Operating Expenses						
Between Groups	1.52E+10	12	1.27E+09	70.76745	1.12E-13	2.277581
Within Groups	3.59E+08	20	17943561			
Total	1.56E+10	32				
Operating Profit						
Between Groups	1.026E+10	10	84.25034	3.6E-15	2.296696	1.026E+10
Within Groups	268001554	22				268001554
Total	1.053E+10	32				
Net Profit						
Between Groups	1.31E+09	10	1.31E+08	8.035953	2.57E-05	2.296696
Within Groups	3.58E+08	22	16251345			
Total	1.66E+09	32				

Source: Author's compilation

It is found out from the Table 3 that F values as calculated are greater than the respective critical values. Therefore, the values so calculated are significant. Hence, the hypothesis is being rejected and found that there is significant variation in the operational results of Public Sector Commercial Banks in India based on the data.

FINDINGS AND CONCLUSION

- Current study concluded that S.B.I. obtained first place with (36,58,144 cr.) and UCO bank (2,07,731.9 cr.) obtained last position in deposits collected.
- It is the fact from the study that State Bank of India obtains top rank (24,54,261.03cr.) and Indian Overseas Bank lowest (91,029.77cr.) rank in terms of investment.
- It could be observed in the study that State Bank of India is leading with 25,02,918 cr. Advance made compared to other banks and UCO Bank with 1,11,771.1 cr. advances made treated as the low performer.
- Study showed that State Bank of India is leading with highest value of total assets (44,91,140 cr.) and UCO Bank has the least amount of (2,52,342.7cr.) total assets.
- It is concluded that UCO Bank has lowest amount of NPA (4,405.48 cr.) and State Bank of India has the highest amount of (38,882.24 cr.) Net NPA.
- It is the fact from the study that State Bank of India obtains top rank of (2,65,977 cr.) and UCO Bank has the last rank (14,853.9 cr.) in terms of Interest Income.
- It is crystal clear from the study that State Bank of India is leading with highest value (43,093.8 cr.) and UCO Bank has the least amount of (3,132.07 cr.) other income.

- It could be observed in the study that UCO Bank is leading with least amount of Interest Expended (9,172 cr.) and State Bank of India has the highest amount of (1,56,143 cr.) Interest Expended.
- Current study revealed that UCO Bank is leading remaining banks with least amount of Operating Expenses (4,220 cr.) and State Bank of India has the highest amount of (83,741 cr.) Operating Expenses.
- It is true from the study that State Bank of India is leading highest amount (69,187 cr.) and UCO Bank has the least amount of (4,594 cr.) Operating Profit.
- It is clear from the study that Net Profit of State Bank of India is highest (22,191cr and it is lowest with Indian Overseas Bank has the least amount of (-1,995 cr.).
- The analysis based on the key financial ratios shows that State Bank of India is treated as number one in terms of Net NPA to Net Advances ratio, return on assets and profit per employee. Indian bank is leading in terms of Capital Adequacy Ratio and Business Per Employee. Bank of Baroda has highest Credit Deposit Ratio, UCO bank has highest Invest Deposit Ratio, Union Bank of India has lowest Operating Expenses Ration.

Finally, it is concluded that State Bank of India is leading all other public sector commercial bank in terms of various parameters like Deposits, Investments, Advances, Total Assets, Net NPA, Interest Income, Other Income, Interest Expended, Operating Expenses, Operating Profit, Net Profit used in the study. Key financial ratios like Credit Deposit Ratio, Investment Deposit Ratio, Operating Exp. as % to Total Expenses, return on Assets [%], Capital Adequacy Ratio-Basel III [%], Net NPA as % to Net Advances, Profit per Employee to Business per Employee, sincerely UCO Bank is ranked as least performing bank based on some parameters.

REFERENCE

- *Black, J. S., & van Esch, P. (2021). AI-enabled recruiting: What is it and how should a manager use it?* Business Horizons, 64*(2), 215–226. https://doi.org/10.1016/j.bushor.2020.11.001*
- *Bogen, M., & Rieke, A. (2018).* Help wanted: An examination of hiring algorithms, equity, and bias*. Upturn.* https://www.upturn.org
- *Kaur, A. (2012). A literature reviews.* International Journal of Marketing, Financial Services & Management Research, 1*(11).*
- *Vasu, V., & Chaitra, K. S. (2018). A literature review.* International Research Journal of Management Sociology and Humanity, 9*(3), 128–144.*
- *Joshi, D., Thakkar, S., Machhi, R., & Chauhan, D. (2021). Financial performance analysis of banking sector in India.* European Journal of Molecular & Clinical Medicine, 8*(3). ISSN 2515-8260.*
- *Kaur, G. (2015).* International Journal of Business Management*. pp. 2349–3402.*
- *Nagarkar, J. J. (2015). Analysis of financial performance of banks in India.* Annual Research Journal of Symbiosis Centre for Management Studies, 3*, 26–37.*
- *Gupta, R. (2014). An analysis of Indian public sector banks using CAMEL approach.* IOSR Journal of Business and Management, 16*(1), 94–102.*

- *Kumar, S., & Gulati, R. (2009). A literature review.* International Journal of Productivity and Performance Management, 59*(1), 51–74.*
- *Academic Journals. (n.d.).* 1120 questions with answers*. Retrieved June 23, 2026, from https://www.academicjournals.org*
- *Kaur, A. (n.d.). Analysis of variance: Explanation, formula, and applications.* Investopedia*. Retrieved June 23, 2026, from https://www.investopedia.com*
- *Banking School. (n.d.).* Difference between gross NPA and net NPA*. Retrieved June 23, 2026, from https://www.bankingschool.co.in*
- *Byju's. (n.d.).* Level of significance*. Retrieved June 23, 2026, from https://byjus.com/maths/level-of-significance/*
- *International Research Journal of Humanities, Interdisciplinary Studies and Innovation. (n.d.).* Article IRJHISIC2302047*. Retrieved June 23, 2026, from https://www.irjhis.com/review_spcl.aspx?paper=IRJHISIC2302047*
- *Scribbr. (n.d.).* Chi-square tests*. Retrieved June 23, 2026, from https://www.scribbr.com/statistics/chi-square-tests/*
- *Bankers Adda. (2022).* Nationalized banks in India 2022: 12 public sector banks*. Retrieved June 23, 2026, from https://www.bankersadda.com*
- *Sharma. (n.d.). Pratishyayavat Ayurvedic management of Vataja Karnashoola: A case report.* EPRA International Journal of Multidisciplinary Research (IJMR)*. Retrieved June 23, 2026, from https://eprajournals.net*
- *Department of Financial Services. (n.d.).* Public sector banks*. Ministry of Finance, Government of India. Retrieved June 23, 2026, from https://financialservices.gov.in*
- *ResearchGate. (n.d.).* Science topic: 1120 questions with answers*. Retrieved June 23, 2026, from https://www.researchgate.net*
- *Google Scholar. (n.d.). Sharma:* Pratishyayavat Ayurvedic Management of Vataja Karnashoola*. Retrieved June 23, 2026, from https://scholar.google.com*.