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A COMPARATIVE STUDY ON FINANCIAL PERFORMANCE OF PUBLIC SECTOR BANKS IN INDIA THROUGH CAMEL MODEL

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ABSTRACT

The wider objective of the banking sector reforms in India has been to improve and increase efficiency and profitability of the banks. The banking sector in India has continuously underground various changes in the area of prudential, regulatory, disclosure, and supervisory norms. It has been passing through the liberalization process and the regulation of interest regime at the same time. Commercial banks, particularly the dominant public sector banks, have been facing competition from the rival banks. The present study is an attempt to compare financial performance of public sector bank based on CAMEL variables and to find out whether the average performance of both public sector banks diverge significantly.

Keywords: *Financial Performance, Banking Sector, CAMEL Model.*

Introduction

Due to global market integration, the banking industry today is highly competitive. Rising competition has led to new conferences for Indian banks, evaluating the Indian banking sector is not an easy task. A CAMEL model was chosen for assessing the banking sector's performance, since it measures each of the important parameters, such as capital adequacy, asset quality, management efficiency, earning quality and liquidity. In addition to providing financial support to all the phases of our economy, the banking system has been crucial to the growth of Indian economy, without the efficient banking system, the Indian economy would not have been able to grow financially due to epidemic. In order to improve the soundness and stability of banks, The Basil Committee of banking supervisions (BCBS), developed the Basel norms, a systematic, versatile and risk sensitive system. There are many ways that bank enlarge the economy. The banks generate credit for the economy, and they operate it in an exclusive way. People put their money in banks, which are then lend to entities /individuals in need. Likewise, people use the loan proceeds to make savings, which create fresh profit from the frugality. Banks raise plutocrat for the frugality in a variety of ways, in addition to credit creation ways. One illustration may be the profit made from advancing services to the country's citizen. In this situation, bank workers' earning in the form of hires and other benefits also contribute to the broader GDP pool. Likewise, any expenditure incurred by banks in the form of colourful charges, plats, stationary, internet cost, and so on adds to the country's GDP inescapably. This research paper tried to determine the performance of banks using the camel model.

- **Punjab and Sind Bank Ltd.** Amalgamated on June 24, 1908 has its headquartered at Hall bazaar, Amritsar Punjab, India. It was one of the six banks nationalized on April 15, 1980. According to section 2(b) of The Bank Acquisition Act, the bank was constituted on April 15 1980 as a corresponding new bank. When the bank was established under the Bank Acquisition Act, its central and administrative office was located at New Delhi. Bank focuses on products, market segments, growth, technology, and managerial competence and standing in relation to the prominent competitors. Since 2004, Punjab and Sind Bank has shown growth of over 40% each year. And its recent IPO was oversubscribed by more than 50 times.

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- **Indian Overseas Bank** founded by Shri. M.Ct.M Chidambaram Chettyar, in the year 1937. As the bank's founder, he had the aim of concentrating in foreign exchange business in banking to take the bank around the world. IOB started business simultaneously at Karaikudi, Chennai, and Rangoon in Burma (presently Myanmar) followed by a branch in Penang, Malaysia. As of Independence, IOB had 38 branches in India and seven overseas with deposits of Rs. 6.6 crores in advances of Rs. 3.23 crores. IOB was one of the fourteen major banks nationalized by 1969. IOB had 195 branches in India when it was nationalized in the year 1969 with the collective deposits of Rs. 67.70 crores and advances of Rs. 44.90 crores. The bank has an overseas presence in four countries: Singapore, Hong Kong, Thailand and Sri Lanka.
- **CAMEL Model :** CAMEL framework is administrative in nature, uniform with international norms and covers, risk monitoring factors for gauging bank performance. Five indicators are analyzed in this framework, each of which is bound into a group that reflects a financial institution's performance under the acronym C-A-M-E-L, Five different components are used to evaluate bank's performance. As the banking industry works under the most volatile circumstances,, it is a noteworthy subject for study, especially in the booming period. This has led to numerous reforms and restructurings, including the camel framework as a valuable contribution to modern banking.

  C – Capital Adequacy **A – Asset Quality** **M – Management Efficiency**

  E – Earnings Capacity **L – Liquidity**

Literature Review

(Arora, 2022) The study undergoes CAMEL model to inspect the safety and soundness of the banks, having the objective to assess whether the CAMEL framework plays a vital role or not. Author states capital adequacy ratio, net NPA to net advances, credit deposit ratio, ROA, liquid asset to total assets ratio are the major factors impacting the financial performance of the banks. The CAMEL framework of private banks were satisfactory but adverse in case of public banks. The study had a small reach and gave evocations to improve financial efficiency by focusing on weak metrics.

(Kaur, 2018) The study states about the financial efficiency of Punjab and Sind Bank with statistical tool as CAMEL Model, is based on secondary data. The paper analyzed through various factors that the ROA and ROE had improved from 2013 to 2016 and decreased lately. Total income, total assets, deposits were showing a positive trend.

(Chandrika C, 2021) States that the Indian Overseas Bank considers over 5 years from 2016 to 2020, having net profit is not on par and management effectiveness is healthier. The banking sector's efficiency measures and indicators are based on its performance. The banking sector contributes as a subset of specific targets and its allocation of money for effective financial as well as economic planning.

(Selvakumar, 2023) The study examined five years data, 2017-2021 using five parameters of CAMEL Model. Secondary data was gathered to analyse financial ratios concluding its mobility and aggressive lending of specific banks. It concludes that Indian Overseas Bank had more short-term investment, Book-value of fixed assets, near cash assets and prepaid expenses compared to Canara Bank. Canara Bank had more aggressive lending equaled to other.

(SURESH K., 2023) The study mainly focused on the pandemic area where there were huge fluctuations in Indian economy. The study emphases on six public and six private banks and compares them using t-test for independent samples through secondary data. The findings concluded by this study is that PSUB's are more dependable and PSB's are somewhere lacking towards the customer's satisfaction. The paper may be helpful to policymakers, investor and researchers to classify specific problem in comparing financial performance of banking sector.

Research Design

Statement of the Problem

Recently, the financial system, especially the banks, has experienced several reforms, regulations and norms. It has been extensively studied how public sector banks perform, how profitability is determined, and what financial indicators are used. Nonetheless, the CAMEL model will be depleted in this study to explore the performance of two public sector banks using financial ratios.

Objective of the Study

The objective of the present study is as under:

- To Study the financial performance of the selected banks using the CAMEL Model.

- To know the financial efficiency of the selected banks in India.
- To offer findings and suggestions about the financial performance of the banks in the light of the study.

Proposed Hypothesis

H_0 = There is no significant difference in the average percentage of debt equity ratio in selected units.

H_0 = There is no significant difference in the average percentage of Total investment to Total assets ratio in selected units.

H_0 = There is no significant difference in the average percentage of Total Advances to Total Deposits ratio in selected units.

H_0 = There is no significant difference in the average percentage of Interest Income to Total Income ratio in selected units.

H_0 = There is no significant difference in the average percentage of Cash and Equivalents to Current Liabilities ratio in selected units.

Sample of Study

A judgmental sampling method has been used to examine the financial soundness of selected banks. The sample has been selected grounded on the highest government holdings (at end of March, 2023).

- Punjab and Sind Bank (98 .25%)
- Indian Overseas Bank (96.38%)

Data Collection

This study is primarily based on secondary data. The data was accumulated from RBI websites, bank websites, published annual reports, and a variety of journals and research papers.

Period of Study

The period for evaluating performance through CAMEL is five financial consecutive years, i.e. from 2018-19 to 2022-23.

Tools & Technique

As an Accounting tools, CAMEL model has been used to evaluate the performance of banks with the help of some ratios, and as a statistical tools. To test the hypothesis, the researcher used a **student t test** (paired)**.** It includes Mean, Standard deviation and 'T' test.

Data Analysis and Interpretation

The CAMEL rating model is based on the evaluation of the performance of the banks and financial institutions by measuring their balance sheet, along with profit and loss statement on the basis of each component.

Table Showing Financial Ratios

(Amt. In Crore)

UNIT	Capital Adequacy Ratio		Asset Quality Ratio		Management Efficiency Ratio		Earnings Quality Ratio		Liquidity Ratio	
	P&B	**IOB**	**P&B**	**IOB**	**P&B**	**IOB**	**P&B**	**IOB**	**P&B**	**IOB**
2018-19	0.49	0.38	3.08	3.42	0.07	0.60	0.91	0.81	3.29	6.22
2019-20	0.57	0.33	2.77	2.21	0.65	0.54	0.90	0.84	4.72	1.49
2020-21	0.32	0.22	3.49	4.77	0.63	0.53	0.89	0.75	2.48	2.35
2021-22	0.17	0.13	5.31	4.86	0.62	0.55	0.88	0.77	2.54	3.31
2022-23	0.60	0.82	6.39	4.50	0.70	0.68	0.89	0.82	2.37	3.06

C – Capital Adequacy

Debt Equity Ratio

A – Asset Quality

Total Investments to Total Asset Ratio

M – Management

Total Advances to Total Deposits Ratio

E – Earnings & Profitability

Interest Income to Total Income Ratio:

L – Liquidity

Cash Ratio

Capital Adequacy - C

- **Debt-Equity Ratio:** This ratio signifies the degree of leverage of a bank. It indicates how much of the bank business is financed through debt and how much through equity.

  Debt Equity Ratio = Borrowings/ (Share Capital + reserves)

Table 1: T-Test calculation

UNIT	P&S Bank	IOS Bank
N	5	5
Mean	0.43	0.38
Standard Deviation	0.1815	.2665
Degree of Freedom	8 (n1+n2-2)	
T-test calculated	0.515	
T-test Table Value	2.306	

The above table 1 shows that the calculated value for the hypothesis is 0.515, which is less than the table value of 2.306 at a 5 percent level of significance. Since the calculated value is less than the table value, it is inferred that there is no significant difference in the average Debt-Equity ratio of banks beneath study.

Asset Quality– A

- **Total Investment to Total Asset Ratio:** Total investments to total assets indicate the extent of deployment of assets in investment as against advances.

  Total Investments to Total Asset = Total Investments / Total Asset

Table 2: T-Test Calculation

UNIT	P&S Bank	IOS Bank
N	5	5
Mean	4.208	3.952
Standard Deviation	1.4022	1.011
Degree of Freedom	8 (n1+n2-2)	
T-test calculated	0.651	
T-test Table Value	2.306	

The above table 2 shows that the calculated value for the hypothesis is 0.651, which is less than the table value of 2.306 at 5 percent level of significance, since the calculated value is less than the table value, it is inferred that there is no significant difference in the average total investment to total assets ratio of banks under study.

Management Efficiency– M

- **Total Advances to Total Deposits ratio:** This ratio indicates the aptitude of the bank to convert the deposits into high-yielding advances.

  Total Advances to Total Deposits = Total Advance/ Total Deposit

Table 3: T-Test Calculation

UNIT	P&S Bank	IOS Bank
N	5	5
Mean	0.534	0.580
Standard Deviation	0.233	0.055
Degree of Freedom	8 (n1+n2-2)	
T-test calculated	0.725	
T-test Table Value	2.306	

The above table 3 shows that the calculated value for the hypothesis is 0.725, which is less than the table value of 2.306 at the 5 percent level of significance, since the calculated value is less than the table value, it is inferred that there is no significant difference in the average total advances to total deposits ratio of banks under study.

Earning Quality – E

- **Interest Income to Total Income ratio:** The interest income to total income indicates the ability of the bank to generate income from its lending.

  Interest Income to Total Interest Income ratio = Interest Income / Total Income

Table 4: T-Test Calculation

UNIT	P&S Bank	IOS Bank
N	5	5
Mean	0.894	0.798
Standard Deviation	0.01	0.03
Degree of Freedom	8 (n1+n2-2)	
T-test calculated	0.0025	
T-test Table Value	2.306	

The above table 4 shows that the calculated value for the hypothesis is 0.0025 which is less than the table value of 2.306 at the 5 percent level of significance, since the calculated value is less than the table value, it is inferred that there is no significant difference in the average interest income to total income ratio of banks under study.

Liquidity - L

- **Cash Ratio:** The cash equivalents such as cash and balances with RBI, balances with other banks to current liabilities are to be measured by this ratio.

  Cash Ratio = Cash Equivalents/ Current Liabilities

Table 5: T-Test Calculation

UNIT	P&S Bank	IOS Bank
N	5	5
Mean	3.08	3.29
Standard Deviation	0.88	1.60
Degree of Freedom	8 (n1+n2-2)	
T-test calculated	0.846	
T-test Table Value	2.306	

The above table 5 shows that the calculated value for the hypothesis is 0.846 which is less than the table value of 2.306 at 5 percent level of significance, since the calculated value is less than the table value, it is concluded that there is no significant difference in the cash equivalents and current liabilities ratio of banks under study.

Limitations of the Study

The study transmitted here is based on five years data only and the data collected is secondary data from annual reports, websites and journals, so their limitations are also implied here. In this study, accounting &statistics tools are used. It has its own limitations that also apply here. This study only includes the CAMEL model, and does not take in other financial factors. The study is only of two public sector banks. In spite of these limitations, the research is accurate atmeasuring the financial performance of banks.

Findings based on Student T-test

The researcher applied the student 'T' test & the following conclusions areobtained in the table as follows:

Sr. No.	Financial Indicators	Calculated Value	Table Value	H0
A	**Capital Adequacy**			
1.	Debt Equity Ratio	0.515	2.306	Accepted
B	**Asset Quality**			
2.	Total Investments to Total Asset Ratio	0.651	2.306	Accepted
C	**Management**			
3.	Total Advance to Total Deposit Ratio	0.725	2.306	Accepted
D	**Earnings & Profitability**			
4.	Interest Income to Total Income Ratio	0.0025	2.306	Accepted
E	**Liquidity**			
5.	Cash Ratio	0.846	2.306	Accepted

Findings based on Ratio Analysis

According to data analysis and statistical tools, the major findings are as follows:

- Debt-Equity Ratio on average of Punjab and Sind Bank is 0.43 while Indian Overseas Bank had 0.38 average ratio which is lower than P&S; it indicates that P&S is using more debt as compared to equity.
- Total Investment to Total Asset Ratio in average of P&S is 4.208 and for IOB are
- 3.952. In this case also P&S is having high Total Investment to Total Assets ratio.
- Total Advances to Total Deposits ratio in average of P&S is 0.534 & 0.580 for IOB. In This case, IOB shows having a high Total Advances to Total Deposits ratio.
- In the Interest Income to Total Income Ratio, the average ratio of P&S and IOB is 0.894 & 0.798 respectively.
- Cash Ratio, the average ratio of P&S is 3.08 & the average ratio of IOB is 3.29 respectively during the period of study. The average ratio of P&S is less as compared to IOB, which shows the inefficiency of the bank in liquidity position.

Conclusion

To conclude the paper as the title " A comparative study of financial performance of selected public banks in India through CAMEL Model" comprising of financial indicators capital adequacy, asset quality, management efficiency, earning quality and liquidity of the both Punjab and Sind Bank are satisfactory. Both banks must provide loans and advances liberally and focus on long term sustainability with profitable market capture for effective financial performance.

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