# A Comparative Study On Financial Performance Of Public Sector Banks In India: An Analysis On Camel Model

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# A COMPARATIVE STUDY ON FINANCIAL PERFORMANCE OF PUBLIC SECTOR BANKS IN INDIA: AN ANALYSIS ON CAMEL MODEL.

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***Abstract:***

Banking sector is one of the fastest growing sectors in India. Today's banking sector becoming more complex. The objective of this study is to analyze the Financial Position and Performance of the Bank of Baroda and Punjab National Bank in India based on their financial characteristics. This study attempts to measure the relative performance of Indian banks. For this study, we have used public sector banks. We know that in the service sector, it is difficult to quantify the output because it is intangible. We have chosen the CAMEL model and t-test which measures the performance of bank from each of the important parameter like capital adequacy, asset quality, management efficiency, earning quality, liquidity and Sensitivity.

**Keywords:** CAMELS Model, Bank of Baroda, Punjab National Bank, Financial performance

## INTRODUCTION

***As soon the bottom lines of Domestic Banks come under increasing pressure and the options for organic growth exhaust themselves, Indian Banks will need to explore ways for inorganic expansion. This, in turn, is likely to unleash the forces of consolidation in Indian banking.***

**C. Rangarajan**
**EX-Chairman of Economic Advisory Council of the Prime Minister**

Banks are playing crucial and significant role in the economy in capital formation due to the inherent nature, therefore banks should be given more attention than any other type of economic unit in an economy. CAMEL approach is significant tool to assess the relative financial strength of a bank and to suggest necessary measures to improve weaknesses of a bank. In India, RBI adopted this approach in 1996 followed on the recommendations of Padmanabham Working Group (1995) committee. The Reserve Bank of India has taken several measures since Independence to improve access to affordable financial services through financial education, leveraging technology, and generating awareness. The banking sectors performance is perceived as economic activities of an economy. The banking sector reforms were aimed at making banks more efficient and viable as one who had a role initiating these reforms

These Public Sector banks penetrate every corner of the country and have been extending a helping hand in the growth of the economy.

## LITERATURE REVIEW

Literature review is a study involving a collection of literatures in the selected area of research in which the scholar has limited experience. In the past, various studies relating to the financial performance of banks have been conducted by researchers.

A study conducted by **Barr et al. (2002)** viewed that "CAMEL rating criteria has become a concise and indispensable tool for examiners and regulators". This rating criterion ensures a bank's healthy conditions by reviewing different aspects of a bank based on variety of information sources such as financial statement, funding sources, macroeconomic data, budget and cash flow.

**Said and Saucier (2003)** examined the liquidity, solvency and efficiency of Japanese Banks using CAMEL rating methodology, for a representative sample of Japanese banks for the period 1993- 1999, they evaluated capital adequacy, assets and management quality, earnings ability and liquidity position.

**Prasuna (2003)** analyzed the performance of Indian banks by adopting the CAMEL Model. The performance of 65 banks was studied for the period 2003-04. The author concluded that the competition was tough and consumers benefited from better services quality, innovative products and better bargains.

**Nurazi and Evans (2005)** investigated whether CAMEL(S) ratios could be used to predict bank failure. The results suggested that adequacy ratio, assets quality, management, earnings, liquidity and bank size are statistically significant in explaining bank failure.

**Bhayani (2006)** analyzed the performance of new private sector banks through the help of the CAMEL model. Four leading private sector banks – Industrial Credit & Investment Corporation of India, Housing Development Finance Corporation, Unit Trust of India and Industrial Development Bank of India - had been taken as a sample.

**Gupta and Kaur (2008)** conducted the study with the main objective to assess the performance of Indian Private Sector Banks on the basis of Camel Model and gave rating to top five and bottom five banks. They ranked 20 old and 10 new private sector banks on the basis of CAMEL model. They considered the financial data for the period of five years i.e., from 2003-07.

**R.C.Dangwal and Reetu Kapoor (2010)** conducted a study on financial performance of commercial banks. In this study they compared financial performance of 19 commercial banks with respect to eight parameters and they classified the banks as excellent, good, fair and poor categories.

**K.V.N.Prasad and Dr.A.A.Chari (2011)** conducted a study to evaluate financial performance of public and private sector banks in India. In this study they compared financial performance of top four banks in India viz., SBI, PNB, ICICI and HDFC and concluded that on overall basis HDFC rated top most position.

**Dr.D.Maheshwara Reddyand K.V.N. Prasad (2011)** conducted a study to evaluate performance of regional rural banks:An Application of Camel model.

**Dr.K.Srinivas and L.Saroja (2013)** conducted a study to compare the financial performance of HDFC Bank and ICICI Bank. From the study it is clear that there is no significance difference between the ICICI and HDFC bank's financial performance but we conclude that the ICICI bank performance is slightly less compared with HDFC.

**Deepti Tripathi and Kishore Meghani (2014)** conducted a study to compare the financial performance of Axis and Kotak Mahindra bank (Private Sector banks). The CAMELS' analysis and t-test concludes that there is no significance difference between the Axis and Kotak Mahindra bank's financial performance but the Kotak Mahindra bank performance is slightly less compared with Axis Bank.

## OBJECTIVES

1) To Analyze and compare the Financial Position and Performance of the Public sector Banks by Applying CAMEL Modal.
2) To give recommendation and suggestion for improvement of efficiency in Bank of Baroda and Punjab National Bank.

## METHODOLOGY

### Sources of Data:

The study is based on secondary data. The data were collected from the official directory, Indian Banking Association, RBI Bulletins, Dion Global Solutions Limited and data base of Centre for Monitoring Indian Economy ( CMIE ) namely PROWESS. The Published Annual Reports of Bank of Baroda and Punjab National Bank taken from their websites, Magzines and Journals on finance have also been used a sources of data
To evaluate the comparative financial performance of Bank of Baroda and Punjab National Bank, the study adopted the world-renowned: Capital Adequacy, Asset Quality, Management, Earning Quality and Liquidity **(CAMEL)** model (with minor modification) with the statistical tools used are arithmetic mean, **t-test** using **SPSS 19**

### Period of Study:

The study covers a period of Five year from 2010-2014.

### Sampling:

Two leading public sector banks- Bank of Baroda and Punjab National Bank- had been taken as a sample.

### Hypothesis:

From the above objectives of the following hypothesis is formulated to test the financial performance and efficiency of the Bank of Baroda and Punjab National Bank.

H0: There is no significant difference between financial position and performance of Bank of Baroda and Punjab National Bank.

**Research Modal:**

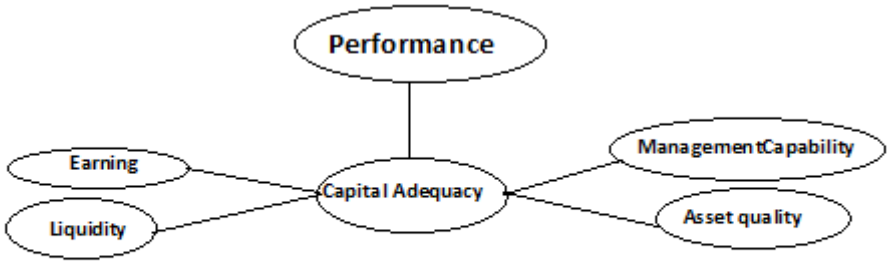


**FIGURE1: RESEARCH MODEL BASED ON THE ARTICLE PRESENTED BY PROFESSOR SANGMI AND DOCTOR NAZIR (2011), CAMER MAGAZINE**

## I. CAPITAL ADEQUECY:

Capital Adequacy indicates whether the bank has enough capital to absorb unexpected losses. It is required to maintain depositors' confidence and preventing the bank from going bankrupt. It is important for a bank to maintain depositors' confidence and preventing the bank from going bankrupt. It reflects the overall financial condition of banks and also the ability of management to meet the need of additional capital.
The following ratios measure capital adequacy:

### 1. Capital Adequacy Ratio (CAR):

Capital adequacy ratio is defined as:

**CAR = (Tier 1 Capital + Tier 2 Capital) / Risk weighted Assets**

TIER 1 CAPITAL - (paid up capital + statutory reserves + disclosed free reserves) - (equity investments in subsidiary + intangible assets + current and b/f losses)

TIER 2 CAPITAL – i. Undisclosed Reserves, ii. General Loss reserves, iii. hybrid debt capital instruments and subordinated debts where risk can either be weighted assets (a) or the respective national regulator's minimum total capital requirement.
If using risk weighted assets,

CAR = [(T1 + T2) / a] _ 10%

percent threshold varies from bank to bank (10% in this case, a common requirement for regulators conforming to the basel accords) is set by the national banking regulator of different countries. But As per the latest RBI norms, the banks should have a CAR of 9 per cent.

## TABLE – 1 CAPITAL ADEQUACY RATIO

### Group Statistics

| | BANKS | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| CAPITAL_ADEQUACY_RATIO | BOB | 5 | 13.8260 | 1.01808 | .45530 |
| | PNB | 5 | 12.8440 | .75494 | .33762 |

### Independent Samples Test

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | Df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| CAPITAL_ADEQUACY_RATIO | Equal variances assumed | 1.139 | .317 | 1.732 | 8 | .121 | .98200 | .56682 | -.32508 | 2.28908 |
| | Equal variances not assumed | | | 1.732 | 7.378 | .125 | .98200 | .56682 | -.34453 | 2.30853 |

***Findings:** The Significant p value is 0.317 ≥ 0.05 than equal variance assumed is 0.121 ≥ 0.05 than hypothesis is accepted.

## 2. Debt Equity Ratio

This ratio thus indicates the bank‘s financial leverage. In the case of manufacturing sector the ideal ratio is 2:1. However, in the case of commercial banks, there is no standard norm for debt – equity ratio this ratio indicates how much of the bank business is financed through debt and how much through equity. It is the proportion of total outside liability to net worth. Higher ratio indicates less protection for the creditors and depositors in the banking system. This ratio indicates the degree of leverage of a bank.

## 1. TABLE – 2 Debt Equity Ratio

### Group Statistics

| | BANKS | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| DEBT_EQUITY_RATIO | BOB | 5 | .0500 | .01871 | .00837 |
| | PNB | 5 | .0600 | .01414 | .00632 |

### Independent Samples Test

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| DEBT_EQUITY_RATIO | Equal variances assumed | 1.600 | .242 | -.953 | 8 | .368 | -.01000 | .01049 | -.03419 | .01419 |
| | Equal variances not assumed | | | -.953 | 7.446 | .370 | -.01000 | .01049 | -.03450 | .01450 |

***Findings:** The Significant p value is $0.242 \geq 0.05$ than equal variance assumed is $0.368 \geq 0.05$ than hypothesis is accepted.

## II. Asset Quality:

This indicates what types of advances the bank has made to generate interest income. When loans are given to highly rated companies, the rates attracted are lower than that of lower rated doubtful companies. Thus asset quality indicates the type of debtors of the bank. Banks determine how many of their assets are at financial risk and how much allowance for potential losses they must make.

## 1. Total Assets Turnover Ratio:

This ratio measures the efficiency in utilization of the assets. It is arrived at by dividing sales by total assets. Total Assets Turnover Ratio=Sales/Total Assets

## TABLE – 3 TOTAL ASSETS TURNOVER RATIO

### Group Statistics

| | BANKS | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| TOTAL_ASSETS_TURNOVER_RATIO | BOB | 5 | .0700 | .00707 | .00316 |
| | PNB | 5 | .0860 | .00548 | .00245 |

### Independent Samples Test

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| TOTAL_ASSETS_TURNOVER_RATIO | Equal variances assumed | .103 | .757 | -4.000 | 8 | .004 | -.01600 | .00400 | -.02522 | -.00678 |
| | Equal variances not assumed | | | -4.000 | 7.529 | .004 | -.01600 | .00400 | -.02533 | -.00667 |

***Findings:** The Significant p value is $0.757 \geq 0.05$ than equal variance assumed is $0.004 \leq 0.05$ than hypothesis is rejected.

**2. Loan Ratio:**
The ratio provides a general measure of the financial position of a bank, including its ability to meet financial requirements for outstanding loans.
Loan Ratio = Loans/Total Assets.

**TABLE – 4 LOAN RATIO**

**Group Statistics**

| | BANKS | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| LOAN_RATIO | BOB | 5 | .1140 | .00548 | .00245 |
| | PNB | 5 | .1900 | .07450 | .03332 |

**Independent Samples Test**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| LOAN_RATIO | Equal variances assumed | 40.638 | .000 | -2.275 | 8 | .052 | -.07600 | .03341 | -.15304 | .00104 |
| | Equal variances not assumed | | | -2.275 | 4.043 | .085 | -.07600 | .03341 | -.16836 | .01636 |

***Findings:** The Significant p value is 0.00 ≤ 0.05 than equal variance assumed is 0.085 > 0.05 than hypothesis Ho is accepted.

**III. Management Efficiency:**
The bank management efficiency guarantees the growth and survival of a bank. This parameter is used to evaluate management quality so as to assign premium to better quality banks and discount poorly managed ones. It involves analysis of efficiency of management in generating business (top-line) and in maximizing profits (bottom-line).

## 1. Credit Deposit Ratio:

It indicates the ability of a bank to convert its deposits into higher earning advances. It is the ratio of how much a bank lends out of the deposits it has mobilized.
Credit Deposit Ratio=Total Advances/Customer Deposit.

## TABLE – 5 CREDIT DEPOSIT RATIO

### Group Statistics

| | BANKS | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| CREDIT_DEPOSIT_RATIO | BOB | 5 | 72.6900 | 2.08854 | .93402 |
| | PNB | 5 | 61.5020 | 19.90782 | 8.90305 |

### Independent Samples Test

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| CREDIT_DEPOSIT_RATIO | Equal variances assumed | 64.318 | .000 | 1.250 | 8 | .247 | 11.18800 | 8.95191 | -9.45514 | 31.83114 |
| | Equal variances not assumed | | | 1.250 | 4.088 | .278 | 11.18800 | 8.95191 | -13.4568 | 35.83280 |

***Findings:** The Significant p value is 0.000 ≤ 0.05 than equal variance assumed is 0.278 > 0.05 than hypothesis Ho is accepted.

## 2. Total Income/Capital employed Ratio:

This measure narrows the focus to gain a better understanding of a company's ability to generate returns from its available capital base.

$$\text{Return on capital employed ratio} = \frac{\text{Net income before interest and tax}}{\text{Capital employed}} \times 100$$

## TABLE – 6 TOTAL INCOME /CAPITAL EMPLOYED RATIO

### Group Statistics

| | BANKS | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| TOTALINCOME_CAPITALEMPLOYED_RATIO | BOB | 5 | 7.7680 | .37036 | .16563 |
| | PNB | 5 | 9.4380 | .32950 | .14736 |

### Independent Samples Test

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| TOTALINCOME_CAPITALEMPLOYED_RATIO | Equal variances assumed | .116 | .743 | -7.533 | 8 | .000 | -1.67000 | .22169 | -2.18123 | -1.15877 |
| | Equal variances not assumed | | | -7.533 | 7.893 | .000 | -1.67000 | .22169 | -2.18243 | -1.15757 |

***Findings:** The Significant p value is 0.743 > 0.05 than equal variance assumed is 0.000 < 0.05 than hypothesis Ho is rejected.

## IV. Earning Quality:

This parameter lays importance on how a bank earns its profits. This also explains the sustainability and growth in earnings in the future. Earning quality represents the quality of a bank's profitability and its capability to maintain quality and earn consistently. This ratio measures the profitability or the operational efficiency of the banks.

### 1. Net Profit Ratio:

Net profit ratio shows the operational efficiency of the business. Decreases in the ratio indicate managerial inefficiency and excessive selling and distribution expenses and Increase shows better performance.

Net Profit Ratio= (Net Profit/Total Income)*100

### TABLE – 7 NET PROFIT RATIO

**Group Statistics**

| | BANKS | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| NET_PROFIT_RATIO | BOB | 5 | 13.9320 | 2.81693 | 1.25977 |
| | PNB | 5 | 11.8840 | 3.44083 | 1.53879 |

**Independent Samples Test**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | T | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| NET_PROFIT_RATIO | Equal variances assumed | .070 | .799 | 1.030 | 8 | .333 | 2.04800 | 1.98869 | -2.53792 | 6.63392 |
| | Equal variances not assumed | | | 1.030 | 7.700 | .334 | 2.04800 | 1.98869 | -2.56923 | 6.66523 |

***Findings:** The Significant p value is 0.799 > 0.05 than equal variance not assumed is 0.333> 0.05 than hypothesis Ho is accepted.

## 2. Dividend per Share (DPS):

Dividend per share indicates the return earned per share. This ratio shows the amount payable per share to equity shareholders. Dividend per share ratio ignores earnings retained in the business. This ratio provides the better information about earning for equity shareholders.

**Dividend per Share = Dividend on Equity Share Capital / No. of Equity Shares**

## TABLE – 8 DIVIDENDS PER SHARE RATIO

### Group Statistics

| | BANKS | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| DIVIDEND_PER_SHARE | BOB | 5 | 18.3000 | 3.01247 | 1.34722 |
| | PNB | 5 | 20.6000 | 6.30872 | 2.82135 |

### Independent Samples Test

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | T | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| DIVIDEND_PER_SHARE | Equal variances assumed | .775 | .404 | -.736 | 8 | .483 | -2.30000 | 3.12650 | -9.50972 | 4.90972 |
| | Equal variances not assumed | | | -.736 | 5.734 | .491 | -2.30000 | 3.12650 | -10.0371 | 5.43714 |

***Findings:** The Significant p value is 0.404 > 0.05 than equal variance not assumed is 0.483>0.05 than hypothesis Ho is accepted.

### 3. Earnings per share: (EPS)

Earnings per share indicate the return earned per share. This ratio measures the market worth of the shares of the company (Banks). Higher earning per share shows better future prospects of the Banks. EPS indicates whether the earning power of the bank has increased or not.

**Earnings per Share = Profit after tax-Preference Dividend / No. of Equity Shares**

**TABLE – 9 EARNING PER SHARE RATIO**

**Group Statistics**

| | BANKS | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| EARNING_PER_SHARE | BOB | 5 | 105.2400 | 13.58148 | 6.07382 |
| | PNB | 5 | 126.8860 | 20.75076 | 9.28002 |

**Independent Samples Test**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | T | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| EARNING_PER_SHARE | Equal variances assumed | .880 | .376 | -1.95 | 8 | .087 | -21.6460 | 11.09099 | -47.2218 | 3.92988 |
| | Equal variances not assumed | | | -1.95 | 6.896 | .093 | -21.6460 | 11.09099 | -47.9527 | 4.66070 |

***Findings:** The Significant p value is 0.376 > 0.05 than equal variance not assumed is 0.087 > 0.05 than null hypothesis Ho is accepted.

## 4. Return on Net worth (RON):

This ratio measures the overall profitability, the operational efficiency and borrowing policy of the enterprise. It indicates the relationship of net profit with capital employed in the business. The primary objective of business is to maximize its earnings and this ratio indicates the extent to which this primary objective of business is being achieved.

**Return on Net Worth = Net Profit / Net-worth**

**TABLE – 10 RETURN ON NET WORTH RATIO**

**Group Statistics**

| | BANKS | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| RETURN_ON_NET_WORTH | BOB | 5 | 17.0460 | 3.53943 | 1.58288 |
| | PNB | 5 | 17.2100 | 5.66225 | 2.53223 |

**Independent Samples Test**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | T | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| RETURN_ON_NET_WORTH | Equal variances assumed | .708 | .425 | -.055 | 8 | .958 | -.16400 | 2.98625 | -7.05032 | 6.72232 |
| | Equal variances not assumed | | | -.055 | 6.712 | .958 | -.16400 | 2.98625 | -7.28729 | 6.95929 |

***Findings:** The Significant p value is 0.425 ≥ 0.05 greater than equal variance assumed is 0.958 ≥ 0.05 than null hypothesis Ho is accepted.

**5. Return on Assets:**

Higher return on asset means greater returns earned on assets deployed by the bank.This ratio measures the return on assets employed or efficiency in utilization of the assets.

**Return on Assets = Net Profit / Total Assets**

**TABLE – 11 RETURN ON ASSETS RATIO**

**Group Statistics**

| | BANKS | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| RETURN_ON_ASSET_RATIO | BOB | 5 | 1.0860 | .24805 | .11093 |
| | PNB | 5 | 1.1160 | .30574 | .13673 |

**Independent Samples Test**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | T | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| RETURN_ON_ASSET_RATIO | Equal variances assumed | .057 | .817 | -.170 | 8 | .869 | -.03000 | .17607 | -.43603 | .37603 |
| | Equal variances not assumed | | | -.170 | 7.674 | .869 | -.03000 | .17607 | -.43905 | .37905 |

***Findings:** The Significant p value is 0.817 ≥ 0.05 than equal variance not assumed is 0.869 ≥ 0.05 than null hypothesis Ho is accepted.

## V. Liquidity Ratios:

Liquidity is very important for any organization dealing with money. For a bank, Liquidity is a crucial aspect which represents its ability to meet its financial obligations. Liquidity ratios are calculated to measure the short term financial soundness of the bank. The ratio assesses the capacity of the bank to repay its short term liability. This ratio is also an effective source to ascertain, whether the working capital has been effectively utilised. Liquidity in the ratio means ability to repay loans. If a bank does not have sufficient liquidity, it may not be in a position to meet its commitments and thereby may lose its credit worthiness.

### 1. Current Ratio:

Current ratio judges whether current assets are sufficient to meet the current liabilities or not. It measures the liquidity position of the bank in terms of its short term working capital requirement.

**Current Ratio = Current Assets/ Current Liabilities**

**TABLE – 12 CURRENT RATIO**

**Group Statistics**

| | BANKS | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| CURRENT_RATIO | BOB | 5 | .0220 | .00447 | .00200 |
| | PNB | 5 | .1740 | .33879 | .15151 |

**Independent Samples Test**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| CURRENT_RATIO | Equal variances assumed | 6.920 | .030 | -1.003 | 8 | .345 | -.15200 | .15153 | -.50142 | .19742 |
| | Equal variances not assumed | | | -1.003 | 4.001 | .373 | -.15200 | .15153 | -.57264 | .26864 |

***Findings:** The Significant p value is 0.030 < 0.05 than equal variance assumed is 0.373 > 0.05 than null hypothesis Ho is accepted.

## 2. Liquidity / Quick Ratio:

Liquid assets are current assets less stock and prepaid expenses. Liquid assets include cash in hand, balance with RBI, balance with other banks (both in India and abroad) and money at call and short notice. Current liabilities include short-term borrowings, short-term deposits, bills payables and outstanding expenses.

## TABLE – 13 QUICK RATIOS

### Group Statistics

| | BANKS | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| QUICK_RATIO | BOB | 5 | 24.8680 | 2.39999 | 1.07331 |
| | PNB | 5 | 22.8220 | 1.77710 | .79474 |

### Independent Samples Test

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| QUICK_RATIO | Equal variances assumed | .763 | .408 | 1.532 | 8 | .164 | 2.04600 | 1.33552 | -1.03371 | 5.12571 |
| | Equal variances not assumed | | | 1.532 | 7.372 | .167 | 2.04600 | 1.33552 | -1.07994 | 5.17194 |

***Findings:** The Significant p value is 0.408 > 0.05 than equal variance assumed is 0.164 > 0.05 than null hypothesis Ho is accepted.

## VI. Sensitivity to Market Risk:

Sensitivity focuses on an institution's ability to identify, monitor, manage and control its market risk, and provides institution management with a clear and focused indication of supervisory concerns in this area.

## 1. Interest Spread Ratio:

Spread is the difference between interest earned and interest paid. So spread is the amount available to the commercial banks for meeting their administrative, operating and other expenses. As a matter of practice, banks try to increase the spread volume so that it is sufficiently available to meet the non-interest expenses and the remainder contributes to the profit volume.

**Spread Ratio (%) = (Spread / Working Fund)*100**

**TABLE – 14 INTERESTS SPREAD RATIO**

**Group Statistics**

| | BANKS | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| INTEREST_SPREAD_RATIO | BOB | 5 | 5.3240 | .69049 | .30880 |
| | PNB | 5 | 5.0040 | 2.98406 | 1.33451 |

**Independent Samples Test**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| INTEREST_SPREAD_RATIO | Equal variances assumed | 5.189 | .052 | .234 | 8 | .821 | .32000 | 1.36977 | -2.83871 | 3.47871 |
| | Equal variances not assumed | | | .234 | 4.427 | .826 | .32000 | 1.36977 | -3.34268 | 3.98268 |

***Findings:** The Significant p value is 0.052 > 0.05 than equal variance not assumed is 0.821 > 0.05 than null hypothesis Ho is accepted.

*
(If variances are equal **p** value will be greater than 0.05 use equal variance assumed) (If variances are unequal **p** value will be greater than 0.05 use equal variance not assumed)
If (sig.2 tailed) ≤ 0.05: significant difference – reject hypothesis.
If (sig.2 tailed) ≤ 0.05: no significant difference NS
Group means are significantly different as the value in the sig. (2 tailed) low is less than 0.05

**$H_0$: $\mu_1 = \mu_2$** (Null hypothesis: mean of two banks are equal)
**Ha: $\mu_1 < \mu_2$** (Alternate hypothesis: mean of two banks are not equal)

## SUMMARY OF FINDINGS, CONCLUSIONS AND SUGGESTIONS:

Based on the above analysis, the following are the summary of findings; conclusions and suggestions about the comparative financial performance of the Bank of Baroda and Punjab national bank are drawn:

1. The capital adequacy and Tier I capital ratio of Bank of Baroda and Punjab national Bank is more than the Basel Accord norms .We conclude that both the banks are good with respect capital adequacy because it is above the Basel norms.

2. The loans to total assets of Punjab National Bank are more compared with Bank of Baroda. Hence, we can say that the risk is more in Punjab National Bank compared with Bank of Baroda.

3. The total advances to customer deposit of Punjab National Bank are less compared with Bank of Baroda. Hence, Bank of Baroda is managing more efficiently for converting deposits to advances.

4. The net profit ratio of Bank of Baroda is more compared with Punjab National Bank.

5. The Average current assets and quick assets of Bank of Baroda is more compared with Punjab National Bank. So, we can conclude that the Bank of Baroda liquidity has well compared with Punjab National Bank. and the t-test has also proved the same in the case of all the liquidity ratios.

6. The debt-equity ratio of Punjab National Bank. 6.00 % is more compared with Bank of Baroda 5.00 %; hence long term solvency is well in Punjab National Bank.

7. The spread ratio of Bank of Baroda is more compared with Punjab National Bank. Hence, we can say that the Punjab National Bank Interest income more compared with interest expenses. Hence Punjab National Bank earns more profits.

From the CAMELS' analysis it clears that there is no significance difference between the Bank of Baroda and Punjab National Bank's financial performance but we conclude that the Punjab National Bank performance is slightly less compared with Bank of Baroda.

## CONCLUSION:

All the two banks have succeeded in maintaining CRAR at a higher level than the prescribed level, 10%. But the Bank of Baroda has maintained highest across the duration of last five years. It is very good sign for the banks to survive and to expand in future.
Out of 14 ratios used in the CAMEL model the average figures of Bank Of Baroda is the best for (6 ratios) followed by Punjab National Bank (5 ratios). Thus it is established that Bank of Baroda is the best bank in the selected public sector banks.
In nutshell it can be concluded that transparency and good governance would work as principal guiding force in present scenario.

## Limitations of the study:

The study is based on secondary data collected from the secondary data source, internet and websites of various banks concerned. Therefore, the quality of the study depends upon the accuracy, reliability, and quality of secondary data source. The published data is not uniform and not properly disclosed by the banks.

## Scope for Further Research:

Capital Adequacy ratio (CAR) is a ratio that regulators in the banking system use to watch bank's health, specifically bank's capital to its risk. Regulators in most countries define and monitor CAR to protect depositors, thereby maintaining confidence in the banking system. This research paper and its findings may be of considerable use to banking institutions, policy makers and to academic researchers in the area of banking performance evaluation with special reference to capital adequacy.

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