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# Comparative Financial Performance of Select Public and Private Sector Banks in India

**Ravikumar Undi,** Research scholar, Department of Studies and Research in Commerce, Gulbarga University, Kalaburagi, ravi.undi@mail.com
**Basavaraj C.S.,** Professor, Department of Studies and Research in Commerce, Gulbarga University, Kalaburagi, drbasavarajcs@gmail.com

**Abstract:**
**Purpose:** Present paper aims to analyse the comparative financial performance of selectpublic and private sector banks in India.
**Design/methodology/approach:** To analyze the financial performance, researchers have selected seven key financial ratios viz. Return on Assets, Return on Equity, Financial Return, Financial Cost, Financial Margin, Net Margin, and Operating Profit Margin. And Paired t-test has been calculated to know if thereis any difference in the ratios between both the sectors.
**Findings:**The study finds that the private sector banks are performing better than the public sector banks as their average financial ratios are better than public sector banks during the study period.
**Originality/values:** Researchers have selected tenpublic and tenprivate sector banks in India for the study and required data have been collected from annual reports of each bank for a period of five years, from 2015 to 2019.

**Keywords: Public sector banks, Private sector banks, Financial performance, Financial ratios, Paired t-test.**

## I. INTRODUCTION

In India, the Banking Regulation Act, 1949 defines bank as a banking company.Abanking company is a company which transacts the business of banking in India [Section5(c)]. Section 5(b) defines banking as accepting, for the purpose of lending or investment, ofdeposits of money from the public, repayable on demand or otherwise and withdrawable bycheque, draft, and order or otherwise.The banking sector plays a magnificent role for smooth and efficient functioning of different activities of an economy. Attainment of growth with social justice is the principal objective of Indian economy, to achieve the said objective it is necessary to strengthen the banking system on sound basis to meet the growing needs for finance. The role of banking system in an economy has been transformed as an engineer of economic change especially in developing countries. Structure of banking industry plays a crucial role as it affects the performance and efficiency in turn of ability to collect savings and mobilizing them into productive activities.
Banking institutions operating throughout the world are facing the challenges of dynamic environment where competitiveness and efficiency hold the key to survive with competition from both domestic and international banks. Technological development, increase in customers' demand, entry of new financial instruments and changes or introduction of new banking regulations and policies are building massive pressure on banks to perform better than other banks in the market. In order to survive, banks must understand the drivers of success like better utilization of resources viz. infrastructure, employees, technology, channel of delivering the quality services to their customers and performing by benchmarking (Mukherjee et al., 2002; Sathya, 2003; Debnath, R.M. & Shankar, R, 2008).
The Indian banking system has gone through many changes/reforms in which the nationalization of Indian commercial banks has changed the profile of Indian banking (Malhotra R N, 1986). Amandeep (1991) opined that the banks have become one of the major stakeholders in the development of the economy. Indian banking system has become more proactive and dynamic as a result of liberalization and economic reforms initiated in 1991 (Chellasamy P &Sumati N, 2004). Liberalization has created both internal and external pressure on the Indian banking system (Janaki J, 2001). Public sector banks (PSBs) have less exposure to risky assets as there are some restrictions (Ram Mohan TT, 2002) and there is a need to ensure long-term finance in the development of the economy (Uppal RK, 2008). In contrast, private sector banks are offering new banking experience (Pathak, 2003). Transparency and good governance are the guiding principles (Gupta, 2008). Deregulation, increased market integration, technological up-gradation and human resource management have transformed the financial sector (Kapoor Seema, 2007) from domestic one to truly international one (Janaki J, 2001).

## II. Literature review

Birla Institute of Scientific Research (1981) which analyzed the performance of public and private sector banks using ratios and growth rate revealed that the private sector banks have a higher profitability ratio than that of public sector banks. KalluruSivareddy& Sham Bhat K (2009) opined that the entry of foreign banks adversely affected the operation of PSBs. PSBs are incompetent as compared to private and foreign banks (except SBI) due to poor governance (Saha Gurudas, 2001) and the profitability of PSBs has constantly declined (Chaudhuri Saumitra, 2002). PSBs are lagging in their performance when compared to other sectors (Mittal Manish &DhadeAruna, 2007: Uppal R K & Kaur Rimpi, 2007). New private sector banks are better than that of old private sector banks and PSBs (Rao Suryachandra, 2008). Foreign banks ranked top in terms of earning quality (Bodla B S & Verma Richa, 2008-09), in contrast, during 1986-2000 foreign banks are the worst performers (Sensaram Rudra, 2006). PSBs are not as profitable as other sectors (T Thirunavukkarasu&Nachimuthu, 2015), contrary-wise it is said that private sector banks are performing better (Neha Rani & Dinesh Gada, 2014; Ravikumar Undi& Basavaraj C S, 2019).

PSBs are required to adopt Basel Accord II along with organizational and technological up-gradation to compete internationally (Kodian N, et.al, 2010). During the post reforms period, PSBs have recorded a reduction in the burden of raising the working funds (Das Abiman, 1999). Besides to improve the service quality, banks must evaluate the service experience of employees (Amuda R &Vijayabanu, 2007). Then they have to clean up their systems and practices to ensure stability (Diwanji A, 2010). The adoption of new technology and information system is a milestone in the development of the banking system. The information system plays a supportive role in PSBs and strategic role in private and foreign banks (A M Rawani& M P Gupta, 2000). Increasing statutory reserve ratio, advancing to priority sector at the lower rate of interest, expansion of branches to the semi-urban and rural area and raising wages of the employees have adversely affected the profitability of PSBs (Agarwal R N, 1993). Social lending and profitability of the bank should go hand in hand (Dey SK & Kumar Pradeep, 2007). Das Abhiman (2002) opined that capital adequacy has a negative and significant impact on asset quality. And bank must reduce operational cost and burden of interest payment to improve the margin of safety (Pandey Rajendra, et.al, 2003). Non-performing assets (NPAs) of banks influence the profitability and liquidity of the bank (SamantaAmitava, 2006). Kajal C and Monika S (2011) recommended the PSBs to pay attention to NPAs to compete with the counterpart. However, the size of NPAs in PSBs reduced to some extent and quality of service has improved in the post-reforms period (Singh Sultan, 2007: Raju D N M, 2009).

## III. Objectives of the study:

The key objectives of the study are:
1. To compare the financial performance of public and private sector banks in India during 2015 to 2019.
2. To know the difference between the financial ratios of public and private sector banks.
3. To draw the conclusion.

## IV. Methodology:

The present study is intended to compare the financial performance of public and private sector banks in India. For the said purpose, researchers have selected tenpublic sector banks and ten private sector banks in India. The study period is 2015 to 2019, and the required data for the study have been collected from the annual reports of each bank for the study period. To analyze the financial performance, researchers have selected seven key financial ratios viz. Return on Assets, Return on Equity, Financial Return, Financial Cost, Financial Margin, Net Margin, and Operating Profit Margin. To know the difference between the financial ratios of public and private sector banks, researchers have calculated the paired t-test.

**1.1 Sample banks of the study**

| Sl. No | Public sector banks | Sl. No | Private sector banks |
|---|---|---|---|
| 1 | Andhra bank | 1 | Axis bank |
| 2 | Bank of Baroda | 2 | Federal bank |
| 3 | Bank of India | 3 | Housing Development Finance Corporation Limited (HDFC) bank |
| 4 | Bank of Maharashtra | 4 | Industrial Credit and Investment Corporation of India (ICICI) bank |

| | | | |
|---|---|---|---|
| 5 | Canara bank | 5 | Kotak Mahindra bank |
| 6 | Central bank of India | 6 | Yes bank |
| 7 | Corporation bank | 7 | Development Credit Bank Ltd (DCB) |
| 8 | Indian bank | 8 | Indusind bank |
| 9 | Punjab National bank | 9 | Ratnakar Bank Limited (RBL) |
| 10 | State bank of India | 10 | City Union bank |

## V. ANALYSIS OF DATA AND INTERPRETATION:

The analysis and comparisonoffinancial performance of public and private sector banks for five years period with respect toseven key financial ratios and their paired t-test have been calculated, presented,and analyzedin the following paragraphs.

### 5.1 Return on Assets of Public and Private Sector Banks

**Table 5.1.1 Return on Assets of Public and Private Sector Banks**

| Sector | Particulars | 2019 | 2018 | 2017 | 2016 | 2015 | Mean | SD |
|---|---|---|---|---|---|---|---|---|
| **Public Sector** | Mean | -1.06 | -0.88 | 0.01 | -0.24 | 0.40 | -0.35 | 0.61 |
| | SD | 1.18 | 0.74 | 0.48 | 0.50 | 0.14 | 0.61 | 0.38 |
| **Private Sector** | Mean | 1.01 | 1.08 | 1.20 | 1.23 | 1.42 | 1.19 | 0.16 |
| | SD | 0.48 | 0.52 | 0.40 | 0.40 | 0.34 | 0.43 | 0.07 |

Source: Compiled from the data gathered from the annual reports of the banks.

**Table 5.1.2 Paired Samples Test of Return on Assets of Public and Private Sector Banks**

| | Paired Differences | | | | | t | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|---|---|
| | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | | | | |
| | | | | Lower | Upper | | | |
| Pair 1 PUB-ROA – PVT-ROA | -1.542 | .462 | .206 | -2.116 | -.967 | -7.458 | 4 | .002 |

Source: Compiled from the data gathered from the annual reports of the banks.

ROA shows the earning capacity of banks over its totalassets. Table 5.1.1 infers the ROA of public and private sector banks of the study wherein average ROA of public sector banks is 0.35(-) and private sector banks is 1.19, which depicts that private sector banks are more efficient than the public sector banks in generating incomes against their total assets.Public sector banks have more variation (0.61) than the private sector banks (0.16) in ROA during the study period. Table 5.1.2 shows the Paired T-test results which infer that "there is a significant difference in the ROA of public sector banks ($M= -0.35$, $SD=0.61$) and private sector banks ($M=1.19$, $SD=0.16$) condition: $t(4) = -7.45$, $p=0.002$." furthermore which leads to reject null hypothesis and accept alternative hypothesis as "p" value 0.002 is less than the 0.05.

### 5.2 Return on Equity of Public and Private Sector Banks

**Table 5.2.1 Return on Equity of Public and Private Sector Banks**

| Sector | Particulars | 2019 | 2018 | 2017 | 2016 | 2015 | Mean | SD |
|---|---|---|---|---|---|---|---|---|
| **Public Sector** | Mean ROE | -20.42 | -16.94 | -0.82 | -4.58 | 6.82 | -7.18 | 11.33 |
| | SD | 26.36 | 14.43 | 8.93 | 8.79 | 1.96 | 12.09 | 9.12 |
| **Private Sector** | Mean ROE | 9.98 | 10.34 | 11.47 | 12.05 | 13.91 | 11.55 | 1.56 |
| | SD | 3.55 | 5.03 | 3.01 | 3.88 | 2.76 | 3.65 | 0.89 |

Source:Compiled from the data gathered from the annual reports of the banks.

**Table 5.2.2Paired Samples Test of Return on Equity of Public and Private Sector Banks**

| | Paired Differences | | | | | t | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|---|---|
| | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | | | | |
| | | | | Lower | Upper | | | |
| Pair 1 PUB-ROE PVT-ROE | -18.738 | 9.882 | 4.419 | -31.008 | -6.467 | -4.240 | 4 | .013 |

Source:Compiled from the data gathered from the annual reports of the banks.

ROE indicates the profitability of banks in relation to their equity/shareholders' wealth.Table 5.2.1 reveals the ROE of public and private sector banks of the study wherein average ROE of public sector banks is 7.18(-) and private sector banks is 11.55, which make clear that private sector banks are more efficient than the public sector banks in generating incomes against their total equity/ shareholders' wealth.Public sector banks have more variation (11.33) than private sector banks (1.56) in ROE during the study period. Table 5.2.2 exhibits the Paired t-test results which conclude that "there is a significant difference in the ROE of public sector banks (M= -7.18, SD= 11.33) and private sector banks (M= 11.55, SD= 1.56) condition: t(4) = -4.24, p=0.013." additionally which leads to reject null hypothesis and accept alternative hypothesis as "p" value 0.013 is less than the 0.05.

### 5.3 Financial return of Public and Private Sector Banks

**Table 5.3.1Financial return of Public and Private Sector Banks**

| Sector | Particulars | 2019 | 2018 | 2017 | 2016 | 2015 | Mean | SD |
|---|---|---|---|---|---|---|---|---|
| **Public Sector** | Mean | 6.81 | 6.81 | 7.08 | 7.75 | 7.94 | 7.28 | 0.53 |
| | SD | 0.36 | 0.59 | 0.67 | 0.72 | 0.86 | 0.64 | 0.18 |
| **Private Sector** | Mean | 7.67 | 7.20 | 7.82 | 8.03 | 8.27 | 7.80 | 0.40 |
| | SD | 0.62 | 0.58 | 0.46 | 0.62 | 0.69 | 0.60 | 0.08 |

Source: Compiled from the data gathered from the annual reports of the banks.

**Table 5.3.2Paired Samples Test of Financial return of Public and Private Sector Banks**

| | Paired Differences | | | | | t | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|---|---|
| | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | | | | |
| | | | | Lower | Upper | | | |
| Pair 1 PUB-FR – PVT-FR | -.520 | .26201 | .11718 | -.84533 | -.19467 | -4.43 | 4 | .011 |

Source: Compiled from the data gathered from the annual reports of the banks.

Financial return indicates the interest earning capacity of banks over their total assets.Table 5.3.1 points out the financial return of public and private sector banks of the study, wherein average financial return of public sector banks is 7.28 and private sector banks is 7.80, which make clear that private sector banks are just a little bit efficient than the public sector banks in interest-earning capacity of banks over their total assets.Public sector banks have more variation (0.53) than private sector banks (0.40) in financial return during the study period. Table 5.3.2 unveil the Paired t-test results which determine that "there is a significant difference in the financial return of public sector banks (M= 7.28, SD= 0.53) and private sector banks (M= 7.80, SD= 0.40) condition: t(4) = -4.43, p=0.011." this leads to reject null hypothesis and accept alternative hypothesis as "p" value 0.011 is less than the 0.05.

### 5.4 Financial cost of Public and Private Sector Banks

**Table 5.4.1Financial cost of Public and Private Sector Banks**

| Sector | Particulars | 2019 | 2018 | 2017 | 2016 | 2015 | Mean | SD |
|---|---|---|---|---|---|---|---|---|
| **Public Sector** | Mean | 4.47 | 4.68 | 5.02 | 5.55 | 5.66 | 5.08 | 0.52 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | SD | 0.29 | 0.56 | 0.69 | 0.71 | 0.85 | 0.62 | 0.21 |
| **Private Sector** | Mean | 4.54 | 4.16 | 4.71 | 5.02 | 5.28 | 4.74 | 0.43 |
| | SD | 0.51 | 0.36 | 0.39 | 0.45 | 0.58 | 0.46 | 0.09 |

Source:Compiled from the data gathered from the annual reports of the banks.

**Table 5.4.2Paired Samples Test of Financial cost of Public and Private Sector Banks**

| | Paired Differences | | | | | T | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|---|---|
| | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | | | | |
| | | | | Lower | Upper | | | |
| Pair 1 PUB-FC – PVT-FC | .334 | .244 | .109 | .0305 | .637 | 3.056 | 4 | .038 |

Source:Compiled from the data gathered from the annual reports of the banks.

Financial cost indicates the interest expenses over the total assets of the bank. Table 5.4.1 shows the financial cost of public and private sector banks of the study wherein average financial cost of public sector banks is 5.08 and private sector banks is 4.74, which clarify that private sector banks are just a little bit efficient than the public sector banks in interest expenses over the total assets.Public sector banks have more variation (0.52) than private sector banks (0.43) in financial cost during the study period. Table 5.4.2 presents the Paired t-test results which determine that "there is a significant difference in the financial cost of public sector banks (M= 5.08, SD= 0.52) and private sector banks (M= 4.74, SD= 0.43) condition:t (4) = 3.056, p=0.038." this leads to reject null hypothesis and accept alternative hypothesis as "p" value 0.038 is less than the 0.05.

**5.5 Financial margin of Public and Private Sector Banks**

**Table 5.5.1 Financial margin of Public and Private Sector Banks**

| **Sector** | **Particulars** | **2019** | **2018** | **2017** | **2016** | **2015** | **Mean** | **SD** |
|---|---|---|---|---|---|---|---|---|
| **Public Sector** | Mean | 2.33 | 2.14 | 2.05 | 2.17 | 2.24 | 2.19 | 0.11 |
| | SD | 0.22 | 0.26 | 0.26 | 0.32 | 0.40 | 0.29 | 0.07 |
| **Private Sector** | Mean | 3.13 | 3.04 | 3.10 | 3.01 | 2.99 | 3.06 | 0.06 |
| | SD | 0.45 | 0.46 | 0.47 | 0.53 | 0.60 | 0.50 | 0.06 |

Source:Compiled from the data gathered from the annual reports of the banks.

**Table 5.5.2Paired Samples Test of Financial margin of Public and Private Sector Banks**

| | Paired Differences | | | | | t | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|---|---|
| | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | | | | |
| | | | | Lower | Upper | | | |
| Pair 1 PUB-FM PVT-FM | -.868 | .115 | .051 | -1.011 | -.724 | -16.786 | 4 | .000 |

Source:Compiled from the data gathered from the annual reports of the banks.

Financial margin indicates the excess of interest income over interest expenses against total assets of bank. Table 5.5.1 focuses on the financial margin of public and private sector banks of the study, wherein average financial margin of public sector banks is 2.19 and private sector banks is 3.06, which indicates that private sector banks are more efficient than the public sector banks in earning excess of interest income over interest expenses against total assets of bank.Public sector banks have more variation (0.11) than private sector banks (0.06) in financial margin during the study period. Table 5.5.2 exposes the Paired t-test results which define that "there is a significant difference in the financial margin of public sector banks (M= 2.19, SD= 0.11) and private sector banks (M= 3.06, SD= 0.06) condition:t (4) = -16.786, p=0.000." this leads to reject null hypothesis and accept alternative hypothesis as "p" value 0.000 is less than the 0.05.

### 5.6 Net margin of Public and Private Sector Banks

**Table 5.6.1Net margin of Public and Private Sector Banks**

| Sector | Particulars | 2019 | 2018 | 2017 | 2016 | 2015 | Mean | SD |
|---|---|---|---|---|---|---|---|---|
| **Public Sector** | Mean | -13.64 | -11.03 | 0.11 | -3.12 | 4.73 | -4.59 | 7.66 |
| | SD | 15.13 | 9.01 | 5.79 | 6.35 | 1.89 | 7.63 | 4.90 |
| **Private Sector** | Mean | 10.96 | 12.18 | 12.62 | 12.80 | 14.36 | 12.58 | 1.22 |
| | SD | 4.86 | 5.58 | 3.93 | 3.75 | 2.99 | 4.22 | 1.01 |

Source:Compiled from the data gathered from the annual reports of the banks.

**Table 5.6.2Paired Samples Test of Net margin of Public and Private Sector Banks**

| | Paired Differences | | | | | t | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|---|---|
| | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | | | | |
| | | | | Lower | Upper | | | |
| Pair 1 PUB-NM PVT-NM | -17.174 | 6.553 | 2.931 | -25.311 | -9.036 | -5.85 | 4 | .004 |

Source: Compiled from the data gathered from the annual reports of the banks.

Net margin infers that the net profit as a percentage of the total income of the banks. Table 5.6.1 specifies the net margin of public and private sector banks of the study, wherein average net margin of public sector banks is 4.59(-) and private sector banks is 12.58, which shows that private sector banks are more efficient than the public sector banks in earning net profit as a percentage of the total income of the banks.Public sector banks have more variation (7.66) than private sector banks (1.22) in net margin during the study period. Table 5.6.2 represents the Paired t-test results which outline that "there is a significant difference in the net margin of public sector banks (M= -4.59, SD= 7.66) and private sector banks (M= 12.58, SD= 1.22) condition, t(4) = -5.859, p=0.004." Correspondingly this leads to the rejection of null hypothesis and acceptance of alternative hypothesis as "p" value 0.004 is less than the 0.05.

### 5.7 Operating profit margin of Public and Private Sector Banks

**Table 5.7.1Operating profit margin of Public and Private Sector Banks**

| Sector | Particulars | 2019 | 2018 | 2017 | 2016 | 2015 | Mean | SD |
|---|---|---|---|---|---|---|---|---|
| **Public Sector** | Mean | 20.26 | 19.99 | 19.96 | 16.92 | 17.63 | 18.95 | 1.56 |
| | SD | 3.63 | 4.85 | 4.57 | 4.17 | 3.51 | 4.15 | 0.58 |
| **Private Sector** | Mean | 26.88 | 28.14 | 27.02 | 24.92 | 24.27 | 26.25 | 1.60 |
| | SD | 4.46 | 5.17 | 5.80 | 6.53 | 5.72 | 5.54 | 0.77 |

Source:Compiled from the data gathered from the annual reports of the banks.

**Table 5.7.2Paired Samples Test f Operating profit margin of Public and Private Sector Banks**

| | Paired Differences | | | | | t | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|---|---|
| | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | | | | |
| | | | | Lower | Upper | | | |
| Pair 1 PUB-OPM PVT-OPM | -7.294 | .736 | .329 | -8.208 | -6.379 | -22.15 | 4 | .000 |

Source: Compiled from the data gathered from the annual reports of the banks.

Operating profit margin indicates the operating incomes earned as percentage of total income. Table 5.7.1 postulates the operating profit margin of public and private sector banks of the study wherein average operating profit margin of public sector banks is 18.95 and private sector banksis 26.25, which indicate that private sector banks are more efficient than the public sector banks in operating incomes earned as percentage of total income. Public sector banks have just a little bit less variation (1.56) than private sector banks (1.60) in operating profit margin during the study period. Table 5.7.2 shows the Paired t-test results which ensure that "there is a significant difference in the operating profit margin of public sector banks (M= 18.95, SD= 1.56) and private sector banks (M= 26.25, SD= 1.56) condition: t(4) = -22.154, p=0.000." Correspondingly this leads to the rejection of null hypothesis and acceptance of alternative hypothesis as "p" value 0.004 is less than the 0.05.

## VI. CONCLUSION:

The study aims to analyse comparative financial performance of public and private sector banks in India during 2015 to 2019. The study finds that the private sector banks are performing better than the public sector banks as their average financial ratios are better than public sector banks in all the seven financial ratios applied in this study. The researchers are in the opinion that issues like- overhung of bad debts, high wage cost, lack of corporate governance, investment in infrastructure, shortage of capital, burden of social schemes are the major reasons which are dragging the performance of public sector banks. As suggestions given by Mukherjee et al., (2002), banks must understand the drivers of success like better utilization of resources viz. infrastructure, employees, technology, channel of delivering the quality services to their customers and performing by benchmarking.

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