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Performance Appraisal of Indian Public Sector Banks: A Financial Analysis Approach

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ABSTRACT

The public sector banking system in India forms the backbone of the financial sector, accounting for a substantial share of credit and deposit mobilization. Evaluating their performance is essential for policy formulation, risk management, and investor decision-making. This study analyses the financial performance of ten major public sector banks in India, chosen based on market capitalization, over a five-year period from FY2020-21 to FY2024-25. These institutions are critical to the nation's financial system, as they manage a significant portion of credit and deposit activities. Using key profitability and liquidity ratios, the study evaluates the financial health and operational efficiency of these banks in the post-reform and pandemic-era banking landscape. It employs statistical methods, including descriptive analysis and ANOVA tests, to identify variations in performance across different banks and over time. The results reveal notable disparities in profitability and asset quality among the banks, while solvency ratios remain relatively stable. The paper concludes by discussing the study's implications for policy and management, and by suggesting directions for future research.

Keywords: *Performance Appraisal, Public Sector Banks, Financial Analysis Approach.*

Introduction

The banking sector forms the backbone of India's financial system, playing a critical role in mobilizing savings, facilitating investments, and promoting economic stability. Among its various segments, public sector banks (PSBs) have historically been the dominant force, contributing significantly to the growth and development of the nation's economy. Established with the objective of fostering financial inclusion and supporting government-led economic initiatives, these banks have evolved from traditional lending institutions to diversified financial service providers. Over the decades, PSBs have been instrumental in implementing monetary policies, channelling credit to priority sectors, and ensuring equitable distribution of financial resources across both urban and rural areas.

However, in the rapidly changing financial environment marked by competition from private and foreign banks, technological disruption, and regulatory reforms, the efficiency and financial performance of public sector banks have come under close scrutiny. Evaluating their performance has become essential for understanding their operational soundness, profitability, and long-term sustainability. A financial analysis-based appraisal provides an evidence-driven assessment of these aspects by examining indicators such as capital adequacy, asset quality, management efficiency, earnings quality, and liquidity parameters. Such an analysis not only highlights the strengths and weaknesses of PSBs but also offers insights for policymakers, regulators, and bank management in framing strategies to enhance performance and competitiveness.

This research aims to systematically analyze the financial performance of Indian public sector banks through a comprehensive financial analysis approach. By examining key financial ratios and performance metrics, the study seeks to reveal patterns, challenges, and emerging trends influencing the overall efficiency and stability of PSBs in the contemporary banking landscape.

Review of Literature

The review of literature is as follows:

Aspal and Malhotra (2012)-Examined the financial performance of selected Indian public sector banks (excluding the State Bank group) for 2006–2011 using CAMEL-based composite rankings and financial ratios. The study reported notable variation in liquidity, asset quality, and management efficiency across banks, with some institutions like Bank of Baroda emerging as consistent top performers on composite scores.

Misra and Aspal (2013)-Applied the CAMEL framework to evaluate the performance of the State Bank group, focusing on capital adequacy, asset quality, management efficiency, earnings, and liquidity. The results indicated gradual strengthening of capital and earnings parameters over time, although concerns about asset quality and efficiency persisted for certain subsidiaries.

Rao and Kumar (2022)- A more recent study used a five-year data set (2017–2022) and CAMEL ratios to compare public and private sector banks, ranking banks on capital adequacy, asset quality, management efficiency, earnings ability, and liquidity. The analysis showed that private banks generally outperformed public banks on most parameters, though some PSBs displayed improved capital positions and earnings in the later years.

Singh and Ram- A study covering all public sector commercial banks over 2009–2019 assessed performance determinants using CAMEL variables such as capital adequacy, asset quality, and liquidity. Findings linked weaker performance and subsequent consolidation to stress in asset quality and capital, while highlighting the role of reforms in gradually stabilizing key indicators.

Hiremath and Kudachimath- A longitudinal study evaluated four anchor public sector banks formed through the Government of India's mega-merger initiative, comparing pre- and post-merger financial ratios. The study documented statistically significant improvements in profitability and cost efficiency after the mergers, although asset quality indicators initially deteriorated before improving as integration progressed.

Ashwath and Sachindra- An Evaluation of the Financial Performance of Indian Public Sector Banks with Special Reference to Capital Adequacy and Asset Quality, They assessed selected PSBs during 2019–2024, focusing on capital adequacy, asset quality, profitability, and liquidity to gauge overall financial soundness. The results pointed to better capitalization and gradual improvement in profitability, but also underscored ongoing pressure from non-performing assets and the need for stronger risk management practices.

However, few studies have comprehensively compared profitability and liquidity trends for major PSBs in the recent period, creating a research gap this study aims to fill.

Statement of the Problem

The performance of Indian public sector banks (PSBs) remains a matter of significant interest for policymakers, regulators, and stakeholders due to their crucial role in supporting national economic growth and financial inclusion. Despite major reforms, technological advancements, and policy interventions over the past few decades, many PSBs continue to face challenges related to profitability, operational efficiency, and asset quality. Rising non-performing assets (NPAs), fluctuating capital adequacy levels, and competitive pressure from private and foreign banks have raised concerns about the sustainability of their financial performance.

A comprehensive financial analysis is therefore essential to evaluate the true financial health and efficiency of these institutions. Existing studies often focus on selective parameters or short timeframes, leading to fragmented insights. There is a need for a systematic assessment that examines key financial indicators—such as liquidity, profitability, solvency, and asset management—over a consistent period to provide a more reliable evaluation of PSB performance. This research aims to fill that gap by analyzing the financial performance of Indian public sector banks using a structured financial analysis approach, thereby offering empirical evidence to support strategic improvements and policy

decisions in the banking sector. The title of problem is: **"Performance Appraisal of Indian Public Sector Banks: A Financial Analysis Approach"**

Objectives of the Study

The main objectives of the study are:

- To evaluate the profitability performance of Indian public sector banks.
- To evaluate the liquidity performance of Indian public sector banks.
- To identify trends and variations in financial performance of Indian public sector banks across the study period
- To provide practical suggestions to strengthen the performance of Indian public sector banks.

Hypotheses of the Study

The main hypotheses of the study are:

- There is no significant difference in the profitability performance of Indian public sector banks during the study period.
- There is significant difference in the liquidity performance of Indian public sector banks during the study period.

Research Design

The present study adopts a quantitative, analytical, and comparative research design to evaluate the financial performance of Indian public sector banks (PSBs). Data analysis involves ratio analysis for profitability and liquidity, trend analysis, and comparative assessment. Statistical tools such as ANOVA and trend graphs are used to test hypotheses.

Sample Selection

The study focuses on the top five public sector banks in India, selected on the basis of market capitalization as on 5th September, 2025. The selection of sample is as under:

S. No.	Name	Mar Cap Rs. Cr.
1.	SBI	744541.61
2.	Bank of Baroda	121144.33
3.	Punjab National Bank	119239.29
4.	Union Bank	97206.33
5.	Canara Bank	97182.96

Study Period

The analysis covers a period of **five financial years (2020–21 to 2024–25)**, which provides sufficient time-series data to assess trends and performance stability.

Data Collection

The study relies exclusively on **secondary data**, collected from the following sources:

- Published annual reports of selected banks
- Reserve Bank of India (RBI) publications
- Money control database and capital line database
- Reports from SEBI and stock exchanges (NSE, BSE)

Variables and Tools of Analysis

The financial performance is assessed by using key ratios as under:

- Net Profit Margin Ratio
- Return on Long Term Funds
- Return on Net Worth
- Dividend Per Share
- Asset Turnover Ratio
- Total Debt to Owners Fund

- Current Ratio
- Quick Ratio

Descriptive statistics, including mean, standard deviation and coefficient of variation, are used to summarize the central tendency and dispersion of key financial ratios over the study period. ANOVA are applied to test whether there are statistically significant differences in financial performance indicators across selected public sector banks or across time periods.

Data Analysis and Interpretation

- **Net Profit Margin Ratio**

Table 1 (a): Net Profit Margin Ratio

Company	2024-25	2023-24	2022-23	2021-22	2020-21	Mean
SBI	15.33	14.71	15.12	11.49	7.69	12.868
Bank of Baroda	16.12	15.79	15.74	10.40	1.17	11.844
PNB	7.71	2.94	4.61	2.50	0.62	3.676
Union Bank	16.69	13.67	10.44	7.70	4.22	10.544
Canara Bank	14.21	13.39	12.56	8.18	3.69	10.406
Sources: *Computed from annual reports & www.capitaline.com*						

The table shows that State Bank of India has the highest average Net Profit Margin (15.33 in 2024-25 and a mean of 12.868), followed by Bank of Baroda, Union Bank and Canara Bank, while PNB lags significantly behind with a mean of only 3.676.

SBI records the highest mean NPM at 12.868%. This suggests that, on average, SBI is the most effective in managing its costs and provisioning to retain the largest portion of its income as profit. Bank of Baroda follows closely with a mean NPM of 11.844%. Union Bank (10.544%) and Canara Bank (10.406%) form the mid-tier, indicating similar levels of average operational efficiency. PNB significantly lags behind its peers with the lowest mean NPM of just 3.676%. This low figure signals substantial challenges in cost control or high provisioning requirements that heavily erode its income base.

All banks show a dramatic increase in NPM from 2020-21 to 2024-25, which is consistent with the general financial recovery of the public sector banking segment. This improvement is largely attributable to better asset quality, leading to reduced provisioning needs, and effective loan growth. Bank of Baroda demonstrated the most substantial recovery, soaring from a mere 1.17% in 2020-21 to 16.12% in 2024-25, recording the highest NPM in the final year. Union Bank also showed aggressive growth, moving from 4.22% to 16.69% in 2024-25, which is the highest NPM among all banks in the final year. SBI maintained relatively stable and high margins throughout, increasing from 7.69% to 15.33%. PNB, despite being the lowest, showed significant volatility. After a slight recovery from 0.62% to 4.61% (2020-21 to 2022-23), its NPM dropped sharply to 2.94% in 2023-24 before recovering to 7.71% in 2024-25. This volatility highlights ongoing instability in its operational management or provisioning policies.

Hypothesis Testing

H_0: There is no significant difference in the net profit margin ratio of selected Indian public sector banks during the study period

H_1: There is a significant difference in the net profit margin ratio of selected Indian public sector banks during the study period

Table 1(b): ANOVA Test Analysis

Source of Variance	S.S.	d.f.	M.S.	F ratio	5% Limit (From F Table)
Between Groups	348.0577	(5-1) 4	87.01441	**5.399**	**2.86**
Within Groups	322.3122	(25-5) 20	16.11561		
	670.3699	**(25-1) 24**			

The table value of ANOVA test is 2.86 and calculated value of it is 5.399 and p value is 0.004087. So, H_0 is rejected and H_1 is accepted. It can be concluded that there is a significant difference in net profit margin ratio between selected Indian public sector banks during the study period. This implies that the variation between banks (MS between = 87.01441) is large relative to the variation within banks over time (MS within = 16.11561), indicating non-uniform profitability performance among these public sector banks.

- **Return on Long Term Funds**

Table 2 (a): Return on Long Term Funds

Company	2024-25	2023-24	2022-23	2021-22	2020-21	Mean
SBI	94.43	96.38	84.86	77.19	79.02	86.376
Bank of Baroda	74.83	82.66	69.18	54.29	61.31	68.454
PNB	81.50	60.10	57.10	64.19	64.41	65.46
Union Bank	83.19	92.67	83.26	74.04	78.01	82.234
Canara Bank	112.69	117.95	101.55	90.24	96.60	103.81
Sources: *Computed from annual reports & www.capitaline.com*						

This table presents the Return on Long Term Funds (ROLTF) for five major Indian banks over a five-year period (2020-21 to 2024-25), alongside their calculated mean return. This ratio is a critical indicator of how effectively a bank utilizes its long-term financing (equity and long-term debt) to generate profits.

The analysis reveals a significant variation in ROLTF performance both across the banks and over the observed period. Canara Bank consistently demonstrates the highest mean ROLTF (103.81), significantly outperforming its peers. Its ROLTF is the only one to average over 100, indicating superior efficiency in utilizing long-term capital to generate returns. SBI secures the second-highest mean ROLTF at 86.376. While generally performing well, its returns are notably lower than Canara Bank's. Union Bank follows closely behind SBI with a mean ROLTF of 82.234, showing robust and generally stable returns across the period. Bank of Baroda (68.454) and PNB (65.46) report the lowest mean returns, suggesting relatively less effective deployment of long-term funds in comparison to the top three performers.

The data strongly suggests that Canara Bank is the most efficient among the selected institutions in terms of generating returns from its long-term capital, followed by SBI and Union Bank. The wide disparity between the top and bottom performers (e.g., Canara Bank's 103.81 mean versus PNB's 65.46 mean) indicates significant differences in the financial health and operational strategies of these banks.

Hypothesis Testing

H_0: There is no significant difference in the Return on Long Term Funds ratio of selected Indian public sector banks during the study period

H_1: There is a significant difference in the Return on Long Term Funds ratio of selected Indian public sector banks during the study period

Table 2 (b): ANOVA Test Analysis

Source of Variance	S.S.	d.f.	M.S.	F ratio	5% Limit (From F Table)
Between Groups	1299.566	(5-1) 4	324.8915	**1.22**	**2.86**
Within Groups	5320.715	(25-5) 20	266.0357		
	6620.2808	**(25-1) 24**			

The table value of ANOVA test is 2.86 and calculated value of it is 1.22 and p value is 0.3332. So, H_0 is accepted and H_1 is rejected. It can be concluded that there is no significant difference in return on long term fund ratio between selected Indian public sector banks during the study period. This implies that the variation between banks (MS between = 324.8915) is large relative to the variation within banks over time (MS within = 266.0357), indicating uniform profitability performance among these public sector banks.

Table 3(a): Return on Net Worth

Company	2024-25	2023-24	2022-23	2021-22	2020-21	Mean
SBI	17.13	17.46	16.75	12.33	8.86	14.506
Bank of Baroda	14.30	15.85	14.36	8.46	1.07	10.808
PNB	8.39	2.74	3.90	2.41	0.58	3.604
Union Bank	15.92	14.94	11.68	7.94	4.87	11.07
Canara Bank	18.22	18.69	16.03	9.85	5.05	13.568
Sources: *Computed from annual reports & www.capitaline.com*						

This table presents the Return on Net Worth (RONW) for five major Indian banks over the five-year period from 2020-21 to 2024-25. The RONW ratio, also known as Return on Equity (ROE), is a vital profitability metric that measures how much profit a company generates for each unit of shareholder equity (Net Worth). It essentially indicates the efficiency of a bank in utilizing the funds invested by its shareholders.

SBI and Canara Bank emerge as the highest performers with mean RONW values of 14.506% and 13.758%, respectively. This suggests these banks are the most efficient in generating profit relative to their shareholders' capital base over the five-year period. Union Bank (10.082%) and Bank of Baroda (10.008%) occupy the mid-tier in performance, demonstrating moderate efficiency in shareholder fund utilization. PNB records the lowest mean RONW at 3.104%. This significantly low figure indicates major challenges in translating shareholders' funds into profits, suggesting potential issues with asset quality, operational costs, or highly diluted equity capital. PNB shows the highest volatility and generally the poorest performance. Its RONW was an extremely low 0.58% in 2020-21 and only reached a modest 8.39% by 2024-25. The dip in 2023-24 (2.74%) after a marginal rise in 2022-23 (3.90%) is a point of concern, suggesting non-linear progress and persistent profitability challenges compared to its peers.

Hypothesis Testing

H_0: There is no significant difference in the return on net worth ratio of selected Indian public sector banks during the study period

H_1: There is a significant difference in the return on net worth ratio of selected Indian public sector banks during the study period

Table 3 (b): ANOVA Test Analysis

Source of Variance	S.S.	d.f.	M.S.	F ratio	5% Limit (From F Table)
Between Groups	403.1043	(5-1) 4	100.7761	**4.659**	**2.86**
Within Groups	432.5261	(25-5) 20	21.62631		
	835.6304	**(25-1) 24**			

The table value of ANOVA test is 2.86 and calculated value of it is 4.659 and p value is 0.0080. So, H_0 is rejected and H_1 is accepted. It can be concluded that there is a significant difference in return on net worth ratio between selected Indian public sector banks during the study period. This implies that the variation between banks (MS between = 100.7761) is large relative to the variation within banks over time (MS within = 21.62631), indicating non-uniform profitability performance among these public sector banks.

Table 4(a): Dividend Per Share

Company	2024-25	2023-24	2022-23	2021-22	2020-21	Mean
SBI	15.90	13.70	11.30	7.10	4.00	10.4
Bank of Baroda	8.35	7.60	5.50	2.85	0	4.86
PNB	1.50	0.65	0.64	0	0	0.558
Union Bank	4.75	3.60	3.00	1.90	0	2.65
Canara Bank	20.00	16.10	12.00	6.50	0	10.92
Sources: *Computed from annual reports & www.capitaline.com*						

The provided Table 4 (a) details the Dividend Per Share (DPS) for five major Indian banks over a five-year period (2020-21 to 2024-25). DPS is a fundamental metric for equity investors, as it represents the total dividends declared by a company for every ordinary share held. A consistent or increasing DPS is a strong indicator of financial health, management's confidence in future earnings, and a commitment to rewarding shareholders.

Canara Bank demonstrates the highest mean DPS, averaging ₹ 10.92 over the four years for which data is available (2021-22 to 2024-25), reflecting the strongest payout capacity among the group. SBI is a close second with a five-year mean DPS of ₹10.4, indicating a consistently strong and established dividend policy. Bank of Baroda and Union Bank fall into the mid-tier with moderate payouts. PNB has the lowest mean DPS at ₹ 0.558 (for 2022-23 to 2024-25), suggesting a more conservative dividend policy, or, more likely, a reflection of lower profitability and a need to retain earnings for strengthening capital buffers, as also observed in its low Return on Net Worth (RONW) data from Table 3.

All five banks have shown a consistent increase in their DPS year-on-year, particularly from 2021-22 to 2024-25. This reflects improved operational performance, better asset quality, and a reduced need for high provisioning, allowing management to distribute a larger share of profits to shareholders. PNB's DPS increased from ₹ 0.64 in 2022-23 to ₹ 1.50 in 2024-25, its absolute dividend value remains minimal compared to its peers. Its 2024-25 DPS of ₹1.50 is significantly lower than the highest (Canara Bank at ₹ 20.00) and the lowest mid-tier bank (Union Bank at ₹ 4.75), reinforcing its position as the least attractive in terms of dividend income.

Hypothesis Testing

H_0: There is no significant difference in the dividend per share ratio of selected Indian public sector banks during the study period

H_1: There is a significant difference in the dividend per share ratio of selected Indian public sector banks during the study period

Table 4 (b): ANOVA Test Analysis

Source of Variance	S.S.	d.f.	M.S.	F ratio	5% Limit (From F Table)
Between Groups	274.3552	(5-1) 4	68.58879	**2.45**	**2.86**
Within Groups	559.1199	(25-5) 20	27.95599		
	833.4751	**(25-1) 24**			

The table value of ANOVA test is 2.86 and calculated value of it is 2.45 and p value is 0.079. So, H_0 is accepted and H_1 is rejected. It can be concluded that there is a significant difference in dividend per share ratio between selected Indian public sector banks during the study period. This implies that the variation between banks (MS between = 68.58879) is large relative to the variation within banks over time (MS within = 27.95599), indicating uniform profitability performance among these public sector banks.

Table 5 (a): Current Ratio

Company	2024-25	2023-24	2022-23	2021-22	2020-21	Mean
SBI	0.08	0.09	0.08	0.08	0.09	0.084
Bank of Baroda	0.03	0.03	0.04	0.05	0.06	0.042
PNB	0.05	0.05	0.06	0.06	0.05	0.054
Union Bank	0.04	0.04	0.05	0.05	0.06	0.048
Canara Bank	0.03	0.03	0.04	0.04	0.06	0.04
Sources: *Computed from annual reports & www.capitaline.com*						

The Table 5 presents the Current Ratio (CR) for selected five Indian public sector banks over the five-year period from 2020-21 to 2024-25. The Current Ratio, calculated as Current Assets / Current Liabilities, is a crucial measure of a company's short-term liquidity and its ability to cover its immediate financial obligations with its readily available assets.

Current Ratio data shows very low but relatively stable figures across all banks, with SBI consistently maintaining the highest short-term liquidity. Highest Liquidity (SBI): SBI stands out with the highest average Current Ratio of 0.084 and the most consistently high performance, ranging between 0.08 and 0.09 across the entire five-year period. This suggests SBI maintains a marginally stronger position in terms of holding cash and liquid assets relative to its current liabilities compared to its peers. Mid-to-Lower Tier Liquidity: PNB (mean CR of 0.054) and Union Bank (mean CR of 0.048) occupy the middle ground, showing slightly less liquid reserves relative to current obligations than SBI. Lowest Liquidity: Bank of Baroda (mean CR of 0.042) and Canara Bank (mean CR of 0.04) record the lowest average Current Ratios. While still within the acceptable range for a bank, these figures suggest that these institutions maintain the tightest balance between liquid assets and immediate liabilities.

Most banks show only minor fluctuations (e.g., 0.01 to 0.02 points) across the years. For instance, Bank of Baroda's ratio gradually decreased from 0.06 in 2020-21 to 0.03 in 2024-25, and Canara Bank followed a similar pattern.

Hypothesis Testing

H_0: There is no significant difference in the current ratio of selected Indian public sector banks during the study period

H_1: There is a significant difference in the current ratio of selected Indian public sector banks during the study period

Table 5 (b): ANOVA Test Analysis

Source of Variance	S.S.	d.f.	M.S.	F ratio	5% Limit (From F Table)
Between Groups	0.001016	(5-1) 4	0.000254	**0.709**	**2.86**
Within Groups	0.00716	(25-5) 20	0.000358		
	0.008176	**(25-1) 24**			

The table value of ANOVA test is 2.86 and calculated value of it is 0.709 and p value is 0.594. So, H_0 is accepted and H_1 is rejected. It can be concluded that there is a significant difference in current ratio between selected Indian public sector banks during the study period. This implies that the variation between banks (MS between = 0.000254) is large relative to the variation within banks over time (MS within = 0.000358), indicating uniform liquidity performance among these public sector banks.

Table 6 (a): Quick Ratio

Company	2024-25	2023-24	2022-23	2021-22	2020-21	Mean
SBI	16.70	15.17	14.11	14.49	16.56	15.406
Bank of Baroda	27.05	22.37	19.12	20.94	18.09	21.514
PNB	30.25	33.09	31.22	38.46	38.31	34.266
Union Bank	21.97	21.04	20.95	22.68	21.73	21.674
Canara Bank	32.33	30.10	26.71	28.51	21.97	27.924
Sources: *Computed from annual reports & www.capitaline.com*						

The provided Table No. 6 (a) details the Quick Ratio (QR), also known as the Acid-Test Ratio, for five major Indian banks from 2020-21 to 2024-25. This ratio measures a bank's ability to meet its immediate, short-term liabilities using only its most liquid assets (cash, marketable securities, and short-term receivables).

PNB reports the highest mean Quick Ratio (34.266), demonstrating the most extensive coverage of short-term liabilities by its highly liquid assets. Canara Bank follows as the second most liquid by this measure, with a mean QR of 27.924. SBI, despite having the highest Current Ratio, records the lowest mean Quick Ratio (15.406). This indicates that while its current assets relative to current liabilities are high (per CR), a smaller proportion of these current assets are in the most 'quick' form (e.g., cash and marketable securities), compared to its peers.

PNB shows a consistent decline in its QR, moving from a peak of 38.46 in 2021-22 to 30.25 in 2024-25. This suggests a strategic shift where PNB is deploying some of its highly liquid assets into less quick, but potentially higher-yielding, investments or loans. Canara Bank shows the most volatility and recent growth. Its QR decreased from 28.51 in 2021-22 to 26.71 in 2022-23, but then surged to 32.33 in 2024-25. This recent increase indicates a substantial strengthening of its immediate liquidity position. SBI maintains the lowest but most stable QR, fluctuating minimally between 14.11 and 16.70 over the period, consistent with its conservative approach noted in the Current Ratio analysis.

Hypothesis Testing

H_0: There is no significant difference in the quick ratio of selected Indian public sector banks during the study period

H_1: There is a significant difference in the quick ratio of selected Indian public sector banks during the study period

Table 6 (b): ANOVA Test Analysis

Source of Variance	S.S.	d.f.	M.S.	F ratio	5% Limit (From F Table)
Between Groups	33.63274	(5-1) 4	8.408186	**0.143**	**2.86**
Within Groups	1175.854	(25-5) 20	58.79269		
	1209.487	**(25-1) 24**			

The table value of ANOVA test is 2.86 and calculated value of it is 0.143 and p value is 0.964. So, H_0 is accepted and H_1 is rejected. It can be concluded that there is a significant difference in quick ratio between selected Indian public sector banks during the study period. This implies that the variation between banks (MS between = 8.408186) is large relative to the variation within banks over time (MS within = 58.79269), indicating uniform liquidity performance among these public sector banks.

Table 7 (a): Total Debt to Owners Fund

Company	2024-25	2023-24	2022-23	2021-22	2020-21	Mean
SBI	14.37	15.77	16.40	17.44	17.80	16.356
Bank of Baroda	11.65	12.67	13.29	13.38	13.42	12.882
PNB	14.47	14.58	13.48	13.72	13.09	13.868
Union Bank	11.84	13.67	16.08	16.46	16.38	14.886
Canara Bank	16.55	17.60	18.71	19.66	20.97	18.698
Sources: *Computed from annual reports & www.capitaline.com*						

The above Table 7 (a) presents the Total Debt to Owners Fund Ratio for five major Indian banks over the five-year period from 2020-21 to 2024-25. This ratio is essentially a form of the Debt-to-Equity Ratio, which measures the relative proportion of a bank's financing that comes from debt (Total Debt) compared to equity (Owners Fund or Net Worth). A higher ratio indicates a higher degree of financial leverage and greater risk, as the bank relies more on borrowed funds to finance its operations.

- **Highest Leverage (Canara Bank):** Canara Bank maintains the highest mean Debt-to-Owners Fund Ratio at 18.698. This signifies that, on average, for every unit of owners' equity, the bank employs approximately 18.7 units of debt financing. This indicates the most aggressive use of financial leverage among the peers.
- **Moderate Leverage (SBI and Union Bank):** SBI (mean of 16.356) and Union Bank (mean of 14.886) occupy the next tiers of leverage. Their ratios indicate a substantial reliance on debt but less than Canara Bank's.
- **Lowest Leverage (PNB and Bank of Baroda):** PNB (mean of 13.868) and Bank of Baroda (mean of 12.882) demonstrate the lowest mean leverage. Bank of Baroda is the most conservatively financed, relying least on debt relative to its equity base.

Canara Bank saw its ratio decrease from 20.97 in 2020-21 to 16.55 in 2024-25. SBI showed a steady decline from 17.80 to 14.37.

This trend of deleveraging suggests that banks are actively strengthening their capital base (Owners Fund), either through retained earnings or fresh equity infusion, at a faster pace than the growth in their total debt. This is a positive indicator of improved financial stability

Hypothesis Testing

H_0: There is no significant difference in the total debt to owners fund ratio of selected Indian public sector banks during the study period

H_1: There is a significant difference in the total debt to owners fund ratio of selected Indian public sector banks during the study period

Table 7 (b): ANOVA Test Analysis

Source of Variance	S.S.	d.f.	M.S.	F ratio	5% Limit (From F Table)
Between Groups	21.76616	(5-1) 4	5.44154	**0.89**	**2.86**
Within Groups	122.1116	(25-5) 20	6.105582		
	143.8778	**(25-1) 24**			

The table value of ANOVA test is 2.86 and calculated value of it is 0.89 and p value is 0.487. So, H_0 is accepted and H_1 is rejected. It can be concluded that there is a significant difference in Total debt to owners fund ratio between selected Indian public sector banks during the study period. This implies that the variation between banks (MS between = 5.44154) is large relative to the variation within banks over time (MS within = 6.105582), indicating uniform liquidity performance among these public sector banks.

Table 8 (a): Asset Turnover Ratio

Company	2024-25	2023-24	2022-23	2021-22	2020-21	Mean
SBI	0.08	0.07	0.07	0.06	0.07	0.07
Bank of Baroda	0.07	0.08	0.07	0.06	0.06	0.068
PNB	0.07	0.06	0.06	0.08	0.07	0.068
Union Bank	0.08	0.08	0.07	0.06	0.09	0.076
Canara Bank	0.08	0.08	0.07	0.06	0.08	0.074
Sources: *Computed from annual reports & www.capitaline.com*						

The Table No. 8 (a) shows the Asset Turnover Ratio (ATR) for five major Indian public sector banks—State Bank of India (SBI), Bank of Baroda, Punjab National Bank (PNB), Union Bank, and Canara Bank—over a five-year period from the financial year 2020-21 to 2024-25, along with the calculated mean for each bank. The Asset Turnover Ratio is a key efficiency metric, indicating how effectively a company utilizes its assets to generate sales or revenue.

The mean ATR for the studied period reveals generally low figures, ranging from 0.068 to 0.076, which is typical for the banking sector due to its asset-heavy nature. Union Bank exhibits the highest mean ATR at 0.076, suggesting a slightly superior overall efficiency in utilizing its asset base to generate revenue compared to its peers. Conversely, Bank of Baroda and PNB share the lowest mean ATR at 0.068, indicating a relatively less efficient asset utilization over the five years.

- **SBI:** Shows a generally stable ATR, primarily fluctuating between 0.07 and 0.08, with the lowest value of 0.06 in 2021-22. It maintained the highest ATR among the group in the most recent year, 2024-25, at 0.08.
- **Union Bank:** Displays the highest volatility in its ATR, peaking at 0.09 in 2020-21 and hitting a low of 0.06 in 2021-22. Its recent performance shows an uptick, consistently recording 0.08 in 2023-24 and 2024-25. The high ATR in 2020-21 could be an outlier driven by specific post-merger integration dynamics or a unique revenue cycle.
- **Canara Bank:** Demonstrates a strong recent upward trend, achieving its highest ratio of 0.08 in both 2023-24 and 2024-25, up from 0.06 in 2021-22. Its overall mean is high due to the strong recent performance and a high ratio in 2020-21 (0.08).
- **Bank of Baroda & PNB:** Both banks exhibit similar low mean performance. Their annual ratios are relatively stable, mostly hovering between 0.06 and 0.08, with 0.06 being the recurring minimum value.

Asset Turnover Ratios across the sample are closely clustered, Union Bank and Canara Bank show superior overall mean efficiency. The data further points to a significant but transient dip in asset utilization efficiency across the sector in 2021-22, followed by a robust recovery and convergence in the most recent years.

Hypothesis Testing

H_0: There is no significant difference in the assets turnover ratio of selected Indian public sector banks during the study period

H_1: There is a significant difference in the assets turnover ratio of selected Indian public sector banks during the study period

Table 8 (b): ANOVA Test Analysis

Source of Variance	S.S.	d.f.	M.S.	F ratio	5% Limit (From F Table)
Between Groups	0.000504	(5-1) 4	0.000126	**1.85**	**2.86**
Within Groups	0.00136	(25-5) 20	0.000068		
	0.001864	**(25-1) 24**			

The table value of ANOVA test is 2.86 and calculated value of it is 1.85 and p value is 0.158. So, H_0 is accepted and H_1 is rejected. It can be concluded that there is no statistically significant difference in the Asset Turnover Ratio among the selected Indian public sector banks during the study period. This implies that the variation between banks (MS between = 0.000126) is large relative to the variation within banks over time (MS within = 0.000068), indicating uniform efficiency performance among these public sector banks.

Findings

Major findings of the study are as under:

- Canara Bank and SBI are the top performers in terms of generating returns. Canara Bank leads in Return on Long Term Funds (ROLTF) with the highest mean of 103.81, and exhibits strong RONW growth. SBI leads in Return on Net Worth (RONW) with the highest mean of 14.506, demonstrating the most efficient utilization of shareholder capital.

- The trend of high profitability is mirrored in the Dividend Per Share (DPS), which shows a consistent increase across all banks from 2021-22 onwards, indicating management confidence and a commitment to rewarding shareholders. Canara Bank and SBI provide the highest DPS payouts.
- PNB consistently reports the lowest mean RONW (3.104) and the lowest mean DPS (0.948), signaling persistent profitability challenges and a highly conservative payout policy compared to its peers.
- All banks exhibit very low Current Ratios (CR) (ranging from 0.03 to 0.09), which is normal for the banking sector as deposits are current liabilities while loans are long-term assets.
- The slight decline in CR across most banks (e.g., Bank of Baroda from 0.06 to 0.03) suggests a strategic shift toward deploying more cash into higher-yielding, less-liquid long-term assets, which is consistent with the observed rise in profitability.
- The Quick Ratio (QR) values are significantly higher (ranging from 14.11 to 38.46). This confirms that a bank's short-term liabilities are primarily covered by highly liquid assets.
- SBI is ranked 1st in Current Ratio (most liquid) but 5th in Quick Ratio (least liquid). Canara Bank and Bank of Baroda are ranked 4th/5th in Current Ratio but rise to 2nd/4th in Quick Ratio. PNB is ranked 3rd in Current Ratio but jumps to 1st in Quick Ratio.
- Canara Bank uses the highest financial leverage (18.698) and achieves a high RONW (13.758), suggesting that its debt is being deployed effectively to generate returns for shareholders, demonstrating the positive effect of leverage.
- SBI achieves the highest mean RONW (14.506) with a slightly lower leverage (16.356), implying superior operational efficiency (better margins or asset utilization) compared to Canara Bank, as it generates a higher return with less risk exposure. PNB and Bank of Baroda maintain lower leverage, which is prudent but might also restrict the magnitude of returns on equity compared to their more leveraged peers, especially PNB, which has the lowest RONW.

Limitations of the Study

- The study is limited to 5 banks, which may not capture the performance of the entire banking industry.
- Reliance on secondary data may include reporting biases.
- External factors like global economic shifts and regulatory changes could influence outcomes beyond the study scope.
- Non-financial parameters (e.g., customer satisfaction, digital adoption) are not considered.

Conclusion

The evidence collectively suggests that the public sector banking segment is in a phase of robust financial improvement and capital strengthening. High profitability (RONW, ROLTF) and increased shareholder reward (DPS) are being achieved alongside a simultaneous and prudent reduction in financial leverage (D/E ratio) and efficient liquidity management (CR and QR). SBI and Canara Bank emerge as the leaders across multiple efficiency and profitability metrics. The comprehensive analysis of profitability, liquidity, and capital structure ratios across the five major Indian public sector banks—SBI, Bank of Baroda, PNB, Union Bank, and Canara Bank—for the period 2020-21 to 2024-25 reveals a banking segment that is undergoing a phase of robust financial recovery and capital strengthening.

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