An Empirical Study on the Financial Health of Private Sector Banks in India through the Eagles Approach

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Abstract

Purpose: This paper has assessed the financial position of the chosen Indian private sector banks on the **EAGLES** framework that had estimated the performance on major aspects of key performance indicators, such as **E**arnings**, A**sset quality, **G**rowth, **L**iquidity, **E**quity and **S**trategic success. The study will also seek to determine comparative **financial strengths**, **operational stability**, and **strategic performance**, as well as dissimilarities among top selected private sector banks.

Methodology: The researchers use a mixed-method research design, which involves analytical review and quantitative methods. The secondary data were gathered through annual reports (2019-2023) of three big private sector banks, **HDFC Bank**, **ICICI Bank** and **IndusInd Bank**. One-way ANOVA with a level of significance of 5% was used to evaluate the financial performance differences so that statistically significant differences in EAGLES parameters could be determined.

Findings: The findings indicate that there are massive differences in the financial performance of the sampled banks. **ICICI Bank** performed better in Earnings, Asset Quality, Equity, and Strategic Performance (II/IC), which implies high levels of profitability, proper management of credit risks, and adequacy of capital. **IndusInd Bank** performed very well in Growth, Liquidity, and NII/NIC, which displays efficient growth strategies and liquidity management. The performance of **HDFC Bank** was balanced with equal results, showing stability in operations and a continued financial state.

Contributions: The author uses the EAGLES model to examine the bank performance systematically, which is helpful to investors, policymakers, and banking professionals. It determines the various levels of strategic capabilities in the private sector banks and ensures that they are financially stable in general, to guide their informed investment and their decisions concerning policies.

Keywords: EAGLES Model, Financial Performance, Private Sector Banks, ANOVA, Asset Quality

INTRODUCTION

One of the most important parts of India's economic structure is the banking sector, which helps with things like capital allocation, business development, and keeping the economy stable. Thanks to new regulations, fiercer competition, and lightning-fast digitization, the operating environment for banks has changed drastically in the last several years (Indian Brand Equity Foundation [IBEF], 2024). To be competitive in a dynamic climate, private sector banks in

India have responded by enhancing their profitability frameworks, improving asset-quality monitoring, and being more agile strategically.

Traditionally, frameworks like the "**CAMELS**" model have been employed to assess the overall health of banks. On the other hand, the "**EAGLES**" model has been widely used in Indian banking research to provide a more comprehensive view of performance (Daida, 2024). This model encompasses Earnings, Asset Quality, Growth, Liquidity, Equity (capital sufficiency), & Strategy/structural response. In India, for example, private banks outperformed their public-sector counterparts on measures of profitability, asset quality, and sustainability, according to research by Daida (2024) using the EAGLES model.

This paper uses this context to empirically analyse a subset of large Indian private banks from 2019 to 2023. The analysis examines variations across each of the six EAGLES aspects using statistical tools such as one-way ANOVA and annual report data. This analysis aims to investigate these financial institutions, draw conclusions about their strengths and areas for improvement, add to the existing body of literature on performance evaluation in the Indian banking industry, and ultimately help with strategic decision-making and regulatory supervision.

LITERATURE REVIEW

The evaluation of banking performance has been a significant area of research in financial studies, particularly in emerging economies such as India. Researchers have developed several frameworks to assess the financial health, operational efficiency, and risk management capabilities of banks. Among these, models such as CAMELS and EAGLES have been widely adopted to examine multidimensional aspects of banking performance.

Mathew et al. (2025) Most of the small finance and payment banks that just joined the Indian banking system have been around for over five years. Despite the fact that both institutions fall under the umbrella term "small bank" or "niche bank," the primary goal of this piece is to shed light on a hitherto uncharted territory by analysing their financial performance employing quantitative models. In order to measure success, this investigation used the EAGLES model, which stands for Earnings, Assets Quality, Growth, Liquidity, Equity, and Strategy. Seven years of data are utilized for the Small Finance Banks analysis, and six years of data are utilized for the Payments Banks analysis. The 19 ratios used in this study will help disseminate knowledge in a more comprehensive way. They used One-way ANOVA to see whether the

EAGLES were statistically significant. According to the results, the Payments Banks are outperforming the Small Finance Banks. Due to the negative SRQ scores of all small banks, the analysis implies that both institutions made significant improvements in the areas of loans, advances, and investments; this could need changes in regulatory policy. The poor Returns on Equity, Asset Quality, and Earnings all made this clear. The research clearly shows that the small finance banks aren't making the most of their depositor's and borrowers' money when it comes to investments, loans, and advances. Both banking firms maintain solid growth and liquidity positions. Some have speculated that new, smaller banks are just entering their growth phase, and that this is because they are anticipating the introduction of novel, low-cost financial products, which should lead to an acceleration of their expansion.

Dipak Kundu et al. (2025). Organizational effectiveness, especially in public sector agencies, can be measured using the EAGLES framework, which places emphasis on five interrelated factors: accountability, engagement, leadership, and governance. In this study, we examine a few of India's public sector banks using the EAGLES model. In order to put a number on the connections between these factors and the banks' bottom lines, econometric models back up the study. Public sector banks in India can boost their bottom lines by cutting costs and enhancing efficiency, according to an econometric model that has been defined, solved, and presented here.

Mrs. Rajni Dayma et al. (2025). This study explores the financial performance of Punjab National Bank after its merger with Oriental Bank of Commerce and United Bank of India. The research utilizes the EAGLES model, a tool designed to assess financial health by focusing on key performance indicators (KPIs) across several dimensions, including profitability, liquidity, efficiency, and solvency. They analyse PNB's financial metrics before and after the merger, aiming to determine the impact of the merger on the bank's operational efficiency, profitability, and financial stability.

G. Rajesh et al. (2024). A turning point in India's banking history came with the nationalization of banks. Competition in the banking business is heating up as the sector grows swiftly to fulfil the demands of the country's development. When thinking about India's economy, it's impossible to ignore the banking industry. There is a vast array of banking institutions in India. The ranks and places of banks change every year due to their performance, which has been altering over time. With the use of the EAGLES model, this research set out to assess the health of a selection of India's private banks. They used the ANOVA test to examine the banks' financial data after classifying them using the EAGLES model. This allowed us to discover how diverse they were. The polled financial institutions were HDFC, DCB, RBL, and ICICI. HDFC Bank outperformed the competition, ranking first in assets and earnings, second in equity, third in growth and liquidity, and fourth in liquidity indicators, behind only ICICI. DCB Bank ranked dead last due to poor performance in profitability, expansion, and liquidity. At the end of the day, HDFC Bank came out on top. RBL and ICICI following closely after. There is a statistically significant difference in all samples, and the null hypothesis is rejected since the values of the investigation's variables in the table are less than the significant value of 0.05 at the 95% confidence level.

Mr. Kiran et al. (2024). This study uses the EAGLES model, which is a comprehensive framework for analysing bank stability, growth, and profitability, to evaluate the financial performance of banks in both the public and private sectors. Financial analysis can help investors estimate the risk of a firm's bankruptcy or failure, which is important for them because they focus on the firm's earnings and prospects. To that end, the EAGLES model examines important financial statistics, shedding light on the operational efficiency and robustness of a bank. It detects possible dangers before they become serious, allowing for prompt actions, acting as an early warning system. In order to compare and contrast the growth and efficiency of five different banks, both public and private, this study looks at their financial statements from 2018–2019 to 2022–23. Important lessons for future strategy, resource allocation, and performance enhancement can be gleaned from the results.

Dr. Sreeram Daida et al. (2024) use the EAGLES model to compare public and private sector banks in India on Efficiency, Asset quality, Growth, Liquidity, Earnings, and Sustainability. Over the course of five years, the study examines SBI, CANARA, HDFC, and ICICI, two public sector banks, and two private sector banks. In order to determine whether there are statistically significant differences between different financial variables, this exploratory study used one-way ANOVA testing. In terms of profitability, growth, and asset quality, private sector banks typically surpass their public sector counterparts, according to the data. But when it comes to economic stability and financial inclusion, public sector banks are still indispensable. Additionally, private banks show more efficiency and sustainability when it comes to liquidity management and strategic responsiveness, according to the research. This study adds to what is already known about the state of Indian banks' finances, which can help with policymaking and changes to the banking industry. The study highlights the significance of using strong evaluation models such as EAGLES to guarantee a more precise and comprehensive evaluation of the performance of banks.

The purpose of the study by **Rashesh Vaidya et al. (2023)** was to assess the effectiveness of Nepalese commercial banks by applying the EAGLE rating model, which was originally developed by **Vong (1994)** and comprised of the following acronyms: earning ability ratio, assets quality ratio, growth rate, liquidity, and equity. Subsequently, **Vong and Song (2015)** renamed the model EAGLES by adding the letter 'S'. The strategy response quotient (S) measures the effectiveness of a bank's management in determining interest rates for deposits and loans and in managing the interest burden, which is defined as non-interest income minus overhead expenditures. From 2018–2019 to 2020–21, the study analysed the financial data of every commercial bank in Nepal. Based on the EAGLES ranking, the most successful banks in Nepal are those that have recently entered the market and are actively expanding their customer base. While determining the ranking of the commercial banks, the study also discovered that there is a substantial association between ranking for return on equity (E), ranking for non-performing loan ratio (A), and ranking for capital adequacy ratio (E). Similarly, among government-owned commercial banks, the paper ranked the best bank according to EAGLES for all components; among joint venture banks, the best bank was ranked according to loan growth, liquidity position, and capital structure.

Vijayalakshmi Srinivas et al. (2022). The soundness and productivity of the financial system are critical to economic expansion. Any economy that wants to thrive and stay stable in this competitive global business climate needs a strong banking system. The banking industry in India is one of the most promising worldwide due to a confluence of demographic, technical, and macroeconomic trends. Dragged down performance and jeopardizing future growth are challenges, including high-stressed asset levels and fragmented sector structure. Non-Performing Assets (NPAs) are the greatest measure of a country's banking sector's health. The profitability of banks is directly affected by non-performing assets. The Indian banking sector has recently been quite worried about non-performing assets (NPAs). Strategies for managing non-performing accounts (NPAs) in the Indian banking system are discussed in this paper, along with the idea of NPAs, their magnitude, and the main reasons why an account becomes an NPA.

According to **Dr. Alka B. Kshatriya et al. (2021)**, the banking sector maintains the economy's stability. The research will look at how well both domestic and international banks in India are doing financially. The characteristics of the EAGLES Model are used to measure financial performance. When comparing the financial performance of different banks and other financial institutions, the EAGLES model is employed. Dr. John Vong founded it following the crisis in Asia. Earnings Capability, Asset Quality, Growth, Liquidity, Equity, and Strategy make up the EAGLES Model. This research paper uses data gathered from banks' annual reports over seven years (2013–2014 to 2019–2020). The financial performance is analysed using t-tests, ANOVA, rank analysis, and ratio analysis. Among the chosen public and foreign banks, research places Citibank at the top, while Bank of India is at the very bottom. In terms of the growth and quality of their assets, public and foreign banks are not much different. Earnings Capacity, Liquidity, Equity, and Strategy are four areas where public banks and foreign banks differ significantly. It found that foreign banks' financial performance outperformed that of India's public sector banks.

According to **Mr. Jay Sathavara et al. (2021)**, a country's overall economic health is enhanced when its currency and banking system are stable. Because of the savings and loans, they facilitate, scheduled commercial banks play a vital role in this industry. The purpose of applying the EAGLE model to a subset of India's private sector banks was to assess their financial health. PSBs were selected according to their market capitalization, which included HDFC Bank, ICICI Bank, and IndusInd Bank. We achieved this by extracting representative sample financial data from the annual reports of participating banks covering the years 2009–10 through 2018–19. We used the EAGLE model to assign rankings to the banks, and the ANOVA test to examine how the various financial parameters varied across the institutions. The results showed that HDFC Bank had the most earnings, assets, liquidity, and equity, while ICICI Bank had the highest earnings, growth, and equity. In terms of expansion, IndusInd Bank was likewise at the top. Last place went to ICICI Bank in terms of total growth, assets, and profitability. The chosen private sector banks have all kept their capital adequacy ratio in line with what is required by the RBI. Based on the study's variables, we may reject the null hypothesis and conclude that there is a statistically significant difference in all samples because the computed values are lower than the significance value of 0.05 at the 95% confidence level.

G. SURESH et al. (2020) All parties involved—depositors, stockholders, staff, and the economy at large—stand to benefit from a bank's sound financial health. Time and again, various policies and procedures have been put in place to assess the financial health of each bank and ensure its proper management. New banking policies and technology developments have placed banks in more difficult and risky situations. Even though it has been proven to be outmoded, the CAMEL model is still commonly used to measure banks' efficiency and performance. Since the EAGLES model bases its evaluations of banks on their output ratios, it provides a more definitive, objective, and consistent way to gauge their financial health and performance. By examining six critical indicators that are important for every bank today. The purpose of this research was to get a feel for how well selected Indian commercial banks were doing financially.

Santhoshi Kumari et al. (2017). When a country's banking system is strong, it helps the economy grow. The EAGLES approach can compare and measure the performance of Indian banks in a more consistent, objective, and definitive way. EAGLES methodology ranks institutions solely based on their output ratios; there is no space for subjective evaluation. Ten public and private banks' worth of data over a decade forms the basis of this investigation. Among the three measures of financial health, Yes Bank stands head and shoulders above the competition. So, Yes Bank has the best profit potential of the four we considered. Comparison of ICICI Bank to public sector banks, PSB perform better in terms of the CAR and investment-to-deposit ratios. Among India's public sector banks, SBI ranks high for both deposit and loan services. According to the findings, there is a significant performance gap between certain public and private banks.

RESEARCH GAPS

1. Most previous studies have focused on comparisons between public and private sector banks, while limited research specifically examines the financial performance of major private sector banks in India.

2. Many studies rely on traditional evaluation models such as CAMELS, whereas the EAGLES model has been less frequently applied for comprehensive banking performance analysis.

3. Earlier research mainly analyses historical banking performance, with fewer studies focusing on the recent period marked by digital transformation, regulatory reforms, and post-pandemic changes in the banking sector.

4. Several studies use basic ratio analysis, while limited research applies statistical tools such as ANOVA to examine significant differences in bank performance.

5. There is limited comparative analysis of leading private sector banks such as HDFC Bank, ICICI Bank, and IndusInd Bank using recent financial data, creating a need for updated empirical research.

OBJECTIVES

The study aims to assess the overall performance, stability, and operational efficiency of the selected banks through multiple financial dimensions, namely Earnings, Asset Quality, Growth, Liquidity, Equity, and Strategic Performance.

METHODOLOGY

Research Design

The study adopts an analytical and empirical research design to evaluate the financial health of selected private sector banks in India. A mixed-method approach is applied, combining conceptual analysis of the EAGLES model with quantitative statistical examination of financial data.

The conceptual component involves reviewing existing literature on banking performance evaluation models, particularly the EAGLES framework, to understand its theoretical foundation and relevance for analysing bank performance. The empirical component focuses on analysing financial indicators derived from the annual reports of the selected banks.

Second, we used the EAGLES criteria (Earnings, Asset Quality, Growth, Liquidity, Equity, and Strategic Performance) to gather empirical data from the chosen banks' annual reports and financial statements. We then used these indicators to quantify the banks' performance.

Nature and Sources of Data

The study is based entirely on secondary data collected from credible and publicly available sources. These include:

- Annual reports and financial statements of HDFC Bank, ICICI Bank, and IndusInd Bank

- Financial databases such as Money Control and Statista
- Publications and statistical data from the Reserve Bank of India (RBI)
- Academic journals, research papers, and financial publications related to banking performance

The use of secondary data ensures accuracy, reliability, and comparability across the selected banks.

Analytical Framework: EAGLES Model

The financial performance of the selected banks is evaluated using the EAGLES model, which assesses banking efficiency through six major dimensions:

EAGLES Parameter	Representative Ratio	Description
Earnings	Return on Equity (RoE)	Measures profitability and shareholder return
Asset Quality	Net NPA (%)	Indicates the level of NPA
Growth	Growth in Loans (%)	Assesses the expansion in lending activity
Liquidity	Loans to Deposits Ratio (%)	Evaluates liquidity and credit deployment
Equity	Capital Adequacy Ratio (CAR) (%)	Reflects capital strength and solvency
Strategic Performance	II/IC and NII/NIC Ratios	Measures interest and non-interest income efficiency

These indicators collectively provide a comprehensive evaluation of profitability, risk management, operational growth, liquidity stability, capital adequacy, and strategic efficiency of banks.

Statistical Technique

To examine whether differences in performance among the selected banks are statistically significant, the study employs One-Way Analysis of Variance (ANOVA).

ANOVA is used because it allows comparison of mean values of financial indicators across multiple groups (banks) simultaneously. The test evaluates whether observed variations in financial ratios are statistically significant or occur merely due to random fluctuations.

The significance level for hypothesis testing is set at 5 percent ($p < 0.05$). If the calculated p-value is less than the significance level, the null hypothesis is rejected, indicating a statistically significant difference among the banks.

Period of Study

The study covers the period 2019 to 2023, which captures both pre-pandemic and post-pandemic financial conditions. This timeframe is particularly relevant as it reflects how banks adapted to major economic disruptions, digital banking expansion, and regulatory changes in the Indian banking sector.

Selection of Banks

Three of India's most prominent private sector banks HDFC, ICICI, & IndusInd Bank were chosen from among twenty-one institutions according to their market value in 2023:

- HDFC Bank – ₹3,82,622 crore
- ICICI Bank – ₹2,82,452 crore
- IndusInd Bank – ₹97,799 crore

This sample of private banks was selected to provide a good cross-section of size and performance across the industry. The sample includes both large and medium-sized banks as well as some smaller ones.

Justification for Selection of Banks

The present study focuses on three leading private sector banks in India—HDFC Bank, ICICI Bank, and IndusInd Bank—to examine their financial performance using the EAGLES framework. The selection of these banks is based on several academic and practical considerations.

First, these banks represent some of the most significant private sector financial institutions in India in terms of market capitalization, asset size, and operational scale. As of 2023, HDFC

Bank and ICICI Bank ranked among the top private banks by market value and total assets, while IndusInd Bank represents a fast-growing mid-sized private sector bank. Including banks of different sizes allows the study to capture variations in financial strategies, operational efficiency, and risk management practices across the private banking segment.

Second, these banks maintain extensive nationwide operations and diversified banking services, including retail banking, corporate lending, digital banking, and investment services. Their wide market presence makes them suitable representatives of the private sector banking ecosystem in India, allowing the findings to reflect broader industry trends.

Third, the selected banks have consistently published detailed and reliable financial reports, which ensures the availability of standardized and comparable data for empirical analysis. Since the study relies on ratio analysis and statistical testing under the EAGLES model, the availability of consistent financial disclosures is essential for maintaining data reliability.

Fourth, previous research has frequently examined these banks when analysing financial performance within the Indian banking sector. However, most earlier studies either compare public versus private sector banks or employ traditional frameworks such as CAMELS. Therefore, analysing these three banks using the EAGLES model with recent post-pandemic data (2019–2023) provides updated insights into the financial health, operational growth, and strategic efficiency of major private sector banks.

Finally, the inclusion of both large and medium-sized banks enhances the comparative strength of the analysis. While HDFC Bank and ICICI Bank represent established large-scale institutions with strong capital structures, IndusInd Bank reflects the performance dynamics of relatively smaller but rapidly expanding private banks. This combination provides a balanced and representative sample for comparative financial evaluation.

HYPOTHESES

H_0: There is no substantial distinction in the financial performance of the selected banks under the specified parameter.

H_{01}: Earnings (Return on Equity)

H_{02}: Asset Quality (Net NPA %)

H_{03}: Growth (Growth of Loans and Advances)

H_{04}: Liquidity (Loans to Deposits Ratio)

H_{05}: Equity (Capital Adequacy Ratio)

$H_{06.1}$: Strategic Performance (Interest Income to Interest Cost Ratio – II/IC)

$H_{06.2}$: Strategic Performance (NII/NIC)

DATA ANALYSIS AND INTERPRETATION

Earnings

Bank earnings indicate profitability and shareholder returns. Maintaining a healthy profit margin lowers the probability of bankruptcy, increases financial stability, and fortifies capital. Return on Equity **(RoE)** is the metric utilized to estimate this parameter within the EAGLES framework. Return on Equity is a metric that banks use to evaluate how well they turn their shareholders' equity into profits. A lower Return on Equity (RoE) shows inefficient use of equity capital, whereas a greater RoE indicates stronger earning power and superior managerial performance.

$$\text{Return on Equity (\%)} = \frac{Net\ Profit}{Share\ holders\ Equity} \times 100$$

Table 1: Comparative Analysis of Return on Equity (%) for Selected Private Sector Banks

Year	HDFC Bank	ICICI Bank	IndusInd Bank
2019	0.46	12.55	16.50
2020	7.19	12.18	13.25
2021	2.15	13.08	14.71
2022	7.06	12.47	7.39
2023	12.03	12.68	10.20
Mean	**5.78**	**12.59**	**12.41**
Rank	***3***	***1***	***2***

The main objective of each bank is to exploit shareholder wealth; therefore, ROE serves as a key indicator to assess the earning capacity of the selected Private Sector Banks. A higher RoE denotes superior profitability and greater returns to equity shareholders, while a lower RoE reflects comparatively weaker performance. During the study period from 2019 to 2023, ICICI Bank achieved the highest mean RoE of 12.59%, followed closely by IndusInd Bank with 12.41%, whereas HDFC Bank reported a relatively lower mean RoE of 5.78%.

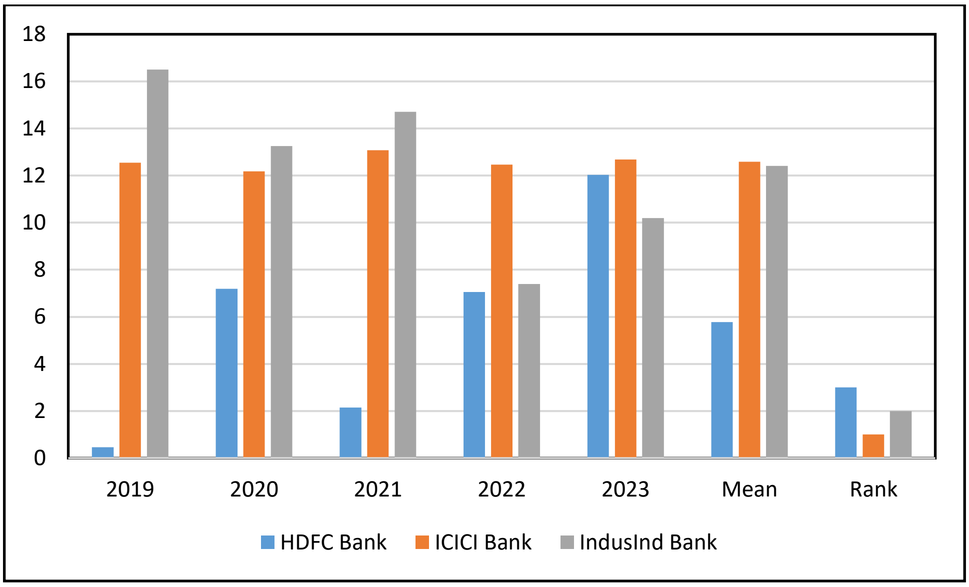

Figure 1: Comparative Analysis of Return on Equity (ROE) of Selected Private Sector Banks (2019–2023)

Consequently, ICICI Bank ranked first, IndusInd Bank second, and HDFC Bank third under the Earnings parameter of the EAGLES model. To examine whether the differences in mean RoE values among these banks were statistically significant, the researcher applied a one-way ANOVA test. Table 2 displays the outcomes of this analysis.

Table 2: Summary of ANOVA Findings for the Relationship Between Earnings and RoE

F	Sig.	Outcomes
7.571	**0.001**	**Discard the Null Hypothesis H01**

H01 is rejected from the research because the calculated F-value is 7.571 and the p-value is less than 0.05.

Asset Quality

The capacity of a bank to control its exposure to risk and keep its loan portfolio in good shape is reflected in the quality of its assets. High levels of NPAs weaken profitability and reduce competitiveness, as funds remain locked in non-recoverable loans. Effective credit appraisal and recovery mechanisms help minimize NPAs, thereby improving financial stability and operational efficiency. The asset quality of the selected Private Sector Banks that were chosen for this study is evaluated using Net Nonperforming Assets (%) as the primary indicator.

$$\text{Net NPA (\%)} = \frac{Non\ Performing\ Loans}{Total\ Loans\ \&\ Advances} \times 100$$

Table 3: Comparative Analysis of Asset Quality (Net NPA %) for Selected Private Sector Banks

Year	HDFC Bank	ICICI Bank	IndusInd Bank
2019	2.06	0.75	1.39
2020	1.56	0.71	1.54
2021	1.05	1.21	1.03
2022	0.73	0.64	1.28
2023	0.39	0.37	1.81
Mean	**1.16**	**0.74**	**1.41**
Rank	***2***	***1***	***3***

Key to understanding a bank's asset quality is the NPA percentage., reflecting its efficiency in managing credit risk. A lower Net NPA ratio signifies stronger asset quality and effective loan recovery mechanisms, indicating that a smaller portion of the bank's assets is tied up in non-performing loans. Accordingly, banks with lower Net NPA values receive higher rankings under this parameter.

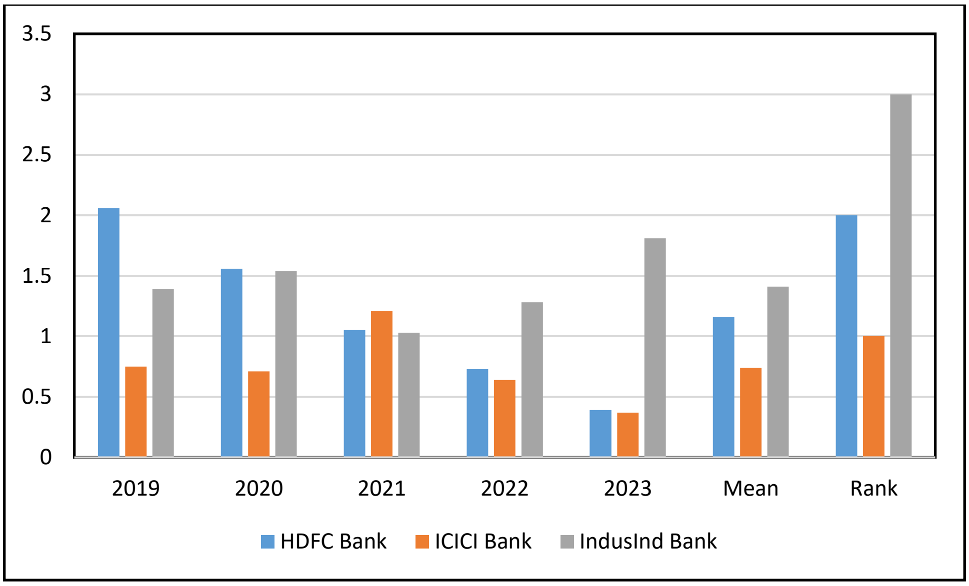

Figure 2: Comparative Analysis of Net Non-Performing Assets (Net NPA %) of Selected Private Sector Banks (2019–2023)

During the study period, ICICI Bank demonstrated superior asset quality with the lowest mean Net NPA of 0.74%, compared to HDFC Bank (1.16%) and IndusInd Bank (1.41%), highlighting its stronger credit risk management practices.

Table 4: Summary of ANOVA Findings for the Net NPA (%)

F	Sig.	Outcomes
4.723	**0.008**	**Discard the Null Hypothesis H02**

In Table 4, we can see that there is a statistically significant difference in the mean Net NPA ratios amongst HDFC Bank, ICICI Bank, and IndusInd Bank. This variation is maintained by a computed F-value of 4.723 & p-value less than 0.05. This shows that according to the EAGLES model, there is a large difference in the asset quality of the chosen banks.

Growth

The EAGLES model isn't complete without growth, which shows how well a bank can grow its operations and stand out in the market. One way to measure a bank's market aggressiveness is by looking at its core deposit and loan growth rates. If the loan growth rate is higher, it usually means that lending activity is better, revenue is higher, and market competitiveness is stronger.

$$\text{Growth in Loans (\%)} = \frac{(Total\ Loans\ at\ t) - (Total\ Loans\ at\ t-1)}{(Total\ Loans\ at\ t-1)} \times 100$$

Table 5: Comparative Analysis of Growth in Loans (%) for Selected Private Sector Banks

Year	HDFC Bank	ICICI Bank	IndusInd Bank
2019	12.54	21.20	28.59
2020	15.49	6.83	10.94
2021	9.15	1.79	2.81
2022	13.46	21.26	12.44
2023	19.44	17.92	21.28
Mean	**14.02**	**13.80**	**15.21**
Rank	***2***	***3***	***1***

The analysis reveals that the growth in loans has varied notably among the selected private sector banks during the study period. The most dynamic lending behaviour was seen by IndusInd Bank, whose loan growth ranged from 2.81% in 2021 to 28.59% in 2019, with the highest swing in the industry. HDFC Bank recorded loan growth between 9.15% (2021) and 19.44% (2023), indicating steady but moderate expansion. In contrast, ICICI Bank showed relatively lower growth variability, ranging from 1.79% (2021) to 21.26% (2022).

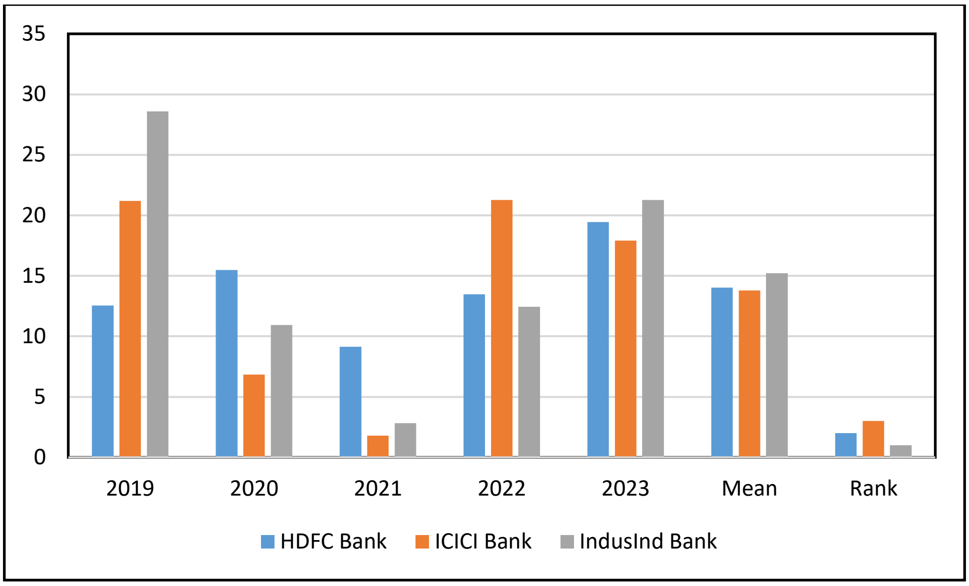

Figure 3: Comparative Analysis of Growth in Loans (%) of Selected Private Sector Banks (2019–2023)

Based on the mean loan growth rates, IndusInd Bank achieved the top rank, followed by HDFC Bank in second place and ICICI Bank in third. To assess whether these differences were statistically significant, the researcher applied a one-way ANOVA test to examine the modification in loan growth rates (%) amongst the selected banks.

Table 6: Summary of ANOVA Findings for the Growth in Loans (%)

F	Sig.	Outcomes
0.612	**0.659**	**Accepted the Null Hypothesis H03**

The outcomes of the loan growth one-way ANOVA study are displayed in Table 6. The null hypothesis (H_{03}) is believed due to the computed F-value of 0.612 and a p-value greater than 0.05. The results show that HDFC Bank, ICICI Bank, and IndusInd Bank all had similar average loan growth rates throughout the research period.

Liquidity

The treasury division of banks is responsible for maintaining adequate liquid assets to meet short-term financial obligations and customer demands. As a measure of how much a bank uses its deposits for lending, the Loans to Deposit Ratio (LDR) is an important metric for liquidity management. While a moderate LDR signifies efficient resource utilization, an excessively high ratio may indicate liquidity vulnerability, reducing the bank's ability to meet unexpected withdrawal demands. Consequently, banks with higher LDRs tend to adopt a more cautious and selective lending approach. To guarantee adequate liquidity reserves & financial stability, commercial banks are required by regulation to sustain a SLR of 25% during 2019 to 2023

$$\text{Loans to Deposit Ratio (\%)} = \frac{Total\ Loans\ \&\ Adcances}{Total\ Deposits} \times 100$$

Table 7: Comparative Analysis of Liquidity – Loans to Deposit Ratio (LDR in %) for Selected Private Sector Banks

Year	HDFC Bank	ICICI Bank	IndusInd Bank
2019	90.21	91.06	95.65
2020	89.27	83.61	102.35
2021	88.18	79.86	82.98
2022	86.12	87.03	81.40
2023	89.27	88.09	86.17
Mean	**88.61**	**85.93**	**89.71**
Rank	***2***	***1***	***3***

Table 7 presents the loan-to-deposit ratio (LDR) of the selected private sector banks, highlighting their liquidity positions during the study period. HDFC Bank demonstrated a strong liquidity profile with an average LDR of 88.61%, securing the second rank under this parameter. ICICI Bank exhibited an LDR ranging from 79.86% in 2021 to 91.06% in 2019, with an overall average of 85.93%, placing it **First rank** in terms of liquidity performance.

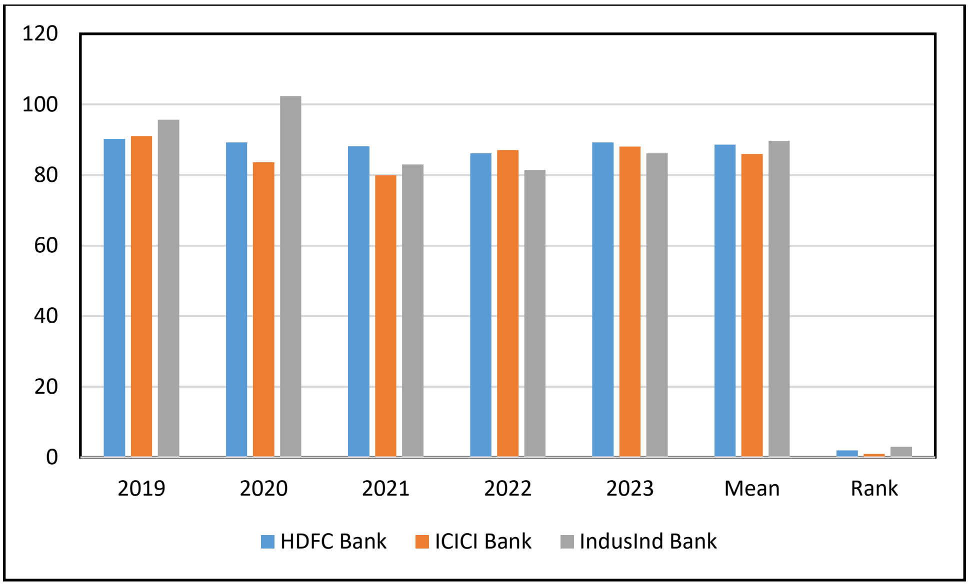

Figure 4: Comparative Analysis of Liquidity – Loan to Deposit Ratio (LDR %) of Selected Private Sector Banks (2019–2023)

In contrast, IndusInd Bank achieved the lowest liquidity ranking, with a mean LDR of 89.71%, varying between 81.40% (2022) and 102.35% (2020). This indicates that IndusInd Bank maintained a comparatively Higher LDR, which weakens its ability to meet short-term obligations.

Table 8: Summary of ANOVA Findings for the Liquidity (LDR)

F	Sig.	Outcomes
1.063	**0.401**	**Accepted the Null Hypothesis H04**

The selected banks' LDRs were compared using one-way ANOVA. The computed F-value is 1.063 & p-value is larger than 0.05, as shown in Table 8, which means that the null hypothesis (H_{04}) is accepted. This recommends that HDFC Bank, ICICI Bank, & IndusInd Bank's liquidity positions did not change much throughout the research period.

Equity

One indicator of a bank's resilience to economic shocks is the CRAR, which compares the capital strength of the institution to its risk-weighted assets. Greater stability and reduced insolvency risk are reflected in a higher CRAR. A CRAR of 8% is required by Basel standards, whereas commercial banks are required to maintain 9% and public sector banks are required to maintain 12% by the RBI. In order to keep the banking system stable and resilient over the long run, it is crucial to keep the CRAR strong.

$$\text{Captial Adequacy Ratio (\%)} = \frac{Tier\ 1 + Tier\ 2\ Captial}{Risk\ Weighted\ Capital} \times 100$$

Table 9: Comparison of Private Sector Banks' Equity: CRAR (%)

Year	HDFC Bank	ICICI Bank	IndusInd Bank
2019	17.23	17.45	13.83
2020	17.53	17.89	12.09
2021	15.40	22.26	15.50
2022	18.54	22.69	15.31
2023	17.64	21.80	15.03
Mean	**17.27**	**20.42**	**14.35**
Rank	***2***	***1***	***3***

A high Capital Adequacy Ratio (CRAR) indicates that a bank maintains sufficient capital reserves and has not overextended its lending capacity, enabling it to meet financial obligations as they arise. With a Highest mean CRAR value of 20.42%, ICICI Bank ranked first among the selected PSB. HDFC Bank with 17.27% ranked second and ICICI Bank with 14.35% ranked third.

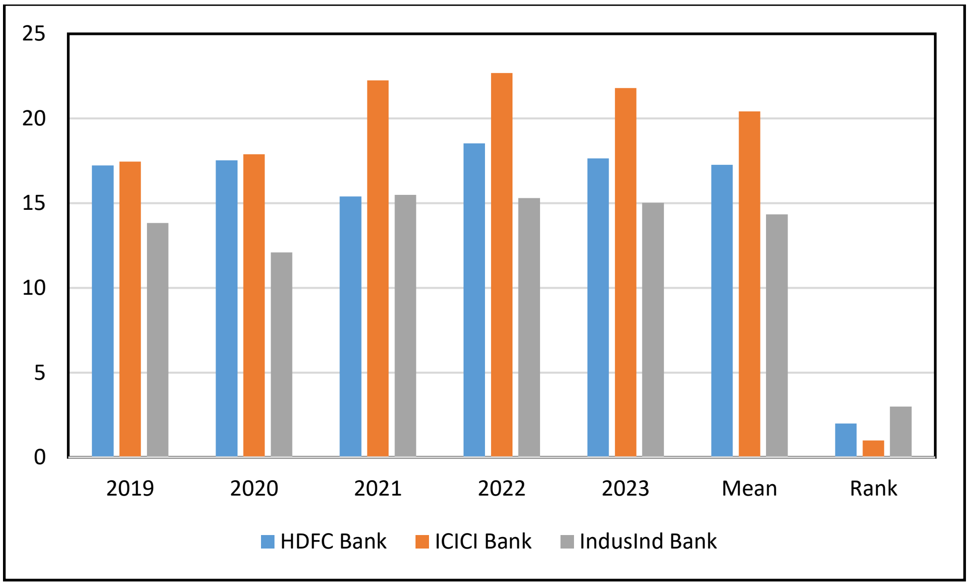

Figure 5: Comparative Analysis of CRAR of HDFC Bank, ICICI Bank, and IndusInd Bank (2019–2023)

To determine whether these differences were statistically significant, the researcher applied a one-way ANOVA test under the assumption that no significant variation exists among the banks' mean CAR values. The results of this analysis are presented below.

Table 10: Summary of ANOVA Findings for the Equity (CRAR)

F-value	Sig.	Outcomes
9.886	**0.000**	**Rejected the Null Hypothesis H05**

The intended F-value of 9.886 and a p-value lower than 0.05 show that there is a statistically significant difference in the mean CRAR among the private sector banks that were chosen. The result indicates that the EAGLES framework finds a substantial difference in the capital strength of HDFC, ICICI, and IndusInd Bank, and the null hypothesis (H_{05}) is discarded.

Strategic Performance

Strategic performance reflects a bank's effectiveness in expanding income and managing operations through interest and non-interest activities. Its deposit mobilization, fee-based income generation, and cost control capabilities are evaluated by the SRQ. A higher SRQ indicates stronger operational efficiency and sound risk management.

$$\text{Strategic Response Quotient (SRQ) (\%)} = \frac{Interest\ Margin}{Net\ Operating\ Cost} \times 100$$

- **Interest Income/Interest Cost**

A bank's ability to efficiently generate interest revenue in relation to the cost of interest-bearing liabilities is measured by the Interest Income to Interest Cost ratio (II/IC ratio). A higher ratio indicates that the bank's interest earnings have grown faster than its interest expenses, reflecting effective asset-liability management. A bank can grow its loan portfolio size to generate more interest income, decrease its cost of deposits, or boost the yield on advances compared to borrowing costs in order to improve this ratio.

Table 11: Comparative Analysis of II/IC Ratio for Selected Private Sector Banks

Year	HDFC Bank	ICICI Bank	IndusInd Bank
2019	1.65	2.70	1.66
2020	1.67	2.65	1.72
2021	1.85	2.33	1.87
2022	1.97	2.01	1.95
2023	2.02	1.89	1.94
Mean	**1.83**	**2.32**	**1.83**
Rank	***2***	***1***	***2***

Throughout the research period, the average II/IC ratio for the PSB that were chosen varied between 1.83 and 2.32. A ratio of 2.32 was recorded by ICICI Bank, with HDFC and IndusInd Bank following at 1.83 each. To determine whether these differences were statistically significant, the researcher applied a one-way ANOVA test to examine the variation in mean interest income relative to interest cost across the selected banks.

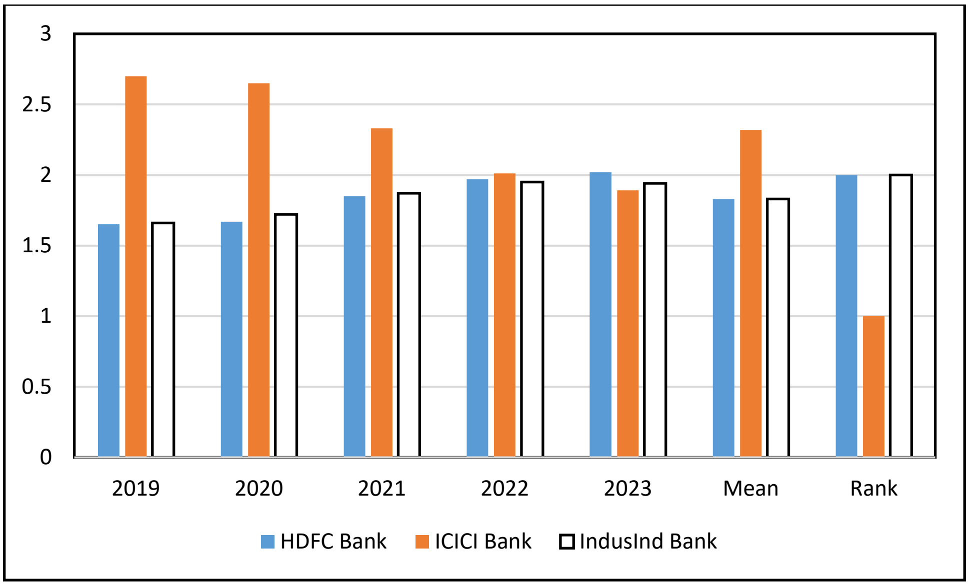

Figure 6: Comparative analysis of II/IC Ratio among Selected Private Banks

Table 12: Summary of ANOVA Findings for the Interest Income to Interest cost

F	Sig.	Outcomes
1.754	**0.178**	**Accepted the Null Hypothesis H06.1**

Table 12 shows the results of the ANOVA, which reveal that the computed F-value is 1.754 & p-value is greater than 0.05. This proves that the chosen PSBs do not differ significantly in their II/IC ratio, and hence supports the acceptance of the null hypothesis ($H_{06.1}$).

- **Non-Interest Income/Non-Interest Cost:**

The NII/NIC ratio reflects a bank's ability to generate fee-based and other non-interest income relative to its operating costs. Ideally, this ratio should exceed one, indicating that the bank earns more non-interest income than it spends on related expenses. However, in this study, the NII/NIC ratios of the selected PSB were found to be below one, suggesting that operational expenses have increased while growth in other income sources has slowed.

Table 13: Comparative Analysis of NII / NIC Ratio for Selected Private Sector Banks

Year	HDFC Bank	ICICI Bank	IndusInd Bank
2019	0.83	0.53	0.88

2020	0.90	0.57	0.84
2021	0.81	0.64	0.78
2022	0.64	0.61	0.77
2023	0.60	0.61	0.72
Mean	**0.76**	**0.59**	**0.80**
Rank	**2**	**3**	**1**

Table 13 presents the NII/NIC ratios of the selected PSB. Among them, IndusInd Bank recorded the highest mean ratio of 0.80, securing the top rank, while ICICI Bank reported the lowest mean of 0.59, placing it third. Specifically, ICICI Bank and HDFC Bank registered NII/NIC ratios of 0.53 (2019) and 0.90 (2020), respectively. To determine whether the differences in mean NII/NIC ratios among the banks were statistically significant, the researcher applied a one-way ANOVA test.

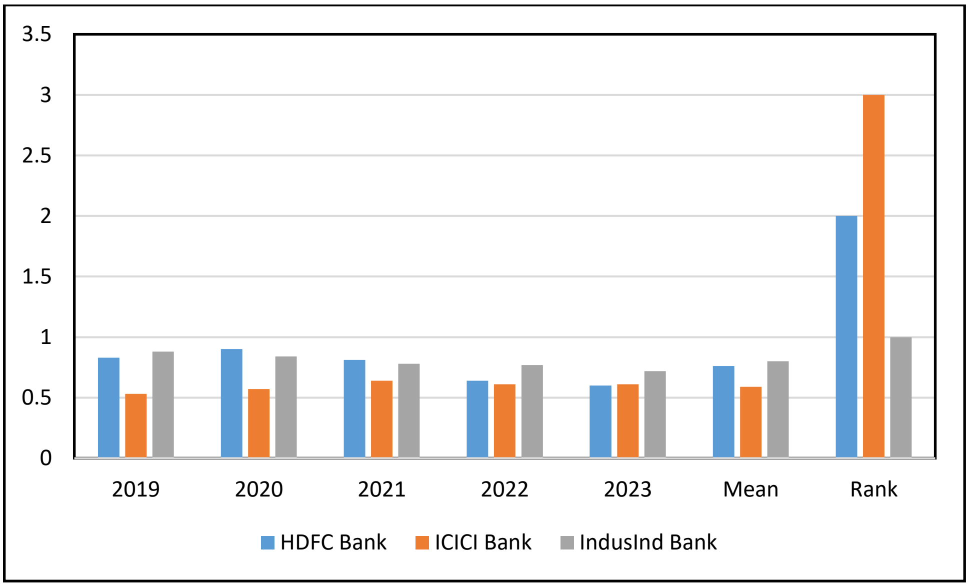

Figure 7: Comparative Analysis of NII / NIC Ratio of HDFC Bank, ICICI Bank, and IndusInd Bank (2019–2023)

Table 14: Summary of ANOVA Findings for the Non-Interest Income to Non-Income Cost

F	Sig.	Outcomes
4.074	**0.014**	**Rejected the Null Hypothesis H06.2**

The null hypothesis ($H_{06.2}$) is rejected due to a statistically important distinction in the NII/NIC ratios across the selected banks, as indicated by the computed F-value of 4.074 with a p-value less than 0.05.

Table 15: Summary of Bank Performance Ranks Based on the EAGLES Framework

Parameters	HDFC Bank	ICICI Bank	IndusInd Bank
Earnings (%)	3	1	2
Asset Quality (%)	2	1	3
Growth in Loans (%)	2	3	1
Liquidity (%)	2	3	1
Equity (%)	2	1	3
Strategic Performance II/IC	2	1	2
NII/NIC	2	3	1

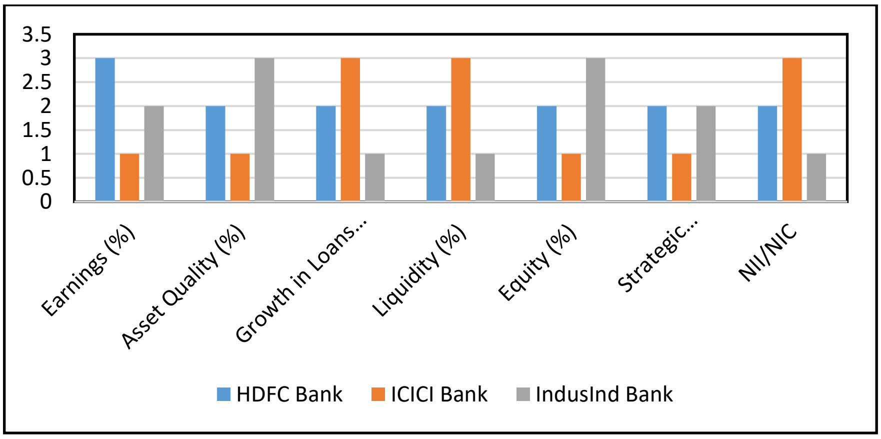

Figure 8: Comparative Ranking of Selected Private Sector Banks Based on EAGLES Performance

The figure presents a comparative ranking of three private sector banks—HDFC Bank, ICICI Bank, and IndusInd Bank—across different EAGLES performance indicators such as Earnings, Asset Quality, Growth in Loans, Liquidity, Equity, Strategic Performance (II/IC), and NII/NIC. HDFC Bank demonstrates strong performance in the earnings category with the highest ranking, indicating better profitability among the selected banks. ICICI Bank shows relatively better performance in growth in loans, liquidity, and NII/NIC indicators, suggesting stronger expansion and income generation capability. IndusInd Bank performs well in asset quality and equity indicators, reflecting stability in asset management and capital position. Overall, the chart highlights variations in strengths across different financial parameters, indicating that each bank has competitive advantages in specific operational areas.

RESULTS AND DISCUSSIONS

Overall Performance of Selected Private Sector Banks

The Indian banking sector has undergone significant transformation in recent years due to regulatory reforms, technological advancements, and consolidation within the industry. In particular, mergers and acquisitions among public sector banks have strengthened their capital base, operational efficiency, and market share. As a result, private sector banks face increasing competitive pressure to enhance profitability, maintain asset quality, and improve strategic performance. In this context, the present study evaluated the financial performance of three major private sector banks—HDFC Bank, ICICI Bank, and IndusInd Bank—using the EAGLES model, which examines six critical dimensions: Earnings, Asset Quality, Growth, Liquidity, Equity, and Strategic Performance.

The analysis was conducted using financial data from 2019 to 2023 and statistical testing through one-way ANOVA to determine whether significant differences exist among the selected banks. The findings reveal that while all three banks maintained sound financial positions during the study period, notable variations were observed in their operational strategies and financial performance across the EAGLES parameters.

Earnings and Profitability Performance

Under the earnings parameter measured through Return on Equity (ROE), ICICI Bank demonstrated the strongest profitability among the selected banks. With the highest mean ROE of 12.59 percent, the bank ranked first in terms of earnings performance, indicating efficient utilization of shareholders' equity and effective profit generation. IndusInd Bank followed closely with a mean ROE of 12.41 percent, reflecting strong earning capacity despite fluctuations in certain years. In contrast, HDFC Bank recorded a comparatively lower mean ROE of 5.78 percent, resulting in the third position in the earnings category.

The ANOVA results indicated a statistically significant difference in the ROE values among the banks ($p < 0.05$), suggesting that variations in profitability are influenced by differences in managerial efficiency, operational strategies, and cost structures.

Asset Quality and Risk Management

Asset quality is a critical indicator of a bank's ability to manage credit risk and maintain financial stability. The analysis based on Net Non-Performing Assets (Net NPA %) shows that ICICI Bank achieved the best asset quality performance with the lowest mean NPA ratio of 0.74 percent. This indicates strong credit appraisal systems and effective loan recovery mechanisms.

HDFC Bank secured the second rank with a mean NPA of 1.16 percent, reflecting stable but relatively higher exposure to non-performing assets compared to ICICI Bank. IndusInd Bank recorded the highest mean NPA of 1.41 percent, suggesting comparatively weaker credit risk management. The ANOVA test confirmed a statistically significant difference among the banks' asset quality levels, reinforcing the importance of efficient risk management strategies in sustaining banking stability.

Growth Performance

Growth in loans and advances represents the expansion capability and market competitiveness of banks. The results indicate that IndusInd Bank recorded the highest mean loan growth rate of 15.21 percent, demonstrating aggressive lending strategies and strong business expansion. HDFC Bank followed with a mean growth rate of 14.02 percent, reflecting consistent but moderate expansion in lending activities. ICICI Bank recorded the lowest mean growth rate of 13.80 percent during the study period.

However, the ANOVA test revealed that these differences were not statistically significant ($p > 0.05$), indicating that the overall lending growth of the selected banks remained relatively similar during the period of study.

Liquidity Management

Liquidity management was assessed using the Loan-to-Deposit Ratio (LDR), which reflects the extent to which banks utilize deposits for lending purposes. ICICI Bank ranked first in liquidity performance with an average LDR of 85.93 percent, suggesting a balanced approach between lending and maintaining liquidity reserves.

HDFC Bank recorded an average LDR of 88.61 percent, placing it second, while IndusInd Bank exhibited the highest LDR of 89.71 percent, indicating relatively greater deployment of deposits in lending activities. Despite these variations, the ANOVA results showed no statistically significant difference among the banks in terms of liquidity management.

Capital Strength and Equity Position

Capital adequacy plays a crucial role in maintaining banking stability and protecting institutions against financial shocks. The Capital Adequacy Ratio (CRAR) analysis revealed that ICICI Bank maintained the strongest capital position with a mean CRAR of 20.42 percent, significantly higher than the regulatory requirement. HDFC Bank followed with a mean CRAR of 17.27 percent, while IndusInd Bank recorded the lowest capital adequacy ratio of 14.35 percent.

The ANOVA test confirmed that the differences in capital adequacy among the banks were statistically significant ($p < 0.05$), indicating varying levels of capital strength and financial resilience.

Strategic Performance

Strategic performance was evaluated using two indicators: the Interest Income to Interest Cost (II/IC) ratio and the Non-Interest Income to Non-Interest Cost (NII/NIC) ratio. ICICI Bank achieved the highest mean II/IC ratio of 2.32, reflecting efficient interest income generation relative to borrowing costs. HDFC Bank and IndusInd Bank recorded similar mean values of 1.83.

However, the ANOVA results showed that these differences were not statistically significant, indicating similar interest income efficiency across the banks.

In terms of non-interest income efficiency, IndusInd Bank recorded the highest NII/NIC ratio (0.80), followed by HDFC Bank (0.76), while ICICI Bank reported the lowest ratio (0.59). The

ANOVA results revealed a statistically significant difference among the banks for this parameter, suggesting variations in fee-based income generation and cost management strategies.

Comparative Performance under the EAGLES Framework

Based on the overall ranking of the EAGLES parameters, ICICI Bank emerged as the best-performing bank among the selected institutions, demonstrating strong profitability, asset quality, capital adequacy, and strategic interest income management. IndusInd Bank showed superior performance in growth and non-interest income efficiency, highlighting its expansion-oriented strategy and diversified income structure. HDFC Bank, although ranking second overall, exhibited consistent and stable performance across most parameters, indicating a balanced and risk-controlled operational approach.

Overall, the findings highlight that while ICICI Bank emphasizes profitability and capital strength, IndusInd Bank focuses more on growth and income diversification, whereas HDFC Bank maintains operational stability across financial dimensions. These differences illustrate the distinct strategic orientations of private sector banks in India's competitive banking environment.

LIMITATIONS OF THE STUDY

This study has certain limitations that should be acknowledged. First, the analysis is limited to only three private sector banks—HDFC Bank, ICICI Bank, and IndusInd Bank—which may restrict the generalization of the findings to the entire banking sector. Second, the study relies solely on secondary data obtained from annual reports and financial databases, which may not capture qualitative factors such as managerial efficiency or customer satisfaction. Third, the study covers a limited period from 2019 to 2023. Finally, the analysis is based only on the EAGLES framework and ANOVA, which may not fully account for macroeconomic and regulatory influences on banking performance.

FUTURE IMPLICATIONS AND SCOPE FOR FURTHER RESEARCH

The findings of this study provide useful insights for investors, banking professionals, and policymakers in understanding the financial performance of private sector banks. Future research can expand the scope by including a larger sample of banks, such as public sector, foreign, and small finance banks, to enable broader comparative analysis. Researchers may also extend the study period to analyse long-term trends in the banking sector. Additionally, future studies can apply advanced statistical techniques and incorporate qualitative factors such as digital banking adoption, corporate governance, and technological innovation to obtain a more comprehensive assessment of banking performance.

CONCLUSION

The present study evaluated the financial performance of selected private sector banks—HDFC Bank, ICICI Bank, and IndusInd Bank—using the EAGLES framework, which examines growth, earnings, asset quality, liquidity, equity, and strategic performance. The findings indicate noticeable variations in performance among the selected banks. ICICI Bank emerged as the overall best-performing bank, demonstrating strong profitability, better asset quality, robust capital adequacy, and effective strategic income management. IndusInd Bank showed superior performance in loan growth, liquidity utilization, and non-interest income efficiency, reflecting its expansion-oriented strategy. HDFC Bank maintained stable and balanced performance across most financial indicators, though its earnings capacity was comparatively lower during the study period. Overall, the results highlight that private sector banks in India adopt distinct strategic approaches to maintain competitiveness in a rapidly evolving banking environment. The EAGLES model proves to be an effective tool for assessing multidimensional banking performance and identifying key areas of operational strength and improvement.

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