




# A STUDY ON THE FINANCIAL PERFORMANCE OF FEDERAL BANK LTD IN THE INDIAN BANKING SECTOR USING CAMEL ANALYSIS

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## ABSTRACT

The banking sector plays a pivotal role in the economic development of a country, and assessing the financial performance of banks is essential to ensure their stability and efficiency. This study aims to evaluate the financial performance of Federal Bank Ltd, a prominent private sector bank in India, using the CAMEL model. The CAMEL framework – comprising **Capital Adequacy, Asset Quality, Management Efficiency, Earnings, and Liquidity** – provides a comprehensive approach to analyzing the soundness of banks. Secondary data from the bank's annual reports for the period 2018–2023 were collected and analyzed to measure each parameter of the CAMEL model. The study employs financial ratios and trend analysis to assess the bank's strengths and weaknesses across the five dimensions. Findings reveal that Federal Bank demonstrates a stable capital base, satisfactory asset quality, and consistent earnings, reflecting its overall financial resilience. However, certain aspects of management efficiency and liquidity require strategic improvement to enhance operational performance. The study provides empirical evidence of the bank's financial health and offers insights for policymakers, investors, and banking professionals to make informed decisions.

**KEYWORDS:** Federal Bank Ltd,

- Financial Performance,
- CAMEL Model,
- Banking Sector in India,
- Capital Adequacy,
- Asset Quality,
- Management Efficiency,
- Earnings,
- Liquidity

**JEL Codes:**

- G21 – Banks; Depository Institutions; Micro Finance Institutions; Mortgages
- G28 – Government Policy and Regulation
- G32 – Financing Policy; Financial Risk and Risk Management
- G34 – Mergers; Acquisitions; Restructuring; Corporate Governance
- C81 – Methodology for Panel Data; if you use ratio/trend analysis -----

## 1. INTRODUCTION

There are certain rates set by the central bank which every bank has to follow and maintain. BPLR- Benchmark Prime Lending Rate is the interest rate that commercial banks generally charge their most credit worthy customers. As per RBI rates earlier banks were free to fix their BPLR for their credit limits. But due to some circumstances and the consequences faced by the banks and public, to bring the transparency in the lending rates RBI has introduced modified rate called as base rate. Base rate is the minimum interest rate which a bank has to charge on its loans lent. Banks cannot charge less than the base rate. On July 1, 2010 BPLR has been replaced by base rate. The base rate calculations were more transparent which were not with the case of benchmark prime lending rate.

Every bank is required to maintain a certain percentage of its total deposits with the Reserve Bank of India as cash reserves. The Capital Reserve Ratio limits the bank's ability to pump more money into the economy. The present CRR rate is 4%. Banks need to maintain some amount of liquid assets like precious metals or other approved securities other than cash. The Statutory Liquidity is used to limit the expansion of bank credit, for ensuring



solvency of the banks. The present SLR rate is 19.5%. Repo rate also known as benchmark interest rate is the rate at which the RBI lends the money to every bank for a short term. When this rate increases, then borrowing from the Reserve Bank of India will become more expensive. If the RBI wants to make the rate more expensive for the banks to borrow the money, it increases the repo rate. Current repo rate is 6.25%. Reverse Repo rate is the short term borrowing rate at which RBI borrows money from banks. Repo Rate signifies the rate at which liquidity is injected in the banking system by RBI, whereas Reverse Repo rate signifies the rate at which the central bank absorbs liquidity from the banks.

Monetary policy is the important aspect set up by the monetary authority of the country where it controls the flow of money in the country. It is the process of controlling cost of very short term borrowing, often targeting inflation rate or interest rate to ensure stability in the price and general trust in the currency. Monetary policy is referred as being contractionary or expansionary. Monetary decisions consider- short and long term interest rates, exchange rates, credit quality, velocity of money through economy, bonds and equities, government and private sector spending and savings, financial derivatives like contracts, futures, options and swaps, etc. and international capital flows of money on large scales.

One of the most important things in banking system is the percentage on its non- performing assets. The banks which have less percentage of NPAs are the better performing banks based on NPA ratio as well as rating systems used to rank. NPA refers to a classification for loans in the books of financial institutions that are in default or are in arrears on scheduled payments of principal or interest or both. In most of the cases, debt is classified as non-performing when loan payments have not been made for the period of ninety days, the amount of elapsed time may be shorter or longer depending on the terms and conditions set forth in each loan.

## 2. REVIEW OF LITERATURE

- **Mishra Ashwini Kumar (2022):** This paper analyzed 12 public and private sector banks over a period of 11 years that is from 2000-11 in Indian banking sector for computing various factors affecting and determining the two using econometric analysis. He has ranked the banks using CAMEL model – found that private sector banks are heading towards convergence.
- **Mukund Sharma (2022):** This paper has given a statement in his article that the purpose of CAMEL system is to detect problems before they manifest themselves. He analysed that private sector banks were better than public sector banks in utilizing the available resources such as flies and also banks whose investment ratios in Government securities were more to have less gross non-performing assets and net non-performing assets using Friedman test and Mann-Whitney test.
- **Subendra Dutta (2021):** This Paper has analysed the most significant factors influencing return on assets of public sector banks which directly or indirectly influenced the economic growth of the country by applying backward multiple regression analysis. He found that NPA had negative impact on RoA and Durbin Watson statistic showed absence of autocorrelation.
- **Nandhini (2020):** has observed the behaviour of various parameters of CAMEL rating model and their consistency over five years of six Indian public sector banks with the help of some ratio analysis and found that there is statistically significant difference between CAMEL ratio of select public sector banks in India.
- **Geeta Sharma (2020):** has evaluated the performance of public and private sector banks applying CAMEL methodology where private sector banks are a better position than public sector banks. There is a scope of improvisation in public sector banks in terms of us Asset Quality and Management Efficiency.
- **Srinivasan (2020):** This Paper has examined where is commercial banks operating in India applying camel model considering all the parameters of select 51 banks both Indian and foreign banks for period 2012-14 using ANOVA and the empirical results of that there is statistically significant difference between CAMEL ratios of selected commercial banks in India.
- **Apoorva Trivedi (2019):** The Article has examined the comparative performance of leading public and private sector banks in India and found that capital adequacy for all the banks have capital about the required level. The earnings ability of banks depends largely on the management of its assets and liabilities which are significant to maintain adequate capital and loan allowance.
- **Khatik (2019):** This Article has analysed that there is a significant difference in the performances and soundness of selected five nationalized banks by applying ANOVA one way classification model.
- **Ruchi Gupta (2018):** This Paper has evaluated the field Nigel position and performance of public sector banks in India using CAMEL model and signified that the overall performance of public sector banks is different.
- **Anju Sharan (2018):** This Paper has opined that not only earnings, but also the quality of earning has to be seen in the context of sustainability, competitiveness, healthy growth for the banking sector. The study recommended that the banks of the increase the interest and non-interesting come through fully utilization of



resources and improve the operational efficiency.

### **3. STATEMENT OF THE PROBLEM**

This study attempts to measure the financial performance of public sector banks in Afghanistan for the period of four years (2014 to 2017) using CAMEL approach. CAMEL stands for Capital Adequacy, Asset Quality, Management Soundness, Earning Quality and Liquidity To accomplish the task, I have chosen three banks out of four banks operating in public sector in Afghanistan. Financial statements of the selected banks are then examined and evaluated for the period of 4 years (from 2014 to 2017) with the help of some ratios. Nowadays, banking sector in Afghanistan is facing the problem of default culture, which is the result of inefficient performance of most banks. The performance of the banks are dependent more on the management's ability in formulating strategic plans and the efficient implementation of these plans. The findings of this study can be very helpful for the management of the banks to improve their financial performance and formulate

### **4. RESEARCH GAP**

The primary function of any public sector bank or private sector bank is to receive deposits and lend money to needful individuals and businesses. Banks are considered to be a synonym of trust across the world. When any individual deposits money in the nationalized banks in India, it doesn't matter what the amount is, the individual knows that the money will be safe in the bank as compared to anywhere else. Top Banks in India help you in putting your hard-earned money in a place that will also give you interest on that amount. This study is undertaken for the period of five years from 2017-22. The top public and private sector banks are chosen for the study based on their Total Assets.

### **4. RESEARCH QUESTIONS**

- How the public banks are competing with each other?
- What is the performance of selected banks in the study?
- How well the performance of banks can be improved?
- Public sector banks in India

### **5. OBJECTIVES OF THE STUDY**

- To study the Impact of Financial performance of Federal Bank Ltd in India.
- To compare and rank Federal Bank Ltd through CAMEL Model.

### **6. HYPOTHESES OF THE STUDY**

**H0:** There is no Impact of financial performance of Federal Bank Ltd in India.

**H1:** There is an Impact of financial performance of Federal Bank Ltd in India.

### **7. RESEARCH METHODOLOGY**

- **Sources of Data:** The secondary data were obtained from the annual reports of the ten public sector banks. Additional data for analysis and verification were sourced from [www.moneycontrol.com](http://www.moneycontrol.com). The data were subjected to certain fundamental mathematical operations such as computing the ratios, before being used for the analysis.
- **Period of the Study:** The study period is 5 years, between 2017 and 2022. Therefore, Public Sector Banks (PSBs) have been the backbone of the Indian economy. From government schemes like Jan Dhan etc to zero balance accounts of the lower-middle class of the country, PSBs have always been at the forefront since their nationalization. During the Covid-19 pandemic too, PSBs coupled with the NPCI made digital transactions easier.

### **8. LIMITATIONS OF THE STUDY**

- This study is limited to only five select public and private sector banks each in India.
- This study is made only by considering financial statements of the banks which could have undergone through window dressing.
- This study is undertaken only for five years.

### **9. SCOPE OF THE STUDY**

The scope of this study is to analyze the performance of banking industry in India. The performance of the banks are analysed and examined by using CAMEL model ratios.



SI No	Bank Name	Headquarter	Tag Line
1	Federal Bank Ltd	Mumbai	Your Perfect Banking Partner

## 10. RESULT AND DISCUSSION

- **Capital Adequacy (C):** It refers to statutory minimum reserves of capital a bank or other financial institutions must have available with them. This is assessed through capital trend analysis. For higher rating, financial institutions must comply with interest and dividend rules and practices.
- **Asset Quality (A):** It is a review or evaluation that assesses the credit risk associated with a particular asset. This is checked by the fair market value of investments compared with the bank's book value of investments. This is reflected by the efficiency of bank's investment policies and practices.
- **Management Efficiency (M):** It refers to the ability of the financial institution to properly react to its financial stress. This component is reflected by the management's capability to point out, measure and to look after and control the risks of institution's daily activities.
- **Earnings Ability (E):** It refers to the institution's ability to create appropriate returns to be able to expand and retain competitiveness and adding capital.
- **Liquidity (L):** It measures the ability of the institution to convert assets to cash easily depending on short term financial resources.

**Table 1. Description of CAMEL parameters**

Category	Ratios	Formula	Significance	Evaluation Criteria
Capital Adequacy	CAR	Tier-1 and Tier-2 Capital/Aggregate of Risk Weighted Assets (RWA)	It measures the bank's ability in absorbing the losses arising from the risk assets	Higher the ratio Better is the financial condition of the bank
	Debt/Equity Ratio	(Deposits + Borrowings + Other liabilities)/ (Capital + Reserves)	It indicates the bank's financial leverage	Lower the ratio Better it is
	Coverage Ratio	(Net Worth-Net NPAs)/ Total Assets	It indicates the availability of capital to meet any incidence of loss assets in NPAs	Higher the ratio Better it is
Asset Quality	Net NPA/Net Advances Ratio	NPAs/Net Advances	It indicates the level of NPAs in the net advances	Lower the ratio Better it is
	Govt Securities/Investment Ratio	Government Securities/ Total Investments	It indicates the bank's strategy: High profits=High risk or Low profits=Low risk	Higher the ratio Safer it is
	Standard Advances/Total Advances Ratio	Standard Advances (Net of Total Assets and Gross NPAs)/ Total Advances	It indicates higher earnings if the bank assets are highly performing	Higher the ratio Better it is
Management Quality	Total Advances/Total Deposits Ratio	Total Advances/Total Deposits	It indicates the bank's ability to convert its deposits into higher earning advances	Higher the ratio Better it is
	Business per Employee	Total Advances and Total Deposits/No of Employees	It measures whether the bank is relatively over or under staffed	Higher the ratio Better it is
	Profit per Employee	Profit/No of Employees	It measures the efficiency of the bank's employees in maximizing the profits	Higher the ratio Better it is
Earnings Ability	Return on Assets	Net Profit after tax/Total Assets	It indicates the returns earned from the assets of the bank	Higher the ratio Better it is
	Income Spread/Total Assets Ratio	Interest Income Earned- Interest expended)/ Total Assets	It indicates how much a bank can earn for every rupee of investments made in assets	Higher the ratio Better it is

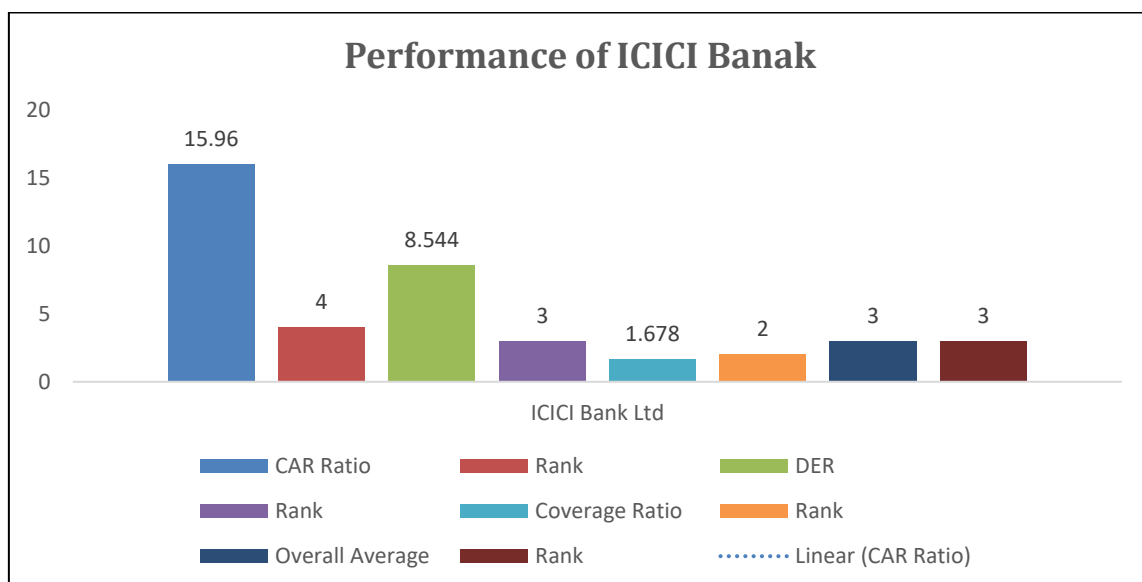
	Operating Profit/Total Assets Ratio	Operating Profit/Total Assets	It indicates the bank's ability to earn after meeting its operating expenses for the investments made in assets	Higher the ratio Better it is
	Cost/Income Ratio	Operating Expenses/Net Income	It indicates the bank's ability to meet its operating expenses from revenue generated	Lower the ratio Better it is
<b>Liquidity</b>	Cash Asset/Total Assets Ratio	Cash Asset/Total Assets	It measures cash in proportion to total assets	Higher the ratio Better it is
	Govt Securities/Total Assets Ratio	Govt Securities/Total Assets	It measures govt securities in proportion to total assets	Higher the ratio Better it is
	Liquid Assets/ Total Deposits Ratio	Liquid Assets/ Total Deposits	It indicates the bank's ability to meet its deposit obligations with available liquid funds	Higher the ratio Better it is

**Table 2. Ranking under Capital Adequacy Parameter of Your Perfect Banking Partner**



$$\text{Capital Adequate Ratio (CAR) Formula} = \frac{(\text{Tier 1 Capital} + \text{Tier 2 Capital})}{\text{Risk Weighted Assets}}$$

Banks	CAR Ratio	Rank	DER	Rank	Coverage Ratio	Rank	Overall Average	Rank
Federal Bank Ltd	15.96	4	8.544	3	1.678	2	3.00	3



From the above table and graph, it is interpreted that Industrial Credit and Investment Corporation of India Bank (ICICI) shows the Capital Performance is 15.96 and the rank is 3. Overall Performance of the Federal Bank Ltd is good.



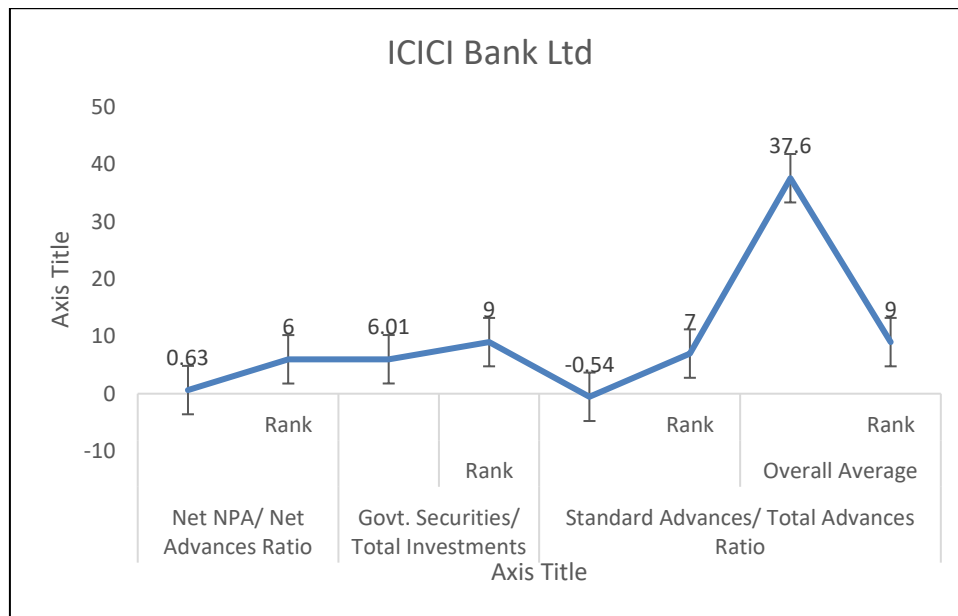
**Table 3. Ranking under Asset Quality Parameter of Your Perfect Banking Partner**

**NNPA Formula**

$$\text{NNPA Ratio} = \frac{\text{Total NNPA}}{\text{Total Advances}}$$

NNPA=GNPA minus the provision made by the bank

Name of the Bank	Net NPA/ Net Advances Ratio	Rank	Govt. Securities/ Total Investments	Rank	Standard Advances/ Total Advances Ratio	Rank	Overall Average	Rank
Federal Bank Ltd	0.63	6	6.01	9	(0.54)	7	37.6	9



From the above table and graph, it is interpreted that Industrial Credit and Investment Corporation of India Bank (ICICI) shows the Capital Performance is 15.96 and the rank is 3. Overall Performance of the Federal Bank Ltd is good.

**Table 4. Composite Ranking (CAMEL)**

Bank Name	Rank (C)	Rank (A)	Rank (M)	Rank (E)	Rank (L)	Overall Average	Rank
Federal Bank Ltd	3	4	4	3	10	4.80	3

From the above table, the composite rankings of the banks i.e., based on the five parameters interpret Investment Corporation of India Bank (ICICI) shows the Capital Performance is 15.96 and the rank is 4. Overall Performance of the Federal Bank Ltd is good.

**Table 5. Ranking under Management Efficiency Parameter**

Banks	Total Advances/ Total Deposit Ratio	Rank	Business per Employee	Rank	Profit per Employee	Rank	Overall Average	Rank
Federal Bank Ltd	1.0128	1	107,203,933.25	9	1,388,057.46	2	4.00	2



From the above table, it is interpreted that among all the banks and among private sector banks followed by Federal Bank Ltd was comparatively better than other k were the least at management efficiency

**Table 6. Ranking under Earnings Ability Parameter**

Banks	Return on Asset	Rank	Income Spread/ Total Assets Ratio	Rank	Operating Profit/Total Assets Ratio	Rank	Cost/Income Ratio	Rank	Overall Average	Rank
Federal Bank Ltd Ltd	1.636	3	7.12	5	(0.45)	4	34.95	4	4.00	4

From the above table, it is interpreted that among all the banks was performing well having highest earnings ability ratio, followed by were comparatively better than other the least at earnings ability.

**Table 7. Ranking under Liquidity Parameter**

Banks	Cash Asset/ Total Asset Ratio	Rank	Government Securities/ Total Asset Ratio	Rank	Liquid Asset/ Total Deposit Ratio	Rank	Overall Average	Rank
Federal Bank Ltd	0.0784	5	0.0022	10	0.136	3	6.00	8

From the above table, it is interpreted that among all the banks stood first in maintaining absolute liquidity every bank required to maintain to better respond immediately to the critical conditions at the time of huge withdrawals by the customers.

**Table:8. CAMEL RATIIONS.**

Year	2017-18	2018-19	2019-20	2020-21	2021-22	Average
<b>CAR Ratio</b>	18.74	17.70	17.02	16.64	17.39	17.498
<b>Debt/ Equity Ratio</b>	6.57	6.65	6.64	6.86	6.58	6.66
<b>Coverage Ratio</b>	1.52	1.62	1.68	1.78	1.84	1.688
<b>Net NPA/ Net Advances Ratio</b>	0.77	0.97	1.61	2.67	4.89	2.182
<b>Government Securities/ Total Investments Ratio</b>	0.004	0.004	0.009	0.014	0.013	0.0088
<b>Standard Advances/ Total Advances Ratio</b>	3.22	3.03	3.78	5.21	7.89	4.626
<b>Total Advances/ Total Deposit Ratio</b>	0.992	1.02	1.072	1.033	0.947	1.0128
<b>Business per Employee (in Cr.)</b>	93,911,715.27	92,849,708.72	112,938,140.26	118,696,176.03	117,623,925.97	107,203,933.25
<b>Profit per Employee (in Cr.)</b>	1,341,411.86	1,358,302.69	1,684,887.74	1,347,597.82	1,208,087.19	1,388,057.46
<b>Return on Asset</b>	1.70	1.78	1.86	1.49	1.35	1.636
<b>Income Spread/ Total Assets Ratio</b>	7.82	7.35	7.04	6.83	6.58	7.12



<b>Operating Profit/Total Assets Ratio</b>	0.00	(0.10)	(0.15)	(0.77)	(1.25)	(0.45)
<b>Cost/Income Ratio</b>	28.67	31.3	32.70	39.40	42.68	34.95
<b>Cash Asset/ Total Asset Ratio</b>	0.077	0.069	0.065	0.083	0.098	0.0784
<b>Government Securities/ Total Asset Ratio</b>	0.001	0.001	0.003	0.003	0.003	0.0022
<b>Liquid Asset/ Total Deposit Ratio</b>	0.142	0.125	0.117	0.142	0.154	0.136

### 11. FINDINGS OF THE STUDY

- The study found that Yes bank and Federal Bank Ltd have the lowest net NPA ratio compared to other banks. Punjab National Bank has the highest net NPA ratio among other banks. (Table 4)
- The study found that Kotak Mahindra has utilized more government securities followed by Canara Bank. Federal Bank Ltd could not invest more in government securities. (Table 4)
- The study found that standard advances to total advances ratio of Punjab National bank is highest among all the other selected banks. Yes, bank is the weakest in this compared to other banks. (Table 4)
- The study found that among all the banks and among private sector banks, Federal Bank Ltd are comparatively better than other public sector banks. Canara bank and Punjab National bank are the least at management efficiency. (Table 8)
- The study found that total advances to total deposit ratio of Federal Bank Ltd is higher than other banks and Bank of Baroda is the lowest among all. (Table 5)
- The study found that Business per employee of Bank of India is the highest compared to other banks, followed by Bank of Baroda. Kotak Mahindra is ranking last among all the banks. (Table 5)
- The study found that Yes bank is better among all banks in having highest profit per employee followed by ICICI.

### 12. SUGGESTIONS OF THE STUDY

CAMELS model is important tool to evaluate the relative financial strength of a banking system and to suggest suitable remedies to improve the deficiencies. CAMELS model is a ratio-based model to appraise the performance of banks. Due to fundamental changes in the banking sector in the recent years, the central banks all around the world have improved their supervision quality and techniques. In evaluating the function of the banks, many of the developed countries are now following uniform financial rating system (CAMEL RATING) along with other existing procedures and techniques.

### 13. CONCLUSION OF THE STUDY

The above study is a humble effort to describe the various ratios which are helpful for the assessment of financial performance of banking sector. The ratios described in the present study are used by various researchers for the evaluation of banks performance in their respective studies. Different banks are ranked according to the ratings obtained by them on the five parameters. In the present study we used five important parameters like Capital Adequacy, Assets Quality, Management Efficiency, Earning Quality and Liquidity for assessing financial performance of the selected private sector banks in India and to determine the factors that predominantly affect the financial performance of the Indian banking sector with efficiently and accurately.

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