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Impact Of Financial Ratio Analysis On Profitability Of Leading Indian Bank: A Case Study Of State Bank Of India (SBI)

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Abstract:

In this study, the researcher has focused on the impact of financial ratio on the profitability of an Indian bank with special reference to State Bank of India. The researcher has strictly focused on this bank because, it is the largest and oldest commercial bank in the history of India with a glorious past of over 100+ years. Not only this, currently SBI acts as the bank with largest number of customers in the world. As per latest reports by Reserve Bank of India, sand many other financial institutions, the customer base of SBI exceeds 52 crores, comprising of both domestic and international customers. SBI solely accounted for 1.1% of 6.7% share in India's global economy incremental growth in FY25.

The research aims to analyze how key ratios like liquidity ratio (cash ratio, credit deposit ratio), solvency ratio, and capital adequacy ratio- affect the overall profitability of the bank. Various analysis tools such as regression, and correlation are used to prove the study. The study is solely based on secondary data collected from annual reports of SBI, RBI, and other financial institutions. The research adopts a descriptive, and analytical research design to intercept the financial health of bank. The study focuses on quantitative aspect rather than qualitative aspect. The study will be useful for investors, bank management, consulting aspirants, financial analyst, and policy makers.

Overall, the research contributes to the existing knowledge by providing insights into financial ratio analysis in assessing and enhancing the profitability of a major public sector bank.

Keywords: Financial ratios, profitability, analysis, State Bank of India

1.1 INTRODUCTION:

Banks act as the life blood of an economy. They act as a bridge between lenders (depositors), and borrowers (loan seekers), and ensure smooth flow of money in the market. The word ‘Bank’ is derived from Italian word ‘BANCA’, which means ‘BENCH’. The term came from medieval Italy, where moneylenders used to sit on wooden benches in open markets and lend money. Some historians also connect it to the German word ‘BANCK’, which means ‘mound of money’.

- **According to Gilbert,” Bank is one who deals in capital or in more defined words in money.”**
- **According to the Oxford English Dictionary,” A bank is an establishment for custody of money received from or on behalf of its customers. It essential duty is to pay their drafts on it. Its profits arise from the use of the money left unemployed by them.”**

In India, banking sector acts as one of the strongest pillar of the financial structure. This sector has seen rapid growth over the past two decades, with a massive growth in market capitalization from INR 1.8 Trillion in 2005 to INR 91 Trillion in 2025. Banks in India constitutes of 57% of nation’s fiscal services.

1.2 STATE BANK OF INDIA (SBI)

SBI sets its foot as the largest and oldest bank in existence with a history of over 200 years. During the 1800s, three major banks were formed by the presidency government, the Bank of Bengal (1806), Bank of Bombay (1840) and Bank of Madras (1843). Later, in the year 1921, these banks merged to form the ‘Imperial Bank of India’, which was later nationalized in the year 1955, and was renamed as the ‘State Bank of India’ on 1st July 1955.

SBI acts as the backbone of Banking and Financial Service Sector in the country. Its headquarters is in Mumbai, India. It has over 240 overseas branches and is spread across 29 countries across boundaries. It holds strong reputation for providing reliable banking services to its customers. Its branch network is spread across rural, semi-urban and urban areas.

In FY25, SBI alone accounted for 16% of India’s total GDP (Gross Domestic Product) addition. SBI has the largest consumer base of more than 52crores, which keeps on growing with each passing year. SBI handles 34% of India’s total cash dispensed, and it solely accounted for 1.1% of 6.7% share in India’s global economy incremental growth in FY25.

1.3 STATEMENT OF PROBLEM:

The Banking Sector plays an important role in the economic development of a country, especially in developing economies like India. Banks not only provide financial services but also contribute in investments, employment generation, and economic growth. In the recent years, there have been a lot of change in technology and customer savings pattern, because of this financial performance and profitability of banks have become a major concern for researchers, policymakers, and financial consultants. With increase in competitions, it has become important for banks to maintain strong financial performance, and improve their profitability. Financial ratio analysis is considered one of the most important tools for measuring financial performance of an organization. It helps analyze various aspects of bank such as liquidity, leverage, market value, solvency, and efficiency. Financial ratios provide meaningful insights on the financial health of a bank and help in decision making for investors, management, other share shareholders. Despite the importance of financial ratios, many studies have focused only on comparative study between public banks and private banks, and general financial performance, rather than examining how specific ratios affect the profitability of leading public sector bank.

The State Bank of India, being a leading public sector bank, plays a vital role in the Indian Banking System. It has a wide number of branches both in India and abroad, and provide financial services to millions of customers worldwide. Although SBI has shown huge growth in recent years, its profitability has been affected by various factors such as non-performing assets, operational cost, and changes in financial performance. Therefore, it becomes necessary to analyze if financial ratios can effectively explain the profitability of SBI and identifying the main ratios that have direct impact on profitability of SBI.

1.4 SIGNIFICANCE OF THE STUDY

- The significance of the study can be determined by the fact that it examines the impact of financial ratio analysis on the profitability of State Bank of India, which is currently the leading public sector bank of India.
- This study is useful for students and researchers who are conducting or wants to conduct research in the field of Banking and Finance.
- Since, the study contains analysis of previous five year financial data of State Bank of India, and provides insights on it. It can also be used as a reference by students from business analytics and consulting backgrounds. It provides a clear understanding of how financial ratios like liquidity ratio, leverage ratio, solvency ratio, etc are used to measure financial performance.
- The study is significant for investors, as it helps them to understand financial strength and profitability position of state bank of India. Investors can use this data to make better decisions regarding investment and financial planning.
- The study also helps in identifying the trends in profit over the selected period, which provides valuable information about the growth of bank.
- The study also helps in identifying strong and weak areas of financial performance and provides useful insights that may be useful for future planning and decision making.
- Therefore, the study is significant not only from academic point of view, but also from practical point of view, as it helps students, researchers, and banking professional to understand the relationship between financial performance and profitability of State Bank of India.

1.5 SCOPE OF STUDY:

The scope of the study for the research topic, 'Impact of financial ratio analysis on the profitability of leading Indian Bank: A case study of SBI is mentioned as follows:

- The present study is undertaken to examine the impact of financial ratio analysis on the profitability of State Bank of India. The scope of study is confined to analyzing the financial performance of State Bank of India using selected financial ratios and evaluating their relationship with profitability.
- The study mainly focuses on financial ratios such as liquidity ratio, leverage ratio, efficiency ratio, solvency ratio, and market value ratio to understand the financial performance of bank such as net profit margins, earnings per share, return on assets and equity received by bank, and bank's ability to operate in long run and generate reasonable profit.
- The study mainly focuses on secondary data collected from reliable sources such as, annual report and financial statement of State Bank of India, trends published by Reserve Bank of India, and other financial journals.
- The study mainly focuses on a time period of five years starting from 2020-2025. The study is restricted only to India and only one bank i.e., State Bank of India. The result of this research may not be applicable to other financial institutions or banks.

2. LITERATURE REVIEW:

A Literature review is a structured summary and analysis of existing research works. It helps new researchers to find gap and in the previous research work, and find practical solutions for it.

[1] **Subalakshmi et al. (2016)**deals with the performance of SBI with reference to Ratio analysis and Percentage analysis. The performance of SBI has been analyzed in terms of deposit mobilization, loans and advances, investment position, non-performing assets, earnings and profitability efficiency. The study shows that SBI has maintained required standards and is running profitability. The profitability of SBI has increased because of its expansion in commercial market, and improving service quality level.

[2] Subbaraju, H.M. (2005)his study focuses on examining trends in operating profitability commercial bank i.e., State Bank of India. It focuses on analyzing the determinants like interest revenue, interest cost, and operating cost of bank. The research aimed to check operational efficiency and to study the methods undertakento improve profitability.

[3] Karthikeyan& Kumar (2023)the researcher analyzed the financial performance between SBI & HDFC Bank in India. The result of the study was concluded under topics such as number of branches, number of ATMs, Deposit, Advance, and NPA. The researchers have used Trend Line Graphs and R-squared value to prove their study. The study concluded that banks should take steps to minimize the risk of NPAs and ensure stability in financial system.

[4] Pokale&Shetiya (2024)their study analyzed the financial performance of Indian banks using profitability, asset quality, and liquidity ratios. The study used secondary data from financial statements from selected banks and concluded that profitability ratios were the most significant indicators of financial performance. The study also emphasized on the importance of maintaining a balance between profitability and liquidity for long-term sustainability.

[5] Paul, S. (2024) conducted a comparative analysis of public and private sector banks with special reference to State Bank of India and IDFC First Bank. The study used statistical tools and ratio analysis to compare the financial performance for past five years. The study concluded that ratios like Return on Assets, Return on Equity and Operating Profit Ratios are most are most significant indicators of financial performance of banks.

[6] Balaji, C. (2016) did comparative study on financial performance of selected public & private sector banks in India. The central banks included in the study are SBI, BOB, PNB, CNI, IDBI Bank. Whereas, the private banks include HDFC, ICICI, Kotak Mahindra, Axis, and Indusind Bank. The study concluded that both the categories of bank showed good growth in total income during the period of study. It also showed an increase in net interest income trend in both sectors. The study also concluded that the volume of profit in public sector banks were more as compared to that of private sector banks.

[7] Sampatrao, S.B. (2019) the study focuses on comparative analysis of SBI and ICICI bank's services and commitments towards its customers in the district of Nashik, Maharashtra. It helps identifying the strengths, weaknesses, and service gap of these banks. The study aims to compare which among the two banks provide better customer services and achieve maximum customer satisfaction. The study is limited to a particular area so that it could give detailed information about the topic.

[8]Dube, C. (2025) focuses on comparative study of financial performance of SBI and ICICI Bank in Jaipur District of Rajasthan. The study focuses on understanding financial dynamics, strengths and weaknesses of these banks by analyzing their profitability, liquidity, efficiency, and solvency ratio. ROE, ROA, and NPA ratios are examined to judge the overall financial stability and efficiency of banks.

[9] Sisodia, G. (2024) focuses on analyzing the impact of merger on stock prices of State Bank of India. The stock price of bank, one year before and after merger were examined using SPSS. The effect on profitability is analyzed using spread and burden ratio by applying paired test for the period of eight years, four years before the merger, and four years after the merger. The risk factor is assessed using CAMEL model. The research used trends of all ratios from 2009-10 to 2020-21.

[10] Sharma et al. (2018) focuses on comparative study of financial performance of public sector banks using company's balance sheets, and ratio analysis. The study focused on ratios such as Return on Assets (ROA), Return on Deposit (ROD), Return on Equity (ROE), Net Interest Margin, and NPA Ratio. The study concluded that in most of the parameters SBI is found to outperformed Canara Bank and PNB.

[11] Mohanty, S. (2021)compares the financial performance of second leading private and public sector bank i.e., ICICI, and Indian Overseas Bank (IOB). The study is focused over a time period of five years from 2016-2017 to 2020-2021. All the data used in the study are secondary data and are taken from annual reports of the particular banks, press reports, and selected study materials. The study concludes that ICICI Bank has more deposits and Investments as compared to IOB. The study concludes that ICICI have good profitability, good liquidity status, and better asset quality management, which proves that ICICI has better financial Performance as compared to the other.

[12] Karthick et al. (2016)focuses on performance evaluation of selected public and private sector banks in India. The study uses tools like Net Profit ratio, ROA, Earnings-per-share, Current ratio, Quick ratio, etc. The study concludes that the bank should maintain friendly customer environment to satisfy their customer and retain them. Bank should have an ability to repeat and sustain ability in future.

[13] Kant, U. (2024)study revolves around the impact of technological advancement on the profitability and productivity of public and private sector bank (SBI, BOB, HDFC, and ICICI Bank). It analyses the technological advancement in the banking sector.

[14] Sameul, R.S. (2018) focuses on impact of merger and acquisitions on HDFC Bank. It compares the profitability of banks before and after the merger. The study focused on the attitude of employees in the bank during pre-merger and post-merger period, the research focused on measuring employee perception related to merger and the difficulties faced by them in the working environment post merger. It also focused on measuring employee productivity after merger.

[15] Sharma, R. (2013) focuses on comparative study in public and private bank with special reference to SBI and HDFC. It focuses on the impact of e-banking on the given banks, and how it has affected their operations. The study compares the affect of e-banking on these banks and the challenges faced by them.

[16] Satyanarayan& Kale(2022)conducted a study on key financial ratios of SBI. The study analyzed various ratios such as liquidity ratio, profitability ratio, and efficiency ratio using data from financial statements. The study concluded that profitability of SBI depends widely on operational efficiency and asset quality.

[17]James et al. analyzed how a company's financial performance can be determined using financial. It focuses on time period from FY2017- FY2021. The study uses databases from annual reports, EMIs, money control, and yahoo finance. It also evaluate fiscal analysis using Duo Point analysis.

[18]Bansal, R. in his study investigates performance of commercial banking sector for a period of April-2011 to March 2014. Statements of finance for Axis, ICICI, Federal and HDFC Bank were obtained from databases such as CMIE, Prowess, money control, and yahoo. The researcher summarized necessary data derived from financial statements and computed it with ratios to prove his hypothesis.

[19]Basha and Tejas (2021) studied determinants of profitability in Indian commercial banks. Their findings showed that liquidity, ROA, ROE, and NIM significantly affects bank's operational efficiency.

[20] Vyas, D. M. (2020) compared the profitability and capital structure of State Bank of India and HDFC Bank. The research found that both the bank were working at par and were better than each other in specific sectors. It also absorbed that financial ratios such as ROE, ROA, and CAR significantly influence profitability and investor confidence..

3. RESEARCH GAP:

After reviewing previous papers related to the topic, several vital research gaps were identified. Some of these gaps are as follows:

- Most previous studies have focused on comparing two or more banks, rather than performing a detailed study on one particular bank. This led to the outcome that specific characteristics of SBI were not studied involving much.
- Earlier research primarily focused on general performance evaluation, /and very few of them focused on studying ratio specially, and even fewer focused on studying its impact on profitability.
- The customer base of SBI has grown rapidly over the past five years, and on contrary to that, hardly any study has been done on its fiscal health in the recent years. This makes it acts as a huge knowledge gap for the researcher, and make the research even more crucial.
- The introduction of Artificial Intelligence in BFSI sector has also changed the way customers deal with the money, many people in today's time prefer to invest their money, rather than keeping them in savings account. This has also affected the profit of these firms. These changes have made most of the present researches outdated.
- Previous studies have used traditional method for hypothesis testing and proving their data without applying statistical tools such as regression and correlation.
- The rapid growth of online banking services, and services like YONO, and UPI transactions have highly transformed the functioning of banks there evaluation needs to be done on the basis of current situation.
- Other scholars have focused on Liquidity ratio, and solvency ratio for comparison, but none of them have talked about Market Value Ratio. Since they talk about equity and market capital, including them in study is necessary.
- Existing literatures have mainly used indicators like ROA, and NIM but hardly any of them have used ROE, which makes the study biased.

4. RESEARCH QUESTION:

These questions are formed after careful analysis of the research gap by the researcher. The research questions for the particular research topic are as follows:

- What is the impact of financial ratio analysis on the profitability of State Bank of India?
- How has the profitability of State Bank of India changed over the years (5 years)?
- What is the relationship between financial ratios and profitability of State Bank of India?

5. RESEARCH OBJECTIVES:

The objective of the research topics are as follows:

- To study the impact of financial ratio analysis on profitability of State Bank of India.
- To examine the trends in profits of SBI over the time period of past five years.
- To examine the relationship between financial ratios and profitability of SBI.

6. HYPOTHESIS:

H_0: Financial ratio analysis has no significant impact on the profitability of SBI.

H_1: Financial ratio analysis has significant impact on the profitability of SBI.

7. RESEARCH METHADOLOGY

The research topic is descriptive and analytical in nature. It aims to analyze the impact of financial ratio analysis on the profitability of State Bank of India. The study is solely based on secondary data collected from financial reports of banks and other published sources.

7.1 DATA COLLECTION: The research is based entirely on secondary data collected from reliable resources, including institutional and financial resources. The primary sources of data include:

- Annual reports and financial statements of State Bank of India from its official websites.
- Data from Reserve Bank of India for analyzing current trends and progress of banking in India
- Articles from business journals like The Economic Times.
- Data from IBEF.
- Data from Ministry of Finance.

7.2 PERIOD OF STUDY: The study covers the period of five years from FY2020-21 to FY2024-25 in order to analyze the trend and impact of financial ratio on profitability of State Bank of India.

7.3 VARIABLES USED: The study contains of dependent variables (x) and independent variables (y). The variables are as follows:

- **DEPENDENT VARIABLE (X):**
  Net Profit Ratio
  Return on Assets (ROA)
  Return on Equity (ROE)
- **INDEPENDENT VARIABLE (Y):**
  Liquidity Ratio
  Leverage Ratio
  Solvency Ratio
  Capital Adequacy Ratio
  Market Value Ratio

7.5 TOOLS AND TECHNIQUES: The research contain statistical test to prove the reliability, relationship, and impact of study. These tests are as follows:

- **CORRELATION TEST:** Since the topic discuss about the impact of one factor on another, correlation test is used**.** Karl Pearson Correlation Coefficient that is a statistical method will be used to measure the relation between both variables.
- **REGRESSION ANALYSIS:** Regression analysis helps prove 'impact'. It helps us to study the impact of independent variable (financial ratio) on dependent variable (profitability).
- **TREND ANALYSIS:** Trend analysis helps to analyze the change in trend or financial pattern over the years. It will help us to determine the growth or decline in profitability of State Bank of India.
- **ANOVA TEST:** It is another test used for data analysis and hypothesis testing.

8. DATA ANALYSIS:

8.1 Credit Deposit Ratio and ROA:

Table 1: Data of CD Ratio and ROA

YEAR	CREDIT DEPOSIT RATIO	ROA
2019	75.72	0.06
2020	72.51	0.38
2021	66.53	0.48
2022	67.47	0.67
2023	73.13	0.96
2024	76.19	1.04
2025	78.14	1.1

Source: official website of SBI

Regression Statistics	
Multiple R	0.31
R Square	0.09
Adjusted R Square	-0.09
Standard Error	0.40
Observations	7

ANOVA

	df	SS	MS	F	Significant F
Regression	**1**	**0.08**	**0.088**	**0.52**	**0.50**
Residual	**5**	**0.81**	**0.16**		
Total	**6**	**0.90**			

	Coefficient	Standard error	t Stat	P-value	Lower95%	Upper95%	Lower 95.0%	Upper95.0%
Intercept	**-1.29**	**2.73**	**-0.47**	**0.66**	**-8.30**	**5.71**	**-8.30**	**5.71**
X Variable 1	**0.03**	**0.04**	**0.72**	**0.50**	**-0.07**	**0.12**	**-0.07**	**0.12**

Source: computed by researcher using MS Excel

Interpretation of the above equation:

- The coefficient of **X = 0.0270** is positive.
- It means that if credit deposit ratio increases by **1 unit**, then profitability **increases** approximately by **0.027 units**.
- The intercept value is -1.2936, which represents the value of profitability when the credit deposit becomes zero. Since a credit deposit ratio is unrealistic in banking, the intercept has little practical importance here.
- The value of r = 0.3071, it indicates a **positive correlation** between the variable, it shows that with increase in CD Ratio, ROA also tends to **increase** but the **relationship is weak.**

Here**, 9.43%** of the variation in profitability is explained by the independent variable, the other 90.57% is caused by other factors. It means the explanatory power of the model is low.

<u>8.2 Capital adequacy ratio and ROA:</u>

Table 2: Data of capital adequacy ratio and ROA for FY2019-FY2025

Year	Capital Adequacy Ratio	Return On Assets
2019	12.83	0.06
2020	13.06	0.38
2021	13.74	0.48
2022	13.83	0.67
2023	14.68	0.96
2024	14.28	1.04
2025	14.25	1.1

Source: official website of SBI

OUTPUT:

Regression Statistics	
Multiple R	**0.93**
R Square	**0.86**
Adjusted R Square	**0.83**
Standard Error	**0.16**
Observations	**7.00**

ANOVA

	df	**SS**	**MS**	**F**	**Significant F**
Regression	**1**	**0.77**	**0.77**	**30.70**	**0.00**
Residual	**5**	**0.13**	**0.03**		
Total	**6**	**0.90**			

	Coefficient	Standard error	t Stat	P-value	Lower95%	Upper95%	Lower 95.0%	Upper95.0%
Intercept	**-6.72**	**1.33**	**-5.03**	**0.004**	**-10.15**	**-3.29**	**-10.15**	**-3.29**
X Variable 1	**0.53**	**0.10**	**5.54**	**0.003**	**0.29**	**0.78**	**0.29**	**0.78**

Source: computed by researcher using MS Excel

Interpretation of the above equation:

- Here, -6.7169 = constant (intercept)
- 0.5349 = regression coefficient (slope)
- The positive regression coefficient of 0.5349 indicates that a one-unit increase in predictor leads to an increase of approximately 0.5349 units in profitability.
- The rate of r is 0.9273, indicates a very strong positive correlation between both. Since, ‘r’ is closer to ‘+1’, it suggests that both variable move in same direction and are highly related.
- The R^2 is 0.8599, it tells that approximately 85.99% of the variation in profitability is explained by the financial ratio analysis, while remaining 14.01% is influenced by other factors.
- Based on the above results, and high explanatory power of the model, it can be concluded that CAR has significant impact on the profitability of the SBI.

8.3 Price-to-equity ratio and Return on Equity:

Table 3: Data of P/E Ratio and ROE from 2021-2025

Year	P/E Ratio	ROE
2021	15.93	9.94
2022	13.91	13.92
2023	9.31	19.43
2024	11	20.32
2025	9.71	19.87

Source: Data collected from SBI official website

OUTPUT:

Regression Statistics	
Multiple R	**0.96**
R Square	**0.92**
Adjusted R Square	**0.89**
Standard Error	**1.52**
Observations	**5.00**

ANOVA

	df	SS	MS	F	Significant F
Regression	**1**	**77.07**	**77.07**	**33.20**	**0.01**
Residual	**3**	**6.96**	**2.32**		
Total	**4**	**84.03**			

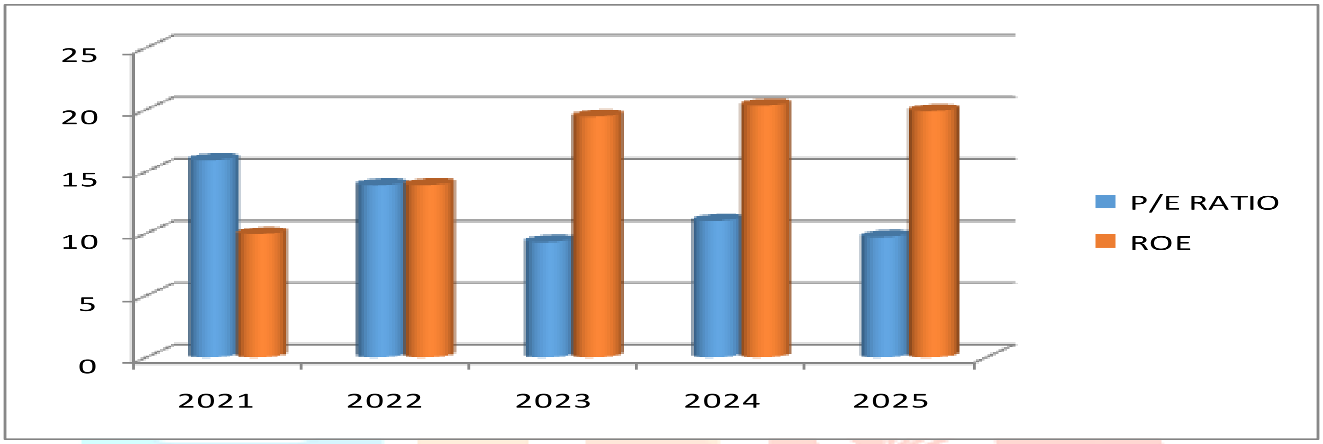
	Coefficient	Standard error	t Stat	P-value	Lower95%	Upper95%	Lower 95.0%	Upper95.0%
Intercept	**35.11**	**3.27**	**10.74**	**0.00**	**24.71**	**45.51**	**24.71**	**45.51**
X Variable 1	**-1.54**	**0.27**	**-5.76**	**0.01**	**-2.39**	**-0.69**	**-2.39**	**-0.69**

Source: computed by researcher using MS Excel

Interpretation:

- The value of 'r' lies very close to -1. This indicates a very strong negative correlation between both the variables used in the analysis.
- Therefore, changes in the financial ratio strongly affect the profitability.
- The value of R^2 is 0.9171, which means 91.71% in the profitability is explained by the p/e ratios included..
- Only about 8.29% of the variation is said to be affected by other factors.
- Although the sample size taken is small but the results still indicate a strong relation between the given variables.

Fig 1: Graph showing comparison of P/E Ratio and ROE



Source: Computed by researcher using MS Excel

In the above graph, we can see that the P/E Ratio and ROE has shown adverse relation with each other. ROE has continuously increased over the time with the decrease in P/E Ratio. When one was 15.93, the other was 9.94, whereas when the first declined to 9.71, the other increased to 19.87, shown inverse proportionality between them.

8.4 Price-to-book ratio and Return on Equity:

Table 4: Data of P/B Ratio and ROE from 2021-2025

YEAR	P/B Ratio	ROE
2021	1.51	9.94
2022	1.83	13.92
2023	1.69	19.43
2024	2.07	20.32
2025	1.77	19.87

Source: Official data of SBI

Regression Statistics	
Multiple R	**0.66**
R Square	**0.43**
Adjusted R Square	**0.24**
Standard Error	**4.00**
Observations	**5.00**

ANOVA

	df	**SS**	**MS**	**F**	**Significant F**
Regression	**1**	**36.08**	**36.08**	**2.26**	**0.23**
Residual	**3**	**47.95**	**15.98**		
Total	**4**	**84.03**			

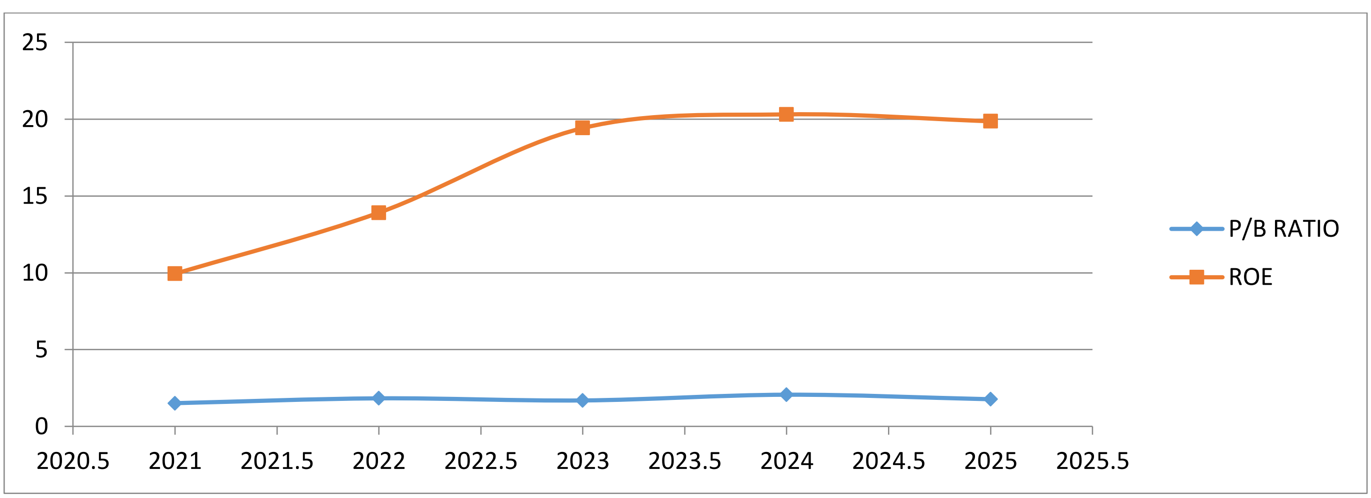
	Coefficient	Standard error	t Stat	P-value	Lower95%	Upper95%	Lower 95.0%	Upper95.0%
Intercept	**-9.34**	**17.42**	**-0.54**	**0.63**	**-64.78**	**46.10**	**-64.78**	**46.10**
X Variable 1	**14.68**	**9.77**	**1.50**	**0.23**	**-16.41**	**45.76**	**-16.41**	**45.76**

Source: computed by researcher using MS Excel

Interpretation:

- The value of 'r' indicates moderate positive correlation.
- It suggests both variables move in same direction. If P/B Ratio increases, ROE also increases.
- The R^2 indicates that 42.94% of variation in ROE is explained by the other, and the rest 57.06% is influenced by other factors like market conditions, economic environment, etc.

Fig 2: Graph of P/B Ratio and ROE from 2021-2025:



Source: computed in MS Excel using data from Table 6.

The previous figure shows change in Return on Equity with reference to the change in Price-to-book ratio. Here, we see that ROE increases with increase in P/B Ratio, hence showing a positive relation between both the dependent and independent variable.

9 COMPARATIVE ANALYSIS OF REGRESSION RESULT:

The comparative analysis of all regression models reveals the following findings:

VARIABLES	Correlation	R^2 Value	Regression equation	Nature of relationship
Credit Deposit Ratio and ROA	**0.3071**	**0.0943**	**-1.2936 + 0.0270X**	**Positive (moderate)**
Capital Adequacy Ratio and ROA	**0.9273**	**0.8599**	**-6.7169 + 0.5349X**	**Positive (very strong)**
P/E Ratio and ROE	**-0.9577**	**0.9171**	**35.1121 + -1.5383X**	**Negative (very strong)**
P/B Ratio and ROE	**0.6553**	**0.4294**	**-9.3388 + 14.6757X**	**Positive (strong)**

The above analysis shows:

- Leaving credit deposit ratio that has a weak impact, all the other financial ratios had shown strong impact on the profitability ratio.
- Capital adequacy ratio has shown a positive impact, whereas the other two have shown strong negative impact on ROE.

Therefore, we can conclude that:

- **H_0 gets rejected.**
- **H_1 (alternative hypothesis) is accepted**

10. Achievement of Objectives:

Objective1: This objective has been successfully achieved through regression analysis of selected financial ratios with profitability indicators. The study examined the relationship between CD Ratio and ROA, Capital Adequacy ratio and ROA, P/E Ratio and ROE, and P/B Ratio and ROE.

The findings revealed that:

- CD Ratio has a moderate positive relationship with ROA.
- Capital Adequacy ratio has a very strong positive relationship with ROA.
- P/E Ratio has a very strong negative relation with ROE.
- P/B Ratio has a strong positive relation with ROE.

Therefore, the study confirms the financial ratio analysis significantly influence the profitability of SBI. Hence, objective is achieved.

Objective2: It was achieved through the analysis of SBI's profitability during the study period, the analysis showed overall profitability, although fluctuations were observed due to changes in operational efficiency, capital structure, and other factors. The trend analysis indicated that profitability generally improved over time. Therefore, the second objective was also successfully achieved.

Objective 3: This objective was achieved by conducting correlation and regression analysis between the selected variables. The output demonstrated that financial ratios and profitability are closely associated with each other. Thus, the study successfully established the existence and nature of relationships between both indicators of SBI. Therefore, third objective has been achieved.

11. FINDINGS AND CONCLUSION:

11.1 FINDINGS:

The findings revealed that the CD Ratio has a positive but moderate relationship with ROA, as indicated by a correlation coefficient of 0.3071 and an R^2 value of 0.0943. This suggests that changes in the first one explain only a small portion of variation is ROA. Therefore, while lending activities contribute to profitability, their impact is relatively limited.

The solvency ratio demonstrated a very strong positive relation with correlation coefficient of 0.9273 and an R^2 value of 0.8599. It indicates that maintaining adequate capital properly improves bank's financial stability and profitability.

The analysis of P/E Ratio and ROE revealed a strong negative relationship, with a coefficient of -0.9577 and R^2 value of 0.9171. This suggests increase in one is associated with the decrease in another. The result indicates that market valuation and profitability may, move in opposite directions under certain conditions.

Further, the P/B Ratio showed a strong positive relationship with ROE, with a coefficient of 0.65334 and an R^2 value of 0.4294. This implies that improvements in the market value of SBI relative to its book value are associated with higher profitability levels.

Overall, the study found that most of the selected ratios have shown significant impact on the profitability, highlighting the importance of financial ratio analysis in evaluating the financial performance of SBI.

11.2 CONCLUSION:

The study concludes that financial ratio plays a vital role in determining the profitability of SBI. The results indicate that profitability is influenced by various financial factors, though the amount and degree of change vary from each other. Here, Capital adequacy ratio and P/B Ratio has shown positive influence on profitability, whereas, the other two have shown negative impact. It also shows that most ratios have shown strong relation, but on the other hand one of them has shown moderate relation.

The regression test confirms that financial ratios are effective tools for assessing the profit making capacity of the bank. The findings support the alternative hypothesis, while the null hypothesis is rejected.

The study also tells that maintaining proper capital levels, effective utilization of resources, and strong market performance are essential for profit making. Therefore, the analysis of these ratios can serve as an important tool for management, investors, researchers, and policymakers in evaluating the financial health and performance of bank. Overall, SBI has shown a meaningful relation between the variables, confirming the motive of the study.

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