

# “A Study on The Financial Soundness and Growth Dynamics of Bank of Baroda”

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**Abstract:** This research seeks to evaluate the financial stability and growth patterns of Bank of Baroda over the last five years. As a prominent public sector bank in India, Bank of Baroda holds a crucial position within the nation's banking and financial landscape. The analysis centres on essential financial metrics, including profitability, asset quality, capital adequacy, and management efficiency. Furthermore, the study examines the bank's dividend policy and its effects on shareholder value. By conducting a thorough review of annual reports, financial statements, and performance ratios, this research reveals trends in the bank's financial condition and growth path. The results aim to shed light on how well the bank has managed regulatory hurdles, market competition, and economic changes, ultimately providing recommendations for stakeholders and policymakers to improve the institution's long-term performance and sustainability.

**Key Words:** Financial Stability, Growth Patterns, Profitability, Asset Quality, Capital Adequacy, Dividend Policy

## I. Introduction:

Bank of Baroda (BOB or Bob) is a public sector bank owned by the Indian government, based in Vadodara, Gujarat. It ranks as the third largest public sector bank in India, trailing only the State Bank of India. According to 2023 statistics, it holds the 586th position on the Forbes Global 2000 list.

The bank was established on July 20, 1908, by the Maharaja of Baroda, Sayajirao Gaekwad III, within the princely state of Baroda, Gujarat. On July 19, 1969, the Government of India nationalized Bank of Baroda, along with 13 other significant commercial banks in the country, and it was classified as a profit-generating public sector undertaking (PSU).

## Problem statement:

In the ever-evolving and competitive landscape of the Indian banking industry, it is vital for public sector banks to maintain financial stability and achieve sustainable growth. Bank of Baroda, despite being one of the largest public sector banks in India, has faced varying trends in profitability, asset quality, and dividend distribution in recent years.

To meet the needs of stakeholders, including investors and regulators, it is crucial to gain a comprehensive understanding of how effectively the bank is managing its resources, upholding asset quality, and generating value for its shareholders. Consequently, a thorough assessment of the bank's financial performance, management efficiency, asset quality, and dividend policy is necessary to pinpoint both strengths and areas that require attention.

## Objectives:

- ❖ To evaluate the bank's profitability and management efficiency.
- ❖ To assess the asset quality and management efficiency.
- ❖ To analyse the banks dividend policy and its impact on shareholder value.

## Need of the study:

- To understand the financial stability and overall performance of Bank of Baroda.
- To help stakeholders make informed investment and financial decisions.
- To assess the banks ability to manage risks and sustain profitability.

## Scope of the study:

**Time Coverage:** The analysis spans five financial years, from 2020-21 to 2024-25, utilizing the standalone balance sheet data of Bank of Baroda.

**Profitability & Management Efficiency:** It examines the bank's profit generation efficiency through ratios such as Return on Assets (ROA), Return on Net Worth (RONW), and Net Interest Margin (NIM).

**Asset Quality:** The research evaluates the quality of the bank's assets by analyzing ratios like the Credit-Deposit Ratio, Advances-to-Deposits, and the trends in loans and reserves.

**Dividend Policy & Shareholder Value:** It investigates the trends in dividend payouts and their impact on shareholder value using metrics such as Dividend Payout Ratio, Book Value per Share, and Adjusted Book Value.

**Overall Analysis:** The study provides a comprehensive overview of the bank's financial health and operational efficiency over the specified period.

## II. Review of literature:

S. Shankarii and E. Muthukumar (2017), analyzed the financial performance of Canara bank with special reference to Coimbatore city. Their objectives were to analyze the financial statements of the bank to assess its true financial position by the use of ratios and to find out their cent trend. They used secondary data for the period of 5 years from 2011 – 12 to 2015 - 16. They used ratio analysis and trend analysis tools for their study.

Chaudhry & Singh (2012) taking asset quality as the base, investigate the impact of the financial reforms of 1991 on the increase in soundness of Indian Banking. The research identified risk management, NPA levels, effective cost management and financial inclusion as the key players that ensure the bank soundness in India

Shikha Agrawal, Prof. R. S. Meena “Financial Performance Appraisal of Indian Banks: A Comparative Study of BOB and HDFC Bank” Pacific Business Review International, Volume 13, issue 5 November 2020.

## III. Research Methodology:

- ✓ The study utilizes secondary data gathered over the last five years to evaluate the financial stability and growth trends of Bank of Baroda. Data sources include annual reports and financial statements from Bank of Baroda for the past five years.
- ✓ Publications from the Reserve Bank of India (RBI), along with regulatory guidelines and banking industry reports, were also reviewed.
- ✓ Market analysis reports and economic surveys pertinent to the banking sector were included in the data collection.
- ✓ Additionally, scholarly articles, research papers, and reputable financial journals contributed to the research.

## Research Gap:

Although financial data and annual reports are accessible, there is a scarcity of academic research that has thoroughly combined profitability metrics, efficiency ratios, asset quality trends, dividend policy behaviour, and statistical regression models to evaluate the long-term financial performance of Bank of Baroda during the post-COVID recovery phase.

**Lack of Comprehensive Financial Evaluation** Many earlier studies have concentrated solely on either profitability or asset quality, often treating them as separate entities. My project addresses this oversight by integrating various performance metrics such as Net Profit Margin (NPM), Return on Assets (ROA), Return on Net Worth (RoNW), Cost-to-Income ratio, Gross Non-Performing Assets (GNPA), and loan growth, thereby offering a more complete perspective on financial health.

**Limited Application of Statistical Analysis in Previous Research** Historically, many studies have relied primarily on ratio analysis without delving deeper. This project enhances the existing methodology by incorporating regression analysis to statistically explore the relationships among critical indicators, such as the correlation between Loans & Advances and Profit After Tax (PAT). This approach uncovers more profound insights into the cause-and-effect relationships at play.

**Insufficient Attention to Post-Pandemic Recovery** There exists a notable gap in the literature regarding the recovery trajectories of Indian banks following the COVID-19 pandemic, particularly from FY20 to FY24. This project specifically examines the financial recovery of Bank of Baroda during this timeframe, thereby providing valuable and timely insights into the sector's rebound.

## Data collection method:

This research utilizes secondary data gathered over the last five years to evaluate the financial stability and growth trends of Bank of Baroda.

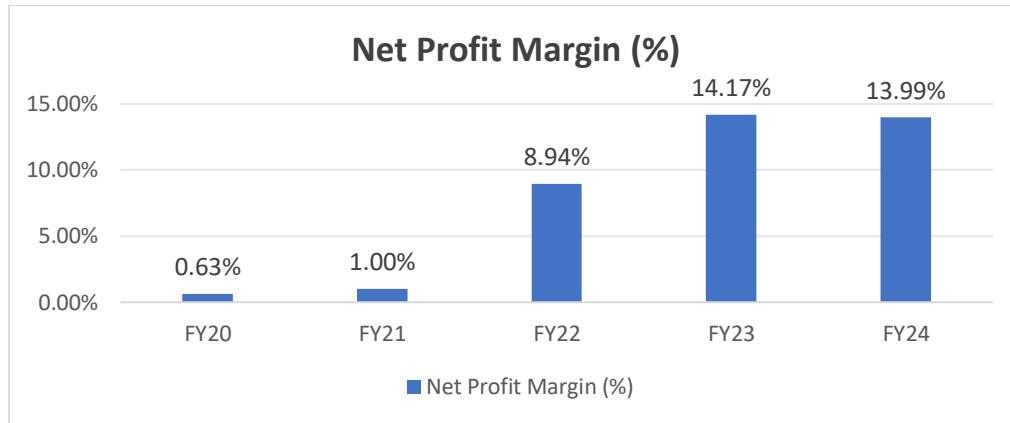
## Data analysis & interpretation:

### Profitability and Management Efficiency:

**Net Profit Margin:** Net Profit Margin is a profitability ratio that shows what percentage of revenue (or total income) remains as net profit after all expenses, taxes, and costs have been deducted.

| Year | PAT (₹ Cr) | Total Income (₹ Cr) | Net Profit Margin (%) |
|------|------------|---------------------|-----------------------|
| FY20 | 546.19     | 86,300.98           | 0.63%                 |

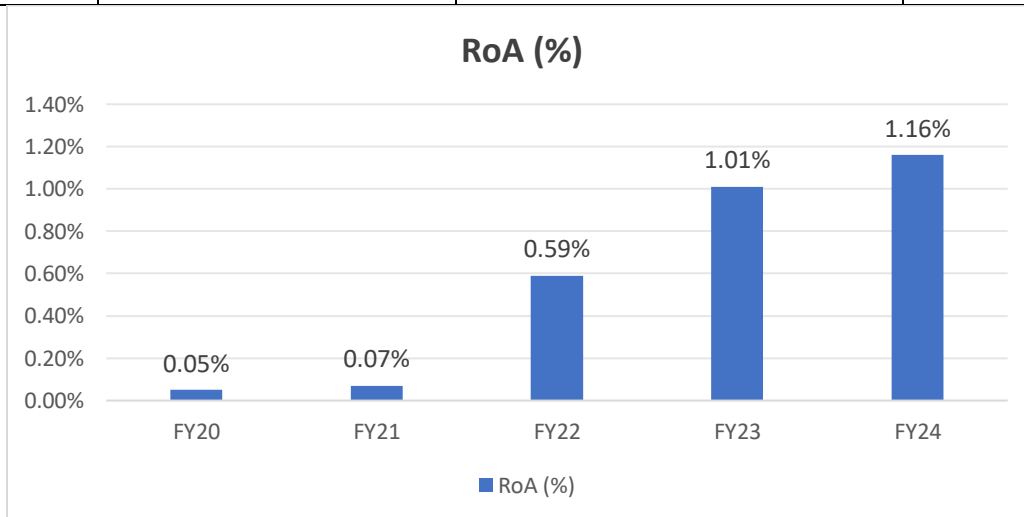
|      |           |             |        |
|------|-----------|-------------|--------|
| FY21 | 828.96    | 82,859.50   | 1.00%  |
| FY22 | 7,272.28  | 81,364.73   | 8.94%  |
| FY23 | 14,109.62 | 99,614.38   | 14.17% |
| FY24 | 17,788.78 | 1,27,101.31 | 13.99% |



**Interpretation:** Between FY20 and FY24, the bank's Net Profit Margin (NPM) showed a significant upward trend. In FY20–FY21, margins were below 1% due to high provisioning, interest burden, and pandemic-related stress. By FY22, NPM improved to around 9% as asset quality and interest margins stabilized. This growth continued in FY23–FY24, with margins reaching approximately 14%, reflecting enhanced operational efficiency, higher net interest income, and better cost control—indicating the bank's improved ability to convert revenue into profit.

#### Return on Asset:

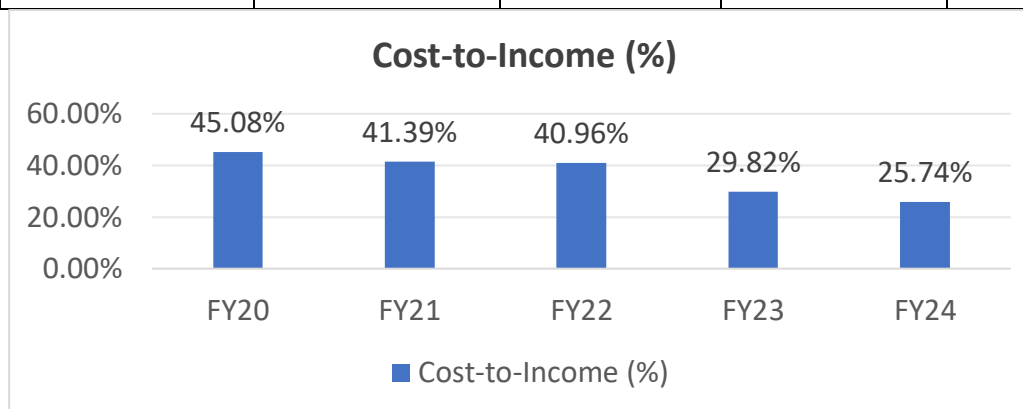
| Year | PAT (₹ Cr) | Total Assets (₹ Cr) | RoA (%) |
|------|------------|---------------------|---------|
| FY20 | 546.19     | 11,10,909.95        | 0.05%   |
| FY21 | 828.96     | 11,10,890.58        | 0.07%   |
| FY22 | 7,272.28   | 12,35,747.57        | 0.59%   |
| FY23 | 14,109.62  | 14,03,821.16        | 1.01%   |
| FY24 | 17,788.78  | 15,33,583.69        | 1.16%   |



**Interpretation:** From FY20 to FY24, the bank's Return on Assets (ROA) improved significantly. It was below 0.1% in FY20–FY21, indicating poor asset utilization. In FY22, ROA rose to 0.59% with improving profitability. By FY23–FY24, it exceeded 1%, signalling strong performance driven by better asset deployment, improved loan recovery, and effective cost management.

**Cost to income ratio:**

| Year | Op. Expenses (Cr) | Total Income (Cr) | Interest (Cr) | Net Income (Cr) | Cost to Income (%) |
|------|-------------------|-------------------|---------------|-----------------|--------------------|
| FY24 | 32,707.60         | 1,27,101.31       | 67,884.41     | 59,216.90       | 55.23%             |
| FY23 | 29,700.48         | 99,614.38         | 48,232.53     | 51,381.85       | 57.81%             |
| FY22 | 33,329.12         | 81,364.73         | 37,259.44     | 44,105.29       | 75.58%             |
| FY21 | 34,302.92         | 82,859.50         | 41,686.04     | 41,173.46       | 83.28%             |
| FY20 | 37,911.07         | 86,300.98         | 48,532.37     | 37,768.61       | 100.38%            |

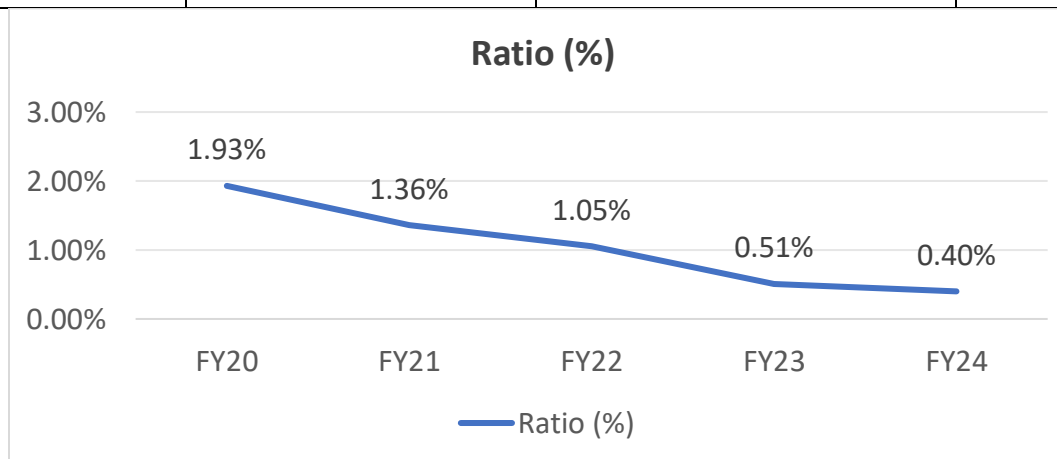


**Interpretation:** The bank's cost-to-income ratio declined notably from over 80% in FY20–FY21, indicating inefficiency, to 75.58% in FY22, and further to around 55–57% in FY23–FY24. This reflects strong cost control, digitization, and revenue growth outpacing expenses, highlighting improved operational efficiency and profitability.

**Asset Quality and Management Efficiency:**

**Provisions to Total Assets Ratio:**

| Year | Provisions (₹ Cr) | Total Assets (₹ Cr) | Ratio (%) |
|------|-------------------|---------------------|-----------|
| FY20 | 21,493.52         | 11,10,909.95        | 1.93%     |
| FY21 | 15,073.80         | 11,10,890.58        | 1.36%     |
| FY22 | 13,002.41         | 12,35,747.57        | 1.05%     |
| FY23 | 7,136.90          | 14,03,821.16        | 0.51%     |
| FY24 | 6,075.61          | 15,33,583.69        | 0.40%     |

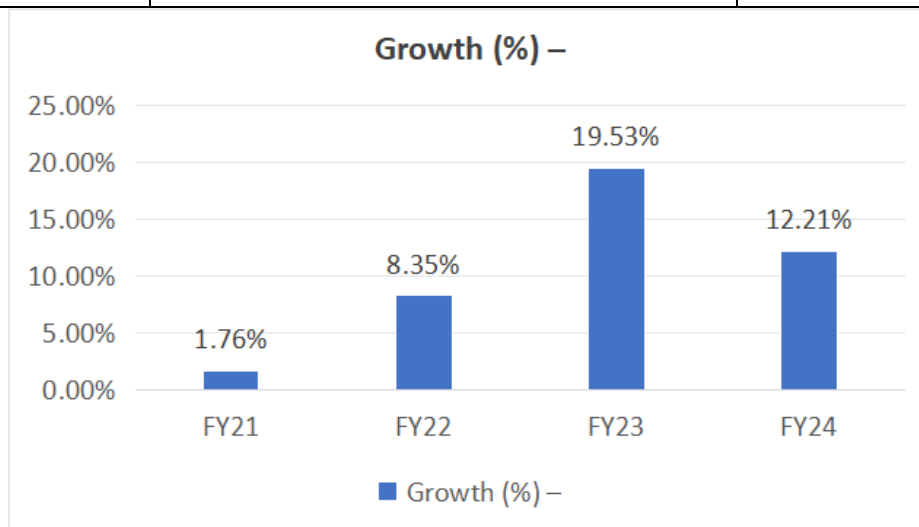


**Interpretation:** The ratio declined from 1.93% in FY20 to 0.40% in FY24, which is a positive signal.

The bank has become more efficient in asset quality management and less exposed to credit risk.

**Loan Growth Rate:**

| Year | Loans (₹ Cr) | Growth (%) |
|------|--------------|------------|
| FY20 | 7,52,510.49  | –          |
| FY21 | 7,65,715.44  | 1.76%      |
| FY22 | 8,29,627.55  | 8.35%      |
| FY23 | 9,91,666.37  | 19.53%     |
| FY24 | 11,12,943.56 | 12.21%     |



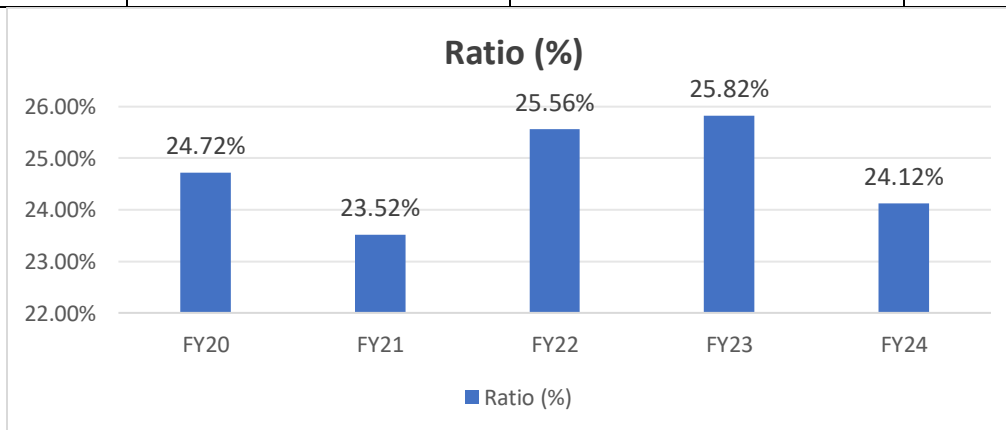
**Interpretation:** The loan book consistently expanded with notable growth in FY23 (19.53%) and healthy double-digit growth in FY24 (12.23%).

Increased credit demand.

Stable economic recovery post-COVID years

**Investment to Total Assets Ratio:**

| Year | Investments (₹ Cr) | Total Assets (₹ Cr) | Ratio (%) |
|------|--------------------|---------------------|-----------|
| FY20 | 2,74,614.61        | 11,10,909.95        | 24.72%    |
| FY21 | 2,61,220.27        | 11,10,890.58        | 23.52%    |
| FY22 | 3,15,795.39        | 12,35,747.57        | 25.56%    |
| FY23 | 3,62,485.36        | 14,03,821.16        | 25.82%    |
| FY24 | 3,69,816.84        | 15,33,583.69        | 24.12%    |

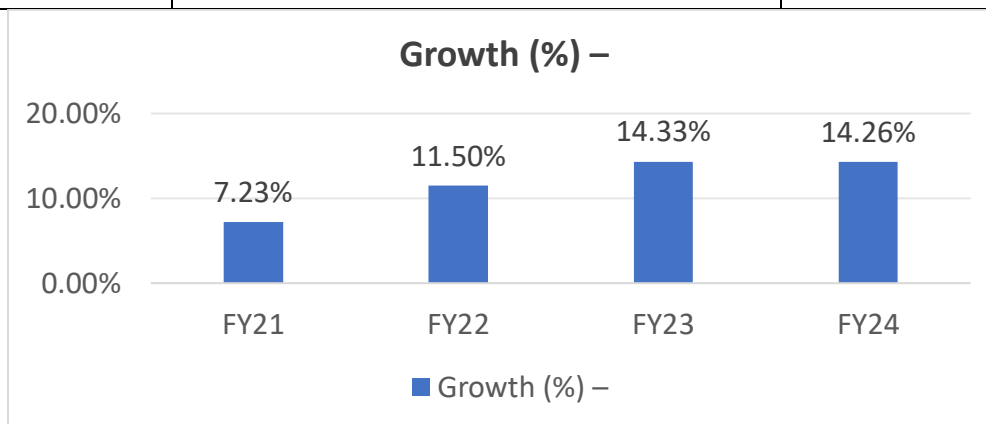


**Interpretation:** The Investment to Total Assets Ratio has shown consistent stability, fluctuating between 23.5% and 25.8% over the past five years. This indicates a well-balanced approach to asset allocation. However, a minor decrease in FY24 points to a transition towards increased loans and advances, presumably in pursuit of higher returns.

#### Dividend Policy and Its Impact on Shareholder Value:

##### Net Worth Growth:

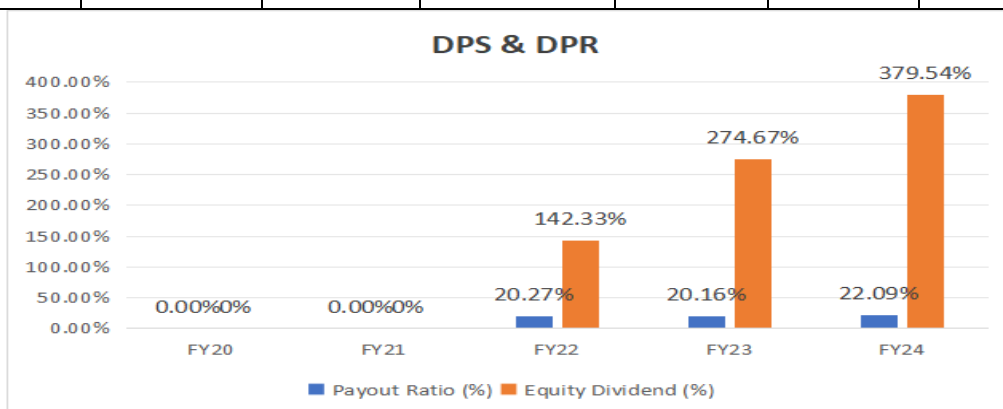
| Year | Net Worth (₹ Cr) | Growth (%) |
|------|------------------|------------|
| FY20 | 71,856.22        | –          |
| FY21 | 77,045.72        | 7.23%      |
| FY22 | 85,909.72        | 11.50%     |
| FY23 | 98,222.89        | 14.33%     |
| FY24 | 1,12,223.59      | 14.26%     |



**Interpretation:** The bank's net worth has demonstrated steady annual growth, reaching its highest point in FY23. This indicates strong retained earnings and profit accumulation, highlighting the bank's strengthening financial position and capital foundation.

##### DPS (Dividend Per Share) & Dividend Payout Ratio (%):

| Year | PAT (₹ Cr) | Equity Dividend (₹ Cr) | Shares Outstanding (Lakhs) | EPS (₹) | DPS (₹) | Payout Ratio (%) | Equity Dividend (%) |
|------|------------|------------------------|----------------------------|---------|---------|------------------|---------------------|
| FY24 | 17,788.78  | 3,930.24               | 51,713.62                  | 34.4    | 7.6     | 22.09%           | 379.54%             |
| FY23 | 14,109.62  | 2,844.25               | 51,713.62                  | 27.28   | 5.5     | 20.16%           | 274.67%             |
| FY22 | 7,272.28   | 1,473.84               | 51,713.62                  | 14.06   | 2.85    | 20.27%           | 142.33%             |
| FY21 | 828.96     | 0                      | 51,713.62                  | 1.6     | 0       | 0.00%            | 0%                  |
| FY20 | 546.19     | 0                      | 46,205.67                  | 1.18    | 0       | 0.00%            | 0%                  |



**Interpretation:** In FY20 and FY21, no dividends were declared due to low profits and COVID-19 impact, with very low EPS. Dividend payouts resumed in FY22 (₹2.85/share) with a 20.27% payout ratio. In FY23–FY24, rising PAT and EPS supported higher dividends while maintaining a stable payout ratio of 20–22%, reflecting a balanced policy of rewarding shareholders and retaining earnings for growth. The high dividend percentage (e.g., 379.54%) is due to it being calculated on the ₹2 face value, as per common Indian reporting practice.

### Statistical Tools for Analysis:

Regression analysis is a statistical technique employed to examine the relationship between two or more variables. It aids in comprehending how a modification in one variable, known as the independent variable, influences another variable, referred to as the dependent variable.

| FY   | Net Sales   | PAT       | Net Worth   | EPS   | Loans & Advances | Total Income | Admin Expenses | Provisions |
|------|-------------|-----------|-------------|-------|------------------|--------------|----------------|------------|
| FY20 | 75,983.65   | 546.19    | 71,856.22   | 1.18  | 7,52,510.49      | 86,300.98    | 28,934.97      | 21,493.52  |
| FY21 | 70,495.06   | 828.96    | 77,045.72   | 1.6   | 7,65,715.44      | 82,859.50    | 22,770.30      | 15,073.80  |
| FY22 | 69,880.78   | 7,272.28  | 85,909.72   | 14.06 | 8,29,627.55      | 81,364.73    | 21,174.81      | 13,002.41  |
| FY23 | 89,588.54   | 14,109.62 | 98,222.89   | 27.28 | 9,91,666.37      | 99,614.38    | 16,154.51      | 7,136.90   |
| FY24 | 1,12,605.95 | 17,788.78 | 1,12,223.60 | 34.4  | 11,12,943.60     | 1,27,101.31  | 16,713.02      | 6,075.61   |

### Between Net Worth and Pat:

| <i>Regression Statistics</i> |             |
|------------------------------|-------------|
| Multiple R                   | 0.983933785 |
| R Square                     | 0.968125693 |
| Adjusted R Square            | 0.957500924 |
| Standard Error               | 1598.851927 |
| Observations                 | 5           |

### ANOVA:

|            | <i>df</i> | <i>SS</i>   | <i>MS</i>   | <i>F</i>    | <i>Significance F</i> |
|------------|-----------|-------------|-------------|-------------|-----------------------|
| Regression | 1         | 232931776.5 | 232931776.5 | 91.11969339 | 0.00243868            |
| Residual   | 3         | 7668982.45  | 2556327.483 |             |                       |
| Total      | 4         | 240600759   |             |             |                       |

|              | <i>Coefficients</i> | <i>Standard Error</i> | <i>t Stat</i> | <i>P-value</i> | <i>Lower 95%</i> | <i>Upper 95%</i> | <i>Lower 95.0%</i> | <i>Upper 95.0%</i> |
|--------------|---------------------|-----------------------|---------------|----------------|------------------|------------------|--------------------|--------------------|
| Intercept    | -33425.68405        | 4409.533636           | -7.580321822  | 0.004762629    | -47458.78807     | -19392.58002     | -47458.78807       | -19392.58002       |
| X Variable 1 | 0.466413136         | 0.048861259           | 9.545663591   | 0.00243868     | 0.310914805      | 0.621911468      | 0.310914805        | 0.621911468        |

**Interpretation:** The regression results indicate a strong model, with Multiple R = 0.98 showing a strong positive correlation, and  $R^2 = 96.81\%$  confirming that most of the variation in the dependent variable is explained by the independent variable. Adjusted  $R^2$  remains high at 95.75%, reinforcing model reliability. The model is statistically significant ( $F = 91.12$ ,  $p = 0.0024 < 0.05$ ), and the independent variable is impactful, with its p-value (0.0024) well below 0.05 and a 95% confidence interval for its coefficient between 0.31 and 0.62.

#### IV. Findings:

- **Profitability (NPM)** saw a sharp rise from under 1% in FY20–21 to nearly 14% in FY24, indicating stronger income conversion.
- **ROA** increased from negligible levels to above 1%, showing efficient use of assets to generate profits.
- **Cost Efficiency** improved as the cost-to-income ratio declined from over 80% to around 55%, reflecting better expense management.
- **Asset Quality** strengthened with Net NPA dropping from 1.93% to 0.40%, reducing credit risk.
- **Credit Expansion** remained healthy, with strong growth in advances post-COVID, especially in FY23 and FY24.
- **Asset Allocation** remained consistent, with investment ratios between 23.5%–25.8%, suggesting prudent portfolio management.
- **Capital Position** improved steadily, driven by profit retention and growth in shareholders' equity.
- **Dividend Distribution** restarted in FY22 with moderate payout ratios, showing a balanced approach to growth and investor returns.
- **Statistical Analysis** confirmed a robust model, with high correlation, strong explanatory power, and significant results

#### Suggestions:

**Emphasize Predictive Variables** Given that Models 2, 3, and 5 demonstrate significant statistical relevance and impressive  $R^2$  values exceeding 85%, my project should highlight the reliability of key financial indicators such as Net Worth and Loans & Advances as predictors of profitability metrics like PAT and ROA. These insights can play a crucial role in guiding the bank's financial planning and forecasting initiatives.

**Enhance Monitoring of Negative Relationships** Model 5 reveals a negative correlation, which stands out compared to the other models. This anomaly may stem from factors such as over leveraging, diminishing returns, or inefficiencies associated with higher investment levels. It is recommended that the bank conduct a thorough investigation into specific instances or thresholds where an increase in a financial metric could adversely affect performance.

**Utilize Efficiency Gains for Expansion** The declining Cost-to-Income Ratio alongside the increasing ROA and RoNW indicates improved operational efficiency. This positions Bank of Baroda favorably in the market, suggesting that it can expand its operations or diversify its product offerings without a corresponding rise in costs.

**Prioritize Sustainable Asset Quality** with the Gross Non-Performing Assets (GNPA) steadily decreasing to just 0.40%, Bank of Baroda has effectively managed credit risk. It would be beneficial to formalize this strategy into a comprehensive risk management framework and potentially share it as a best practice among other Public Sector Banks (PSBs).

**Strengthen Communications of Shareholder Value** The resumption of dividends and stable payout ratios, coupled with an increase in EPS, reflect a well-balanced dividend policy. Bank of Baroda should clearly communicate this to shareholders and investors to attract more long-term institutional investors, and consider moderate increases in dividends if profitability remains strong.

#### V. Conclusion:

The analysis of "Financial Soundness and Growth Dynamics of Bank of Baroda" covering the five-year span from FY20 to FY24 indicates a notable and steady enhancement in the bank's overall financial health and operational effectiveness. In spite of the challenges faced during the COVID-19 pandemic, the bank has exhibited remarkable resilience and a definitive recovery across essential financial metrics.

Key profitability indicators, including Net Profit Margin, Return on Assets, and Return on Net Worth, have experienced significant increases, showcasing improved earning potential, enhanced asset utilization, and greater value for shareholders. The bank's adeptness in cost management is highlighted by a considerable drop in the cost-to-income ratio, which reflects successful digitization initiatives and operational improvements.

The quality of assets has seen substantial improvement, evidenced by a sharp decrease in Gross NPAs and Provisions to Total Assets, indicating effective credit management and better recovery strategies. Concurrently, the bank has sustained a healthy loan growth rate, demonstrating a strong market presence and demand for credit. Additionally, the consistent rise in net worth and

reserves underscores the bank's focus on generating internal capital, ensuring long-term financial security. The evolution of the dividend policy into a balanced strategy rewards shareholder while also retaining adequate earnings for future growth.

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