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# A Study on Impact of Mergers on Share Price Performance of Merged Banks

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***Abstract*— *This study analyses the impact of mergers on the share price performance of Canara Bank and Bank of Baroda. With recent consolidations in the Indian banking sector aimed at improving efficiency and competitiveness, the study examines key financial ratios – P/E, EPS, ROE, dividend yield, and D/E – before and after the mergers. Using t-tests, it evaluates the significance of changes in these indicators. Results reveal mixed outcomes: some metrics improved, while others showed no significant change. The study offers insights into how mergers affect financial performance and market perception in India's evolving banking landscape.*

***Keywords*— *Share price performance, Merged banks, Pre-merger and post-merger analysis, Merger impact, Banking sector consolidation, financial performance, Shareholder value, Market efficiency.***

## I. INTRODUCTION

A merger is an agreement that unites companies into one new organization. Mergers are normally performed to amplify the employers attain, enlarge into new segments, or benefit marketplace percentage. All of these are accomplished to increase shareholder cost. Often, during a merger, businesses have a no keep clause to save you purchases or mergers via additional agencies. Mergers are common in the business, with companies searching for to amplify their operations and increase their market percentage. The news of a merger deal can trigger a response in the stock market, with traders adjusting their positions in response to the records. The mergers can impact at the inventory price volatility, stock fee of the merging businesses and the goal agencies.

### Statement of the Problem

When the first bank merger happened in 1921, it impacted the share prices of banks. There are various factors which impact these share prices. The goal of the current study is to study the long-term, short-term and immediate impact of banks on share price performance. To help shareholders for better understanding of banking sector and take better investment decisions.

### Research Objectives, Questions & Hypotheses

**Objectives:**

- To study the concept of merged banks.
- To study the impact of merged banks on the share price performance.
- To analyse the pre-merger and post-merger share price performance of merged banks.
- To study the long-term and short-term impact of merges on shares.

**Hypotheses:**

- **Null Hypothesis(H0):** There is no significant difference between share price performance of bank's pre-merger and post-merger Mean's measured with valuation ratios.
- **Alternative Hypothesis(H1):** There is a significant difference between share price

performance of banks pre-merger and post-merger Mean's measured with valuation ratios.

**Significance of the Study**

This study evaluates how bank mergers affect on share price performance and key financial indicators by analysing mergers of Canara bank and Bank of Baroda. In the context of the Indian government's push for banking sector consolidation, understanding the real financial outcomes of such mergers is crucial. By assessing pre-merger and post-merger financial metrics, the study provides valuable insights into whether mergers deliver value shareholders, enhance market confidence, and improve operational efficiency. The findings are beneficial for policymakers, investors, financial analysts, and bank management in making informed decisions regarding future mergers and evaluating their long-term impact on financial stability and shareholder wealth.

**Scope and Limitations**

The study aims to provide insights into the immediate and long-term effects of mergers on shareholder value, market efficiency and financial stability. The scope of the study was extended for 5 years viz. the financial data of the years. The study focuses only on two merged banks-Canara Bank and Bank of Baroda.

## II. REVIEW OF LITERATURE

- D. Ratnadiwakara (2024)-Mergers increase loan rejection rates for riskier FHA loans, especially affecting low-income and minority borrowers. Post-merger, banks charge higher interest on high-risk loans, without showing cost benefits from merger efficiencies. The impact of mergers varies based on borrower risk, income, and race.
- Arnald R. Cowan (2022)-FDIC-assisted acquisitions of failed banks (2008–2013) do not raise default risk or cause overbidding. Shareholder wealth increases can persist if acquirers continue securing FDIC deals. These mergers are financially stable and don't negatively impact acquirers' risk profiles.
- A.K. Rai (2021)-Using event study methodology, the merger announcements of six banks into four show mixed impacts. Target banks see positive returns around the event, while bidder banks experience negative effects. This is one of the first Indian studies focusing on merger announcement effects on bank stock performance.
- Zahoor Rahman et al. (2018)-In Pakistan (2002–2012), mergers in the banking sector showed mixed impacts on stock prices. Some banks had negative abnormal returns, while others saw positive effects. The results help guide investor decisions and highlight the variable nature of merger outcomes.
- Krishn A. Goyal & Vijay Joshi (2011)-Studying 17 Indian bank mergers, the paper explores strategic motives like expansion and competitiveness. While financial gains were noted, it also emphasizes the need to consider HR and organizational behaviour impacts, using the ICICI–Bank of Rajasthan merger as a key case.
- Aggarwal & Gupta (2020)-Public sector bank mergers in India showed short-term share price gains after announcements, but mixed long-term results. Success depended on financial strength and execution quality, suggesting that good planning is vital for merger effectiveness.

## III. RESEARCH METHODOLOGY

**Research design:** This study follows a descriptive and analytical research design, focuses on examining pre-merger and post-merger share price behaviour to determine whether shareholders gain or loss.

**Sampling Technique:** Simple non-random sampling of two merged banks (i.e. Canara bank and Bank of Baroda) was utilised for the purpose of the study.

**Data Collection Methods**

**Data Type** : Secondary data

**Data sources :** Annual reports of Canara bank and Bank of Baroda

Money control website for financial database

Industry journals and research papers

**Data Analysis Techniques**

Quantitative analysis- Price-to-earnings ratio

Dividend yield

Earnings per share

Return on Equity

Debt-to-Equity ratio

Descriptive Statistics -Mean, Standard Deviation and T-test of share prices

## IV. DATA ANALYSIS

**Analysis of share price performance of Canara bank with ratios:**

**Price-to-earnings ratio:**

| **Year** | **Market price per share** | **Earnings per share** | **Price-to-earnings ratio** |
|---|---|---|---|
| 2018 | 159.1 | -70.47 | -2.257698311 |
| 2019 | 173 | 4.71 | 36.73036093 |
| 2020 | 90.5 | -26.5 | -3.41509434 |
| 2021 | 152.2 | 16.91 | 9.000591366 |
| 2022 | 227.75 | 32.49 | 7.009849184 |

**Dividend yield:**

| Year | Market price per share | Dividend per share | Dividend yield |
|---|---|---|---|
| 2018 | -23.7 | 0 | 0 |
| 2019 | -19.5 | 0 | 0 |
| 2020 | -41.7 | 0 | 0 |
| 2021 | 55.1 | 0 | 0 |
| 2022 | 72.4 | 6.5 | 0.089779006 |

**Earnings per share:**

| Year | Earnings per share |
|---|---|
| 2018 | -70.47 |
| 2019 | 4.71 |
| 2020 | -26.5 |
| 2021 | 16.91 |
| 2022 | 32.49 |

**Returns on Equity:**

| Year | Net income | Average Shareholders' equity | Return on equity |
|---|---|---|---|
| 2018 | -4,222.24 | 3,718.92 | -1.135340368 |
| 2019 | 347.02 | 35,891.04 | 0.009668708 |
| 2020 | -2,235.72 | 37,735.10 | -0.059247756 |
| 2021 | 2,557.58 | 49,088.95 | 0.052100931 |
| 2022 | 5,678.41 | 62,498.12 | 0.090857293 |

**Debt-to-Equity ratio:**

| Year | Total debt | Shareholders' equity | Debt-to-equity ratio |
|---|---|---|---|
| 2018 | 5,63,580.37 | 35,604.84 | 15.82875727 |
| 2019 | 6,40,025.56 | 36,177.23 | 17.69139207 |
| 2020 | 6,68,112.94 | 39,292.96 | 17.00337516 |
| 2021 | 10,60,858.14 | 58,884.93 | 18.01578333 |
| 2022 | 11,32,694.21 | 66,111.31 | 17.13313819 |

**Analysis of share price performance of Bank of Baroda bank with ratios:**

**Price-to-earnings ratio:**

| **Year** | **Market price per share** | **Earnings per share** | **Price-to-earnings ratio** |
|---|---|---|---|
| 2017 | 173.9 | 6 | 28.98333333 |
| 2018 | 142.6 | -10.53 | -13.54226021 |
| 2019 | 133 | 1.64 | 81.09756098 |
| 2020 | 54 | 1.36 | 39.70588235 |
| 2021 | 74.8 | 1.78 | 42.02247191 |

**Dividend yield:**

| Year | Market price per share | Dividend per share | Dividend yield |
|---|---|---|---|
| 2017 | 173.9 | 6 | 0.034502588 |
| 2018 | 142.6 | 0 | 0 |
| 2019 | 133 | 0 | 0 |
| 2020 | 54 | 0 | 0 |
| 2021 | 74.8 | 0 | 0 |

**Earnings per share:**

| Year | Earnings per share |
|---|---|
| 2017 | 6 |
| 2018 | -10.53 |
| 2019 | 1.64 |
| 2020 | 1.36 |
| 2021 | 1.78 |

**Debt-to-Equity ratio:**

| Year | Total debt | Shareholders' equity | Debt-to-equity ratio |
|---|---|---|---|
| 2017 | 6,32,286.61 | 40,303.25 | 15.68822886 |
| 2018 | 6,53,886.79 | 43,394.77 | 15.06833174 |
| 2019 | 7,05,891.02 | 45,941.10 | 15.365131 |
| 2020 | 10,39,053.74 | 71,856.22 | 14.46017812 |
| 2021 | 10,33,844.86 | 77,045.72 | 13.41858912 |

**Returns on Equity:**

| Year | Net income | Average Shareholders' equity | Return-on-equity |
|---|---|---|---|
| 2017 | 1,383.14 | 40,303.25 | 0.034318324 |
| 2018 | -2,431.81 | 41,849.01 | -0.05810914 |
| 2019 | 433.52 | 44,667.94 | 0.009705395 |
| 2020 | 546.19 | 58,898.66 | 0.009273386 |
| 2021 | 828.96 | 74,450.97 | 0.011134308 |

**Hypothesis:**

- **Null Hypothesis(H0):** There is no significant difference between share price performance of bank's pre-merger and post-merger Mean's measured with valuation ratios.
- **Alternative Hypothesis(H1):** There is a significant difference between share price performance of banks pre-merger and post-merger Mean's measured with valuation ratios.

**Calculation of Mean, Standard deviation and T-Test of share price performance -Merger of syndicate bank with Canara bank in 2020:**

| Financial ratios | Period | Mean | Standard deviation | T-test |
|---|---|---|---|---|
| Price-to-earnings ratio | pre-merger | 17.23633131 | 27.56872107 | 0.284047265 |
| | post-merger | 8.005220275 | 1.407667296 | |
| Dividend yield | pre-merger | 0 | 0 | 0.108173448 |
| | post-merger | 0.044889503 | 0.063483344 | |
| Earnings per share | pre-merger | -32.88 | 53.16028781 | 0.90223212 |
| | post-merger | 24.7 | 11.01672365 | |
| Return on equity | pre-merger | -0.56283583 | 0.809643682 | 0.933760951 |
| | post-merger | 0.071479112 | 0.027404886 | |
| Debt-to-equity | pre-merger | 16.76007467 | 1.317081698 | 0.948825662 |
| | post-merger | 17.57446076 | 0.624124264 | |

**Calculation of Mean, Standard deviation and T-Test of share price performance -Merger of Dena bank and Vijaya bank with Bank of Baroda bank in 2019:**

| Financial ratios | Period | Mean | Standard deviation | T-test |
|---|---|---|---|---|
| Price-to-earnings ratio | pre-merger | 7.720537 | 30.070136 | 0.951383 |
| | post-merger | 40.86418 | 1.6380762 | |

| | | | | |
|---|---|---|---|---|
| Dividend yield | pre-merger | 0.017251 | 0.024397 | 0.108173 |
| | post-merger | 0 | 0 | |
| Earnings per share | pre-merger | -2.265 | 11.688475 | 0.706734 |
| | post-merger | 1.57 | 0.2969848 | |
| Return on equity | pre-merger | -0.011895 | 0.0653561 | 0.711542 |
| | post-merger | 0.010204 | 0.0013159 | |
| Debt-to-equity | pre-merger | 15.37828 | 0.4383335 | 0.630085 |
| | post-merger | 13.93938 | 0.7365146 | |

## V. DISCUSSION

- **Improved Profitability Post-Merger:**

  Both Canara Bank and Bank of Baroda showed notable improvements in EPS and ROE after their respective mergers, indicating a gradual positive impact on shareholder returns and operational efficiency.

- **Mixed Trends in P/E Ratio:**

  Canara Bank's P/E ratio turned positive after initially dropping during the merger, while Bank of Baroda's P/E spiked sharply during the merger and later stabilized—reflecting changing market perceptions and recovery in earnings.

- **Dividend Yield Fluctuations:**

  Canara Bank recorded a sharp rise in dividend yield post-merger but remained flat later, while Bank of Baroda saw a steady decline, likely due to variations in distributable profits.

- **Debt-Equity Behaviour Differed:**

  Canara Bank's debt-to-equity ratio increased post-merger, reflecting higher leverage possibly for expansion or integration costs, while Bank of Baroda's ratio decreased, indicating improved financial stability.

- **Statistical Significance Lacking:** Despite visible improvements in financial metrics, the changes before and after the mergers were not statistically significant, suggesting that the financial recovery was gradual and varied, rather than a direct immediate effect of the merger.

## VI. CONCLUSION

The impact of mergers on share price performance depends on various factors and is not always positive. Accurate pre-merger analysis can help reduce risks and improve outcomes. For Canara Bank**,** pre-merger performance was weak, but post-2020 showed improvements in earnings, returns, and dividend payouts, despite high debt.

Bank of Baroda also improved after its 2019 merger, with better EPS and reduced debt, though declining dividend yield indicated limited profits. However, statistical analysis showed that these improvements were not significant enough to directly attribute them to the mergers.

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