**Journal of Informatics Education and Research**
**ISSN: 1526-4726**
**Vol 3 Issue 2 (2023)**

# Merger and Acquisition with Special Reference to Banking Sector

**Dr Chand Tandon**

Prof and HOD New Delhi Institute of Management New Delhi
Chand.tandon@ndimdelhi.org

**Abstract**

Many foreign and local financial institutions are engaged in buying and selling action around the globe. A single primary goal associated with buy-sell agreements is to capitalize on savings of scale. In recent years, there have been several newspaper stories regarding the financial services industry in the nation. Reports on different topics are made available. The discussion varied from the comfort of utilizing financial institutions and their readiness to meet the impending Basel II compliance deadlines to the growing penetration of national financial institutions into international markets in search of inorganic growth. It's comprehensive in every way throughout.

All sectors in the nation and overseas are looking for advantageous deals because amalgamations as well as buying businesses are the only method to obtain an edge over competitors both locally and globally. To attain revenue streams of magnitude, fight corrosive rivalry inside the industry, and create a competitive advantage in the global economy. The financial services sector in the nation is currently one of the quickest expanding. It has evolved from a struggling business venture to a thriving industry. The rapid expansion rate of the industry makes it a favored financial services location for foreign investors. The nation's financial business has undergone a paradigm change throughout the last twenty years. The national financial sector is expanding at an incredible pace. Mergers and acquisitions are a comparatively new element within the national financial services business. This will allow the bank to attain world-class status and provide more value to its clients

**Introduction :**

The financial business has seen an ongoing flow of consolidation and purchases in recent years. a variety of the Financial Institutions and Firms Purchase and Transfer Acts of 1970 and 1980, the federal government, can devise a strategy to combining the assets for any state-owned the financial institution alongside any other state's the financial institution or banking industry.

Introduction:
The banking industry in India has accomplished multiple outstanding achievements over the last thirty years. The most noteworthy feature is its wide operating range.
The Indian financial system has even spread to the most remote parts of the nation. One of the primary causes for India's rapid development has been the way the banking industry there has reached even the most remote parts of the nation.

Financial institutions in India played an important part in the nation's economic growth after freedom. Indian banks are undergoing an exciting period as a result of the swift shifts caused by the slow adoption of reforms in the banking industry.

The current transformation process is seen as an opportunity to transform a healthy, strong, and vibrant system into an Indian banking system that can perform its role effectively and independently without forcing the government to lie

.

## List of major consolidated banks in India 2019-2020

| Acquiring Bank | Acquired Bank | Year of a merger |
|---|---|---|
| Bank Of Baroda | Vijaya Bank, Dena Bank | April 1, 2019 |
| Punjab National Bank | Oriental Bank Of commerce, United Bank Of India | April 1, 2020 |
| Canara Bank | Syndicate Bank | April 1, 2020 |
| Union Bank Of India | Andhra Bank, Corporation Bank | April 1, 2020 |
| Indian Bank | Allahabad Bank | April 1, 2020 |

## List of major consolidated banks in India 2019-2020

| Acquiring Bank | Acquired Bank | Year of a merger |
|---|---|---|
| Bank Of Baroda | Vijaya Bank, Dena Bank | April 1, 2019 |
| Punjab National Bank | Oriental Bank Of commerce, United Bank Of India | April 1, 2020 |
| Canara Bank | Syndicate Bank | April 1, 2020 |
| Union Bank Of India | Andhra Bank, Corporation Bank | April 1, 2020 |
| Indian Bank | Allahabad Bank | April 1, 2020 |

- Following As part of the nation's economic deregulation, the authorities declared several changes based on the Narasimhan Committee's recommendations to render the financial services sector fiscally feasible Nirmala Sitharaman, who is the Indian Financial Minister, made the announcement on the last day of August the year 2019. Public Bank Consolidation {PSB}, where 10 PSBs will be merged into 4 major banks to strengthen the fight against the banking sector.

- Aim to clean up bank balance sheets and create world-class lenders to support the growth of a $5 trillion economy by 2024.

- Earlier, there were two rounds of bank mergers, It's what all of us desire to achieve in order to have a solid banking sector alongside an economy valued at five trillion dollars.

- According to the finance minister, they're striving diligently to create the next wave of banks, large banks that have greater lending capacities.

- Technology base, societal similarity, consumer reach, and competitiveness are key reasons for consolidation, according to Finance Minister Rajiv Kumar.

## REVIEW OF LITERATURE

**Sanjay Sharma & Sahil Sidana {2017}:**

The study report discussed the effect of SBI's merger on the company's financial situation. SBI will be made evident by his worldwide expansion of SBI's network, making it simpler to give cheaper means. Following the merging with partners, SBI's total as well as net NPA will decline. Individualized administration improves an organization's productivity and efficacy.

**Kotnal Jaya Shree {2016}:**

The study paper expresses the 'economic consequences" of the combination of businesses on SBI's revenue as well as different merger reasons within the financial services sector in India. We examined the merged banks' financial success prior to and following the merging by using financial metrics like the margin of gross profit, margin of net profit, operating profit margin, investment return on equity, and ratio of debt to equity. Finally, while the bank has benefited, it states that mergers and acquisitions cannot resolve the bank's general growth and financial problems.

**Prof. Ritesh Patel & Dr. Dharmesh Shah {2016}:**

The report employs an economic value-added approach, as well as additional monetary variables like the margin of net profit, return in capital, stated revenue margin, future interest rates, and earned interest rate, to compare the monetary performance of Total assets before and after the merger. They concluded that the financial health of the bank would increase following the merging. However, reviewing previous financial success before merging can help the merger succeed.

**Parveen Kumari {2014}:**

In this research, he regarded the integration of banks as a strategic approach, saying that bank mergers and acquisitions aim to grow and promote credit formation. Using data gathered upon the amalgamation, she determined the fact the total amount of offices and cash machines, net revenue, deposits, and net value all grew.

**S. Devarajappa {2012}:**
The purpose of this research is to determine various justifications over buying or selling another company in India. We also looked at bank success before and after acquisitions in terms of ROI, return on capital employed, and return on equity. And the merger's impact helps Weekly Bank thrive by allowing it to merge with a bigger bank.

**Ramon, A.A., Onaolapo and Ajala, O. Ayorinde {2012}:**

This research looked at the effect about consolidations and mergers on the success of a few Nigerian commercial banks. For the objectives of this research, total earnings, upon-tax earnings, as well as deposit profit were chosen as financial achievement criteria. As a consequence, financial effectiveness and productivity are enhanced. According to the research, financial institutions ought to become proactive in promoting their financial goods, concentrate on staff training and reskilling, and make investments in technological infrastructure.

**Azeem Ahmed Khan {2011}:**

Researchers concentrated on explaining various motivations for M & A in India in this study. According to the findings of this research, M & A have aided in the distribution of dividends to stockholders.

**Nisarg A Joshi and Jay M Desai:**

The performance benefit for shareholders was evaluated before and after the merger. To examine the effect, ratio analysis is done using operating profit margin, total operating profit margin, net profit margin, return on equity, leverage ratio, and P/E per share. Additionally, they came to the conclusion that the combination would not, at least not right away, enhance performance.

**Bhan Akhil {2009}:**

This study sheds light on the causes of and advantages of consolidation in the Indian financial industry. The research examined eight bank mergers that took place in India between 1999 and 2006 and found that they were effective for the merging banks and added value for the purchasing banks. Additionally, it was determined that the impacts of mergers would not be felt immediately but rather over a long period of time in the context of Indian finance.

## RESEARCH METHODOLOGY

### I. Problem statement:

The bank sector have witnessed large-scale M&A in the past, having numerous international competitors appearing from consecutive M&A in bank industry. Large organizations only thrive in today's challenging environment. Government-owned banks are in bad shape as monetization has been abolished. Many government banks suffered huge losses due to bad debts that lenders were hesitant to repay, and many factors, such as the elimination of banknotes, ruined their business. They discussed closing various bank. So that people could withdraw funds under tricky conditions. Rather closing some bank, the government, had conversation along Reserve Bank of India, made very bold decision to consolidate them.

## II.Research objectives:

- Before & after amalgamation productivity study on ‘ BOB’.
- Before & after amalgamation productivity study on ‘ PNB’.
- Before & after amalgamation productivity study on ‘ CB’.
- Before & after amalgamation productivity Study on ‘ UB’.
- Before & after amalgamation productivity study on the ‘ IB’.

## III.Significance of the study:

- This research has been crucial & knowledge providing of mergers & acquisitions of Indian banks & contact of merger & acquisition on banks’ financial performance.

## IV.Data collection sources:

- This research is established solely on second data from selected unit’s yearly report & internet.
- The notes about the past, rise, & advancement of the bank branches are collected mainly from books and magazines, published papers, reports, articles, newsletters, & magazines about banking.

## V.Choose a pattern:

**Sample size: - 5 Mega Bank Mergers List in India 2019 to 2020**

| Acquiring Bank | Acquired Bank | Year of a merger |
|---|---|---|
| Bank Of Baroda | Vijaya Bank, Dena Bank | April 1, 2019 |
| Punjab National Bank | Oriental Bank Of commerce, United Bank Of India | April 1, 2020 |
| Canara Bank | Syndicate Bank | April 1, 2020 |
| Union Bank Of India | Andhra Bank, Corporation Bank | April 1, 2020 |
| Indian Bank | Allahabad Bank | April 1, 2020 |

## VI.Research tool:

- The research was performed on the Statistical Package for The Social Sciences.
- This study is based on correlation analysis and paired 'T-test'.

**The Research hypothesis:**

**A. Ratio Analysis:**

Ratio analysis is an important technique in financial analysis that shows the arithmetic relationship between any two numbers. A metric is generally a statistical measure that can be used to compare and measure relationships between numbers. Ratios are operating profit margin, net profit margin, return on total assets, return on equity,
cost to income, leverage ratio, and CASA ratio.

**B. Statistical Analysis:**

This study uses means, differences, and standard deviations as tools for statistical analysis and paired t-tests to evaluate hypotheses.

**Paired T-test:**

The paired t-test is a method of testing comparisons between two related samples with small values of n, the variances of the two populations need not be equal, but the two populations must be normal and hold need to do it.

**Null Hypothesis:** The average score of the selected units will not be significantly different before and after the merge.

**Alternate Hypothesis:** The average score of the selected units will be significantly different before and after the merge.

## VIII. Research Limits:

- The research gives opinion on V select bank only.
- Dates before and after selected merged banks are used in this study.
- All limitations of ratio analysis affect research.
- Since this study is data-only, secondary data limitations affect the analysis.
- In this study, one-year pre- and post-fusion data will be compared to the selected units.

## DATA ANALYSIS

**1. Operating Profit Ratio:**

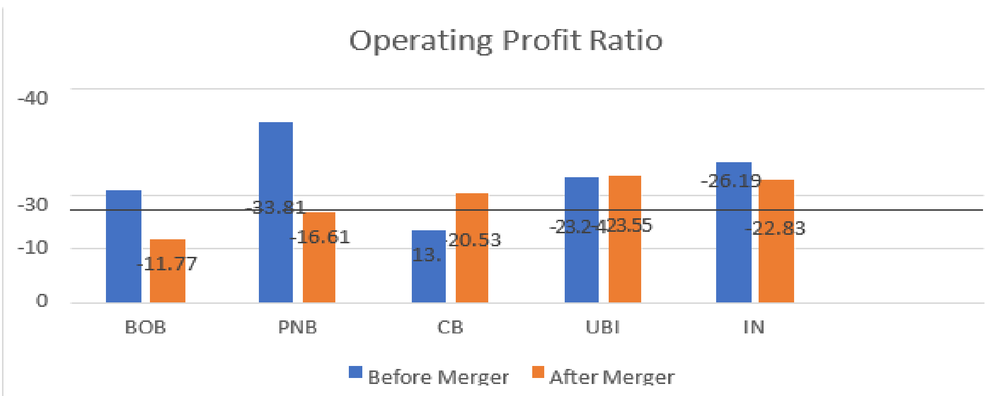
- OPR = OP / sales * 100
- OPR is measured through addition of non-recurring items and subtracting non-operating income from net income.
- This usually calculates the productivity and effectiveness of organization.

**Table 1**

**Operating Profit Ratio in selected Unit**

| Bank Name | Before Merger {x} | After Merger {y} | Difference {x-y} | Square Of Difference {x-y}^2 |
|---|---|---|---|---|
| BOB | -20.82 | -11.77 | -9.05 | 81.9025 |
| PNB | -33.81 | -16.61 | -17.2 | 295.84 |
| CB | -13.30 | -20.53 | 7.23 | 52.2729 |
| UBI | -23.24 | -23.55 | 0.31 | 0.0961 |
| IB | -26.19 | -22.83 | -3.36 | 11.2896 |
| | | Total | -22.07 | 441.4011 |

{Source: Moneycontrol.com}




❖ **Analysis:**

- BOBs have low pre-merger and towering post-merger ratio are {-20.82} and {-11.77}.
- PNBs have low pre-merger and towering post-merger ratio are {-33.81} and {-16.61}.
- CB have towering pre-merger and low post-merger ratio are {-13.30} and {-20.53}.
- UB have the low post-merger and towering pre-merger ratio are {-23.55} and {-23.24}.
- IB have the towering post-merger and low pre-merger ratio are {-22.83} and {-26.19}.

Journal of Informatics Education and Research
ISSN: 1526-4726
Vol 3 Issue 2 (2023)

**Table 1.1**

**t-test analysis of selected business units when reviewing operating margin**

| N | Means | | | S. D | | | d.f | t-test | p-values | Result |
|---|---|---|---|---|---|---|---|---|---|---|
| | x | y | xy | x | y | xy | | | | |
| 5 | -23.47 | -19.05 | -4.41 | 7.49 | 4.89 | 9.27 | 4 | -1.064 | 0.347 | Ho |

- **Null Hypothesis: {Ho}**

The average score of the selected units will not be significantly different before and after the merge.

- **Alternate Hypothesis: {H1}**

The average score of the selected units will be significantly different before and after the merge.

**At the 5% significance level, where t = -1.064 and p-value = 0.347.**

**Therefore, t < p**

**Since T is less than the p-value, the Null Hypothesis {Ho} is accepted, meaning that there is no significant difference in the average score of the selected departments before and after the merger and acquisition.**

2. **Net Profit Ratio:**

- Net income margin = After tax income / revenue * 100
- Can modify and measure for nonprofits and can replace net assets when used in the formula instead of net income.
- Comparison of net income after income tax and net income. Profit remaining after deducting all production, administrative and financial costs from sales and recognizing income tax.
- It's a Good measure of the overall performance of a company when combined with an assessment showing utilization of equity by the company.
- This ratio is measured by the trend to determine performance over time.
- It's also used to evaluate business performance with competitors.

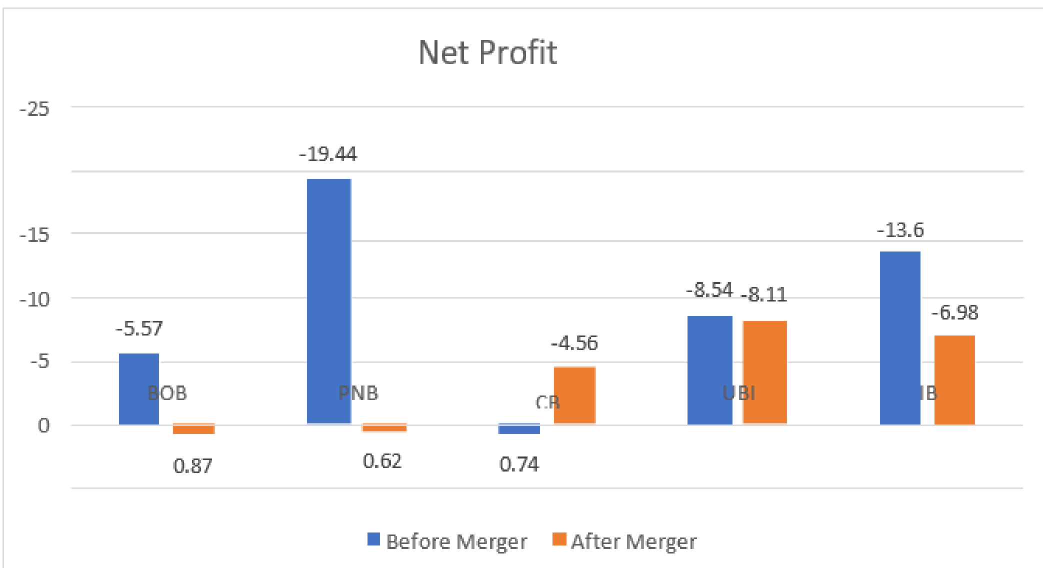
**Journal of Informatics Education and Research**
**ISSN: 1526-4726**
**Vol 3 Issue 2 (2023)**

**Table 2**

**Net Profit Ratio in selected Unit**

| Bank Name | Before Merger {x} | After Merger {y} | Difference {x-y} | Square Of Difference {x-y} ^2 |
|---|---|---|---|---|
| BOB | -5.57 | 0.87 | -6.44 | 41.4736 |
| PNB | -19.44 | 0.62 | -20.06 | 402.4036 |
| CB | 0.74 | -4.56 | 5.3 | 28.09 |
| UBI | -8.54 | -8.11 | -0.43 | 0.1849 |
| IB | -13.60 | -6.98 | -6.62 | 43.8244 |
| | | total | -28.25 | 515.9765 |

{Source: Moneycontrol.com}




❖ **Analysis:**

- BOBs have low pre-merger and towering post-merger ratio are {-5.57} and {0.87}.
- PNBs have low pre-merger and towering post-merger ratio are {-19.44} and {0.62}.
- CB have towering pre-merger and low post-merger ratio are {0.74} and {-4.56}.
- UB have the towering post-merger and low pre-merger ratio are

{-8.11} and {-8.54}.

**Journal of Informatics Education and Research**
**ISSN: 1526-4726**
**Vol 3 Issue 2 (2023)**

**Table 2.1**

**t-test analysis of selected business units when reviewing the Net profit ratio**

| N | means | | | S. D | | | d.f | t-test | p-values | Result |
|---|---|---|---|---|---|---|---|---|---|---|
| | x | y | xy | x | y | xy | | | | |
| 5 | -9.2820 | -3.6320 | -5.65000 | 7.69 | 4.19 | 9.438 | 4 | -1.338 | 0.252 | Ho |

- IB have the towering post-merger and low pre-merger ratio are {-6.98} and {-13.60}.
-
- **Null Hypothesis: {Ho}**

The average score of the selected units will not be significantly different before and after the merge.

- **Alternate Hypothesis: {H1}**

The average score of the selected units will be significantly different before and after the merge.

**At the 5% significance level, where t = -1.338 and p-value = 0.252.**

**Therefore, t < p**

**Since T is less than the p-value, the Null Hypothesis {Ho} is accepted, meaning that there is no significant difference in the average score of the selected departments before and after the merger and acquisition.**

**3. Return on asset:**

- ROA = Company's Net Income / Average Total Assets
- It shows value of an asset contributing to income.
- The more assets, the more employees, the more revenue they can generate and the ratio is more positive.
- ROA is the same as return on equity but does not contemplate the effect of bank loans. Since bank usually use a leverage ratio of 10:1 to achieve a 10% return, they must earn at least 1% of their bank asset.

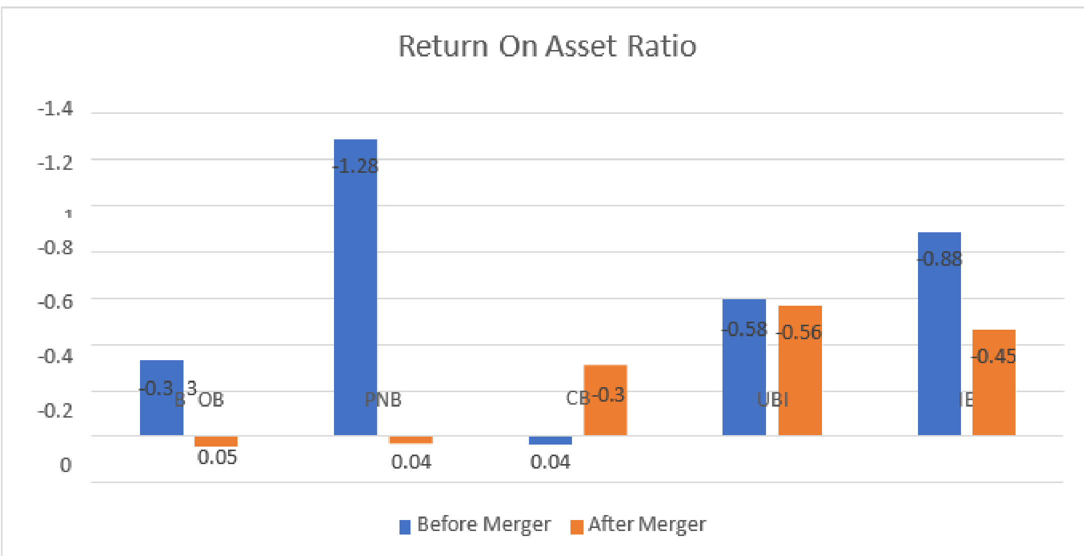
Journal of Informatics Education and Research
ISSN: 1526-4726
Vol 3 Issue 2 (2023)

**Table 3**

**Return On Assets Ratio in selected Unit**

| Bank Name | Before Merger {x} | After Merger {y} | Difference {x-y} | Square Of Difference {x-y}^2 |
|---|---|---|---|---|
| BOB | -0.33 | 0.05 | -0.38 | 0.1444 |
| PNB | -1.28 | 0.04 | -1.32 | 1.7424 |
| CB | 0.04 | -0.30 | 0.34 | 0.1156 |
| UBI | -0.58 | -0.56 | -0.02 | 0.0004 |
| IB | -0.88 | -0.45 | -0.43 | 0.1849 |
| | | total | -1.81 | 2.1877 |

{source: Moneycontrol.com}




❖ **Analysis:**

- BOBs have low pre-merger and towering post-merger ratio are {-0.33} and {0.05}.
- PNBs have low pre-merger and towering post-merger ratio are {-1.28} and {0.04}.
- CB have towering pre-merger and low post-merger ratio are {0.04} and {-0.30}.
- UB have the towering post-merger and low pre-merger ratio are

{-10.16} and {-11.92}.

- IB have the towering post-merger and low pre-merger ratio are {-0.45} and {-0.88}.

**Journal of Informatics Education and Research**
**ISSN: 1526-4726**
**Vol 3 Issue 2 (2023)**

**Table 3.1**

**t-test analysis of selected business units when reviewing the Return on Asset Ratio**

| N | means | | | S.D | | | d.f | t-test | Sig. {2-tailed} | Result |
|---|---|---|---|---|---|---|---|---|---|---|
| | x | y | xy | x | y | xy | | | | |
| 5 | -O.6060 | -0.2440 | -0.36200 | 0.50585 | 0.27952 | 0.61897 | 4 | -1.308 | 0.261 | Ho |

- **Null Hypothesis: {Ho}**

The average score of the selected units will not be significantly different before and after the merge.

- **Alternate Hypothesis: {H1}**

The average score of the selected units will be significantly different before and after the merge.

**At the 5% significance level, where t = -1.308 and p-value = 0.261.**

**Therefore, t < p**

**Since T is less than the p-value, the Null Hypothesis {Ho} is accepted, meaning that there is no significant difference in the average score of the selected departments before and after the merger and acquisition.**

**4. Return on Equity:**

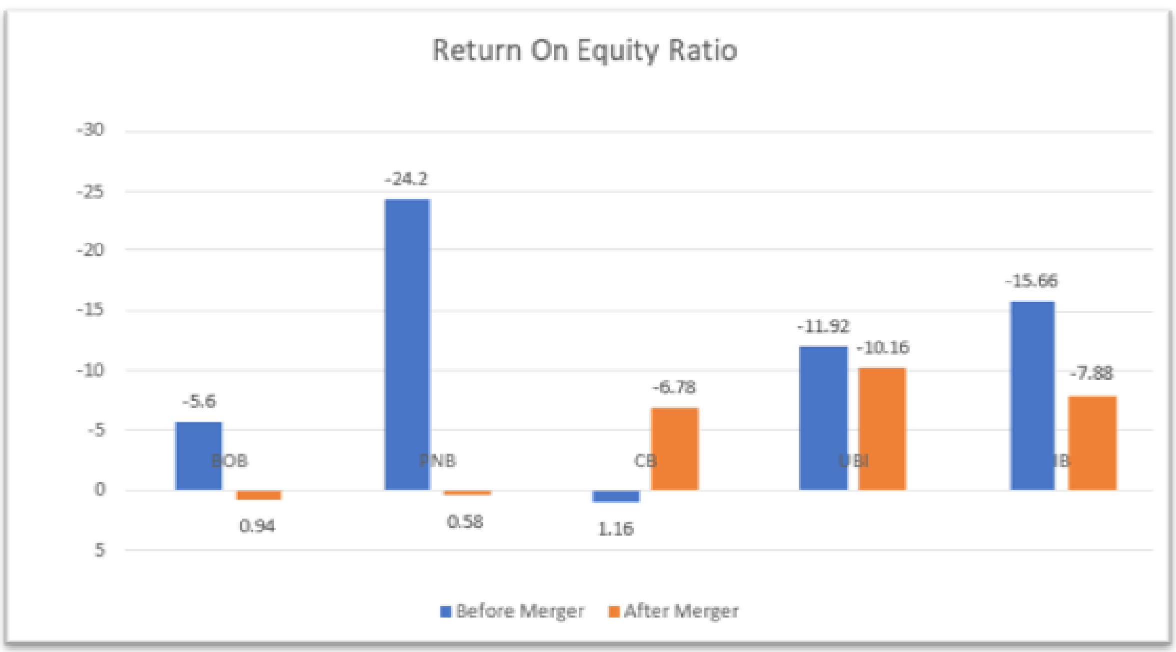
- ROE = Net Income / Shareholders Equity.
- It is the most crucial indicator of all investment banks.
- Profit is calculated by dividing the bank's net income upon its equity.

**Table 4**

**Return On Equity Ratio in selected Unit**

| Bank Name | Before Merger {x} | After Merger {y} | Difference {x-y} | Square Of Difference {x-y} ^2 |
|---|---|---|---|---|
| BOB | -5.60 | 0.94 | -6.54 | 42.7716 |
| PNB | -24.20 | 0.58 | -24.78 | 614.0484 |
| CB | 1.16 | -6.78 | 7.94 | 63.0436 |
| UBI | -11.92 | -10.16 | -1.76 | 3.0976 |
| IB | -15.66 | -7.88 | -7.78 | 60.5284 |
| | | total | -32.92 | 783.4896 |

{Source: Moneycontrol.com}




❖ **Analysis:**

- BOBs have low pre-merger and towering post-merger ratio are {-5.60} and {0.94}.
- PNBs have low pre-merger and towering post-merger ratio are {-24.20} and {0.58}.
- CB have towering pre-merger and low post-merger ratio are {1.16} and {-6.78}.
- UB have the towering post-merger and low pre-merger ratio are {-10.16} and {-11.92}.
- IB have the towering post-merger and low pre-merger ratio are {-7.88} and {-15.66}.

**Table 4.1**

**t-test analysis of selected business units when reviewing the Return on Equity Ratio**

| N | means | | | S. D | | | d.f | t-test | p-vales | Result |
|---|---|---|---|---|---|---|---|---|---|---|
| | X | Y | XY | X | Y | XY | | | | |
| 5 | -11.24 | -4.66 | -6.58 | 9.66 | 5.09 | 11.90 | 4 | -1.237 | 0.284 | Ho |

- **Null Hypothesis: {Ho}**

The average score of the selected units will not be significantly different before and after the merge.

- **Alternate Hypothesis: {H1}**

The average score of the selected units will be significantly different before and after the merge.

**At the 5% significance level, where t = -1.237 and p-value = 0.284.**

**Therefore, t < p**

**Since T is less than the p-value, the Null Hypothesis {Ho} is accepted, meaning that there is no significant difference in the average score of the selected departments before and after the merger and acquisition.**

**5. Cost to Income Ratio:**

- It is a measure which companies use to evaluate their performance.
- The cost-to-income ratio is usually used to measure the operating costs of a finance institution or bank compared to the income generated by it.
- Better analysis of the company's performance. A microfinance institution or bank should be compared to the historical average of the industry.
- If low, it is good for the company's productivity.
- A company must increase operating profits or decrease operating expenses in order to reduce profit expenses.
- Income Ratio = Operating Cost / Operating Income

❖ **Analysis:**

- BOBs have towering pre-merger and low post-merger ratio are {48.92} and {43.41}.
- PNBs have towering pre-merger and low post-merger ratio are {58.80} and {41.81}.
- CB have towering post-merger and low pre-merger ratio are {40.83} and {38.78}.
- UB have the towering post-merger and low pre-merger ratio are {46.11} and {45.76}.
- IB have the towering post-merger and low pre-merger ratio are {41.12} and {40.72}.

**Table 5.1**

**t-test analysis of selected business units when reviewing Cost to Income Ratio**

| N | Means | | | S. D | | | d.f | t-test | p-values | Result |
|---|---|---|---|---|---|---|---|---|---|---|
| | X | Y | XY | X | Y | XY | | | | |
| 5 | 46.59 | 42.65 | 3..94 | 7.91 | 2.17 | 7.84 | 4 | 1.124 | 0.324 | H1 |

- **Null Hypothesis: {Ho}**

The average score of the selected units will not be significantly different before and after the merge.

- **Alternate Hypothesis: {H1}**

The average score of the selected units will be significantly different before and after the merge.
.

**At the 5% significance level, where t = 1.124 and p-value = 0.324.**

**Therefore, t > p**

**Since T is greater than the p-value, the Alternate Hypothesis {H1} is accepted, meaning that there is significant difference in the average score of the selected departments before and after the merger and acquisition.**

**6. Earnings Per Share:**

- EPS = Net income – Preferred Dividends / End of period Common Shares Outstanding.
- EPS is considered the most important variable in determining the value of our stock.
- Company stock is divided into each outstanding share of common stock. Earnings per share also serves as an indicator of the company's profitability.
- An important aspect of earnings per share is the amount of capital required to generate earnings (net income).
- Two companies can earn the same earnings per share, but only one can invest less capital, so one company will use capital more efficiently to generate its own profit, other things being equal. to be a "good" company.

**Table-6**

**Earnings Per Share Ratio in selected Unit**

| Bank Name | Before Merger {x} | After Merger {y} | Difference {x-y} | Square Of Difference {x-y} ^2 |
|---|---|---|---|---|
| BOB | -64.97 | -46.70 | -18.27 | 333.7929 |
| PNB | -30.00 | 1.00 | -31 | 961 |
| CB | 8.00 | -24.00 | 32 | 1024 |
| UBI | -25.00 | -13.00 | -12 | 144 |
| IB | -29.00 | -9.00 | -20 | 400 |
| | | total | -49.27 | 2862.793 |

❖ **Analysis:**

- BOB have the towering post-merger ratio {-46.70} and a low pre-merger ratio {-64.97}.
- PNB post and pre-Merger ratio are {1.00} and {-30.00}.
- CB pre- and post-merger ratio are {8.00} and {-24.00}.
- UBI's post and pre-merger ratio are {-13.00} and {-25.00}.
- IB's post and pre-merger ratio are {-9.00} and {-29.00}.

**Table 6.1**

**t-test analysis of selected business units when reviewing Earning Per Share Ratio**

| N | Means | | | S. D | | | d.f | t-test | p-vales | Result |
|---|---|---|---|---|---|---|---|---|---|---|
| | X | Y | XY | X | Y | XY | | | | |
| | -28.19 | -18.34 | -9.85 | 25.86 | 18.20 | 24.37 | 4 | -0.904 | 0.417 | Ho |

▶ **Null Hypothesis: {Ho}**

The average score of the selected units will not be significantly different before and after the merge.

▶ **Alternate Hypothesis: {H1}**

The average score of the selected units will be significantly different before and after the merge.

**At the 5% significance level, where t = -0.904 and p-value = 0.417.**

**Therefore, t < p**

**Since T is less than the p-value, the Null Hypothesis {Ho} is accepted, meaning that there is no significant difference in the average score of the selected departments before and after the merger and acquisition.**

**7. Debt Equity Ratio:**

❖ **Analysis:**

**Table 7**

**Debt Equity Ratio in Selected Units**

| Bank Name | Before Merger {x} | After Merger {y} | Difference {x-y} | Square Of Difference {x-y}^2 |
|---|---|---|---|---|
| BOB | 15.07 | 15.37 | -0.3 | 0.09 |
| PNB | 17.36 | 13.09 | 4.27 | 18.23 |
| CB | 21.53 | 20.27 | 1.26 | 1.58 |
| UBI | 18.92 | 16.44 | 2.48 | 6.15 |
| IB | 15.60 | 14.71 | 0.89 | 0.792 |
| | | total | 8.6 | 26.842 |

{source: Moneycontrol.com}

- BOB have the towering post-merger ratio {15.37} and a low pre-merger ratio {15.07}.
- PNB have towering pre-merger and low post merger ratio are {17.36} and {13.09}.
- CB have towering pre- and low post-merger ratio are {21.53} and {20.27}.
- UBI's post and pre-merger ratio are {16.44} and {18.92}.
- IB's post and pre-merger ratio are {14.71} and {15.60}.

**Table 7.1**

**t-test analysis of selected business units when reviewing the Debt-to-Equity Ratio**

| N | Means | | | S. D | | | d.f | t-test | p-vales | Result |
|---|---|---|---|---|---|---|---|---|---|---|
| | X | Y | XY | X | Y | XY | | | | |
| | 17.69 | 15.97 | 1.72 | 2.62 | 2.69 | 1.73 | 4 | 2.215 | 0.091 | H1 |

▶ **Null Hypothesis: {Ho}**
The average score of the selected units will not be significantly different before and after the merge.

▶ **Alternate Hypothesis: {H1}**
The average score of the selected units will be significantly different before and after the merge.

**Journal of Informatics Education and Research**
**ISSN: 1526-4726**
**Vol 3 Issue 2 (2023)**

**At the 5% significance level, where t = 2.215 and p-value = 0.091.**

**Therefore, t > p**

**Since T is greater than the p-value, the Alternate Hypothesis {H1} is accepted, meaning that there is significant difference in the average score of the selected departments before and after the merger and acquisition.**

**8. ROCE {%} Ratio:**

**Table 8**

**ROCE {%} Ratio in selected Unit**

| Bank Name | Before Merger {x} | After Merger {y} | Difference {x-y} | Square Of Difference {x-y} ^2 |
|---|---|---|---|---|
| BOB | 1.72 | 1.78 | -0.06 | 0.0036 |
| PNB | 1.69 | 1.81 | -0.12 | 0.0144 |
| CB | 1.56 | 1.32 | 0.24 | 0.0576 |
| UBI | 1.54 | 1.70 | -0.16 | 0.0256 |
| IB | 1.78 | 2.14 | -0.36 | 0.1296 |
| | | Total | -0.46 | 0.2308 |

{source: Moneycontrol.com}

❖ **Analysis:**

- BOB have the towering post-merger ratio {1.78} and a low pre-merger ratio {1.72}.
- PNB have towering post-merger and low pre-merger ratio are {1.81} and {1.69}.
- CB have towering pre- and low post-merger ratio are {1.56} and {1.32}.
- UBI's towering post and low pre-merger ratio are {1.70} and {1.54}.
- IB's towering post and low pre-merger ratio are {2.14} and {1.78}.

**Table 8.1**

**t-test analysis of selected business units when reviewing the ROCE Ratio**

| N | Means | | | S.D | | | d.f | t-test | p-vales | Result |
|---|---|---|---|---|---|---|---|---|---|---|
| | X | Y | XY | X | Y | XY | | | | |
| 5 | 1.65 | 1.75 | -0.092 | 0.104 | 0.293 | 0.217 | 4 | -0.948 | 0.397 | Ho |

▶ **Null Hypothesis: {Ho}**
The average score of the selected units will not be significantly different before and after the merge.
▶ **Alternate Hypothesis: {H1}**
The average score of the selected units will be significantly different before and after the merge.

**At the 5% significance level, where t = -0.948 and p-value = 0.397.**

**Therefore, t < p**

**Since T is less than the p-value, the Null Hypothesis {Ho} is accepted, meaning that there is no significant difference in the average score of the selected departments before and after the merger and acquisition.**

**9. Assets Turnover Ratio:**

❖ **Analysis:**

- BOB have the towering post-merger ratio {0.07} and a low pre-merger ratio {0.06}.
- PNB have same pre- and post-merger ratio which are {0.07} and {0.07}.
- CB have same pre- and post-merger ratio which are {0.07} and {0.07}.
- UBI have same pre- and post-merger ratio which are {0.07} and {0.07}.
- IB have same pre- and post-merger ratio which are {0.07} and {0.07}.

**Table 9.1**

**t-test analysis of selected business units when reviewing the Assets Turnover ratio**

| N | Means | | | S.D | | | d.f | t-test | p-values | Result |
|---|---|---|---|---|---|---|---|---|---|---|
| | X | Y | XY | X | Y | XY | | | | |
| 5 | 0.068 | 0.070 | -0.002 | 0.004 | 0.000 | 0.004 | 4 | -1.000 | 0.374 | Ho |

- **Null Hypothesis: {Ho}**

The average score of the selected units will not be significantly different before and after the merge.

- **Alternate Hypothesis: {H1}**

The average score of the selected units will be significantly different before and after the merge.

**At the 5% significance level, where t = -1.000 and p-value = 0.374.**

**Therefore, t < p**

**Since T is less than the p-value, the Null Hypothesis {Ho} is accepted, meaning that there is no significant difference in the average score of the selected departments before and after the merger and acquisition.**

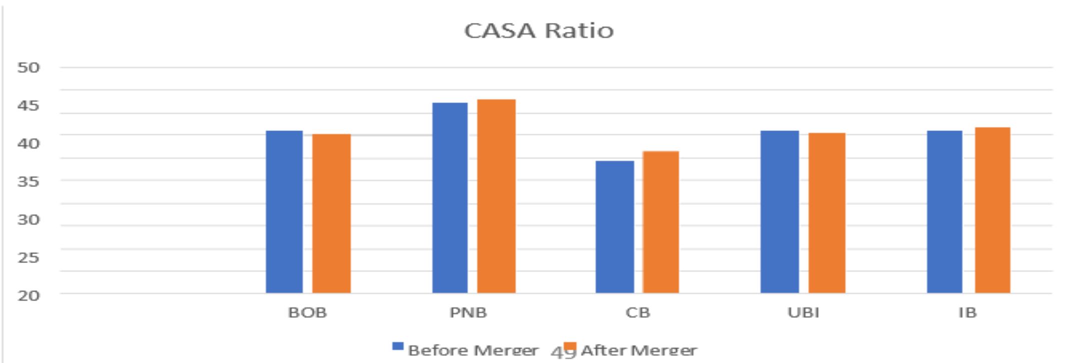
**10. CASA ratio:**

**Table 10**

**CASA Ratio in selected Unit**

| Bank Name | Before Merger (x) | After Merger (y) | Difference (x-y) | Square Of Difference (x-y)^2 |
|---|---|---|---|---|
| BOB | 35.81 | 35.03 | 0.78 | 0.6084 |
| PNB | 42.16 | 42.97 | -0.81 | 0.6561 |
| CB | 29.18 | 31.37 | -2.19 | 4.7961 |
| UBI | 35.97 | 35.46 | 0.51 | 0.2601 |
| IB | 35.90 | 36.51 | -0.61 | 0.3721 |
| | | total | -2.32 | 6.6928 |

(source: Moneycontrol.com)




❖ **Analysis:**

- BOB have the towering pre-merger ratio {35.81} and a low post-merger ratio {35.03}.
- PNB have towering post-merger and low pre-merger ratio are {42.97} and {42.16}.
- CB have towering post- and low pre-merger ratio are {31.37} and {29.18}.
- UBI's towering pre and low post-merger ratio are {35.97} and {35.46}.
- IB's towering post and low pre-merger ratio are {36.51} and {35.90}.

**Table 10.1**

**t-test analysis of selected business units when reviewing the CASA ratio**

| N | Means | | | S. D | | | d.f | t-test | p-values | Result |
|---|---|---|---|---|---|---|---|---|---|---|
| | X | Y | XY | X | Y | XY | | | | |
| 5 | 35.80 | 36.26 | -0.464 | 4.59 | 4.21 | 1.184 | 4 | -0.876 | 0.431 | Ho |

- **Null Hypothesis: {Ho}**

The average score of the selected units will not be significantly different before and after the merge.

- **Alternate Hypothesis: {H1}**

The average score of the selected units will be significantly different before and after the merge.

**At the 5% significance level, where t = -0.876 and p-value = 0.431.**

**Therefore, t < p**

**Since T is less than the p-value, the Null Hypothesis {Ho} is accepted, meaning that there is no significant difference in the average score of the selected departments before and after the merger and acquisition.**

## FINDING

- PNB had the towering margin {-33.81} and CB the lowest {-13.30} before the merger. The towering post-merger ratio {-23.55} and the lowest ratio {-11.77} is BOI.
- Pre-merger net profit is towering for CB {0.74} and lowest for PNB {-19.44}. After merger BOB recorded the towering ratio {0.87} while UBI recorded the lowest ratio {-8.11}.
- CB has the towering pre-merger earnings ratio {0.04} and PNB has the lowest ratio {-1.28}. After consolidation, the towering ratio of BOB is {0.05}, while BOI has the lowest ratio {-0.56}.
- In terms of pre-merger earnings, CB has the towering ratio {1.16} and PNB has the lowest ratio {-24.20}. After consolidation, BOB has the towering ratio {0.94}, while BOI has the lowest ratio {-10.16}.
- The towering pre-merger cost ratio {58.80} in PNB and the lowest ratio in CB {38.78}.
- Earnings per share was the towering for CB {8.00} and the lowest for BOB {-64.97}. After merger, PNB has the towering ratio {1.00} and the lowest ratio {-46.70} is BOB.
- CB has the towering pre-merger debt ratio {21.53}, while BOB has the lowest {15.07}. After merger, the towering rate is {20.27} in CB and the lowest rate is in PNB {13.09}.
- Pre-merger ROCE ratio has the towering ratio {1.78}, UBI has the lowest ratio {1.54}. BI has the towering post-merger ratio {2.14} and CB has the lowest ratio {1.32}.
- Pre-merger asset turnover is the towering {0.07} and the lowest {0.07} for BOB for PNB, CB, and BOI. The post-merger ratio {0.07} is the same for all the merged banks.
- PNB has the towering pre-merger CASA ratio {42.16} and CB has the lowest {29.18}. PNB has the towering post merger ratio {42.97} and CB has the lowest {31.37}.

## CONCLUSION

• The banking industry has experienced a wave of mergers and acquisitions in recent years, with several global players emerging in the banking industry through continuous mergers and acquisitions.

• The present study shows that there is no significant change in the profitability of selected banks in India following mergers and acquisitions in some banks during the study period. But there are reliable predictions to increase profitability in the future. Therefore, determine whether the merger leads to a higher level of bank merger costs.

• Mergers and acquisitions lead to financial gains and increased value of the target bank. depending on the situation and whether it will increase the buyer's share and income or not.

• The main purpose of mergers and acquisitions is to reduce competition in the economy and maintain existing markets.

• Consolidation is useful for the growth and development of a country if it does not only create competition problems.

• The impact of M & A on shareholder value. Assets represent structural factors such as the relative size of the merger and acquisition partner, how the merger is financed, and the number of participants in the merger or acquisition can affect whether the merger or acquisition is successful.

• The importance of considering the scope of potential targets and what methods to use for funding M & A.

Structural factors that can independently affect shareholder value.

• The administration of banks and other entities that consider mergers and acquisitions should try to evaluate and consider how these structural factors can affect the performance of the proposed M & A.

• Mergers have increased the competitiveness of the industry to compete with competitors in the global market, but mergers shrink the industry as the number of firms decreases.

• Mergers help banks strengthen their financial base and get tax breaks and direct access to cash.

• In the banking sector, it helps weak banks consolidate their position by merging with big and strong banks.

• The study above shows the impact of M & A on individual banks. VB, DB, BOB, ETB and UBI merged to form PNB, SB merged with CB and AB. Then CB merged with UBI and AB y competitive.

**References / Bibliography:**

List of websites/sources that had provided me with the relevant data for my project:
a) https://shapoorji.in/contact-us/global-presence/
b) https://www.businesstoday.in/magazine/corporate/story/debt-challenge-288681-2021-02-18

c) https://www.financialexpress.com/industry/eyeing-a-clean-slate-shapoorji-pallonji-group-aims-to-become-net-debt-free-by-march/2363072/

d) https://www.shapoorjipallonjifinance.com/wp-content/uploads/2021/09/Annual-Report.pdf#toolbar=0