Paper 10

Evaluation of Pre- and Post-Merger Financial Performance: A Case Study of SBI

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Abstract
Mergers and acquisitions are very popular means of inorganic growth. The Indian banking industry is going through a phase of consolidation through mergers. In 2020 alone there were 4 cases of merger among public sector banks. Merger of ING Vyshya with Kotak Mahindra bank, Bank of Rajasthan with ICICI Bank are the notable examples in private sector. Mergers and amalgamations of banking companies is regulated by the Banking Regulation Act, 1949. Through M&A, acquired banks get a new name, structure, products and services. However, the risk of NPAs continues to be a major problem for banks. The present paper studies the impact of mergers on the financial performance, market performance, asset quality and liquidity position of SBI after its merger with its associate banks and Bharatiya Mahila Bank through ratio analysis. A comparison of various financial ratios is made to find out the nature of change in the performance parameters of the bank. The study highlights reduction in profitability, increase in cost to income ratio, slight improvement in liquidity, decline in asset quality and market performance.
Keywords: Bank Mergers, Financial Performance, Market Performance, Ratio Analysis, Non-Performing Assets

1. INTRODUCTION

Mergers and acquisitions are effective strategies for achieving growth and expansion for businesses, world over. Mergers enable companies to raise fresh capital, improve efficiency, increase value for shareholders and enable the firm to attract better talent. They also help to cut costs, create synergies and economies of scale, improve market share and meet competitive challenges.

Indian corporates have also adopted this inorganic route of M&A to achieve growth and gain competitive advantage. Removal of the restrictive provisions of the MRTP Act and reforms in FEMA and FERA in 2000 have encouraged and increased M&A activities not only within the country but also cross-border M&As.

The Indian banking industry has been the main stay of the financial system, playing an important role in mobilizing funds and channeling investments to industry.

The Indian banking system comprises of 12 public sector banks, 22 private sector banks, 56 RRBs, 1485 urban co-operative banks [1].

The financial inclusion initiatives of the government have enabled a lot of people to access banking services. As on April 2020, deposits under the PMJDY stood at Rs. 1.28 lakh crores There is an increased use of digital payments, especially after UPI was introduced. At the end of March 2020, total transactions under the UPI were recorded at 1.25 billion valued at 2.06 lakh crores [2] As on 2020, there are 38.7 crore Jan Dhan accounts [3].

At the same time, the banking industry faces several challenges. The poor asset quality as a result of large number of Non-productive Assets (NPAs) and large overdues has been a persistent problem faced by the Indian Banks. The banking system has had to face large defaults in the recent times.

In the Indian banking scenario, mergers have been a useful tool for survival of weak banks by merging into larger banks. It has also enabled the acquiring banks to grow in size. For instance, the State Bank of India (SBI) had entered the list of top 50 Global Banks after its merger with its associate banks and Bharatiya Mahila Bank [4].

However, the risks of mergers of banks include high NPAs and costs related to the merger.

RECENT BANK MERGERS IN INDIA

Table 1: Recent Bank Mergers

YEAR	ACQUIRER BANK	TARGET BANK
2004	Oriental Bank of Commerce	Global Trust Bank
2005	Centurion Bank	Bank of Punjab
2006	Federal Bank	Ganesh Bank of Kurundwad
2006	Centurion Bank of Punjab	Lord Krishna Bank
2008	HDFC	Centurion Bank of Punjab
2010	ICICI Bank	Bank of Rajasthan
2014	Kotak Mahindra Bank	ING Vysya
2017	State Bank of India (SBI)	5 associate banks and Bharatiya Mahila Bank
2018	IDFC Bank	Capital First Bank
2019	Bank of Baroda	Vijaya Bank, Dena bank
2020	Indian Bank	Allahabad bank
2020	Union Bank of India	Andhra Bank and Corporation Bank
2020	Canara Bank	Syndicate Bank
2020	Punjab National Bank	Oriental Bank of Commerce, United Bank of India

Source: bankexamstoday.com

2. RELATED WORKS

Table 2: Review of related works on Mergers and Acquisitions

Sl. No.	Period of study	Mergers studied	Findings	References

1	1979- 83	50 largest acquisitions in the US listed in NYSE	Significant improvement was found in the operating performance of acquiring firm's post-merger.	Healy, Palepu and Ruback (1992) [5]
2	1999 - 2003	118 cases of mergers in various Indian industries	In case of banking and finance, pharma, textile and Electric equipment sectors an improvement in profitability was found. A significant decline was observed in the chemical and agri sector.	Mantravadi and Reddy (2008) [6]
3	2010-11 to 2015-16	8 cases of merger involving the following acquiring banks: Bank of Baroda HDFC Bank ICICI Bank Oriental Bank of Commerce PNB SBI	In the case of BoB, OBC and PNB the current ratio shows no improvement after merger. SBI record an improvement in converting working capital to earnings. There is no much impact on ROCE in any of the banks.	Singh and Das (2008) [7]
4	2005-07 (pre-merger) & 2009-11 (post-merger)	2 bank mergers HDFC bank with Centurion Bank of Punjab Centurion Bank of Punjab with Lord Krishna Bank	No change in Net profit margin, ROCE and operating profit margin after the merger. Debt-equity ratio shows improvement post-merger.	Devarajappa S., (2012) [8]
5.	2004- 2009	Indian bank mergers occurring during 2004- 2009	Technical efficiency of merged banks showed improvement only from the 3rd year since merger. Underperformance of	Jayaraman, Rangaswamy and Arunachalam, (2014) [9]

			merged banks is mostly due to scale inefficiency. There was no significant impact on profitability and operational costs.	
6	2006 – 10 (pre-merger) & 2011- 15 (post-merger)	SBI merger with State bank of Indore	Overall positive impact on liquidity and investment parameters and negative impact on profitability.	Gupta, 2016 [10]
7.	2007 -10 (pre-merger) & 2010 – 17 (post-merger)	ICICI bank merger	Increase in profitability and improvement in liquidity position post-merger. EPS also increased post-merger.	Veena K.P., (2016) [11]
8.	5 years prior to and after merger up to 2014	Mergers involving the following acquiring banks: Federal Bank Indian Overseas bank SBI ICICI bank	In case of ICICI bank, the study found the performance has improved. In case of IOB, Federal Bank and SBI performance has declined with regard to CAR & NPA and liquidity.	Tanwar, (2016) [12]
9.	2003- 04 till 2013-14	Bank of Baroda merger Oriental bank of commerce IDBI Bank SBI merger	In case of BOB and OBC negative impact on ROE, ROA, Net profit ratio and yield on investment. Positive impact on EPS, Profit/employee, yield/employee. In case of IDBI, merger has had most negative impact on net profit margin.	Patel, (2018) [13]

			For SBI merger has had positive impact on all variables studied.	
10.	2015-18	SBI merger with State bank of Indore	Improvement in liquidity and decrease in profitability and decline in market performance found.	Manoj Kumar N.V., (2018) [14]
11.	2013-14 to 2017-18	SBI merger with associate banks and Bharatiya Mahila Bank	Reduction in cash-deposit ratio and investments. Deposits to liabilities ratio is stable.	Sreemathi and Tharmalingam, (2018) [15]
12.	2004 – 09 (pre-merger) & 2010–17(post-merger)	SBI merger with State bank of Indore	Cost of banking operations has reduced. Improvement in per branch performance. No significant improvement in per employee ratios. All key ratios except cost to income have shown a decline in performance.	Ali and Sharma (2019) [16]

3. OBJECTIVES OF THE STUDY

1. To study the impact of the merger on the financial performance of the acquiring banks in terms of profitability.
2. To analyze the liquidity position of the acquiring banks after merger.
3. To analyze the impact of the merger on the asset quality of the acquiring banks
4. To study the impact of the merger on the market performance of the acquiring banks.

4. RESEARCH HYPOTHESES

- **H0**: There is no significant difference in the pre- and post-merger Net profit margin
  H1: There is a significant difference in the pre- and post-merger Net Profit margin.

- **H0**: There is no significant difference in the pre- and post-merger cost to income of the selected acquiring bank.
  H2: There is a significant difference in the pre- and post-merger cost to income of the selected acquiring bank.

- **H0**: There is no significant difference in the pre- and post-merger Earnings per share of the selected acquiring bank.
  H3: There is a significant difference in the pre- and post-merger Earnings per share of the selected acquiring bank.

- **H0:** There is no significant difference in the management of NPAs pre- and post-merger.
  H4: There is a significant difference in the management of NPAs pre- and post-merger.

- **H0**: There is no significant difference in the pre- and post-merger current ratio of the selected acquiring bank.
  H5: There is a significant difference in the pre- and post-merger current ratio of the acquiring bank.

5. RESEARCH DESIGN

Case study of SBI merger is selected as the merger of SBI with its associate banks is an important move in the consolidation of the state-run banks. With this merger, almost 25% of the outstanding loans in the country's banking sector will be found in SBIs balance sheet and also the merged entity will have 23,000 branches and a global presence [18].

5.a. METHODOLOGY OF DATA COLLECTION

The data for the study is collected from various secondary sources.The various ratios are obtained from the following websites

www.moneycontrol.com

stock-financials.valuestocks.in

Standalone balance sheet ratios of SBI i.e., the acquiring bank have been considered for the purpose of the study.

5.b. PERIOD OF STUDY

The State Bank of India merger with it's associate banks and Bharatiya Mahila Bank having taken place on 1st April 2017, three financial years have since elapsed. Hence, various financial ratios to measure liquidity, profitability, asset quality and market performance is calculated for a period of 6 financial years i.e., 3 years pre-merger and 3 years post-merger for the acquiring bank.

5.c. RESEARCH TOOLS

Analyzing financial statement, Income statement including revenues, cost of goods, cost of Selling, General and Administrative, gross margin. operating margin, net margin etc. and balance sheet are important to measure the financial performance, market performance, liquidity and to know the financial risk of the bank [17].

a) The pre- and post-merger profitability position is analyzed by using the ratios ROCE, CASA, Net Profit Margin, Operating Profit Margin, Return on Assets, Return on Equity/ Net worth, Net interest margin, Cost to Income.
b) The market performance is evaluated through EPS(Rs.), Price to Book Value, Earnings Yield and P/E Ratio.

c) The asset quality is measured through Net and Gross NPA Ratio.
d) In order to analyze the liquidity position, financial ratios like Current Ratio and Loans to Deposit are used.

5.d. METHODOLOGY OF DATA INTERPRETATION

The ratios are tabulated to observe the post-merger change. Comparison of the performance is done by calculating the pre and post-merger means. T-test is conducted to find out whether there is a significant difference in the pre and post-merger performance. Hypothesis has been tested at 5% level of significance.

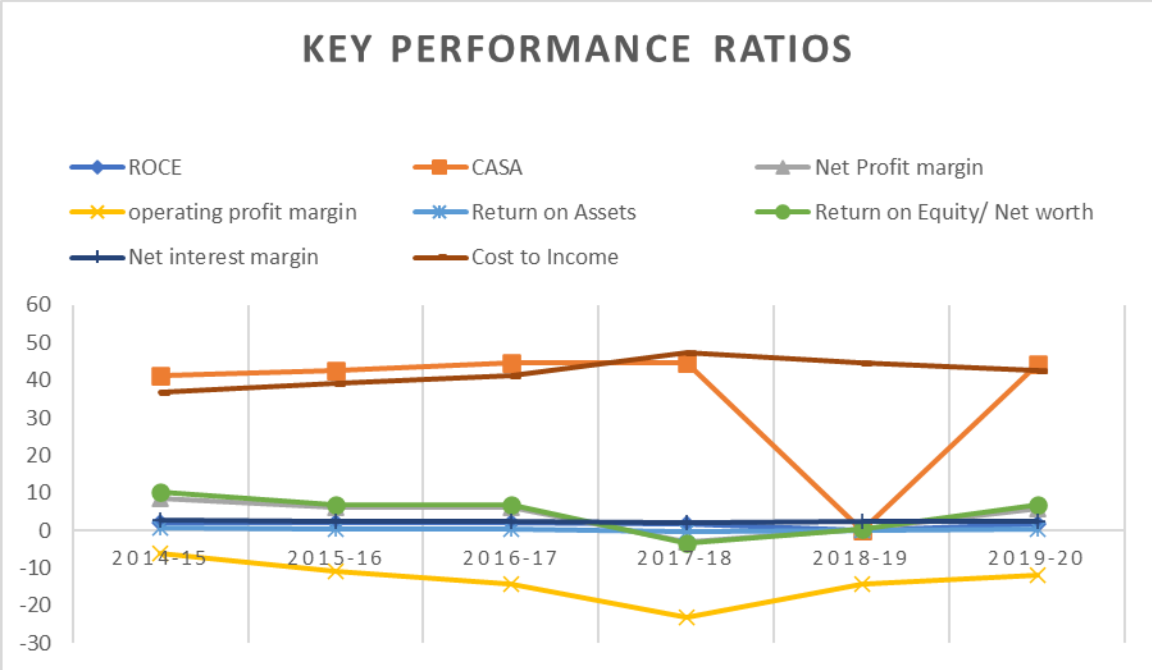
6. ANALYSIS AND INTERPRETATION

6.a. KEY PERFORMANCE RATIOS

Table 3: Pre- and post-merger means of key performance ratios of SBI

	MEAN		**STD. DEV**		**Mean Difference**	**p- value**
	PRE	**POST**	**PRE**	**POST**		
ROCE	2.003333333	1.2	0.051316014	1.039278596	-0.8033333	0.252134921
CASA	42.84	29.566667	1.627236922	25.60581444	-13.273333	0.420882559
Net Profit margin	6.87333333	1.0066667	1.487357836	4.332485815	-5.8666667	0.090782988
Operating profit margin	-10.45	-16.4233333	4.029739446	5.962451956	-5.9733333	0.223906045
Return on Assets	0.47666667	0.06666667	0.134288247	0.273007936	-0.41	0.0798936
Return on Equity/ Net worth	7.926666667	1.323333333	1.971302446	5.22292383	-6.6033333	0.109845197
Net interest margin	2.46	2.346666667	0.202977831	0.16653328	-0.1133333	0.496224158
Cost to Income	39.04666667	44.923333	2.151518843	2.483955179	5.87666667	0.036312239

Source: www.moneycontrol.com and author's calculations



INTERPRETATION

- The ROCE has reduced post-merger, this shows that there is a decline in the bank's earnings on its investment. Since p-value is <0.05 the decline is not statistically significant.
- A higher CASA (Current account Savings account) means cost of funds is lower. As current accounts do not carry any interest and savings accounts get minimum interest. CASA has reduced in post-merger years meaning that costs of funds have increased. But it is not statistically significant.
- The Net Profit margin has reduced post-merger, indicating decrease in profitability post-merger. As observed from the table, the decline is not statistically significant.
  Hence, the null hypothesis is accepted.
- The Operating Profit margin has reduced post-merger, indicating an increase in the cost of operations post-merger. This shows there is no improvement in managing costs after merger. However, the decrease in operational profit margin is not statistically significant.
- The return on assets has decreased post-merger, indicating that assets are not being properly utilized to earn returns. However, the decrease is not statistically significant.
- The return on net worth/equity has decreased post-merger, that means that profitability has declined from shareholder's perspective also. As observed from the table, the decline is not statistically significant.
- Net interest margin has declined post-merger. If the NPAs rise, the interest earned would come down, hence NIM will fall. NIM will also fall when the bank loans come down. So, reducing NIM post-merger implies investment inefficiency. However, the fall is not statistically significant.

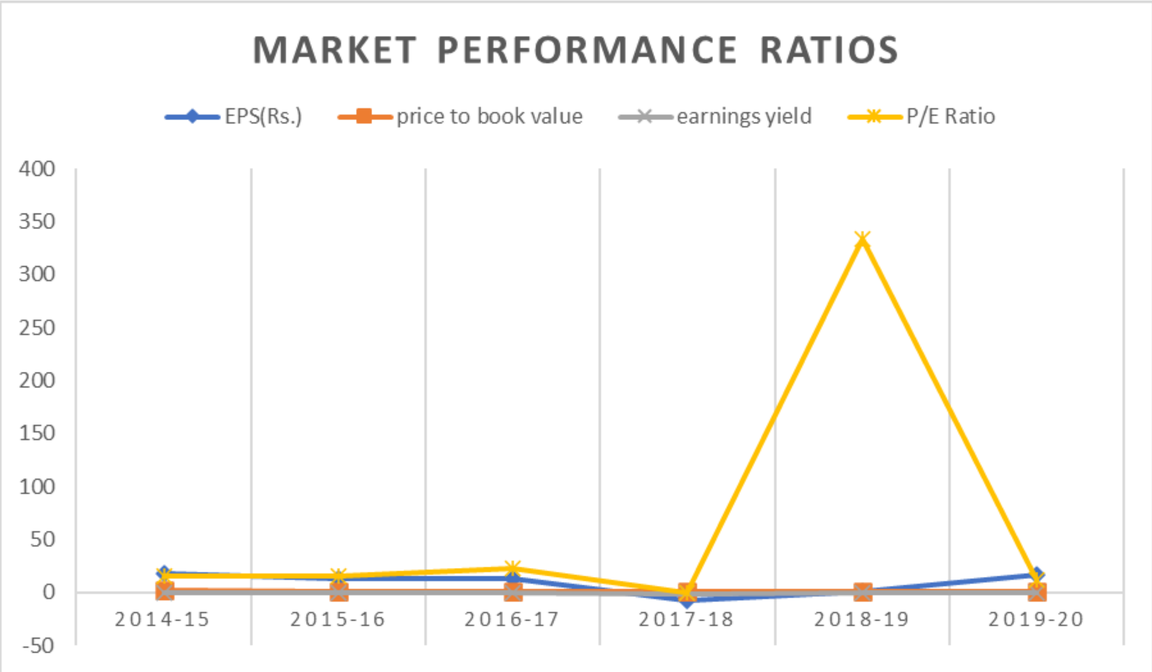
Cost to income ratio has increased in the post-merger years. It shows costs are rising faster than income. Also, since $p<0.05$, the increase is statistically significant. Hence, the null hypothesis is rejected.

6.b. MARKET PERFORMANCE RATIOS

Table 4: Pre and post-merger means of market performance ratios of SBI

	MEAN		STD. DEV.		Mean Difference	p -value
	PRE	POST	PRE	POST		
EPS(Rs.)	14.6533333	3.17666667	2.51865705	12.10184008	-11.476667	0.183090672
Price to Book Value	1.36333333	1.09666667	0.273007936	0.234591844	-0.26666667	0.26873365
Earnings Yield	0.06	0.01666667	0.017320508	0.056862407	-0.04333333	0.275301783
P/E Ratio	17.54	115.06	4.079056263	188.8822763	97.52	0.421827569

Source: www.moneycontrol.com, stock-financials.valuestocks.in and author's calculations



<u>INTERPRETATION</u>

- There is decline in EPS in the post-merger years. A lower EPS generally indicates lower possible dividends, thereby a lower market value. As per the table, though there is a decline in the EPS, it is not statistically significant.
  Hence, the null hypothesis is accepted.
- There is a decrease in Price to book value in the post-merger years and the post merger mean is close to 1. A decrease in Price to book value is good for the investors. But the decrease is not statistically significant.

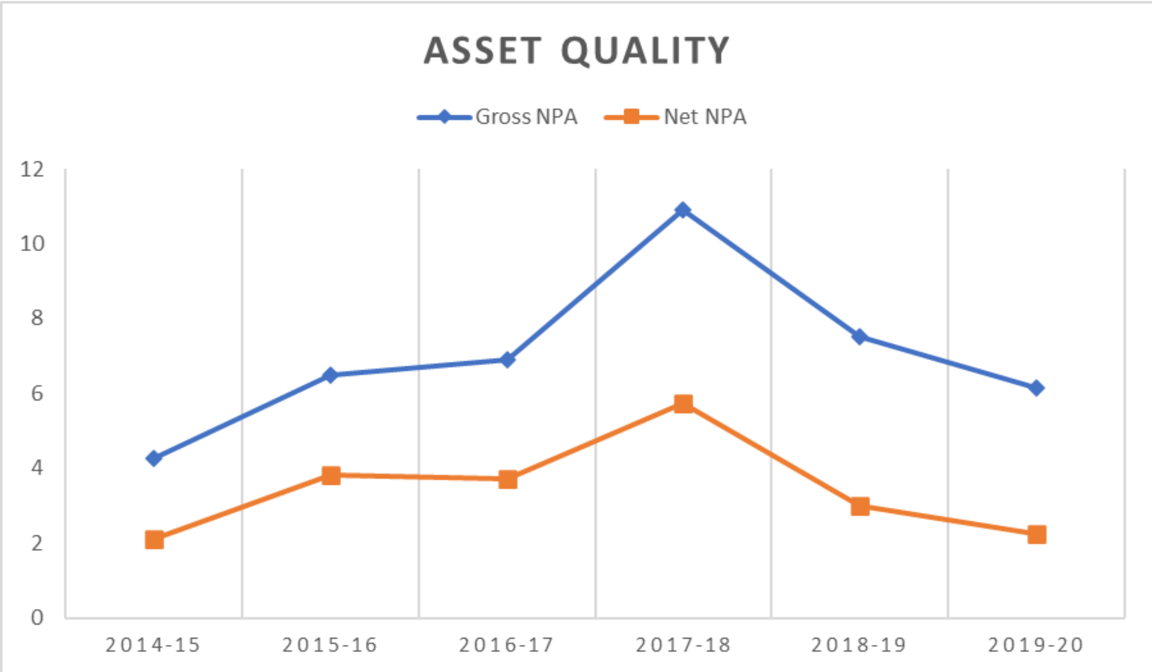
- There is a slight decrease in earnings yield ratio post-merger, it shows a slight decrease in the return which investors may earn. But it is not statistically significant.
- There is an increase in the P/E ratio post-merger. However, the increase is not statistically significant.

6.c. ASSET QUALITY RATIOS

Table 5: Pre- and post-merger means of Non-performing Assets of SBI

	MEAN		STD. DEV.		Mean Difference	p value
	PRE	POST	PRE	POST		
Gross NPA	5.88333333	8.19666667	1.428577381	2.449027018	2.313333333	0.230470426
Net NPA	3.21333333	3.65666667	0.948173683	1.837425735	0.443333333	0.729191352

Source: www.moneycontrol.com and author's calculations



INTERPRETATION

- Gross NPA has increased post-merger, showing declining asset quality. But it not a statistically significant increase.
- Net NPA is those bad loans for which no provision made in the books. Net NPA gives a better picture of the asset quality. There is a slight increase in the net NPA post-merger, but it is not statistically significant.
- Hence, the null hypothesis is accepted.

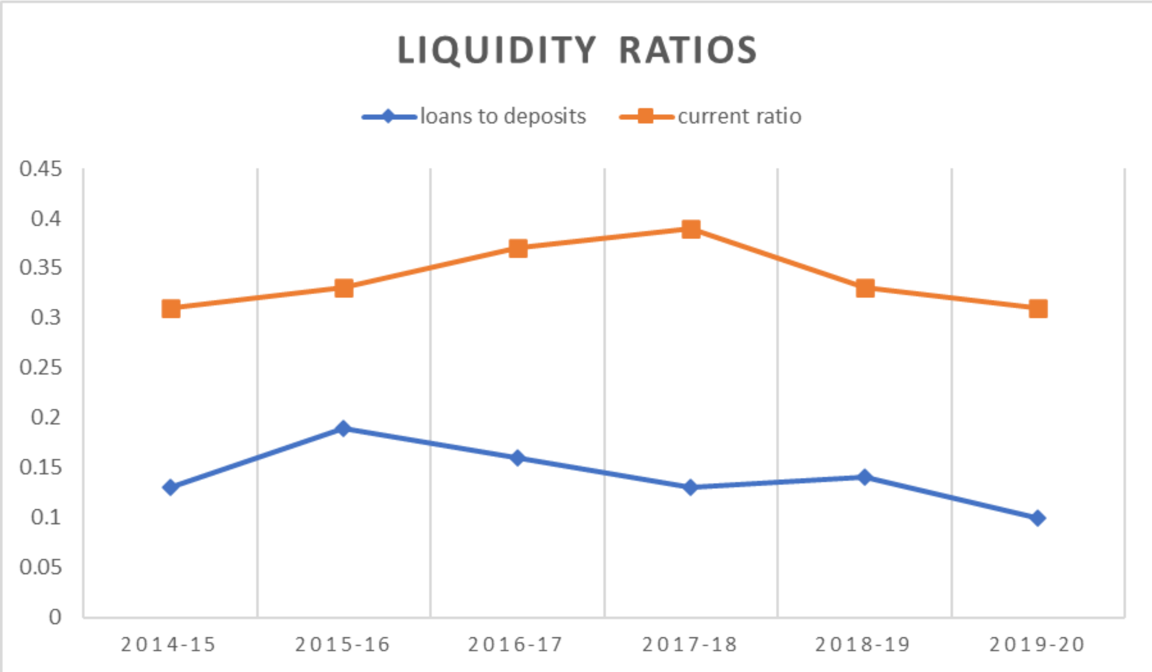
6.d. LIQUIDITY RATIOS

Table 6: Pre- and post-merger means of liquidity ratios of SBI

	MEAN		STD. DEV.		Mean Difference	p value
	PRE	POST	PRE	POST		

Loans to deposits	0.16	0.12333333	0.03	0.02081666	-0.03666667	0.15697509
current ratio	0.33666667	0.34333333	0.030550505	0.04163332	0.006666667	0.83401920

Source: stock-financials.valuestocks.in and author's calculations



INTERPRETATION

- There is a slight reduction in the loans to deposit ratio, indicating better liquidity in the post-merger years, it can also mean that bank is not lending to its optimum capacity. However, the change is not statistically significant.
- The current ratio is approximately the same in the pre and post-merger years, there is a slight increase post-merger, indicating a slight improvement in the bank's ability to pay off its short-term obligations.

  Hence, the null hypothesis is accepted.

7. LIMITATIONS OF THE STUDY

- The merger taken place in 2017, only 3 years pre-merger and 3 years post-merger could be analyzed for the purpose of the study.
- The study does not take into account any other economic factors which may have influenced the financial performance during the period.

8. FINDINGS

- The study observes that all the profitability ratios have shown a decrease in the post-merger years. However, the decrease is not statistically significant.
- Cost to income ratio has increased in the post-merger years. It shows costs are rising faster than income in the post-merger years. Also, the increase is statistically significant.

- With regard to the market performance ratios, the study finds that P/E has increased and P/BV has decreased indicating sound market performance post-merger.
  However, the EPS and Earnings yield have shown a slight decrease post-merger, indicating a slight decrease in returns which the investors may earn on their investment. But the changes are not statistically significant.
- There is no statistically significant change in the NPA position of the bank.
- With regard to the liquidity position of the bank there is a very slight reduction in the loans to deposit as well as a slight increase in current ratio indicating an improvement in liquidity position.

9. CONCLUSION

Starting with the Indra Dhanush 7-point action plan, the Government has embarked on revitalizing the Indian banking sector and the SBI merger is an important step in this direction . After its merger with its associate banks and Bharatiya Mahila bank, the SBI has entered the list of top 50 global banks. The current study has analyzed the profitability, liquidity, NPA position and market performance in the 3 years prior to and after the merger. In the 3 years after the merger, the study finds no improvement in the parameters of financial performance, market performance and asset quality. Also, the cost to income has increased showing decreasing efficiency. However, the liquidity position has slightly improved. The benefits of the mergers may accrue in the medium/long term period.

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