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Pre and Post Merger in State Bank of India: An Analytical Perspective

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Abstract: *State Bank of India is privileged to be the largest commercial bank in India in terms of Deposits, Assets, Branches, Customers and Employees. It has been observed that the profitability of State Bank of India was going down for the last few years and losses were mainly due to associate banks. On 1st April 2017, State Bank of India merged its five Associate Banks (State Bank of Bikaner & Jaipur, State Bank of Hyderabad, State Bank of Mysore, State Bank of Patiala and State Bank of Travancore) and Bharatiya Mahila Bank with itself. Smt. Arundhati Bhattacharya, Chairperson of State Bank of India, expected that the profits of the Bank should increase after the merger. The current paper evaluates the performance of the State Bank of India based on the financial ratios from the perspective of pre and post-merger. A paired t-test was applied to compare 2 years pre and 2 years post-merger excluding the period of merger (2017-18), it was concluded that there was a significant difference in Operating Cost to Income ratio and Business per Employee ratios where Operating Cost to Income ratio gradually increased from 2015-16 to 2019-20 thus showing the slow ability of the bank to generate revenue from its expenditure and Business per employee increased from 2015-16 to 2019-20 thus showing optimum utilization of labour force and hence enhanced banking performance. Although the accumulated losses of associate banks were shown in the balance sheet of the amalgamated entity the investors should not lose hope as such bold steps have effects in long run and they take time to become visible.*

Key Words: *Financial Ratios, Financial Performance, State Bank of India, Merger, Paired t-test.*

1. INTRODUCTION:

With a legacy of over 200 years, the State Bank of India (SBI) traces its ancestry to the Bank of Calcutta founded in 1806 and is the oldest commercial bank in the Indian subcontinent. SBI is fostering the nation's 2.6 trillion-dollar economy as it is an Indian multinational, public sector banking and financial services statutory body that is striving to serve the hopes of its vast population. (source: www.sbi.co.in) Previously state Bank of Indore was merged in 2010 and before that State Bank of Saurashtra was merged in 2008. The majority of the mergers in India have been crafted to bail out weak banks to safeguard depositors' interests and to protect the financial system. The report of the Committee on Banking Sector Reforms (the Second Narasimham Committee, 1998), however, discouraged this practice. It recommended mergers among strong banks, both in the public and private sectors and even with financial institutions and non-banking financial companies.

2. REVIEW OF LITERATURE:

Under the charter of the British East India Company, the banks like the Bank of Bombay was established in 1840, the Bank of Madras in 1843 and the Bank of Calcutta in 1840. These Banks were merged in 1921 and took the form of a new bank known as the Imperial Bank of India. The Imperial Bank of India was partially nationalized on 1 July 1955 and named as the State Bank of India along with its 8 associate banks. Later on, the State Bank of Bikaner and the State Bank of Jaipur merged and formed the State Bank of Bikaner and Jaipur.

The Indian banking sector can be divided into two eras, the pre liberalization era and the post-liberalization era. In the pre liberalization era government of India nationalized 14 Banks on 19 July 1969 and later on, 6 more commercial Banks were nationalized on 15 April 1980. In the year 1993 government merged The New Bank of India and The Punjab National Bank and this was the only merger between nationalized Banks, after that the numbers of nationalized Banks reduced from 20 to 19 [1]. In the post-liberalization regime, the government had initiated the policy of liberalization and licenses were issued to the private banks, which lead to the growth of the Indian Banking sector. The second Narasimham Committee (1998) had suggested mergers among strong banks, both in the public and private sectors. The facts and figures of mergers in the Indian banking sector are as follows. During the pre-nationalization period from 1961 to 1968, 46 mergers have taken place, in the nationalized period from 1969 to 1992 the number of mergers was 13. During the post-reform period i.e. starting from 1993 to 2006, 21 mergers have taken place out of which 13 were forced mergers, 5 were voluntary merger, 2 were a convergence of financial institution into the bank and 1 was due to other regulatory compulsions [1]. The Indian Banking Industry shows a sign of

improvement in performance and efficiency after the global crisis in 2008-09. The Indian Banking Industry is having a far better position than it was at the time of crisis. The government has taken various initiatives to strengthen the financial system. The economic recovery gained strength on the back of various monetary policy initiatives taken by the Reserve Bank of India.

The reasons behind the merger of SBI with its associate banks [2] are listed as follows:

1) Government of India provides subsidies and contributions for bad debt recovery and share capital to SBI and its associate banks. It will become easy for the government to provide aid to this single amalgamated bank instead of giving it separately to SBI and its associate banks.
2) Profitability of SBI was going down for the last few years and this merger will be able to show a better position of profitability in the books of SBI. Net profit of the group fell due to associate banks.
3) To recover loans that have turned bad and to reduce the Non-Performing Assets (NPA) of SBI and associate banks in the future, the merger of SBI with associate banks was important.
4) For the reconstruction of SBI and associate banks in face of financial crises so that it can meet its liabilities.
5) With the merger, SBI has become bigger than before. Now it has a larger asset base and ranks 45th among top banks of the world.
6) Management of bank will become easier as earlier all the branches were managed by separate management though the holding was the same and it used to make the whole process cumbersome.
7) Cost of managing a large number of branches will reduce which will increase the profitability of the bank.

The academic studies conducted in past have examined the impact of the merger in the banking sector by adopting the following two competing approaches. The first approach relates to long-term evaluation i.e. performance resulting from mergers by analyzing the accounting information such as return on capital, profitability ratios and efficiency ratios. An alternative approach is to analyze the merger gains in the stock price performance of the bidder and the target firms around the announcement event. In such a case a merger is assumed to create value if the combined value of the bidder and target banks increases on the announcement of the merger and the consequent stock prices reflect the potential net present value of acquiring banks [1]. The current paper follows the former method and tries to find some empirical evidence for the same. The performance of the State Bank of India has been evaluated based on the following financial measures as obtained from the annual reports of the State Bank of India from 2015-16 to 2019-20.

2.1. Operating Costs to Total Assets Ratio: This ratio indicates the number of operating costs expended per unit of assets. All efforts by a bank to cut costs by rationalizing its labour force and branches and back-office operations should get reflected in this ratio. The larger the ratio, the lower is the efficiency. A reduction in operating costs leads to a reduction in lending rates and also net interest margins, thereby facilitating greater credit off-take, and hence, economic growth [3]. From 2015-16 to 2017-18 the ratio reduced from 0.0185 to 0.0174 which shows improved efficiency of the bank but then a sharp rise to 0.0190 in 2019-20 shows that Bank attracting the best talents in the industry with lucrative salaries and perks. They have invested a good amount of resources in training and human resource management strategies to retain their workforce, which has raised their employee costs.

2.2. Cost to Income Ratio: The cost to income ratio indicates how profitably the funds have been deployed by the banks. The ratio indicates the ability of a bank to generate revenue from its expenditure. It depicts the impact of an off-balance sheet. The operating costs can be divided into labour and non-labour operating costs. However, with the increased integration of financial services and markets across the world, a greater reliance on technology solutions is required to achieve greater competitiveness, it is generally expected that the non-labour operating costs would account for a greater share in operating costs than the labour costs. It gradually increased from 0.2178 in 2015-16 to 0.2485 in 2019-20 thus showing the poor ability of a bank to generate revenue from its expenditure.

2.3. Net Interest Margin (NIM) or Spread : Net interest margin is defined as the difference between the total interest earned (including investments) and total interest expended (including inter-bank borrowings), normalized by assets. This ratio indicates the effectiveness of the bank to deploy all their funds (both deposit and borrowings) to generate income from credit and investment operations. The lower the ratio, the more efficient is the banking system. Economic growth positively influences the net interest margins with a lag. The NIM declined from 3.4344 % in 2015-16 to 2.3842% in 2017-18 showing the increase in efficiency of the banking system and it rises to 2.7516 % in 2019-20 thus showing income generated from investment operations being expanded on the training of employees and engagement programs.

2.4. Business per Employee : Various ratios used so far assessed the performance in terms of cost or return as a proportion to total earning assets, whereby productivity of the labour could not be ascertained directly. To understand the trend in labour productivity devoid of the influence of various other aspects such as pricing of services rendered by the bank could be undertaken by using ratios such as business per employee and business per branch Public sector banks also benefited from the rationalization of the workforce through VRS undertaken during the early 2000s and

introduction of practices whereby some routine jobs were outsourced. In later years, the focus was on the generation of banking services through human capital intensive processes in line with improved technologies rather than manpower-intensive banking. Business per employee increased from Rs 14.11 crore in 2015-16 to Rs 21.05 crore in 2019-20 thus showing enhanced banking performance. Similarly, profit per employee increased from Rs 4,70,000 in 2015-16 to 5,11,000 in 2016-17 showing improved bank performance but then it declined to a loss of Rs 2,43,000 in 2017-18 and again improved to a profit of Rs 33,000 in 2018-19 thus showing a sharp increase in profit per employee by Rs 2,76,000 than the previous year and further increased to Rs 5,78,980 in 2019-20.

2.5. Return on Assets: Return on Assets (RoA) indicates how much profits a business unit (bank in the instant case) can generate per unit of its assets. A higher value of this ratio is indicative of higher profitability, and hence, productivity. ROA declined from 0.46 % in 2015-16 to 0.19 % in 2017-18 thus showing a loss in productivity and it rises sharply to 0.02 % in 2018-19 thus exhibiting a sharp rise in productivity by 0.21 % during 2018-19 from the previous year and further improved to 0.38% in 2019-20.

2.6. Return on Equity (RoE): The return on equity, defined as the ratio of net profits after tax to total equity capital, is, therefore, used as an alternative measure of profitability. The RoE indicates the amount of profit a business unit is generating for its equity investors. The ratio is widely used by equity investors in their decision making. A higher value of the ratio is indicative of higher profitability, and hence, productivity.ROE declined from 7.74 % in 2015-16 to 7.25 % in 2016-17 thus showing a decrease in profits for equity investors and it declined to a loss of 3.78 % in 2017-18 thus showing a loss to equity investors but it rises sharply to 0.48 % in 2018-19 thus exhibiting a sharp rise in profits to equity investors and higher productivity by 4.26% during 2018-19 from the previous year and further to 7.79% in 2019-20.

2.7. Capital to Risk-Weighted Assets Ratio (CRAR): The **capital adequacy ratio** measures the amount of a bank's capital in relation to its risk-weighted credit exposures and is the most widely used measure of the soundness of banks. It determines the capacity of a bank to withstand the unexpected losses arising out of its operations. The more the capital adequacy ratio a bank has, the more will be the capacity it has to absorb the unexpected losses before becoming insolvent. It, thus, provides a "cushion" for potential losses, which protects the bank's depositors or other lenders. Two types; tier 1, which can absorb losses without a bank being required to cease trading. Tier 2, which can absorb losses in the event of a winding-up and so provides a lesser degree of protection to depositors. CAR declined from 13.12% in 2015-16 to 12.60% in 2017-18 showing a lack of financial cushion for potential losses but it rises sharply to 12.72% in 2018-19 thus exhibiting a greater capacity to absorb the unexpected losses and further to 13.06% in 2019-20.

2.8. Employee Cost Ratios: The Employees' Cost Ratios which are represented by "employee cost to operating expenses", "employee cost to total business'' and "employee cost to total assets" are based on the wage bill data of individual banks. Banks have been treating them as critical factors for improving profitability and trying to minimize them in relation to operating expenses, total business and total assets. From 2015-16 to 2017-18 the ratio reduced from 0.7785 to 0.5907 which shows efforts made by the banks to reduce wage bills but then a sharp rise to 0.6284 in 2018-19 shows that Bank attracting the best talents in the industry with lucrative salaries and perks and further to 0.6498 in 2019-20.

2.9. Efficiency and Non-Performing Assets (NPAs): Net non-performing assets are expected to show a negative association with efficiency. The level of NPAs is a drag on a bank's performance. The robust economic growth has not only enabled banks to increase credit volumes but has also resulted in an improved credit risk environment as a result of which the incremental NPAs have declined sharply. Provisioning also leads to an increase in net interest margin. In other words, banks with large NPAs need to make larger provisions, which ultimately get reflected in higher net interest margins. NPAs accumulated from Rs 26984crore in 2015-16 to Rs 70680 crore in 2017-18 thus showing the accumulated burden of provisions on the Bank but then NPAs declined to Rs 54529 crore in 2018-19 thus showing ease in a burden on Bank due to reforms and corrective timely steps followed in banking systems and further to Rs 42776 crore in 2019-20.

3. OBJECTIVE OF THE STUDY:

To analyze the impact of the merger of associate banks with SBI on the financial performance of State Bank of India.

4. RESEARCH METHODOLOGY:

The current study has collected data of two years pre-merger and two years post-merger excluding the year of the merger, i.e. 2017-18, from secondary literary sources. The data was also collected from the bank periodicals, manuals, and magazines along with on line available reports. In order to conduct this research the SBI was selected as sample Bank because it is best representative of the financial banking institution in India and therefore a change, in its financial performance may be followed subsequently by other banks in the country.

Table 1 a: Year-wise Financial performance of the bank

Year	OC/TA	OC/ I	Net Interest margin or Spread (NIM)=(IE-IE2)/TA	Business (Deposits + advances) per employee (Rs Crore)	Return on Assets=profits/assets (%)
2015-16	0.0185	0.2178	3.4344	14.1100	0.46
2016-17	0.0172	0.2203	3.0057	16.2400	0.41
2017-18	0.0174	0.2261	2.3842	16.7000	(-)0.19
2018-19	0.0189	0.2492	2.6476	18.7700	0.02
2019-20	0.0190	0.2485	2.7516	21.0500	0.38

(Source: www.sbi.co.in/ annual reports)

Table 1 b: Year-wise Financial performance of the bank

Year	Return on Equity=profits/equity (%)	EC/OC (Employee Cost Ratio)	Profits/employee (Rs thousands)	NPA (Rs in crore)	CAR (%)
2015-16	7.74	0.7785	470.00	26984.00	13.12
2016-17	7.25	0.7680	511.00	32247.00	13.11
2017-18	(-)3.78	0.5907	(-)243.00	70680.00	12.60
2018-19	0.48	0.6284	33.00	54529.00	12.72
2019-20	7.79	0.6498	578.98	42776.00	13.06

(Source: www.sbi.co.in/ annual reports)

Labels: OC/TA= Operating Cost to Total Assets ratio, OC/I= Operating Cost to Income ratio, NIM= Net Interest Margin, BPE= Business Per Employee, ROA= Return on Assets, ROE= Return on Equity, EC/OC= Employee Cost to Operating Cost ratio, PPE= Profit Per Employee, NPA= Non Performing Assets, CAR= Capital Adequacy Ratio.

5. DATA ANALYSIS:

In order to make an analysis of the difference in financial performance of the selected bank, the paired t-test was applied. The paired sample t-test, sometimes called the dependent sample t-test, is a statistical procedure used to determine whether the mean difference between two sets of observations is zero. In a paired sample t-test, each subject or entity is measured twice, resulting in pairs of observations. Therefore the effectiveness of the merger of banks can be analysed by measuring the performance of the bank before merger and after merger and conducting the paired sample t-test.

The paired sample t-test has four main assumptions:-

- The dependent variable must be continuous (Interval/Ratio)
- The observations are independent of one another.
- The dependent variable should be normally distributed.
- The dependent variable should not contain any outliers.

The data were subjected to a paired t-test using the SPSS-20 software tool excluding the year of the merger, i.e. 2017-18.

Table 2: Paired t-test on the financial performance of the bank

Ratio	Effect	Mean	Std. Dev.	t-value	p-value*
OC/TA	Pre	0.0178	.00091924	-1.562	.363
	Post	0.0189623	.00008811		
OC/ I	Pre	.2190500	.00176777	-18.449	**.034**
	Post	.2488355	.00051545		
NIM	Pre	3.2200500	.30313668	1.954	.301
	Post	2.6996166	.07356260		
BPE	Pre	15.1750000	1.50613744	-63.133	**.010**
	Post	19.9100000	1.61220346		
ROA	Pre	.4350000	.03535534	1.146	.457
	Post	.2000000	.25455844		
ROE	Pre	7.4950000	.34648232	.862	.547
	Post	4.1350000	5.16895057		

EC/OC	Pre	.7732500	.00742462	8.399	.075
	Post	.6391205	.01516112		
PPE	Pre	490.5000	28.99138	.731	.598
	Post	305.9900	386.06616		
NPA	Pre	29615.5000	3721.50299	-2.238	.268
	Post	48652.5000	8310.62600		
CAR	Pre	13.1150	.00707	1.286	.421
	Post	12.8900	.24042		

Note: *Significant at 5 percent

The summary of the analysis presented in Table 2 shows that except for OC/I and BPE ratio, all other performance ratios: OC/TA, NIM, ROA, ROE, EC/OC, PPE, NPA and CAR, shows that the p-value is greater than 5 percent. Therefore it can be concluded that there is no significant difference in these ratios before and after merger.

6. RESULTS AND DISCUSSION:

Based on the analysis of 2 years pre and post-merger financial ratios merger data of State Bank of India, it can be observed that there is a significant difference in Operating Cost to Income ratio and for Business per Employee ratio, In Operating Cost to Income ratio, it was observed that it gradually increased from 0.2178 in 2015-16 to 0.2485 in 2019-20 thus showing the slow ability of the bank to generate revenue from its expenditure. In relevance to the Business per employee ratio which shows labour productivity excluding other factors such as pricing of services offered by the bank, Business per employee increased from Rs 14.11 crore in 2015-16 to Rs 21.05 crore in 2019-20 thus showing optimum utilization of labour force and hence enhanced banking performance. It was also observed that there was no significant difference in pre and post-merger with respect to Operating Cost to Total Assets ratio, Net Interest Margin, Business Per Employee, Return on Assets, Return on Equity, Employee Cost to Operating Cost ratio, Profit Per Employee, Non Performing Assets and Capital Adequacy Ratio. It has been predicted above that there is a statistical significant difference in bank performance by two of the performance ratios they can also help to improve or decrease the bank financial performance. As per the currently available data Operating cost to income ratio and Business to employee ratio can be labelled as most significant contributor for of bank financial performance.

7. CONCLUSION:

The State Bank of India is growing at an astonishing pace. A relatively new dimension in the Indian banking industry has accelerated through mergers and acquisitions. Mergers in the banking sector are a form of a horizontal merger because the merging entities are involved in the same kind of activity. By the way of Mergers and acquisitions in the banking sector, the banks can achieve significant growth in their operations, minimize their expenses to a considerable extent and also competition is reduced because merger eliminates competitors from the banking industry. However, it was observed that although the merger took place on 01 April 2017, there was no significant difference in pre and post-merger with respect to Operating Cost to Total Assets ratio, Net Interest Margin, Business Per Employee, Return on Assets, Return on Equity, Employee Cost to Operating Cost ratio, Profit Per Employee, Non Performing Assets and Capital Adequacy Ratio. A significant difference in Operating Cost to Income ratio and Business per Employee ratio was observed within two years of merger. It shows that there has been a slow ability of the bank to generate revenue from its expenditure and optimum utilization of work force thus showing the enhanced banking performance.

8. RECOMMENDATIONS:

Based on the financial study of merger of the associate banks with the State Bank of India and the results of the analysis, it is noticed that there is a significant difference in two of the performance ratios within two years of merger. Therefore it is predictable that the results of merger will be fruitful in the coming years. It is recommended to conduct a longitudinal post-merger analysis on different public and private sector banks. Since banking institution are representative of the national economy therefore the effect of every change in the policy and functions hereafter should be analysed from the perspective of performance.

REFERENCES:

1 Sai, V. R. N. & Sultana, S. T. (2013), "Financial performance Analysis in Banking Sector-A Pre and Post Merger Perspective," *ABHINAV-International Monthly Refereed Journal of Research In Management & Technology*, April 2013, Vol-II, pp.56-66.

2 Khurana, B. (2017), "Analysis of Merger of SBI and its Associates," *International Journal of Research-Granthaalayh,* Vol-5, Issue-5, pp. 391-393, DOI**:** https://doi.org/10.29121/granthaalayah.v5.i5.2017.1872.

3 Bhide, M.G., Prasad, A. & and Ghosh, S. (2002), Banking Sector Reforms: A Critical Overview, *Economic and Political Weekly,* Vol. 37, No. 5, Money, Banking and Finance (Feb. 2-8, 2002), pp. 399-401+403-408, Published by Economic and Political Weekly, https://www.jstor.org/stable/4411685. Page Count: 9.

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