International Journal of Advances in Engineering and Management (IJAEM)
Volume 2, Issue 12, pp: 777-784 www.ijaem.net ISSN: 2395-5252

Effect of Merger on SBI and its associates – an Empirical Insight

Pritam Dhara[1] Sayan Basu[2]

State Aided College Teacher, Hiralal Mazumdar Memorial College for Women, West Bengal[1]
State Aided College Teacher, Rammohan College, West Bengal[2]
Corresponding Author: Sayan Basu

Date of Submission: 25-12-2020 Date of Acceptance: 31-12-2020

ABSTRACT: In this present scenario, corporate restructuring is a very important component in the financial and economic environment all over the world. To cope up with the recent trend and change in the banking performance across the globe the issue of merger and acquisition in the Indian banking sector has been the major source of policy drivers by the policy makers in bringing the equilibrium in the economic sector reforms. The purpose of the present paper is to explore the pre & post merger financial performance of State Bank of India & its associates through various critical measures. A comparative ratio analysis has also been conducted to analyze the pre and post merger financial performance of the selected banks. Paired Sample T-test has been conducted at 5% level of significance to observe whether there is a significant difference in the financial performance during pre and post merger period. Further, Regression analysis has been conducted to forecast the net profit of State Bank of India for the period 2020-2025.

KEYWORDS:- Corporate Restructuring, merger & acquisition, paired sample T-test, regression analysis.

I. INTRODUCTION

State Bank of India has achieved the "Mars mission" in the banking sector on April 1, 2017 by merging its six associates into a single unit and becoming the pioneer of the globe in terms of merging. The five associates banks that have been merged were State Bank of Bikaner & Jaipur (SBBJ) , State Bank of Hyderabad(SBH) , State Bank of Mysore(SBM) , State Bank of Patiala (SBP) and State Bank of Travancore (SBT) along with Bhartiya Mahila Bank(BMB) . Two of the SBI associates which were merged before 2017 were State Bank of Saurashtra (2008) and State Bank of Indore (2010). SBI is an Indian multinational ,public sector banking house operating with its extensive branch network over 24000 and assets over of USD 500 billion and over 500 million active users with more than 740 millions of accounts. The bank descends from the Bank Of Calcutta founded in 1806 via Imperial Bank of India. The Bank of Madras merged with other two presidency banks viz. the Bank of Bengal & the Bank of Bombay to form the Imperial Bank of India. In the year 1955 under the State Bank of India Act of 1955 ,Reserve Bank of India took over 60 % stake of the imperial bank of India .On July 1 ,1955 the Imperial bank of India became State Bank of India. As per the reports laid down by the former chairperson of SBI, Arundhati Bhattacharya, post 48 hours of the merger has created a CBS database of about 500 terabyte in size which was the biggest in the entire globe .Before the merger SBI alone was standing to 52th rank in terms of assets holding position globally but the resultant of the merger will uplift the rank to 45th,but becoming the largest bank in India. The main reasons for the merger highlighted by the major economists and policy makers were:-

Requirement of additional capital as per Basel III norms, to ensure and facilitate synergies in terms of recruitment exams, branches, ATM's. Post merger will help the banks to manage their liquidity both short term as well as long term position comfortably along with overnight borrowings in call money market , greater recognition of the bank in the global market by clubbing of six asset holding positions into one , lowering down the operating costs because of fewer number of CMD ,ED,GM and zonal managers , gaining technological advantage of 128 bit encryption and worldwide recognition of VISA ,MASTERCARD , finally one stop service for all customers of associate banks.

II. BRIEF REVIEW OF LITERATURES

Patel et al.(2016) examined the comparative position of pre & post-merger stock risk-return performance of selected banks. This study covers the comparison of Systematic and unsystematic risk during the pre & post-merger period. According to the study, banks are going for merger due to various objectives such as market

share gain, increase geographical coverage, value maximization; create financial synergy and so on. But few times to fulfil this objectives, acquirer banks do not consider few important parameters in target banks which leads to poor financial and stock performance. It is suggested in the study that researchers can undertake further studies in area of merger and acquisition with respect to evaluation of stock performance. Moreover, it can also be studied that the valuation of target bank done by acquire bank has impact on profit and return for acquire bank or not. It is also suggested in the study that, through stock risk analysis, managers can decide the merger deal in such way that it can reduce risk, especially, unsystematic risk, because as unsystematic risk decreases it motivates investors to invest more in bank & vice versa.

Jayaraman et al.(2014) examined the impact by comparing the efficiency of merged banks three years before and after the merger. To validate whether change in efficiency of banks is due to the merger, this study compares the efficiency of merged banks with non-merged banks. Through interval estimation, this paper provided how close or far away the banks are from the efficient frontier. In this particular study, it is concluded that the efficiency of merged banks & the similarity between performance of both merged and non-merged banks during post-merger period shows that the under- or over-performance of merged banks cannot be purely attributed to effect of merger in the post-merger scenario can be improved by optimally utilising the inputs. Though, it is said in the study that it cannot rule out the influence of extraneous factors including global financial crisis in the performance of banks during the post-merger period.

Vanitha et al. (2011) evaluated the financial performance, ratio analysis, mean, standard deviation &'t' test have been used as tools of analysis. Their study found that in India merging companies were taken over by companies with reputed and good management.

Their conclusion emerged from the point of view of financial evaluation is that the merging companies were taken over by companies with reputed and good management. Therefore, it was possible for the merged firms to turn around successfully in the due course. However it is suggested in the study, the analysis should be done with a bigger sample size before coming to the final conclusion.

Sinha et al.(2011) examined the Mergers & Acquisitions scenario of the Indian Financial Services Sector. This study pointed out the fact that though companies may have been able to leverage the synergies arising out of the merger or acquisition, but they have not been able to manage their capital structure to improve their liquidity. In this study, the comparison of the pre and post-merger performance of these companies indicates that though Interest Cover (EBIT/Interest) has remained a significant factor contributing to the return on shareholder's funds both before and after the merger, the Profit Margin has also a significant positive effect on the return only after the merger. Thus the ability of a company to service its debt obligations is an important factor affecting the company's return irrespective of whether it is involved in a merger or not but it becomes important to generate higher profits after the merger in order to justify the decision of merger undertaken by the management to the shareholders.

V Radha Naga Sai et al. (2013) evaluated the performance of two selected banks based on the financial ratios from the pre & post merger perspective. As per this study, the banking industry is one of the fast growing industries in India. Through the Mergers and acquisitions in the banking sector, , the banks can achieve significant growth in their operations, by minimizing their expenses to a considerable extent and also competition is reduced because mergers can eliminate competitors from the banking industry. Based on the analysis of 4 years pre and post merger financial ratios merger data of Indian overseas bank, they had concluded that Net profit margin, Operating profit margin, Return on capital employed, Return on equity and Debt-Equity ratio there is significant difference but no significant difference with respect to Gross profit margin and through the analysis of 3 years financial ratios pre and merger data of HDFC bank data, they had concluded that Net profit margin, Operating profit margin, Return on capital employed, Return on equity and Debt-Equity ratio there is no significant difference in these ratios before after merger.

III. OBJECTIVES OF THE STUDY

1) To analyze the pre & post merger financial performance of State Bank of Bikaner & Jaipur , State Bank of Hyderabad , State Bank of Mysore , State Bank of Travancore , State Bank of Patiala , Bharatiya Mahila Bank , State Bank of India.
2) To analyze the impact of merger of State Bank of Bikaner & Jaipur , State Bank of Hyderabad

International Journal of Advances in Engineering and Management (IJAEM)
Volume 2, Issue 12, pp: 777-784 www.ijaem.net ISSN: 2395-5252

, State Bank of Mysore , State Bank of Travancore ,State Bank of Patiala , Bharatiya Mahila Bank on the financial performance of State Bank of India.

3) To forecast the post merger net profit of the acquirer bank (State Bank of India) for the period of 2020 to 2025

IV. RESEARCH METHODOLOGY

- The researchers have selected the merger of State Bank of Bikaner & Jaipur, State Bank of Hyderabad, State Bank of Mysore, State Bank of Travancore, State Bank of Patiala and Bharatiya Mahila Bank with State Bank of India, which took place in 2016 as a convenient sample for this study.
- The performance of the bank have been evaluated on the basis of 7 financial measures:
  - Return On Net Worth
  - Return On Capital Employed
  - Return On Assets
  - Basic EPS
  - Net Profit Margin
  - Retention ratio
  - CASA
- To analyze the impact of the merger on the financial performance of the acquirer bank (State Bank of India),pre-post merger data of the above mentioned ratios have been considered, where the pre merger period is considered from 2014-2016 and the post merger period is considered for 2017-2019.
- Secondary Data for the study have been collected from annual reports, money control.com and capitaline databases.
- A comparative ratio analysis has been conducted to analyze the pre and post merger financial performance of the selected banks.
- Paired Sample t test (matched pair) have been conducted at 5% level of significance to observe whether there is a significant difference in the financial performance during pre and post merger period.
- Regression analysis has been conducted to forecast the net profit of State Bank of India for the period 2020-2025.

V. DATA ANALYSIS

TABLE 1 : FINANCIAL PERFORMANCE OF STATE BANK OF BIKANER AND JAIPUR , STATE BANK OF HYDERABAD , STATE BANK OF MYSORE , STATE BANK OF TRAVANCORE , BHARATIYA MAHILA BANK DURING PRE-MERGER AND POST-MERGER PERIOD.

Ratios	Pre-merger Period (Average)						Post-merger Period (Average)
	State Bank of Bikaner and Jaipur	State Bank of Hyderabad	State Bank of Mysore	State Bank of Travancore	State Bank of Patiala	Bharatiya Mahila Bank	State Bank of India
RONW	8.86	6.93	7.97	5.48	4.26	9.08	6.63
ROCE	0	0	0	0	0	0	2.06
ROA	0.77	0.29	0.44	0.29	0.16	0.11	0.74
BASIC EPS	112.34	55	72.35	55	51.24	64.98	18.69
NET PROFIT MARGIN	8.81	1.18	5.08	3.38	2.03	1.73	6.71
RETENTION RATIO	87.21	91.35	93.21	91.35	84.27	84.29	95.55
CASA	0	0	0	0	0	0	45.16

Source: Annual reports of State Bank of India and its associates

Observation: In the pre merger period, RONW of the associate banks is quite good where RONW of Bharatiya Mahila Bank was quite impressive .The average RONW of the five banks is 7.10 whereas that of SBI in the post merger period is slight less i.e 6.63.This is because as the formation of new SBI will take time to pace it up as equity value of the bank increased .ROCE of the associate bank for the pre-merger period was nil, but that of SBI in the post merger is 2.06. hence it can be concluded that the management of SBI has efficient level to use its available capital optimally.ROA of the associate banks of the pre merger period was quite good but not as compared to SBI except State Bank of

Bikaner & Jaipur. The average ROA of the associate banks is 0.34 as compared to SBI 0.74 .The ROA of SBI in the post merger period showed an increase of nearly 117.64% as compared to the associate banks in the pre-merger period. This showed how SBI metamorphosed its assets into revenues. Basic EPS of the associate banks was quite high in the pre merger period, as compared to SBI in the post merger.SBI showed a decline of -0.710 in the basic EPS in the post merger stage.Net Profit Margin of SBI in the post-merger period was high as compared to its associates during the pre merger except State Bank of Bikaner and Jaipur. Overall the Net Profit margin of SBI showed a growth of 81.35% during the post merger stage. Retention ratio of the associate banks was quite same in the pre merger period, as a bank generally ploughs profit back instead of distributing free dividends. Retention ratio of SBI in the post merger was 95.55% with the growth of nearly 7.83% .CASA of the associate banks was nil in the pre merger period but that of SBI in the post merger period was 45.16.

Hypothesis Testing on the basis of Financial Measures

Ho: There is no significant difference between pre merger and post merger financial performance.

H1: There is a significant difference between pre merger and post merger financial performance.

Table 2.a: RONW OF STATE BANK OF INDIA

Period	N	Mean	Mean Difference	S.D	df	t-statistic	Tabulated value	Result
Pre-merger	3	5.296667	1.366667	0.517912	2	4.570	4.303	Ho Rejected
Post-merger	3	6.663333						

Source: Author's own tabulation

Observation: Return on net worth can be defined as a tool for defining the profitability of the company. It is calculated by dividing the net income of the company by shareholder's equity. As the t-statistic (2, 0.05) = 4.570 is more than the tabulated value 4.303, so we rejected the null hypothesis and accepted the alternate hypothesis .So from the paired sample t test we can conclude that there is a significant difference of RONW in the post merger period .From the sample mean it can be conclude that there is an increase of 25.8% of RONW in the post merger period. Hence it can be concluded that there is a decline in shareholder's equity from the investor's perspective, where as the post merger gave SBI a higher net profit due to clubbing of its associates into a single entity.

Table 2.b: ROCE OF STATE BANK OF INDIA

Period	N	Mean	Mean Difference	S.D	df	t-statistic	Tabulated value	Result
Pre-merger	3	1.873333	0.186667	0.065064	2	4.97	4.303	Ho Rejected
Post-merger	3	2.06						

Source: Author's own tabulation

Observation: Return on capital employed is a financial ratio which defines the company's profitability and the efficiency to which the capital of the concern is applied. It is calculated by dividing the Earning before interest and tax (EBIT) by Capital employed, where Capital employed is the result of the difference between Total assets and Current liabilities. As the t-statistic (2, 0.05) = 4.97 which is more than the tabulated value 4.303, so we rejected the null hypothesis and accepted the alternate hypothesis .So from the paired sample t test we can conclude that there is a significant difference of ROCE in the post merger period than Pre merger .From the sample mean it can be conclude that there is an slight increase of 0.187 or approx 10 % of ROCE in the post merger period. Hence it can be concluded that there is an increase in the efficient level to use its available capital optimally.

International Journal of Advances in Engineering and Management (IJAEM)
Volume 2, Issue 12, pp: 777-784 www.ijaem.net ISSN: 2395-5252

Table 2.c: ROA OF STATE BANK OF INDIA

Period	N	Mean	Mean Difference	S.D	df	t-statistic	Tabulated value	Result
Pre-merger	3	0.483333	0.256667	0.098658	2	4.506	4.303	Ho Rejected
Post-merger	3	0.74						

Source: Author's own tabulation

Observation: Return on Asset is an indicator of the profitability of the company in terms of its total assets. From the perspective of stakeholders and shareholders it gives an insight of how the management of the company is using its assets in terms of generating income. It is calculated by dividing the net income of the company by total assets .As the t-statistic (2, 0.05) = 4.506 is more than the tabulated value 4.303, so we rejected the null hypothesis and accepted the alternate hypothesis. So from the paired sample t test we can conclude that there is a significant difference of ROA in the post merger period. From the sample mean it can be conclude that there is an increase of 54.17% of ROA in the post merger period. The ROA figures gave an idea about how the company is converting its money into net income. The higher ROA indicates the fact that how SBI is earning more on less investment.

Table 2.d: BASIC EPS RATIO OF STATE BANK OF INDIA

Period	N	Mean	Mean Difference	S.D	df	t-statistic	Tabulated value	Result
Pre-merger	3	15.40333	3.29	1.232	2	4.628	4.303	Ho Rejected
Post-merger	3	18.69333						

Source: Author's own tabulation

Observation: Basic Earnings per Share can be defined as how the company is segregating its net income into the shares of common stock. It is calculated by subtracting the preferred dividend from the net income whole divided by weighted average of common share outstanding. As the t statistic (2, 0.05) = 4.628 is more than the tabulated value 4.303, so we rejected the null hypothesis and accepted the alternate hypothesis .So from the paired sample t test we can conclude that there is a significant difference of Basic EPS in the post merger period .From the sample mean it can be conclude that there is an increase of 23.70 % of EPS in the post merger period.

Table 2.e: NET PROFIT MARGIN OF STATE BANK OF INDIA

Period	N	Mean	Mean Difference	S.D	df	t-statistic	Tabulated value	Result
Pre-merger	3	5.29	1.413	0.554	2	4.418	4.303	Ho Rejected
Post-merger	3	6.71						

Source: Author's own tabulation

Observation: Net Profit Margin can be defined as how much the net income is generated percentage to revenue. It is calculated by subtracting Cost of Goods Sold, Operating and other expenses, Interest and Taxes from Revenue and expressed in percentage. As the t- statistic (2, 0.05) = 4.418 is more than the tabulated value 4.303, so we rejected the null hypothesis and accepted the alternate hypothesis .So from the paired sample t test we can conclude that there is a significant difference of Net Profit Margin in the post merger period .From the sample mean it can be conclude that there is an increase of 26.84% of Net Profit Margin in the post merger period. Hence it can be concluded that

though the pre merger and post merger highlighted the positive figure but the profit margin of post merger is higher.

Table 2.f: RETENTION RATIO OF STATE BANK OF INDIA

Period	N	Mean	Mean Difference	S.D	df	t-statistic	Tabulated value	Result
Pre-merger	3	79.416	16.133	6.100	2	4.583	4.303	Ho Rejected
Post-merger	3	95.55						

Source: Author's own tabulation

Observation: Retention Ratio can be defined as the portion of the profit kept back as retained earnings opposing to being paid as dividend to share holders for the future growth and development of the company. It is calculated by subtracting the dividend distributed from the net income and dividing the result by net income .As the t statistic(2,0.05) = 4.583 is more than the tabulated value 4.303 ,so we rejected the null hypothesis and accepted the alternate hypothesis .So from the paired sample t test we can conclude that there is a significant difference of RETENTION RATIO in the post merger period .From the sample mean, it can be concluded that there is an increase of 16.134 % of RETENTION RATIO in the post merger period. Glancing through the mean , the mean of post merger period is nearly 96% indicating that the new SBI is keeping aside more of its income than the pre merger period for its growth and development .As the bank became huge, significantly more operating costs are generated in operations so SBI is holding of its income for future endeavors'.

Table 2.g: CASA RATIO OF STATE BANK OF INDIA

Period	N	Mean	Mean Difference	S.D	df	t-statistic	Tabulated value	Result
Pre-merger	3	42.28	2.813	1.104	2	4.506	4.303	Ho Rejected
Post-merger	3	45.16						

Source: Author's own tabulation

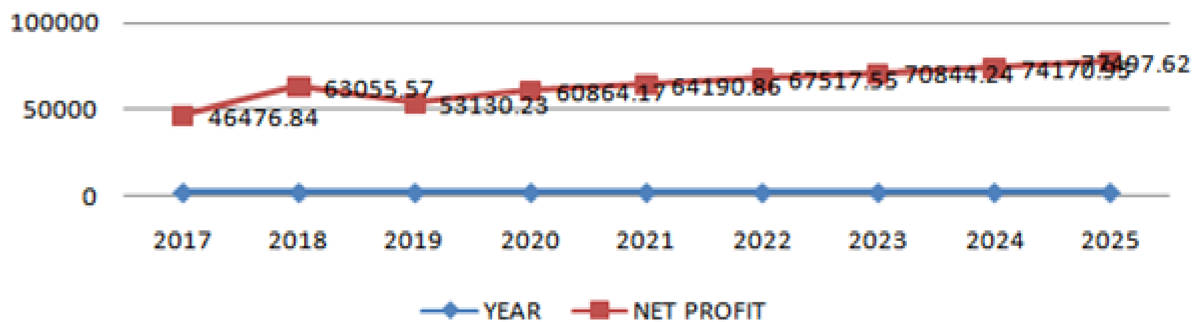
Observation: A current account savings account is the ratio of the accounts, enticing the customers to keep their money in bank. .As the t-statistic (2, 0.05) = 4.506 is more than the tabulated value 4.303, so we rejected the null hypothesis and accepted the alternate hypothesis .So from the paired sample t test we can conclude that there is a significant difference of CASA ratio in the post merger period .From the sample mean it can be conclude that there is an slight increase of 6.81% of CASA ratio in the post merger period. Hence it can be concluded that higher CASA ratio signifies that the bank doesn't depend heavily on costlier wholesale funds, which can abrupt the profit margin.

Table 3: FORECASTING NET PROFIT OF STATE BANK OF INDIA ON THE BASIS OF REGRESSION ANALYSIS

YEAR	2017	2018	2019	2020	2021	2022	2023	2024	2025
NET PROFIT	46476.84	63055.57	53130.23	60864.17	64190.86	67517.55	70844.24	74170.93	77497.62

Source: Author's own tabulation

CHART 1:



Source: Line Chart is made according to the data tabulated

Observation: On the basis of past data (2017-2019) the net profit of the acquirer bank i.e., State Bank of India, the net profit of the SBI is forecasted using in accordance with the regression trend analysis. Though there is an upward trend of net profit in 2018 but subsequently there is an upward trend in the next 7 years .After the merger of the SBI associates into SBI, the net profit of the acquirer bank will gradually increase with the passage of time.

VI. CONCLUSION

The merger of the associates banks State Bank of Bikaner & Jaipur (SBBJ), State Bank of Hyderabad (SBH), State Bank of Mysore (SBM), State Bank of Patiala (SBP) and State Bank of Travancore (SBT), along with Bhartiya Mahila Bank (BMB) created a huge alterations in the financial performance of the acquirer bank State Bank of India and it became one of the top fifty banks on a global scale and becoming the pioneer of the globe in terms of merging . The comparative ratio analysis of the of the pre & post merger era is expressing financial performance of the associates along with SBI. After the merger a strong knock can be felt in the financial performance of SBI in relation to RONW , ROCE , ROA ,Basic EPS, Net Profit Margin ,Retention Ratio and CASA .Though financial measures like RONW and Basic EPS of SBI in the post merger period doesn't showed a significant change in table 1,as compared to its associates in premerger period but after the merger the paired sample t test showed a significant difference between the financial measure of SBI in the pre-merger & post merger period, where the mean of the post merger period being greater indicating the increase of the financial measure of SBI in the post merger period, table 2.The regression trend analysis in table 3 showed a positive upward trend in the net profit of SBI in the post merger period, and with due course of time it will increase gradually.

REFERENCES

[1]. Andre, P., M. Kooli and J. L'Her, (2004). "The Long-Run Performance of Mergers and Acquisitions: Evidence from the Canadian Stock Market", Financial Management 33 (4), pp 27-43

[2]. Beena P. L. (2000). 'An analysis of merger in the private corporate sector in India' Journal of Scientific & Industrial Research", Special Issue on Management, August – Sep., Nasscom, New Delhi. pp 34-51

[3]. Berger, A.N. (1993): "'Distribution-Free' Estimates of Efficiency in the US Banking Industry and Tests of the Standard Distributional Assumptions", Journal of Productivity Analysis, 4, pp 261-92.

[4]. Berger, A.N., and D.B. Humphrey (1992): "Megamergers in Banking and the Use of Cost Efficiency as an Antitrust Defense", Antitrust Bulletin, 37, pp 541-600.

[5]. Berger, A.N., and L.J. Mester (1997): "Inside the Black Box: What Explains Differences in the Efficiencies of Financial Institutions", Journal of Banking and Finance,21, pp 895-947.

[6]. Clark, J.A. (1996): "Economic Cost, Scale Efficiency, and Competitive Viability in Banking", Journal of Money, Credit, and Banking, 28, pp 342-364.

[7]. Cybo-Ottone, A., and M. Murgia (2000): "Mergers and Shareholder Wealth in European Banking", Journal of Banking and Finance, 24, pp 831-859.

[8]. Gallet, C. A., (1996). "Mergers and Market Power in the U.S. Steel Industry" Applied Economics Letters 3, pp 221-223.

[9]. Ghosh, A., (2001): „Does operating performance really improve following corporateacquisitions?" Journal of Corporate Finance 7 pp 151-178.

[10]. Haynes, M., and S. Thompson (1999): "The Productivity Effects of Bank Mergers: Evidence from the UK Building Societies", Journal of Banking and Finance, 23,pp 825-46.

[11]. John, Kitching (1967): „Why Do Mergers Miscarry‟, Harvard Business Review, Vol 45, pp 84-101.
[12]. Katsuhiko Ikeda and Noriyuki Doi (1983): „The Performances of Merging Firms in Japanese Manufacturing Industry: 1964-75‟, The Journal of Industrial Economics, Vol. 31, No. 3, March, pp 257-266.
[13]. Kumar, R., (2009). "Post-Merger Corporate Performance: an Indian Perspective", Management Research News 32 (2), pp 145-157
[14]. Linder, Jane C., and Crane, Dwight B. "Bank Mergers: Integration and Profitability," Journal of Financial Services Research 7 (1992), pp 35-55.