# International Journal of Applied Engineering & Technology

# ANALYZING THE PRE AND POST-MERGER PERFORMANCE OF THE STATE BANK OF INDIA THROUGH A COMPARATIVE CAMEL MODEL EVALUATION

### Mrs. S. Sasikala<sup>1</sup> and Dr. B. Sudha<sup>2</sup>

<sup>1</sup>Ph. D Research Scholar and <sup>2</sup>Professor, Department of Banking Management, Alagappa University, Karaikudi

#### **ABSTRACT**

The main aim of this study is to evaluate the operational efficiency of the SBI during pre and post-merger periods. The Indian Banking industry witnessed stress in the asset quality due to mounting NPAs arising out of the financial crisis (2008). However, the performance of the Indian banks has been conditioned by the RBI through various prudential measures. The SBI merger with its associates helps the bank to expand its geographical reach which enables it to provide services to a larger base. The series of mergers in the SBI are as follows: SBS (State Bank of Saurashtra) in 2008, SBI (State Bank of Indore) in 2010, and its other subsidiaries in 2017. Among other associates, SBS is the smallest associate with total assets amounted to Rs.18,847 crore and advances of Rs.11,000 crore in 2007. Against this backdrop, this paper evaluated the pre and post-merger performance of SBI using CAMEL model (Capital adequacy, Asset quality, Management ability, Earning capability and Liquidity). The independent sample t-test analysis results revealed that Asset Quality, Earning capability, and Liquidity are better in the post-merger period compared to the pre-merger, this is due to increase in the GNPA which negatively impacted Asset quality, Earning capability and liquidity

Keywords: Merger and Acquisition, CAMEL, NPA, consolidation of banks.

### 1. INTRODUCTION

Consolidation of banks mainly undertaken to enhance the financial soundness and improve their capability to help economic growth. SBS was established in 1902 early it was named as Bhavnagar Darbar. Later on in 1950, the four banks (Rajkot State Bank, Porbandar State Bank, Palitana Darbar Bank, and Vadia State Bank) were merged with Bhavnagar Darbar and renamed as SBS. After ten years, the SBS became the associate bank of the SBI with 420 branches of the network. On 13 August 2008, the SBI takeover the SBS, after the consolidation, the branches increased from 10183 to 14699. In 2010, the State Bank of Indore amalgamated with State Bank of India and in 2017 the six associates of SBI ()State Bank of Bikaner and Jaipur, State Bank of Mysore, State Bank of Hyderabad, State Bank of Travancore, State Bank of Patiala and Bhartiya Mahila Bank) were merged with SBI. After this mega-merger, the SBI has become a leading banker with an total asset base of Rs.32 trillion, 22500 branches, and 58000 ATMs. Since, its establishment, the SBI has grown many folds and has introduced the YONO app to their customers for the ease of doing banking transactions on 10<sup>th</sup> December 2017. The business of SBI in 2022 were total deposits of Rs.4,087,410 cr, total assets Rs 5,360,883 cr, and a net profit Rs.31675 cr.

The merger and acquisition of banks could happen not only for the benefit of the banking sectors but also for the nation's economy. Similarly, the merger in the SBI has also caused many changes in the business operations of the SBI. The consolidation process in SBI was very smooth and quick due to the following reasons, the first and foremost reason is that the associates were smallest which smoothly made the merger, the second reason is, that the ownership was held by the SBI and no outside shareholders and the final reason is that the competition of new branches should be less. In this backdrop, this article compared the SBI performance during the merger period.

### 2. REVIEW OF LITERATURE

Surendra Kumar Mishra et al, (2012) analyzed the financial health of the merged State Bank entity by adopting CAMEL model. The analysis found the loan quality and capital adequacy are affected due to merger. the State Bank of Bikaner and Jaipur should improve the management efficiency and the SBP (State Bank of Patiala) should concentrate in the earning quality. Amrita Kupta et al (2016), discussed the effect of mergers on the productivity and asset quality of SBI. The independent sample t-test has been employed in this paper. Study covered six years from 2014 to 2020. The study found a significant change in the operating profit and net interest

# International Journal of Applied Engineering & Technology

income. Tapas Kumar Sethy (2017), examined the operational efficiency of SBI in the merger period. The researcher has used the DEA model. Following variables Earning Per Share, Price-earnings ratio, and Market Price to book value of Equity have been used to analyse the impact of merger. The study found that there was a positive impact on the merger performance of the bank after the merger. Kamna R Choudhary (2021), studied the financial performance of ICICI Bank by employing CAMELS approach. The results revealed that there is an improvement in the ICICI bsank's performance in all financial parameters after merger. Gaurav Sisodia et al, (2021) analysed the effect of merger and acquisition. ROE, Debt Equity, Interest Income ratio, Total Advances to Assets ratios. The results revealed no significant changes in the selected ratio's before and after merger. Priyanka et al, (2020) has explained about the EVA in her paper. The study stated that, EVA is the most significant measurement to determine the efficacy of managers,q

#### 3. METHODOLOGY

In this article, the researcher has used published data and were taken from the SBI's annual reports. The CAMEL rating model which is an appropriate tool to examine the overall financial soundness of the SBI, before and after merger. Capital Adequacy determines strength of the bank to absorbs losses. Capital adequacy gives enough confidence to the stakeholders for capital security. Asset Quality assesses the loan quality and the underlying risk attached to the particular loan portfolio. Management Ability refers to the capability of the manager to maximize earnings or minimize the cost under the given circumstances. In other words, management efficiency is how the bank can manage the business and profits. Earning Capability measures the sustainable earning cabacity of the bank. Liquidity is the bank's ability to meet short-term financial obligations.

#### 4. STUDY PERIOD

The Indian banking sector consists of greater public, private, and foreign banks. The consolidation of banks has taken place in all bank forms. The article aims to analyse SBI's merger performance. Hence, two different periods 2003-04 to 2007-08 (pre-merger period) and 2008-09 to 2021-22 (post-merger period) have been taken. The researcher has employed widely used CAMEL model. The results will be helpful to understand whether the merger created value to the SBI or not.

#### 3.2 Research Hypothesis

The financial efficiency of SBI during consolidation period has been analyzed in terms of Capital Adequacy using (CAR), NNPATAR(Net NPA to Total Assets Ratio), PPE(profit per employee), ROA(Return on Asset), GSTAR (Government Securities to Total Asset Ratio). The hypotheses of take a look at are as follows:

 $\mathbf{H}_{01}$ : There is no significant difference in the capital adequacy of the SBI during the study period.

 $\mathbf{H}_{02}$ : There is no significant difference in the asset quality of the SBI during the pre and post-merger period.

 $H_{03}$ : There is no significant difference in the management efficiency of the SBI during the pre and post-consolidation period.

H<sub>04</sub>: There is no significant difference in the earning capability of the SBI in the pre and post-merger period.

 $H_{05}$ : There is no significant difference in the liquidity of the SBI throughout the- pre and post-merger period.

### 5. RESULTS AND FINDINGS

**Table: 1** Descriptive statistics of CAMEL ratios of SBI during pre (2003-04 to 2007-08) and post-merger (2008-09 to 2021-22)

	CAR		NNPATAR		PPE		ROA		GSTAR	
Min (%)	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
	12.74	10.69	1.12	0.56	1.30	-2.43	0.86	-0.84	16.46	20.76
Max (%)	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
	11.88	13.83	1.46	3.58	3.73	12.93	0.97	1.02	46.8	28.57

## International Journal of Applied Engineering & Technology

Average (%)	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
	13.54	12.54	1.27	1.79	2.33	5.02	0.90	0.39	36.09	24.01

**Source:** computed by the author by using secondary data

### Interpretation

The first merger happened between SBI and the SBS in the year 2008. Hence, five years from 2003-04 to 2007-08 have been taken as the pre-merger period and fourteen years from 2008-09 to 2021-22 have been taken as after merger. Average CAR of before merger was 12.54 percent which was 1 per cent lower than the pre-merger period average CAR. According to the RBI guideliness, PSBs (Public Sector Banks) to maintain a minimum CAR of 12 percent. The SBI has maintained an average CAR of 13.54 per cent in the before merger. 12.54 per cent in the after merger. The NNPATAR has been calculated to ascertain the asset's quality, the post-merger average NNPATAR was 0.52 per cent higher than before merger, which means the accumulated NPA and stressed assets of associate banks have been merged with the SBI's NPA. The SBI has managed the situation by providing an additional provision of Rs.8600 crores in 2017. The profit per employee has been used to measure the management's ability. In the post-merger period, PPE was 2.69 percent increased than the before merger. PPE which implies that after merger, the efficiency of the employees to generate the profit has increased and the productivity of the bank in the post-merger was also high. Earning capability has been analyzed by using the Return on Asset for the study period. Perhaps, ROA in the post-merger period was 0.51 percent lesser than the pre-merger period, its standalone total income declined in the initial period of the merger. The consolidated results shows minimum of Rs 4,550 crores loss in the subsidiaries, leads to sharp decreasing trend of ROA during the after merger. Liquidity of the SBI has been judged based on the Government Securities to Total Asset Ratio which was higher in the pre-merger and 12.08 per cent lower in the after the merger. The bank cut government bond holdings and ensured trade credit in an attempt to optimize capital. This lower ratio indicates the risk involved in the assets held by the SBI.

**Table: 2** T-test analysis of the SBI for before and after merger

	CAR		NNPATAR		PPE		ROA		GSTAR	
Mean	Pre	12.7480	Pre	1.2700	Pre	2.3300	Pre	.9020	Pre 36.0900	
	Post	12.5443	Post	1.7964	Post	5.0279	Post	.3900	Post 24.015	
Std.Deviation	Pre	0.74958	Pre	.14422	Pre	.88184	Pre	.05357	Pre 14.4987	
	Post	0.89151	Post	.90624	Post	3.46760	Post	.60369	Post 2.2765	
t-value	.495		-2.100		-2.679		3.139		1.854	
Sig	.794		.034		.235		.009		.000	

**Source:** computed by the author by using secondary data

#### **Interpretation**

Table 2 reveals the t-test result obtained based on comparing the before and after merger of SBI during the period under review. The result reveals that the p-value of CAR is .794, which is higher than 5 percent. This indicates, that nothing changes have been happened in CAR of SBI during before and after merger period. It could inferred from analysis that the SBI has maintained an adequate capital adequacy ratio throughout the study period, which helps to know the bank's efficiency. P value of NNPATAR of SBI was 0.34 which is less than 5 percent, Hence, proved that changes have been found in the asset quality of SBI during the before and after merger. The SBI has experienced sharp decreasing trend in asset quality in the after merger and registered an NPA Rs.223427.6 crore in 2017. In the case of PPE, it is found that the p-value was 0.149 which is greater than the standard value 0.05. Hence, there is no significant changes in the management ability of SBI during the before and after merger. The PPE implies employees efficiency to generate profit. Result revealed that the p-value of ROA is .009 which below to standard value. The combined NPAs of SBI and its associates have increased the provisioning coverage ratio to 59 per cent in 2017, which reduced the ROA during the after merger period. P-value for the liquidity is .000 which is less than the standard value .05 which shows liquidity of SBI changed in the before and after merger.

ISSN: 2633-4828

# International Journal of Applied Engineering & Technology

The analysis revealed that the liquidity of the SBI was less in the after the merger because the proportion of the total assets invested in the safe investments was less in the post-merger period.

#### 5. CONCLUSION

The findings of thia article have confirmed, the SBI has registered a deterioration in asset quality and a decline in earning capability and liquidity. After the merger, the earning capability and liquidity of the SBI have been affected due to huge provisioning for NPA. Return on assets decreased to 0.67 percent in 2022 from 0.97 percent in 2008. The capital adequacy ratio has been maintained by the bank through better planning, internal accruals, and efficient risk management. CAR as at the end of March 2022 stood at 13.83 percent, an improvement over 2008 at 13.54 percent. From the comparative analysis of the before and after merger performance of SBI, it is found that the bank's asset quality, earning capability, and liquidity were affected by the merger. The SBI will attain success in the merger process by continuously adopting a good management practice, lowering slippages, and reducing the outstanding GNPAs through recoveries, upgrades, and write-offs to manage the NPAs.

#### REFERENCES

- 1. Misra, Dr SK, and Parvesh Aspal. "A camel model analysis of State Bank Group." In *Proceedings of 19th International Business Research Conference*. 2012.
- 2. Amrita Gupta and Dr. Anita modi, "Impact of merger on productivity and asset quality of SBI." Journal of Emerging Technologies and Innovative Research. 8(3), 2349-5162.
- 3. Sethy, Tapas Kumar. "Impact of merger on financial performance of banks: A case study of state bank group." *International Journal of Technical Research & Science* 2, no. 6 (2017): 338-394.
- 4. Choudhary, Kamna. "Effect of Mergers on Financial Performance of Banks: A Case Study With Respect to ICICI Bank Mergers." (2021).
- 5. Sisodia, Gauray, and Nilmani Tripathy. "Merger and Acquisition Effect on Financial Performance of SBI."
- 6. Rodriguez-Fernandez, M. (2016). Social responsibility and financial performance: The role of good corporate governance. *BRQ Business Research Quarterly*, 19(2), 137-151.
- 7. Krishnasamy, Geeta, AlfieyaHanuumRidzwa, and Vignesen Perumal. "Malaysian post merger banks' productivity: application of Malmquist productivity index." *Managerial Finance* (2004).
- 8. Poh, L. T., Kilicman, A., & Ibrahim, S. N. I. (2018). On intellectual capital and financial performances of banks in Malaysia. *Cogent Economics & Finance*, 6(1), 1453574.
- 9. Abbas, Q., Hunjra, A. I., Azam, R. I., Ijaz, M. S., & Zahid, M. (2014). Financial performance of banks in Pakistan after Merger and Acquisition. *Journal of Global Entrepreneurship Research*, 4(1), 1-15.
- 10. Pastor, J. T., Lovell, C. A., &Tulkens, H. (2006). Evaluating the financial performance of bank branches. *Annals of Operations Research*, *145*(1), 321-337
- 11. Zhang, Anming, and Derek Aldridge. "Effects of merger and foreign alliance: An event study of the Canadian airline industry." *Transportation Research Part E: Logistics and Transportation Review* 33, no. 1 (1997): 29-42.
- 12. DeYoung, Robert, Douglas D. Evanoff, and Philip Molyneux. "Mergers and acquisitions of financial institutions: A review of the post-2000 literature." *Journal of Financial services research* 36, no. 2 (2009): 87-110.
- 13. Cortés, Lina M., John J. García, and David Agudelo. "Effects of mergers and acquisitions on shareholder wealth: Event study for Latin American airlines." *Latin American Business Review* 16, no. 3 (2015): 205-226.

ISSN: 2633-4828

# International Journal of Applied Engineering & Technology

- 14. Ismail, K. N. I. K., & Karem, M. A. (2011). Intellectual capital and the financial performance of banks in Bahrain. *Journal of Business Management and Accounting*, 1(1), 63-77.
- 15. Maqbool, S., &Zameer, M. N. (2018). Corporate social responsibility and financial performance: An empirical analysis of Indian banks. *Future Business Journal*, 4(1), 84-93.
- 16. Kumar, P. (2022). Performance of State Bank of India: A Descriptive Study. *Contemporary Issues in Banking, Insurance and Financial Services*, 43.
- 17. Chadaram, S., & Kale, S. G. (2022). An analysis of Balance Sheet with reference to State Bank of India. *Journal of Global Economy*, 18(2), 159-166.
- 18. Kumar, C. K. Income Statement Analysis of State Bank of India.
- 19. Palamalai, S., &Saminathan, Y. (2016). A CAMEL model analysis of public, private and foreign sector banks in India. *Pacific Business Review International*, 8(9), 45-57.
- 20. Samir, D., &Kamra, D. (2013). A comparative analysis of non-performing assets (NPAs) of selected commercial banks in India. *Opinion: International Journal of Management*, 3(1).
- 21. Pandit, S., & Naik, M. N. (2022). A Comparative Study on Stock Market Performance of Five Prominent Public Sector Bank in India. *Specialusis Ugdymas*, 1(43), 6652-6660.
- 22. Haque, A. (2014). Comparison of financial performance of commercial Banks: A case study in the context of India (2009-2013). *Journal of Finance and Bank Management*, 2(2), 1-14.
- 23. Priyanka, T. & Sudha, B. (2020). Concept Of Economic Value Added And It's Application In Commercial Banks, *International Journal of Scientific & Technology Research*, 9(3), 1639-1641.