



Cover Page



AN ANALYSIS OF PRE- AND POST-MERGER PERFORMANCE OF THE SELECTED BANKS IN INDIA – A CAMEL APPROACH

Dr. M. Gangadhara

Guest lecturer, Department of Commerce, S.V.Arts College, (Autonomous),(TTD), Tirupati

Abstract

The CAMEL model is one of the widely used techniques to measure the performance of the financial organizations, including banking sector. The merger is common corporate strategy used in expansion of business. The present study examined the impact of mergers in banking sector on the performance of the five selected banks in India during 2017-2024. The study adopted CAMEL approach, additionally statistical techniques like averages and T-test was used to measure the impact. The study found that, mergers have shown significant impact on the capital adequacy, asset quality, management efficiency, earning quality and insignificant effect on the liquidity. The study concludes that mergers contribute to the overall growth and competitiveness of the banking sector and recommends effective post-merger integration and management strategies for achieving long-term benefits.

Key words: CAMEL, Merges, Banking sector etc.,

INTRODUCTION:

A nation's economy relies on the banking industry to mobilize savings, provide loans, promote investments, support industrial and agricultural development, and provide financial stability. In the present competitive and globalized financial world, banks face mounting NPAs, low profitability, insufficient capital base, technological improvements, rising operational expenses, and fierce market competition. Mergers and consolidations have become a key banking strategy to address these issues and improve the system. A bank merger combines two or more banks to improve financial strength, operational efficiency, market share, and performance. Indian public sector banks were merged by the government and regulated by the Reserve Bank of India to become stronger and more competitive to support economic growth. The consolidation process also sought to reduce weak banks' burdens, improve asset quality, capital sufficiency, and customer service.

Recently, mergers have been increasingly important in the banking sector since they enable banks attain economies of scale, greater resource utilization, bigger branch networks, better risk management, and operational efficiency. Mergers also help banks diversify, develop technology, and compete in domestic and foreign markets. Through consolidation, financially weak banks can benefit from bigger banks' strengths, improving financial stability and public confidence in the banking system. Another benefit of bank mergers is lowering NPAs and increasing profits. Before the merger, several Indian public sector banks were struggling with significant NPAs and diminishing profitability. Merged banks can boost recovery, operational efficiency, and financial performance by pooling resources, capital, and management. Mergers improve capital adequacy and liquidity, helping banks satisfy regulatory criteria. Mergers also advance banking technology and digital transformation. Large merging banks can invest more in banking technology, digital payments, cybersecurity, and new financial products. This boosts customer satisfaction, financial inclusion, and service quality. However, bank mergers also face problems such organizational culture integration, personnel management, technology system harmonization, branch rationalization, and short-term operational issues. Thus, mergers must be assessed to determine if they achieved their goals and improved bank finances. Mergers' effects on selected public sector banks' financial performance before and after mergers are examined in this study. The study analyzes Capital Adequacy Ratio, Asset Quality, Management Quality, Earning Quality, and Liquidity Position to determine how bank mergers strengthen the Indian banking system.

REVIEW OF LITERATURE:

Jang & Yadav (2021) used CAMEL Model to study HDFC Bank's financial performance after the merger. Secondary data was used for ten years, spanning five years pre- and post-merger (2003-08 and 2009-14). A paired sample T-test determined



Cover Page



the statistical significance of the difference between the CAMEL ratios before and after the merger and the merger's impact on bank performance. Results showed HDFC's financial performance improved after the merger.

Gandhi, Mehta & Chhajer (2020) examined four mergers by ICICI Bank, one of the leading private banks. The mergers of ICICI Bank with Sangli Bank (2008), Bank of Madura (2001), Bank of Rajasthan (2011), and ICICI Ltd. (2002) were examined. The CAMEL model analyzed mergers. Data from three years before and after the merger was used for research. Researchers found that ICICI Bank's financial performance didn't improve after these mergers.

Aruna P & Bharadwaj (2019) examined the causes of the April 1, 2017, mega-merger and SBI's financial performance before and after the merger. This study used CAMEL model and paired t-test. Results show merger had no significant impact on financial performance. Researchers believe this information can help merger planners plan and succeed.

This study by Purohit & Bothra (2018) evaluated India's top two banks' finances. To conduct the study, SBI and ICICI Bank were selected for five years, from 2012-13 to 2016-17. CAMEL ratios were used in this investigation. The analysis found that CAMEL ratios are not significantly different from ICICI and SBI banks' ratio rankings. Modern technology, financial reforms, and recovery procedures improved these banks' overall performance.

Kaur & Priya (2017) assessed BOB and PNB using the "CAMEL model". The study calculated six ratios using secondary data from 2011–12 to 2015–16. The financial position of these two institutions was assessed using t-test.

Jang & Yadav (2021) used CAMEL Model to study HDFC Bank's financial performance after the merger. Secondary data was used for ten years, spanning five years pre- and post-merger (2003-08 and 2009-14). A paired sample T-test determined the statistical significance of the difference between the CAMEL ratios before and after the merger and the merger's impact on bank performance. Results showed HDFC's financial performance improved after the merger.

Gandhi, Mehta & Chhajer (2020) examined four mergers by ICICI Bank, one of the leading private banks. The mergers of ICICI Bank with Sangli Bank (2008), Bank of Madura (2001), Bank of Rajasthan (2011), and ICICI Ltd. (2002) were examined. The CAMEL model analyzed mergers. Data from three years before and after the merger was used for research. Researchers found that ICICI Bank's financial performance didn't improve after these mergers.

Aruna P & Bharadwaj (2019) examined the causes of the April 1, 2017, mega-merger and SBI's financial performance before and after the merger. This study used CAMEL model and paired t-test. Results show merger had no significant impact on financial performance. Researchers believe this information can help merger planners plan and succeed.

This study by Purohit & Bothra (2018) evaluated India's top two banks' finances. To conduct the study, SBI and ICICI Bank were selected for five years, from 2012-13 to 2016-17. CAMEL ratios were used in this investigation. The analysis found that CAMEL ratios are not significantly different from ICICI and SBI banks' ratio rankings. Modern technology, financial reforms, and recovery procedures improved these banks' overall performance.

Kaur & Priya (2017) assessed BOB and PNB using the "CAMEL model". The study calculated six ratios using secondary data from 2011–12 to 2015–16. The financial position of these two institutions was assessed using t-test.

NEED OF THE STUDY:

The banking industry is essential for a country's economic development by mobilizing savings, offering credit facilities, facilitating investments, and ensuring financial stability. In recent years, the Indian banking system has experienced substantial structural transformations due to the merger and consolidation of public sector banks, directed by the Reserve Bank of India and the Government of India. The mergers were largely implemented to fortify the financial standing of banks, enhance operational efficiency, diminish Non-Performing Assets, boost profitability, and elevate the worldwide competitiveness of Indian banks. The necessity for the current analysis stems from the significance of assessing whether these mergers have genuinely enhanced the financial performance of public sector banks. Mergers necessitate the integration



Cover Page



of assets, liabilities, personnel, and operational systems, making it crucial to evaluate their effects on financial metrics such Capital Adequacy Ratio, Asset Quality, Management Efficiency, Earning Quality, and Liquidity Position. An evaluation of these variables aids in comprehending the efficacy of merger rules and their role in fortifying the banking industry.

OBJECTIVES OF THE STUDY:

- To the study the impact of mergers on the capital adequacy of the selected banks in India
- To the study the impact of mergers on the Asset Quality of the selected banks in India
- To the study the impact of mergers on the Management Efficiency of the selected banks in India
- To the study the impact of mergers on the Earning Quality of the selected banks in India
- To the study the impact of mergers on the Liquidity of the selected banks in India
- The application of CAMEL model to finding out he financial performance during post mergers period

HYPOTHESIS: The study has formulated and tested the following alternative hypothesis where null hypothesis is implied

H₁: There is significant impact of mergers on the capital adequacy of selected banks in India

H₂: There is significant impact of mergers on the Asset quality of selected banks in India

H₃: There is significant impact of mergers on the Management efficiency of selected banks in India

H₄: There is significant impact of mergers on the Earning Quality of selected banks in India

H₅: There is significant impact of mergers on the Liquidity of selected banks in India

RESEARCH METHODOLOGY: Present study is an analytical and descriptive in nature. The study focused on the examining the impact of mergers on the performance of the selected banks in India. The selected banks are five Canara bank (CB), Bank of Baroda (BOB), Bank of India (BOI), Punjab National Bank (PNB) and Union Bank of India (UBI). The study period included eight years four years pre –merger and four years post merger period i.e. 2017-2020 and 2021-2024.The study applied percentage, average and t-test techniques. 8

DATA ANALYSIS AND INTERPRETATION

Table 01: Capital Adequacy Ratio of selected Banks during pre and post-merger period										
	2016-17	2017-18	2018-19	2019-20	AVG	2020-21	2021-22	2022-23	2023-24	AVG
CB	11.08	12.86	13.22	11.90	12.27	13.65	13.18	14.90	16.31	14.51
BOB	13.18	12.24	12.13	13.42	12.74	13.30	14.99	15.68	16.24	15.05
BOI	12.01	12.14	12.94	14.19	12.82	13.10	14.93	16.51	16.28	15.21
PNB	11.28	11.66	9.20	9.73	10.47	14.15	14.32	14.50	15.50	14.62
UBI	10.56	11.79	11.46	11.78	11.4	12.81	12.56	14.52	16.04	13.98

Source: RBI Annual Reports



Cover Page



Table 01 presents the Capital Adequacy Ratio (CAR) of selected public sector banks during the pre-merger period (2016–17 to 2019–20) and post-merger period (2020–21 to 2023–24).

Canara Bank had CAR values between 11.08 % and 13.22 % in the pre-merger period, averaging 12.27 %. During the post-merger period, the Capital Adequacy Ratio (CAR) rose consistently from 13.65 % in 2020–21 to 16.31 % in 2023–24, yielding a higher average of 14.51 %. Bank of Baroda sustained a consistent Capital Adequacy Ratio (CAR) of 12.74 % throughout the pre-merger years, which subsequently increased to 15.05 % in the post-merger period. Likewise, Bank of India demonstrated steady rise in Capital Adequacy Ratio (CAR), increasing from 12.01 % in 2016–17 to 14.19 % in 2019–20, with a pre-merger average of 12.82 %. Subsequent to the merger, the bank attained an elevated average Capital Adequacy Ratio of 15.21 %.

Punjab National Bank had a relatively diminished Capital Adequacy Ratio (CAR) in the pre-merger phase, particularly in the fiscal years 2018–19 and 2019–20, where the ratios fell to 9.20 % and 9.73 %, respectively, culminating in a pre-merger average of 10.47 %. Nevertheless, the bank shown significant enhancement following the merger, elevating its average Capital Adequacy Ratio to 14.62 % in the post-merger phase. Union Bank of India exhibited enhancement, with its average Capital Adequacy Ratio rising from 11.40 % in the pre-merger phase to 13.98 % in the post-merger phase.

Table 02: Asset Quality (Net NPA to Net Advances) Ratio of selected Banks during pre and post-merger period										
	2016-17	2017-18	2018-19	2019-20	AVG	2020-21	2021-22	2022-23	2023-24	AVG
CB	6.42	6.33	7.48	5.37	6.41	4.22	3.82	2.65	0.68	2.84
BOB	5.06	4.72	5.49	3.33	4.65	3.13	3.09	1.72	2.25	2.55
BOI	7.79	6.90	8.28	5.61	7.15	3.88	3.35	2.34	1.66	2.81
PNB	8.61	7.81	11.24	6.56	8.56	5.78	5.73	4.80	2.72	4.76
UBI	5.25	6.57	8.42	6.85	6.77	5.49	4.62	3.68	1.70	3.87

Source: RBI Annual Reports

Table 02 presents the Asset Quality Ratio measured in terms of Net Non-Performing Assets (Net NPA) to Net Advances of selected public sector banks during the pre-merger period (2016–17 to 2019–20) and post-merger period (2020–21 to 2023–24). Canara Bank had Net NPA % ages between 5.37 % and 7.48 % during the pre-merger phase, with a mean of 6.41 %. Following the merger, the ratio experienced a substantial decrease from 4.22 % in 2020–21 to 0.68 % in 2023–24, culminating in an average reduction to 2.84 %. Bank of Baroda sustained relatively lower Net NPA rates, with a pre-merger average of 4.65 %, which subsequently improved to 2.55 % in the post-merger period. Likewise, Bank of India exhibited a significant pre-merger average Net NPA ratio of 7.15 %, which markedly decreased post-merger to an average of 2.81 %. Punjab National Bank had the highest Net NPA ratios among the studied banks in the pre-merger period, reaching 11.24 % in 2018–19 and averaging 8.56 %. Nevertheless, the bank shown significant enhancement in the post-merger phase, decreasing its average Net NPA ratio to 4.76 % by the fiscal year 2023–24. Union Bank of India demonstrated enhancement in asset quality, as evidenced by a reduction in its average Net NPA ratio from 6.77 % in the pre-merger phase to 3.87 % in the post-merger period.



Cover Page



Table 03: Management Quality (Return on Advances) of selected Banks during pre and post-merger period

	2016-17	2017-18	2018-19	2019-20	AVG	2020-21	2021-22	2022-23	2023-24	AVG
CB	9.58	8.87	8.04	8.48	8.75	8.39	8.03	7.43	8.00	7.96
BOB	7.34	7.18	7.17	7.67	7.34	8.07	7.17	6.64	7.46	7.33
BOI	7.98	7.49	7.15	7.99	7.65	8.12	7.46	6.57	7.36	7.38
PNB	8.69	7.92	7.46	7.87	7.99	7.70	7.78	6.92	7.35	7.44
UBI	9.05	8.29	7.92	8.12	8.34	8.20	7.68	7.23	7.98	7.77

Source: RBI Annual Reports

Table 03 presents the Management Quality measured through Return on Advances of selected public sector banks during the pre-merger period (2016–17 to 2019–20) and post-merger period (2020–21 to 2023–24). Canara Bank exhibited Return on Advances ratios between 8.04 % and 9.58 % during the pre-merger period, with a mean of 8.75 %. During the post-merger period, the ratio had a little decline, with values fluctuating between 7.43 % and 8.39 %, yielding an average of 7.96 %. Bank of Baroda exhibited a steady performance for the entire study period. The bank recorded a pre-merger average of 7.34 %, whereas the post-merger average was nearly identical at 7.33 %, signifying stability in managerial efficiency. The Bank of India reported Return on Advances ratios ranging from 7.15 % to 7.99 % during the pre-merger period, with an average of 7.65 %. Following the merger, the average marginally declined to 7.38 %. Punjab National Bank exhibited a pre-merger average of 7.99 %, which slightly decreased to 7.44 % in the post-merger phase. Union Bank of India exhibited a pre-merger average Return on Advances of 8.34 %, which diminished little to 7.77 % in the post-merger period.

Table 04: Earning Quality (Return on Assets) of selected Banks during pre and post-merger period

	2016-17	2017-18	2018-19	2019-20	AVG	2020-21	2021-22	2022-23	2023-24	AVG
CB	-0.52	0.20	-0.75	0.06	-0.25	-0.32	0.23	0.48	0.81	0.31
BOB	-0.78	0.20	-0.34	0.06	-0.22	0.06	0.07	1.84	1.03	0.75
BOI	0.94	-0.24	-0.91	-0.84	-0.26	-0.43	0.28	0.43	0.49	0.19
PNB	-0.61	0.19	-1.60	-1.25	-0.82	0.04	0.15	0.26	0.18	0.61
UBI	0.35	0.13	-1.07	-0.59	-0.38	-0.53	0.27	0.47	0.69	0.23

Source: RBI Annual Reports

Table 04 presents the Earning Quality of selected public sector banks measured through Return on Assets (ROA) during the pre-merger period (2016–17 to 2019–20) and post-merger period (2020–21 to 2023–24). Canara Bank exhibited variable ROA values in the pre-merger period, spanning from -0.75 % to 0.20 %, with a mean of -0.25 %. Nonetheless, the bank



Cover Page



demonstrated significant enhancement in the post-merger phase, attaining positive ROA values from 2021 to 2022 and averaging 0.31 %. Bank of Baroda additionally reported a negative return on assets over the majority of the pre-merger years, culminating in an average of -0.22 %. During the post-merger phase, the bank's profitability significantly enhanced, with a return on assets (ROA) of 1.84 % in 2022–23 and an average of 0.75 %, the highest among the chosen banks. The Bank of India exhibited erratic ROA performance prior to the merger, with some years reflecting negative returns, culminating in a pre-merger average of -0.26 %. Subsequent to the merger, the bank progressively enhanced its profitability, attaining a favourable average ROA of 0.19 %. Punjab National Bank encountered a significantly adverse ROA in the pre-merger years, especially in 2018–19 and 2019–20, culminating in a pre-merger average of -0.82 %, the lowest among the chosen banks. Nonetheless, the bank rebounded in the post-merger phase, sustaining positive ROA values with an average of 0.61 %. Union Bank of India exhibited a negative pre-merger average ROA of -0.38 %, although enhanced its profitability post-merger, achieving a positive average of 0.23 %.

Table 05: Liquidity (Cash-Deposit Ratio) of selected Banks during pre and post-merger period										
	2016-17	2017-18	2018-19	2019-20	AVG	2020-21	2021-22	2022-23	2023-24	AVG
CB	4.31	4.02	4.21	4.99	4.38	3.61	4.26	4.75	4.66	4.32
BOB	3.78	3.79	3.84	4.17	3.89	3.45	4.02	6.81	4.56	4.71
BOI	6.62	5.06	6.02	5.61	5.83	5.26	9.68	6.42	6.58	6.98
PNB	4.79	4.05	4.48	4.75	4.52	5.46	3.97	7.48	6.10	5.75
UBI	4.55	4.39	5.14	5.00	4.77	4.46	4.10	4.47	4.50	4.38

Source: RBI Annual Reports

Table 05 presents the Liquidity position of selected public sector banks measured through the Cash-Deposit Ratio during the pre-merger period (2016–17 to 2019–20) and post-merger period (2020–21 to 2023–24). Canara Bank recorded Cash-Deposit Ratios ranging from 4.02 % to 4.99 % during the pre-merger period, with an average of 4.38 %. In the post-merger period, the ratio remained relatively stable with an average of 4.32 %, indicating consistency in maintaining liquidity levels. Bank of Baroda maintained moderate liquidity during the pre-merger years with an average ratio of 3.89 %. However, the liquidity position improved significantly during the post-merger period, reaching 6.81 % in 2022–23 and resulting in an average of 4.71 %. Bank of India recorded the highest Cash-Deposit Ratios among the selected banks during both periods. The bank maintained a pre-merger average of 5.83 %, which further increased to 6.98 % during the post-merger period. A notable rise to 9.68 % was observed in 2021–22, indicating a strong liquidity position. Punjab National Bank reported a pre-merger average ratio of 4.52 %, which improved to 5.75 % in the post-merger period. The bank showed a substantial increase in liquidity, particularly in 2022–23 when the ratio reached 7.48 %. Similarly, Union Bank of India maintained stable liquidity throughout the study period, with a slight decline in the post-merger average from 4.77 % to 4.38 %.



Cover Page



T-TEST RESULT

Financial Variable	Pre-merger mean	Post-merger mean	T-test	P-Value	Result
Capital Adequacy Ratio	11.94	14.67	-7.63	0.0001	Significant
Net NPA Ratio	6.71	3.37	8.64	0.0000	Significant
Return on Advances	8.01	7.58	3.24	0.0032	Significant
Return on Assets	-0.39	0.42	-4.49	0.0011	Significant
Cash-Deposit Ratio	4.68	5.23	-1.68	0.1690	Insignificant
Source: Computed from SPSS					

DISCUSSION ON HYPOTHESIS RESULT

1. Capital Adequacy Ratio (CAR): The average Capital Adequacy Ratio rose from 11.94 in the pre-merger phase to 14.67 in the post-merger phase. The computed p-value (0.001) is below the 5 % significance threshold, signifying a statistically significant enhancement in capital adequacy post-merger. Consequently, the null hypothesis is dismissed.

2. Asset Quality (Net Non-Performing Asset Ratio): The average Net NPA ratio decreased from 6.71 to 3.37 following the merger. The p-value (0.001) being less than 0.05 indicates that the decrease in bad loans is statistically significant. This suggests that the mergers enhanced the asset quality of the chosen institutions.

3. Management Quality (Return on Investments): The average Return on Advances somewhat decreased from 8.01 to 7.58 in the post-merger period. The p-value (0.032) is below 0.05, indicating that the change is statistically significant. Consequently, the merger significantly influenced managerial efficiency.

4. Earning Quality (Return on Assets): The Return on Assets increased from a negative average of -0.39 in the pre-merger phase to a positive average of 0.42 in the post-merger phase. The p-value (0.011) signifies a statistically significant enhancement in profitability and earnings quality post-merger.

5. Liquidity (Cash to Deposit Ratio): The average Cash-Deposit Ratio rose from 4.68 to 5.23 in the post-merger period. The p-value (0.169) above 0.05, signifying that the enhancement in liquidity is not statistically significant. Consequently, the null hypothesis regarding liquidity performance is adopted.

Findings of the Study

- The study analyzed the financial performance of several public sector banks throughout the pre-merger and post-merger phases, utilizing key metrics including Capital Adequacy Ratio, Asset Quality Ratio, Return on Advances, Return on Assets, and Cash-Deposit Ratio. The analysis indicated that the mergers positively influenced the overall financial performance of the chosen banks. The Capital Adequacy Ratio of all banks significantly enhanced throughout the post-merger period, signifying a more robust capital foundation and increased financial stability. Bank of India achieved the highest post-merger average Capital Adequacy Ratio, although Punjab National Bank exhibited the most significant enhancement following the merger. The paired sample t-test established that the enhancement in capital adequacy was statistically significant, resulting in the rejection of the null hypothesis.
- The assessment of Asset Quality, shown by the Net NPA to Net Advances Ratio, revealed that all chosen banks encountered a notable reduction in Net NPA ratios following the merger phase. This signifies enhancement in recovery performance, credit monitoring, and risk management practices. Punjab National Bank exhibited the highest Net NPA ratio in the pre-merger phase but demonstrated significant improvement post-merger. Bank of Baroda had superior asset quality consistently during the research period. The t-test results demonstrated that the decrease in Net NPA ratios was statistically significant, hence corroborating the alternative hypothesis.



Cover Page



- The study additionally indicated that the Management Quality, assessed via Return on Advances, exhibited relative stability during both periods. Despite minor reductions in several banks post-merger, the overall performance remained largely stable. Canara Bank achieved the greatest Return on Advances in the pre-merger period. The paired t-test revealed a statistically significant difference between the pre- and post-merger periods, indicating that mergers affected managerial efficiency and operational performance.
- The Earning Quality, as assessed by Return on Assets, shown significant enhancement in the post-merger period. The majority of the chosen banks exhibited negative Return on Assets in the pre-merger phase owing to losses and inadequate profitability. Subsequent to the merger, all banks progressively attained positive Return on Assets, indicating enhanced profitability and superior asset use. Bank of Baroda attained the greatest post-merger Return on Assets among the evaluated banks. The t-test results validated that the enhancement in earning quality was statistically significant
- The investigation of liquidity, assessed by the Cash-Deposit Ratio, revealed that the selected banks upheld good liquidity situations in both periods. The Bank of India exhibited the greatest liquidity ratios among the chosen institutions. Despite the enhancement of the average Cash-Deposit Ratio in the post-merger period, the paired sample t-test indicated that the change lacked statistical significance. Consequently, the null hypothesis was upheld regarding liquidity performance.

SUGGESTIONS

The study's findings indicate that public sector banks have to persist in fortifying their capital base to uphold elevated Capital Adequacy Ratios and guarantee long-term financial stability. Banks must enhance credit evaluation methods, loan monitoring mechanisms, and recovery tactics to mitigate Non-Performing Assets and elevate asset quality. Increased focus should be directed towards enhancing management efficiency and the appropriate application of advancements to maintain superior operational performance. Banks should use methods to enhance profitability, including cost control, diversification of income streams, and effective asset utilization, to sustain a favorable Return on Assets. It is essential to retain sufficient liquidity reserves to fulfill short-term financial obligations without compromising profitability. The post-merger integration process should be enhanced through technological upgrading, staff training, and improved coordination across the merged businesses. Banks must consistently enhance their risk management processes to mitigate operational and financial risks in accordance with the regulatory directives of the Reserve Bank of India.

Conclusion

The study concludes that the mergers of public sector banks positively influenced the financial performance of the examined banks. Substantial enhancement was noted in Capital Adequacy Ratio, Asset Quality, and Earning Quality following the transaction. The reduction in Net NPA rates and enhancement in profitability suggest that the mergers have bolstered the banks' financial stability and operational efficacy. Despite minor fluctuations in Management Quality and Liquidity position, the banks' overall performance remained stable and good post-merger. The findings of the paired sample t-test indicated that mergers had a substantial impact on the majority of financial metrics of the chosen banks. The study's findings indicate that the consolidation measures implemented in the Indian banking system have led to improved financial stability, increased operational efficiency, decreased non-performing loans, and bolstered competition among public sector banks. Consequently, the analysis substantiates the assertion that bank mergers significantly enhanced the overall performance and sustainability of public sector banks in India.

References:

1. Brahma, C. (2018) A Comparative Analysis of SBI and ICICI: Camel Approach. International Journal of Research in Management, Economics and Commerce, Vol. 8, No. 1, pp.151-156.
2. Panboli, S., & Birda, K. (2019) Camel Research of Selected Private and Public Sector Banks in India. International Journal of Marketing & Financial Management, Vol. 4, No. 7, pp.36-52.
3. Jang, J., & Yadav, S. (2021). Impact of Merger on HDFC Bank Financial Performance: A CAMEL Analysis Approach. International Journal of Economics and Finance, Vol. 13, No. 8, pp.23-35.



Cover Page



-
4. Dudhe, C. (2018) A Selective Study: Camels Analysis of Indian Private Sector Banks. *International Journal of Engineering and Management Sciences*, Vol. 3, pp.277-283.
 5. Chiamonte, L., Croci, E., & Poli, F. (2015). Should we trust the Z-score? Evidence from the European Banking Industry. *Global Finance Journal*, 28, 111-131. <https://doi.org/10.1016/j.gfj.2015.02.002>
 6. Kuriakose, S., & Paul, J. (2016). Strategic and financial similarities of bank mergers. *Review of International Business and Strategy*, 26(1),50-68. <https://doi.org/10.1108/RIBS-09-2013-0084>
 7. Rajamani, M., & Ramakrishnan, P. R. (2015). A Study on Impact of Merger of Centurian Bank of Punjab on the Financial Performance of HDFC Bank. *IOSR Journal of Humanities and Social Science*, Vol. 20, No. 5, pp.28-31.