Post-Merger Financial Performance of ICICI Bank

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Abstract
India has witnessed Mergers and Acquisitions across sectors and the most talked about mergers are those in the Banking sector. The banking sector attracts more attention because of the wide geographic spread and the scattered spectrum of stakeholders. Post liberalization banking sector has grown by leaps and bounds and has also seen a lot of mergers and acquisitions. ICICI bank is one of the biggest players among the private sector banks, adopted the merger and acquisition route for expansion. It witnessed four mergers and the same have been studied in this paper. Evaluation of the mergers has been done using the CAMEL model. For the study, three years' pre-merger data and three years' post-merger data have been taken into consideration. It was found that there was no significant improvement in the financial performance of ICICI Bank post these mergers.

Keywords: ICICI Bank, Mergers and Acquisitions, Ratio Analysis, CAMEL Model and Post-merger Financial Performance
JEL Classification: G21, G34

Introduction

Mergers and acquisitions have been taking place since time immemorial. History is full of stories about rulers acquiring other kingdoms. The reasons may have varied from greed to safeguarding the interest of its subjects, but time has seen mergers and acquisitions. Here, the discussion is about mergers and acquisitions in the corporate. Kim (2009), in the study titled 'Trends and practices in the global market,' identified six trends starting from the late nineteenth century and continuing until the early twenty-first century. The first wave or trend concentrated on horizontal integration, while the second one, which started in the early twentieth century, saw a lot of vertical integration. During the third wave, which started around 1965, the focus was on diversification strategies. The fourth wave saw a lot of hostile takeovers; thus, paving the way for growth in the private sector. The trend during the 1990s saw a high number of deals and huge magnitude, while the last one who started around 2003 was characterized by cross border acquisitions.

Kar and Soni (2008), in their study of mergers and acquisitions in India, found that the activity was divided into two phases. The first one, which was during 1991-92 to 1995-96, saw 68 mergers while the second phase, which lasted till 2000-01, had 1318 mergers and acquisitions. These mergers saw companies grow in size, achieving better market share and realizing synergistic benefits.

Most of the mergers and acquisitions try to achieve synergistic benefits or acquire a better market share or safeguard the interests of shareholders of a weak firm. Khan (2011) studied two mergers in the banking sector and found that post-merger the profitability of the banks increased and various ratios like ROCE, GP margin, etc. showed considerable improvement. Shobhana and Deepa (2011), in their study on the Indian banking sector, found that both the public and private sector banks showed improvement after the merger, although the improvement in the public sector was not found to be statistically significant.

Various studies have been done to understand the impact of mergers and acquisitions on the performance of the acquiring firm. Some studies reveal that there is value addition post-merger, while in others, the merger has resulted in value erosion. The present study is focused on understanding the post-merger change in the financial performance of ICICI Bank. Post privatization, ICICI bank had followed the path of inorganic growth and acquired smaller banks. The study focusses on the mergers of ICICI Bank with Bank of Madura (2001), ICICI Ltd. (2002), Sangli Bank (2008) and Bank of Rajasthan (2011).

Literature Review

Leepsa and C S Mishra (2013), in their study, found that the impact of the merger is the highest in the year of the merger and the year after, but in the long run, the companies tend to perform poorly.

K Ramakrishnan (2008), in his study, found that the post-merger performance of the firms in India improved in the long run and also generated higher operating cash flows. The performance improved in spite of the fact that the sales did not go up. The firms had become viable post-merger.

Mann and Kohli (2008) studied the market-driven and non-market driven mergers and found that the market-driven mergers were found to be profitable while the non-market driven mergers did not create any value.

Chadamiya et al. (2012) studied the impact of mergers and acquisitions on the financial performance of ICICI Bank and HDFC Bank. They found that the decision did not have much effect on ROTA, ROCE, etc. of the banks, post-merger, but had a significant impact on the net profit and shareholders' equity to total assets.

Saluja et al. (2012) studied the financial performance of HDFC Bank based on the parameters of the CAMEL model. They found that the performance had improved on all parameters of the CAMEL model.

Sinha et al. (2011), in their study, found that post-merger, the acquiring firms did result in value creation. On the other hand, in sixty percent of the cases, the debt-equity ratio showed a significant increase.

Natarajan et al. (2011) found that post-merger, public sector banks performed better than the private sector banks in terms of net earnings.

Goyal and Joshi (2011), in their work on motives behind the mergers of banks, found that it has served as a tool for the survival of weak banks by merging into larger banks. Another reason is the expansion of the branch network and reaching out to the rural segment.

Ravichandran et al. (2010) found that scaling up of operations and profitability were the major reasons for mergers.

Kaur and Kaur (2010) suggested strong banks should be merged with strong banks to create efficient and stronger banks as the merger between the strong and distressed banks did not yield any major efficiency gains.

Methodology

CAMEL Model has been used to assess the post-merger performance of banks by various researchers like Saluja et al. (2012), Hays et al. (2009), and Raiyani (2010). In the present study, also the CAMEL Model is used to assess the post-merger financial performance of merged banks. Various ratios, under the CAMEL parameter, have been used to examine the post-merger performance of ICICI Bank. Four mergers of ICICI Bank have been considered as the sample for analysis. The mergers considered are ICICI Bank with Bank of Madura (2001), ICICI Ltd. (2002), Sangli Bank (2008) and Bank of Rajasthan (2011). For the study, mergers of ICICI bank with Bank of Madura and ICICI Ltd. have been considered together. Had these mergers been considered separately, the impact of one merger would have reflected on others as well. Thus, they have been considered together.

The basic objective of the CAMEL model is to analyze the banks' performance based on parameters 'Capital Adequacy', 'Asset Quality,' 'Management Efficiency,' 'Earning Ability' and 'Liquidity.' Ratios under each parameter are considered for analyzing the post-merger performance of ICICI Bank.

The mean of each ratio is calculated using three years of pre-merger data. Similarly, mean of each ratio is calculated using three years post-merger data. The two means are compared to assess whether post-merger financial performance has improved. For testing the statistical significance of the same, a single tail student t-test with the level of significance at 5% ($\alpha = 0.05$) is applied.

If the ratio is significant statistically, then a score of '1' is assigned to the ratio, else score of '0' is assigned. Weighted scores (WS) are calculated for each ratio based on the weights assigned. These weights are assigned to each ratio under each parameter based on the importance of each of these ratios in assessing the financial performance and criticality of the ratio from the banks (Reddy 2012).

Such weighted scores are then summed up for each parameter. The resultant figure is the Cumulative weighted score (CWS). Based on the CWS of the parameter, it is decided whether or not the parameter has improved significantly. The minimum CWS required for a parameter for it to be called 'Improved Significantly' is 0.50 (Reddy 2012).

Equal weights (20%) are assigned to each parameter of the CAMEL model. Using these weights, the weighted score of each parameter is calculated and summed up to be known as the Cumulative weighted score of the model (CWSM). The minimum final score of CWSM required for a merger is also 0.50, for it to be called 'Leading to Improvement in Financial Performance' of ICICI Bank.

Objective

The objective of the study is to analyze the post-merger financial performance of ICICI bank.

Hypothesis

From the above objective following hypothesis is formulated:

H0: There is no significant improvement in the post-merger financial performance of ICICI Bank.

H1: There is a significant improvement in the post-merger financial performance of ICICI Bank.

Data Analysis and Interpretation

ICICI Bank with Bank of Madura and ICICI Ltd

ICICI Bank merged with Bank of Madura in the year 2000-01 and with ICICI Ltd. in the year 2001-02. For these two mergers taken together the pre-merger years considered are 1997-98, 1998-99 and 1999-00. The post-merger years considered are 2002-03, 2003-04 and 2004-05. The financial performance of the Bank is examined by analyzing data on the indicators under the CAMEL parameter.

Table 1: Capital Adequacy

Ratios	Period*	Mean	SD	T test	Sig	Remark#	Weight	Score	WS
Capital Adequacy Ratio (%)	Pre	15%	0.04	-1.410	0.884	NS	0.700	0.000	0.00
	Post	11%	0.01						
Debt -Equity Ratio (times)	Pre	13.54	6.40	-0.149	0.445	NS	0.100	0.000	0.00
	Post	12.98	1.13						
Proprietary Ratio (%)	Pre	7%	0.03	-0.510	0.682	NS	0.050	0.000	0.00
	Post	7%	0.00						
Interest Coverage Ratio (Times)	Pre	0.39	0.13	-0.785	0.762	NS	0.050	0.000	0.00
	Post	0.31	0.13						
Total Advances to Total Assets Ratio (%)	Pre	32%	0.02	9.126	0.000	S	0.050	1.000	0.05
	Post	51%	0.03						

Government Securities to Total Investment ratio (%)	Pre	62%	0.08	1.503	0.104	NS	0.050	0.000	0.00
	Post	69%	0.03						
								Cumulative WS	0.05

*Pre – Pre-merger; ** Post – Post-merger; # NS – Statistically Not Significant and S - Statistically Significant

Hypothesis testing

Capital Adequacy

Table 1 provides the results of the Capital Adequacy parameter. Capital Adequacy Ratio (CAR) is the most important ratio of this parameter and is assigned a weight of 70% (Reddy 2012). Another relatively important ratio is the Debt-Equity Ratio, which is assigned a weight of 10%. Rest all others are assigned a weight of 5% each. CAR has decreased after the merger and the same is also proven by t-test at a 5% level of significance. The p value= 0.884 concludes that the post-merger CAR has not improved.

On the other hand, there is a considerable decrease in CAR. Pre means and post mean values of Debt Equity Ratio indicate that there is a slight increase in the D/E ratio, which is not considered to be favorable and the result of the t-test proves that there is no significant improvement as far as Debt Equity Ratio is concerned. Proprietary Ratio, Interest Coverage Ratio and Government Securities to Total Investment ratio having p-value 0.682, 0.762 and 0.104 respectively prove that there is no significant improvement in these ratios after the merger. The mean values of pre and post Total Advances to Total Asset ratio shows improvement (32% to 51%), which is also statistically proven by p-value = 0.000. Visually the Government Securities to Total Investment Ratio has improved post-merger, but the same cannot be proved statistically.

Table 1 indicates that the Cumulative WS (0.05) is pretty less and thus, there is no significant improvement as far as the Capital Adequacy is concerned. Hence, we fail to reject the null hypothesis.

Table 2: Asset Quality

Ratios	Period	Mean	SD	T test	Sig	Remark	Weight	Score	WS
Net NPA to Net Advances (%)	Pre	1.85%	0.01	1.480	0.106	NS	0.700	0.000	0.00
	Post	3.69%	0.02						
Total Investments to Total Assets Ratio (%)	Pre	36.26%	0.05	-0.932	0.798	NS	0.300	0.000	0.00
	Post	33.34%	0.02						
								Cumulative WS	0.00

Asset Quality

Table 2 provides details about Asset Quality. Under Asset Quality, the ratios that have been considered are Net NPAs to Net Advances Ratio and Total Investments to Total Assets Ratio. Net NPAs to Net Advances ratio primarily depicts the asset quality and is assigned a weight of 70%. The other ratio is assigned a weight of 30% (Reddy, 2012). There is no significant improvement in either of the two ratios, which are proven by the p values of 0.106 and 0.798. The mean of Net NPAs to Net Advances ratio has increased from 1.85% to 3.69%, which is not a good sign, thereby showing worsening NPA situation. The Total Investments to Total Assets ratio has decreased from 36.26% to 33.34%, which is also not desirable. So, the WS of the individual ratio is nil and Cumulative WS is also nil. Post-merger, there has not been any improvement and the same is not statistically significant. Hence, we fail to reject the null hypothesis.

Table 3: Management Efficiency

Ratios	Period	Mean	SD	T test	Sig	Remark	Weight	Score	WS
Expenditure to Income Ratio (%)	Pre	76.05%	0.04	0.17	0.437	NS	0.150	0.000	0.00
	Post	76.86%	0.07						

Total Advances to Total Deposits Ratio (%)	Pre	38.24%	0.04	9.91	0.000	S	0.400	1.000	0.40
	Post	100.79%	0.10						
Assets Turnover Ratio (Times)	Pre	0.15	0.05	-1.12	0.838	NS	0.150	0.000	0.00
	Post	0.11	0.00						
Earning Per Employee (Rs.)	Pre	878.67	194.56	2.17	0.048	S	0.150	1.000	0.15
	Post	1133.33	57.74						
Business Per Employee (Rs.)	Pre	58786.67	21446.22	2.92	0.021	S	0.150	1.000	0.15
	Post	100333.33	12013.88						
								Cumulative WS	0.70

Management Efficiency

Table 3 provides details about the Management Efficiency Parameter. The most important ratio to showcase the management efficiency in converting deposits into advances is Total Advances to Total Deposits Ratio. This ratio has given a weight of 40% and rests; others are equally weighted (Reddy 2012). The Expenditure to Income Ratio has shown practically no movement and the same is not statistically significant. The asset turnover ratio has also not been found to be statistically significant, although the ratio has reduced from 0.15 to 0.11. The other ratios, namely Total Advances to Total Deposits Ratio, Earning per employee and Business per employee, have all shown improvement and be statistically significant, i.e., their p-value is less than 5%. The Cumulative WS, as per the above table, is 0.70, which is considered to be significant. Thus, it can be concluded that the bank has shown significant improvement as far as Management Efficiency is concerned.

Table 4: Earning Ability

Ratios	Period	Mean	SD	T test	Sig	Remark	Weight	Score	WS
Return on Assets (%)	Pre	1.22%	0.00	-0.460	0.665	NS	0.170	0.000	0.00
	Post	1.10%	0.00						
Return on Equity (%)	Pre	16.18%	0.06	0.174	0.435	NS	0.170	0.000	0.00
	Post	16.84%	0.02						
Spread Ratio (%)	Pre	2.06%	0.01	0.369	0.365	NS	0.170	0.000	0.00
	Post	2.40%	0.01						
Net Interest Margin (%)	Pre	2.22%	0.00	-0.191	0.571	NS	0.170	0.000	0.00
	Post	2.16%	0.00						
Operating Profit to Working Fund Ratio (%)	Pre	3.23%	0.01	-2.603	0.970	NS	0.170	0.000	0.00
	Post	1.70%	0.00						
Interest Income to Total Income Ratio (%)	Pre	80.88%	0.05	-1.847	0.931	NS	0.170	0.000	0.00
	Post	68.14%	0.11						
								Cumulative WS	0.00

Earning Ability

The table 4 provides the details of the Earning Ability parameter. Under this parameter, all the ratios are equally weighted. The ROA ratio has reduced and so have the other ratios like NIM, Operating Profit to Working Fund ratio and Interest Income to Total Income ratio. These ratios have shown no improvement and the difference has also not been found to be statistically significant. The ROE and Spread Ratio have shown some improvement post-merger, but the improvement is not statistically significant. The entire earning ability parameter has not shown any significant improvement.

Table 5: Liquidity

Ratios	Period	Mean	SD	T test	Sig	Remark	Weight	Score	WS
Liquid Assets to total Assets Ratio (%)	Pre	26.12%	0.02	-12.925	1.000	NS	0.250	0.000	0.00
	Post	6.83%	0.01						
Liquid Assets to Total Deposits Ratio (%)	Pre	31.60%	0.04	-7.723	0.999	NS	0.250	0.000	0.00
	Post	13.45%	0.00						
Government Securities to Total Assets Ratio (%)	Pre	22.23%	0.01	0.592	0.293	NS	0.250	0.000	0.00
	Post	23.18%	0.03						
Liquid Assets/ Demand Deposits (%)	Pre	246.53%	0.35	-3.636	0.989	NS	0.250	0.000	0.00
	Post	137.78%	0.38						
								Cumulative WS	0.00

Liquidity

Table 5 provides the details of Liquidity. Under this parameter also, all the ratios are equally weighted. None of the ratios, except Government Securities to Total Assets Ratio, have shown any improvement. Even in the case of Government Securities to Total Assets Ratio, the improvement is marginal and that is not statistically significant. The Cumulative WS is also nil and based on the p-value, none of the ratios are statistically significant.

Table 6: Cumulative WS for CAMEL Model (CWSM)

Parameter	Cumulative WS	Weight	Final Score
Capital Adequacy	0.05	20%	0.01
Asset Quality	0.00	20%	0.00
Management Efficiency	0.70	20%	0.14
Earning Ability	0.00	20%	0.00
Liquidity	0.00	20%	0.00
		Total	0.15

Table 6 shows the Cumulative WS for CAMEL Model (CWSM) for the merger. Each parameter of CAMEL is assigned a weightage of 20%. To conclude that a merger or acquisition has led to an improvement in the financial performance of the acquiring bank, the CWSM should be more than 0.50 (Reddy 2012). In the present case, CWSM is 0.15, which is much lower than 0.50. Overall we fail to reject the Null Hypothesis and thus, there is no significant improvement in the financial performance of ICICI Bank after merging with Bank of Madura and ICICI Ltd.

Merger of ICICI Bank and Sangli Bank

The merger with Sangli bank was one of the significant developments in the history of the banking sector in India. CAMEL model has been applied here also to check the degree of success enjoyed by the bank post-merger.

Table 7: Capital Adequacy

Ratios	Period	Mean	SD	T test	Sig	Remark	Weight	Score	WS
Capital Adequacy Ratio (%)	Pre	12.27%	0.009	4.044	0.008	S	0.7	1	0.70
	Post	18.28%	0.024						
Debt -Equity Ratio (times)	Pre	11.811	1.769	-5.61	0.002	S	0.1	1	0.10
	Post	6.02	0.255						
Proprietary Ratio (%)	Pre	7.13%	0.01	10.02	0.000	S	0.05	1	0.05
	Post	13.64%	0.005						
Interest Coverage Ratio (Times)	Pre	0.41	0.07	1.275	0.136	NS	0.05	0	0.00
	Post	0.493	0.088						
Total Advances to Total Assets Ratio (%)	Pre	54.67%	0.015	-0.47	0.667	NS	0.05	0	0.00
	Post	53.56%	0.039						

Government Securities to Total Investment ratio (%)	Pre	63.16%	0.033	-2.12	0.949	NS	0.05	0	0.00
	Post	46.84%	0.129						
								Cumulative WS	0.85

Hypothesis Testing

Capital Adequacy

Table 7 provides the details of Capital Adequacy. The mean of CAR has increased from 12.27% to 18.28% and when tested for statistical significance, the ratio is found to be statistically significant. The D/E ratio has decreased from 11.81% to 6.02% and it (improvement) is also found to be statistically significant. The proprietary ratio has increased from 7.13% to 13.64% and it is also found to be significant statistically. Interest Coverage Ratio and Total Advances to Total Assets Ratio does not show much difference. The little difference that they have is not found to be statistically significant. The Government Securities to Total Investment ratio has decreased from 63.16% to 46.84%, but this difference is also not found to be statistically significant.

The Cumulative WS, calculated based on the weights assigned to the ratios, is 0.85. Since, the value is greater than 0.50 the bank has shown improvement in the parameter – Capital Adequacy

Table 8: Asset Quality

Ratios	Period	Mean	SD	T test	Sig	Remark	Weight	Score	WS
Net NPA to Net Advances (%)	Pre	1.23%	0.007	1.062	0.826	NS	0.7	0	0.00
	Post	1.80%	0.006						
Total Investments to Total Assets Ratio (%)	Pre	30.51%	0.002	1.587	0.094	NS	0.3	0	0.00
	Post	43.35%	0.14						
								Cumulative WS	0.00

Asset Quality

Table 8 provides details of Asset Quality. The Net NPA to Net Advances ratio has gone up from 1.23% to 1.80% (which is not desired) while the other ratio has gone up from 30.51% to 43.35%. Both ratios are not significant statistically. The Cumulative WS score is nil and overall, the bank has not shown any significant improvement in this parameter.

Table 9: Management Efficiency

Ratios	Period	Mean	SD	T test	Sig	Remark	Weight	Score	WS
Expenditure to Income Ratio (%)	Pre	69.67%	0.009	-0.32	0.384	NS	0.15	0	0.00
	Post	68.94%	0.039						
Total Advances to Total Deposits Ratio (%)	Pre	90.33%	0.052	1.15	0.157	NS	0.4	0	0.00
	Post	95.20%	0.052						
Assets Turnover Ratio (Times)	Pre	0.115	0.007	-6.26	0.998	NS	0.15	0	0.00
	Post	0.088	0.003						
Earning Per Employee (Rs.)	Pre	1000	100	0	0.5	NS	0.15	0	0.00
	Post	1000	100						
Business Per Employee (Rs.)	Pre	93733.3	7865.32	-0.37	0.635	NS	0.15	0	0.00
	Post	88466.7	23373.13						
								Cumulative WS	0.00

Management Efficiency

Table 9 provides details about Management Efficiency. Under this parameter, none of the ratios has shown significant improvement. Even though Expenditure to Income Ratio and Total Advances to Total Deposits ratios have shown improvement, but the same is not found to be statistically significant. The other ratios have either shown deterioration or have remained the same, but the difference in none of them is found to be statistically significant. The

Cumulative WS is nil and this parameter does not show any significant improvement post-merger.

Table 10: Earning Ability

Ratios	Period	Mean	SD	T test	Sig	Remark	Weight	Score	WS
Return on Assets (%)	Pre	0.87%	0.002	1.992	0.059	NS	0.17	0	0.00
	Post	1.12%	0.001						
Return on Equity (%)	Pre	12.25%	0.021	-2.97	0.98	NS	0.17	0	0.00
	Post	8.23%	0.01						
Spread Ratio (%)	Pre	3.85%	0.002	-4.63	0.995	NS	0.17	0	0.00
	Post	1.85%	0.007						
Net Interest Margin (%)	Pre	2.70%	0.001	-2	0.942	NS	0.17	0	0.00
	Post	2.52%	0.001						
Operating Profit to Working Fund Ratio (%)	Pre	1.91%	0.002	2.306	0.041	S	0.17	1	0.17
	Post	2.35%	0.003						
Interest Income to Total Income Ratio (%)	Pre	58.42%	0.019	14.93	0.000	S	0.17	1	0.17
	Post	79.15%	0.015						
								Cumulative WS	0.34

Earning Ability

Table 10 talks about Earning Ability. ROA has improved marginally while ROE has reduced from 12.25% to 8.23%. The spread ratio has gone down to 1.85%, while NIM has come down to 2.52% from 2.70%. All these ratios are not found to be statistically significant. The Operating profit to Working Fund Ratio and Interest Income to Total Income ratio both have gone up post-merger and the mean difference (post mean – pre mean) of both ratios is found to be statistically significant. Equal weightage of 17% is assigned to each ratio. The Cumulative WS calculated is 0.34 and since it is less than 0.50, the overall parameter does not show significant improvement.

Table 11: Liquidity

Ratios	Period	Mean	SD	T test	Sig	Remark	Weight	Score	WS
Liquid Assets to total Assets Ratio (%)	Pre	8.10%	0.018	1.158	0.156	NS	0.25	0	0.00
	Post	10.19%	0.026						
Liquid Assets to Total Deposits Ratio (%)	Pre	13.34%	0.027	1.509	0.103	NS	0.25	0	0.00
	Post	18.17%	0.048						
Government Securities to Total Assets Ratio (%)	Pre	19.27%	0.01	-0.11	0.541	NS	0.25	0	0.00
	Post	19.11%	0.023						
Liquid Assets/ Demand Deposits (%)	Pre	134.90%	0.434	-0.01	0.504	NS	0.25	0	0.00
	Post	134.62%	0.197						
								Cumulative WS	0.00

Liquidity

Table 11 gives details of Liquidity. The Liquid Assets to Total Assets ratio and Liquid Assets to Total Deposits Ratio both have increased, but the improvement is statistically not significant. The Government Securities to Total Assets Ratio has reduced marginally and so has Liquid Assets to Demand Deposits ratio. None of the ratios are statistically significant. The Cumulative WS is nil and overall, the Liquidity parameter has not shown improvement statistically.

Table 12: Cumulative WS for CAMEL (CWSM)

Parameter	Cumulative WS	Weight	Final Score
Capital Adequacy	0.85	20%	0.17

Asset Quality	0.00	20%	0.00
Management Efficiency	0.00	20%	0.00
Earning Ability	0.34	20%	0.07
Liquidity	0.00	20%	0.00
		Total	0.24

Table 6 shows the CWSM for the merger with Bank of Sangli. The score is 0.24, which is much less than 0.50. Thus, there is no significant improvement, after this merger, in the financial performance of ICICI Bank based on all the parameters of CAMEL. Thus, the null hypothesis cannot be rejected.

Merger of ICICI Bank and Bank of Rajasthan

The merger with Bank of Rajasthan was an important event that has helped the banking sector in evaluating the future of mergers in this sector.

Table 13: Capital Adequacy

Ratios	Period	Mean	SD	T test	Sig	Remark	Weight	Score	WS
Capital Adequacy Ratio (%)	Pre	16.30%	0.03	1.524	0.101	NS	0.700	0.000	0.000
	Post	18.77%	0.00						
Debt -Equity Ratio (times)	Pre	6.35	0.67	1.154	0.156	NS	0.100	0.000	0.000
	Post	6.82	0.22						
Proprietary Ratio (%)	Pre	13.02%	0.01	-0.307	0.613	NS	0.050	0.000	0.000
	Post	12.79%	0.00						
Interest Coverage Ratio (Times)	Pre	0.43	0.11	1.093	0.168	NS	0.050	0.000	0.000
	Post	0.51	0.05						
Total Advances to Total Assets Ratio (%)	Pre	54.62%	0.04	0.095	0.464	NS	0.050	0.000	0.000
	Post	54.87%	0.02						
Government Securities to Total Investment ratio (%)	Pre	56.91%	0.14	-0.314	0.615	NS	0.050	0.000	0.000
	Post	54.41%	0.00						
								Cumulative WS	0.000

Capital Adequacy

Table 13 provides details about Capital Adequacy. The mean of CAR has shown marginal improvement from 16.30% to 18.77%. The mean of Interest coverage ratio has gone up from 0.43 to 0.51. The Debt- Equity ratio has also gone up (which is not desirable). None of the ratios under Capital Adequacy are statistically significant. The Cumulative WS of Capital Adequacy is 0.00. This parameter has not shown any significant improvement.

Table 14: Asset Quality

Ratios	Period	Mean	SD	T test	Sig	Remark	Weight	Score	WS
Net NPA to Net Advances (%)	Pre	1.95%	0.35	-5.628	0.002	S	0.700	1.000	0.70
	Post	0.83%	0.32						
Total Investments to Total Assets Ratio (%)	Pre	0.32%	0.14	-0.456	0.664	NS	0.300	0.000	0.00
	Post	0.13%	0.02						
								Cumulative WS	0.70

Asset Quality

Table 14 provides details of Asset Quality. The Net NPA to Net Advances ratio has gone down from 1.95% to 0.83% (which is desirable) while the other ratio has gone down from 0.32% to 0.13%. The Net NPAs to Net Advances ratio is statistically significant. Since a weightage of 70% has been assigned to this ratio, the Cumulative WS score is 0.70. Thus, the bank has shown significant improvement in this parameter.

Table 15: Management Efficiency

Ratios	Period	Mean	SD	T test	Sig	Remark	Weight	Score	WS
Expenditure to Income Ratio (%)	Pre	72.60%	0.04	-2.486	0.034	S	0.150	1.00	0.15
	Post	64.48%	0.04						
Total Advances to Total Deposits Ratio (%)	Pre	0.94	0.05	1.918	0.064	NS	0.400	0.00	0.00
	Post	1.00	0.02						
Assets Turnover Ratio (Times)	Pre	9.84%	0.01	0.716	0.257	NS	0.150	0.00	0.00
	Post	10.99%	0.03						
Earning Per Employee (Rs.)	Pre	1100.00	100.00	1.732	0.079	NS	0.150	0.00	0.00
	Post	1300.00	173.21						
Business Per Employee (Rs.)	Pre	106366.67	7893.25	-7.098	0.999	NS	0.150	0.00	0.00
	Post	73000.00	1997.50						
								Cumulative WS	0.15

Management Efficiency

Table 15 provides details about Management Efficiency. Under this parameter, Expenditure to Income, Ratio has decreased from 72.60% to 64.48% and it is statistically significant also. While the Total Advances to Total Deposits ratios have shown improvement, but the same is not found to be statistically significant. The Assets Turnover Ratio has improved marginally from 9.84% to 10.99% but is not statistically significant. The earnings per Employee ratio has improved, but the same is not statistically significant. Business per Employee has decreased considerably. The Cumulative WS of Management Efficiency is 0.15. This parameter has not shown any significant improvement.

Table 16: Earning Ability

Ratios	Period	Mean	SD	T test	Sig	Remark	Weight	Score	WS
Return on Assets (%)	Pre	0.68%	0.01	2.422	0.036	S	0.170	1.000	0.17
	Post	1.52%	0.00						
Return on Equity (%)	Pre	5.47%	0.05	2.273	0.043	S	0.170	1.000	0.17
	Post	11.90%	0.01						
Spread Ratio (%)	Pre	1.60%	0.00	4.415	0.006	S	0.170	1.000	0.17
	Post	3.54%	0.01						
Net Interest Margin (%)	Pre	2.38%	0.00	2.333	0.040	S	0.170	1.000	0.17
	Post	3.28%	0.01						
Operating Profit to Working Fund Ratio (%)	Pre	2.35%	0.00	1.307	0.131	NS	0.170	0.000	0.00
	Post	2.64%	0.0						
Interest Income to Total Income Ratio (%)	Pre	78.52%	0.02	-0.439	0.658	NS	0.170	0.000	0.00
	Post	75.56%	0.12						
								Cumulative WS	0.68

Earning Ability

Table 16 talks about Earning Ability. ROA has improved from 0.68% to 1.52% and the same is statistically significant. While ROE has increased from 5.47% to 11.90% and it is statistically significant. The spread ratio and NIM are statistically significant and they have improved post-merger. The Operating profit to Working Fund Ratio has improved but is not statistically significant. The Interest Income to Total Income ratio has gone down but is not statistically significant

The Cumulative WS of this parameter is 0.68 and since it was more than 0.50 the overall parameter has shown significant improvement.

Table 17: Liquidity

Ratios	Period	Mean	SD	T test	Sig	Remark	Weight	Score	WS
Liquid Assets to total Assets Ratio (%)	Pre	10.13%	0.03	-1.770	0.924	NS	0.250	0.000	0.00
	Post	7.45%	0.00						
Liquid Assets to Total Deposits Ratio (%)	Pre	17.54%	0.05	-1.310	0.870	NS	0.250	0.000	0.00
	Post	13.62%	0.01						
Government Securities to Total Assets Ratio (%)	Pre	18.94%	0.02	-1.128	0.839	NS	0.250	0.000	0.00
	Post	17.30%	0.01						
Liquid Assets/ Demand Deposits (%)	Pre	148.23%	0.08	-7.102	0.999	NS	0.250	0.000	0.00
	Post	101.23%	0.08						
								Cumulative WS	0.00

Liquidity

Table 17 gives details of Liquidity. The Liquid Assets to Total Assets ratio and Liquid Assets to Total Deposits Ratio both have decreased, but the same is statistically not significant. The Govt. Securities to Total Assets Ratio has reduced marginally while the Liquid Assets to Demand Deposits ratio has decreased considerably. None of the ratios are statistically significant. The Cumulative WS is nil and overall, the Liquidity parameter has not shown improvement statistically.

Table 18: Cumulative WS for CAMEL Model (CWSM)

Parameter	Cumulative WS	Weight	Final Score
Capital Adequacy	0.00	20%	0.00
Asset Quality	0.70	20%	0.14
Management Efficiency	0.15	20%	0.03
Earning Ability	0.68	20%	0.14
Liquidity	0.00	20%	0.00
		Total	0.31

Table 18 Shows the CWSM of the merger with Bank of Rajasthan. The Overall CWSM is 0.31, which is much less than 0.50. Thus, in this case, also, there is no significant improvement in the post-merger financial performance of ICICI Bank. The null hypothesis cannot be rejected.

Table 19: Summarised Score based on CAMEL for the mergers

Parameter / Final Score	Bank of Madura and ICICI Ltd.	Bank of Sangli	Bank of Rajasthan
Capital Adequacy	0.01	0.17	0.00
Asset Quality	0.00	0.00	0.14
Management Efficiency	0.14	0.00	0.03
Earning Ability	0.00	0.07	0.14
Liquidity	0.00	0.00	0.00
Total	0.15	0.24	0.31

Table 19 shows a summary of the results of the CAMEL model. The total score is less than 0.50 in the case of all the mergers. Thus, it cannot be said that any of the mergers lead to significant improvement in the financial performance of ICICI.

Conclusion

Based on the study of the mergers of ICICI Bank with four different institutions, the following conclusions can be drawn:

- Under the parameter Capital Adequacy, a merger with Bank of Sangli has shown significant improvement. In the other mergers, there is no statistically significant improvement.
- Under the parameter Asset Quality, a merger with Bank of Rajasthan has shown significant improvement.
- Under the Management Efficiency parameter, mergers with Bank of Madura and ICICI Ltd. have shown significant improvement.
- Under the Earning Ability parameter, a merger

with Bank of Rajasthan has shown significant improvement.

- Under the last parameter, i.e., Liquidity, none of the mergers have shown any significant improvement.

Based on the above, one can see that the Merger with Bank of Rajasthan resulted in significant improvement in two of the five parameters. However, overall, none of the mergers seem to have led to significant improvement in the financial performance of ICICI.

The study had undertaken three years pre and three years post-merger data, but it seems that to understand whether the synergistic benefits accrued or not, more than three years post-merger data should be considered because the performance of ICICI Bank has been improving over the years and the mergers have certainly added much more value than is visible in this study.

References

Chadamiya, B.P. and Mital R. Menapara. "Financial Performance of Indian Banking Sectors during Pre and Post Mergers and Acquisitions." *Journal of Applied Management and Investments*, vol. 1, no. 2, 2012.

Eichengreen, B. and Gupta, P. "The Financial crisis and Indian banks: Survival of the fittest?." *Journal of International Money and Finance,* vol. 39, 2013, pp. 138-152.

Goyal, K. A. and Vijay Joshi. "Mergers in Banking Industry of India: Some Emerging Issues." *Asian Journal of Business and Management Sciences*, vol. 1, no. 2, 2011, pp. 157-165.

Hays, F.H. et al. "Efficiency Ratios and Community Bank Performance." *Journal of Finance and Accountancy,* vol. 1, no. 1, 2009.

Kar, R.N. and Amit Soni. "Mergers and Acquisitions in India: A Strategic Impact Analysis for the Corporate Enterprises in the Post Liberalisation Period." http://www.igidr.ac.in/conf/oldmoney/MERGERS%20AND%20ACQUISITIONS%20IN%20INDIA.pdf.

Kaur, Pardeep and Gian Kaur. "Impact of Mergers on the Cost Efficiency of Indian Commercial Banks." *Eurasian Journal of Business and Economics,* vol. 3, no. 5, 2010, pp. 27-50.

Khan, A.A. "Merger and Acquisitions (M&As) in the Indian Banking Sector in Post Liberalization Regime." *International Journal of Contemporary Business Studies*, vol. 2, no. 11, 2011, pp. 31-45.

Kim, Moom-Kyum. "Trends and Practices in the Global Market." *Mergers and Acquisitions: Issues and Perspectives from the Asia-Pacific Region,* edited by Ganesh Chand, Asian Productivity Organization, 2009, pp. 10-25.

Leepsa, N.M. and C.S. Mishra. "Do Mergers & Acquisitions Pay off Immediately? Evidence from Mergers & Acquisitions in India." *South Asian Journal of Management,* vol. 20, no. 3, 2013, pp. 39-57.

Natarajan, P. and K. Kalaichelvan. "Implication of Mergers and Acquisitions on Finanaical Position of Selected Banks." *Journal of Banking Financial Services and Insurance Research,* vol. 1, no. 5, 2011, pp. 73-82.

Raiyani, J.R. "Effect of Mergers on Efficiency and Productivity of Indian banks: A CAMELS Analysis." *Asian Journal of Management Research,* vol. 1, no. 2, 2011, pp. 772-794.

Ramakrishnan, K. "Long-term Post-merger Performance of Firms in India." *Vikalpa: The Journal for Decision Makers*, vol. 33, no. 2, 2008, pp. 47-64.

Ravichandran, K., Fauzias Mat-Nor and Rasidah Mohd-Said. "Market Based Mergers in Indian Banking Institutions." *International Research Journal of Finance and Economics*, vol. 37, 2010, pp. 30-39.

Saluja, R., Sharma, S. and Lal, D. "Impact of Merger on Financial Performance of Bank - A Case Study of HDFC Bank." *International Journal of Research in Finance & Marketing,* vol. 2, no. 2, 2012, pp. 313-326.

Shobhana, V.K. and N. Deepa. "Mergers & Acquisitions in the Indian Banking Sector and Pre and Post Merger Technical Efficiencies - An Empirical Investigation." *Journal of Banking Financial Services and Insurance Research*, vol. 1, no. 8, 2011, pp. 1-9.

Shriharsha Reddy, K. "Relative Performance of Commercial Banks in India using CAMEL Approach." *International Journal of*

Multidisciplinary Research, vol. 2, no. 3, 2012, pp. 38-58.

Singh, M.B. and Reena Kohli. "An Empirical Analysis of Bank Mergers in India: A Study of Market Driven versus Non-Market Driven Mergers." *Decision,* vol. 35, no. 1, 2008, pp. 47-73.

Sinha, N., Kaushik, K.P. and Timey Chaudhary. "Measuring Post Merger and Acquisition Performance: An Investigation of Select Financial Sector Organizations in India." *International Journal of Economics and Finance,* vol. 2, no. 4, 2010, pp. 190-200.

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