

Performance analysis of Indian banks using camel approach

Dr. Nidhi Tanwar

Assistant Professor DAV College Chandigarh, Punjab, India

Abstract

The present paper examines the impact of mergers and acquisitions on the financial and operating performance of banks that have been merged during post liberalization period by using a camel model. The present study is based on secondary data covering the time period from 2001-02 to 2013-2014. The findings of this paper reveal that to some extent mergers and acquisitions has been successful in Indian banking sector. Further, the Government should not promote merger between strong and distressed banks as a way to promote the interest of the depositors of distressed banks, as it will have adverse effect upon the asset quality of the stronger banks.

Keywords: Indian Banking Sector, Mergers, Acquisitions, Camel, Financial performance

1. Introduction

A merger involves a marriage of two or more banks. It is generally accepted that mergers promote synergies. The basic idea is that the combined bank will create more value than individual banks operating independently. Economists refer to the phenomenon of the “2+2 =5” effect brought about by synergy. The resulting combined entity gains from operating and financial synergies. Operational synergies generally refer to gains in economies of scale and economies of scope. Economies of scale refer to the lower operating costs(per-unit) arising from spreading the fixed costs over a wider scale of production and economies of scope refer to the utilization of skill assets employed in the production in order to produce separate and limited results will be used to produce results on a wider scale. Additionally, financial synergies refer to the effect of a merger on the financial activities of the resulting company. The argument is that combining two banks give rise to savings in costs, maximization in the use of resources and increase in revenues. Similarly mergers and takeovers also play a crucial role in efficient allocation of resources. When a bank is not performing as expected, others will notice that the assets of the bank are not being put to their most efficient use. This bank will then become a potential target for a takeover for a bank which believes that under its management the assets can be fully-utilized to produce better results. To that extent mergers and takeovers play a crucial economic role of moving resources from zones of under-utilization to zones of better utilization. Poorly run companies are more prone to being taken over by the powerful and managers have an incentive to ensure that their company is governed properly and resources are used to produce maximum value. Takeovers in the banking sector will ensure that the boards and management of institutions will improve corporate governance to avoid being targets in future. There are three categories of banks that want to play them M & A game in a big way. First there are banks (like Indian bank) that have survived on the governments recapitalization bonds over the past decade. They are now keen to take over banks to become strong and acquire widespread reach. In the second category, there are two types of banks. In one group there are reasonably strong public sector banks (like

union bank) that want to acquire a bank with an overseas presence to become global ethics. The other types are banks that have been looking at increasing their domestic presence. The RBI forced the merger of weak private banks with public sector banks. Mergers and Acquisitions would gather, as management will strive to meet the expectations of the stakeholders.

1.1 Literature Review

Gourlay, Ravishankar, & Tom, 2005 ^[1] studied the efficiency gains from mergers among Indian banks during 1991 to 2005 and concluded that the merger led to improvement of efficiency for the merging banks.

Romero, Alberto, Herrera, & Luis, 2007 ^[2] studied the mergers and acquisitions undertaken by Group Sarmiento Angulo within the Colombian banking sector using the strategic analysis model. It was concluded that the relational strategic component played an important role in designing and deploying the strategy of the group being studied.

Anand & Singh, 2008 ^[3] studied the five cases of mergers i.e. Times Bank with the HDFC Bank, Bank of Madura with ICICI Bank, ICICI Ltd. with the ICICI Bank, Global Trust Bank with the Oriental Bank of Commerce and Bank of Punjab with the Centurion Bank in the Indian banking sector to capture the returns to shareholders as a result of the merger announcements using the event study methodology with the aim to understand the wealth effects of bank mergers. It was concluded that the merger announcements in the Indian banking industry had positive and significant shareholder wealth effect both for the acquirer and the target banks.

Manansakis, 2009 ^[4] studied the stock market valuation of mergers and acquisitions in the Greek banking sector from 1995 to 2002 using the standard event study methodology. It was found that the targets shareholders earned significant abnormal returns upon the announcement of both horizontal and diversifying deals. On the other hand, the bidder's shareholders had significant losses in case of horizontal and zero effects in diversifying deals. Although mergers and acquisitions were not found value enhancing but they could be rationalized under the prism of its recent deregulation. Further,

it was concluded that for the targets, mergers and acquisitions be perceived as vehicles to ensure their survival in the European market.

Kaur & Kaur, 2010 ^[5] examined the impact of mergers on the cost efficiency of banks that merged during post liberalization period during 1990-91 to 2007-08. To test the efficiency differences between public and private both parametric and non-parametric tests were employed. It was found that over the entire study period average cost efficiency of public sector banks was found to be 73.4 and for private sector banks was 76.3 percent. It was noticed that to some extent merger programme had been successful in Indian banking sector. It was suggested that Government should not promote merger between strong and distressed banks as a way to promote the interest of the depositors of distressed banks, as it would have adverse effect upon the asset quality of the stronger banks.

Arora & Abraham, 2011 ^[6] studied the financial implications before and after mergers and the change in share prices after the strategic announcement. The Event study techniques such as CAR and t-test have been used to study the effect of mergers and acquisition and Ratio Analysis to understand the financial implications before and after the event. It was concluded that mergers and acquisitions produce synergies over a long run however it alone cannot ensure that the organisation remains profitable.

Khan, 2012 ^[7] carried out a comparative study of the pre and post-merger financial performance of acquiring banks by taking a sample of two cases of mergers occurred in the year 2004 in the Indian banking sector. In order to analyse the data, Ratios and t-test have been used. It was found that the post M & A's have not created difference in the financial performance of the acquiring banks

Kumar, 2013 ^[8] studied the impact of consolidation on different profitability and efficiency parameters i.e. Profit Per employee, Business per Employee, Investment and Advances, Interest Income, Return on Assets and NPAs etc of the banks by examining the pre and post-merger performance of Bharat Overseas Bank and Indian Overseas Bank. It was concluded that after merger there was improvement in all the parameters of the banks and merger was successful.

Santhiyavalli & Abirami, 2014 ^[9] studied the impact of merger on the performance of selected Banks (ICICI Bank Ltd and HDFC Bank Ltd) based on the secondary data collected for a period of six years covering three years before and three years after the last merger. A set of profitability ratios and productivity ratios were analysed and paired t-test was applied for testing the statistical significance of the banks. The concept of Economic Value Added (EVA) was also applied to understand the impact of merger on shareholders wealth. It was found that the banks had been positively impacted by the event of mergers and acquisitions. Further, results suggested that banks had improved efficiency and increased the shareholders value through strategic mergers

Bassi & Gupta, 2015 ^[10] evaluated the impact of Mergers and Acquisition on the performance of the five banks based on secondary data by using various statistical tools i.e. ratio analysis, mean, and standard deviation. The study concluded that investors were getting abnormal returns due to announcement of merger and acquisition. Moreover, the event had positively impacted overall financial valuation of the company

2. Methodology

It covers the objectives of the study, hypothesis, Data collection, sample design, period of study, statistical tools. For the present study the following research methodology has been used:

2.1 Objectives of the Study

1. To examine the impact of merger on the overall performance of merged banks.
2. To analyse the financial and operating performance of merged banks during pre-merger and post-merger period.

2.2 Hypothesis

Ho: (There is no significant difference between the overall performance of merged banks during pre and post merger period)

H1: (There is significant difference between the overall performance of merged banks during pre and post merger period)

1. **Sources of Data:** The study is descriptive and analytical in nature based on secondary data which has been collected from various sources such as annual reports of the respective banks, CMIE Prowess database, Ace Analyzer, Capitaline database, RBI Annual Reports, RBI Reports on Trend and Progress on Banking in India, journals, magazines and relevant websites related to the study.
2. **Statistical Tools:** The Camel model parameters and ranking have been used to study the overall performance of merged banks in Indian banking sector. Camel model has been explained below:

2.3 Camel Model

CAMEL model is basically ratio based model for evaluating the performance of banks. It is an instrument to rate/rank the banks. It is a management tool that measures Capital Adequacy, Assets Quality, Managerial Efficiency, Earnings Quality and Liquidity of financial institutions. The Uniform Financial Institution Rating System commonly referred to the acronym CAMEL rating was implanted in U.S. Banking institutions and later globally, following recommendations by the U.S. Federal Reserve. The system was adopted in India in 1995 at the suggestion of Mr. Padmanabhan the then governor of Reserve Bank of India. It has proven to be an effective internal supervisory tool for evaluating the soundness of a financial firm, on the basis of identifying those institutions requiring special attention.

- **Capital Adequacy:** It is important for a bank to maintain depositor's confidence and preventing the bank from going bankrupt. It reflects the overall financial condition of banks and also the ability of management to meet the need of additional capital. The following ratios measure capital adequacy

- **Capital Adequacy Ratio**

$$\text{CAR (\%)} = (\text{Tier 1 Capital} + \text{Tier 2 Capital}) / \text{Risk weighted Assets}$$

Where:

Tier 1 Capital - (paid up capital + statutory reserves + disclosed free reserves) - (equity investments in subsidiary + intangible assets + current and b/f losses)

Tier 2 Capital – a. Undisclosed Reserves + b. General Loss reserves + c. hybrid debt capital instruments and subordinated

debts where risk can either be weighted assets (a) or the respective national regulator's minimum total capital requirement.

- **Debt-Equity Ratio**

Debt-Equity Ratio (Times) = Debt / Equity

- **Advance To Assets Ratio**

Advance to Assets Ratio (%) = Advance / Assets * 100

Where:

Advance = Bills purchased & discounted (Short term) + Cash credits, overdrafts & loans (Short term) + Term loans

Assets = Cash in hand + Balances with RBI + Balances with banks inside/outside India + Money at call + Investments + Advances + Fixed Assets + Other Assets

- **Assets Quality:** The quality of assets is an important parameter to gauge the strength of bank. The prime motto behind measuring the assets quality is to ascertain the component of non-performing assets as a percentage of the total assets. This indicates what types of advances the bank has made to generate interest income. The ratios necessary to assess the assets quality are:

- **Net NPAs to Total Assets**

Net Npas to Total Assets (%) = Net Npas / Total Assets * 100

Where:

Net NPAs = Gross NPAs - Net of provisions on NPAs - interest in suspense account.

Total Assets = Cash in hand + Balances with RBI + Balances with banks inside/outside India + Money at call + Investments + Advances + Fixed Assets + Other Assets

- **Net NPAS To Net Advances**

Net Npas to Net Advances (%) = Net Npas / Net Advances * 100

Where:

Net NPAs = Gross NPAs - Net of provisions on NPAs - interest in suspense account.

Net Advances = Gross Advances – Provisions

- **Total Investments To Total Assets**

Total Investments to Total Assets (%) = Total Investments / Total Assets * 100

Where:

Total Assets = Cash in hand + Balances with RBI + Balances with banks inside/outside India + Money at call + Investments + Advances + Fixed Assets + Other Assets

- **Management Efficiency:** Management efficiency is another important element of the CAMEL Model. The ratio in this segment involves subjective analysis to measure the efficiency and effectiveness of management. The management of bank takes crucial decisions depending on its risk perception. The ratios used to evaluate management efficiency are described as:

- **Total Advances To Total Deposits**

Total Advances to Total Deposits (%) = Total Advances / Total Deposits * 100

Where:

Total Advances = Bills purchased & discounted (Short term) + Cash credits, overdrafts & loans (Short term) + Term loans.

Total Deposits = Demand Deposits + Savings Bank Deposit + Term Deposits + Deposits of other Banks.

- **Profit Per Employee**

Profit per Employee (Lakhs) = Profit after Tax / Total Employees

- **Business Per Employee**

Business per Employee (Lakhs) = Total Business / Total Employees

Where:

Total Business = Total advances + Total deposits

- **Earnings Quality:** The quality of earnings is a very important criterion that determines the ability of a bank to earn consistently. It basically determines the profitability of bank and explains its sustainability and growth in earnings in future. Banks depend on their strong capability of earnings for performing the activities like funding dividends, maintaining adequate capital levels, providing for opportunities of investment for bank to grow, strategies for engaging in new activities and maintaining the competitive outlook. The following ratios explain the quality of income generation.

- **Return on Total Assets**

Return on Total Assets (%) = Net Income or Profit / Average Total Assets * 100

Where:

Net Income = Total Revenue - Total Expenses

Average Total Assets = [Total Assets CY+ Total Assets PY] / 2

- **Return On Net Worth**

Return on Net Worth (%) = Pat / Net Worth * 100

Where:

PAT = Profit after Tax

Net Worth = Equity Share Capital + Reserve and Surplus – Fictitious Assets

- **Interest income to total income**

Interest Income to Total Income (%) = Interest Income / Total Income * 100

Where:

Interest Income = Income on Advances, Interest on Deposits with Rbi.

Total Income = Interest Income + Non Interest Income

- **Liquidity**

Risk of liquidity is curse to the image of bank. Bank has to take a proper care to hedge the liquidity risk; at the same time ensuring good percentage of funds are invested in high return generating securities, so that it is in a position to generate profit with provision liquidity to the depositors. The following ratios are used to measure the liquidity:

- **Liquid Assets To Total Deposits**

Liquid Assets to Total Deposits (%) = Liquid Assets / Total Deposits * 100

Where:

Liquid Asset = Cash In Hand, Balance with Institutions (RBI & Banks (India and Abroad) and Money at Call and Short Notice

Total Deposits = Demand Deposits + Savings Bank Deposit + Term Deposits + Deposits of other Banks.

• **Liquid Assets To Total Assets**

Liquid Assets to Total Assets (%) = Liquid Assets / Total Assets * 100

Where:

Liquid Asset = Cash In Hand, Balance with Institutions (RBI & Banks (India and Abroad) and Money at Call and Short Notice

Total Assets = Cash in hand + Balances with RBI + Balances with banks inside/outside India + Money at call + Investments + Advances + Fixed Assets + Other Assets

• **Quick Ratio**

Quick Ratio (Times) = Cash in hand + Cash at Bank+ Marketable Securities + Receivables / Current Liabilities * 100

- 1. Period of the Study:** The financial performance of Mergers and Acquisitions in Indian Banking has been analysed for a period of five years i.e. from 2006-2010. To analyse the impact of mergers and acquisitions on the performance of select merged banks a period of five years before the merger and after the merger period has been taken upto 2014 for analysis.
- 2. Sample Design:** For understanding the impact of mergers and acquisitions on the financial and operating performance of the merged banks two banks have been taken for the study. The sample banks representing different categories of mergers in Indian banking sector and are presented in the following table-1:

Table 1: Selected Merged Banks

Merger Year	Acquirer Bank	Target Bank	Motive of merger	Type of merger
2006	IDBI Ltd.	United western Bank	Restructuring of weak bank	Forced merger
2010	State Bank of India	State Bank of Indore	Expansion of Size, benefit of scale and scope economy	Voluntary Merger

Source: Compiled from Report on Trend and Progress, RBI, Various Issues

3. Findings and Discussions

Table 2: IDBI Acquired United Western Bank (2006) Capital Adequacy

Years	Loans & Advances To Assets (%)	Rank	Capital Adequacy Ratio (%)	Rank	Debt Equity Ratio (Times)	Rank	Average	Rank
2001	2.15	5	17.86	4	8.27	12	7.00	6.5
2002	2.39	3	18.72	1	7.54	9	4.33	1
2003	3.19	2	18.23	2.5	9.17	13	5.83	3.5
2004	3.20	1	18.23	2.5	9.20	14	5.83	3.5
2005	2.27	4	14.80	7	8.12	11	7.33	8
2006	2.02	6	13.73	8	7.69	10	8.00	9
2007	1.67	7	11.95	12	6.46	8	9.00	10
2008	1.41	8	11.23	13	5.97	7	9.33	11.5
2009	0.71	12	10.83	14	5.82	6	10.67	14
2010	0.64	13	12.16	11	4.07	5	9.67	13
2011	0.54	14	12.84	10	3.04	4	9.33	11.5
2012	0.90	9	16.26	6	2.32	3	6.00	5
2013	0.87	10	16.90	5	2.18	2	5.67	2
2014	0.84	11	13.13	9	2.11	1	7.00	6.5

Table 2 depicts that regarding Advances to Assets, IDBI was at the first position with highest value of 3.2 in the year 2004 followed by the year 2003(3.19) and at the bottom most position with least value of 0.54 in the year 2011 followed by the year 2010(0.64). Bank is maintaining higher CAR than the prescribed level (i.e. 9%) in all the years. It was highest in the year 2002(18.72) followed by the year 2003 and 2004(18.23) respectively and lowest value has been found in the year 2009(10.83). In terms of Debt Equity Ratio, bank was at the

top position with least DER of 2.11 in the year 2014 followed by the year 2013(2.18) and at the bottom position in the year 2004(9.2). Overall Bank was at the top position with average of 4.33 in the year 2002 followed by the years 2003 and 2004(5.83) respectively. The bank was at the bottom position with average of 10.67 in the year 2009. This depicts that the overall financial condition of bank and the ability to meet the need of additional capital declined after the merger.

Table 3: Asset Quality

Years	Net NPA To Net Advances (%)	Rank	Net NPA To Total Assets (%)	Rank	Total Investment To Total Assets (%)	Rank	Average	Rank
2001	11.69	13	1.83	14	16.12	14	13.67	14
2002	14.20	14	1.03	12	16.25	13	13.00	13
2003	2.40	11.5	0.65	9	38.11	1.5	7.33	9
2004	2.40	11.5	0.48	5	38.11	1.5	6.00	5
2005	1.01	5	1.04	13	28.60	9	9.00	10

2006	1.12	8	0.64	8	24.72	12	9.33	11
2007	1.30	9	0.70	10	25.06	11	10.00	12
2008	0.92	3	0.83	11	29.02	7	7.00	8
2009	1.02	6	0.60	7	31.46	5	6.00	5
2010	1.06	7	0.05	1	26.94	10	6.00	5
2011	1.61	10	0.06	2	28.70	8	6.67	7
2012	0.73	1	0.38	3	32.50	3	2.33	1
2013	0.77	2	0.42	4	31.90	4	3.33	2
2014	0.97	4	0.55	6	29.65	6	5.33	3

Table 3 presents Asset Quality position of the IDBI. In respect of NNPA/NA ratio Bank was at the top position with a value of 0.73 in the year 2012, followed by the year 2013(0.77) and at the lowest position with a value of 14.2 in the year 2002. In case of NNPA/TA ratio Bank was at the highest position with a least value of 0.05 in the year 2010 followed by the year 2011(0.06) and at the bottom position in the year 2001(1.83). In terms of TI/TA ratio, IDBI Bank was at the first position with a value of 38.11 in the years 2003 and 2004 respectively

followed by the year 2012(32.5) and it was at the lowest position with a value of 16.12 in the year 2001. Overall regarding Assets Quality, IDBI Bank was at the top position with average of 2.33 in the year 2012 followed by the year 2013(3.33) and 2014(5.33) respectively. The bank was at the bottom position with average of 13.67 in the year 2001. This exhibits that the efficiency of bank in assessing the credit risk and recovering the debts has improved after the merger.

Table 4: Managerial Efficiency

Years	Business Per Employee (Lakh)	Rank	Profit Per Employee (Lakh)	Rank	Total Advances To Total Deposits (%)	Rank	Average	Rank
2001	169.52	7	-7.26	14	2.70	5	8.67	12
2002	160.26	8	1.41	3	0.25	12	7.67	6
2003	116.36	11	1.65	2	0.20	13.5	8.83	13
2004	116.40	10	1.70	1	0.20	13.5	8.17	9
2005	173.13	6	1.23	7	7.74	1	4.67	2
2006	141.43	9	0.84	12	4.85	3	8.00	8
2007	188.06	5	0.88	10	2.99	4	6.33	3
2008	211.59	4	0.84	13	2.17	6	7.67	6
2009	250.44	2	0.84	11	0.98	10	7.67	6
2010	248.20	3	1.21	8	0.91	11	7.33	4
2011	253.36	1	1.31	6	4.96	2	3.00	1
2012	70.80	14	1.10	9	1.75	7	10.00	14
2013	73.50	13	1.40	4.5	1.61	8	8.50	10.5
2014	74.70	12	1.40	4.5	1.52	9	8.50	10.5

Regarding Management Efficiency of the IDBI, bank secured the top position with highest BPE of 253.36 in the year 2011, followed by the year 2009(250.44) and lowest position with a least BPE of 70.80 in the year 2012(Table 4). In terms of Profit per Employee, IDBI secured the top position in the year 2004 with 1.7 followed by the year 2003(1.65) and at the bottom position in the year 2001(-7.26). At the front of TA/TD ratio, bank was at the first place with a value of 7.74 in the year 2005

followed by the year 2011(4.96) and at the bottom most position in the years 2003 and 2004(0.2). Overall Bank was at the top most position in the year 2011 with average of 3.00, followed by the year 2005(4.67) and at the bottom position with average of 10.00 in the year 2012. This reveals that managerial efficiency has enhanced due to the better performance of the employees after the merger.

Table 5: Earnings Quality

Years	Interest Income To Total Income (%)	Rank	Return On Assets (%)	Rank	Return On Net Worth (%)	Rank	Average	Rank
2001	77.46	10	0.61	13	-26.78	14	12.33	14
2002	70.57	11	0.62	11.5	6.00	13	11.83	13
2003	60.00	13.5	0.73	6	8.16	12	10.50	12
2004	60.00	13.5	0.73	6	8.20	11	10.17	11
2005	61.91	12	0.68	8	9.18	10	10.00	10
2006	85.72	5	0.67	9.5	10.06	9	7.83	8
2007	80.44	9	0.67	9.5	11.24	7	8.50	9
2008	87.09	3	0.62	11.5	12.08	6	6.83	6
2009	86.63	4	0.53	14	13.19	4	7.33	7
2010	89.50	2	0.73	6	15.81	1	3.00	2
2011	91.30	1	0.83	4	13.43	3	2.67	1
2012	80.70	7	1.50	3	11.20	8	6.00	5
2013	82.01	6	1.70	2	13.10	5	4.33	4
2014	80.56	8	1.78	1	14.02	2	3.67	3

The Earnings Quality position of the bank before and after the merger in terms of Interest Income to Total Income, Return on Assets and Return on Net Worth has been analysed in table 5. In case of II/TI ratio, bank was at the top position in the year 2011 with a value of 91.3 followed by the year 2010(89.5) and at the bottom most position in the years 2003 and 2004 with least value of 60. In case of ROA ratio, bank was at the first position with a value of 1.78 in the year 2014, followed by the year 2013(1.7) and at the bottom position in the year

2009(0.53).In case of RONW ratio, IDBI stood at the top place with a value of 15.81 in the year 2010 followed by the year 2014(14.02) and it was at lowest position (value of -26.78) in the year 2001. On the basis of group averages, Bank was at the top position with group average of 2.67 in the year 2011, followed by the year 2010(3.00) and bank was at the lowest level in 2001 with group average of 12.33. This reveals that ability of a bank to earn consistently and profitability of bank has enhanced after the merger.

Table 6: Liquidity

Years	Quick Ratio (Times)	Rank	Liquid Assets To Total Assets (%)	Rank	Liquid Assets To Total Deposits (%)	Rank	Average	Rank
2001	0.76	12	1.66	14	21.10	9	11.67	13
2002	0.96	11	14.6	1	152.8	1	4.33	1
2003	0.67	13.5	2.83	13	18.02	12	12.83	14
2004	0.67	13.5	4.80	12	30.50	3	9.50	11
2005	1.21	10	9.90	7	53.59	2	6.33	8
2006	2.20	4	8.55	8	29.15	4.5	5.50	3
2007	1.94	8	10.37	6	29.15	4.5	6.17	6
2008	2.26	3	8.17	9	24.85	7	6.33	8
2009	1.64	9	7.80	10	14.66	13	10.67	12
2010	3.77	2	7.19	11	10.02	14	9.00	10
2011	3.95	1	10.56	5	19.03	11	5.67	4.5
2012	2.02	7	13.07	2	25.04	6	5.00	2
2013	2.06	6	11.76	3	21.60	8	5.67	4.5
2014	2.19	5	11.45	4	20.59	10	6.33	8

Liquidity Position of the IDBI bank before and after the merger (Table 6) through Quick Ratio reveals that bank was at the top position with a value of 3.95 in the year 2011 followed by the year 2010(3.77) and at bottom position in the years 2003 and 2004 with a value of (0.67). In case of LA/TA ratio, bank was at the first position with highest value of 14.6 in the year 2002, followed by the year 2012(13.07) and at the bottom position with least value of 1.66 in the year 2001. In context of LA/TD ratio, bank was at top position with a value of 152.8 in the year

2002 followed by the year 2005(53.59) and bank was at the lowest position in the year 2010(10.02).Overall IDBI stood at the top position in 2002 with average of 4.33 followed by 2012(5.00) and 2006(5.50) respectively. The bank was at the bottom position with average of 12.83 in the year 2003 followed by the year 2001(11.67). This reflects that banks ability to meet its financial obligations has enhanced after the merger.

Table 7: Overall Performance of IDBI on the Camel Parameter Basis

Years	Capital Adequacy Parameter-Group Ranking	Asset Quality Parameter-Group Ranking	Managerial Efficiency Parameter-Group Ranking	Earnings Quality Parameter -Group Ranking	Liquidity Parameter-Group Ranking	Average	Rank*
2001	6.5	14	12	14	13	11.9	14
2002	1	13	6	13	1	6.8	5.5
2003	3.5	9	13	12	14	10.3	13
2004	3.5	5	9	11	11	7.9	9.5
2005	8	10	2	10	8	7.6	7
2006	9	11	8	8	3	7.8	8
2007	10	12	3	9	6	8.0	11
2008	11.5	8	6	6	8	7.9	9.5
2009	14	5	6	7	12	8.8	12
2010	13	5	4	2	10	6.8	5.5
2011	11.5	7	1	1	4.5	5.0	2
2012	5	1	14	5	2	5.4	3
2013	2	2	10.5	4	4.5	4.6	1
2014	6.5	3	10.5	3	8	6.2	4

* Note: Lowest value represents good performance

From the overall analysis it may be concluded that the performance of IDBI Bank was at the top position in the year 2013(4.6), followed by the year 2011(5) and 2012(5.4) respectively. However, the performance was low in the year

2001 i.e. before merger with value of 11.9 followed by the year 2003(10.3). However, it is pertinent to mention that performance of the bank started improving consistently after merger.

Table 8: State Bank of India Acquired State Bank of Indore (2010) Capital Adequacy

Years	Advances To Assets (%)	Rank	Capital Adequacy Ratio (%)	Rank	Debt Equity Ratio (Times)	Rank	Average	Rank
2005	0.43	4	12.45	4	0.94	1	3.00	1
2006	0.07	10	11.88	8	1.29	2	6.67	7
2007	0.38	5.5	12.34	5	1.79	9	6.50	6
2008	0.34	7.5	13.54	1	1.49	4	4.17	4
2009	0.38	5.5	12.97	2	1.45	3	3.50	3
2010	0.42	7.5	12.00	7	1.56	7	7.17	8
2011	0.48	3	10.69	10	1.84	10	7.67	9
2012	0.62	2	12.05	6	1.52	5	4.33	5
2013	0.34	9	11.22	9	1.71	8	8.67	10
2014	0.66	1	12.86	3	1.55	6	3.33	2

Table 8 depicts that regarding Advances to Assets ratio, SBI was at the highest position with value of 0.66 was in the year 2014 followed by the year 2012(0.62) and the lowest position with least value of 0.07 in the year 2006. It has been maintaining higher CAR than the prescribed level i.e. 9% in all the years. It was found highest in the year 2008(13.54) followed by 2009(12.97) and the lowest value of ratio has been found in the year 2011(10.69). In terms of Debt Equity Ratio, bank was at the top position with least DER of 0.94 in the year

2005 followed by the year 2006(1.29) and it was at the bottom position in the year 2011(1.84). In case of. Overall regarding Capital Adequacy, SBI was at the top position in the year 2005 with average of 3.00, followed by the year 2014(3.33) and 2009(3.5) respectively. The bank was at the bottom position with average of 8.67 in the year 2013. This depicts that the overall financial condition of bank and ability to meet additional capital requirement has declined after the merger.

Table 9: Asset Quality

Years	Net NPA To Net Advances (%)	Rank	Net NPA To Total Assets (%)	Rank	Total Investment To Total Assets (%)	Rank	Average	Rank
2005	2.65	10	1.16	7	42.80	1	6	7
2006	1.88	7	0.99	4	32.80	2	4.33	4.5
2007	1.56	2	0.93	3	26.30	5	3.33	2.5
2008	1.78	4	1.03	6	26.20	6	4.67	6
2009	1.79	5	1.00	5	28.50	3	4.33	4.5
2010	1.72	3	0.10	1	28.10	4	2.67	1
2011	1.35	1	0.101	2	24.14	7	3.33	2.5
2012	1.82	6	1.18	8	23.33	8	7.33	8
2013	2.10	8	1.39	9	22.36	9	8.67	9
2014	2.57	9	1.73	10	22.19	10	9.67	10

Asset Quality position of the SBI through NNPA/NA ratio was at the top in the year 2011 with a value of 1.35, followed by the year 2007(1.56) and at the last position with a value of 2.65 in the year 2005. In case of NNPA/TA ratio Bank was at the top position with a least value of 0.1 in the year 2010 followed by the year 2011(0.101) and it was at the lowest position in the year 2014(1.73). In terms of TI/TA ratio, SBI Bank was at the highest position with a value of 42.8 in the

year 2005 followed by the year 2006(32.8) and the bottom position with a value of 22.19 in the year 2014. Overall regarding sub-parameters of Assets Quality, SBI Bank was at the top position with average of 2.67 in the year 2010 followed by 2007 and 2011(3.33) respectively. The bank was at the bottom position with group average of 9.67 in the year 2014. This exhibits that the efficiency of bank in assessing the credit risk and recovering the debts has improved after the merger.

Table 10: Managerial Efficiency

Years	Business Per Employee (Lakh)	Rank	Profit Per Employee (Lakh)	Rank	Total Advances To Total Deposits (%)	Rank	Average	Rank
2005	24.31	10	0.21	10	3.47	1	7	7
2006	29.92	9	0.22	9	0.09	10	9.33	10
2007	35.70	8	0.24	8	0.49	6.5	7.5	9
2008	45.60	7	0.37	7	0.46	8	7.33	8
2009	55.60	6	0.47	4	0.49	6.5	5.5	6
2010	63.60	5	0.45	5	0.54	5	5	5
2011	70.47	4	0.39	6	0.63	4	4.67	4
2012	88.69	3	0.54	2	0.78	3	2.67	2
2013	98.48	2	0.62	1	0.44	9	4	3
2014	117.20	1	0.49	3	0.85	2	2	1

Table 10 exhibiting the level of Management Efficiency of the SBI found that bank secured the top position with highest BPE of 117.2 in the year 2014, followed by the year 2013(98.48) and the bottom position with a least BPE of 24.31 in the year 2005. In terms of Profit per Employee, bank secured the top position with 0.62 in the year 2013 followed by the year 2012(0.54) and at the bottom position in the year 2005(0.21). At the front of TA/TD ratio, bank was at the first place with a

value of 3.47 in the year 2005 followed by the year 2014(0.85) and it was at the lowest end with a value of 0.09 in the years 2006. Overall Bank was at the top position in the year 2014 with average of 2.00 followed by average of 2.67 and 4.00 in the year 2012 and 2013 respectively. The bank was at the bottom position with average of 9.33 in the year 2006. This reveals that Managerial Efficiency has enhanced due to the better performance of the employees after the merger.

Table 11: Earnings Quality

Years	Interest Income To Total Income (%)	Rank	Return On Assets (%)	Rank	Return On Net Worth (%)	Rank	Average	Rank
2005	80.04	10	0.99	3	19.59	1	4.67	5
2006	82.60	8	0.89	5	17.04	3	5.33	6
2007	83.30	5.5	0.84	8	15.41	7	6.83	7
2008	83.70	4	1.01	2	16.75	4	3.33	2
2009	83.30	5.5	1.04	1	17.05	2	2.83	1
2010	81.60	9	0.88	6.5	14.80	8	7.83	9
2011	82.80	7	0.71	9	12.62	9	8.33	10
2012	87.30	2	0.88	6.5	15.75	5	4.5	4
2013	87.52	1	0.97	4	15.47	6	3.67	3
2014	87.02	3	0.65	10	10.04	10	7.67	8

Table 11 presents the Earnings Quality position of the bank before and after the merger in terms of Interest Income to Total Income, Return on Assets and Return on Net Worth. In case of II/TI ratio, bank was at the top position in the year 2013 with a value of 87.52 followed by the year 2012(87.30) and at the bottom position with least value of 80.04 in the year 2005. In case of ROA ratio, bank was at the first position with a value of 1.04 in the year 2009, followed by the year 2008(1.01) and at the bottom position in the year 2014(0.65).In case of RONW

ratio, SBI bank stood at the top place with a value of 19.59 in the year 2005 followed by the year 2009(17.05) and it was at bottom position with a value of 10.04 in the year 2014. On the basis of group averages, Bank was at the top position in the year 2009 with average of 2.83 followed by 3.33 and 3.67 in the year 2008 and 2013 respectively. The bank was at the bottom position with average of 8.33 in the year 2011.This reveals that ability of a bank to earn consistently and profitability of bank has decreased after the merger.

Table 12: Liquidity

Years	Quick Ratio (Times)	Rank	Liquid Assets To Total Assets (%)	Rank	Liquid Assets To Total Deposits (%)	Rank	Average	Rank
2005	1.93	4	12.00	6	97.40	1	3.67	2
2006	1.65	8	13.40	3	17.46	4	5.00	5
2007	1.68	7	13.24	4	17.22	5	5.33	6
2008	1.48	10	15.13	1	20.30	2	4.33	4
2009	1.96	3	14.23	2	18.50	3	2.67	1
2010	1.63	9	10.80	7	14.21	7	7.67	9
2011	2.12	1	13.02	5	17.08	6	4.00	3
2012	1.85	5	10.59	8	13.57	8	7.00	8
2013	1.98	2	10.01	9	13.06	9	6.67	7
2014	1.82	6	9.14	10	11.76	10	8.67	10

Table 12 presenting Liquidity position of the SBI bank before and after the merger through Quick Ratio found that bank at the top position in the year 2011 with a value of 2.12 followed by the year 2013(1.98) and bottom position in the year 2008 with a value of (1.48). In case of LA/TA ratio, bank was at the first position with highest value of 15.13 in the year 2001, followed by the year 2009(14.23) and it was at the bottom position with least value of 9.14 in the year 2014. In context of LA/TD ratio, the top position with a value of 97.4 was in the

year 2005 followed by the year 2008(20.3) and it was at the lowest position in the year 2014(11.76).Overall SBI stood at the top position with average of 2.67 in the year 2009 followed by the year 2005(3.67) and at the bottom position with average of 8.67 in the year 2014 followed by (7.67) and (7.00) in the year 2010 and 2012 respectively. This reflects that banks ability to meet its financial obligations has declined after the merger.

Table 13: Overall Performance of SBI on the Camel Parameter Basis

Years	Capital Adequacy Parameter-Group Ranking	Asset Quality Parameter-Group Ranking	Managerial Efficiency Parameter-Group Ranking	Earnings Quality Parameter -Group Ranking	Liquidity Parameter-Group Ranking	Average	Rank*
2005	1	7	7	5	2	4.4	2
2006	7	4.5	10	6	5	6.5	10
2007	6	2.5	9	7	6	6.1	6
2008	4	6	8	2	4	4.8	3
2009	3	4.5	6	1	1	3.1	1
2010	8	1	5	9	9	6.4	8.5
2011	9	2.5	4	10	3	5.7	5
2012	5	8	2	4	8	5.4	4
2013	10	9	3	3	7	6.4	8.5
2014	2	10	1	8	10	6.2	7

*Note: Lowest value represents good performance

From the overall analysis (table 13) it may be concluded that the performance of SBI Bank was at the top position in the year 2009 with average of 3.1, followed by the year 2005(4.4) and 2008(4.8) respectively. However, the performance was poor in the year 2010 and 2013 i.e. after merger with average value of 6.4. This reflects that bank performance has declined in the post-merger period and merger may not be considered successful.

4. Conclusion

Mergers and acquisitions have proven to be a significant and increasingly popular means for achieving corporate diversity and growth. But the existing failure rate of mergers suggests that neither academicians nor practitioners have a thorough understanding of the variables involved in planning and implementing a successful merger. It is suggested that a successful merger should involve not only thorough financial and strategic analysis and planning, but also planning regarding congruence between the two companies' preferences about the implementation strategy for the merger.

5. References

- Gourlay A, Ravishankar G, Tom WJ. Non Parametric Analysis of Efficiency Gains from Bank Mergers in India, working paper 2006-17, Department of economics, Loughborough University. 2005.
- Romero R, Alberto C, Herrera T, Luis J. Mergers and Acquisitions as Growth Strategy in the Colombian Banking Sector. *Innovar*. 2007; 17(30):77-98.
- Anand M, Singh J. Impact of Merger Announcements on Shareholders Wealth: Evidence from Indian Private Sector Banks. *Vikalpa the Journal for Decision Makers*. 2008; 33(1):35-54.
- Manansakis C. Shareholder Wealth Effects from Merger And Acquisitions In The Greek Banking Industry. *International Journal of Banking, Accounting and Finance*. 2009; 1(3):242-256.
- Kaur P, Kaur G. Impact of Mergers on the Cost Efficiency of Indian Commercial Banks. *Eurasian Journal of business and economics*. 2010; 3(5):27-50.
- Arora J, Abraham S. A Study on the Effects of Merger & Acquisitions in the Indian banking industry. *International Journal of Research in Computer Application & Management*. 2011; 1(7):88-96.
- Khan AA. Post-Merger Financial Performance Appraisal of Acquiring Banks in India: A case analysis. *International journal of research in commerce & management*. 2012; 3(7):172-176.
- Kumar S. Impact of Bank mergers on the efficiency of banks: A Study of merger of Bharat Overseas Bank With Indian Overseas Bank. *International Journal of Academic Research in business And Social Sciences*. 2013; 3(12).
- Santhiyavalli G, Abirami K. Impact of Merger on Firm's Performance-A Case Study on Select Private Banks. *Indian Journal of Applied Research*. 2014; 4(9):566-570.
- Bassi P, Gupta V. A Study on Impact of Announcement of merger and acquisition on the valuation of the companies (With special reference to banks). *Asia Pacific Journal of Research*. 2015; 1(21):1-13.