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IMPACT OF MERGER ON LIQUIDITY POSITION OF SELECTED PUBLIC AND PRIVATE SECTOR BANKS IN INDIA

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Abstract
The Indian Banks play a prominent role in financing the economic needs of the country. Liquidity risk in Indian banking sector is strongly influenced by structural and business cycle factors over many years. Sudden change in technological development and market globalization has posed serious challenge to the Indian public and private sector banks to manage liquidity. This study examines trends in mergers and acquisitions in Indian banking and the impact of M&A's has been studied in two public and two private sector leading banks of India. The study compares pre and post merger liquidity performance of merged banks with the help of financial parameters like Liquid assets to Total Deposits, Liquid assets to Demand deposits and Liquid assets to Total assets etc. In the context of banking, liquidity, or the ability to fund increases in assets and meet obligations as they come due, is critical to the ongoing viability of the banking institution. Since there is a close association between liquidity and solvency of banks, sound liquidity management reduces the profitability of banks becoming insolvent, thus reducing the possibilities of bankruptcies and bank runs.

Keywords: Mergers &Acquisitions, Banking, Financial soundness, Demand deposits, Total deposits, Total assets, Liquidity assets.

Introduction
In today's global marketplace, banking organizations have greatly expanded the scope and complexity of their activities and face an ever changing and increasingly complex regulatory environment. It has been realized globally that M&A is only way for gaining competitive advantage domestically and internationally and as such the whole range of industries are looking for strategic acquisitions within India and abroad. Today, the banking industry is counted among the rapidly growing industries in India. In the last two decades, there has been paradigm shift in banking industries. A relatively new dimension in the Indian banking industry is accelerated through M&A. In order to attain the economies of scale and also to combat the unhealthy competition Consolidation of Indian banking sector through M&A's on commercial considerations and business strategies are the essential pre requisite. Consolidation has been a significant strategic tool and has become a worldwide phenomenon, driven by advantages of scale-economies, geographical diversification, and lower costs through branch and staff rationalization, cross-border expansion and market share concentration.

In the past three decades, India's banking system has earned several outstanding achievements to its credit. The most striking is its extensive reach. It is no longer confined to metropolises or cities in India. In fact, Indian banking system has reached even to the remote corners of the country. This is one of the main aspects of India's banking growth story. The first banks were Bank of Hindustan (1770-1829) and The General Bank of India, established 1786 and since defunct. The largest bank, and the oldest still in existence, is the State Bank of India, which originated in the Bank of Calcutta in June 1806, which almost immediately became the Bank of Bengal. This was one of the three presidency banks, the other two being the Bank of Bombay and the Bank of Madras, all three of which were established under charters from the British East India Company. The three banks merged in 1921 to form the Imperial Bank of India, which, upon India's independence, became the State Bank of India in 1955. The Government of India issued an ordinance and nationalised the14 largest commercial banks in 1969. These banks have 85 per cent of bank deposits in the country. A second round of nationalisation of 6 more commercial banks took place in 1980. Nationalisation took place so that government get more control of credit delivery. With the second round of nationalisation, 91% of banking business was held by the Government of India. Later on, in the year 1993, the government merged New Bank of India with Punjab National Bank.

The Indian Banking Sector
The history of Indian banking can be divided into three main phases:
Phase I (1786- 1969) - Initial phase of banking in India when many small banks were set up.
Phase II (1969- 1991) - Nationalisation, regularisation and growth.
Phase III (1991 onwards) - Liberalisation and its aftermath.

Liquidity is one of the vital elements for an organization in particular to those dealing with money. Liquidity refers to the ability to meet the short term obligation on time. To maintain a satisfactory liquidity position an organization has to maintain assets which can be converted into cash within a short span of time without at the same time adversely affecting the profitability. This is because by maintaining high proportion of liquid assets. a firm can have high liquidity but it implies that funds are unnecessarily locked up in liquid assets which have an opportunity cost. For a bank, liquidity is a crucial aspect

because of the RBI stipulatations on CRR and SLR. A bank cannot afford to maintain high liquidity apart from these statutory requirements. This is because any increase in liquidity in banks will further lockup the funds there by restricting profitable investments on the one hand and restricting its ability to lend on the other giving little scope to improve its assets and create money . This will have a negative effect on earnings. Hence, the Banks have to take proper care in hedging liquidity risk, while at the same time ensuring that a good percentage of funds are invested in high return generating investments, so that banks can generate profit while at the same time provide liquidity to the depositors. Among a bank's assets, cash, investments are the most liquid component.

Review of Literature

Devarajappa.S (2012)[1] studied motives of merger in Indian banking industry. It also compares pre and post merger financial performance. For his study purpose he used the financial parameters like gross profit margin, net margin, return on capital employed, return on equity and debt-equity ratio and statistical tools like independent t-test. The study covers a period of six years that is before 3 years and after 3 years from the period of merger. The results of the study suggested that after merger the financial performance of banks have increased.

T. Mallikarjunappa, Panduranga Nayak (2013)[2], examined the wealth effects of takeover announcements on target company share holders for 227 sample companies, which received bids during 1998-2007. For analysis purpose they used models like AR, AAR's and CAAR's. The results indicate that takeovers in India create wealth for target companies. Finally the study concluded that they offer an opportunity to shareholders of target companies and general investors to make profits both in the period before and after the announcement of the takeover bid.

Dr. T. Sathishkumar and Dr.R.Azhagaiah (2014)[3], analysed the impact of mergers and acquisitions on profitability of manufacturing firms in India. For this purpose, 39 manufacturing firms are selected based on the adequacy of data in the data source for a period of 10 years on year to year basis from 2001–2002 to 2011–2012 considering the firms, which had gone into the *M&As* process during the financial year 2006–07. Paired samples t-test is applied to study the mean difference in the profitability of the firms in the pre-and post-merger periods. The study proves that the *M&As* has significant effect on profitability for 38 out of 39 manufacturing firms in India in the post-merger period and therefore the study concluded that the acquiring manufacturing firms in India have utilized their combined resources well in accelerating profit and enhancing shareholders' wealth after merger.

Neha Duggal (2015)[4,] focused on post merger performance of acquiring firms in Indian pharmaceutical industry. The researcher used various ratios like Current ratio, Quick ratio, Debt-Equity ratio, Return on Net worth, Interest turnover ratio, Debt equity ratio, Operating profit ratio etc., and statistical tools like T test. The study period covers from 2000 to 2006. The study observed that merger have significant impact on the performance as compared to pre merger period but the impact is evident more in the immediate year after merger. Finally he concludes that there is a positive impact of merger announcement on the operating and financial performance in short-run but not in long –run.

A.N.Tamragundi, Devarajappa.S (2016)[5], focused on the impact of mergers on the performance of banks which were merged between 2004-2008. The CMIE data based at IIM Bangalore have been used for collection of relevant data. Various statistical tools like mean, Standard deviation, T-test and ANOVA have been used for analysing the impact of merger. The study found that the physical and financial performance of merged banks is significant but it is not clearly reflected in the share price. The study concluded that, merger is a useful strategy to increase profitability, liquidity and efficiency, but the overall growth and financial illness of the bank cannot be solved from mergers alone.

Need for the Study

From the review of literature, it can be observed that academicians, researchers, financial organisations in India have carried out research studies covering various aspects of mergers and acquisitions. However, the present study is different from the above research studies in terms of both period and sample chosen. The reasons of M&A may different from time to time and may vary from company to company. In the tasks of combinations most of them focused on manufacturing sector. Further very few studies have attempted in service sector. In service sector, banking has been scanty. Hence, there is a need for this study.

Objectives

The present research paper aims at analyzing the impact of mergers on the performance of the Indian Banking industry:

1. To study the concepts of mergers and acquisitions in the Indian banking sector.
2. To identify the liquidity position of the selected public and private sector banks in India.
3. To analyse the impact of Mergers & Acquisitions on liquidity position of selected public and private sector banks in India.

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Research Methodology

Period of Study

To study the impact of merger, the period of study covers sixteen years from 1999-2000 to 2014-2015, it is divided into two parts period before merger and period after merger. In case of ICICI and IOB the study period covers 8 years before merger and 8 years after merger, whereas in HDFC it covers 9 years before merger and 7 years after merger and in case of IDBI it is 7 years before merger and 9 years after merger.

Data Collection

The study is based on the secondary. The data has been taken from the annual reports of selected public and private sector banks. And all the data relating to history, growth and development of Banking Industry have been collected from the books, magazine, published paper, report, article, various news papers, bulletins and various published and unpublished theses and dissertations, various web sites like www.RBI.Org.in, www.Moneycontrol.com, www.Indiainfoline.com and www.Indianstat.com.

Statistical Tools of Analysis

The statistical tools like Percentage, average, Standard Deviation, T-test, ratios analysis, charts and Diagrams are used for analysis of the present study.

Sample Design

For the purpose of the study, four banks –two banks from public sector and two banks from private sector have been chosen as detailed below.

S. No	Name of bank	Merged bank	Year of merger	Category
1	Indian Overseas Bank	Bharat Overseas Bank ltd.	2007	Public
2	IDBI Bank Ltd.	United Western Bank Ltd.	2006	Public
3	HDFC Bank ltd	Centurion bank of Punjab ltd.	2008	Private
4	ICICI Bank ltd.	Sangli bank ltd	2007	Private

Source: RBI Newsletter

Data Analysis and Interpretation

To know the liquidity position of the banks we are calculated various ratios some of them are as follows.

Liquid assets to Demand deposits ratio measures the liquidity available to the depositors of a bank. Higher this ratio indicates, higher the liquidity of bank. As a bank funds are tied up with RBI and Govt. Securities to meet the CRR and SLR requirements as stated earlier, any further increase in Liquid assets to Demand Deposits ratio will only hamper the profitability. Hence, a low ratio of Liquid assets to Demand Deposits has to be maintained without at the same time adversely affected liquidity.

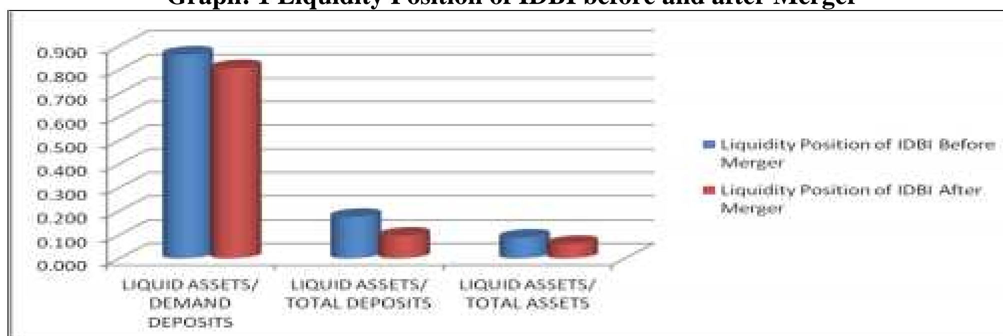
The Liquid Assets to Total Deposits Ratio measures the ability of liquid assets of a bank in covering total deposits. The higher this ratio the better from the point of view of depositors as it provides higher margin of safety for their principal amount. The liquid assets to total deposits indicates the proportion of liquid assets in the total deposits mobilized. In the case of banking sector, this ratio has to be interpreted with caution. Normally, a higher ratio is better from the point of view of depositors. As stated earlier, due to statutory requirements of the regulatory bodies a larger portion of banks are locked in CRR and SLR. Consequently any further attempt to hold funds in liquid form will have an adverse effect on profitability.

The Liquid Assets to Total Assets Ratio indicates the extent of liquid assets of a bank that supports to its assets base. When the banks assets are not productively employed and the NPA's are mounting, there will be liquidity crises and it become hazardous to banks survival. In the present banking scenario, banks are confronted with increasing NPA's and hence an Optimum ratio of liquid assets to Total assets has to be maintained.

TABLE: 1 Liquidity Ratios of Private Sector Banks (IOB,IDBI) before and after Merger															(Times)
RATIOS	IDBI														
	Before Merger							After Merger							
	1999-00	**2000-01**	**2001-02**	**2002-03**	**2003-04**	**2004-05**	**2005-06**	**2007-08**	**2008-09**	**2009-10**	**2010-11**	**2011-12**	**2012-13**	**2013-14**	**2014-15**	**2014-15**
LIQUID ASSETS/ DEMAND DEPOSITS	1.363	0.863	0.386	0.561	0.375	1.455	**1.036**	0.989	1.205	1.009	0.930	0.875	0.569	0.538	0.672	0.478
LIQUID ASSETS/ TOTAL DEPOSITS	0.169	0.112	0.137	0.116	0.113	0.374	**0.206**	0.159	0.120	0.100	0.087	0.115	0.086	0.079	0.071	0.056
LIQUID ASSETS/ TOTAL ASSETS	0.129	0.080	0.108	0.088	0.088	0.069	**0.061**	0.068	0.068	0.066	0.063	0.083	0.063	0.056	0.051	0.041
RATIOS	IOB															
	Before Merger								After Merger							
	1999-00	**2000-01**	**2001-02**	**2002-03**	**2003-04**	**2004-05**	**2005-06**	**2006-07**	**2007-08**	**2008-09**	**2009-10**	**2010-11**	**2011-12**	**2012-13**	**2013-14**	**2014-15**
LIQUID ASSETS/ DEMAND DEPOSITS	1.798	1.502	1.363	0.981	1.253	0.989	0.650	**1.318**	1.149	1.343	1.022	1.018	1.323	1.155	1.356	1.701
LIQUID ASSETS/ TOTAL DEPOSITS	0.193	0.149	0.114	0.098	0.126	0.112	0.073	**0.131**	0.123	0.109	0.089	0.083	0.091	0.076	0.083	0.101
LIQUID ASSETS/ TOTAL ASSETS	0.170	0.135	0.102	0.087	0.111	0.098	0.063	**0.109**	0.102	0.091	0.076	0.068	0.074	0.062	0.069	0.088
Source: Annual Reports																

TABLE: 2 IMPACT OF MERGER ON LIQUIDITY POSITION OF IDBI AND IOB							
SI NO.	**BUSINESS PARAMETERS**	IDBI					
		Mean		**T-Value**		**Result**	**Growth Rate (%)**
		Before Merger	**After Merger**	**Cal.**	**Table Value @5%**		
1	LIQUID ASSETS/ DEMAND DEPOSITS	0.863 (0.445)	0.807 (0.252)	0.32	1.76	**NS**	-6.49%
2	LIQUID ASSETS/ TOTAL DEPOSITS	0.175 (0.094)	0.097 (0.031)	2.35	1.76	**S**	-44.57%
3	LIQUID ASSETS/ TOTAL ASSETS	0.089 (0.023)	0.062 (0.012)	3.02	1.76	**S**	-30.34%
		IOB					
1	LIQUID ASSETS/ DEMAND DEPOSITS	1.231 (0.354)	1.258 (0.224)	0.18	1.76	**NS**	2.19%
2	LIQUID ASSETS/ TOTAL DEPOSITS	0.1245 (0.036)	0.0944 (0.016)	2.18	1.76	**S**	-24.18%
3	LIQUID ASSETS/ TOTAL ASSETS	0.1094 (0.032)	0.0788 (0.014)	2.50	1.76	**S**	-27.97%

Graph: 1 Liquidity Position of IDBI before and after Merger



Graph: 2 Liquidity Position of IOB before and after Merger

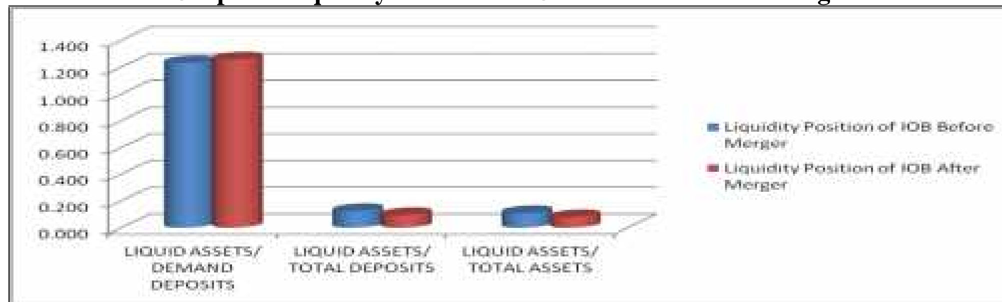


Table 1 exhibits the data on the ratio of Liquid assets to Demand deposits, Liquid assets to Total deposits and Liquid assets to Total assets in selected public sector banks before and after merger. The ratio of Liquid assets to Demand deposits in IDBI have registered 1.036 times and 0.478 times respectively. In IOB it was 1.318 times before the merger and increased to 1.701 times after the merger. The Liquid assets to Total deposits before merger in IDBI have register at the rate of 0.206 times and after the merger it is reduced to 0.056 times, in IOB it has register 0.131 times to 0.101 times before and after merger. While Liquid assets to Total assets before and after merger in IDBI have register at the rate of 0.061 times to 0.041 times, in IOB it has 0.109 times to 0.088 times. In both banks the Liquid assets to Total deposits and Liquid assets to Total assets has reduced after the merger. But in IDBI the rate of reduction is relatively higher than in IOB. Hence, the IOB's higher liquidity has restricted its profitability investments and its ability to lend compared with IDBI.

Table 2 reveals average of Liquid assets to Demand deposits, Liquid assets to Total deposits and Liquid assets to Total assets in the two public sector banks under study. In IDBI the average of liquid assets to demand deposits decreased from 0.863 times before the merger to 0.807 times after merger. In IOB the ratio increased from 1.123 times before the merger to 1.258 times after the merger. The average of liquid assets to Total deposits before and after the merger is 0.175 times and 0.097 times in IDBI, while in IOB it is 0.125 times and 0.095 times respectively. The average liquid assets to total assets in IDBI is 0.089 times before the merger and 0.062 times after the merger. In IOB it is only 0.109 times before the merger and 0.079 times after the merger. The above figures indicate that the liquidity of the banks has decreased after the merger compared to pre merger period. This indicates diversion of funds for profitable investment. The significance of T -test at five percent level provides an ample evidence for this.

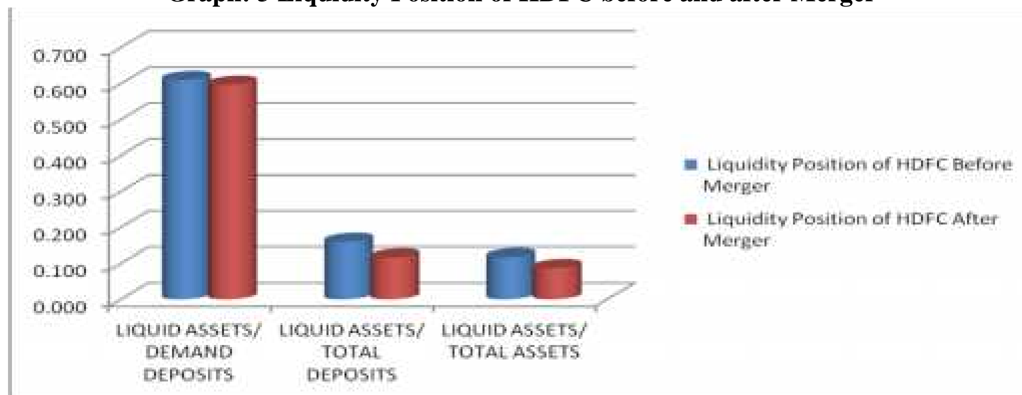
TABLE: 3 Liquidity Ratios of Private Sector Banks (HDFC, ICICI) before and after Merger (Times)

RATIOS	HDFC															
	Before Merger									After Merger						
	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
LIQUID ASSETS/ DEMAND DEPOSITS	0.582	1.071	0.918	0.640	0.414	0.421	0.469	0.462	0.514	0.616	0.804	0.639	0.461	0.522	0.644	0.494
LIQUID ASSETS/ TOTAL DEPOSITS	0.192	0.224	0.225	0.142	0.120	0.123	0.124	0.134	0.147	0.123	0.179	0.142	0.085	0.092	0.108	0.081
LIQUID ASSETS/ TOTAL ASSETS	0.139	0.167	0.168	0.104	0.087	0.087	0.094	0.100	0.111	0.096	0.135	0.107	0.062	0.068	0.081	0.062
RATIOS	ICICI															
	Before Merger								After Merger							
	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
LIQUID ASSETS/ DEMAND DEPOSITS	2.151	1.371	4.673	1.759	1.167	1.007	1.028	1.857	1.541	1.385	1.254	0.980	1.036	1.122	0.960	0.854
LIQUID ASSETS/ TOTAL DEPOSITS	0.346	0.219	0.399	0.135	0.124	0.130	0.103	0.172	0.156	0.137	0.192	0.151	0.142	0.142	0.125	0.117
LIQUID ASSETS/ TOTAL ASSETS	0.283	0.182	0.123	0.061	0.068	0.077	0.068	0.101	0.095	0.079	0.107	0.084	0.077	0.077	0.070	0.066
Source: Annual Reports																

TABLE: 4 IMPACT OF MERGER ON LIQUIDITY POSITION OF HDFC AND ICICI

SI NO.	RATIOS	Mean		T-Value		Result	Growth Rate (%)
		Before Merger	After Merger	Cal.	Table Value @5%		
		HDFC					
1	LIQUID ASSETS/ DEMAND DEPOSITS	0.610 (0.233)	0.597 (0.117)	0.13	1.76	NS	-2.13%
2	LIQUID ASSETS/ TOTAL DEPOSITS	0.159 (0.043)	0.116 (0.035)	2.15	1.76	S	-27.04%
3	LIQUID ASSETS/ TOTAL ASSETS	0.117 (0.324)	0.087 (0.027)	1.97	1.76	S	-25.64%
		ICICI					
1	LIQUID ASSETS/ DEMAND DEPOSITS	1.877 (1.204)	1.142 (0.234)	1.69	1.76	NS	-39.16%
2	LIQUID ASSETS/ TOTAL DEPOSITS	0.204 (0.111)	0.145 (0.023)	1.45	1.76	NS	-28.92%
3	LIQUID ASSETS/ TOTAL ASSETS	0.1203 (0.077)	0.0819 (0.013)	1.39	1.76	NS	-31.92%

Graph: 3 Liquidity Position of HDFC before and after Merger



Graph: 4 Liquidity Position of ICICI before and after Merger

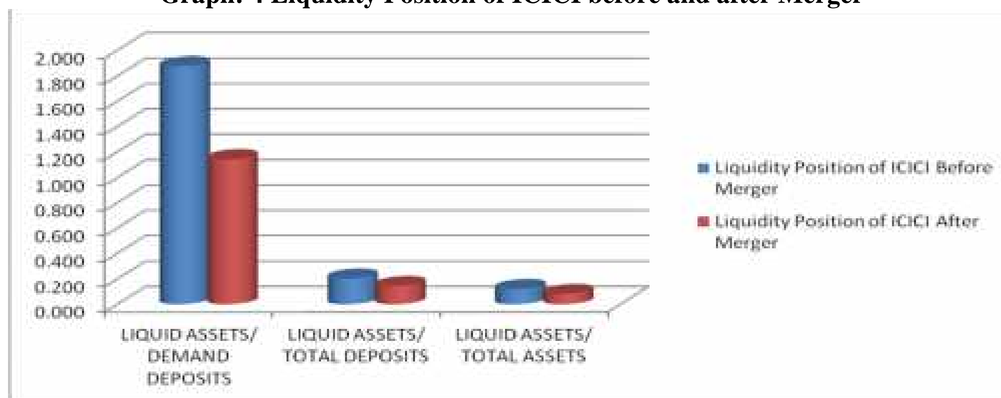


Table 3 exhibits the data on the ratio of Liquid assets to Demand deposits, Liquid assets to Total deposits and Liquid assets to Total assets in selected private sector banks before and after merger. The ratio of Liquid assets to Demand deposits before and after merger in HDFC have registered 0.514 times and 0.494 times. In ICICI, it was 1.857 times before merger and 0.854 times after merger. The Liquid assets to Total deposits before merger in HDFC have register 0.147 times and after the merger it was reduced to 0.081times, in ICICI it has register 0.172 times to 0.117 times before and after merger. While Liquid assets to Total assets before and after merger in HDFC have registered 0.111 times to 0.062 times, in ICICI it has 0.101 times to 0.066 times. In both banks the Liquid assets to Demand deposits, Liquid assets to Total deposits and Liquid assets to Total assets has reduced after the merger. After the merger the ICICI bank Liquid assets to Demand deposits ratio reduced continuously. But in HDFC the rate of reduction in Liquid assets to Total deposits and Liquid assets to Total assets ratio were

relatively higher than ICICI. Hence, the ICICI's higher liquidity has restricted its profitability investments and its ability to lend compared with HDFC.

Table 4 reveals average of Liquid assets to Demand deposits, Liquid assets to Total deposits and Liquid assets to Total assets in the two public sector banks under study. In HDFC the average of liquid assets to demand deposits decreased from 0.610 times before the merger to 0.597 times after merger. In ICICI the ratio decreased from 1.877 times before the merger to 1.142 times after the merger. The average of liquid assets to Total deposits before and after the merger is 0.159 times and 0.116 times in HDFC, while in ICICI it is 0.204 times and 0.145 times respectively. The average liquid assets to total assets in HDFC is 0.117 times before the merger and 0.087 times after the merger. In ICICI it is 0.120 times before the merger and 0.082 times after the merger. The above figures specify that the liquidity of the banks were reduced after the merger compared to pre merger period. This indicates diversion of funds for profitable investment. The significance of T - test at five percent level provides an ample evidence for this.

Conclusion

Merger is the useful tool for growth and expansion in Indian Banking Sector. It is helpful for survival of weak banks by merging into larger bank. This study shows that impact of merger on liquidity position of Indian Banking sector. For this a comparison between pre and post merger performance examined in terms of Liquid assets to Total deposits, Liquid assets to Demand deposits and Liquid assets to Total assets. In the present study, all the liquidity ratios have shows the improvement after the merger and for the purpose and objective of the study, investigator apply t-test for analyzing the pre and post merger performance of banks and result suggested that after the merger the liquidity position of the banks have increased. The most important observation is that liquidity position was increased after the merger for 2 to 3 years and later on it was decreased gradually.

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