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"Bank Merger Motivations and Post Merger Productivity"

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I. Introduction

The concept of mergers and acquisitions is very much popular in the current scenario. More, so it is significantly popular concept after 1990s when India entered in to the phase of Liberalization, Privatization and Globalization (LPG). These winds of LPG are no doubt blowing over all the sectors of the our economy but its maximum impact can be seen in the industrial sector. It caused the market to become more competitive so that it can avoid unhealthy competition and can face competition from both International and multinational companies along with domestic ones.

Mergers and Acquisitions (M and As) continue to be a noteworthy strength in the reformation of the financial services industry. The Commercial Banking Sector of India, which has played a very important role in the economic development of the country, is currently passing through an exciting and testing phase. With the onset of economic reforms, the banking sector in India has undertaken the process of mergers and acquisitions to capture various synergistic benefits like economies of scale and scope, in the face of increasing competition from both domestic as well as foreign players and rapid technological developments. Various research studies inspect merger related gains in banking sector and these studies have adopted one of the two approaches, based on either accounting information or market prices.

Mergers and acquisitions in the banking sector is a common phenomenon across the world. The primary objective behind this move is to attain growth at the strategic level in terms of size and customer base. This, in turn, increases the credit-creation capacity of the merged bank tremendously. Small banks fearing aggressive acquisition by a large bank sometimes enter into a merger to increase their market share and protect themselves from the possible acquisition.

Banks also prefer mergers and acquisitions to reap the benefits of economies of scale through reduction of costs and maximization of both economic and non-economic benefits. Bank mergers are a vertical type of merger because all banks are in the same line of business of collecting and mobilizing funds. In some instances, other financial institutions prefer merging with a bank in case they provide a similar type of banking service.
Another important factor is the elimination of competition between the banks. This way considerable amount of funds earlier used for sustaining competition can be channelized to grow the banking business. Sometimes, a bank with a large bad debt portfolio and poor revenue will merge itself with another bank to seek support for survival. However, such types of mergers are accompanied with retrenchment and a drastic change in the organizational structure. Consolidating the business also makes the bank robust enough to sustain in the every-changing business environment. They find it easier to adapt themselves quickly and grow in the domestic and international markets.

II. Productivity Definition

Productivity is defined as the goods and services produced per unit of labour, capital or both. The ratio of output to input is a total productivity measure. In simple words, productivity is the output per unit of input employed. Kopleman has defined productivity as the relationship between physical output of one or more of the associated physical inputs used in production. When single input is used to measure productivity, it is called 'factor productivity' and when all factors are combined together for the purpose, it is known as 'total factor productivity.'

Concept Of Productivity In Banking

The concept and definition of productivity as applied in manufacturing industries cannot be applied as such in banking industry because it is primarily a service industry. In the field of banking, the various products are accounts, drafts, exchange remittances, cheques, travellers cheques, credit cards, debit cards, services for guarantees, various kinds of loans like housing loan, education loan, car loan etc. Identification and measurement of output in banking is very difficult exercise as it is not possible to bring various services to measure output. However, banking being an important economic activity cannot afford to lose sight of the concept of productivity. Application of the concept in the Indian banking industry becomes all the more difficult, as it gets associated with such diverse aspects like operational cost effectiveness, profitability,

customer services, priority sector lending, mobilization of deposits, deployment of credit in rural and backward regions. But as we know that banks are the mirror of an economy. Therefore better functioning of banking sector may lead to the overall improvement of the economy. In fact, banks act as a link between those who want to save and those who want to invest, so improvement in the productivity of the banking sector is very much needed who want to save and obviously, difficulty is not in applying the broader concept of productivity as ratio of output and input, but is in measuring output in the form of services. Productivity at the national level is dependent on various factors like per capita income, saving habits and banking habits. In addition to it, there are regional variations which affect the productivity of various players in the banking field. So in order to have a reliable idea of productivity, it is necessary to analyze every segment, different sizes of banks and region wise positioning of banks. As in banking industry in India, volume of business became progressively imperative to secure more resources for meeting social objectives while maintaining viability of operations, business level may be preferred as being more representative of productivity. Productivity helps firms, industries and nations to achieve sustainable competitive advantage. Industry is a thrust area for countries in their quest for competitiveness. It must be noted that banks which have maintained the momentum of continuous growth, and profitability showed better ratio of manpower effectiveness. Each element has crucial sub- components which serve as building blocks for productivity. The Government policies effectively support competitiveness if they are structures around productivity driven reform mechanism, cost deflating tariff structure and technology and industry vision.

Motivations Behind Mergers And Acquisitions In Indian Banking Sector

The growing tendency towards mergers in banks world-wide, has been driven by growing competition, need to reduce costs, need to go with global size, take benefits of economies of scale, economies of scope, investment in technology for technical gains, desire for business expansion into new areas and need for improvement in shareholder value. The underlying strategy for mergers, as it is presently being thought to be, is, 'larger the bank, higher its competitiveness and better prospects of survival **(S.Revanthy,2011)**. Due to smaller size, the Indian banks may find it very difficult to compete with international banks in various facets of banking and financial services. Hence, one of the strategies to face the intense competition could be, to consolidate through the process of mergers.

The Narsimhan Committee in its report on Banking Sector reforms in 1998 also suggested the use of mergers to build the size and strength of operations for each bank. It recommended the merger of large Indian banks to make them strong enough to stand in international competition. It suggested that there should be two to three banks with international orientation, eight to ten national banks and a large pool of local banks so that system can cover remote areas too.

The main motivations behind mergers in Indian banking sector are mainly more number of bank branches **(Paul, 2003** studied the merger of ICICI bank with Bank of Madura & concluded that synergies generated by the merger would include increased financial capability, branch network, customer base, rural reach, and better technology.) more number of ATMs, more deposits & advances, increased profitability and greater market shares. **(S. Revanthy, 2011)**. Both the analysis based on primary data & secondary data supports these motivations. The analysis of primary data shows data the respondents are also of the view that branch network, ATMs availability has been increased after mergers this again supported by the analysis of secondary data which shows that there is an increase in number of branches after mergers.

The merged banks get stronger position to face competition from other banks & financial service companies. The analysis of secondary data also suggested that there is an increase in value of deposits & advances after mergers.Bank mergers benefit customers through more branches, diversified products, greater opportunities for technology based banking and reduced operating costs. The increase in products & services of banks as a result of merger also increase the prices & quality of such products & services. The analysis of primary data also shows that the customers are willing to pay high price for high quality.

For banks, mergers are proved to be useful tool for fighting market competition. Mergers lead to better risk management & generate various economies of scale which in turn helps in lowering down cost of providing service.

Literature Review

Under this study the a number of research papers were reviewed for the purpose of providing an insight into the work related to Merger and Acquisitions (M&As). After going through the available relevant literature on M&As and it comes to know that most of the work done high lightened the impact of M&As on different aspects of the companies. A firm can achieve growth both internally and externally. Internal growth may be achieved by expanding its operation or by establishing new units, and external growth may be in the form of Merger and Acquisitions (M&As), Takeover, Joint venture, Amalgamation etc. Many studies have investigated the various reasons for Merger and Acquisitions (M&As) to take place.

P. Chellasamy and N. Ponsabariraj (2014) explored various motivations of Merger and Acquisitions activities in Indian banking sector. It also compared pre and post merger financial performance of merged banks with the help of financial parameters like net profit to total income, net profit to working capital, return on assets and return on equity which includes profitability analysis, current ratio and liquidity ratio which includes liquidity analysis. The study covers the area of performance evaluation of Merger and Acquisitions in Indian banking sector during the period from 1999-2000 to 2010-2011. The paired t-test was used to find out the significant relationship between the profitability and liquidity performance of pre and post- Merger and Acquisitions of selected scheduled commercial banks in India. The study concluded that there were no greater changes in the profitability when pre & post merger periods are compared.

Jagriti Kumari (2013) concluded that the primary purpose of mergers and acquisition is to reduce competition and protect existing markets in the economy. Overall mergers and acquisitions have their own pros and cons. But mergers are good for the growth and development of country only when it does not give rise to competition issues. Mergers improve the competition edge of the industry in order to compete in the global market but also shrink the industry because number of firms reduces. Mergers help banks to strengthen their financial base and access tax benefits and direct access to cash resources. Mergers and acquisition are done for consolidating strategies in order to expand the geographical area of operation but optimal level of cooperation should be allowed and followed so as to gain proper advantage of mergers.

Dutta and Dawn (2012) in a paper “Merger and acquisitions in Indian banks after liberalisation: An analysis” investigates the performance of merged banks in terms of its growth of total assets, profits, revenue, deposits, and number of employees. The performance of merged banks is compared taking four years of prior-merger and four years of post-merger. The study findings indicate that the post-merger periods were successful and saw a significant increase in total assets, profits, revenue, deposits, and in the number of employees of the acquiring firms of the banking industry in India.
Sinha Pankaj & Gupta Sushant (2011) studied a pre and post analysis of firms and concluded that it had positive effect as their profitability, in most of the cases deteriorated liquidity. After the period of few years of Merger and Acquisitions(M&As) it came to the point that companies may have been able to leverage the synergies arising out of the merger and Acquisition that have not been able to manage their liquidity. Study showed the comparison of pre and post analysis of the firms. It also indicated the positive effects on the basis of some financial parameter like Earnings before Interest and Tax (EBIT), Return on shareholder funds, Profit margin, Interest Coverage, Current Ratio and Cost Efficiency etc.

Goyal K.A. & Joshi Vijay (2011) in their research paper, gave an overview on Indian banking industry and highlighted the changes occurred in the banking sector after post liberalization. The need of Merger and Acquisition in India has been examined under this study. It also gave the idea of changes that occurred after M&As in the banking sector in terms of financial, human resource & legal aspects. It also described the benefits which came out through M&As and examined that M&As is a strategic tools for expanding their horizon and companies like the ICICI Bank has used merger as their expansion strategy in rural market to improve customers base and market share. The selected sample of Mergers of post liberalization and discussed about communication in M&As, the study lightened the role of media in M&As.

Kuriakose Sony & Gireesh Kumar G. S (2010) in their paper, assessed the strategic and financial similarities of merged Banks, and relevant financial variables of respective Banks were considered to assess their relatedness. The result of the study found that only private sector banks are in favour of the voluntary merger wave in the Indian Banking Sector

Kuriakose Sony et al., (2009) focused on the valuation practices and adequacy of swap ratio fixed in voluntary amalgamation in the Indian Banking Sector and used swap ratio for valuation of banks, but in most of the cases the final swap ratio is not justified to their financials.

Bhaskar A Uday et al., (2009) This study found that Banking sector witnessed Merger activities in India when banks were facing the problem of losing old customer and failed to attract the new customers. It described that the acquiring firms mainly focuses on the economies of scale, efficiency gain and address the need of communication and employee concern, and described the integration process was handled by professional and joint integration committee. Road map is prepared and HR integration is done as per schedule and they took a case of the Bank of Punjab acquired the Lord Krishna Bank and later on the Centurion Bank of Punjab acquired by the HDFC Bank and gave the frame of integration. This study regulate the link between communication, HR integration, management action and consequent contribution of post merger success by conducted interview in a

recent bank merger, in depth interviews work conducted in a recent mergers of a Indian Bank. It was inferred that proactive communication, changes in organizational structure, and appropriate human resource integration would smoothen the journey towards successful integration.

Anand Manoj & Singh Jagandeep (2008) studied the impact of merger announcements of five banks in the Indian Banking Sector on the share holder bank. These mergers were the Times Bank merged with the HDFC Bank, the Bank of Madurai with the ICICI Bank, the ICICI Ltd with the ICICI Bank, the Global Trust Bank merged with the Oriental Bank of commerce and the Bank of Punjab merged with the centurion Bank. The announcement of merger of Bank had positive and significant impact on shareholder's wealth. The effect on both the acquiring and the target banks, the result showed that the agreement with the European and the US Banks Merger and Acquisitions except for the facts the value of share holder of bidder Banks have been destroyed in the US context, the market value of weighted Capital Adequacy Ratio of the combined Bank portfolio as a result of merger announcement is 4.29% in a three day period (-1,1) window and 9.71 % in a Eleven days period (-5, 5) event window. The event study used for proving the positive impact of merger on the bidder Banks.

Mehta Jay & Kakani Ram Kumar (2006) on the aspect of various motives for Merger and Acquisitions, this study stated that there were multiple reasons for Merger and Acquisitions in the Indian Banking Sector and still contains to capture the interest of a research and it simply because of after the strict control regulations had led to a wave of merger and Acquisitions in the Banking industry and states many reason for merger in the Indian Banking sector. While a fragmented Indian banking structure may be very well beneficial to the customer because of competition in banks, but at the same time not to the level of global Banking Industry, and concluded that merger and Acquisition is an imperative for the state to create few large Banks.

Dunis and Klein (2005) considered an acquisition as an option of potential benefits. Hence, assuming semi-efficient capital markets, the market capitalisation reflects the market participant's view on the value of those benefits once the merger is announced. In this case, the share price, equivalent to the option, is the cumulated market value of both companies without the merger. They applied the real option pricing theory model to a sample of 15 European bank mergers announced between 1995 and 2000 to examine if these were possibly overpaid. The results showed that the option premium exceeded the actual takeover premium suggesting that, those acquisitions were not on average overpaid

Objectives Of The Study

1. To explore the motivations behind Selected Bank Mergers
2. To study the impact of mergers on Post - merger productivity & its relationship with motivation s of mergers.

III. Research Methodology:

This study is based primarily on secondary data. For comparing the pre-post performance eight variables are taken which are Branches, Employees, Deposits per employee, Advances per employee, income, income per employee, income per branch and ROA. For achieving the objective of analyzing the performance of merging banks before & after merger following null hypothesis are formed.

1. H1: There is no change in the number of branches during pre & post merger period.
2. H2: There is no change in the of number of employees during pre & post merger period.
3. H3: There is no change in the Income during pre & post merger period.
4. H4: There is no change in the Income per Branch during pre & post merger period.
5. H5: There is no change in the Income per Employee during pre & post merger period.
6. H6: There is no change in the Deposits per Employee during pre & post merger period.
7. H7: There is no change in the Advances per Employee during pre & post merger period.
8. H8: There is no change in the Return on Assets (RoA) during pre & post merger period.

Period of study: The total period of study is ten years. These ten years period is splited as such that the study includes five years before the merger and five after the merger.

Techniques for Analysis: Various statistical techniques used for the purpose of analysis of data are Mean, Standard Deviation, Compound Growth Rate & T-test.
Analysis of secondary data: Mean, standard deviation, coefficient of variation, Paired t-test and Compound Growth Rate Methods have been computed to measure the performance of banks in terms of all thirteen variables taken for study for each bank merger.

Following formulas have been used for analysis in case of secondary data:
Mean:

$$\overline{X} = \frac{\sum x}{n}$$

Standard Deviation:

$$(\sigma) = \sqrt{\frac{\sum x^2}{n-1}}$$

Coefficient of Variance:

$$C.V = \frac{\sigma}{x} \times 100$$

Compound Growth Rates: The compound growth rates of different indicators of the banks were worked out by applying the regression model in its exponential form as under:

$$Y = ab^t u$$

Where,

Y = a performance indicator
a = a constant term
t = time variable (No. of years under study)
b = regression coefficient of time
u = a random error term

Log transformation of the above function is:

$$\text{In } Y_t = \text{In } a + t\,(\text{In } b) + e$$

Where,

In b = In (1 + r) and
r = [antilog (In b) – 1] x 100
CGR (%) = [antilog (In b) – 1] x 100

IV. Data Analysis & Discussion

Branches: A branch is a banking center or a retail location where a bank, offers a wide range of face-to-face and automated services to its customers. The banks want to increase the geographical penetration so as to increase the business. The effect of mergers on branch network is summarized in table 1 below:

Table-1: Pre & Post Merger Change in Branches

Bank	Period	Mean	SD	t-value	Change in Mean	CGR
OBC with BDB & PCB	Pre	597.60	66.11	14.48 **	270.8	6.81
	Post	868.40	72.05			5.19
BoB with BCB	Pre	2504.20	45.27	10.15**	184.8	1.11
	Post	2689.00	38.65			0.61
UBI with SB	Pre	2029.80	81.37	0.36	20.6	2.52
	Post	2050.40	49.83			-1.27
ICICI with BoM	Pre	40.40	27.92	19.64**	387.6	63.38
	Post	428.00	69.44			10.54
BoB with BSB	Pre	2619.00	68.40	4.22*	120.6	1.59
	Post	2739.60	29.62			0.32
PNB with NB	Pre	3840.80	33.57	14.17**	216.6	0.48
	Post	4057.40	37.90			0.51
BoB with SGLAB	Pre	2689.00	38.65	3.57*	135.8	0.61
	Post	2824.80	105.10			2.22
OBC with GTB	Pre	963.20	40.18	8.63**	291.8	2.66
	Post	1255.00	115.48			5.88
FB with GBK	Pre	440.00	24.82	7.92**	193.2	3.6
	Post	633.20	78.06			7.91
IOB with BOB	Pre	1472.20	36.07	8.65**	479.2	1.43
	Post	1951.40	156.44			4.99
ICICI with TSB	Pre	470.40	77.93	4.13*	1071	11.16
	Post	1541.40	655.28			31.11

The analysis of motivations behind mergers revealed that the increase in number of branches is one of the factors of mergers. The analysis of secondary data also supports this motivation. The above analysis in table: 1 presents that number of branches records an increase in all the banks in terms of mean number of branches. For all bank mergers the t-value ranges from 3.57 to 19.64, which is more than the table value. This indicates that, in all bank mergers (except one that is of UBI with SB) the hypothesis is rejected thus the change in terms of increase in number of branches is significant.

Employees: Human Resource is a very important part of any organization. Any organization can get advantage over its competitors through its talented and dedicated manpower. For an organization satisfaction of its employees is vital for its success. In case of mergers & acquisitions in India it is not happening at the scale as the government expects, one of the reasons for this is opposition from bank employees and unions, which fears there might be cultural issues when two different banks are brought together and overlapping branches would have to be closed. As this study shows that there is an increase in the mean number of employees in various banks after mergers this means that in such banks there is no overlapping in branches but there are few banks in which mean number of employees has been decreased after merger, these are mainly PSBs so the govt. should take acre while giving merger approvals only if it is sure that the deal will be able to cut on duplication in branches, people and infrastructure then only the consolidation will make any sense . It was stated in the article given by Varishti Beniwal in article "The ministry has already discussed the issue with some large banks to figure their prepare dness" 2014 that now is the right time to go for it, as a lot of public sector staff would be retiringinthenexttwo-threeyears.

Table -2: Pre and Post-merger change in Employees

Bank	Period	Mean	SD	t-value	Change in Mean	CGR
OBC with BDB & PCB	Pre	11921.20	880.21	4.83**	2129	4.75
	Post	14050.20	432.55			0.12
BoB with BCB	Pre	45810.80	331.99	1.81	(3325)	0.4
	Post	42485.80	3894.27			-4.63
UBI with SB	Pre	31666.00	1073.49	8.22**	(4550.40)	-1.81
	Post	27115.60	2083.24			-4.17
ICICI with BoM	Pre	715.60	414.15	4.80**	10364.20	44.94
	Post	11079.80	5233.64			39.74
BoB with BSB	Pre	44887.00	3373.06	4.06*	(5489.80)	-3.23
	Post	39397.20	722.11			-1.13
PNB with NB	Pre	62641.00	4214.98	2.56	(4266.60)	-3.93
	Post	58374.40	653.29			-0.64
BoB with SGLAB	Pre	42485.80	3894.27	3.04*	(4324.60)	-4.63
	Post	38161.20	1204.52			-1.93
OBC with GTB	Pre	13734.00	372.85	4.63**	1009	-1.21
	Post	14743.00	151.51			0.02
FB with GBK	Pre	6332.00	104.85	2.26	908.40	0.81
	Post	7240.40	987.39			8.94
IOB with BOB	Pre	24411.60	179.26	1.64	919.40	-0.44
	Post	25331.00	1122.37			2.28
ICICI with TSB	Pre	15277.40	6807.89	9.54**	24888.20	32.74
	Post	40165.60	9805.59			9.74

The analysis of mean value in case of number of employees shows a decrease in five bank mergers and increase in six bank mergers. The t-value in case of the merger of UBI with SB is 8.22 and t-value of BOB with BSB is 4.06. Both these t-values are more than the table values & hence the hypothesis is rejected for these two banks and decrease in number of employees in these two banks is thus significant. The other two banks in which the mean number of employees decreased are BOB with BCB with t-value 1.81 and PNB with NB with t-value 2.56, both the t-values are less than the table values & therefore the hypothesis is accepted that the change is not significant. Out of the six banks which shows an increase in the mean value for the number of employees after the merger, two bank mergers i.e. FB with GBK and IOB with BoB having t-value 2.26 and 1.64 respectively less than the table value shows that the hypothesis is accepted for these two banks & the change i.e. increase is insignificant. The remaining four banks have t-values between 4.63 to 9.54 which are greater than the table values, consequently the hypothesis is rejected and the change leading to increase is significant.

Income: It comprises of the total income i.e. interest income plus other incomes of the bank.

Table -3: Pre and Post-merger change in Income

Bank	Period	Mean	SD	t-value	Change in Mean	CGR
	Pre	726.40	274.41	7.19 **	1414	26.24
OBC with BDB & PCB	Post	2140.40	706.49			23.67
BoB with BCB	Pre	4342.20	760.90	46.90**	2557.67	11.65
	Post	6899.87	777.21			7.45
UBI with SB	Pre	2447.20	535.72	20.11**	2083.30	15.28
	Post	4530.50	725.28			10.75
ICICI with BoM	Pre	477.00	369.70	3.23*	7823.18	66.8
	Post	8300.18	5691.14			78.99
BoB with BSB	Pre	5877.60	876.66	8.36**	2451.93	10.03
	Post	8329.53	1196.68			7.7
PNB with NB	Pre	5954.40	1219.96	19.64**	4505.45	13.7

	Post	10459.85	1592.99			9.46
BoB with SGLAB	Pre	6899.87	777.21	3.02*	4727.34	7..44
	Post	11627.21	4226.68			24.41
OBC with GTB	Pre	3355.38	516.81	3.58*	3024.54	10.17
	Post	6379.92	2363.16			25.2
FB with GBK	Pre	1431.06	149.35	5.33**	2092.66	5.97
	Post	3523.72	1005.16			21.15
IOB with BOB	Pre	4417.33	573.12	5.90**	5772.23	8.6
	Post	10189.56	2745.00			19.54
ICICI with TSB	Pre	11761.30	5754.70	8.92**	22843.78	47.42
	Post	34605.08	4469.61			0.64

The study of income shows significant increase in all the eleven banks, as the t-value ranges from 3.02 to 46.90 which is greater than table values rendering the hypothesis rejected for all the bank mergers. This shows that the banks are able to increase their income through mergers.

Income per Branch: The next variable is Income per branch.

Table -4: Pre and Post-merger change in Income per Branch

Bank	Period	Mean	SD	t-value	Change in Mean	CGR
	Pre	1.19	0.32	8.54**	1.24	18.18
OBC with BDB & PCB	Post	2.43	0.64			17.58
BoB with BCB	Pre	1.73	0.27	47.38**	0.83	10.42
	Post	2.56	0.27			6.79
UBI with SB	Pre	1.20	0.22	12.10**	1.02	12.44
	Post	2.22	0.40			12.18
ICICI with BoM	Pre	11.49	1.18	1.30	6.58	2.09
	Post	18.07	11.27			61.92
BoB with BSB	Pre	2.24	0.28	8.05**	0.80	8.31
	Post	3.04	0.42			7.35
PNB with NB	Pre	1.55	0.31	22.85**	1.03	13.15
	Post	2.58	0.37			8.91
BoB with SGLAB	Pre	2.56	0.27	3.16*	1.52	6.79
	Post	4.08	1.32			21.71
OBC with GTB	Pre	3.47	0.40	3.22*	1.52	7.31
	Post	4.99	1.39			18.24
FB with GBK	Pre	3.25	0.19	5.17**	2.23	2.29
	Post	5.48	1.06			12.27
IOB with BOB	Pre	2.99	0.32	6.29**	2.18	7.07
	Post	5.17	1.07			13.86
ICICI with TSB	Pre	23.87	9.63	0.22	1.84	32.63
	Post	25.71	9.86			-23.24

The next variable is Income per Branch, which shows an increase in all the banks. This increase is significant in nine banks with t-value ranges from 3.16 to 47.38 which is greater than the table values rendering hypothesis rejected. The two bank merger i.e ICICI with BoM having t-value 1.30 and merger of ICICI with TSB having t-value 0.22 these two t-values are less than the table values leading to acceptance of hypothesis. Hence the increase in income per branch in these two banks is not significant.

Income per Employee: Income per employee takes the company's income from the income statement and divides it by the number of employees needed to produce this income. Income per employee measures management's ability to use their employee resources effectively to create profits for the company. When making a comparison between two companies, the business with the higher value for income per employee is the more efficient organization. This can be used for drawing conclusions about the relative performance of a company.

Table -5: Pre and Post-merger change in Income per Employee

Bank	Period	Mean	SD	t-value	Change in Mean	CGR
OBC with BDB & PCB	Pre	0.06	0.02	6.21**	0.09	20.51
	Post	0.15	0.05			23.52
BoB with BCB	Pre	0.09	0.02	9.03**	0.07	11.2
	Post	0.16	0.03			12.67
UBI with SB	Pre	0.08	0.02	10.70**	0.09	17.41
	Post	0.17	0.04			15.58
ICICI with BoM	Pre	0.61	0.14	0.52	0.06	15.08
	Post	0.67	0.33			28.09

BoB with BSB	Pre	0.13	0.03	24.49**	0.08	13.71
	Post	0.21	0.03			8.93
PNB with NB	Pre	0.10	0.03	21.01**	0.08	18.35
	Post	0.18	0.03			10.17
BoBwith SGLAB	Pre	0.16	0.03	3.34*	0.15	12.67
	Post	0.31	0.12			26.86
OBC with GTB	Pre	0.25	0.04	3.38*	0.18	11.52
	Post	0.43	0.16			25.17
FB with GBK	Pre	0.23	0.02	8.63**	0.25	5.12
	Post	0.48	0.08			11.21
IOB with BOB	Pre	0.18	0.02	6.61**	0.22	9.09
	Post	0.40	0.10			16.88
ICICI with TSB	Pre	0.75	0.27	1.13	0.14	11.06
	Post	0.89	0.20			-8.3

The next variable of the study is Income per Employee shows an increase in all the bank mergers. This increase is significant in nine bank merger as their t-value ranges from 3.34 to 24.49 and these t-values are more than the table values rendering to rejection of hypothesis. Two banks that is ICICI with TSB with t-value 1.13 and ICICI with BoM with t-value 0.52 have insignificant change as these t-values are less than the table values leading to acceptance of hypothesis.

Deposit per Employee: This ratio reveals the deposit collection of employees. Higher the ratio higher will be the employees' productivity.

Table -6: Pre and Post-merger change in Deposits per Employee

Bank	Period	Mean	SD	t-value	Change in Mean	CGR
OBC with BDB & PCB	Pre	0.47	0.13	5.53**	0.76	19.1
	Post	1.23	0.44			25.98
BoB with BCB	Pre	0.74	0.16	8.98**	0.73	14.32
	Post	1.47	0.32			14.87
UBI with SB	Pre	0.66	0.17	8.94**	0.84	17.84
	Post	1.50	0.38			17.91
ICICI with BoM	Pre	4.80	2.20	0.45	(0.30)	35.08
	Post	4.50	0.76			10.76
BoB with BSB	Pre	1.13	0.28	7.10**	1.11	15.44
	Post	2.24	0.63			17.66
PNB with NB	Pre	0.79	0.24	10.37**	1.02	21.18
	Post	1.81	0.46			17.32
BoBwith SGLAB	Pre	1.47	0.32	5.59**	1.94	14.87
	Post	3.41	1.30			22.76
OBC with GTB	Pre	2.06	0.41	7.60**	2.53	13.53
	Post	4.59	1.43			16.14
FB with GBK	Pre	2.09	0.53	53.01**	2.24	17.94
	Post	4.33	0.59			8.91
IOB with BOB	Pre	1.68	0.30	6.51**	2.26	12.26
	Post	3.94	1.06			16.69
ICICI with TSB	Pre	5.07	0.98	0.79	0.72	12.44
	Post	5.79	1.11			- 10.98

As regards Deposits per employee the mean values, shows an increase in all the eleven bank mergers. The t-value analysis shows that this increase is significant in all banks except two in which the increase is insignificant these are ICICI with TSB having t-value 0.79 and ICICI with BoM having t-value 0.45, these two t-values are less than the table values leading to acceptance of hypothesis. The t-value for the bank mergers in which the increase is significant ranges from 5.53 to 53.01 and this is greater than the table values leading to rejection of hypothesis

Advances per Employee: This ratio revels the contact and convincing skills of the employees to disburse and invest the amount deposited. This only ultimately results in the interest earning capacity of a bank. The deposits cannot be maintained unless they are advanced for productive use by the people. As this entails involvement of employee time, this also is considered as a ratio to measure the productivity. Higher the ratio, higher the productivity.

Table -7: Pre and Post-merger change in Advances per Employee

Bank	Period	Mean	SD	t-value	Change in Mean	CGR
OBC with BDB & PCB	Pre	0.24	0.08	6.98**	0.32	21.51

	Post	0.56	0.18			22.31
BoB with BCB	Pre	0.39	0.06	5.88**	.0.36	9.1
	Post	0.75	0.18			16
UBI with SB	Pre	0.29	005	5.54**	0.53	12.8
	Post	0.82	0.27			23.99
ICICI with BoM	Pre	2.19	0.38	2.75*	2.19	7.39
	Post	4.38	1.69			22.89
BoB with BSB	Pre	0.57	0.17	4.43**	0.75	17.97
	Post	1.32	0.55			26.57
PNB with NB	Pre	0.39	0.14	6.14**	0.71	26
	Post	1.10	0.40			25.53
BoBwith SGLAB	Pre	0.75	0.18	3.63*	1.57	16
	Post	2.32	1.12			37.17
OBC with GTB	Pre	0.84	0.50	5.39**	2.23	21.69
	Post	3.07	1.16			28.09
FB with GBK	Pre	1.25	0.39	23.82**	1.88	20.95
	Post	3.13	0.52			10.78
IOB with BOB	Pre	0.93	0.33	2.17	1.22	23.01
	Post	2.15	1.03			-23.8
ICICI with TSB	Pre	5.23	0.66	0.18	0.10	-0.25
	Post	5.33	0.96			-9.06

The next variable Advances per Employee shows an increase in all the eleven bank mergers. This increase is insignificant in two banks these two are IOB with BOB having t-value 2.17 and ICICI with TSB having t-value 0.18 as these two t-values are less than the table that's why hypothesis in case of these two banks is accepted. The t-value of nine bank mergers other than these two lies between 2.75 to 23.82 which is greater than table value so the hypothesis is rejected and the increase in these nine banks is significant.

Return on Assets: An indicator of how profitable a company is relative to its total assets. ROA gives an idea as to how efficient management is at using its assets to generate earnings. It is a financial performance ratio which indicates the performance of the banks.

Table-8: Pre and Post-merger change in Return on Assets (RoA)

Bank	Period	Mean	SD	t-value	Change in Mean	CGR
OBC with BDB & PCB	Pre	0.93	0.54	0.80	0.29	34.4
	Post	1.22	0.30			-15.02
BoB with BCB	Pre	0.74	0.18	1.26	0.13	13.5
	Post	0.87	0.29			15.29
UBI with SB	Pre	0.70	0.28	0.17	0.03	5.34
	Post	0.73	0.41			47.21
ICICI with BoM	Pre	1.75	0.92	1.22	(0.75)	-28.56
	Post	1.00	0.49			33.35
BoB with BSB	Pre	0.78	0.21	0.32	0.09	-11.46
	Post	0.87	0.47			108.81
PNB with NB	Pre	0.70	0.42	1.89	0.37	-52.62
	Post	1.07	0.07			1.09
BoBwith SGLAB	Pre	0.87	0.29	0.02	(0.01)	15.29
	Post	0.86	0.14			9.05
OBC with GTB	Pre	1.17	0.35	0.42	0.13	14.52
	Post	1.30	0.44			-17.81
FB with GBK	Pre	1.33	0.97	0.01	0.01	-18.43
	Post	1.34	0.12			-2.09
IOB with BOB	Pre	1.29	0.29	1.36	(0.28)	-3.11
	Post	1.01	0.37			-19.72
ICICI with TSB	Pre	1.09	0.49	0.12	0.03	44.03
	Post	1.12	0.15			6.28

The literature reviewed suggested some researches which says that there was no effect of mergers on ROA (Bhavesh Chadamiya et el 2010) and some says that post merger profitability including ROA has improved. (Antony Akhil , 2011). The results of this paper show that there is an increase in ROA but that change is not significant as shown in table 7. The analysis illustrates that the Pre & Post mean values of Return on Assets (ROA) records an increase in all the bank mergers except one bank i.e. BOB with SGLAB. All these banks showing increase in mean value are having t-value ranges from 0.01 to 1.89. These t-values are less than the table values so hypothesis is accepted and the increase in mean value of ROA in pre & post period in all these banks is insignificant.

Table- 9: Consolidated CGR of different variables

Bank	Branches	Employees	Income	Income/ Branch	Income/ Employee	Deposit/ Employee	Advances/ employee	ROA
OBC with BDB & PCB	6.81	4.75	26.24	18.18	20.51	19.1	21.51	34.4
	5.19	0.12	23.67	17.58	23.52	25.98	22.31	-15.02
BoB with BCB	1.11	0.4	11.65	10.42	11.2	14.32	9.1	13.5
	0.61	-4.63	7.45	6.79	12.67	14.87	16	15.29
UBI with SB	2.52	-1.81	15.28	12.44	17.41	17.84	12.8	5.34
	-1.27	-4.17	10.75	12.18	15.58	17.91	23.99	47.21
ICICI with BoM	63.38	44.94	66.8	2.09	15.08	35.08	7.39	-28.56
	10.54	39.74	78.99	61.92	28.09	10.76	22.89	33.35
BoB with BSB	1.59	-3.23	10.03	8.31	13.71	15.44	17.97	-11.46
	0.32	-1.13	7.7	7.35	8.93	17.66	26.57	108.81
PNB with NB	0.48	-3.93	13.7	13.15	18.35	21.18	26	-52.62
	0.51	-0.64	9.46	8.91	10.17	17.32	25.53	1.09
BoB with SGLAB	0.61	-4.63	7.44	6.79	12.67	14.87	16	15.29
	2.22	-1.93	24.41	21.71	26.86	22.76	37.17	9.05
OBC with GTB	2.66	-1.21	10.17	7.31	11.52	13.53	21.69	14.52
	5.88	0.02	25.2	18.24	25.17	16.14	28.09	-17.81
FB with GBK	3.6	0.81	5.97	2.29	5.12	17.94	20.95	-18.43
	7.91	8.94	21.15	12.27	11.21	8.91	10.78	-2.09
IOB with BOB	1.43	-0.44	8.6	7.07	9.09	12.26	23.01	-3.11
	4.99	2.28	19.54	13.86	16.88	16.69	-23.8	-19.72
ICICI with TSB	11.16	32.74	47.42	32.63	11.06	12.44	-0.25	44.03
	31.11	9.74	0.64	-23.24	-8.3	-10.98	-9.06	6.28

Emerging Strategies & Implications For Upcoming Mergers In Banking Sector

The analysis in this paper shows that its better for the banks to merge in the same sector as majority of the mergers in the same sector performed well. The analysis shows that barring few cases, in all the mergers most of the variables except ROA under the study have shown significant improvement after merger in the books of acquiring banks. It is suggested that the acquiring banks should curtail the quantum of assets in the post merger period. The banks should take care of their Assets. They should manage the assets properly. In public sector ,the best merger is that of BoB with BSB & in Private sector the best merger is of ICICI with BoM. In both the cases the acquiring banks followed the strategy of downsizing the number of branches & number of employees in the pre merger period & continued with this downsizing strategy even after mergers. It is also observed that immediately after merger, branch growth rate is slow & employee growth also decline.

It is also observed that growth rate of Return on Assets decline where branch size increases. Banks are advised not to go for increasing the branch size immediately after the merger as it affects the ROA.

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