

MERGER BETWEEN GLOBAL TRUST BANK (GTB) AND ORIENTAL BANK OF COMMERCE (OBC)

Dr. Sangita Ghosh

Research Scholar,

Department of Commerce, Vidyasagar University

E-mail: sghosh4545@gmail.com

Merger is a combination of two or more companies into one company. In banking industry when two or more banks pool their resources together then merger took place. In this study through ratio analysis and principal component analysis, I have examined the impact of merger on the transferee bank's performances. Here transferee bank is Oriental Bank of Commerce, whose liquidity, profitability and efficiency position increases in post merger period than pre-merger period, and overall performance has improved significantly.

Key words: Merger, Acquisition, Transferor bank and Transferee bank

1. Introduction

In India, the New Economic Policy and subsequently, the financial reforms, the competitiveness among the corporate bodies and the banking institutions has grown to such a point that many financially not- so-strong or rather weak firms have either merged or one company has acquired another in order to effectively face the growing competition and strengthen their strengths to meet threats and materialize different opportunities. In this study an attempt has been done to analyze the change in performance of the banks due to merger.

1.1 Literature Review

Some of the important literatures in the area of merger and related issues are discussed below. Angelidis and Lyroudi (2006), had studied productivity of the Italian Banking system, and examine the impact of bank size on its performance. Ojose and Dacanay (2007) had studied the technical efficiency of Philippine Commercial Banks in post Asian Financial crisis period through Data Envelope analysis. They had found that bank had improved their productivity, efficiency in post merger period. Universal Banks are more technically efficient than simple commercial banks due to scope of more return earning via economy of scale. Nazir and Atia, (Jan2010), had studied on operating efficiency on 28 Pakistani Commercial Banks at the juncture

of the privatization. The study revealed that privatisation could not help banks in improving their operating income. Public sector banks had more control on interest and operating expenses. State controlled banks efficiency had improved, but private sector banks had declined. Vidye (2011) had compared efficiency of public, private and foreign banks and also measured change in productivity of those banks. Public sector banks from technical and operational efficiency point of view were much ahead than private and foreign banks. Foreign banks had improved their efficiency gradually. Sinha (2011) had found temporary differences in performances between public sector Banks and Private sector Bank. They had used Data Envelop analysis and found that in year 2001 to 2006, there was a declining trend of public and private sector banks technical efficiency. Mohaman (2012) had focused on technical efficiency measurement of the banks during 1992-2009. He had found that there was a positive relationship between banks profitability and technical efficiency. It was also found that Islamic banks were more efficient in exploiting their resources than other banks. Nedunchezian and Premalatha (2014) in their article on “Analysis of Pre and Post Merger Public sector Bank efficiency: ADE” published in IJARS (vol.3, issue-1) had focused on the comparative of performance assessment of some selected commercial banks. They had found that in post merger banks performances were better than pre merger. Efficiency of the selected banks was increased in post merger period. Sinha and Gupta (2011) had compared the Banks performance between pre and post merger period. They had mention that in post merger period there were improvement of EBIT, EPS, Interest coverage, Current ratio and Cost efficiency during post merger period in relation to pre merger period. Goyal and Joshhi (2011) in their article had given an overview on Indian banking performance in post merger period. They had mentioned that some banks had accepted merger as an expansion strategy to tap the rural market. The article also highlighted on the advantages of merger in banking industry. Sony and Kumar (2010), in their article had focused on the strategic and financial similarities of merged banks to get synergetic benefit. They pointed out that private sector banks had adopted voluntary merger strategy, but Public sector banks were reluctant. They told that one of the aims of merger is to attain optimum capital structure.

From the literature review summary we can write

- Most of the articles had mentioned the strategies behind merger and acquisition
- Few articles had measured the pre-merger and post merger performances of the acquiring banks on the basis of financial ratio analysis only

- Few articles had mentioned various types of efficiency improvement like technical, operational efficiency due to merger of the purchasing bank.

1.1. Research Gap:

Few articles had measured pre- and post- merger performance of the selected acquiring banks on the basis of ratio analysis. It is also found that in most cases there was no trend of the ratios; in such case they had not used principal component analysis to identify the leading ratio responsible for change in liquidity, efficiency and profitability performance of the purchasing bank due to merger.

1.2. Objectives of the Study:

The main objectives of the study are:

- To measure the performance of the selected acquiring banks in terms of their profitability, liquidity, operating efficiency etc. both in the pre- and post- merger period;
- To compare the performances of the purchasing bank (Oriental Bank of Commerce) between pre- and post-merger period and to assess the impact of merger on the acquiring bank's efficiency.

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1.4. Sources of data and methods for analysis of financial strength and weaknesses of the banks

Financial analysis is the process of identifying the financial strength and weaknesses of any institution by properly establishing relationship by means of ratios between the items of its balance sheet and profit and loss account. Ratio analysis is the most widely used tool of financial analysis. We apply this ratio analysis for evaluating the financial strength and weaknesses of the selected merged banks. The objectives of financial analysis are:

- i) to determine the financial soundness and solvency of the bank, i.e., the liquidity of the bank,
- ii) to assess the profitability of the bank,
- iii) to measure the operational efficiency of the bank,
- iv) to do intra-bank comparison etc.

A ratio is a quotient of two numbers representing certain characteristics of two variables and is an expression of relationship between the two variables. Ratio analysis indicates a quantitative relationship, which is used for a qualified judgment and decision-making. In this study we have judged bank's liquidity position using three ratios, namely, current ratio, liquid ratio and absolute liquid ratio. Current ratio indicates the bank's ability to pay its current liabilities. The formula for current ratio is current assets divided by current liabilities. Current assets consist of (1) cash and balances with R.B.I., (2) balances with banks, (3) money at call and short notice, (4) advances except long term loans and (5) other assets. Current liabilities consist of (1) demand deposit, (2) savings bank deposits, and (3) other liabilities and provisions. The standard norm of current ratio is 2:1. In case of banking industry the standard norm of 1.5:1 is considered as satisfactory because cash and marketable securities constitute 10% of total current assets. Current ratio is a liberal test of a bank's ability to meet its current liabilities, whereas liquid ratio is a more stringent test of a bank's ability to meet its current liabilities. The formula for liquid ratio is liquid assets divided by liquid liabilities. Liquid assets are defined as current assets less other assets. Liquid liabilities are current liabilities less other liabilities and provisions. As the conversion of other assets into cash takes time, it is excluded from current assets in order to arrive at the amount of liquid asset. Other liabilities and provisions are excluded from current liabilities because these are not immediate liabilities. Liquid ratio is a true test of business solvency. The rule of thumb for Liquid Ratio is 1:1. Higher ratio (i.e. greater than 1:1) indicates sound financial position and lower ratio (i.e. smaller than 1:1) indicates financial difficulty. Absolute liquid ratio is still a more stringent test of liquidity. It may not be possible to realize amounts from all the loanees and hence the amount of loans and advances is treated as non-liquid asset. The formula for absolute liquid ratio is quick asset divided by liquid liabilities. Quick assets consist of cash and balances with R.B.I., balances with other banks and money at call and short notice. The standard norm of Absolute Liquid Ratio is 0.5:1.

In this study we have measured banks profitability position using eight ratios, namely, Earning per share (EPS), Dividend per share (DPS), Net Asset Value per share, Dividend Pay-out ratio. Profitability ratios indicate the relationship between different components of profit on total revenue. It is useful to the investors in judging the prospects of return on their investments. It indicates the degree of efficiency of the Loans and Advance department, Deposit department, Investment department etc. and also the degree of cost control. Earning per share indicates how much earning is available to per shareholder; Dividend per Share indicates how much total dividend available to per shareholder of the bank by deploying fund. Higher the ratio, higher is the t earning capacity of the bank and vice versa. EPS is calculated by dividing total earnings by number of shareholders. Similarly DPS is calculated by dividing total divided by number of shareholders Financial cost percentage indicates the interest burden of the bank on deposits and borrowings in relation to deployed average working fund. Financial cost ratio is defined as the ratio of interest spent on deposits and borrowings to average working fund. The higher percentage indicates greater interest burden on the bank and vice versa. Risk cost ratio indicates the risk management capacity of the bank. It establishes the relationship between risk cost (i.e., provisions during the year) and average working fund. The higher the risk cost percentage, the greater is the risk on investment and vice versa. Operating expense ratio indicates the relationship between operating expense and average working fund. Operating expense includes all expenses except the amount of interest expended. Higher operating expense ratio indicates lower profitability and inefficiency in respect of cost controlling capacity of the bank and vice versa. Miscellaneous income ratio indicates the non-funding income earning capacity of the bank. It is the ratio of miscellaneous income including commission to average working fund. Miscellaneous income of the banks includes locker rent, commission etc. Employee cost to total cost shows the relationship between employee cost and total cost. The higher ratio of employee cost to total cost indicates that the employee cost has a large share in the total cost and to improve the profitability position of the bank this cost is to be controlled. Ratio of interest cost to total cost establishes the relationship between interest cost and total cost. Similarly, the ratio of interest income to total income shows the relationship between interest income and total income. It shows whether the interest income is the major income source in total income or not.

In this study we have also judged bank's performance efficiency using efficiency ratio includes Cost – Income ratio and Operational Cost to Total Asset ratio. The primary function

of banking institution is to mobilize resources collected through deposits and borrowing and lending the same to the borrowers thereby making a profit after meeting its fixed and variable costs. The ratios utilized here are to find out the diligence of the banks in these functions. The ratios are worked out by relating actual costs to returns. Operational Cost to Total Assets ratio is calculated using the formula operational cost divided by total operational assets .It indicates the total asset management ability of the organization. The aim of the management should be to keep the operational cost of fund lower. Credit-deposit ratio is obtained by dividing total loans and advances outstanding by total deposit outstanding. It indicates the fund deploying capacity of the bank through loans and advances. Operational ratio includes Return On Asset% (ROA %) and Return On Equity % (ROE %).

Margin ratio includes yield on Investment, Yield on advances and Spread.

Capital Adequacy ratio (CAR) includes CAR (Basle-I) and CAR (Basle-II).

Growth ratio includes Net Profit growth and Advances growth.

Liquidity ratio includes CD ratio, Interest expended to Interest earned, Investment to Deposit ratio. Asset quality includes Net NPA to Net Advances.

1.5. Major Findings of the Study:

Merger between Global Trust Bank (GTB) and Oriental Bank of Commerce (OBC) had took place in the year 2005. The main objective of this merger was to expansion of business.

1.5.1. Operational or Financial ratio:

In operational ratio analysis it is found that since 1997 up to year 2000, EPS of GTB was in rising trend, but since 2001 to 2003, it was in decreasing trend, consequently Dividend per share and Dividend payout ratio of this bank also in increasing up to year 2000 and since 2001 it was in declining trend (see Table-1).

But in OBC bank EPS was in rising trend up to year 2005, then it had fluctuated time to time. In case of Dividend per share there was an increasing trend up to year 2012 and then fluctuated. In Dividend payout ratio it was found that it was fluctuated time to time up to year 2005, after that it was around 20% p.a.(see Table-7)

1.5.2. Margin ratio:

In margin ratio analysis of GTB it was found that in first 3 years (1997 to 1999), there was no trend on Yield on advance, but since 2000 it was in rising trend. In case of Yield on investment analysis up to year 2001 there was a declining trend. In Interest spread analysis ratio, it was fluctuated time to time (see Table-2).

In OBC bank Yield on Advance and Yield on Investment were fluctuated time to time, there was no discernable trend. Interest spread ratio, it was also fluctuated time to time, but in post merger period it was around 6% (see Table-8).

1.5. 3. Performance ratio:

In performance ratio analysis of GTB, it was found that in both ROA(%) and ROE(%), there was a declining trend over the study period (see Table-3), but in OBC bank, there was no trend of both ROA (%) and ROE(%) (see Table-9).

1.5. 4. Capitalization ratio:

In Global Trust Bank there was no capitalization ratio data (see Table-4). But in OBC Bank Capital adequacy ratio of Basel I was always above the standard norm, the trend of CAR as per Basel I was fluctuated time to time over the study period. In case of CAR as per Basel II norms, it was always below the standard norm (15%) and it was also fluctuated time to time (see Table-10)

1.5.5. Efficiency ratio:

In efficiency ratio analysis of GTB, CD ratio was declined over the study period. Operating cost ratio was declined up to year 2000, but then it was raised (see Table-5).

In case of OBC Bank CD ratio was fluctuated time to time over the study period, but in post merger period CD ratio was comparatively better than pre merger period. In Operating cost to Total asset ratio of OBC Bank there was a decline trend and this ratio was much longer in post merger period than pre merger (see Table-11).

1.5. 6. Liquid ratio:

In liquid ratio analysis of GTB Bank, it was found that there was no discernable trend of cash to deposit and loan to deposit ratios (see Table-6).

But in OBC Bank cash to deposit ratio was fluctuated time to time. But in post merger period loan to deposit ratio was inclined (see Table-12)

In case of merging between **Global Trust Bank** and **Oriental Bank of Commerce**, it was found that in both the banks all the three Operational ratios were fluctuated time to time over the study period.

1.5.7. Principal Component analysis of Liquidity, Profitability, Efficiency and overall performance position of the transferee banks

In the above section the bank's liquidity, profitability and efficiency positions had been analyzed by using the relevant ratios for each of these positions and the performance of the bank was assessed on the basis of these positions. But it can be safely said that not all these three factors with their all constituent ratios are not equally important in determining performance of the bank. Someone of these factors may be more important than others in the sense of its explaining power or predictive power. Further, all the ratios may not move in the same direction to derive valid conclusion. An attempt is made here to club the homogeneous ratios in the form of either liquidity or profitability or efficiency ratio through factor analysis and then special type of regression equation (namely regression equation with dummy dependent variable) has been estimated to assess the performance of the bank over time.

Factor Analysis of Oriental Bank of Commerce

Liquidity Factor:

To construct liquidity factor, two ratios namely, current ratio, Cash ratio have been clubbed through factor analysis and it is observed from the table below that first principal component (or factor) represents 92.37% of the total sampling variations of the two related ratios and its Eigen value is 1.12. As the Eigen value of the first factor is highest and more than 1, so according to Kaiser's criterion only second principal component is to be chosen as the liquidity factor. It should be mentioned in this connection that according to Kaiser's criterion only those principal components will be chosen whose Eigen values are greater than one. Further Bartlett's test of sphericity is estimated to be 46.3, which is found to be significant at 1% probability level; this implies that here principal component analysis is a fruitful exercise in clubbing the basic ratios (e.g. current ratio, Cash ratio, Cash to Deposit and Loan to Deposit ratio). From the values of the last column of the table (related to factor matrix in factor 1) it is also observed that in the

constructed first principal component the contributions of the basic four ratios are very high (more than 80%).

Factor (F)	Eigen value	Percent of variation	Factor Matrix in Factor 1
1	1.12	92.37	.8216 (Current ratio)
2	.135	7.63	.8521 (Cash ratio)

Bartlett's test of sphericity is estimated to be 46.3*

Efficiency Factor:

To construct principal component for efficiency factor, three basic variables, namely, Credit Deposit ratio, Operating Cost to Total Asset, NPA to Total Advance ratio have been clubbed and applying Kaiser's criterion (Eigen value >1), first principal component has been selected as efficiency factor which represents more than 97.49% of the sample variations of the related basic three variables (see the following table). Further, Bartlett's test of sphericity is estimated to be 27.29, which is found to be significant at 1% probability level, implying that principal component analysis is here required to club the variables of efficiency ratio.

Factor (F)	Eigen value	Percent of variation	Factor Matrix in Factor 1
1	2.561	98.43	.817 (Credit-Deposit ratio)
2	1.93	1.52	.848 (Operating Cost to Total Assets)
3	.058	.05	.836 (NPA to Total Advance)

Bartlett's test of sphericity = 27.29*

In the constructed principal component for efficiency factor, the contributions of the basic variables are more than 80% (being positive or negative according to their nature).

Profitability Factor:

Similarly, through factor analysis, the principal component for profitability factor has been constructed and the results are presented in the following table. Here Bartlett's test of sphericity is estimated to be 78.441, which is found to be significant at 1% probability level and so principal component analysis may be statistically accepted here.

Factor (F)	Eigen value	Percent of variation	Factor Matrix in Factor 1
1	3.112	95.85	.8565 (Yield on advance)
2	2.15	3.74	.8802 (Yield on Investment)
3	.23	.41	.808 (Interest spread)

Bartlett’s test of sphericity =78.441*

On the basis of Kaiser’s criterion (Eigen value >1), first principal component has been selected and it explains 95.85% of the total sampling variation of the basic variables. The constructed principal component signifies the combined effect of the profitability ratios and in this principal component contributions of the basic variables are not less than 80% (see last column of the table).

Performance Factor:

Similarly, through factor analysis, the principal component for Performance factor has been constructed and the results are presented in the following table. Here Bartlett’s test of sphericity is estimated to be 31.676, which is found to be significant at 1% probability level and so principal component analysis may be statistically accepted here.

Factor (F)	Eigen value	Percent of variation	Factor Matrix in Factor 1
1	1.563	99.93	.869 (Return on assets)
2	.025	.07	.885 (Yield on Capital Employed)

Bartlett’s test of sphericity =31.676*

On the basis of Kaiser’s criterion (Eigen value >1), second principal component has been selected and it explains 99.93% of the total sampling variation of the basic variables. The constructed principal component signifies the combined effect of the profitability ratios and in this principal component contributions of the basic variables are not less than 85% (see last column of the table).

Let F₁, F₂ and F₃, F₄ be the constructed principal components representing the liquidity, efficiency, profitability and Performance conditions of the bank respectively.

After the construction of the principal components, regression of Dichotomous dependent variable (D which is ‘0’ for pre-liberal and ‘1’ for liberal period) has been estimated on the respective first principal components of liquidity (F₁), efficiency (F₂), profitability (F₃) and Performance (F₄). The estimated regression results are presented below:

$$\bar{R}^2 = .740*$$

$$[F=1.604]$$

$$D = -23.208^{**} -5.192F_1^{69.6\%} +.357F_2^* +.348F_3^{***} +.157F_4^{***}$$

(11.104) (0.015) (0.113) (0.196) (0.329)

$$DW=.974$$

Finally from the regression result it is observed that, Efficiency, Profitability and Overall Performance of the bank increases significantly between pre-merger and merger period; but Liquidity of Oriental Bank of Commerce remains unchanged between pre-merger and merger period.

1.6. Conclusion

The basic objective of merger between Global Trust Bank and Oriental Bank of Commerce was expansion of business. From the analysis of performance of purchasing bank i.e. Oriental Bank it is found that efficiency , profitability and overall performance had increased in post merger period in comparison with pre-merger period; but liquidity position remain unchanged.

Table-1: Operational / Financial Ratio Analysis of Global Trust Bank

Year	Earning per share	Dividend per share
1997	5.52	1.5
1998	7.71	1.8
1999	6.81	2
2000	8.95	2.2
2001	1.5	1.5
2002	3.32	1
2003	-22.47	0

Source: Computed by the author

Table-2: Margin Ratio Analysis of Global Trust Bank

Year	Yield on advances	Yield on Investment	Interest Spread
1997	24.4	11.76	12.17
1998	22.44	12.93	12.73
1999	23.19	11.09	13.62
2000	20.13	10.48	12.44
2001	21.89	10.46	13.53
2002	23.88	14.47	14.11
2003	16.47	12.41	9.02

Source: Computed by the author

Table-3: Performance Ratio analysis of Global Trust Bank

Year	Return on Asset (ROA)	ROE (%)
1997	2.16	31.24
1998	2.49	37.67
1999	1.58	26.64
2000	1.71	26.54
2001	0.94	14.39
2002	0.48	8.19
2003	-3.71	-137.46

Source: Computed by the author

Table-5: Efficiency Ratio Analysis of Global Trust Bank

Year	CD Ratio	Operating cost to Total Asset
1997	64.16	2.01
1998	53.44	1.88
1999	51.71	1.83
2000	51.8	1.65
2001	53.01	1.73
2002	47.07	2.32
2003	47.34	2.39

Source: Computed by the author

Table-6: Liquid Ratio Analysis of Global Trust Bank

Year	Cash to Deposit	Loan to Deposit
1997	0.11	0.04
1998	0.09	0.01
1999	0.12	0.12
2000	0.8	0.06
2001	0.09	0.08
2002	0.08	0.01
2003	0.11	0

Source: Computed by the author

Table- 5.5.7: Operational / Financial Ratio Analysis of Oriental Bank of Commerce

Year	EPS	DPS	D/P
1996	8.97	2.5	27.86
1997	9.36	2.5	26.71
1998	10.91	3	27.51

1999	11.95	3.5	29.28
2000	14.47	3.5	24.19
2001	10.54	3.5	33.22
2002	16.65	3.5	21.02
2003	23.73	4.5	18.96
2004	35.63	5	14.03
2005	37.71	3	7.96
2006	22.24	4.5	20.24
2007	23.18	4.7	20.27
2008	14.1	4.7	33.34
2009	35.54	7.3	20.54
2010	45.29	9.1	20.09
2011	51.51	10.4	20.19
2012	39.13	7.9	20.19
2013	45.51	9.2	20.21
2014	38	7.6	20

Source: Computed by the author

Table-8: Margin Ratio Analysis of Oriental Bank of Commerce

Year	Yield on advances	Yield on Investment	Interest Spread
1996	21.96	11.3	15.22
1997	25.29	11.3	17.71
1998	23.08	11.47	15.79
1999	24.3	11.1	16.67
2000	26.36	12.32	18.64
2001	24.91	12.49	17
2002	21.48	13.49	14.37
2003	21.02	13.36	14.18
2004	16.77	12.73	11.7
2005	14.12	10.41	9.9
2006	12.27	10.72	7.35
2007	11.7	8.63	6.33
2008	12.53	8.39	6.06
2009	12.93	9.21	6.16
2010	12.29	8.06	6.14
2011	12.6		6.4
2012	14.21		7.37
2013	13.73		6.87
2014	13.67		7.42

Source: Computed by the author

Table- 9: Performance Ratio Analysis of Oriental Bank of Commerce

Year	ROA (%)	ROE(%)
1996	1.64	20.96
1997	1.63	20.42
1998	1.59	20.75
1999	1.37	19.89
2000	1.29	20.95
2001	0.79	13.63
2002	1.08	20.23
2003	1.38	24.51
2004	1.83	28.67
2005	1.53	24.19
2006	0.99	13.11
2007	0.87	10.87
2008	0.43	6.21
2009	0.88	14.56
2010	0.91	16.48
2011	1.01	17.15
2012	0.67	10.72
2013	0.7	11.46
2014	0.54	9.16

Source: Computed by the author

Table-10: Capitalization ratios of Oriental Bank of Commerce

Year	Capital Adequacy Ratio (BASEL-I)	Capital Adequacy Ratio (BASEL II)
2000	14.1	
2001	12.72	
2002	11.81	
2003	10.99	
2004	14.04	
2005	14.47	
2006	9.21	
2007	12.46	
2008	12.51	
2009	12.12	12.98
2010	12	12.54
2011	10.83	14.23
2012	12.3	12.69
2013	11.01	12.04
2014	10.75	11.85

Source: Computed by the author

Table-11: Efficiency Ratio Analysis of Oriental Bank of Commerce

Year	CD Ratio	Operating cost to Total Asset	NPA to total Advances
1996	53.63	2.14	
1997	48.6	2.19	5.84
1998	48.39	2.03	4.5
1999	45.87	1.97	4.5
2000	42.21	1.74	3.8
2001	44.88	1.94	3.6
2002	49.7	1.64	3.2
2003	52.59	1.71	1.4
2004	55.17	1.57	0
2005	52.87	1.93	1.29
2006	66.89	2.06	0.49
2007	68.97	1.68	0.49
2008	70.08	1.73	0.99
2009	69.64	1.24	0.65
2010	69.43	1.23	0.87
2011	68.97	1.17	0.98
2012	71.8	1.3	2.21
2013	73.31	1.33	2.27
2014	71.88	1.32	2.28

Source: Computed by the author

Table-12: Liquid Ratio Analysis of Oriental Bank of Commerce

Year	Cash to Deposit	Loan to Deposit
1996	0.16	0.07
1997	0.11	0.01
1998	0.12	0.01
1999	0.12	0.02
2000	0.1	0.01
2001	0.08	0.02
2002	0.08	0.03
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2014	0.05	0.03

Source: Computed by the author

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