

A Study on Merger between Bank of Punjab (BOP) and Centurian Bank of Punjab (CBOP) From Accounting Point of View

Abstract

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. It is observed that Liquidity, Efficiency and Overall Performance of the bank increases significantly between pre-merger and merger period; but profitability of Centurian bank remains unchanged between pre-merger and merger period.

Keywords: Merger, Acquisition, Spread, Transferor Bank and Transferee Bank.

Introduction

Merger is not a new thing in banking industry, particularly in post nationalization period in India. There were so many merging cases between the public sector with private sector or one private bank with another private bank or one public sector bank with another public sector bank to achieve some objectives like enhance the capital strength, to penetrate the market, to achieve synergetic effect, to take tax saving benefit etc.

Objectives of the Study

We compare the transferee bank's performances between pre and post merger period to identify the better and poor performance reasons.

Reasons for Merger in Banking Industry

Merger of weak banks-Practice of merger of weak banks with strong banks was going on in order to provide stability to weak banks but Narasimham Committee opposed this practice. Mergers can diversify risk management. 2. Increase in market competition- Innovation of new financial products and consolidation of regional financial system are the reasons for merger. 3. Markets developed and became more competitive and because of this market share of all individual firm reduced so mergers and acquisition started. 4. Capability of generating economies of scale when firms are merged. 5. Transfer of skill takes place between two organization takes place which helps them to improve and become more competitive. 6. Globalization of economy impact bank mergers. 7. New services and products- Introduction of e- banking and some financial instruments/ derivatives. 8. Technology- Removal of entry barrier opened the gate for new banks with high technology and old banks can't compete with them so they decide to merge. 9. Positive synergies- When to firms merge their sole motive are to create a positive effect which is higher than the combined effect of two individual firms working alone. Two aspects of it are cost synergy and revenue synergy.

Data Base of The Study

The basic data that are required for the assessment of both transferor and transferee banks performance like deposits, loans, income, expenditure, spread, EPS, DPS, number of employees, number of branches, margin, etc. are collected.

Methodology

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. EPS is calculated by dividing total earnings by number of shareholders. Similarly DPS is calculated by dividing total dividend by

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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 ratios are utilized here 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 organisation. 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.

Factor analysis has also been used to different types of ratios to identify the principal factors accounting for liquidity, profitability and efficiency of the bank and then by using dummy dependent

variable method, regression analysis has been performed to analyze the change in liquidity, profitability and efficiency position of the bank between pre-liberal and liberal period.

Hypothesis

Null Hypothesis: H0

No change in average performance, liquidity, efficiency and profitability between pre and post merger period were equal ($\mu_1 = \mu_2$)

Alternative Hypothesis: H1

Average change in performance, liquidity, efficiency and profitability between pre and post merger period were not equal i.e. ($\mu_1 > \mu_2$)

Merger between Bank of Punjab (Bop) and Centurian Bank of Punjab (CBOP)

Merger between Bank of Punjab and Centurian Bank of Punjab took place in the year 2005. Bank of Punjab merged with Centurian Bank of Punjab.

Operational or Financial Ratio Analysis

In case of merging between Bank of Punjab and Centurian Bank of Punjab it was found that EPS of Bank of Punjab was in rising trend but DPS and Dividend Pay-out ratio were in decreasing trend. In Centurian Bank of Punjab, EPS was in decreasing trend. But Dividend per share and Dividend Pay-out ratio were in increasing trend.

Margin Ratio analysis

In case of merging between Bank of Punjab and Centurian Bank of Punjab it was found that, the Yield ratio of Bank of Punjab were fluctuated time to time over the study period. But in Centurian Bank of Punjab the Yield ratios were in declining trend.

Performance Ratio analysis

In case of merging between Bank of Punjab and Centurian Bank of Punjab it was found that in ROA (%) was fluctuated time to time. In ROE (%), there was decreasing trend. In both the performance ratios i.e. ROA (%) and ROE (%) were fluctuated time to time.

Capitalization Ratio analysis

In case of merging between Bank of Punjab and Centurian Bank of Punjab it was found that Capitalization ratio of BOP, it was found that CAR of Basel (I) rules was always above the standard norm over the study period. In CBOP, it was fluctuated time to time over the study period.

Efficiency Ratio analysis

In case of merging between Bank of Punjab and Centurian Bank of Punjab it was found that in Efficiency Ratio analysis of CBOP, Credit-Deposit Ratio, Operating cost to total Asset and NPA to total advances were fluctuated time to time over the study period.

Liquid Ratio Analysis

In case of merging between Bank of Punjab and Centurian Bank of Punjab it was found that Current Ratio, Cash Ratio, Cash to Deposit Ratio and Loan to Deposit ratio were fluctuated time to time during the study period. In CBOP, Current Ratio, Cash Ratio, Cash to Deposit Ratio were fluctuated time to time. Cash to Deposit Ratio and Loan to Deposit ratio were in rising trend during the study period.

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Factor 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 have been analysed 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. The results of all these analysis are presented below one by one:

Factor Analysis of Centurian Bank of Punjab Liquidity Factor

To construct liquidity factor, four ratios namely, Current ratio, Cash ratio, Cash to Deposit and Loan to Deposit ratio have been clubbed through factor analysis and it is observed from the table below that first principal component (or factor) represents 85.96% of the total sampling variations of the three related ratios and its Eigen value is 2.95. 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 38.23, 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	2.95	95.37	.8596(Current ratio)
2	1.13	2.14	.8121(Cash ratio)
3	.211	1.45	.8463(Cash to Deposit)
4	.165	1.04	.8315(Loan to Deposit ratio)

Bartlett's test of sphericity is estimated to be 38.23*

Efficiency Factor

To construct principal component for efficiency factor, three basic variables, namely, Credit Deposit Ratio, Operating Cost to Total Asset ratio and NPA to Total Advance ratio have been clubbed 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 28.61, 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	2.78	97.49	.836 (Credit-Deposit ratio)
2	.926	2.14	.818 (Operating Cost to Total assets)
3	.208	.37	.806 (NPA to total advance)

Bartlett's test of sphericity = 28.61

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 38.13, 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	1.981	90.152	.8845 (Yield on advance)
2	.686	4.265	.8302 (Yield on Investment)
3	.489	5.583	.768 (Interest spread)

Bartlett's test of sphericity =38.13

On the basis of Kaiser's criterion (Eigen value >1), first principal component has been selected and it explains 90.15% 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 75% (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 28.63, 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	.008	6.7	.769 (Return on assets)
2	2.556	93.3	.785 (Yield on Capital Employed)

Bartlett's test of sphericity =28.63

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On the basis of Kaiser's criterion (Eigen value >1), second principal component has been selected and it explains 93.3% 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 75% (see last column of the table).

Let F_1 , F_2 and F_3 , F_4 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 (F_1), efficiency (F_2), profitability (F_3) and Performance (F_4). The estimated regression results are presented below:

$$R^2 = .949^*$$

$$[F=5.491]$$

$$D = -2.047^{**} + .002F_1 + .0213F_2^{***} + .0153F_3^{34.5\%} + .130F_4^{***}$$

$$(.742) \quad (.085) \quad (.009) \quad (.015) \quad (.237)$$

$$DW = .940$$

Conclusion

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

Table: 1.1 Operational / Financial ratio analysis of Bank of Punjab

Year	Earning per share	Dividend per share	Dividend pay out Ratio
1998	1.27	0.97	76.46
1999	2.14	1.25	58.49
2000	3.08	1.4	45.44
2001	3.09	1.54	49.88
2002	3.15	1.68	53.24
2003	3.32	1.54	46.53
2004	3.4	1.3	38.21
2005	3.03	0.5	16.49
2006	3.52	0.5	14.19
2007	5.83	0	0

Table:1.2 : Margin ratio analysis of Bank of Punjab

Year	Yield on Advances	Yield on Investment	Interest Spread
1998	12.64	7.68	17.27
1999	22.21	8.21	16.53
2000	28.63	13.8	15.49
2001	22.14	13.36	14.18
2002	20.19	10.9	12.6
2003	22.6	11.71	12.9
2004	22.54	17.1	1.81
2005	19.66	16.92	9.8
2006	14.44	13.6	8.95
2007	13.6	6.12	7.38

Table:1.3 : Efficiency ratio analysis of Bank of Punjab

year	CD Ratio	Operating cost to Total Asset	NPA to Total Advance
1998	45.61	2.67	NIL
1999	46.71	2.3	1.59
2000	47.54	2.47	1.14
2001	49.96	1.99	3.66
2002	53.6	2.07	2.32
2003	53.6	2.45	2.31
2004	53.72	2.87	2.93
2005	58.56	2.92	7.17
2006	62.35	3.26	4.69
2007	69.07	3.81	4.64

Table: 1.4: performance ratio analysis of Bank of Punjab

Year	Return on Asset (ROA)	Return on Equity (ROE)
1998	1.34	26.16
1999	0.86	23.43
2000	0.81	21.87
2001	0.79	21.63
2002	0.82	25.59
2003	1.06	26.42
2004	1.18	22.49
2005	1.23	17.01
2006	1.06	16.03
2007	1	

Table 1.5 Operational/Financial ratio analysis of Centurian Bank of Punjab

Capitalization Ratio Analuysis of Bank of Punjab		
Year	Capital Adequacy Ratio (BASEL-I)	Capital Adequacy Ratio (BASEL II)
1998	35.03	NIL
1999	18.65	
2000	16.34	
2001	14.64	
2002	9.81	
2003	11.02	
2004	12.82	
2005	13.59	
2006	12.64	
2007	9.23	

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Table:1.6: Liquid Ratio Analysis of Bank of Punjab

Year	Current Ratio	Cash Ratio	Cash to Deposit	Loan to Deposit
1998	1.28	46.28	39.01	79.52
1999	2.02	91.73	18.19	43.903
2000	2.64	144.39	17.8	39.28
2001	2.05	195.28	15.82	47.69
2002	1.72	259.961	12.75	49.91
2003	1.9	206.53	12.47	49.31
2004	1.7	237.78	14.82	48.05
2005	1.56	405.96	14.75	50.06
2006	1.26	322.72	12.08	56.89
2007	1.66	325.88	13.47	56.12

Table:2.1 : Operational/Financial Ratio Analysis of Centurian Bank of Punjab

Margin Ratio Analysis Of Centurian Bank Of Punjab			
year	Yield on Advances	Yield on Investment	Interest Spread
1999	29.23	11.57	18.49
2000	24.07	10.18	16.36
2001	26.98	12.57	18.63
2002	29.51	14.43	19.12
2003	28.27	13.29	18.96
2004	21.45	8.28	14.81
2005	15.77	3.70	11.07
2006	12.29	6.27	8.01
2007	11.30	5.43	6.88

Table:2.2 : Margin Ratio Analysis of Centurian Bank of Punjab

Year	Earning per share	Dividend per share	Dividend pay out Ratio
1999	1.92	.10	43.96
2000	1.90	.11	48.85
2001	.39	.13	33.33
2002	-5.19	Nil	Nil
2003	-1.40	Nil	Nil
2004	-1.56	Nil	Nil
2005	.25	.12	48.0
2006	.18	.13	70.6
2007	.77	.19	29.0

Table:2.3: Performance Ratio Analysis of Centurian Bank of Punjab

Year	Capital Adequacy Ratio (BASEL-I)	Capital Adequacy Ratio (BASEL II)
1999	8.42	NIL
2000	15.62	
2001	16.49	
2002	6.74	
2003	3.02	
2004	7.49	
2005	39.22	
2006	12.52	
2007	11.05	

Table:2.4 : Capitalization Ratio Analysis of Centurian Bank of Punjab

Year	Return on Asset (ROA)	Return on Equity(ROE)
1999	29.23	11.57
2000	24.07	10.18
2001	26.98	12.57
2002	29.51	14.43
2003	28.27	13.29
2004	21.45	8.28
2005	15.77	3.70
2006	12.29	6.27
2007	11.30	5.43

Table:2.5 : Efficiency Ratio Analysis of Centurian Bank of Punjab

Year	Current Ratio	Cash Ratio	Cash to Deposit	Loan to Deposit
1998	1.94	126.48	5.91	63.08
1999	1.74	332.41	8.60	47.58
2000	3.26	325.02	7.63	47.64
2001	1.86	305.92	8.65	46.23
2002	1.55	219.84	7.76	46.34
2003	1.17	260.95	8.62	51.39
2004	1.03	331.90	9.40	62.14
2005	1.10	556.52	5.92	69.51
2006	1.15	1079.14	7.26	75.49

Table:2.6: Liquid Ratio Analysis of Centurian Bank of Punjab

Year	CD Ratio	Operating cost to Total Asset	NPA to Total Advances
1998	63.08	3.60	3.73
1999	47.58	2.00	2.70
2000	47.64	2.42	2.96
2001	46.23	3.95	5.82
2002	46.34	4.96	7.51
2003	51.39	5.29	4.43
2004	62.14	4.88	2.51
2005	69.51	4.41	1.13
2006	75.49	3.82	1.26

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