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Early Warning Signals of Merger of Banks- A Case Study of Global Trust Bank (GTB) and Centurion Bank of Punjab (CBOP) in India

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Abstract

There have been many acquisitions of banks in the past either forced one or voluntarily. Many of acquisitions take place on account of the adverse financial position of the acquired bank. This happens over a period of time. There are enough indicators which can be perceived well in advance to indicate the financial health of a bank. The objective of this paper is to identify signals which may lead to future merger of a bank whether forced or voluntary. To identify these signals according to the CAMELS parameter through different variables, two cases i.e. the Global Trust Bank and Centurion Bank of Punjab were taken to study the health of these banks in pre and post acquisition stages. The paper presents an analysis of various financial parameters which indicated well in advance the deteriorated financial position of the bank leading to the merger of the bank at a later stage.

Keywords: Merger and Acquisitions, Failure, Early Signals, CAMELS, Net Interest Margin

Introduction

Apparently, [1]Banking in India is a formal way originated in the last decades of the 18th century. When, the East India Company established Bank of Bengal (1809), Bank of Bombay (1840) and Bank of Madras (1843) as independent units and called as Presidency Banks. These three banks were amalgamated in 1920 and Imperial Bank of India was established. It was the first amalgamation in banking sector in India. Thereafter, a good number of acquisitions were held in pre and post independence era.

During the pre independence period, the banking sector was less organized and their growth concentrated in a few big cities or towns. There was also a great depression of 1930s'. Since, 1933 till independence in 1947, approximately, 1400 banks got failed and most of the failures took place during1935-55. In which 1940 decade was the worst phase. On the other hand, if we analyze the acquisition of banks scenario during 1956-2007, approximately 463 acquisitions took place in this phase. In this period majority of acquisitions were held during 1956-1970 and more particularly in 1964. This was on account of introduction of policy of reconstruction of commercial banks and compulsory amalgamation of banks being followed by the Reserve Bank of India (RBI). It may be noted that during the period 1960-1982, over 200 banks were either merged or liquidated, mostly small with low capital base or insufficient liquid assets, interconnected lending and private oriented. In 1935, RBI came into existence with extensive powers for the supervision of banking in India as central banking authority. The banks saw many failures at that time.

However, post independence in the First phase, 14 banks got nationalized on 19 July 1969 while 6 more private banks were nationalized on 15 April 1980. The RBI norms became more stringent in the post economic reform era. This resulted in increased number of mergers during 1993 and 2006. The following table -1 presents a snapshot in this regards.

1 http://rbi.org.in/scripts/publicationsview.aspx?id=10487

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In the post banks nationalization era, there were 80 mergers. Of them, forced mergers were 13, voluntary mergers 5, convergence of financial institutions into banks 2 and other mergers on account of regulatory compulsions one. In the post banks' nationalization era, out of 34 bank mergers, in 25 cases private sector banks merged with the private sector and 9 private sector banks were merged with the public sector banks. In the post economic reform era, the thrust on consolidation emerged as the Narasimaham committee (1991 & 1998) emphasized on convergence and consolidation of banks in India to make the size of Indian commercial banks comparable with those of globally active banks by restructuring weak banks. The mergers between strong banks, both in the public and private sectors were also suggested by the committee.

The RBI on January 22, 1993 had granted licenses to 10 banks in the private sector. These came to be known as New Generation tech-savvy banks. [2]The Global Trust Bank (GTB) was the first of such new generation banks which was set up 1993 in compliance with a new licensing policy of the RBI. GTB fared very well till 2000, but its operations were impacted by the Stock scam occurred in the year 2000. The exposure caused substantial losses which resulted in drop of return on investments. This apart, it also faced large bad debts with heavy provisions on account of increased level of NPAs. This posed serious challenges on the viability and sustainability of bank. Later this bank was amalgamated with Oriental Bank of Commerce, a public sector bank in 2004. This was the forced merger by RBI in the interest of depositors. It can be stated here that the bank started feeling warning signals from the ill health right from March 2000.[3]

The Centurion Bank of Punjab (formerly Centurion Bank)[4] was a private sector bank that provided retail and corporate banking services. It operated on a strong nationwide network of 403 branches and had over 5,000 employees. On 29 June 2005, the Boards of Directors of Centurion Bank and Bank of Punjab agreed to a merger proposition of the two banks. The combined bank was named as Centurion Bank of Punjab (CBOP). The Erstwhile Centurion Bank had in the past acquired Bank of Punjab and Lord Krishna Bank. HDFC[5] Bank had earlier acquired the Times Bank. Thus, this merger led to strategic growth and helped HDFC Bank to become the largest private sector bank in terms of branch network. The financial performance of CBOP at the time of the merger is produced at the table-1. This study is an attempt to analyze various factors responsible for mergers of banks and also to assess whether there are possible early warning signals which may lead to potential merger of a bank.

Literature Review

An attempt has been made to correlate various studies undertaken in the process of banking acquisitions and also the analysis made in the past about various factors of bank failures and mergers. We have considered both types of mergers (Forced and Voluntary) give a concrete base to the findings of our study.

Richard, J. C.(2010) made a study of determinants of bank failure in US over the period of 1970 to 2007 and their findings suggest that the banks failure rate was increasing function of unemployment rate, cost of fund, financial market volatility and charge offs on outstanding loan at a commercial rate while being bank hold the mortgages is a decreasing function, though the entire function derives through equation methodology.

The extent of it revisited (2011) with few advance variables and analysis for the same period 1970 to 2009 where they have extremely emphasized the banking statutes FDICIA and RNIBA in which they found that FDICIA acted to reduce bank failure whereas RNIBA induced bank failure in the US.

Burton, A. A. and Cliff, J. H. (1987) discussed in predicting bank's failure through the Probit model, which have explanatory variable and those findings suggest bank likely hood of failure lies in the balance sheet and income accounting data (Net Worth and Net Income). Further, they found that a larger amount of Certificate of Deposits and loan portfolio had a higher frequency of falling in risk and banks with immense size and affiliated to holding had a lower probability of failure.

2 http://crisil.com/Ratings/Brochureware/News/GT-BOBC_020804.PDF
3 http://www.banknetindia.com/banking/gtb5a.htm
4 http://rbi.org.in/Scripts/BS_PressReleaseDisplay.aspx?prid=18320
5 http://www.hdfcbank.com/htdocs/common/pdf/CBOP_merger.pdf

While, focusing on the banking sector fragility by Mannasoo, K. and Estonia, B. (2005) had found such indicators like credit risk, liquidity risk, capital risk and structural factors in which outcomes are a high credit risk and low liquidity.

Wheelock, D. C. and Wilson, P. W. (2000) focused on bank disappearance and its acquisition through using the Hazard estimation model (capture CAMEL variable proportionately other measurement of management performance as operating efficiency). They had analyzed timings to failure and acquisition. Further, results indicated managerial inefficiency reduces attractiveness of a bank to the acquirer. On the other hand, keeping rest of the variable constant, even if the bank has a lower capitalization are more likely to be acquired.

Similar aspects on managerial efficiency and inefficiency were focused by Richard, S. B., Lawence, M. S. and Thomas F S. (1994) in a study of forecasting bank failure with non parametric estimation approach. They analyzed through multiple input output DEA model which supported imperativeness of management variables, if those are removed from the model, the results would not be appropriate in terms of accuracy about the hidden efficiency of bank which can be acquired. Moreover, the logit and probit model is most commonly employed methodology applied in banking sector especially in detecting potentials of failure risk. Gunsel, N. (2007) have involved CAMEL function variable to reach certain outcomes.

The other motives behind merger are crucial because distressed of individual bank moves for voluntary or forced merger, but with underlying opportunities, like managerial efficiency, higher capitalization, expansion strength etc. have the bearing. There are several motives involved in merger and acquisitions. In the context of Indian banking sector, a study conducted by Kakani, R.K. and Mehta, J. (2006) found stability, risk and return to shareholder, capital adequacy norms (CAR) and regulatory framework, managing bankruptcy risk and rest are bottom line growth.

A similar study is undertaken by Liu, T. K (2010) which investigated motivational aspects of mergers in banks by applying regression model to explore it, and its impact of stream of variable on merger and found government shareholding ratio, market condition, debt ratio, capital adequacy and liquidity reserve ratio are motives of merger. And Tiwari, A. K. and Grover, M. (2010) analyzed the effectiveness of acquisitions based on different variables in prior and post merger era. A similar study was tried by Srinivas. D. K. (2010) through analysis of physical performance merger based on caution parameters.

To sum up, firstly there are lesser number of studies undertaken in Indian context as regards to pre indicators of merger in the banking sector, whereas adequate review was found in the international context. In analyzing several reasons of failure of banks, most of it, have used CAMALS analysis to ascertain bank performance. The extent of managerial efficiency is also very crucial in the path of merger. The aspects of managerial efficiency are significant for both private and public sector banks. While private banks merger are generally voluntary whereas public bank merger is restructuring of fragile bank through merger. In this paper an attempt is made to take this research more deepens utilizing other parameters such as capital adequacy and non performing assets and managerial efficiency.

Research Methodology

Objective of the Study

Main aim of this paper is to examine early signals or indicators of merger and acquisition in India while looking at narrow objectives to:

- Ascertain financial indicators of banks and their performance prior to merger for particular period of time.
- Assess quality of assets and investment portfolio pattern of the bank prior to merger.
- Analysis of management factors leading to merger of banks.

Hypothesis of the Study

Ho: There are no early signals available before a bank is merged or acquired.

Hα: There are early signals available before a bank is merged or acquired.

Sample of the Study

Name of Bank merged	*Merged with*	*Year of merger*	*Category*
Centurion Bank of Punjab (CBOP)	HDFC Bank Ltd.	2008	Voluntary merger
Global Trust bank (GTB)	Oriental Bank of Commerce	2004	Forced merger

Data and Tools Used for The Study

The study is mainly based on secondary data drawn from the reliable sources for the respective banks. This data is related to 8 year period. For analysis of the data, two important statistical tools viz. Mean or average value, standard deviation and unpaired T-test (independent data) have been used to arrive at conclusions.

Variable Description (CAMELS' Analysis)

The new approach to on-site supervision of banks has been in force since July, 1997 in India. This is the modified version of the CAMEL model adopted in the US. The CAMELS, evaluates banks' Capital Adequacy, Asset Quality, Management, Earnings, Liquidity and Systems and Control. This system covers the mandated aspects of solvency, liquidity and financial/operational health of banks. The objective of the off-site supervision system is to maintain continuous surveillance on the performance of banks as part of the ongoing supervisory strategy formulated by the Board for Financial Supervision (BFS) and to track industry and peer group trends in respect of capital adequacy, asset quality, operating results, large exposures, connected lending, changes in ownership based on quarterly performance of banks. The objective is to sound advance warning signals of risks to the individual banks based on their performance. In a study Wheelock, D. C. and Wilson, P. W. (2000) had found bank with risky assets portfolio, low solvency, low profitability and highly leveraged are more likely to fail than other banks.

Data Analysis and Findings

To analyze responsible predictable variables of merger, this would define future merger predictability based on flexibility of those variables.

Analyze financial ratio of both banks based on CAMELS parameters- This model is generally applied on banks to evaluate their financial performance periodically and also to take necessary precautions for risk exposed banks. As per Burton, A. A. and Cliff, J. H. (1987) the accounting data on Net worth and Net income is most relevant about risk of bank failure. On the other hand emphasized the greater degree of management effectiveness.

Financial Ratio Performance Analysis of Centurion Bank of Punjab (Refer table-4.1)

On analyzing the profitability ratios of CBOP, the following in observed:

a. The level of non-performing assets increased in the year ended march 2006 considerably.

b. The NPA to net Advances increased during the period 2000-2004. But it stated declining from the year 2005. It may be on account of increased in Credit Deposit Ratio. The Actual NPAs might not show much reduction.

c. The Business per Employee started declining from March 2001 from 6.36 crore to 3.39 crore as at the end of March 2006. In March 2007 it increased to 4.2 crore.

d. It is observed that the all the important financial ratios stated declining since the year 2000 to 2004.

As at end of March 2005 the Capital Adequacy ratio was 21.42% which declined to 11.05% in 2007. This clearly indicates that risk weighted assets increased significantly.

Private bank outlook: As CBOP merger was a voluntary merger took place in 2008 with HDFC. HDFC acquired CBOP to increase its asset size, expansion of business and profitability which are the strengths to merge. When such entity gets merged with the other, it always has hidden or explored potentials. It is known as synergy potential which describes the worth of merger in future.

Financial ratio Performance Analysis of Global Trust Bank (Refer table-4.2)

The profitability analysis of GTB reveals followings:

The bank started receiving early signals right from March 2000 as a percentage of NNPA to net advances increased from 0.87% in March 2000 to 19.77% in March 2003.

Table 4.1: Financial Ratio's Performance of Centurion Bank of Punjab

Ratio	2007	2006	2005	2004	2003	2002	2001	2000	Mean	St.d
Capital adequacy ratio CAR (%)	11.05	12.52	21.42	7.49	3.02	6.74	16.49	15.62	11.8	6.0
Gross non performing assets GNPA(Cr)	317.88	320.61	156.41	221.41	228.43	231.81	NA	NA	184.6	125.8
Net non performing assets NPA(Cr)	141.5	73.95	55.05	68.9	104.09	101.66	71.3	71.29	86.0	28.0
NNPA to NA (%)	1.26	1.13	2.49	4.43	7.92	5.82	2.96	2.7	3.6	2.3
Business per employee BPE(Cr)	4.2	3.39	3.83	3.93	4.03	4.68	6.36	6.89	4.7	1.3
Profit per employee PPE(Cr)	0.02	0.02	0.02	0.01	0.02	0.01	0.07	0.09	0.0	0.0
Operating profit to Av. working fund -OP to AWF (%)	1.86	1.49	0.65	0.38	0.61	0.32	1.08	1.61	1.0	0.6
Net interest margin NIM (%)	3.78	5.03	4.48	3.9	2.81	2.09	1.84	1.93	3.2	1.2
Net profit to total funds NP to TF (%)	0.8	1.11	0.63	-3.15	-0.7	-1.89	0.13	0.82	-0.3	1.5
Cash to Deposit ratio (%)	6.74	6.87	9.04	8.2	8.25	8.1	8.09	7.64	7.9	0.8
Credit to Deposit ratio (%)	73.18	67.5	57.18	48.95	46.28	47	47.6	53.1	55.1	10.2

Table 4.2: Financial Ratio's Performance of Global Trust Bank

Ratio	2003	2002	2001	2000	1999	1998	1997	1996	Mean	St.d
Capital adequacy ratio CAR (%)	NA	11.21	12.71	13.68	11.97	10.28	10.16	9.36	9.9	4.0
Gross non performing assets GNPA(Cr)	915.82	430.35	238.3	49.33	90.96	NA	NA	NA	215.6	299.9
Net non performing assets NPA(Cr)	647.66	279.79	153.82	27.86	70.58	NA	NA	NA	147.5	210.1
NNPA to NA (%)	19.77	9.23	3.75	0.87	2.15	2.98	NA	NA	4.8	6.3
Business per employee BPE(Cr)	6.55	7.09	8.32	8.55	6.9	8.09	8.72	8.66	7.9	0.8
Profit per employee PPE(Cr)	-0.2	0.04	0.07	0.12	0.09	0.15	0.13	0.13	0.1	0.1
Operating profit to Avg working fund -OP to AWF (%)	0.5	1.84	2.32	4.13	2.4	3.93	NA	NA	1.9	1.5
Net Interest margin NIM (%)	0.3	1.05	2.35	2.96	1.18	2.37	2.76	2.21	1.9	1.0
Net profit to total funds NP to TF (%)	-3.69	0.48	0.94	1.7	1.58	2.49	2.36	2.54	1.1	2.0
Cash to Deposit ratio (%)	9.06	8.11	8.47	9.59	10.57	10.05	12.55	15.72	10.5	3.2
Credit to Deposit ratio (%)	50.22	53.15	52.53	51.84	52.48	57.83	78.8	99.12	62.0	19.0

a. The Net Interest margin also started declining from 2.96% in March 2002 to 0.31 % in March 2003. Accordingly, net profit to total funds also declined.

b. The bank could maintain credit to deposit ratio at around 50%, but interest income declined

Therefore, there were enough signals to indicate bank's declining financial position over the years. The bank did not meet capital adequacy level. According to Kakani, R.K. and Mehta, J. (2006) GTB had excessive exposure towards capital market which caused heavy losses.

Indicators Responsible for Future Mergers of Banks (Refer Table-4.3)

T-test is frequently used for hypothesis testing to compare the means of two groups or categories. As per the results, the majority of outcomes in the tables is insignificant which lead to accept the alternative hypothesis that says there are alarming signals available before indicating the financial health of a bank which leads to potential merger in due course of time. However, there are few parameters like business per employee, Cash to deposit ratio and EPS which have shown significant results, thus accepting the null hypothesis.

Table 4.3: Indicators Responsible for Future Mergers of Banks

	Variable	Mean CBOP	Mean GTB	Std CBOP	Std GTB	T-value	DF	P sig value	P>0.05, P<0.05 Reject or Accept
CAPITAL	Capital adequacy ratio CAR (%)	11.79	9.92	5.99	4.25	0.721	14	0.485	NS
ASSETS	Gross non performing assets GNPA (Cr)	1.84	2.15	125.76	320.61	0.255	14	0.803	NS
	Net non performing assets NPA (Cr)	85.96	1.47	27.98	224.62	0.768	14	0.455	NS
	NNPA to NA (%)	3.58	4.84	2.33	6.72	0.498	14	0.626	NS
MANAGEMENT	Business per employee BPE (Cr)	4.66	7.86	1.27	0.87	5.860	14	0.000	S
	Profit per employee PPE (Cr)	0.03	0.06	0.03	0.11	0.813	14	0.430	NS
	Earning per share (%)	0.53	5.24	0.71	2.75	4.671	14	0.000	S
EARNINGS	Operating profit to Avg working fund -OP to AWF (%)	1.00	1.89	0.59	1.63	1.447	14	0.170	NS
	Net Interest margin NIM (%)	3.23	1.89	1.23	0.93	2.435	14	0.029	NS
	Net profit to total funds NP to TF (%)	-0.28	1.05	1.52	2.05	1.472	14	0.163	NS
LIQUIDITY	Cash to Deposit ratio (%)	7.86	10.51	0.76	2.51	2.848	14	0.013	S
	Credit to Deposit ratio (%)	55.10	61.99	10.18	17.63	0.958	14	0.355	NS

However, to strengthen our statement, we have considered table 1 and 2 of financial ratios' performance of past 8 years of respective banks. These financial ratios are based on CAMELS parameters. They have respective weights as decided by the RBI. We have considered them much appropriate to test our hypothesis. Accordingly; we conclude that early warning signals of mergers of a bank are available well in advance.

Based on the prescribed weights, we analyzed that in case of GTB entire financial performance got deteriorated after years and caused the forced merger with oriental bank of commerce. Whereas, in case of CBOP there were declining trends in profitability and asset quality. However the other strengths of the bank motivated for a voluntary merger with HDFC bank. The most insignificant indicator was found in terms of quality of asset portfolio and earning parameters. Hence, we can say the frequent rise or fall in asset base and declining in earning efficiency indicators are the parameters indicating early warning signals of a bank's potential merger in future.

Conclusion

The analysis concluded, that there are certain important ratios such as the level of net NPAs to total advances, capital adequacy ratio, operating profits to working funds, Net Interest margin, return on equity, and return on assets etc. Which have direct bearing on the financial performance of the bank, these parameters indicated negative/deteriorated performance of a Bank in the pre acquisition periods more so before 3 to 4 years of the merger. In case of acquisitions of a bank to take synergic advantage of the acquisition, there were enough positive indications. The study concludes that the financial position of a bank can be brought to the track if a bank adheres due care well in advance on receiving such adverse signals. The CAMELS model implemented by the RBI for bank's performance assessment is a useful mechanism to help a bank to initiate corrective actions.

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