Research Paper Management

A Study on Financial Viability of Times Bank Ltd. & HDFC Bank Ltd. Merger

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ABSTRACT *Unlike all the sectors of industry, banks also want to defend themselves against the odd situations and want to tap the new opportunities in the market for continuous growth. M&As in the Indian Banking sector has gained its momentum since a past few decades. Earlier, the banking facilities were available only to a certain class of people but now we can see that due to reforms, mass is getting the advantage. Here, an attempt is made to throw some light on the financial performance of merger deal through various ratios of Times Bank Ltd. (merged bank) with HDFC Bank Ltd. A total duration of six years is considered for the study; ie., 3 years pre-merger and 3 years post-merger using its financial data. Further analysis is conducted using SPSS. It can be concluded that the deal provided financial benefits to HDFC Bank Ltd. as the performance had improved.*

KEYWORDS : M&A, ratios, operational, profitability, productivity

Introduction:
Any firm would have some strong stimuli for mergers & acquisitions like enhancing its capacity, increasing market share, cost efficiency, or widen its scope for profitability by invading new markets. This phenomenon is not uncommon in the Indian Banking Sector too. Right from the time of post-liberalization, there are enormous changes in the banking system for availing the financial benefits to its end users. The regulations have been reformed to help bank sustain & maintain its business in this highly competitive globalized market. There are different types and sizes of the banks. Usually noted that the weak banks are merged with the stronger ones so that the depositors are not into loss. Here an attempt is made to justify the financial synergies that had aroused due to the merger of Times Bank Ltd with HDFC Bank Ltd. occurred on 26-11-1999.

Review of Literature:
A large number of researchers have come up with various studies wherein they have analyzed the synergies arising due to the restructuring activities. It was investigated by (Joshi, 2011), that there had been major shifts in the Indian Banking Sector due to M&A in terms of human resources, legal aspects as well as finance. Aggarwal A.K. (2006) in the study also accomplished that the financial sector reforms have assisted the banking industry to desirable harness the equipped flexibility and purposeful autonomy for increasing productivity, profitability gains and efficiency. Several methods are used in the literature to analyze the impact of M&A on bank performance. One examines efficiency and profitability improvements of merged banks using accounting indicators, while the other examines the stock price of merged banks (Dimitris K. Chronopoulos, Hong Liu,Fiona J McMillan, John O. S. William, 2013); Tsangarakis, et al., 2013) (Nickolaos V. Tsangarakisa*, 2013). The accounting method consists of a comparison of financial ratios before and after the merger and acquisition (Dimitris K. Chronopoulos, Hong Liu,Fiona J McMillan, John O. S. William, 2013).

Research Methodology:
The research here is dealing with calculating the pre & post efficiency calculation of merged banks over a particular period of time. A duration of 6 years i.e., 3 years pre-merger and 3 years post-merger has been taken for study. Various ratios have been utilized for analyzing the financial performance of HDFC Bank Ltd. post-merger comparing it with its pre-merger status. Data is analyzed further using SPSS. For examining the financial performance of commercial banks following financial ratios have been calculated:

Table 1: Classification of financial ratios

Class	Variable/Parameter
Business Parameters	Aggregate deposits Average working funds (AWF) Operating profits Net profits(NI)
Operational Parameters	Total Debt to Net worth Interest income to AWF Net interest income to AWF Operating expenses to AWF Capital adequacy ratio Net interest Income to Average assets Operating expenses to total expenses Efficiency Ratio
Profitability Parameters	Operating profit to AWF Net profit to AWF Net Profit to average net worth Operating profit to average net worth Asset utilization(AU) Equity multiplier(EM) Net Interest Margin (NIM) Burden ratio Earnings per share(EPS) Price-Earnings(PE) ratio
Productivity Parameters	Business per employee Business per branch Operating profit per branch Operating profit per employee Assets per employee Loans and Advances per employee Net income per employee

Analysis of Business parameters for Times Bank Ltd. (merged) - H D F C Bank Ltd

(Rs. in Crores)

Table 2: Business Parameter Analysis: Pre-Merger and Post-Merger Mean Parameter for acquiring banks

	Pre-Merger (3-year avg.)	Post-Merger (3-year avg.)	t-statistic (0.05significance)	p - values
Aggregate Deposits	8615.627	12579.88	-4.088	0.055
Average Working Funds(AWF)	1879.287	17045.247	-4.222	0.052
Operating Profit	60.223	311.917	-3.632	0.068
Net Profit	57.02	451.15	-3.969	0.058

The above table describes pre-merger and post-merger value of times bank limited with HDFC Bank Limited. Analysis value of merged banks are statistically described as 0.068 as operating profit and 0.058 as net profit for merged values.

Interpretations of Business Parameters:
Analysis of business parameters were observed and promulgated that there is a significant difference among average pre and post-merger

figures of aggregate deposits, average working funds(AWF) and net profits at 0.05 level of significance, while it is not in the case of operating profits (p- value = 0.619).

It would be observed that there is significant difference between average pre- and post-merger figures of Aggregate Deposits, Average Working Funds (AWF) and Net Profits at 5% level of significance, while it is not so in respect of Operating Profits(p-value= 0.473). While the percentage growth between average pre and post-merger aggregate deposits, average working funds and Net profits is 110%, 102% and 142% respectively, the corresponding growth rate for Operating profit is only 18%, justified by p-value of 0.008. Nowadays, there is hugely competitive and increasingly deregulated financial markets, both the cost and amount of deposits with the banks are vital in exerting a sustainable competitive advantage.

The financial management inference of the two features of the deposits- stability and low cost source of funds- makes them the ideal source of funds by banks. The financial inferences being equal, banks with sturdy deposit base are more worthy than those with a weak deposit base. The benefits are reflected in the net profit that has developed significantly through the operating profit which has not shown in high growth rate.

Analysis of Operational Parameters for Times Bank Ltd. (merged) - H D F C Bank Ltd:

(Rs. in Crores)

Table 3: Operational Parameter Analysis: Pre- Merger and Post-Merger Mean Ratio for acquiring banks

	Pre-Merger (3-year avg.)	Post-Merger (3-year avg.)	t-statistic (0.05significance)	p - values
Total Debt to Net Worth	5.865	12.42	-3.384	0.028
Interest Income to AWF	3.277	5.697	-1.963	0.121
Net Interest Income to AWF	9.657	7.007	2.288	0.084
Operating Expenses to AWF	2.443	1.733	3.067	0
Capital Adequacy Ratio(CAR)	16.983	12.403	1.289	0.326
Net Interest Income to Assets	4.667	3.05	4.326	0
Operating expenses to total expenses	0.265	0.247	2.693	0.074
Efficiency Ratio	57.62	59.317	-0.518	0.632

Interpretations of Operational Parameters:
The operational parameter which is represented above shows that there is a significant difference in respect of three i.e average i) Operating Expenses to AWF ii) Operating expenses to total expenses and 120 iii) Efficiency ratio.

It may be further observed that average operating expenses to AWF ratio has declined from 2.44% to 1.73% (t=3.067, p=0.000) in the post-merger situation. The other operating performance ratio that has recorded marginal improvement is the efficiency ratio which has increased from 57.62% to 59.317% (t= -0.518, p=0.632) in the post-merger situation. Still, the average operating expenses to total expenses ratio has slightly declined *(*from 0.265 to 0.247) in post-merger period (t=-2.693, p=0.074). There is no significant difference in respect of other parameters i.e. average i) Total Debt to Net worth ii) Interest income to AWF iii)Net Interest income to AWF iv) Net interest income to assets and v) Capital adequacy ratio, at 0.05 level of significance.

These results advocate that commercial bank mergers in India have, on balance, resulted in a minor turn down in operating efficiency. The bank mergers have also not significantly collided with the Interest and Net interest income to Average Working Funds ratios. Net-interest income (NII) = Interest income minus interest expense, foregrounds a few basic risks in banking. It represents interest rate risk, liquidity risk and prepayment risk. (Joseph.S.Sinkey Jr, 2002). The efficiency ratio is relatively popular and measures a bank's ability to manage non-interest expense relative to adjusted operating income [Non-interest expense/ (NII+ Non-interest income)]. Theoretically, it indicates how much a bank pays in non-interest expense for one rupee of operating income. The lesser the 121 efficiency ratio, the greater profitable is the bank, all other factors being equal. (Timothy W. Koch & S. Scott MacDonald, 2003)

Analysis of Profitability Parameters for Times Bank Ltd. [merged] - H D F C Bank Ltd

(Rs. in Crores)

Table 5: Profitability Parameters Analysis: Pre- Merger and Post-Merger Mean Ratio for acquiring banks

	Pre-Merger (3-year avg.)	Post-Merger (3-year avg.)	t-statistic (0.05significance)	p - values
Operating Profit to AWF	3.017	3.207	-0.12	0.916
Net Profit to AWF(ROA)	2.173	1.513	1.05	0.404
Net Profit to Avg Net Worth(ROE)	17.837	22.693	-1.341	0.272
Operating Profit to average Net Worth	0.232	0.275	-0.609	0.585
Asset Utilization(-times)	0.114	0.082	3.104	0.036
Equity Multiplier(-Times)	4.667	3.05	4.326	0.012
Net Interest Margin(NIM)	4.667	3.05	4.326	0.012
Burden ratio	2.443	1.733	3.067	0.037
Earnings per Share(EPS)(Rs.)	2.067	8.04	-3.385	0.043
PE ratio	25.863	33.603	-0.796	0.509

Interpretations of Profitability Parameters:
It is observed that while three profitability ratios are significant, the remaining seven are not at 0.05 level of significance. The ratios which show significant difference in performance between pre and post-merger situations are i)Net profit to AWF ii) Equity Multiplier and iii)the EPS. While the ratio of Net profit to AWF (ROA) has shown a 9.23% decline from 1% to 0.90%, the Equity multiplier (EM) (Total assets/Total equity) and the EPS have declined from 4.667 to 3.05. (t= 4.326, p=0.012) and from Rs 2.067 to Rs 8.04 respectively. The decline in EM is not positive and is not significant. A high EM increases ROE when net income is positive but is also indicative of a high solvency or capital risk. As regards EPS, it is observed that while the EPS has risen by over 100% post-merger, the valuation ratio PE has not kept pace with it in as much as it has increased by only Rs. 7.74 post-merger and the change is not significant.

The interest spread to AWF ratio , which shows how well a bank is managing and matching its interest income and interest expenditure effectively has increased only slightly by 0.11% (4.67% to 3.05%, p=0.012). Spread management is critical in successful bank management because of its impact on the bottom-line. Correspondingly, the operating profit to AWF has increased from 3.017% to 3.207%. The change in average net profit to average net worth (ROE) (increase by about 0.19%) is also not significant (p=0.272) as also the Operating profit to average net worth.(p=0.585). The change in AU ratio is not significant in as much as it has come down by just 1% (p=0.036). The changes in NIM and burden ratios are not significant. While the Net interest margin (NIM), which is a summary measure of the net interest return on income producing assets, has not changed significantly (p=0.012), the burden ratio, has declined from 2.443 to 1.733 (p=0.037) not indicating clearly towards improved performance in the post-merger scenario.

Analysis of Productivity Parameters for Times Bank Ltd. (merged) - H D F C Bank Ltd

(Rs. in Crores)				
Table 6: Productivity Parameter Analysis: Pre-Merger and Post-Merger Mean for acquiring banks				
	Pre-Merger (3 years avg. %)	Post-Merger (3 year avg. %)	t-statistic(0.05 significance)	p-values
Business Per employee	27.367	78.767	-3.127	0.052
Business per Branch	1.032	0.706	2.449	0.092
Operating Profit per branch	1.032	0.706	2.449	0.092
Operating profit per employee	0.117	0.094	1.702	0.231
Assets per employee	3.736	5.18	-4.24	0.013
Loans and Advances per employee	1.218	1.516	-4.097	0.015
Net income per employee	0.424	0.424	0.011	0.992

Interpretations of Productivity Parameters:

Out of the seven productivity parameters that have been considered for analysis, the improvement in four of them has been found to be statistically significant, post- merger. These are i) Business per employee ii) Operating profit per employee iii) Assets per employee and iv) Loans and advances per employee. The business per employee ratio has increased from Rs.27.367 crores to Rs.78.767 crores (t = -3.127, p= 0.052) i.e. by about 51.4 % which is quite impressive and indicative of the significant contribution made by the employees of the banks towards business growth in the post-merger period. While the operating profit per employee has grown from Rs. 0.117 crores to Rs. 0.094 crores (t= 1.702, p=0.231), the Assets per employee ratio has grown from Rs. 3.736 crores Rs. 5.18 crores (by about 14.40.00 which is quite overwhelming) and the increase is statistically significant. The Loans per employee ratio has registered a massive increase of over 298.00 (from Rs.1.218 to Rs. 1.516 crores) (t=--4.097p=0.015). The other two productivity ratios which have shown an increase are i) Business per branch(BPB) and ii) Net income per employee. The increase in BPB is not significant possibly because of the speed of branch expansion to meet the competition and enhance the reach & the need to meet regulatory requirements of the RBI in the post liberalization/ merger period. The marginal decline in operating profit per branch can also be attributed to these factors. The net income per employee ratio has stable marginally from 0.424 to 0.424 possibly due to the fact that growth in NI (PAT) has not kept pace with the increase in the number of employees. On balance it can be concluded, that the productivity of commercial banks has shown a healthy increase in the post-merger period.

Conclusion:

The ratio analysis yields blended results concerning the effect of bank mergers on the performance of Indian business banks. The EPS and PE ratio analysis demonstrates for the times bank ltd expanded from Rs. 8.04 and Rs. 33.603 post-merger which is factually critical. Analysis of productivity parameters demonstrates that the normal net income per employee has remained constant from Rs. 0.424 crores Pre - merger to Rs.0.424 crores post-merger for times bank ltd. There is a basic need for the banks to deal with their credit risk by checking their advance portfolios proficiently in the post-merger situation.

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