PRE AND POST ACQUISITION PERFORMANCE OF PUBLIC AND PRIVATE SECTOR BANKS IN INDIA

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Abstract

In this paper we examine performance of public and private banks before and after their activities acquiring other financial institutions. The merger and acquisitions activities of the public sector and private sectors banks in India between 1995 and 2006 are considered for the study. The performance of acquiring banks is undertaken based on ratio analysis. The ratios pertaining to liquidity, activity, solvency and profitability are used to evaluate the performance between two periods. Results of the empirical analysis shows that there is a significant difference in the activity, solvency and profitability between pre and position acquisition period for public sector banks. For private sectors banks, a strong difference in liquidity status between two period are found. This study suggests that performance of public and private sector banks is affected by their M & A activities.

Key Words: Merger and Acquisition (M & A), Interest spread and Parametric t-test
Introduction

Mergers and acquisitions (M&A) within the Indian financial sector have changed the Indian banking landscape tremendously in the past two decades. The Indian banking sector has witnessed significant structural changes that resulted in its consolidation through a large number of mergers and acquisitions (M&As) and increased cross-shareholdings. Also, in many countries, especially where smaller banks were active, the growth in M&As was attributed to banks’ desire to increase in size in order to obtain gains in terms of market power and/or efficiency.

While the bulk of the research on the financial performance of mergers and acquisitions has focused on stock returns around the merger announcement, there are very few research work in this area focusing on effect of M & As on firm performance by comparing the various financial ratios between pre and post event period. In particular, mergers have had a positive effect on key financial ratios of firms acquiring domestic firms while a slightly negative impact on the firms acquiring cross-border firms. Therefore here an attempt is made to evaluate the performance of acquiring banks based on comparing key financial ratios before and after acquisition period of 5 years. The liquidity ratios, activity ratio and profitability ratios during pre and post acquisition periods are compared. This study analyses 11 mergers in the Indian banking sector between 1995 and 2006 to capture the effect of M & A on firm performance.

Review of Literature

Measuring the performance of M&A deals has been a difficult problem for many researchers. Scholars have used different techniques in the form of ratio analysis and comparative analysis to identify the effects of M&A on acquiring companies. Rao and Sanker (1997) found that there was a significant improvement in liquidity, leverage, and profitability for acquiring firms. A majority of the acquiring firms were found to have some meaningful synergies. In addition, the return on capital and return on total assets were increased significantly. The risks, measured by variability in the earnings, of pre-merger firms were found to be higher than that of post- merger firms (Kumar and Bansal, 2008). M&A activities were also identified to improve the overall operational efficiency of acquirers at a significant level. On the contrary, some studies revealed a mixed or negative impact of M&A deals on acquirers’ performance. Selvam. M (2007), in his study on stock price reactions to mergers and acquisitions activities taken place in banking industry with special reference to private and public sector banks, has observed that M & A activities has affected profitability to some extent and resulted in unhealthy competition among the players. Pawaskar (2001) found that M&A did not result in improved performance or excess profit for the acquiring firms. Instead, the only significant gains were through an increased leverage of the acquired firms. In another study with ratio analyses, earning to equity ratio, liquidity ratio, and size ratio, were founded to have positive effect on the for the targets, whereas pre-tax profit turned out to be significantly negative (Renganathan, 1995).

Statement of the Problem

The Merger and Acquisitions have become one of the crucial strategic issues in the banking industry in India nowadays. Although acquiring banks have frequently experienced deteriorated post-acquisition performance that has reduced shareholders’ wealth, the M & A is still one of the most common strategic instruments for expansion or restructuring. It is known that acquisitions have a tremendous impact on the industry, but there is a definite lack of comprehensive and systematic research about the underlying structure of the mergers and
acquisitions (M&A) phenomenon in the banking industry. Particularly there is a lack of comprehensive research on financial performance combining M & A activities of banks under public and private sector. So, the present research is undertaken to find out whether expansion or restructuring of banks through M & A activities has improved the financial performance or not.

Objectives of the Study

The present research work is carried out with objective of finding out the effect of M & A activities on financial performance of all banks under public and private sectors by comparing various ratios between pre and post-event period of five years.

Hypothesis

The following null hypotheses are framed for the present study:

(a) There is no significant difference in pre and post acquisition performance of Public sector banks.
(b) There is no significant difference in pre and post acquisition performance of Private sector banks

Methodology

Sample

A sample of bank merger announcements announced during the years between 1996 and 2006 are considered for the study (See Appendix). The merger announcements by banks in both public and private sectors are taken into account.

Period of the Study

The M & A activities of banks under private and public sectors during the period from 1999 to 2004 are undertaken. However, for evaluating financial performance, the required data for five years before and after M & A event are collected. Therefore, in respect of data, the study period is 16 years from 1st April 1994 to 31st March 2009.

Data

The present study is relied on secondary data, which are the financial statements for five years before and after the M & A announcement years. The required data were gathered from PROWESS data base.

Design

In order to evaluate the effect of Merger and acquisition activities of public and private sector banks on their performance, ratio analysis method is adopted. The ratios pertaining to liquidity (Current ratio, Quick ratio and Cash asset ratio), activity (Total income to Net working capital, Total income to Total Assets ratio and Total income to Fixed asset ratio), Solvency (Proprietary ratio and Credit / Deposit ratio) and profitability (Net profit margin, Return on net worth and Return on capital employed) are calculated for pre and post period of five years separately and ratios between two period are compared. A brief explanation of above ratios are given below:

Current Ratio (CR)

The current ratio is the ratio used for testing the basic liquidity of a company. It comprises of cash, accounts receivable, marketable securities, prepaid expenses, etc. It
signifies a company's ability to meet its short-term liabilities with its short-term assets. A current ratio greater than or equal to one indicates that current assets should be able to satisfy near-term obligations. A current ratio of less than one may mean the firm has liquidity issues.

\[
\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}
\]

**Quick Ratio (QR)**

The quick ratio is a tougher test of liquidity than the current ratio. It eliminates certain current assets such as prepaid expenses that may be more difficult to convert to cash. Like the current ratio, having a quick ratio above one means a company should have little problem with liquidity. The higher the ratio, the more liquid it is, and the better able the company will be to ride out any downturn in its business.

\[
\text{Quick Ratio} = \frac{\text{Cash} + \text{Accounts Receivable} + \text{Short-Term or Marketable Securities}}{\text{Current Liabilities}}
\]

**Cash Asset Ratio (CSHRAT)**

This ratio indicates a conservative view of liquidity such as when a company has pledged its receivables and its inventory, or the analyst suspects severe liquidity problems with inventory and receivables. It is calculated as follows:

\[
\text{Cash Asset Ratio} = \frac{\text{Cash Equivalents} + \text{ Marketable Securities}}{\text{Current Liabilities}}
\]

**Total Income to Working Capital Ratio (TIWC)**

Indicates efficient use of working capital in generating income. A low ratio indicates inefficiency, while a high level implies that the company's working capital is working too hard.

\[
\text{TIWC} = \frac{\text{Total Income}}{\text{Working capital}}
\]

**Total Income to Total Asset Ratio (TITOAST)**

Measures the activity of the assets and the ability of the business to generate income through the use of the assets.

\[
\text{TITOAST} = \frac{\text{Total Income}}{\text{Total Assets}}
\]

**Total Income to Net Fixed Asset Ratio (TITONFA)**

Measures the capacity utilization and the quality of fixed assets. It is calculated as follows:

\[
\text{TITONFA} = \frac{\text{Total Income}}{\text{Net Fixed Assets}}
\]

**Interest Expended to Interest Earned Ratio (INTEXPEARN)**

Indicates the relationship between interest expended on deposits and interest earned on lending. This ratio is also called interest spread ratio. The formula for this ratio is:

\[
\text{INTEXPEARN} = \frac{\text{Interest Expended}}{\text{Interest Earned}}
\]

**Proprietary Ratio**

This ratio exposes the relationship between shareholders’ capital and total assets. The shareholders’ capital consist of equity paid up and reserves less accumulated loss. This ratio is used by the investors to know how safety a bank against losses and insolvency.

\[
\text{Proprietary Ratio} = \frac{\text{Shareholders’ Capital}}{\text{Total Assets}} \times 100
\]
Credit Deposit Ratio

This ratio is used to assess short-term solvency position of a bank. The ratio is nothing but proportion of advances to deposits. Advances includes loans, cash credit, overdrafts and bills discounted. This ratio indicates how effectively the deposits of the bank have been utilized for generating revenue.

Credit Deposits Ratio = Advances / Deposits

Net Profit Margin (NPM)

The profit margin tells you how much profit a company makes for every one rupee it generates in revenue or sales. Profit margins vary by company (firm or industry), but all else being equal, the higher a company's profit margin compared to its competitors, the better. It is calculated as:

\[ \text{NPM} = \frac{\text{Net Profit After Tax}}{\text{Total Income}} \]

Return on Net Worth (RONW)

This ratio is used to analyze the ability of the firm’s management to realize an adequate return on the capital invested by the owners of the firm. Tendency is to look increasingly to this ratio as a final criterion of profitability. The formula is:

\[ \text{RONW} = \frac{\text{Net Profit After Taxes}}{\text{Net Worth (Shareholders’ Equity)}} \]

Return on Capital Employed (ROCE)

Return on capital employed (ROCE) is the rate of return a business is making on the total capital employed in the business. Capital will include all sources of funding (shareholders funds + debt). To be consistent with this the return should be taken prior to interest (the return to lenders) and tax. It is therefore

\[ \text{ROCE} = \frac{\text{PBIT}}{\text{(Total Assets – Current Liabilities)}} \]

Statistical Tool

The statistical significance of the difference in ratios between pre and post event period of five years are tested using parametric t-test.

Results and Discussion

It can be seen from Table I that the liquidity position of the public sector banks in terms of CR, QR and Cash Ratio tend to experience with trivial decline against their deals associated with acquisition of other banks. The scenario is reverse in the case of turning working capital into earnings That is, efficient use of working capital do not differ between periods.

Regarding their activities, in turning their total assets and fixed assets into generating income, there has been remarkable decline after acquisition activities. That is, the TITOAST, on an average for five years, 0.0977 times in pre-period has declined to 0.0808 times in post-period and the difference in these two values is significant at 1 per cent level (t value = 6.58, p < 0.01). Similarly, the TITONFA on an average for 5 years has significantly declined to 11.8737 times during post-period from 14.2371 times in pre-period (t-value = 1.71, p < 0.10). At the same time interested expended to interest earned, which is 0.7781 times in pre-period has declined significantly to 0.6874 times in pre-period (t-value = 2.04, p < 0.05). A significant increase of proprietary ratio of 0.0489 times in pre-period to 0.0599 times in post-period (t-value = -3.74, p < 0.01), it is apparent that there has been a remarkable increase in
owners’ equity relative to total assets after acquisition activities of public sector banks. Similarly, there has also been a notable increase in extending credit to the customers relative to mobilization of deposits from 0.5189 times in pre-period to 0.5723 times in post-period (t-value = -2.80, p < 0.01).

As far as the profitability is concerned, RONW and ROCE, on an average for five years before and after acquisition event remain same. That is, there is no remarkable difference in these two profitability ratios between two period. However, Net earnings (Net profitability margin) on the average for five years, which stood at 5.83 per cent in pre-period, has increased significantly to 8.73 per cent in post-period (t-value = -3.82, p < 0.01). On the whole, it is concluded that the M & A activities of public sector banks have significant negative effect on utilization of assets in generating income but there has been a positive and significant influence on interest spread (interested expended relative to interest earned), owners’ capital and advances to deposits (solvency) as well as on making profit net of all expenses.

The financial performance of private sector banks before and after their acquisition activities are evaluated by comparing various ratios pertaining to liquidity, activity and profitability between pre and post period 5 years and the results of the analysis are presented in Table II. It can be observed from the table that the performance of private banks during five years after acquiring other banks is not attractive. The liquidity position become weak during post-event period of 5 years. The CR, QR and CSHRAT, which is 4.3040 times, 4.2690 times and 3.2822 times on an average in pre-event period of five years has declined significantly to 1.3430 times (t-value = 4.29, p < 0.01), 1.2050 times (t value = 4.43, p < 0.01) and 0.9293 times (t-value = 4.12, p < 0.01) on an average during post-event period of five years respectively.

At the same time, efficiency in utilization of working capital for generating income is unaffected by the acquisition activities. That is, decline in TIWC from 1.1448 times in pre-period to 1.0834 times in post-period is trivial. However, efficiency of the private sector banks in generating income relative to assets has come down significantly from 0.0931 times in pre-period to 0.0700 times in post-period (t value = 2.09, p < 0.05). It can be seen that ratio of interest expended to interest earned is 0.7697 times in pre-period has declined to 0.6828 times in post-period, but there is no significant difference in mean ratios. That is there is no notable change in interest spread due to acquisition activities of private sector banks. At the same time, owners’ fund in total investments has come down from 0.1780 times in pre-period to 0.0731 times in post-period. On the other hand, lending credit to the customer against mobilization of deposits has increased significantly from 0.4638 times to 0.7889 times between pre and post acquisition periods (t-value = -2.63, p < 0.01).

As far as the effect of acquisition activities on profitability of the private sector banks is concerned, no notable change in NPM as well as in RONW (t-value is insignificant) between pre and post period of five years is found. However, the profitability, on an average for 5 years, relative to capital employed has declined at marginal level from 11.5430 per cent in pre-period to 7.5140 per cent in post period (t-value = 1.84, p < 0.10). Hence, from the results comparing the liquidity, activity, solvency and profitability ratios, between pre and post-acquisition period of five years, it is found that the deals acquiring other limited banks by private sector banks have significant negative effect on their liquidity position as well as on their overall financial performance.

Conclusion

Our empirical analysis of financial performance against acquisition activities of public and private sector banks has led to the finding that the performance of private sector banks is...
found to be better in pre-period compared to their performance in post-acquisition period. It is further found that there is notable change in liquidity position of the public sector banks due to their acquisition activities whereas there has been significant decline in their activities in turning their assets for generating income. It is however found that the net earnings of public sector banks has increased significantly after acquiring other banks likely due to a notable decline in interest expended relative to interest earned. Overall, the performance of public sector banks in terms of generating income relative to their investment in fixed assets is significantly and negatively affected whereas their performance in respect of their net earnings is positively influenced by acquisition deals due to increase in interest spread. The deals pertaining to acquiring other (private limited) banks by private sector banks have significant negative effect on their liquidity position as well as on their overall financial performance. Hence, both hypotheses are rejected and alternatively it is concluded that there is impact of M & A on financial performance of both Public and Private sector banks in India.

Table I
Comparison of Various Ratios between Pre and Post Acquisition Period of 5 Years for PUBLIC Sector Banks

<table>
<thead>
<tr>
<th>Financial Ratios</th>
<th>Pre Period</th>
<th>Post Period</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
<td></td>
</tr>
<tr>
<td>Current Ratio (CR)</td>
<td>4.3106 (2.1958)</td>
<td>3.8920 (2.1057)</td>
<td>0.81</td>
</tr>
<tr>
<td>Quick Ratio (QR)</td>
<td>4.0520 (2.1019)</td>
<td>3.6746 (1.9829)</td>
<td>0.77</td>
</tr>
<tr>
<td>Cash Ratio (CSHRAT)</td>
<td>3.1506 (1.6893)</td>
<td>2.9334 (1.4826)</td>
<td>0.57</td>
</tr>
<tr>
<td>Total Income to Net Working Capital (TIWC)</td>
<td>0.8686 (0.4890)</td>
<td>0.9192 (0.4084)</td>
<td>-0.47</td>
</tr>
<tr>
<td>Total Income to Asset Turnover Ratio (ASTTO)</td>
<td>0.0977 (0.0077)</td>
<td>0.0808 (0.0131)</td>
<td>6.58***</td>
</tr>
<tr>
<td>Total Income to Fixed Asset Turnover Ratio (FATO)</td>
<td>14.2371 (6.9422)</td>
<td>11.8737 (4.3268)</td>
<td>1.71*</td>
</tr>
<tr>
<td>Interest Expended to Interest Earned</td>
<td>0.7781 (0.1882)</td>
<td>0.6874 (0.1838)</td>
<td>2.04**</td>
</tr>
<tr>
<td>Proprietary Ratio</td>
<td>0.0489 (0.0150)</td>
<td>0.0599 (0.0088)</td>
<td>-3.74***</td>
</tr>
<tr>
<td>Credit Deposit Ratio</td>
<td>0.5189 (0.0640)</td>
<td>0.5723 (0.0929)</td>
<td>-2.80***</td>
</tr>
<tr>
<td>Net Profit Margin (NPM)</td>
<td>0.0583 (0.0340)</td>
<td>0.0873 (0.0293)</td>
<td>-3.82***</td>
</tr>
<tr>
<td>Return on Net Worth (RONW) (%)</td>
<td>14.6846 (4.7653)</td>
<td>15.2780 (4.9911)</td>
<td>-0.51</td>
</tr>
<tr>
<td>Return on Capital Employed (ROCE) (%)</td>
<td>9.7034 (4.6332)</td>
<td>10.4354 (4.3074)</td>
<td>-0.68</td>
</tr>
</tbody>
</table>

Figures in brackets are standard deviation
***Significant at 1% level; **Significant at 5% level; *Significant at 10% level
Table II
Comparison of Various Ratios between Pre and Post Acquisition Period of 5 Years for PRIVATE Sector Banks

<table>
<thead>
<tr>
<th>Financial Ratios</th>
<th>Pre Period</th>
<th>Post Period</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
<td></td>
</tr>
<tr>
<td>Current Ratio (CR)</td>
<td>4.3040 (2.1378)</td>
<td>1.3430 (0.4496)</td>
<td>4.29***</td>
</tr>
<tr>
<td>Quick Ratio (QR)</td>
<td>4.2690 (2.1491)</td>
<td>1.2050 (0.3992)</td>
<td>4.43***</td>
</tr>
<tr>
<td>Cash Ratio (CSHRAT)</td>
<td>3.2822 (1.7695)</td>
<td>0.9293 (0.3569)</td>
<td>4.12***</td>
</tr>
<tr>
<td>Total Income to Net Working Capital (TIWC)</td>
<td>1.1448 (1.6130)</td>
<td>1.0834 (1.4728)</td>
<td>0.09</td>
</tr>
<tr>
<td>Total Income to Asset Turnover Ratio (ASTTO)</td>
<td>0.0931 (0.0267)</td>
<td>0.0700 (0.0227)</td>
<td>2.09**</td>
</tr>
<tr>
<td>Total Income to Fixed Asset Turnover Ratio (FATO)</td>
<td>2.9560 (1.1944)</td>
<td>3.9700 (1.5405)</td>
<td>-1.64</td>
</tr>
<tr>
<td>Interest Expended to Interest Earned</td>
<td>0.7697 (0.2537)</td>
<td>0.6528 (0.1240)</td>
<td>1.31</td>
</tr>
<tr>
<td>Proprietary Ratio</td>
<td>0.1780 (0.2188)</td>
<td>0.0731 (0.0109)</td>
<td>1.51</td>
</tr>
<tr>
<td>Credit Deposit Ratio</td>
<td>0.4638 (0.1926)</td>
<td>0.7889 (0.3393)</td>
<td>-2.63**</td>
</tr>
<tr>
<td>Net Profit Margin (NPM)</td>
<td>0.1295 (0.0636)</td>
<td>0.1296 (0.0287)</td>
<td>-0.004</td>
</tr>
<tr>
<td>Return on Net Worth (RONW) (%)</td>
<td>16.5110 (9.2116)</td>
<td>16.0950 (7.5001)</td>
<td>0.11</td>
</tr>
<tr>
<td>Return on Capital Employed (ROCE) (%)</td>
<td>11.5430 (4.1188)</td>
<td>7.5140 (5.5644)</td>
<td>1.84*</td>
</tr>
</tbody>
</table>

Figures in brackets are standard deviation

***Significant at 1% level; **Significant at 5% level; *Significant at 10% level
References


Appendix

Particulars of Bank Mergers Between 1996 and 2006

<table>
<thead>
<tr>
<th>Acquiring Banks</th>
<th>Target Banks</th>
<th>Event Date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PUBLIC SECTOR BANKS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bank of Baroda</td>
<td>Bareilly Corporation Banks Ltd</td>
<td>03.06.1999</td>
</tr>
<tr>
<td>Bank Of Baroda</td>
<td>Banaras State Bank Ltd</td>
<td>20.07.2002</td>
</tr>
<tr>
<td>Bank Of Baroda</td>
<td>South Gujarat Local Area Bank Ltd</td>
<td>25.06.2004</td>
</tr>
<tr>
<td>Oriental Bank Of Commerce</td>
<td>Punjab Co.op Bank and Bari Doab Bank Ltd</td>
<td>08.04.1997</td>
</tr>
<tr>
<td>Oriental Bank Of Commerce</td>
<td>Global Trust Bank Ltd</td>
<td>14.08.2004</td>
</tr>
<tr>
<td>Punjab National Bank</td>
<td>Nedungadi Bank Ltd</td>
<td>01.02.2003</td>
</tr>
<tr>
<td>State Bank Of India</td>
<td>Kashinath Seth Bank</td>
<td>01.01.1996</td>
</tr>
<tr>
<td><strong>PRIVATE SECTOR BANKS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H D F C Bank Ltd.</td>
<td>Times Bank Ltd</td>
<td>26.02.2000</td>
</tr>
<tr>
<td>I C I C I Bank Ltd.</td>
<td>Bank of Madura</td>
<td>10.03.2001</td>
</tr>
</tbody>
</table>

***