# An Impact of Merger on Profitability Ratio - A Study of HDFC Bank

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Abstract: In the present era of global economy, Mergers and Acquisitions have become the most commonly used business approach of corporate reformation. It also strengthens to achieve greater market share, long term profitability, entering new markets, capitalizing on economies of scale etc. With modernization, the Merger and Acquisition have become more common among banks in India as this helps banks to increase their market share and also helps them to penetrate the regions where the acquiring banks do not have any presence. This paper aims at analyzing the post-merger performance of acquiring bank taking profitability ratio as the key parameter. The merger of HDFC bank with Centurion Bank of Punjab has been considered for the study.

Keywords : Merger and Acquisitions, Profitability Ratio, Return on Equity, Net Profit Margin, Return on Assets

## INTRODUCTION-

Since the liberalization in the early 1990's, India has experienced an economic revolution. With the deregulation of interest rates and the emergence of strong domestic and foreign players, the banking sector has seen major changes. Liberalization and Globalization have breathed new life into the foreign exchange markets. The banking industry has progressed from an era of severe controls and government intervention to a more market-governed system. New private banks have made their presence felt in a very strong way and several foreign banks have entered into the country. Over last few decades, mergers and acquisition have been very common among Indian banking sector. Some of the mergers and acquisition within the banking industry were forced while some were voluntary.

Merger and Acquisitions in Indian Banking Industry dates back to early 20th century when three presidency banks namely Bank of Bengal, Bank of Bombay and Bank of Madras were merged to Imperial Bank of India which then came to be known as State Bank of India. Since eighties, the consolidation excitement began in both commercial and rural banks of the country. Since early 21st century, the Merger and Acquisitions in Indian Banking Industry took the rapid stage where most of the co-operative banks started merging with commercial banks.

### Merger & Acquisitions: Conceptual Framework

Merger is defined as the combination of two or more companies into a single one where one survives and other loses its corporate existence. The survivor acquires the asset as well as liabilities of the merged companies.

A merger is a combination of two or more companies where one corporation is completely absorbed into another one. The less important company loses its identity and becomes the part of the more important corporation, which retains its identity. A merger extinguishes the merged corporation and the surviving corporation assumes all the right, privilege, and liabilities of the merged corporation. A merger is not the same as a consolidation in which two corporations lose their separate identities and unite to form a completely new corporation.

Growth is always the priority of all companies and confers serious concern to expand the business activities. Merger and Acquisitions (M&A) is the need of business enterprises for achieving the economies of scale, growth, diversification, synergy, financial planning and globalization of economy.

Table 1 provides details of Bank mergers in India in three different periods: Pre nationalization period (1961 – 1968), nationalization period (1969 – 1990) and post reform period i.e. after the year 1991.

TABLE-1: Bank Mergers in different periods

| Period | Number of Mergers |
|---|---|
| Pre-Nationalization Period (1961 – 1968) | 46 |
| Nationalization Period (1969 – 1990) | 13 |
| Post Reform Period (1991 – 2014) | 35 |
| Total number of mergers | 94 |

TABLE-2: Mergers and Acquisitions since 2000

| Year | Details of Mergers |
|---|---|
| 2000 | Times Bank with HDFC Bank |
| 2001 | ICICI with ICICI Bank<br>Bank of Madura with ICICI Bank |
| 2002 | Benares State Bank with Bank of Baroda<br>ING bought stake in Vysya Bank & ING Vysya Bank formed |
| 2003 | Nedungadi Bank with Punjab National Bank |
| 2004 | Global Trust Bank with Oriental Bank of |

| | Commerce |
|---|---|
| 2005 | Bank of Punjab with Centurion Bank<br>IDBI Bank with IDBI |
| 2007 | Lord Krishna Bank with Centurion Bank of Punjab |
| 2008 | Centurion Bank of Punjab with HDFC Bank |
| 2010 | Bank of Rajasthan with ICICI Bank |
| 2014 | ING Vysya Bank with Kotak Mahindra Bank |

**Profitability Ratios:**

Profitability ratios measure the performance and provide an indication of its ability to generate profits. As profits are used to fund business development and pay dividends to shareholders, a bank’s profitability and how efficient it is at generating profits is an important consideration for shareholders. It measures the bank's use of its assets and controls its expenses to generate an acceptable rate of return. It also reveals the bank´s ability to earn a satisfactory profit and returns on investment. The ratios are an indicator of good financial health and how effectively the bank in managing its assets. Return on Equity (ROE), Net Profit Margin (NPM) and Return on Assets (ROA) are taken into considerations to analyze profitability parameters of HDFC Bank.

## LITERATURE REVIEW:

Tambi (2005) in his research attempts to evaluate the impact of mergers on the performance of a corporation. Though the theoretical assumption says that mergers improve the overall performance of the company due to increased market power and synergy impacts, he uses his paper to evaluate the same in the scenario of Indian economy.

Bhattacharyya et al. (1997) used DEA to measure the productivity efficiency of 70 Indian commercial banks in the period 1986-1991. They found that the public sector banks are the most efficient banks as compared to foreign banks and private banks. They also found a temporal decline in the performance of public sector banks.

Das (1997) used the cross-section data and DEA to examine the efficiency of 65 major banks for the year 1995. He found the Indian banks as the more technically efficient.

Mukherjee et al. (2002) examined the technical efficiency of 68 Indian commercial banks for the period 1996-1999 and found that public sector banks are more efficient than both private and foreign banks.

Ram Mohan and Ray (2004) found that public sector banks performed better than private sector banks but not differently from foreign banks.

Kaur and Kaur (2010) studied the impact of merger on the cost efficiency of participated banks and compared the performances of the banks before and after merger. The result of their studies indicate that mergers led to higher level of cost efficiency for the merging bank and their study suggest that the trend of merger in Indian Banking sector has no far been restricted to restructuring of week and financially distressed.

Ravichandran and Alkhathlan (2010) analyzed the efficiency and performance of post-merger using CRAMEL–type variable of selected banks in India & Saudi Arabia which are initiated by the market forces. The result of their research suggests that the mergers did not seem to enhance the productive efficiency of the banks as they do not indicate any significant difference.

Anand and Singh (2008) analyses five mergers in the Indian banking sector to capture the returns to shareholders as a result of the merger announcements using the event study methodology. Their study reveals that the merger announcements in the Indian banking industry have positive and significant shareholder wealth effect both for bidder banks and target banks.

**Objective:**

1. To investigate the post-merger performance of HDFC Bank by analyzing the profitability ratio as a key parameter.

**Methodology:**

The research relies on secondary data which includes both raw and published summaries. The data have been gathered from the websites of HDFC bank and Money Control. The study is carried out over various years under consideration using Accounting Based Approach of different financial parameters. The pre-merger and post-merger averages for a set of key financial ratios were computed for 4 years prior to, and 4 years after, the year of merger completion. For the years prior to a merger, the key financial ratios of the acquiring firm alone are considered. Post the merger, the operating ratios for the combined firm are taken. For the purpose of researching the average ratios were compared using paired t-test. A confidence interval of 95% has been set for difference in means.

**Hypothesis:**

The following hypothesis have been formulated and tested to draw the conclusion:

1. There is no significant association between pre & post-merger Net Profit Margin.

2. There is no significant association between Return On Assets of the selected banks pre and post-merger.

3. There is no significant association between pre & post-merger Return On Equity.

**HDFC Bank and its Merger with CBOP:**

As the part of liberalization of the Indian Banking Industry in 1994, the HDFC (Housing Development Finance Corporation) Bank was amongst the first to receive an "in principle" approval from the Reserve Bank of India (RBI) to set up a bank in the private sector. The bank was incorporated in August 1994 in the name of "HDFC Bank Limited", with its registered office in Mumbai. HDFC Bank commenced operations as a Scheduled Commercial Bank in January 1995. The Bank has a network of 4,281 branches in 2,505 cities across India, as on December 31, 2015. All the branches are linked on an online real-time basis. Customers in over 1397 locations are also served through Telephone Banking. The Bank's expansion plans take into account the need to have a presence in all major industrial and commercial centers, where its corporate customers are located, as well as the need to build a strong retail customer base for both deposits and loan products. Being a clearing and settlement bank to various leading stock exchanges, the Bank has branches in centers where the NSE & BSE has a strong and active member base. The Bank also has a network of 11,843 ATMs across India.

The Centurion Bank of Punjab (CBOP) was a private sector bank that provided retail and corporate banking services. It was operated on a strong nationwide franchise of 394 branches 452 ATMs in 180 locations which was supported by over 7,500 employees. Centurion Bank was incorporated on 30 June 1994. The Bank was a joint venture between 20th Century Finance Corporation and its associates and Keppel Group of Singapore through Kephinance Investment (Mauritius). In the year 1995, Centurion Bank amalgamated 20th Century Finance Corporation. On 29 June 2005, Centurion Bank and Bank of Punjab agreed to a merger of the two banks. The combined bank took as its name Centurion Bank of Punjab. Bank of Punjab had been founded in the year 1995. In the year 2006 Centurion Bank of Punjab acquired Kochi-based Lord Krishna Bank.

On May 23, 2008, the amalgamation of Centurion Bank of Punjab with HDFC Bank was formally approved by Reserve Bank of India (RBI) to complete the statutory and regulatory approval process. As per the scheme of amalgamation, shareholders of CBOP received 1 share of HDFC Bank for every 29 shares of CBOP. The amalgamation added significant value to HDFC Bank in terms of increased branch network, geographic reach, and customer base, and a bigger pool of skilled manpower. The merger between the two banks created a nationwide network of 1,148 branches a strong deposit base of around Rs. 1,200 billion and net advances of around Rs. 850 billion.

The balance sheet size of the combined entity after the merger was over Rs. 1,500 billion. The merger made HDFC bank largest private bank in the country in terms of number of branches ahead of its competitor ICICI which had 955 branches across the country at the time of merger. Before merger HDFC had 754 branches and COBP had 394 branches. The merger made HDFC largest private banks with 1,148 branches.

TABLE –3: Value added after Merger of HDFC Bank and CBOP

| Categories | HDFC Bank | CBOP | Merged Entities |
|---|---|---|---|
| Branches | 754 | 394 | 1,148 |
| ATM | 1525 | 452 | 1977 |

Source: HDFC Bank & Moneycontol.com (2013)

**Analysis and Interpretations:**

Table (4) shows the mean, standard deviation, correlation, calculated t-value and significance of the perception of the selected bank in pre and post-merger context of Net Profit Margin (NPM) of HDFC Bank. For the HDFC bank the test of difference of mean was found to be not significant (- 0.967<1.9432, DF=6) i.e. calculated t-value is less than tabulated t-value at 5% level of significance. This implies that pre and post-merger performance of HDFC bank do not differ in context of net profit margin.

TABLE 4: T-Test of pre and post-merger of Net Profit Margin of HDFC Bank

| **Particulars** | **HDFC Bank** | |
|---|---|---|
| Pre/Post - Merger | Pre-Merger | Post-Merger |
| | 21.33 | 17.9 |
| | 19.15 | 19.2 |
| | 16.18 | 18.5 |
| | 15.1 | 19.1 |
| Mean | 17.94 | 18.67 |
| Standard Deviation | 2.84 | 0.6 |
| R | -0.564 | |
| Calculated t-value | -0.967 | |
| Tabulated value of (t) | 1.9432 | |
| Significance (.05 Level) | Not Significant | |

Similarly, Table 5 for the Return of Assets (ROA) of HDFC bank the test of difference of mean was found to be not significant (0.052<1.9432, DF=6) i.e. calculated t-value is less than tabulated t-value at 5% level of significance. This implies that pre and post-merger performance of HDFC bank do not differ in context of return on assets. Therefore the hypothesis taken “There is no significant association between return on assets of the selected banks pre and post-merger” is accepted.

TABLE 5: T-Test of pre and post-merger of Return On Assets of HDFC Bank

| **Particulars** | **HDFC Bank** | |
|---|---|---|
| Pre/Post - Merger | Pre-Merger | Post-Merger |
| | 1.42 | 1.45 |
| | 1.39 | 1.57 |
| | 1.39 | 1.68 |
| | 1.42 | 1.82 |
| Mean | 1.405 | 1.630 |
| Standard Deviation | 0.02 | 0.16 |
| R | 0.037 | |
| Calculated t-value | 0.052 | |
| Tabulated value of (t) | 1.9432 | |
| Significance (.05 Level) | Not Significant | |

Testing of significance difference between pre & post-merger Return on Equity (ROE) of HDFC Bank also show there is no significant difference in between banks pre & post-merger Return on Equity. Test of difference of mean (Table 6) was found to be not significant (-0.024<1.9432, DF=6) i.e. calculated t-value is less than tabulated t-value at 5% level of significance. This implies that pre and post-merger performance of HDFC bank do not differ in context of Return on Equity (ROE).

TABLE 6: T-Test of pre and post-merger of Return On Equity of HDFC Bank

| **Particulars** | **HDFC Bank** | |
|---|---|---|
| Pre/Post - Merger | Pre-Merger | Post-Merger |
| | 18.45 | 16.12 |
| | 17.74 | 16.74 |
| | 19.46 | 18.69 |
| | 17.74 | 20.34 |
| Mean | 18.34 | 17.97 |
| Standard Deviation | 0.81 | 1.92 |
| R | -0.017 | |
| Calculated t-value | -0.024 | |
| Tabulated value of (t) | 1.9432 | |
| Significance (.05 Level) | Not Significant | |

## CONCLUSION:

On analyzing three key profitability ratios of selected banks it is observed that net profit margin, return on equity and return on assets of the selected bank has increased after the merger. However on analyzing the pre and post-merger performance of the selected bank using student t-test it is found that, there is no significant relationship between selected bank pre and post-merger performances.

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