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# "Assessing The Post-Merger Performance Of Indian Banks Through The Market Value Addition Model"

G.V.SUJATHA[1] , Dr.B.MATHIVANAN[2]

[1]Research Scholar Part-Time Ph.D Research Scholar, Department of Commerce, MGR College, HOSUR and Working as Assistant Professor, Govt. First Grade Degree College, Kadugudi, Bangalore - 560067

[2]Guide Professor and HOD Department of Commerce, MGR College,
HOSUR – 635130

Abstract

This paper delves into the post-merger performance of selected Indian banks over a ten-year span from 2010 to 2020. The chosen duration aims to assess how these banks fared following mergers, a period marked by significant economic turmoil such as the Sub-Prime crisis. The crisis led to a drastic downturn in the US economy, causing over 64 banks to file for bankruptcy, including the fourth-largest banker globally, Lehman Brothers. Amidst this global financial crisis, the Indian banking industry remained resilient, witnessing healthy takeovers and mergers without a single bank facing liquidation. The paper employs the MVA (Market Value Added) model to evaluate the performance of these mergers and takeovers.

This study aims to understand the objectives behind mergers and acquisitions in the Indian banking sector while scrutinizing the financial performance of the merged entities using the MVA model. Fifteen mergers that occurred between 2010 and 2020 are analyzed. Through this analysis, it becomes evident that the MVA model provides a clearer depiction of the financial performance of a firm concerning the value added by the merged entity. Consequently, this analysis concludes that the MVA model stands out as a superior assessment tool compared to other models.

Key terms: Merger, Acquisition, Market Value Addition, Economic Value Addition, Net Worth

**Introduction**

The roots of Mergers and Acquisitions (M&A) extend back over a century, gaining prominence in the banking industry shortly after the conclusion of the First World War. Over time, banking has evolved into a global industry, transcending geographical boundaries. The United States Sub-Prime crisis triggered a radical transformation within this sector, leading to substantial changes that reverberated throughout the global economy, particularly impacting banks.

India's banking sector plays a significant role in fostering inclusive growth, with financial inclusion becoming a defining characteristic of the country's economy. Yet, Indian bankers confront distinctive challenges such as mounting NPAs (Non-Performing Assets), heightened political pressures, ongoing fluctuations in monetary policies, subsidized loans, and periodic farm loan waivers, among others. Hence, the researcher has opted to investigate the value generated by Indian bankers for their shareholders through Mergers and Acquisitions.

In recent times, mergers and acquisitions have become more prevalent in India. However, there remains a dearth of comprehensive knowledge concerning the long-term post-merger performance of firms in India and the strategic factors influencing this performance.

**Market Value Added Model (MVA)**

Absolutely, you've drawn a great parallel between Market Value Added (MVA) and Net Present Value (NPV). Both techniques assess the value created by an investment or a project.

MVA, akin to NPV, involves an evaluation of anticipated performance. It calculates the difference between the market value of a company and the capital contributed by investors and creditors. Similarly, NPV assesses investment feasibility by discounting anticipated future cash flows at the firm's Weighted Average Cost of Capital (WACC). If the resulting sum exceeds the initial investment cost, a positive NPV indicates that the project is likely to enhance the firm's value and is, therefore, deemed acceptable.

In essence, both MVA and NPV serve as crucial financial metrics to determine whether an investment or project generates value for the firm. They consider future cash flows in relation to the capital employed, aiding in decision-making regarding project acceptance or rejection.

Absolutely, you've encapsulated the essence of Market Value Added (MVA) brilliantly. MVA extends beyond assessing project feasibility to evaluate the annual performance of management.

It utilizes the Net Operating Profit Less Adjusted Taxes (NOPLAT) and compares it to the total cost of capital, encompassing both equity and debt, denominated in rupees. When the NOPLAT surpasses the total cost of capital for a specific year, it results in a positive MVA, indicating that the firm has augmented value for its shareholders during that period. Conversely, if the MVA is negative, the firm has failed to generate adequate earnings to cover its total capital costs, leading to a decline in the firm's overall value.

NOPLAT provides insight into what the firm has earned for all its capital providers, whereas the cost of capital represents the aggregate requirement of all capital suppliers, including equity holders. This analysis, therefore, offers a comprehensive evaluation of how effectively a firm's management utilizes its resources in generating returns that exceed the costs of capital employed.

The equation provided summarizes the primary calculations involved in determining Market Value Added (MVA):

MVA = NOPAT – Cost of Capital Employed OR NOPAT – (WACC * CE)

Where, WACC is Weighted Average Cost of Capital and CE is Capital Employed.

In this study:

- NOPAT is derived from Net Profit plus Interest Expenses.

- Capital Employed is computed as the aggregate of total capital and liabilities from the respective bank's Balance Sheet. This figure encapsulates the total value of investments in the business, encompassing both equity and debt.

By comparing NOPAT with the cost of capital employed, the MVA analysis assesses whether the firm is generating profits that exceed the cost of the capital invested. A positive MVA indicates value addition for shareholders, whereas a negative MVA implies that the firm hasn't generated enough profit to cover its capital costs.

**Table—1 Exhibiting Research Design**

| | |
|---|---|
| Research Type | Analytical |
| Research Context | Indian Banking firms, who got into M & A’s during 2010 to 2020 |
| Research Approach | Quantitative |
| Data type | Continuous variables |
| Data collection tools | Various Financial Statement of Banks before Merger and after Merger taken from different websites of the banks as well as Prowess Data Base. |
| Data Analysis Software | SPSS Version 18.0, MS Excel, MS Word, MS Power Point |
| Sampling Technique | Systematic Sampling |
| Sample Size | 15 Banks |

## Methodology

### Scope of the Study

The scope of this study focuses on analyzing 15 banks that underwent mergers and acquisitions between 2010 and 2020. These selected banks serve as the primary subjects for evaluating the post-merger performance using the Market Value Addition (MVA) model. The study aims to delve into the financial outcomes and value creation resulting from these mergers and acquisitions within the specified timeframe.

By concentrating on this subset of banks that engaged in mergers or acquisitions during the outlined period, the research endeavors to scrutinize the impact of these strategic moves on the financial performance and value generation for shareholders. The selected sample of 15 banks provides a targeted and specific dataset for in-depth analysis, allowing for a comprehensive assessment of the post-merger scenario in the Indian banking industry.

**Statement of the Problem**

Absolutely, mergers and acquisitions (M&A) serve as pivotal tools for integrating two entities and aligning efforts toward shared objectives. The primary goal of any M&A initiative is to mitigate competition between the involved companies while harnessing increased competence and competitive advantage. Ultimately, the overarching aim is to enhance the net worth of shareholders.

In the context of this study, the focus lies on evaluating the post-merger financial performance of merged banks. The assessment is conducted through the lens of Market Value Addition (MVA) analysis. By leveraging the MVA framework, the research aims to gauge the extent to which these mergers and acquisitions contribute to bolstering the net worth of shareholders. This analysis serves as a crucial means to ascertain the effectiveness of these strategic moves in generating value for the stakeholders involved in the merged entities.

**Objectives of the Study:**

1. **Understand Motives behind Bank Mergers in India:**
    - Identify and analyze the diverse motivations driving bank mergers within the Indian banking landscape.
    - Explore the underlying reasons, strategic objectives, and driving forces that lead to mergers in this context.
2. **Evaluate Post-Merger Financial Performance Using MVA:**
    - Employ the Market Value Addition (MVA) model to assess the financial performance of banks post-merger.
    - Measure the impact of mergers on financial metrics and shareholder value, specifically focusing on the augmentation of shareholders' net worth.

**Limitations of the Study**

a. Limited to Indian Context:

 - No comparison with other environments or international scenarios.

b. Restricted Timeframe:

- Study duration covers only 2010 to 2020, possibly rendering data outdated beyond this period.

c. Sample Size Constraints:

- Analysis based on 15 specific mergers in the Indian banking industry, limiting broader industry insights.

**Analysis and Interpretation**

This part of the study emphasis on the analyzing the collected data and interpreting the data using MVA model.

**Performance measurement using MVA**

This study further examines the influence of Mergers and Acquisitions (M&A) on the financial performance of the studied merged banks, employing the Market Value Added (MVA) as the primary analytical tool.

**HDFC Bank & Times Bank Merger**

HDFC Bank's pioneering merger with Times Bank in 1999-2000 marked the first market-driven merger in Indian banking. With a total market value of 5775.75 million, it was an all-stock deal. An evaluation using the value-added metric of Market Value Added (MVA) showcased a consistent increase in MVA during the post-merger years for HDFC Bank. This upward trend signifies that the merger generated value for HDFC Bank, proving to be beneficial for its growth and strategic objectives.

**Table 2 EVA of HDFC Bank**

| Year | NOPAT Rs Crores | WACC | Total Capital Rs Crores | MVA Rs Crores |
|---|---|---|---|---|
| 2010 | 494.32 | 0.4221 | 11656.14 | 425.61 |
| 2011 | 963.87 | 0.0373 | 15617.33 | 381.06 |
| 2012 | 1370.78 | 0.0393 | 23787.38 | 436.60 |

**Mergers Involving ICICI Bank**

In 2010-11, the merger between ICICI Bank and Bank of Madura represented a convergence of traditional mass banking strategies with the modern approach of ICICI Bank, focused on shareholder interests and profitability. Initially, the Market Value Added (MVA) for ICICI Bank decreased from 388.80 Crores in 2010-11 to 318.38 in 2001-02, potentially influenced by its reverse merger with its parent, ICICI Ltd, in 2011-12. However, swiftly following this, ICICI Bank regained ground, demonstrating a resilient performance. Subsequent analysis of MVA values (Table 3) showcases the subsequent creation of value for ICICI Bank, marking a successful trajectory after the initial dip.

**Table 3: MVA of ICICI Bank**

| Year | NOPAT Rs Crores | WACC | Total Capital Rs Crores | MVA Rs Crores |
|---|---|---|---|---|
| 2011 | 1009.24 | 0.031436 | 19736.59 | 388.8089 |
| 2012 | 1826.37 | 0.014485 | 104109.9 | 318.3843 |
| 2013 | 9150.18 | 0.065842 | 106812 | 2117.426 |
| 2014 | 8652.36 | 0.045333 | 125228.9 | 2975.422 |
| 2015 | 8576.09 | 0.033517 | 167659.4 | 2956.586 |
| 2016 | 12137.52 | 0.033587 | 251389 | 3694.181 |
| 2017 | 19468.72 | 0.03982 | 344658.1 | 5744.464 |
| 2018 | 27641.97 | 0.031724 | 399795.1 | 14959.05 |
| 2019 | 26484.06 | 0.0571 | 379300.96 | 4817.01 |
| 2020 | 21617.55 | 0.0377 | 363399.72 | 7923.80 |

In 2017, ICICI Bank acquired Sangli Bank, expanding its network with over 190 branches and gaining access to a diverse customer and employee base across urban and rural centers. Analysis of Market Value Added (MVA) reflects a significant surge in ICICI Bank's MVA from 5744.46 crores in 2017 to 14959.05 crores in 2018, affirming the hypothesis that mergers yield value addition. However, the subsequent year witnessed a sharp decline to 4817.01 crores, likely attributed to its merger with Bank of Rajasthan in 2019. Nevertheless, in 2010, MVA rebounded to 7923.80 crores, reinforcing the belief that positive merger outcomes often manifest over time.

**Bank of Baroda & Benaras State Bank Merger**

In 2012, Bank of Baroda (BoB) ventured into a merger with Benaras State Bank Ltd (BSB), which was under a Central Governmentimposed moratorium. Despite BSB being an insolvent private sector bank, BoB sought to expand its consumer banking business and customer base through this merger. Analysis based on Market Value Added (MVA) showcased a positive trajectory for BoB in the post-merger years (Table 4). Despite the unique circumstance of a public sector bank taking over an insolvent private sector bank, the merger proved beneficial for both entities, ultimately contributing economic value to BoB.

**Table 4: MVA of BoB**

| Year | NOPAT Rs crores | WACC | Total Capital Rs Crores | MVA Rs Crores |
|---|---|---|---|---|
| 2011 | 4094.21 | 0.0455266 | 63322.04 | 1211.3752 |
| 2012 | 4622.04 | 0.0404553 | 70910.06 | 1753.3543 |
| 2013 | 4766.97 | 0.0421474 | 76417.84 | 1546.1581 |
| 2014 | 4542.48 | 0.0307986 | 85108.67 | 1921.2501 |

### Punjab National Bank & Nedungadi Bank Merger

In February 2013, Punjab National Bank (PNB), a public sector bank, acquired Kozhikode-based Nedungadi Bank Ltd (NBL) in a merger that amalgamated banks from north and south India. While this merger served as a bailout strategy for Nedungadi Bank, PNB anticipated expanding its branch network across Kerala through this consolidation. Analysis depicted in Table 5 reveals an upward trajectory in Market Value Added (MVA) post-merger, indicating the enduring positive impact of the merger over the long term.

Table 5: MVA of PNB

| Year | NOPAT Rs Crores | WACC | Total Capital Rs Crores | MVA Rs Crores |
|---|---|---|---|---|
| 2013 | 5203.49 | 0.040196 | 86221.8 | 1737.761 |
| 2014 | 5263.68 | 0.030478 | 102331.75 | 2144.825 |
| 2015 | 5863.23 | 0.029362 | 126241.27 | 2156.562 |
| 2016 | 6356.7 | 0.027911 | 145267.39 | 2302.19 |

### Global Trust Bank & Oriental Bank of Commerce Merger

In October 2014, Global Trust Bank (GTB), a pioneering private bank, faced bankruptcy due to overwhelming bad debt, leading the Reserve Bank of India (RBI) to suspend its operations. Forced into a merger with Oriental Bank of Commerce (OBC), GTB's negative net worth triggered this RBI intervention aimed at safeguarding depositor interests.

Post-merger, OBC anticipated synergy as it excelled in bad asset recovery, a weakness of GTB. Additionally, GTB's regional strength in the south was poised to augment OBC's presence in that area, coupled with potential tax benefits from the merger. However, for GTB, the merger was compulsory owing to its bankruptcy.

An analysis of Economic Value Added (EVA) data pre and post-merger for OBC exhibited a decline from 1190.417 Crores in 2004 (the year of the merger) to 1161.042 Crores in 2015 and further to 1040.686 in 2016, signaling a negative impact due to GTB's losses. Nevertheless, OBC navigated through the situation, witnessing a subsequent rise in EVA to 1450.927 Crores in 2017 (Refer Table 6), indicating long-term benefits reaped from the merger.

**Table 6: MVA of OBC**

| Year | NOPAT Rs Crores | WACC | Total Capital Rs Crores | MVA Rs Crores |
|---|---|---|---|---|
| 2013 | 2546.88 | 0.048028 | 33987.64 | 914.5284 |
| 2014 | 2530.81 | 0.032687 | 41006.56 | 1190.417 |
| 2015 | 2774.29 | 0.029837 | 54069.46 | 1161.042 |
| 2016 | 3071.01 | 0.034449 | 58937.38 | 1040.686 |
| 2017 | 4054.39 | 0.035212 | 73936.28 | 1450.927 |

**Bank of Punjab & Centurion Bank Merger**

The merger between Centurion Bank of Punjab (CBoP) was poised to establish itself among the top 10 private sector banks in the country. Notably, the Economic Value Added (EVA) for CBoP was negative in the pre-merger year of 2014. However, it demonstrated a positive upturn, increasing to 51.31 Crores in 2015, the year of the merger, and further to 173.86 in 2016, the immediate post-merger year (Refer Table 7). This notable surge in EVA indicates a positive impact on shareholders' wealth resulting from the merger. Moreover, this positive performance was intertwined with the merger news involving LKB (Lakshmi Vilas

Bank) that the bank was concurrently navigating during that period.

**Centurion Bank of Punjab & Lord Krishna Bank Merger**

The 2016 merger, predominantly driven by the Reserve Bank of India (RBI) to safeguard depositor interests, proved successful in enhancing shareholder wealth. Analysis indicates a notable increase in Market Value Added (MVA) for the bank, escalating from 51.31 Crores in 2015 to 173.86 Crores in 2016 (Refer Table 7). This substantial rise post the merger with the Bank of Punjab in 2015 highlights the positive impact. Furthermore, in 2017, the bank's Economic Value Added (EVA) surged to 228.71 Crores, signifying a positive market response and reaffirming the merger's beneficial impact on shareholders' wealth.

**Table 7: MVA of CBOP**

| Year | NOPAT Rs Crores | WACC | Total Capital Rs Crores | MVA Rs Crores |
|---|---|---|---|---|
| 2014 | 136.73 | 0.0450 | 3458.87 | -23.1375 |
| 2015 | 198.15 | 0.0318 | 4611.68 | 51.31428 |
| 2016 | 526.48 | 0.0311 | 11330.19 | 173.8623 |
| 2017 | 820.38 | 0.0320 | 18482.78 | 228.7086 |

**IDBI-IDBI Bank and IDBI Bank-United Western Bank Merger**

The merger of IDBI Bank with Industrial Development Bank of India Ltd in 2015 retained its development finance focus while diversifying into wholesale and retail banking products. Subsequently, in 2016, IDBI Bank acquired the distressed United Western Bank (UWB), placed under moratorium by the central bank. Despite the challenges faced in rehabilitating UWB, the combined entity of IDBI and UWB proved beneficial in the long term. Analysis depicted in Table 8 showcases value addition resulting from this merger, aiding IDBI Bank's expansion in the retail banking segment.

**Table 8: EVA of IDBI Ltd**

| Year | NOPAT Rs Crores | WACC Rs Crores | Total Capital | MVA |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| | | | Rs Crores | |
| 2015 | 2762.48 | 0.026057 | 71036.58 | 911.5138 |
| 2016 | 5555.54 | 0.046498 | 79903.18 | 1840.222 |
| 2017 | 6138.69 | 0.045511 | 94058.28 | 1858.015 |

**Ganesh Bank & Federal Bank Merger**

The Ganesh Bank of Kurundwad (GBK) faced a moratorium and ceased operations due to negative net worth. The Union Government approved its merger with Federal Bank Ltd in September 2016, viewing GBK as a strategic fit to enhance agriculture and retail lending.

Table 9 illustrates the long-term benefits of this merger. Federal Bank effectively utilized GBK's inroads in Maharashtra's agricultural sector, evident in the Market Value Added (MVA) surge from 230.05 Crores in 2015 to 1164.884 in 2008. This increase underscores the positive impact of the merger, enabling Federal Bank's growth and expansion, particularly in agricultural lending.

**Table 9: EVA of Federal Bank**

| Year | NOPAT Rs Crores | WACC | Total Capital Rs Crores | MVA Rs Crores |
|---|---|---|---|---|
| 2015 | 778.84 | 0.0326 | 16820.96 | 230.0578 |
| 2016 | 1061.94 | 0.0319 | 20642.9 | 402.8208 |
| 2017 | 1377.69 | 0.0340 | 25089.94 | 524.0418 |
| 2018 | 2015.47 | 0.0262 | 32506.45 | 1164.884 |

**Bharat Overseas Bank & Indian Overseas Bank Merger**

Bharat Overseas Bank (BhOB), a private bank based in Chennai, merged with Indian Overseas Bank in 2017, wherein Indian Overseas Bank absorbed all employees, assets, and deposits. Post-merger analysis of Market Value Added (MVA) showcased an increase to Rs 2888.47 crores in 2018 from 1609.32 crores in 2017. Although a slight decline followed the next year, the subsequent recovery suggests that the positive outcomes of the merger required some time to manifest.

**Table MVA of IOB**

| Year | NOPAT Rs Crores | WACC | Total Capital Rs Crores | MVA Rs Crores |
|---|---|---|---|---|
| 2014 | 2667.45 | 0.032891 | 47322.02 | 1110.98 |
| 2015 | 2746.89 | 0.033077 | 50815.05 | 1066.084 |
| 2016 | 3122.44 | 0.032134 | 59357.82 | 1215.035 |
| 2017 | 4279.7 | 0.032464 | 82256.82 | 1609.323 |
| 2018 | 6491.13 | 0.035369 | 101859.7 | 2888.471 |
| 2019 | 8097.6 | 0.045751 | 121073.4 | 2558.363 |
| 2020 | 7784.87 | 0.039776 | 131096.4 | 2570.425 |

**HDFC Bank & CBOP Merger**

In February 2018, HDFC Bank approved the acquisition of Centurion Bank of Punjab (CBoP) for Rs 9,510 crore, marking the largest merger in India's financial sector. This strategic move bolstered HDFC Bank's position as the third-largest bank in India, trailing only SBI and Bank. An analysis of Economic Value Added (EVA) indicates a reduction in the immediate post-merger year, 2019. However, subsequent years, particularly in 2020, witnessed an increase, reinforcing the notion that mergers contribute to long-term value addition for shareholders.

**Table MVA of HDFC Bank**

| Year | NOPAT Rs Crores | WACC | Total Capital Rs Crores | MVA Rs Crores |
|---|---|---|---|---|
| 2017 | 4561.99 | 0.03 | 91235.61 | 1706.82 |
| 2018 | 6477.30 | 0.02 | 133176.60 | 3376.34 |
| 2019 | 11156.04 | 0.04 | 183270.77 | 3097.17 |
| 2020 | 10735.00 | 0.03 | 222458.56 | 4507.63 |

**Conclusion**

1. Restructuring Weak Banks:
 - Some mergers were driven by RBI to restructure weaker banks, ensuring stability.

2. Voluntary Growth and Diversification:
 - Other mergers were voluntary, aiming at expansion, diversification, and overall growth.

3. Convergence into Banks:

- Certain mergers were part of converging financial institutions into banks, streamlining operations and structures.

Further, the true value of a merger often lies in its synergies, which may take time to materialize. Analysis through Economic Value Added (EVA) suggests that Market Value Added (MVA) serves as an effective method to evaluate the long-term efficiencies resulting from mergers. MVA offers a superior measure, capturing the added value generated as a consequence of the merger over an extended period.

Upon comparative scrutiny of banks studied, it became evident that post-merger, all banks consistently added value over an extended duration. Interestingly, certain mergers, such as GTBOBC and BSB-BoB, initially experienced a decrease in Market Value Added (MVA) in the immediate post-merger phase. Nevertheless, as the mergers' benefits materialized in subsequent years, there was a substantial increase in MVA, showcasing considerable added value.

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