MERGERS AND ACQUISITIONS 
ANNOUNCEMENT IMPACT ON ACQUIRING 
FIRM’S STOCKS RETURNS IN INDIAN 
BANKING SECTOR

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ABSTRACT

The objective of the present study is to analyse the merger and acquisition’s impact during the announcement on stocks return of acquirer banks which are listed in National Stock Exchange. This study is conducted across Indian banking sector consisting of 4 major banks merger in the year of 2019. The event study methodology has been applied for the event window of 11 days, 21 days and 61 days, i.e. -5 to +5 days stock returns, -10 to +10 days stock return and -30 to +30 days stock returns respectively. The shareholders return of acquiring banks and abnormal returns due to announcement of merger and acquisition have been examined. Findings of the present paper suggests that M&A announcement in banking sector in India leads price to downgrade for acquirer bank though the pattern was not consistent. The results are in consistent with the findings by Kumar et al. (2011), Onikoyi et al. (2014) and Mall & Gupta (2019).

Key words: Merger, Acquisition, Event Study Methodology, Average Abnormal Return, Stock Return.

http://www.iaeme.com/IJM/issues.asp?JType=IJM&VType=11&IType=11

1. INTRODUCTION

Banking sector of India is considered as one of the strongest drivers of Indian economy. In short time Indian banking sector has undoubtedly earned numerous achievements. Several reforms in Indian banking sector and some successful merger and acquisition in India has contributed towards its growth manifold times and in past few years Indian banking sector has gone under tremendous M&A. The major objective of merger and acquisition in banking
industry is to increase and maximise the perks of economies of scale. The concept of merger and acquisition emerged from government bodies in India as well as some financial organisations also adopted merger and acquisition policies to restructure the corporate sector of India as the increasing global market competition has made merger and acquisition as an important strategic choice. In India the merger and acquisition trend have changed over years. There are diverse effect of merger and acquisition in various sectors in Indian economy. Different research paper documented various factors which drive merger and acquisition. The bank restructuring began due to eruption of 1997 financial crises in Asia which resulted in increased risk in financial market and amplified volatility of stock returns in banking sector (Tan and Hooy, 2004). Economic downfall resulted in increase in Non-Performing Assets (Olisaemeka, 2010). Globalisation and liberalization also challenged financial sector which made bank regulation as much necessity resulting in mergers and acquisition hitting the wave in this sector (Cetorelli and Goldberg, 2011). Information technologies, global amalgamation of market, financial distress, increase in financial alliances and regional restrictions can also be the other reasons for mergers and acquisition trend (Bashir et al., 2011; Mall and Gupta, 2019). As mergers and acquisition is viewed as a growth strategy by companies, researchers are not only examining the motive of mergers and acquisition deals but are also evaluating post-merger financial and stock market performance of the firms. Researchers are conducting various studies to examine the financial as well as stock performance, to evaluate the impact on banks due to these deals but the results are conflicting in nature (Aik et al., 2015). Some studies concluded that M&A deals are beneficial to the parties involved (Sinha et al., 2010) while there is conflict in the empirical studies regarding banks performance as some reported that these deals are not proved useful for the acquiring firm (Pautler, 2001). With an aim to explore M&A deal’s announcement impact on stock prices, this study will make an attempt to extend this topic further.

2. LITERATURE REVIEW

Over the last few decades mergers and acquisition are gaining popularity in corporate growth strategy. Mergers increases companies market share and market power, lowers cost of capital, provides economies of scale and scope, and alleviates redundant corporate costs by benefitting shareholders and its relevant companies (Ma, Q., Zhang, W. & Chowdhury, N. 2011). Just like a coin has two side, so does this. There can be few disadvantages of M&A as it might hamper shareholders value, it can be problematic to operate big businesses, managers can overestimate the synergies among target and acquiring firm which results in paying extra for the target firm (Roll, 1986). Several attempts have been made by researchers over the years to study and to understand the significance of adopting M&A strategy for an organisation. As M&A literature is related to more than one branch, Krishnakumar & M. Sethi, (2012) have contributed in throwing a light on how over the last three decades different methodologies are used in estimating merger and acquisition performance.

There are five approaches commonly used to evaluate the performance in case of Merger and acquisition event. First, analysis on the basis of event study methodology which is based on both short run and long run stock market (Sudarsanam & Mahate, 2006; Mall & Gupta, 2019); Second, analysis on the basis of accounting methodology (Chauhan and Kaushik, 2017); Third, Assessment on the basis of expert information (Hayward, 2002); Fourth, assessment on the basis of managers’ subjective (Homburg and Bucerius, 2006); and Fifth, divesture methodology (Mitchell & Lehn, 1990). To measure the mergers and acquisition performance, the researchers empirically uses two studies, accounting study and event study.
Accounting study is used for calculating the post-merger operating performance. Post-merger operating performance of merged firm is compared with the non-acquired benchmark firms’ group or with the industry. (Barber & Lyon, 1996). There are certain limitations to this method as companies have different accounting rules but it measures directly mergers and acquisitions economic impact (McWilliams & Siegel, 1997). Researchers also broadly apply event study methodology since 1970s (Martynova and Renneboog, 2008). Event study evaluates the effect on abnormal stock price as this unanticipated event brings in new additional information in the market which reflects immediately on stock returns of the company. Researcher define an event window of certain days pre- and post-merger to measure its impact on stock return (Wang, D. & Hamid, M. 2012).

Event study methodology is most popularly adopted and preferred by the researchers. Top management and Finance Journal tell us that short term event study methodology is used by 41% of researchers whereas 16% used long term event study methodology, in accordance to 87 research papers reviewed on performance of merger and acquisition (Zollo and Degenhard, 2007; Krishnakumar & M. Sethi, 2012). Researchers vary their study with different window size. Many have used short term window of -5 to +5 days (Anand and Singh, 1997; Pangarkar and Lie, 2004; Wang & Xie, 2007; Krishnan, Krishnan & Lefanowicz, 2009; Moshifique & Boetang, 2009). Few came up with their study on long term event windows where they calculated abnormal returns up to 50 days pre- and post-merger announcement (Chatterjee, 1986) and even up to 100 days post-merger event window (Singh and Montgomer, 1987).

In India studies are mostly dominated by accounting return methodology to study post-merger performance of merged companies. New studies are coming up with new technologies like one used data envelopment analysis methodology (Singh, 2009) and others also use Event study methodology (Shukla & Gekara, 2010; Mall and Gupta, 2019). In event study methodology it is assumed that the country has an efficient stock market. In India, there are still many controversies on this subject. Some paper suggests that Indian stock market is efficient (Mittal & Jain, 2009) whereas some are against this. Otherwise, Event study methodology is widely accepted Internationally mostly in developed countries (Krishnakumar & M. Sethi, 2012).

The mergers and acquisition impact on stock returns literature is divided into two parts, theoretical and empirical literature. Each literature examines the financial performance and how stock market performs for the both target and acquirer bodies. Even after several studies already being performed, yet there is no incontestable results found regarding the question whether M&A leads to gain to the acquirer company’s shareholders (Mall & Gupta, 2019).

Mergers and acquisition is a well-researched topic but still it is unanswered whether deals are profitable (Mohanty and Mishra, 2014). The empirical findings obtained in the M&A literature review by Mall & Gupta (2019) are contradictory in nature and they attempted to fill this gap by contributing to the already existing literatures on impact of post-merger performance of acquirer firm’s by empirically testing it with the help of event study methodology mainly in India during the years 2008 to 2015 focusing mainly on sectors other than agricultural and financial sectors. There was another paper where they also studied M&A’s announcement impact on acquirer Indian banks’ stocks return and intraday volatility during the period of 2000-2018 using event study methodology for the banks which were listed in NSE (Mall & Gupta, 2019). (Adnan & Hossain, 2016) also studied using event analysis methodology which included the impact of announcement in M&A on both target and acquiring firm’s stock returns, also added t statistics testing in the study. Various other researchers also conducted studies to analyse wealth effect of M&A for short duration using event study methodology analysis (Dodd, 1980; Asquith, 1983; Pettway & Yamada, 1986;
Dennis and McConnell, 1986; Sicherman and Pettway, 1987; Liargovas and Repousis, 2010; Duso, Guglar and Yurtoglu, 2010).

A profusion of empirical studies is consigned to scrutinize the pre- and post-event M&A’s impact on banks. The discord regarding the benefits banks will make with M&A deal is yet debateable. Some studies stand by the fact that M&A deals are remunerative (Resti and Siciliano, 1999; Anand and Singh, 2008; Onikoyi et al., 2014). Irreconcilable to these studies, some studies demonstrate that M&A deals are unfavourable and gains negative returns (Srinivasan et al., 2006; Sinha et al., 2010; Kumar et al., 2011; Sharma and Warne, 2012). Campa and Hernaldo (2006) stated that for target firms M&A are advantageous but for acquiring firms it generates zero returns.

Some studies observed that M&A deals leads to a negative impact on stock prices of acquiring firm as well as their profit (Girma 2008; Flught 2009; Yen & Andre 2010; Chatterjee, 2011). Some studies also reported the mix results in their study, suggesting that prices of acquiring firm may increase or decrease post-merger (Andrade et al., 2001; Bris and Cabolis, 2004). Saboo and Gopi (2009) observed that depending on the deal type- cross-border or domestic, performance of the firm varies.

The contradictory results observed by researchers can be due to various factors impacting the performance and stock returns of the acquiring and target firms. Methods of payment, type of merger and acquisition, size of firm, acquiring firm asset base, deal success etc. Researchers also observed that result may vary with different event window, different economy taken into consideration to examine post-merger returns (Mantravadi and Reddy, 2008; Williams, 2010; Ismail et al., 2011).

The findings in M&A literature are contradictory in nature. Therefore, the present study tries to contribute by filling the gap in the existing literature, by examining the impact on M&A announcement using three different event window and adding t test to our analysis.

3. RESEARCH OBJECTIVE AND SAMPLE SELECTION

As per the literature survey, the present study will focus on filling the gap and contributing to the existing literature. The key purpose behind this analysis is to inspect the impact of mergers and acquisition announcement in banking sector on stock prices of acquiring firms. The data of mergers and acquisitions announcement in banking sector throughout the year 2019 was included in this study. Data was filtered and only those banks which are listed in National Stock Exchange were shortlisted. The study was conducted for 3 different windows of 61 days, 21 days and 11 days. The date of announcement of merger and acquisition event is taken as day 0, further 30 days stocks prices data before the event announcement day and 30 days stock prices data after the event announcement day was taken for 61 days window. Similarly, for 21 days and 11 days window, -10 to +10 days stock prices data and -5 to +5 days stock prices data respectively were extracted.

Data was filtered using following steps:

First, all the mergers and acquisition announcement in banking sector during the period of 2019 were identified.

Second, Acquirer banks which were listed in NSE of India were identified which finally comprised a sample of four acquirer bank whose M&A announcement was made during 2019.

4. METHODOLOGY

In the present paper, the effect of an event i.e. Merger has been analysed using an event study methodology where stock return will be considered as a dependent variable and merger and acquisition as independent event. The motive behind using event study methodology is,
believe that any type of new information is reflected on the stock prices (Fama, 1976; Louhichi, 2008). The basic idea behind using event study methodology is that the discounted value of company’s future profits can be revealed by the stock prices. Based on the hypothesis that stock markets are efficient, event study methodology is used (Fama, 1976).

The aim of present paper is to examine whether the acquiring companies’ shareholders are able to gain abnormal return after the announcement of merger deal. Three different windows are used to conduct this study.

4.1. Calculation of Stock Returns

In the present paper, three different event windows are considered for calculating the stock returns pre- and in post-M&A eras, event windows of 61 days, 21 days and 11 days are decided. The date of announcement is taken as day 0. The closing values are extracted from NSE of India for 30 days, 10 days and 5 days before the event announcement date and after the event announcement date. Final sample of 4 bank M&A events took place in 2019. The closing value of all 4 acquirer banks were extracted from NSE to calculate stock return.

\[
R_{ij} = \frac{(P_{ij} - P_{ij-1})}{P_{ij-1}}
\]

\(R_{ij}\) = Stock return of bank i at time j

\(P_{ij}\) = Closing price of bank i on day j

\(P_{ij-1}\) = Closing price of bank i on day j-1

Average of all the 4 acquirer banks return is computed.

Nifty returns were calculated using nifty prices. Nifty returns are taken as benchmark portfolio returns which are compared with the shareholders return to obtain abnormal returns. For this, nifty closing price data is extracted for the period of 6 November 2018 to 17 October 2019.

This paper has not taken bank nifty indices into consideration as bank nifty contains only 12 stocks whereas nifty is broad-based indices with 50 stocks so considering that nifty will capture market-wide sentiments. Moreover, majority of the banks in our study sample are a part of nifty, so considering nifty as a benchmark return will be more appropriate.

Nifty returns were calculated using the given formula:

\[
R(m)j = \frac{(NP_j - NP_{j-1})}{NP_{j-1}}
\]

\(R(m)j\) = Market return at time j

\(NP_j\) = Nifty closing price on day j

\(NP_{j-1}\) = Nifty closing prices on day j-1

The benchmark for calculating intercept, slope, R square and Standard Error is taken as -30 to -200 days.

Expected Return Calculation

\(E(R)j = \text{Intercept} + \text{Slope} \times R(m)j\)

Average Abnormal Return:

\(\text{AAR}_j = R(i)_j - E(r)_j\)

Here AAR refers to the abnormal return
\(R(i)_j\) represents the stock returns of the banks on that particular day
And E(r) is the expected return

Now, Cumulative abnormal average return is calculated

\(\text{CAAR}_jt = \text{CAAR}_j-1 + \text{AAR}_jt\)
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Initial CAAR is taken as AAR

And AAR stands for an average abnormal return.

Where CAAR stands for cumulative average abnormal return and t refers to the time period.

Hypothesis need to be tested to know the impact of the merger announcement on stock returns. In general, hypothesis test to be abnormal return on the day announcement is made or around the days of announcement must be zero or lesser than zero. When CAR after the announcement is greater than zero or statistically significant, the stock prices on an average reacts positively. The assessment is done using hypothesis testing. If abnormal return is not there, then it is a null hypothesis i.e H0 and the alternative hypothesis i.e. H1 depicts the existence of abnormal returns. Alternative hypothesis i.e, H1 is considered to be more appropriate as it represents the significant negative or positive abnormal return in the window. For hypothesis testing, the following formula has been used:

\[
t_{\text{CAR}} = \frac{\overline{\text{CAR}}_{1t}}{\left(\frac{\sigma(\overline{\text{CAR}}_{1t})}{\sqrt{n}}\right)}
\]

In this study, [-30, +30], [-10, +10] and [-5, +5] event windows have been considered and for acquirer companies before and after the announcement of merger, returns are compared and analysed. Furthermore, charts of acquirer company’s returns are analysed.

5. RESULTS AND DISCUSSIONS

The results from the analysis of the data of the closing prices taken from NSE to evaluate average abnormal returns of the acquirer firm to the shareholders, during the time span of windows from -30 day to +30-day, -10 day to +10 day and -5 to +5 day of the announcement date. The calculations and the result obtained are represented using tables and line graphs. Table 1 consists of the mean values of abnormal return of the banks engaged in the event from -30 day to +30 day.

The impact of mergers and acquisition in banking sector for an event window of 61 days is shown by evaluating average abnormal return (AAR) and cumulative average abnormal return (CAAR) respectively in tabular form in table 1. Impact on companies post mergers and acquisition were examined in the studies by Cornett (2006), Campa and Hernaldo (2006), etc. The present study shows pre- and post-merger announcement impact on acquiring firm. For a long event window of 61 days, AAR is mostly positive pre-merger announcement and it drastically declined after the announcement for almost 2 days. The results by Kumar et al., (2011); Anand and Singh, (2008); Gathecch (2014); Somoye (2008); Mall and Gupta (2019) are consistent with the result of our study. AAR drastically becomes negative on day +1 (day just after the announcement day), it rises from day 2 to day 6 and then falls again but remain positive. This continues till day 30 with an overall growth on day 30. Overall, there is a positive shareholders return growth which is also consistent with the studies done by Chong (2005), Choi and Murtagh (2004), Kumar et al., (2011). Moreover, on the leakage of an insider information before the announcement of the merger can reflect in daily stock prices which in turn will lead to positive or negative abnormal returns whether ‘t’ tends to 0.
Table 1

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Graph 1 and 2 representing Average Abnormal Return and Cumulative average abnormal return during an event window of 61 days.

To understand the results in a better way line graphs of average abnormal return (AAR) and cumulative average abnormal return (CAAR) are plotted. The AAR pattern is plotted in
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Graph 1 and cumulative average abnormal return pattern is plotted in graph 2. From the graph it can be depicted that how instantly market reacts to merger and acquisition announcement as the returns drops to negative on the very next day of announcement. Greene and Watts, (1996) also had a consistent finding in their paper.

Graph 3 & 4 representing Average Abnormal Return and Cumulative average abnormal return during an event window of 21 days

The study has been carried forward from long event window of 61 days to short event windows of 21 days and 11 days to deeply understand the movement of Average abnormal returns and Cumulative average abnormal returns. The Average abnormal return for an event window of 21 days also depicts the same trend, as by 61 days window. The Average abnormal return reacts quickly to the announcement date and it falls drastically on announcement of M&A event though it gains back its positive value after 2 days.

Graph 5 & 6 representing Average Abnormal Return and Cumulative average abnormal return during an event window of 11 days

Source: Author’s Calculations based on stock prices data obtained from NSE

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6. IMPLICATIONS AND CONCLUSION

The present study shows how announcement of mergers and acquisitions in banking sector in India reflects in stock behaviour. In this study particularly the impact of M&A announcement was examined. The abnormal returns generated by shareholders of acquiring banks is also examined. Through this study it was found that stock returns show an upward and downward trend during the announcement of merger and acquisition deal. This was examined by using three different window and the results were consistent with few studies already done. Just after the announcement day the returns become negative which again starts rising back. Thus, it shows an overall upward and downward swings and there is a negative t-statistics on the day of announcement. These results can help global fund manager in taking future actions and formulate strategies and policies accordingly. It can be used by stockholders, bank managers, M&A consultants, market regulators and researchers. It can also contribute to the behavioural finance literature. It can be concluded that M&A deal announcement with respect to stock performance is dependent on various other factors like the country selected, sample period, methodology used to obtain results and how much data is extracted. As M&A events result varies accordingly with various factors such as in which country the study is conducted, sample period, whether monthly, weekly or daily data is extracted, which methodology is used to get the results etc. So, future study can take all these points into consideration. This study can contribute in existing literature so that effect on acquirer firm’s shareholder wealth can be better understood and future research can examine the impact on target shareholders wealth.

This study focuses on the event study methodology using 3 windows to deeply understand the impact on acquirer firm’s shareholder wealth. Since event study is fully based on an assumption that stock market is efficient and there are still controversies going on, whether the stock markets are efficient in Indian market or not. So, the future study can be extended further by including mix of two methodology to arrive at more reliable results.

REFERENCES


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