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Stock Market Reaction to Mergers and Acquisitions Announcements: An Event Study of Indian Acquirer Firms

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Abstract:
The Indian corporate sector has shown remarkable growth in mergers and acquisitions (M&As) since the liberalization policies of 1991. This paper investigates the short-term market reaction to merger announcements of 40 acquirer firms listed on the Bombay Stock Exchange (BSE) between 2009 and 2018. Using the event study methodology with both the market model and the marketadjusted model, abnormal returns (AR), average abnormal returns (AAR) and cumulative abnormal returns (CAR) were calculated for event windows ranging from -20 to +20 days. The findings reveal that the announcement date (day 0) consistently generates positive and significant abnormal returns**,** indicating that investors perceive M&As as wealth-creating opportunities. Furthermore, shorter event windows (-1, +1 and -2, +2) show significant cumulative abnormal returns, suggesting lucrative short-term trading possibilities for investors. However, nearly half of the event days reported negative abnormal returns, underlining the mixed perception of the market towards such announcements.

Key Words: Mergers and Acquisitions, Event Study, Abnormal Returns, Indian Corporate Sector, Stock Market Reaction.

1. Introduction

The Indian Corporate Sector has been catering to the uprising domestic and world markets through mergers and acquisitions strategies. It is progressively building capacity by showing keen interest in this strategy. In 1991, previous economic policies were replaced by the new industrial policy which was emerged as a big departure from the ongoing policies in the industrial sector. (Kar and Soni 2008). As a result, India had become an ardor partaker in mergers and acquisitions activities irrespective of national and international level (Berger et al.). The rapid growth in mergers and acquisitions' activities in recent years calls for research to analyze what drives firms to go for mergers and acquisitions and how it affects firms and markets (Andrade, Mitchell, & Staffird, 2001; Holmstrom & Kaplan, 2001). When a merger or acquisition is announced, a lot of information about the possible deal is released, which can be utilized to predict how the stock market will respond. These announcements' impacts appear to be a good predictor of future success. Investors' expectations of mergers and acquisitions benefits are reflected in the security returns around the announcement. Stock market reactions to mergers and acquisitions announcements may assist in predicting profitability as a result of

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it. Short-term effects of the event are also important since they generate rapid trading possibilities. Conducting event studies provides the most statistically reliable information on whether mergers and acquisitions create wealth for

shareholders. Various studies have applied event methodology to analyze the short-term effects of mergers and acquisitions. (Wansley et al. (1983); Bradely (1988); Delaney and Wamuziri (2004); Geekiyanage and Jaffer (2017); Tao et al. (2017), Wang et al. (2020). In this context, the present study proposes to conduct empirical research to investigate the short-term performance of mergers and acquisitions. Review of related Literature:

Dodd (1980) evaluated the effect of both accepted and rejected merger proposals on stockholders' wealth. One hundred fifty-one proposals of the New York stock exchange firms have been taken as a sample for the study. The period for the study was 1970 to 1977. The market model was adopted for calculating abnormal returns. The study concluded that the market reacted positively to the first announcement of the merger and after that positive reaction came out regarding completed proposals and an adverse reaction associated with canceled proposals.

Georgen and Reeneboog (2003) took the sample of two twenty-eight mergers and acquisitions announcement of continental Europe and U.K. Cumulative average abnormal return was calculated for measuring short term wealth effect. The capital Asset Pricing Model was used for estimating abnormal returns. The study revealed that bidder firms reacted positively to the announcement of events. The study further revealed that hostile acquisitions, cash offers and domestic bids received significantly positive abnormal returns compared to friendly acquisitions, all equity financed firms and cross-border mergers and acquisitions.

Lowinski et al. (2004) analyzed the domestic and international acquisitions of 114 Swiss corporations listed on the Swiss stock exchange from 1990 to 2001. The study highlighted that the event has generated a significant Average Abnormal Return and Cumulative Average Return in the short time and found no difference between the short-term performance of domestic and cross-border mergers

Karels et al. (2011) took the sample of forty-six Indian acquirers of United States target and forty-one acquirers of Indian target to find out stock market reaction due to mergers and acquisitions announcement. The period ranges from Jan 1995 to August 2007. It is revealed that Indian acquirers and Indian target have achieved an advantageous position in terms of gain over US Target and US acquirers due to the merger announcement.

Andreou *et al.* (2012) analysed the abnormal return and synergistic gain in short run around merger announcement by taking the sample of 59 deals of bidder and target firms of freight transporation included in securities data corporation data base. The time period for the study was 1980-2000 and it was found that due to merger announcement, target firms got more synergistic

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gain than bidder firms and vertical merger were more beneficial as compared to horizontal merger as far as valuation effect of target firms were concerned. Moreover, for bidder firms' result were in favour of friendly merger.

Elad and Bongbee (2017) selected 50 companies, traded on LSE (FTSE 100) to investigate the reaction of the stock market on the acquisitions during the time period ranging from July 2012 to May 2013, it is concluded that abnormal return occurred as a result of acquisition event that the shareholder of acquiring firms got positive and insignificant abnormal return.

Wang et al. (2020) evaluating the reaction of acquiring firms" stock returns as a result of fiftyeight cross- border mergers and acquisitions (M&A) between listed Chinese acquirers and German targets. The market model of event study methodology has been used to know the shareholder wealth effect during the most recent time of 2012-2018. It is revealed that the announcement of mergers and acquisitions resulted in a positive cumulative abnormal return of on average 2.18% in a window period of five days.

Objectives of the study

In the light of above discussion, the study aimed at calculating abnormal return around merger announcement by the acquiring entities of Indian Corporate Sector.

Hypothesis of the Study

H01: Around merger announcement, the acquirer firm gets zero abnormal return.

H02: Around merger announcement, the acquirer firm receives zero Average abnormal return.

H03: Around merger announcement, the acquirer firm gets zero Cumulative average abnormal return.

Data Description

The research is limited to an examination of forty acquirer businesses that have completed mergers and acqusitions transactions in the time period from March 1, 2009, to March 31, 2018and are listed on the Bombay Stock Exchange (BSE). Major sources of secondary data are annual reports of the sample companies, websites of the sampled companies, SEBI and various websites related to the stock market information i.e. money control, BSE and Yahoo finance.

Event Study Methodology

The mergers and acquisitions announcements are the events defined for this research study. To ensure the clean period data, these dates are manually validated from the Bombay Stock Exchange (BSE) archives of business announcements. It has manually verified that there is no conflicting event occurring during the event timeframe. The estimation window for this study is 150 days runs from day –170 to day –21 (from 20 to 170 days previous to the event window), The study's event window is set to –20, through 0, to +20. Here, 0 represents the announcement date, –20 represents the 20-day period preceding the announcement date and +20 represents the

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20-day period following the announcement date. To calculate the predicted returns, the market model and market adjusted model has used.

i **Market Model**

The regression of a stock's performance against a market index is known as the market model. For regression, the BSE SENSEX1 value-weighted market index was employed. The abnormal return is the differences between the actual return and the expected return on a particular day.

ARit = Rit - E (Rit) Where,

ARit = Abnormal return on security for day t Rit = Actual return on security for day t E(Rit) = expected return on security for day t

For measuring the expected return, the following model has been applied. E(Rit) = ---------- α_1+ β_1Rmt +eit= for 1 ---------- N

Where, αj is a intercept of the stock, βj is the beta of the stock, Rmt is the market returns and εjt is an error term.

ii. **Market adjusted method**: Under the market-adjusted method, The abnormal return is estimated as the difference between the actual return on security and return on the market portfolio. Koulakiotis et.al (2006) used a market-adjusted model for assessing the effect of the announcement of mergers and acquisitions on stock prices. ARit = Rit - Rmt

Average Abnormal Return

To know the impact of merger announcement on the entire sample collectively, Average Abnormal Return is calculated for each day of the event window.

$$AAR_t = \frac{1}{N_t}\sum_{i=1}^{N_t} AR_{it}$$

AARt = Average abnormal returns of merger announcement N = Number of firms in the acquiring blocks (i.e., 40)

Cumulative Abnormal Return

Cumulative Abnormal Return has also been estimated to avoid the problem arising due to unavailability of exact event date

CARi $= \sum_{i=1}^{T}(AR_{it})$

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Analysis and Interpretation

Average Abnormal Returns to Bidder Firms during Event Window

Note: The Statistical significance is based on t-Statistics, calculated following (Brown& Warner, 1985).

The furnished results related to average abnormal returns extracted through employing the market Model and market-adjusted model are presented in table 4.5. The impact of mergers and acquisitions on the stock returns has been analyzed and presented surrounding the announcement period that is -20 to +20 days. The value of t- Statistics is obtained by dividing the average abnormal return of each day by the Standard deviation of the average abnormal return of the estimation period (Brown & Warner, 1985). The percentage of companies that obtained positive abnormal returns is also displayed in the above table. It is revealed that average abnormal returns calculated using the market model have been in positive numbers on greater days during the post-merger period. It is found that during the pre-merger period, only seven days, that is, for -17th, -14th, -10th- 6th, -5th, - second and -the first day, have shown the positive impact of the announcement on the share price of bidder firms. However, after the announcement, the firms have shown a strong positive impact on the average abnormal returns. There have been ten days during which the average abnormal returns for the bidder firms have been recorded in positive terms. However, it is worth mentioning here that the date of the announcement, i.e., day zero, has shown positive average abnormal returns, which is also significant at a 5 percent level of probability. Besides, it was only +3 day, a value for which has been noticed significantly. However, the average abnormal returns for the same day have been found as -0.0114, which is negative. So, the results computed through the market model suggest that the investors find it more profitable to invest in the acquirer firms' stocks on the same date of the announcement. It is also noticeable that there have been only 18 days during 40 days of event study during which the average abnormal returns for the acquirer firms have been recorded in positive numbers. The remaining days surfaced with negative results and all the results have been recorded as insignificant except for two days.

Based on the analysis made through employing a market-adjusted model, it is suggested that no significant difference has shown when making a comparison with the final results accrued through the market model. The four days surrounding the announcement date have shown positive results and once again, the date of announcement surfaced significant positive average abnormal returns for the bidder firms. It is also revealed that on the day of the maximum announcement number of firms, i.e., 75% have received the positive abnormal return. Two days that witnessed the significant impact of mergers and acquisitions on the returns of the bidder firms have been recorded during the post-announcement era, signifying that the investors perceive it as a lucrative opportunity to invest in the stocks of the acquirer firms. However, it is

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also revealed here that the positive impact of mergers and acquisitions has remained more compared to the days before the announcement day that has shown the same trends. However, it was also revealed by the results that almost half of the event study days have shown a negative impact of the mergers and acquisitions policy adopted by the sampled firms irrespective of the day's pre and post announcement days.

The cumulative average abnormal returns for various size windows have been obtained through the market and market-adjusted model and the final figures for the same are presented in table 4.6. Studying the event window by dividing it into different small-sized windows is of great importance and crucial for investors to discover profitable prospectuses for their excess funds. The results derived based on the market model reveal that the shorter windows have shown impressive results; the three days (-1, +1) window and five days (-2, +2) window have shown significant positive results. The same trends have been observed using the market-adjusted model, as the shorter window nearer the announcement days has left a positive impact on the investors of the mergers and acquisitions policy adopted by the bidder firms. The Cumulative average abnormal returns have been maximum for the three days (-1, +1) window. The values for which have been registered as 2.34 percent, followed by the five days (-2, +2) window. So, it can be inferred from the results that the investors can earn a substantial profit if they choose to invest in the firms on the very days when the bidder firms announce mergers and acquisitions. So, it is indicated by the major revealing of the event study that if the stocks of the issuing companies are purchased around the announcement day, it can be a rational decision from the point of investors to gain potently.

5. Conclusion:

The present study concludes that mergers and acquisitions announcements in India have a significant short-term impact on shareholder wealth, particularly for acquirer firms. Both the market model and market-adjusted model confirm that day 0 (announcement date) yields positive and statistically significant abnormal returns. The cumulative results further reinforce that shortterm windows around the announcement date (-1, +1 and -2, +2) provide profitable opportunities for investors. From an investment perspective, the findings suggest that acquiring firm stocks can generate excess returns if purchased close to the announcement date. However, since almost half of the event days reflected negative abnormal returns, investors must remain cautious as not all mergers are value-creating in the long run. From a corporate strategy viewpoint, the evidence supports the notion that Indian firms actively engaging in M&As signal strength and confidence to the market, which enhances investor sentiment in the short run. For policymakers, the results highlight the efficiency of Indian capital markets in absorbing and reflecting merger-related information. Thus, the study reaffirms that M&As serve as a vital strategic tool in the Indian

corporate landscape, providing short-term shareholder wealth creation, though long-term effects still require further examination.

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