

IMPACT OF MERGER AND ACQUISITION ANNOUNCEMENT ON SHAREHOLDERS' WEALTH AN EMPIRICAL STUDY USING EVENT STUDY METHODOLOGY

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PURPOSE
ONE of the primary motives behind any strategic corporate decision is to maximize shareholder value. The present paper examines the announcement effect of 85 merger and acquisition on Indian acquiring firm shareholders wealth in the short run during 1991-2010. The paper seeks to assess the impact of merger announcement on the wealth of the acquiring company's shareholders in India.

Design/Methodology/Approach: *This paper applies an event study methodology to empirically test the effect of announcement of M&A using daily stock returns. The study applies regression analysis with secondary data examining 85 acquirers. In order to obtain robust results, one non-parametric, Generalized sign test has also been applied.*

Findings: *The results indicate that the acquiring company shareholders generated negative but insignificant returns post merger announcement in the short run. The empirical results obtained from the event study methodology suggest that acquiring companies' shareholders receive a substantial significant and positive average abnormal return around the announcement day of merger and acquisition only.*

Originality/Value: *This study provides a detailed analysis of M&A performance in India during post liberalization period. A lot of work has been conducted mostly in developed nations on their firms; the authors best of their knowledge have conducted exhaustive study in India by taking substantially large period with different event windows.*

Key Words: *Mergers and Acquisitions, Abnormal Return, Cumulative Abnormal Returns (CAR), Event Study, Media Announcement, India.*

Introduction

The business strategy of inorganic growth through Mergers and Acquisitions (M & A) has assumed significance due to its value creation potential. A merger and acquisition strictly defined, occurs when an operating enterprise acquires control over the whole or part of the business of another enterprise (Kang & Johansson 2000). The growing tendency towards mergers and acquisitions world-wide has been driven by intensifying competition. Firms increasingly need to reduce costs, expand business into new areas, attain global size, take benefit of economies of scale, invest quickly in technology for strategic

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gains, and improve shareholder value in the wake of global competition. In India, the introduction of deregulatory policy measures and competition policies have resulted in a significant increase in the number of mergers and acquisitions (Khanna, 1997; Venkiteswaran, 1997; Chandrasekhar, 1999; Roy, 1999; Basant, 2000; Beena, 2000, 2004, & 2008, Das, 2000; Kumar, 2000; Agarwal, 2002; Dasgupta, 2004; Agarwal & Bhattacharya, 2006; Mantravadi & Reddy, 2008; Nagano & Yuan, 2013; Banerjee et al., 2014).

Most researchers agree that mergers are caused by a complex pattern of motives which sometimes overlap or compete with each other. Merger and acquisitions are one of the major managerial decisions firms take in their daily existence (Mitchell & Stafford, 2000; Khemani, 1991) and have significant effect on the performance of the acquiring firms (Agrawal et al., 1992). Sudarsanarn (1995) states that all firm decisions including mergers and acquisitions are made with the fundamental objective of enhancement of shareholders wealth. Merger and acquisition activity results in overall benefits to shareholders when the consolidated post-merger firm is more valuable than the simple sum of the two separate pre-merger firms (Pilloff & Santomero, 1996).

In India, mergers and acquisitions have increased significantly as the firms are acquiring companies both, domestically and globally across various industrial sectors of the Indian economy. Mergers and acquisitions is a strategic business decision and the acquiring firm and its shareholders are expected to be the important beneficiaries of this decision. A popular belief is that merger and acquisition strengthen businesses by making their operations more synergetic. The synergy trap hypothesis (Sirower, 1997) states that immediately before and after the merger announcement, the acquiring firm's stock price is negatively affected and the target firm's stock price is positively affected. According to the efficient markets hypothesis, prices reflect all publicly available information of an underlying asset (Fama, 1970). Panayides and Gong (2002) reported that an announcement of merger and acquisition immediately effects the stock price of target and acquiring company, as the news of mergers and acquisitions forces investors to revise expectations about the company's future profitability.

Many researchers (Agrawal et al., 1992; Leeth & Borg, 1994; Wilcox et al., 2001; Yuce & Ng, 2003; Hassan et al., 2007; Anand & Singh, 2008; Rani et al., 2013) argue that companies adopt mergers and acquisitions for economic benefit. Acquiring firms tend to improve their long term profitability through merger and acquisition route. Shareholders of the acquiring firm also hope to make significant long term gains by investing in acquirers expected synergic benefits. On the contrary, in short-run mixed returns are registered for acquiring firms. Merger and acquisition announcements create value for the targets, while the effect on bidders is neither value creating nor value destroying, but at the best, value is conserved in the short-term. Therefore, assessment of merger and acquisition activities has to be done keeping in mind these benefits. The present study aims at examining the short term impact of acquirer firms in India in order to evaluate the efficacy of merger and acquisition strategy.

Review of Literature

This study primarily focuses on the impact of merger announcement on shareholders' wealth and accordingly the review of research has been focused on implications of merger announcement on shareholders' wealth. Studies indicate that merger and acquisition events preserve value and performance for the firms (Franks et al., 1991; Healy et al., 1992). Under the assumption of efficient capital markets that reflect all available information, merger and acquisition announcements applying event study methodology indicate that there can be significant loss of wealth to the shareholders of predator firms both in the short and in the long runs (Asquith, 1983; Agarwal et al., 1992). The central results of these studies also find support in the research that compares pre- and post- merger and acquisition accounting performance of the firms (Ravenscraft & Scherer, 1989). Brown & Warner (1980), Davidson et al., (1989), Mitchell et al., (2002) each employed the similar event study methodology to examine stock market reactions to acquisition announcements.

In general, most studies on the short-term returns apply an event-study framework, or residual analysis. On the merger announcement effect to the acquiring firms, some recorded significant positive gains (Dodd & Ruback, 1977; Asquith et al., 1983; Canina, 2001) while others indicated significant negative losses (Dodd, 1980; Asquith, 1983; Sheel & Nagpal, 2000; Hsu & Jang, 2006; Kumar & Pannerselvam, 2009; Goddard & Zhou, 2012). Thus registering mixed returns on announcement for the acquiring firms. It has been seen that often stock market performance of bidding firms have been above expectations or positive.

Schwert (1996) found 10.1 per cent of abnormal returns generated to the shareholder of target firms whereas Jarrel and Poulsen (1989) reported the return to the target firms' shareholders to be equal to 28.99 per cent on a sample of 526 deals of US companies between 1963 and 1986. The results were consistent with the study conducted by Franks and Harris (1989) on a sample of 1898 UK target firms in the period 1955-1985. They found a significant return of 23.3 per cent to the target firms' shareholders. More recently, Goergen & Renneboog (2004) reported a significant abnormal return of 9.01 per cent to target shareholders supporting the findings for European transactions. Cybo-Ottone and Murgia (2000) focused on a sample of 54 merger and acquisition deals in the European banking industry over time period 1988-1997. They found a significant and highly positive effect to the target company shareholders for all the event windows analyzed.

Yuce & Ng (2003) examine the impact of the merger announcement of Canadian companies during 1994 to 2000. The authors concluded that both target and acquirer companies resulted in significant positive abnormal returns in this period. However, in the long run, for acquiring companies the abnormal returns diminish to become significant and are negative. On the other hand for target companies, the abnormal returns diminish to be non-significant and are positive.

Duso et al., (2006) studied a sample of 167 mergers during the period 1990-2002. The study contrasts a measure of the merger's profitability based on event studies and accounting data. They find positive and significant correlation in a long window around the announcement date for rivals in case of anticompetitive mergers. On the other hand Dube & Glascock (2006) by applying event study examined the post-acquisition differences in the share and operating performance, and in risk characteristics, for acquirers during 1975-1996. They distinguished between acquirers paying cash and those who employ stock, as well as, acquirers who merge with targets and to those who directly approach target shareholders to tender their shares. They found mergers, especially in conjunction with cash payments, are risk increasing transactions and post-acquisition the intrinsic business risk increases, with a decrease in the degree of operating leverage and a small deterioration in the operating performance. Although no risk adjusted abnormal performance in the stock returns of acquiring firms following acquisitions was found.

There are very few Indian studies in the area of mergers and acquisitions. Pandey (2001) studies the stock price performance of relatively large target firms surrounding open offers, between 1997 and 2001, in the context of change of management. The sample of his study consists of 16 open offers with value of above Rs. 10 crore. The study finds that the target firm valuations increase in the run-up to the announcement. The target firms' stock prices earn significant 8.7 percent returns between -2 and 0 day, 12.1 percent between -10 and 0 day and 18.43 percent between -30 to 0 day. Therefore, he strongly argues that owing to relatively large insiders' shareholdings, takeover as governance mechanism is not likely to be effective, and private value of control may be the driver in the market for corporate control.

Anand & Singh (2008) analyzed five bank mergers in India by applying event study methodology to study the returns generated to the shareholders with the announcement of merger. They found positive and significant shareholder wealth for both bidder and target banks. The market value weighted CAR

of the combined bank portfolio showed 4.29 per cent in a three day period (-1, 1) window and 9.71 per cent in 11-day period (-5, 5) event window. Gopalaswamy, Acharya and Malik (2008) investigates the differences in stock price reaction of 25 target and acquiring companies due to merger announcements during 2000-2007 considering three event windows, (-10, +5), (-15, +10) and (-25, +15). They found that around the announcement period acquiring companies' shareholders generate higher returns than those for the target companies but post-merger a downward trend in the cumulative returns is registered, concluding negative result of the merger. Mann & Kohli (2009) investigated the effect of mode of financing employed in merger and acquisition on the announcement period returns of 69 acquiring and the target companies' shareholders in India during 2001-2008. They found maximum value is generated for the shareholders of the target companies engaged in cash offers followed by the shareholders of acquiring companies engaged in cash offers, target companies engaged in stock offers, and finally, for acquiring companies engaged in stock offers. Chakraborty (2010) examines the effects on shareholders wealth of bidder, target and combined financial sector firms on the announcement of takeovers of 67 targets for the period 2001-2007. The author finds that the shareholders of 19 target firms earn significantly positive abnormal returns while for the remaining 48 firms there was no market reaction on takeover announcements. Further the results reveal that bidders experienced post-event positive wealth effects on takeover announcements. However, for the combined firms, positive returns were observed. Chakraborty concludes that except for a few cases, which show positive returns, takeovers in the financial services sector do not evoke market reaction.

Rani, Yadav, & Jain (2011) examines the short-run abnormal returns to India pharmaceutical industry during 2001-2007 using event study methodology. The results revealed that acquisitions of foreign companies generated significantly positive short-term wealth on the announcement day to the shareholders of acquiring companies. In 2013, on a sample of 623 mergers and acquisitions during 2003-2008 examined the short-run abnormal returns to India based merger and acquisition. They found significant short-term wealth on the day of announcement to the shareholders of acquiring companies with CAR of 2 per cent (statistically significant at 1 per cent) in event window of 11 days (-5, 5). The results indicated presence of high event-induced variance in abnormal return due to the announcement of merger and acquisition in Indian context. Karels et al., (2011) studied the cross-border merger and acquisition between the US and Indian firms announced over the period 1995-2007. They found that US firms generate significant losses on the announcement of acquisitions of Indian targets on the other hand Indian targets generate significant gains on the announcement of mergers with US acquirers.

Kashiramka & Rao (2013) analyzed the impact of merger and acquisition announcements during different periods of deal activity in Indian Information Technology and Information Technology enabled Services (IT and ITeS) sector between 1999-2009. The results revealed that both the acquiring and target firm shareholders generated positive return on announcement of acquisition irrespective of the period of announcement of the deal while mergers generated wealth losses for the acquiring firms across all periods. Mallikarjunappa and Nayak (2013) examined the stock price responses of target companies to the announcement of takeovers in India for nine years from 1998 to 2007 using a sample of 227 companies. The ARs, AARs, and CARs were computed for a 61-day window period (-30, +30) employing the standard market model. Results of the study indicated takeovers generated wealth in India for the target company shareholders at 37 percent when raw data was used and 27 percent when log returns were used.

Table No. 1 summarizes the findings of the studies, which use stock measures to study post-merger performance of acquiring and target companies. The review reveals acquiring firms generate significant negative returns or no returns and on the other hand target firms are able to generate positive returns to the shareholders, irrespective of time period, deal type (merger vs. tender offer), and observation period. Since more than one-half of the studies show deterioration in post-merger performance of acquiring firms, and these studies are from US and Europe, it is not very clear whether mergers and acquisitions, overall, have led to the betterment for Indian companies.

Table No. 1: Summary of Shareholder Return Studies for Merger and Acquisition

Study	Cumulative Abnormal Returns (percent)	Sample Size	Sample Period	Event Window (Days)	Findings
Davidson, Dutia and Cheng (1989)	-13.47 18.50	163	1976-1985	(-90, +90)	Bidders do not gain when they cancel any merger but target firms earn positive cumulative prediction errors (CPEs)
Flanagan (1996)	-0.10*	60	1972-1990	(-60, +60)	Negative returns for acquiring firms (related and unrelated firms) and positive returns for acquired firms
Shusterman, Norsworthy and Bessler (2000)	+15.00 Long distance+10.00 Local companies	5	1996-1999	(-1, +1)(-10, +10)	Significant abnormal return for both bidder and target in short run (both windows)
Pandey (2001)	-2.96 18.43	14	1997-2001	(0, +5)(-30, 0)	Target firm valuations increase in the run-up to announcement
Wilcox, Chang and Grover (2001)	33.5***	89	1996-1998	(-2, +2)	Significant positive returns for US telecommunication firms
Capron and Pistre (2002)	-34.00	101	1988-1992	(-20, +1)	Zero or negative returns for acquirers
Lepetit, Patry and Rous (2002)	2.412** 2.624**	180 in 13 European countries	1991-2001	(-7, +7)(-15, +15)	Positive and significant return increase in value of target banks
Seth, Song and Pettit (2002)	7.57***	100	1981-1990	(-10, +10)	Gain occurs for bidder firms
Delong (2003)	-2.51*** 14.70***	54	1991-1995	(-10, +1)	Acquirer lose and target banks gain significant return
Yuce and Ng (2004)	-2.32** 9.53	1361 Acquiring 242 Target	1994-2000	(-40, +40)	Acquiring firms lose in long run but gain only for 2 days. Target firms gain in long run
Scholtens and Wit	-1.86 12.65*** 2.56 9.28**	US: 81 78 Target Europe: 20 Bidder17 Target	1990-2000	(-3, +31)	Target banks earn significant positive abnormal return and bidders do substantially less or not at all in US and Europe banks

Contd...

Study	Cumulative Abnormal Returns (percent)	Sample Size	Sample Period	Event Window (Days)	Findings
Lowinski, Schiereck and Thomas (2004)	1.07***	114	1991-2001	(-1, +1)	No difference in wealth creation between domestic and international merger activity
Rosen (2006)	1.86	500	1982-2001	(-2, +2)	Bidder firms earn positive return when announcement is hot but in long run returns are lower
Hassan et. al., (2007)	1.81	405	1981-2004	(-1, +1)	No abnormal returns for mergers of acquiring firms in pharmaceutical industry
Christopoulos and Vergos (2008)	+6.00 (short run) -1.4 (long run)	11	1998-2007	Different windows between -20, +160 at interval of 5 days	Positive in short run till 20 day but negative in long run till 90 days in Greek peer and foreign banks
Laabs and Schiereck (2008)	2.23**	230	1981-2007	(-20, +20)	Significant positive return for acquiring firms in automotive supply industry
Louhichi (2008)	0.96***	117	2001-2003	(-6, +6)	Intraday analysis reveals that investors react positively to good news and negative to bad news
Zhu and Malhotra (2008)	2.52 2.88 1.24 -0.944	74	1999-2005	(-1, +1) (-2, +2) (-5, +5) (-5, +20)	Indian acquiring firms gain
Anand and Singh (2008)	Bidder 0.0667** Target 0.0710* 0.0997* 0.1281* 0.1048 0.1019	5	1999-2005	(-1, +1) (-2, +2) (-5, +5) (-10, +10) (-15, +15) (-40, +40)	Significant positive returns for bidder and target banks
Rheume and Bhabra (2008)	56.00	2421	1993-2005	(-1, +1)	Positive wealth change for acquiring firms in telecommunication industry
Akdogu (2009)	10.40*** 0.29	275	1996-2005	(-1, 0)	Target firms earn positive return and acquirer break-even in Telecom industry

Contd...

Study	Cumulative Abnormal Returns (percent)	Sample Size	Sample Period	Event Window (Days)	Findings
Kumar and Pannerselvam (2009)	-1.36*** 37.2*** -15.23*** -0.12	Mergers:165 (acquirer) 18 (target) Acquisitions: 252 (acquirer) 58 (target)	1998-2006	(-60, +60) Acquirer (-40, +40) Target	Significantly negative for acquirer firms and positive in case of target merging firms
Schiereck, Grub and Unverhau (2009)	29.00-1.5	285	1997-2002	(-20, +20)	Target firms gain and bidder firms lose
Barari and Mohanty (2010)	1.166 1.096 -0.023	1177	1996-2008	(-1, +1) (-5, +5) (-10, +10)	Acquirers do not generate significant abnormal returns in India
Locke, Dupati and Laurence (2011)	0.48***	30	2005-2010	(-1,+1)	Outward foreign direct investment (OFDI) related Indian merger and acquisition announcements has positive effect on returns of acquiring firms in the stock market.
Rani, Yadav and Jain (2011)	-0.164 1.278*** 0.128	76	2001-2007	(-30, -1) (-1, 0) (-1, 1)	Significant positive abnormal returns to the shareholders of Indian Pharmaceutical companies on their acquisitions of foreign targets
Selcuk and Yilmaz (2011)	-2.33**	62	2003-2007	(-5, +5)	Acquiring companies generate significant negative abnormal returns for Turkish companies
Kashiramka and Rao (2013)	Merger Acquisition 101 -13.76** 10.49** -18.32** 14.86**	101	1999-2009	(-10, +10)	Acquisition announcements for acquiring and target firms gained but merger announcement resulted in wealth losses for acquirer and target.
Mallikarjunappa and Nayak (2013)	27.40**	227	1998-2007	(-30, +30)	Takeovers generated wealth in India for the target company shareholders
Rani, Yadav and Jain (2013)	2.00***	623	2003-2008	(-5, +5)	Significant short term wealth to the acquiring company's shareholders

* Significant at 10 per cent, ** Significant at 5 per cent, *** Significant at 1 per cent

The review of research to date on mergers and acquisitions in area of strategy and finance shows that lot of research work has been done on post-acquisition performance using event studies and has shown mixed results. Some studies indicated that merger and acquisition have made the combined firms worse off while others show gains to bidders or target companies. Most of the studies in the context of USA and Europe show deterioration in post-merger performance, however when it comes to Indian cases of mergers and acquisitions, it is seen that studies covering measurement of shareholders' wealth are limited. Therefore it is important to evaluate merger and acquisition in Indian context. The present study attempts to fill this gap in literature on merger and acquisition in Indian context.

Objectives of the Study

The objectives of the study are:

1. To examine the announcement effect of merger announcement on the wealth of the acquiring company's shareholders in India
2. To review the performance of mergers and acquisitions.

Sample Selection and Period of Study

This study began with the universe of all companies which had undergone mergers in India. To meet the objectives of the study, the data was collected for all the companies that are listed on Bombay stock exchange (BSE) and which have merged into another company in the decade of 1991-2010. Further, the sample is based on mergers, for which the first media announcement date was available to analyze the impact of a particular event on shareholder value, have been considered for the study. Instances where there has been no media announcement for the merger are excluded from this study. A total of 85 firms met the above criteria and hence form the final sample in the study (Refer Table No. 2). The data on stock prices of the sample for the entire period of study are extracted from CMIE database Prowess. The announcement date is identified as the day when the acquiring company first publishes/disclosed information about the merger.

Table No. 2: Number of Companies Selected for Present Study

Particulars	No. of Companies
Total No. of Companies for which merger announced date obtained	956
Less no. of companies excluded:	
No. of companies for which data on stock prices	340
No. of companies left after deleting those for	249
No. of companies for which some other	185
No. of companies for which date could not be verified	97
No. of Companies selected in sample	95

Methodology

An event study methodology (Brown & Warner, 1980 and 1985; MacKinlay, 1997) is used to measure the stock performance and to determine whether the announcement of a merger resulted in abnormal returns for the periods prior to, surrounding, and after an announcement. The traditional market model with value weighted market index (BSE SENSEX) has been used to estimate abnormal return.

The daily residual returns (r_{jt}) are estimated in a 40-day window under the single-factor market model as follows:

$$r_{jt} = R_{jt} - (\alpha + \beta * R_{mt})$$

where,

r_{jt} = Abnormal return for bank stock j at time t

R_{jt} = Actual return for bank stock j at time t

α = Ordinary least squares (OLS) estimate of the intercept of the market model regression

β = Ordinary least squares (OLS) estimate of the coefficient in the market model regression

R_{mt} = Return to the market at time t

The daily average abnormal returns (AR_t) of merger announcement in a 40-day (-40, +40) window are estimated for merged companies by taking arithmetic average of the residual returns (r_{jt}).

$$AR_t = \sum r_{jt} / N$$

Where,

AR_t = Average abnormal returns of merger announcement

N = Number of firms in the sample

The reason for averaging across firms is that stock returns are noisy but the noise tends to cancel out when averaged across a large number of firms. Therefore, more firms in the sample, the better ability to distinguish the effect of an event. The cumulative average returns (CAR) of merger announcement in a 40 days window are estimated for merging companies by summation of the average abnormal returns (AR_t) in the respective window:

$$CAR_j(t_1, t_2) = \sum_{t=t_1}^t AR_t$$

where,

CAR = Cumulative average abnormal returns of merger announcement

Statistical Significance of Event Returns

There are numerous tests including parametric and non-parametric for evaluating statistical significance of abnormal returns. Each tests the null hypothesis that there are no abnormal returns associated with the merger announcement, but they differ in the necessary assumptions about statistical properties of abnormal returns. Parametric test statistics for abnormal performance on event days are based on a standard t test of the difference between two means. In addition to parametric statistics, event studies typically report a non-parametric test. The non parametric tests differ from the parametric ones because they do not assume normality and they do not require as stringent assumptions about return distributions as parametric tests. Non-parametric test is generally used in conjunction with parametric test in the event studies to verify the results are not driven by outliers. In order to obtain robust results one parametric traditional t test (used by Brown-Warner (1980) and developed by Patell (1976)) and one non-parametric generalized sign test (Cowan, 1992) have been applied.

(a) Traditional t test: The statistical significance of the daily residual returns of each company (r_{jt}), daily average abnormal returns (AR_t) of merging and cumulative abnormal return (CAR), has been examined using the t -statistics, given by:

$$-statistics\ of\ Abnormal\ Return = \frac{r_{jt}}{\hat{S}(AR)}$$

Where, $\hat{S}(r_j)$ = Standard deviation of residual of company j for the clean period

$$t\text{-statistics of Average Returns} = \frac{AR_t}{\hat{S}(AR)}$$

Where, $\hat{S}(AR)$ = Standard deviation of average abnormal returns of merged company during clean period.

$$t\text{-statistics of CAR} = \frac{CAR}{\hat{S}(AR)\sqrt{t}}$$

Where t = respective window period.

If the estimated value of t-statistics is greater than 1.64 but less than 1.96, it is significant at 10 per cent level. If estimated value of t-statistics is greater than 1.96 and less than 2.58, it is significant at 5 per cent level. If its value exceeds 2.58, it is significant at 1 per cent level. In the event of the t-statistics being significant, it implies that there are abnormal returns associated with the merger announcements in India.

(b) Generalized Sign Test (GSign_z): The generalized sign test examines whether the number of stocks with positive cumulative abnormal returns in the event window exceeds the number expected in the absence of abnormal performance. In this way generalized sign test takes account of a possible asymmetric return distribution under the null hypothesis. The null hypothesis of generalized sign test is that proportion of positive returns is same as in the estimation period. The test statistic uses the normal approximation to the binomial distribution. The generalized sign test statistic presented by Cowan (1992) is:

$$Gsign_z = \frac{w - n\hat{p}}{[n\hat{p}(1-\hat{p})]^{1/2}}$$

Where, w = number of stocks in the event window for which the cumulative abnormal return is positive

\hat{p} = binomial distribution of positive signs (= average P)

n = Number of firms (85)

P = proportion of positive sign in the estimation window for a firm

The generalized sign test compares the proportion of positive abnormal return in the event window to the proportion from a period unaffected by the event. The proportion of positive abnormal return \hat{p} based on the 200 day estimation period for a sample of n security event is:

$$\hat{p}_z = \frac{1}{n} \sum_{j=1}^n \frac{1}{200} \sum_{t=1}^{200} S_{jt}$$

Where, $S_{jt} = \begin{cases} 1 & \text{if } AR_{jt} > 0 \\ 0 & \text{Otherwise} \end{cases}$

Empirical Results

The estimates of cumulative average abnormal returns (CAR) of the merged companies in the different windows are reported in Table No. 3. It is observed that CAR of eighty five companies is positive and significant in one-day (-1, +1), two-day (-2, +2) and five-day (-5, +5) event window at 1.27 percent, 1.39 percent and 1.88 percent. The CAR is registered to be negatively significant in forty-day (-40, +40) event window at -7.45 percent. Moreover, the proportion of positive abnormal return during the event window is not different from the proportion during the estimation period as per the generalized sign test.

During run-up window, before the merger announcement CAR is registered to be positive and significant in one (-1, 0), two (-2, -1) and five (-5, -1) day window. During post merger announcement the CAR is negative in one (+1, 0) day window at -0.26 percent and thereafter it increased continuously from two-day (+2, +1) window to forty-day (+40, +1) window at -0.34 percent, -0.98 percent, -0.89 percent, -1.70 percent, -3.64 percent and -6.23 percent, where CAR is registered to be significantly negative in twenty-five (+25, +1) and forty (+40, +1) day window. It is concluded that mergers has not created shareholders wealth. As per the generalized sign test the proportion of positive abnormal return during the run-up window pre and post merger announcement is different from the proportion during the estimation period (significant at 5 percent).

Table No. 3: Cumulative Average Abnormal Return to the Acquirer Shareholders, 1991-2009

Window	CAR	Days	t-statistics	GSign _z
CAR 1 DAY WINDOW	0.0127	3	2.2504 **	1.2884
CAR 2 DAY WINDOW	0.0139	5	1.9107 *	1.2884
CAR 5 DAY WINDOW	0.0188	11	1.7422 *	1.0708
CAR 10 DAY WINDOW	0.0119	21	0.7956	0.4179
CAR 15 DAY WINDOW	0.0043	31	0.2350	1.5060
CAR 25 DAY WINDOW	-0.0210	51	-0.9040	1.2884
CAR 40 DAY WINDOW	-0.0745	81	-2.5423 **	0.2002
Run up window				
(-1 DAY)	0.0064	1	1.9576 *	1.0708
(-2 TO - 1 DAY)	0.0083	2	1.8122 *	1.7237
(-5 TO - 1 DAY)	0.0196	5	2.6943 ***	2.3766 **
(-10 TO - 1 DAY)	0.0118	10	1.1492	0.4179
(-15 TO - 1 DAY)	0.0123	15	0.9786	1.2884
(-25 to - 1 DAY)	0.0064	25	0.3948	2.5942 ***
(-40 to - 1 DAY)	-0.0212	40	-1.0270	1.0708
After announcement				
(+1 DAY)	-0.0026	1	-0.8120	-0.8880
(+2 TO + 1 DAY)	-0.0034	2	-0.7372	-0.4527
(+5 TO + 1 DAY)	-0.0098	5	-1.3411	-1.7585 *
(+10 TO + 1 DAY)	-0.0089	10	-0.8666	-0.4527
(+15 TO + 1 DAY)	-0.0170	15	-1.3514	-0.8880
+25 TO + 1 DAY)	-0.0364	25	-2.2363 **	-1.9761 **
+40 TO + 1 DAY)	-0.0623	40	-3.0259 ***	-2.4114 **

***denotes Significant at 1 percent level, ** denotes Significant at 5 percent, * denotes Significant at 10 percent

Comparing the results of present study to the other studies in the context of acquiring firms, mixed trend is observed. Few of the studies that actually found that the mergers created wealth and are contrary to the present study was conducted by Cybo-Ottone & Murgia (2000), find significantly positive weighted combined merger revaluations in European banking. Anand & Singh (2008) study the effect of five specific mergers in the Indian banking sector on the shareholders wealth. The merger announcements in the have positive and significant shareholder wealth effect both for bidder and target banks. The market value weighted CAR of the combined bank portfolio as a result of merger announcement is 4.29 per cent in a three day period (-1, 1) window and 9.71 per cent in a 11-day period (-5, 5) event window. Kale, Kini, & Harley E Ryan (2003) show CAR 1.71 percent for the Indian bidding firms. Oelger & Schiereck (2011) shows significant positive CAR for the event window (-10, +10) of 3.35 percent.

The results of studies in the European context are contrary with the results of the present study. Most of the event studies on mergers and acquisitions in Europe report minimal or close to zero CARs to acquirers. Martynova & Renneboog (2006) report 0.5 percent statistically significant positive CAR for bidders' share price on the announcement day. This result is also supported by the research conducted by Goergen & Renneborg (2003) who find that the share price of the bidding firms in Europe reacts positively with a statistically significant announcement effect of 0.7 percent. Ng et al., (2010) investigate the valuation effect on acquiring banks during the period of 2004 through 2010 and report positive value effect to the acquiring bank, on average, 0.3 percent and 0.8 percent in USA and in Europe, respectively.

The results of the study that are found consistent with the present study are conducted by Rani, Yadav, & Jain (2008). They reported negative CAR for India based mergers. Drapper (2006) reports that UK bidder shareholder returns drop by a significant amount of 0.4 percent if a public target announcement is done within the period 1981-2001. Loughran & Vjih (1997) examined the long-term abnormal return and concluded a loss in value seen from the perspective of the acquiring company. Both Agrawal et al., (1992) and Loderer & Martin (1992) also documented negative abnormal performance in relation to the acquiring company concerning the long-term abnormal performance.

A graphical presentation of cumulative average abnormal return of all the companies under different event windows is captured in Figure No. 1. The CAR in various run-up windows before and after the merger announcement are depicted in Figure No. 2 and Figure No. 3 respectively.

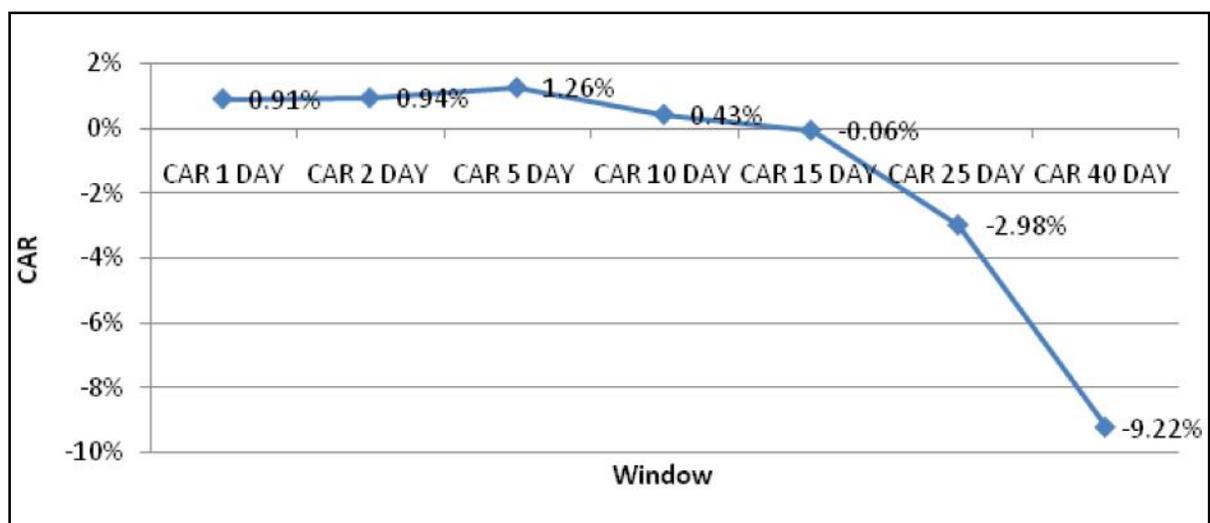


Figure No. 1: CAR Event Window

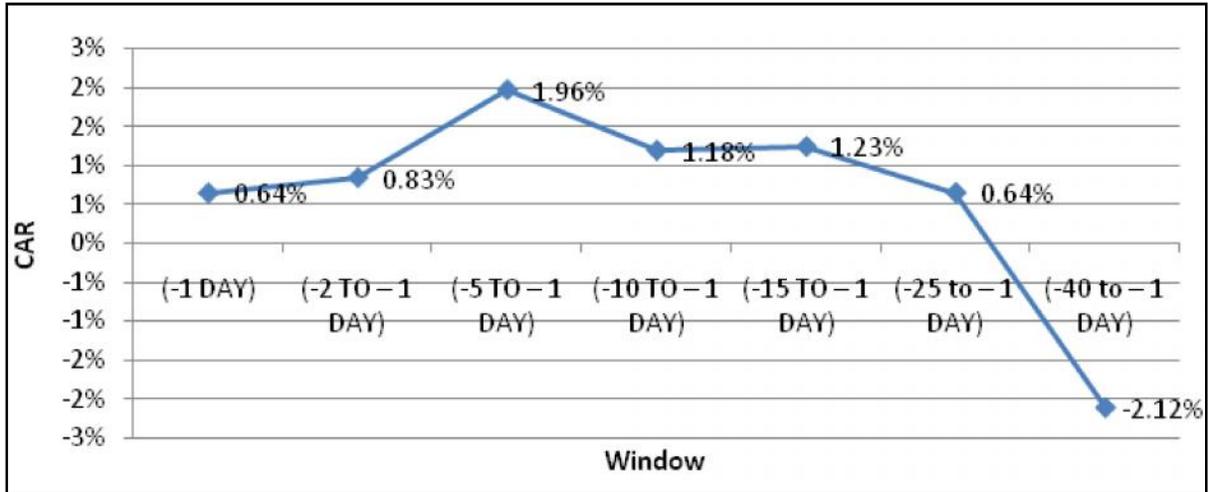


Figure No. 2: CAR Run-up Window before Merger Announcement

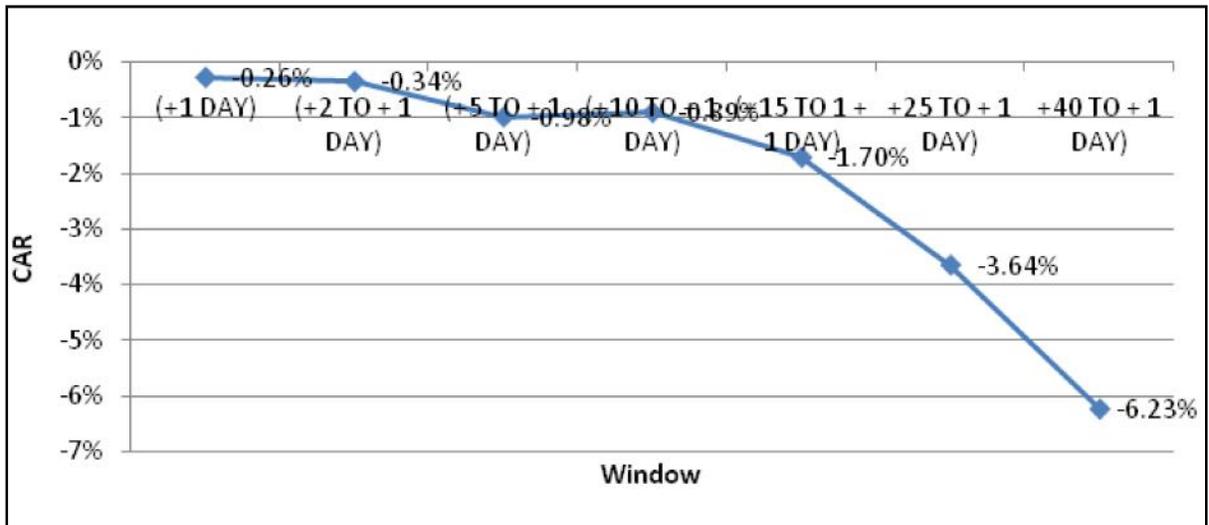


Figure No. 3: CAR Run-up Window Post Merger Announcement

CAR of all merged companies is positive and significant in short window. The acquirer shareholders earn 0.89 percent average return on the day of announcement. Shareholders experienced positive abnormal return; the returns are significant at 1 percent. One day CAR before announcement is 0.64 percent and is statistically significant at 10 percent. One day after merger announcement it is 0.26 percent, which is not statistically significant. CAR in day before announcement to the day of announcement (-1, 0) is 1.53 percent and significant at 1 percent. Its value on the day before announcement to the day after announcement (-1, +1) is 1.27 percent & is statistically significant at 5 percent (Refer Table No. 4). It is concluded that merger has not created shareholders wealth after merger because CAR after announcement of merger is positive but not statistically significant.

Table 4: Statistical Significance of Cumulative Average Abnormal Returns

Window	CAR	Percent of CAR	t-statistics	GSign _z
Day before announcement (-1)	0.0064	0.64	1.9576 *	1.0708
Day of merger announcement (0)	0.0089	0.89	2.7522 ***	3.2471 ***
Day after merger announcement (+1)	-0.0026	0.26	-0.8120	-0.8880
Day before merger announcement to the day of announcement (-1 to 0)	0.0153	1.53	3.3303 ***	1.9413 *
Day before merger announcement to the day after announcement (-1 to +1)	0.0127	1.27	2.2504 **	1.2884

***denotes Significant at 1 percent level, ** denotes Significant at 5 percent, * denotes Significant at 10 percent

Conclusion and Implication

The purpose of this paper has been to investigate the announcement effect of merger and acquisition on Indian acquiring firm shareholders wealth in the short run. A sample of 85 Indian acquiring firms has been analyzed in order to find empirical evidence that undermine the hypothesis that announcement of merger and acquisition do not generate value for acquirer and its shareholders in India, during the period 1991-2010

The event study methodology was applied in order to analyse the abnormal returns to acquiring shareholders over a period of forty days surrounding the announcement day with different event windows. The objective of choosing a short event period, under which the returns of the stocks are examined, is that there will generally be no information other than the news of the merger or acquisition during this period, and the observed returns should therefore be entirely due to this news.

This study finds that the announcement of merger and acquisition do not generate significant positive value for acquiring firm shareholders in India in the short run. The empirical results obtained from the event study methodology suggest that acquiring companies' shareholders receive a substantial significant and positive average abnormal return around the announcement day of merger and acquisition only. The findings of this study suggest significant and positive abnormal returns on both of the days prior to the announcement day. The positive abnormal returns on the days in the event period that are prior to the announcement day may have been observed be due to dissemination of news of some of the merger and acquisition before the actual day of announcement, which often occur due to insider trade or rumours.

There was also a decline in the returns after the actual merger and acquisition of the companies. This study reveals that the abnormal returns are more influenced by the information of the merger. The results reveals that post merger performance has been negative for the acquiring firms. The results are consistent with the studies in relation to acquiring firms conducted by Agrawal et al., 1992; Loderer & Martin, 1992; Kaur, 2002; Beena, 2004; Gopalaswamy et al., 2008; Lee & Mansor, 2012; Dilshad, 2013; Shah & Deo, 2013; Drymbetas & Kyriazopoulos, 2014.

According to the findings, acquiring firm shareholders experience negative average abnormal return immediately following the announcement day. However, the result obtained on the last day of the event period is statistically significant. The results obtained in this study are consistent with prior empirical findings on the announcement effect of merger and acquisition on acquiring firms' shareholders' value.

Recommendations and Scope of Future Study

Based on the findings of the study, it has been identified that mergers and acquisitions have not found to be contributing significantly to the shareholders value in the short term, therefore the acquirers

need to assess whether paying substantial purchase considerations for these transactions is economically viable for the firm. The acquiring firms should therefore investigate carefully before overpaying and taking synergy benefit as it is one of the important reason of failure of merger and acquisition. In order to reach conclusive results, further study can be undertaken to investigate the effect of merger and acquisition on the wealth of Indian target companies. Further the study can be conducted using any control group for comparison (industry average or firms with similar characteristics).

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