Payment Methods in Acquisitions : A Study on Short-Term Performance of Indian Non - Financial Acquiring Firms

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Abstract

The present study examined the short-term stock performance of acquirers due to the announcement of different payment methods in mergers and acquisitions (M&A) deals. The investigation explored if there were any significant changes in the abnormal returns (AR) of acquiring companies as they chose different payment methods. Event study methodology was used to investigate the acquirers' AR due to the announcement of three types of payment methods, that is, cash, stock, and mixed in M&A deals during the period from April 1, 2000 to March 31, 2017. The analysis was carried out by taking 197 cash deals, 138 stock deals, and 39 mixed payment methods deals which were announced by Indian acquiring companies from the non-financial sector. Abnormal returns were calculated for a period of 61 days surrounding the event announcement day applying the market model. The parametric test *t* - statistic, Patell *Z* test, and a non-parametric test (sign test) were used to check the robustness of the results. The findings indicated that the payment method used in M&A deals was a vital factor in explaining stock returns during the announcement period. The results specified that the acquirer from non-financial sector gained positively higher ARs in the pre-announcement period for cash and mixed payment methods deals than stock payment method. The results also showed that the stock payment method deals generated negative returns in various event window periods across the announcement day. The information gained from this study will help the investors generate more short-term profit from the Indian stock market.

Keywords : **acquisitions, abnormal returns event study, non-financial sector, payment method**

JEL Classification : G14, G30, G34

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Mergers and Acquisitions (M&As) play a crucial role in the performance of companies. It is a widely acceptable inorganic growth strategy in the corporate world for maximizing the wealth of shareholders. The significance of M&As is increasing day by day to achieve synergy by combining with other companies (Kumar & Bansal, 2008). Despite its significance and importance across the world, the existing studies on M&As are limited in India. The short-term effect on shareholders' wealth is estimated by measuring the volatility in the share price of both acquirer and target companies during the announcement period of M&A deals. Several studies have been done in the past to observe the stock market performance due to M&A announcements (Adra & Barbopoulos, 2018; Ma, Pagan, & Chu, 2009; Rani, Yadav, & Jain, 2015; Travlos, 1987). One of such deal information about M&As is the payment method in the M&A deal, which significantly affects the stock price of both acquirer and target companies (Ismail & Krause, 2010). It is a very vital state to finalize the mode of payments in M&As that would satisfy the stakeholders of both acquirer and target companies.

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Some of the past studies such as the ones conducted by Barbopoulos, Paudyal, and Sudarsanam (2017) ; Rani et al. (2015) ; and Sherif (2012) discussed the stock market performance due to the announcement of payment methods used in M&As. Earlier M&A studies disclosed mixed findings. Some literature reported that abnormal returns were positive for acquiring companies that used cash payment as deal consideration (Rani et al., 2015), while there are other studies that found that acquiring companies' shareholders gained positive abnormal returns (AR) using stock offers in M&As (Chang, 1998). Jucunda and Sophia (2014) found that announcement of cash deals generated negative returns, but announcement of stock deals were no longer value destructive.

Mateev (2017) revealed that there was a significant difference between the abnormal returns of stock and cash deals in case of European bidders. The literature has furnished several contradicting viewpoints about payment methods in M&As. In addition, existing research shows that the mixed payment method has received perfunctory attention. The different conclusions of the prevailing studies indicate that the acquirers' stock price response due to payment methods in M&As require additional academic inquiry. Furthermore, most of the studies related to stock market performance due to different payment methods of M&As predominantly focused on the developed economies like the USA, UK, and France (Faccio & Masulis, 2005; Giannopoulos, Holt, Khansalar, & Mogoya, 2017). However, limited research has been carried out on acquirers' stock performance for the announcement of various payment methods of M&As in developing countries like India. Moreover, some Indian studies relating to M&A announcement effect on stock price concentrated on banking and financial sectors (Anand & Singh, 2008; Chakraborty, 2010).

The studies regarding the impact of M&A announcements on the short-term stock performance of Indian non-financial companies are very few. Carletti, Hartmann, and Ongena (2015) detected that the short-term stock performance of non-financial companies responded negatively ; whereas, the stock performance of financial companies responded positively during the M&A announcement period.

The decision of payment methods in M&As is highly dependent upon the capital structure of the acquiring firms (Murphy & Nathan, 1989). The capital structures of both financial and non-financial companies are different (Ukaegbu & Oino, 2014). So, this study is an attempt to examine the stock performance of Indian non-financial companies for the announcement of different types of payment method of M&A deals.

Literature Review

Most of the studies relating to M&A performance emphasizes on two approaches, that is, short-term stock price performance and the profitability of companies in the long-run based on accounting performance. One segment of literature deals with operating performance of acquirer companies based on accounting data (Heron & Lie, 2002 ; Kumar & Rajib, 2007) and another segment of literature focuses on stock performance due to the M&A announcements (Ma et al., 2009; Mateev, 2017). However, some studies only concentrated on the effect of payment mode on shareholder's wealth and stock returns of the acquiring companies during the announcement period (Alexandridis, Petmezas, & Travlos, 2010; Ladkani & Banerjee, 2012 ; Rani et al., 2015). Since the scope of the present study is limited to the short-term performance, we confine the literature review to the stock performance due to the announcement of different payment methods of M&A deals.

Myers and Majluf (1984) demonstrated that in the case of the asymmetric information model, the acquiring company's stock price response was caused by the information associated with payment method chosen by the acquiring company in M&As deals. As per this model, the stock return is negative when the M&A deal is discharged through payment of stock.

Eckbo, Giammarino, and Heinkel (1990) examined 182 Canadian acquisition deals from which 92 deals were all-cash offers, 34 deals were all stock offers, and 56 deals were a mix of cash and stock offers. They found that the acquirers' abnormal returns were significantly large in case of mixed payment offers than 'only cash offers' and 'only stock offers.' Contrary to this, Brown and Ryngaert (1991) found that M&A deals done using mixed offers

and stock offers led to a negative abnormal return to the shareholders of acquiring companies ; whereas, in case of cash offers, returns were significantly higher than all stock or mixed offers. Boone, Lie, and Liu (2014) examined the payment method by taking cash, stock, and mixed payment methods and explored that the mixed payment method was significantly different from only-cash and only-stock payment method. Lei and Li (2016) indicated that investor bases and investor recognition of acquiring companies increased in the case of stock acquisitions than cash acquisitions.

In the Indian context, studies like the ones conducted by Kumar and Rajib (2007), Pawaskar (2001), Ramakrishnan, (2010), and Singh and Mogla (2010) investigated the financial performance of companies due to M&A deals, but there are just a handful of studies using stock market data to evaluate short-term stock performance of acquirer companies in the Indian corporate sector (Anand & Singh, 2008; Mann & Kohli, 2009; Prakash, 2017; Rani et al., 2015; Singh, 2017). However, these studies concentrated either on particular industries or analyzed very small sample periods.

Ranju and Mallikarjunappa (2017) examined the impact of acquisition announcement on shareholder wealth by taking 349 Indian acquisition deals and reported that acquisition announcement did not generate any value for the acquirer firm's shareholders. Also, it was indicated that announcement of acquisitions decreased shareholder's wealth significantly during the post-event period. However, Prakash (2017) explored the short-run stock performance of both acquirer and target shareholders due to M&A announcements and found that target firms created shareholder value, and the acquirer firms destroyed shareholder value.

Recent studies such as the ones conducted by Barai and Mohanty (2010), Kohli and Mann (2012), and Rani et al. (2015) explored the stock performance of the Indian companies during the M&A announcements through event study methodology with a large sample size, and they found that cash payment method deals generated more stock returns than stock payment method deals.

However, these studies did not deeply analyze the stock returns of acquirers due to announcement of different types of payment methods, that is, cash, stock, and mixed payment methods by using recent sample periods. Particularly, the literature on short-term stock returns of acquirers from the non-financial sector because of M&A announcements is very limited. The stock performance for the announcement of mixed payment method M&A deals has not been much explored in the Indian context in the past literature. The probable reasons for this is that less M&A deals are announced in mixed payment methods in India. So, the objective of this study is to evaluate stock performance due to the announcement of three different payment methods (cash, stock, and mixed) of M&A deals and examine the linkages between the stock performance of acquirers during the announcement period and payment methods in M&A deals.

Data Description

This study is carried out based on data collected from secondary sources such as Bloomberg database, CMIE Prowess IQ, and website of BSE. The data relating to M&A deals were collected from Blomberg database. These covered the M&A deals for a period starting from April 1, 2000 to March 31, 2017. The daily stock prices of acquiring companies and market data were collected from Prowess database and BSE website. The sample of M&A deals were arranged as per different payment methods. For comparing the stock market reaction due to the announcement of different payment methods used in M&A deals, three categories of data sets are used for this study, that is, M&A deals through cash payment method, stock payment method, and mixed payment method (combination of cash, stock, debt, and earn-out). We found that few M&A deals used mixed payment method within the sample period as compared to cash and stock payment methods.

The following are the sample selection criteria :

(i) The stocks of the acquiring companies needed to be listed and also traded on BSE.

(ii) The acquirers should be from the non-financial sector.

(iii) The acquirers' stock prices must be obtainable for both the periods, that is, event window period and estimation window period.

(iv) Only majority acquisitions (more than 50% acquisition) were included in the sample.

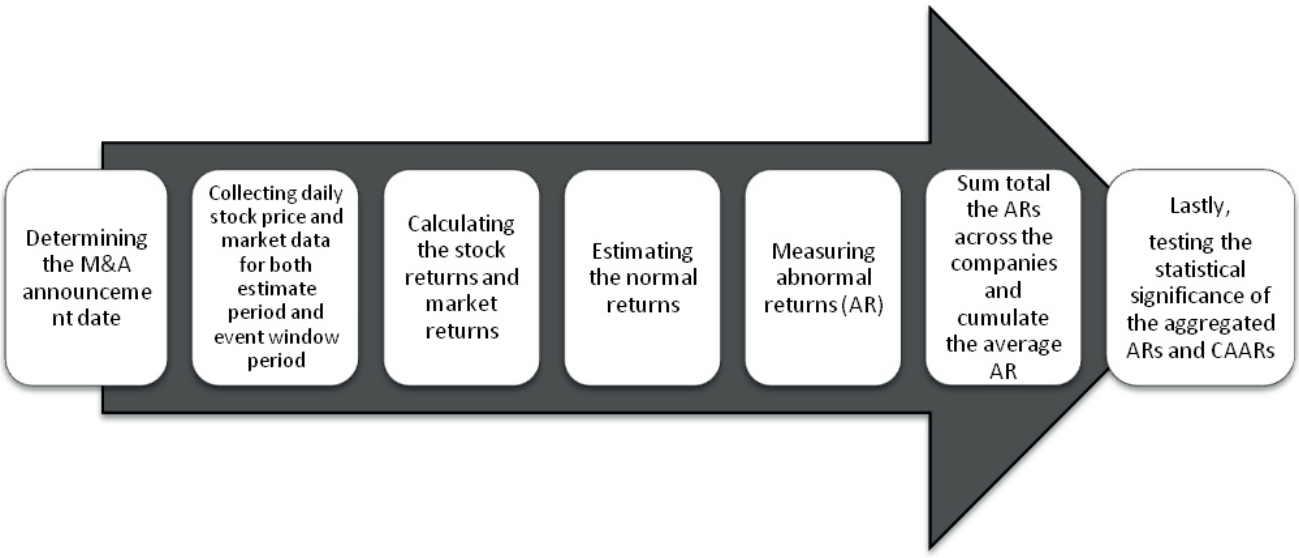
(v)1The acquirers should have not announced any additional event of merger/takeover or any other announcement during the event window period.

After fulfilling the above criteria, a total of 197 cash deals and 138 stock deals were included in the sample, but in case of mixed payment method, only 39 deals were found that satisfied the sample criteria.

Research Methodology

Event study methodology was applied in this study to measure the stock price reactions of the acquirer due to the announcement of different payment methods for M&A deals. Event study methodology was initially introduced by Fama, Fisher, Jensen, and Roll (1969), which was further developed by Brown and Warner (1985) and Kothari and Warner (2007). This methodology follows certain stages of estimation given in Figure 1, which includes :

Figure 1. Stages of Event Study Methodology



The study used the first announcement date of the M&A as the event day as in Dodd (1980). The stock returns were examined in the event window period to find the effect of the M&A event. The event day is defined as day '0'. The next trading day is taken as day +1 and immediately preceding trading day is defined as day -1. Total 61 trading days (-30, 0, +30) have been considered as the 'event window'. The information relating to M&A announcements may leak well before the official announcement to the market. For this reason, the market is speculated before the announcement day (Faccio & Masulis, 2005; Mallikarjunappa & Nayak, 2013; Rani et al., 2015 ; Travlos, 1987). So, the reaction of the stock returns was studied for 30 days before the announcement day. Likewise, the 30 days of the post-announcement period have been taken to capture the post-event stock

performance of the acquirer because of the M&A announcements.

The AR is calculated by deducting expected returns from actual returns. The expected return is the normal return predicted form the stock price. However, the unexpected part of the returns which are caused by the announcement of the event is the abnormal returns (Ramakrishnan, 2010). The expected returns are computed by using the market model. It comprises the regression of individual stock's returns against the returns of a market index (Brown & Warner, 1985; Goergen & Renneboog, 2004; Rani et al., 2015; Wansley, Lane, & Yang, 1987). The study used BSE Sensex as a market index in the market model. Normally, expected returns are calculated based on the estimation period, which begins before the event window. For this period, alpha (α) and beta (β) are projected using the market regression model. The market model parameters are estimated based on 200 days (i.e. from - 230 to -31 days). The study also follows the event study methodology procedures to determine AR. The AR is computed as per (1) :

$$AR_{it} = R_{it} - E(R_{it}) \quad (1)$$

where, AR_{it} = Abnormal return of company *i* in time *t*,
R_{it} = Actual return of company *i* in time *t*,
$E(R_{it})$ = Expected return of company *i* in time *t*.

The expected return is calculated as follows :

$$E(R_{it}) = \alpha_{it} + \beta_i \ R_{mt} + \epsilon_{it} \quad (2)$$

α_{it} = Intercept term,
β_i = Beta coefficient of the regression model,
R_{mt} = Return on the market index (BSE Sensex) in time *t*,
ϵ_{it} = Error term.

The average abnormal return (AAR) of all companies in different payment method is derived by the average of all abnormal returns of companies on each event day *t*. To calculate the AAR, the following formula is used :

$$AAR_t \frac{1}{N} = \Sigma^{N}_{i=1} AR_{it} \quad (3)$$

AAR_t = Average abnormal return on day *'t'*,
N = Total number of companies.

Cumulative average abnormal returns (CAAR) indicate the total effect of the event window across all securities for the different event window period (i.e. t_1 to t_2). CAAR is calculated by adding the AARs over different time periods. The below model is used to compute CAAR :

$$CAAR_{(t_1,t_2)} = \sum_{t=t_1}^{t_2} AAR_{(t_1,t_2)} \quad (4)$$

t_1 , t_2 are the number of days in the event window.

As per the Kang and Stulz's (1996) study, the event study methodology has specific some robustness issues. So, the robustness of the results are tested by using parametric test (*t* - statistic, Patell *Z* test) and non- parametric test (sign test) for determining their statistical significance. In the significant test, if the test value is statistically significant, it means the existence of abnormal returns, otherwise there are no abnormal returns.

Table 1. Average Abnormal Returns (AAR) Around M&A Announcements for Cash, Stock, and Mixed Payment Methods Deals

Event Day	Cash Deal AAR %	*t*-Test Value	Stock Deal AAR %	*t* - Test Value	Mixed Deal AAR %	*t* -Test Value
-30	0.51***	2.2	-0.34	-1.64	-0.09	-0.2
-29	0.18	0.8	-0.06	-0.28	-0.56	-1.22
-28	0.25	1.1	-0.06	-0.29	-0.32	-0.69
-27	0.12	0.52	-0.14	-0.67	0.22	0.48
-26	0.36	1.55	0.58***	2.76	-0.41	-0.89
-25	0.45**	1.96	0.38*	1.8	0.37	0.79
-24	0.65***	2.82	0.03	0.13	-0.54	-1.18
-23	-0.19	-0.84	0.60***	2.83	-0.19	-0.42
-22	-0.12	-0.52	0.11	0.52	0.15	0.33
-21	0.27	1.18	-0.16	-0.78	-0.26	-0.57
-20	0.02	0.1	0.15	0.71	0.43	0.93
-19	-0.34	-1.49	0.45**	2.14	0.24	0.53
-18	0.15	0.64	0.23	1.09	0.21	0.45
-17	-0.02	-0.07	-0.35*	-1.68	0.02	0.05
-16	0.31	1.36	-0.1	-0.45	0.56	1.23
-15	0.32	1.37	-0.09	-0.42	-0.62	-1.34
-14	-0.24	-1.04	-0.07	-0.36	0.12	0.26
-13	0.04	0.17	-0.02	-0.09	0.27	0.59
-12	-0.26	-1.11	0.28	1.31	0.65	1.41
-11	-0.07	-0.29	0.26	1.25	0.46	0.99
-10	0.05	0.21	0.05	0.25	-0.32	-0.69
-9	0.2	0.87	0.03	0.16	0.16	0.35
-8	-0.04	-0.18	-0.28	-1.35	0.18	0.38
-7	-0.29	-1.28	-0.14	-0.65	0.66	1.43
-6	0.41*	1.8	0.13	0.60	0.02	0.04
-5	-0.26	-1.12	-0.28	-1.35	0.37	0.8
-4	0.17	0.73	-0.47**	-2.24	0.16	0.34
-3	0.13	0.55	-0.1	-0.5	0.01	0.02
-2	0.16	0.7	-0.02	-0.08	0.45	0.99
-1	0.73***	3.2	0.05	0.22	0.76*	1.65
0	0.38*	1.65	0.42**	2.00	0.64	1.38
1	-0.23	-0.99	-0.42**	-1.99	-0.18	-0.4
2	0.15	0.67	-0.1	-0.46	0.05	0.11
3	-0.26	-1.14	-0.13	-0.62	-0.75	-1.63
4	-0.3	-1.3	0.13	0.62	-0.78*	-1.7
5	0.33	1.42	-0.1	-0.47	0.3	0.65
6	-0.24	-1.07	-0.54**	-2.58	0.28	0.61
7	-0.04	-0.18	0.03	0.14	-0.53	-1.14
8	-0.37	-1.62	-0.13	-0.6	-0.72	-1.56

9	-0.15	-0.64	-0.11	-0.52	1.57***	3.41
10	-0.05	-0.22	-0.06	-0.31	0.02	0.05
11	-0.36	-1.59	-0.06	-0.3	-0.34	-0.74
12	-0.42	-1.82	-0.60***	-2.84	-0.58	-1.25
13	-0.17	-0.74	-0.02	-0.1	0.45	0.98
14	-0.12	-0.51	0.09	0.41	0.04	0.08
15	-0.28	-1.22	-0.08	-0.37	0.44	0.96
16	-0.27	-1.18	-0.29	-1.36	-1.25***	-2.72
17	-0.25	-1.07	-0.45**	-2.15	-0.23	-0.49
18	-0.70***	-3.04	-0.07	-0.32	-0.68	-1.47
19	-0.55	-2.38	-0.17	-0.83	-0.31	-0.66
20	-0.02	-0.07	-0.09	-0.43	-0.58	-1.27
21	-0.18	-0.78	-0.06	-0.31	-0.34	-0.73
22	-0.58**	-2.54	-0.17	-0.8	-0.33	-0.72
23	-0.21	-0.9	-0.32	-1.5	0.25	0.54
24	0.31	1.33	-0.29	-1.37	-0.37	-0.8
25	-0.01	-0.04	-0.13	-0.63	-0.16	-0.34
26	0.08	0.35	-0.17	-0.8	0.37	0.8
27	0.31	1.37	-0.11	-0.5	-0.05	-0.1
28	0.19	0.81	0.01	0.07	0.52	1.12
29	0.11	0.47	-0.13	-0.63	-0.24	-0.53
30	0.37	1.62	-0.83***	-3.93	-0.44	-0.95

Note: ***, **, and * denote statistical significance at 1%, 5%, and 10% levels, respectively.

Analysis and Results

Table 1 shows the average abnormal returns (AARs) of acquirer companies of each payment method, that is, cash, stock, and mixed payment method with corresponding test statistics values. Table 1 displays 61 days (-30, 0, +30) event window AAR for cash, stock, and mixed payment method acquisitions deals. Cash payment method deals portray 21 days positive AARs out of 30 days during the pre-announcement window. Similarly, 15 days and 22 days positive AARs are observed during the pre-acquisition period in stock and mixed payment method deals. The AARs of the acquirer companies differ in each payment method for two reasons, that is, associated with synergy revaluations effect and signal effect. According to Eckbo et al.'s model (1990), these are less signaling effects in cash payment methods than stock payment deals. However, the acquirers' ARs in cash payment method are linked to the revaluation synergy. Only in the case of mixed payment method deals, the acquirers' ARs are affected by both a signal effect and a synergy revaluation effect.

In case of the post-announcement period, in cash payment method, the values of AAR are positive for 9 days, but in stock and mixed payment methods, the values of AAR are positive for 5 days and 12 days in post-event days. It has been exposed that in event day, that is, "0" days, the value of AARs is positive for all payment methods deals. However, the values of AARs are significant only for cash payment method (at level 10%) and stock payment method (at level 5%). It indicates that the stock returns of acquirers responded positively for both cash and stock payment methods on event day (0 day). These findings are similar to the results obtained by Rani et al. (2015). The Table 1 shows that the majority of AARs during the event window are insignificant for the three payment methods. The outcomes indicate that in cash and stock deals, much of the information is spread before

the announcement period. In case of mixed financing deals, in the previous day of event day, the values of AARs are significant at the 10% level, but in the post-announcement 9th day, the AAR value is maximum at 1.57%, which is statistically significant at the 1% level. These results also depict that most of the values of AAR are positive in pre-announcement days as compared to post-announcement days for all payment methods. These findings specify that the market started reacting in the pre-announcement event periods, and as a result, investors

Figure 2. Acquirer's AAR Across the Event Window (Cash, Stock, and Mixed M&A Deals)

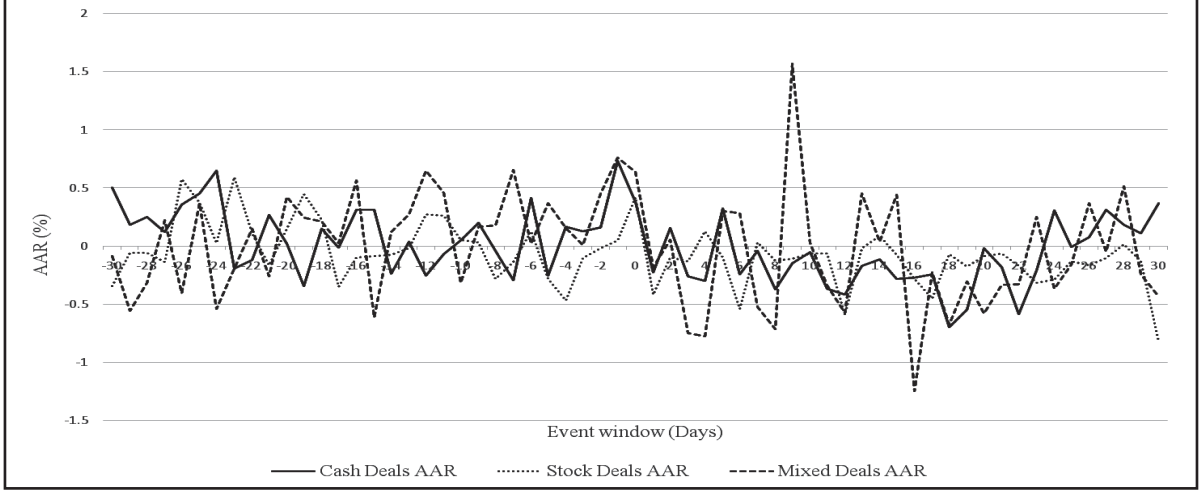


Figure 3. Acquirer's CAAR Across the Event Window Period (Cash, Stock, and Mixed M&A Deals)

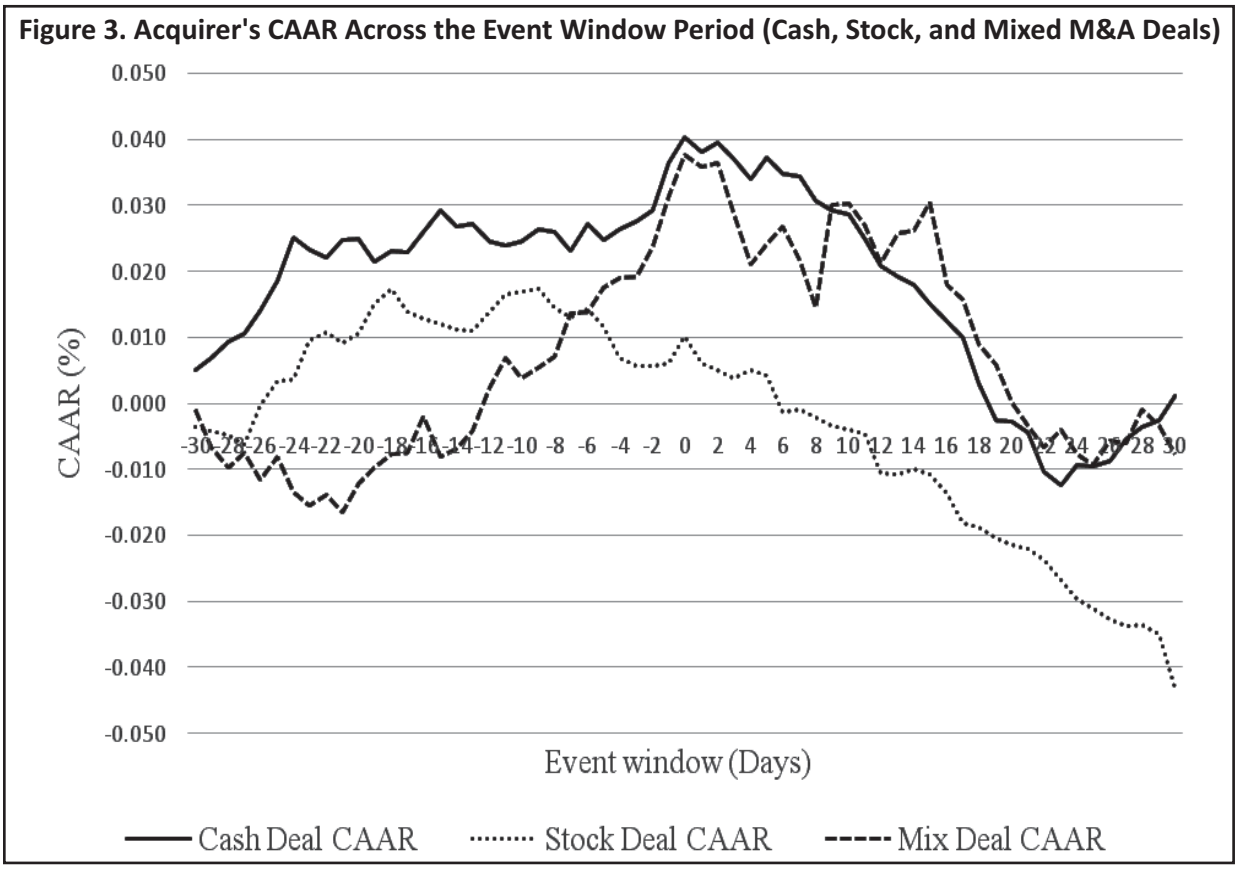


Table 2. Acquirer's CAARs for M&A Announcements Across Various Window Periods (Cash Offer Deals)

Event Window	Cash Deals CAAR %	Pos : Neg	Patell *Z*	*p* - value	Sign Test	*p* - value
(-30, +30)	0.12	92 : 105	0.160	0.873	0.071	0.943
(-25, +25)	-2.36	88 : 109	-1.044	0.297	-0.099	0.921
(-20, +20)	-2.74	81 : 116	-1.641	0.101	-0.440	0.660
(-15, +15)	-1.09	84 : 113	-0.840	0.401	-0.781	0.435
(-10, +10)	0.47	91 : 106	-0.031	0.975	-0.440	0.660
(-5, +5)	1.00	99 : 98	0.958	0.338	-0.270	0.787
(-4, +4)	0.93	105 : 92	1.002	0.317	-0.952	0.341
(-3, +3)	1.07	108 : 89	1.349	0.177	-1.122	0.262
(-2, +2)	1.20	97 : 100	1.933*	0.053	1.265	0.206
(-1, +1)	0.89	108 : 89	1.971**	0.049	0.753	0.451
(0 day)	0.38	110 : 87	1.737*	0.082	1.776*	0.076
(-30, 0)	4.04	95 : 102	3.109***	0.002	2.117**	0.034
(-25, 0)	2.62	101 : 96	2.588***	0.010	2.117**	0.034
(-20, 0)	1.56	107 : 90	1.880*	0.060	1.776*	0.076
(-15, 0)	1.43	110 : 87	2.091**	0.037	1.094	0.274
(-10, 0)	1.64	110 : 87	2.537**	0.011	0.924	0.356
(-5, 0)	1.31	101 : 96	2.651***	0.008	1.776*	0.076
(-4, 0)	1.57	106 : 91	3.215***	0.001	1.946*	0.052
(-3, 0)	1.4	112 : 85	3.133***	0.002	2.117**	0.034
(-2, 0)	1.28	104 : 93	3.211***	0.001	2.458**	0.014
(-1, 0)	1.12	108 : 89	3.463***	0.001	1.946*	0.052

Note: ***, **, and * denote statistical significance at 1%, 5%, and 10% levels, respectively.

generated positive abnormal returns, however, in the post-announcement event period, the positive abnormal returns do not sustain.

The Figure 2 graphically displays the value of AARs of each payment method deal for 61 days event window period. It shows that the values of AARs fluctuate during the event window period for all payment methods deals. It is observed that on event day (0 day), the cash deals AARs and mixed deals AARs are higher than stock deals AARs. In the cash payment method, the AARs reached the peak level in the previous day of the event. However, for the mixed payment method, the AAR reaches at the highest peak level on the 9th day after the post-event period.

Figure 3 shows the line chart of CAAR values for 61 days in the event window for each payment method i.e. cash, stock, and mixed deal and indicate the trend of CAARs values. It is clearly noted that most of the values of CAARs for pre-event days in cash payment method are higher than stock and mixed payment method. It is also observed that on the event day (0 days), the cash and mixed deal CAAR are higher than stock deals CAAR. In the post-event period, the CAAR value of stock payment method attains negative value more quickly than cash and mixed deals CAARs.

The Table 2 shows the values of CAARs of cash payment method deals with various size event windows to determine the imperative periods for an investment perspective. It represents the CAARs value of 197 acquiring companies with the corresponding number of positive and negative CAARs. Patell *Z* and sign test were used to check the significance of CAAR in different event window periods. In the cash payment method, CAARs for the 13 event window periods out of 21 event windows are positive and statistically significant as per the Patell *Z*

Table 3. Acquirer's CAARs for M&A Announcements Across Various Window Periods (Stock Offer Deals)

Event Window	Stock Deals CAAR %	Pos : Neg	Patell *Z*	*p* - value	Sign Test	*p* - value
(-30, +30)	-4.31	66 : 72	-2.722***	0.006	-0.510	0.609
(-25, +25)	-3.07	65 : 73	-1.924*	0.054	-1.080	0.279
(-20, +20)	-3.05	63 : 75	-2.018**	0.043	-2.078**	0.037
(-15, +15)	-2.36	61 : 77	-1.858*	0.063	-1.651*	0.098
(-10, +10)	-2.04	63 : 75	-2.140**	0.032	-0.653	0.513
(-5, +5)	-1.02	64 : 74	-1.016	0.309	0.487	0.626
(-4, +4)	-0.64	60 : 78	-0.476	0.633	1.342	0.179
(-3, +3)	-0.3	59 : 79	0.246	0.805	1.770*	0.076
(-2, +2)	-0.06	73 : 65	0.641	0.521	0.202	0.839
(-1, +1)	0.05	70 : 68	0.947	0.343	1.770*	0.076
(0 day)	0.42	76 : 62	2.650***	0.008	2.055**	0.039
(-30, 0)	1.04	78 : 60	1.007	0.313	-0.083	0.933
(-25, 0)	1.06	78 : 60	1.180	0.238	0.772	0.439
(-20, 0)	0.12	76 : 62	0.213	0.830	1.627	0.103
(-15, 0)	-0.26	72 : 66	-0.309	0.756	2.055**	0.039
(-10, 0)	-0.62	71 : 67	-0.732	0.464	2.055**	0.039
(-5, 0)	-0.41	76 : 62	-0.120	0.904	0.772	0.439
(-4, 0)	-0.13	77 : 61	0.354	0.723	1.485	0.137
(-3, 0)	0.34	78 : 60	1.597	0.110	2.340**	0.019
(-2, 0)	0.45	80 : 58	1.963**	0.049	1.2	0.230
(-1, 0)	0.47	77 : 61	2.401**	0.016	1.770*	0.076

Note: ***, **, and * denote statistical significance at 1%, 5%, and 10% levels, respectively.

value. The CAAR on (-30, 0) event window in cash payment method is 4.04%, which is significant at the 1% level with the maximum value. As per the results, the most advantageous investment window for the investors is (-30, 0) cash payment method deals because the cumulative average abnormal returns are maximum during this window period. One notable finding is that for all the pre-event window periods, the CAAR values are positive and statistically significant as per the Patell *Z* test values. This result specifies that the acquirers' stock returns positively reacted in the pre-announcement periods. So, it is better for investors to invest in acquirers' stocks during the pre-announcement periods and sell the stocks on announcement day or just one day before the date of announcement. In the cash payment method, the CAAR on event day (0 day) is 0.38%, and this is significant at the 10% level. It is also observed that on the event day (day 0), the CAAR values for 110 acquirers out of the total 197 acquirers are positive.

The values of CAARs for stock payment method deals with a positive and negative number of CAAR and significant test, that is, Patell *Z* and sign test over the various window periods are presented in the Table 3. It has been noted that on the announcement day (0 day), the CAAR value is positively significant at 0.42% (Patell *Z* value at 1% level, 2.65). Furthermore, the Table 3 displays that the CAAR values during the pre-event windows (-2, 0) and (-1, 0) are 0.45% and 0.47%. The results are also statistically significant as per the Patell *Z* value. In the event window of 31 days (-30, 0) and 26 days (-25, 0), the CAARs are 1.04% and 1.06%, respectively. These values are higher than what they are for other event window periods, but the results are not significant. The acquirer firms' CAAR in stock payment method for the entire event period of 61 days (-30, 30) is negative of 4.31 %; but this is significant (Patell *Z* value at 1%, -2.72). Similarly, the acquirer firms' CAARs in stock payment

Table 4. Acquirer's CAARs for M&A Announcements Across Various Window Periods (Mixed Offer Deals)

Event Window	Mixed Deals CAAR %	Pos: Neg	Patell *Z*	*p* - value	Sign Test	*p* - value
(-30, +30)	-0.77	20:19	0.38	0.703	0.600	0.548
(-25, +25)	0.24	22:17	0.304	0.761	1.242	0.214
(-20, +20)	1.66	20:19	0.7672	0.443	0.600	0.548
(-15, +15)	3.24	23:16	1.2196	0.222	1.563	0.117
(-10, +10)	2.35	23:16	1.1681	0.242	1.563	0.117
(-5, +5)	1.02	20:19	1.1898	0.234	0.600	0.548
(-4, +4)	0.35	23:16	0.994	0.320	1.563	0.117
(-3, +3)	0.98	22:17	1.3586	0.174	1.242	0.214
(-2, +2)	1.72	23:16	1.9383*	0.052	1.563	0.117
(-1, +1)	1.21	22:17	1.8323*	0.066	1.242	0.214
(0 day)	0.64	21:18	1.2687	0.204	0.921	0.356
(-30, 0)	3.78	21:18	1.6623*	0.096	0.921	0.356
(-25, 0)	4.95	24 : 15	1.9682**	0.049	1.884*	0.059
(-20, 0)	5.43	24 : 15	2.389**	0.016	1.884*	0.059
(-15, 0)	3.96	24 :15	2.0717**	0.038	1.884*	0.059
(-10, 0)	3.08	27 : 12	2.0223**	0.043	2.847***	0.004
(-5, 0)	2.39	22:17	2.4632**	0.013	1.242	0.214
(-4, 0)	2.02	21:18	2.3211**	0.020	0.921	0.356
(-3, 0)	1.86	19:20	2.1443**	0.032	0.279	0.78
(-2, 0)	1.85	18:21	2.2003**	0.027	-0.041	0.966
(-1, 0)	1.4	20:19	2.0669**	0.038	0.600	0.548

Note:***,**, and * denote statistical significance at 1%, 5%, and 10% levels, respectively.

method deals during event windows (-25, +25), (-20, +20), (-15, +15), and (-10, +10) are negative of 1.92%, 2.01%, 1.85%, and 2.14%, respectively and these results are significant (Patell *Z* value). These values are remarkable. The results specify that in case of stock payment method, the investors experience negative returns if they invest in pre-announcement days and sell in the post event period. These results are similar to the findings of Golubov, Petmezas, and Travlos (2015) ; Heron and Lie, (2002) ; and Rani et al. (2015).

The Table 4 presents results of CAARs of mixed payment M&A deals. In case of mixed payment method, it has been seen that most of the values of CAAR of various window periods are positive except one window period, that is, (-30, 30). However, a total of 12 window periods are statistically significant (at Patell *Z* value) out of 21 window periods.

On event day (0 day), the CAAR value in mixed payment method is insignificant, but the CAAR values of 1.72% and 1.21% for the event window of five days (-2, +2) and three days (-3, 3), respectively are significant at the 10% level. In the mixed payment method, the CAAR value is maximum (5.43%) for the pre-event window (-20, 0), which is positive and significant at the 5% level. The CAAR value increases from 1.4% to 5.43% during the window period (-1, 0) to (-20, 0). One remarkable finding is that in all the pre-event windows, the CAAR values for mixed payment method are positive and statistically significant. These results are in line with the findings of Eckbo et al.'s (1990) model. This model detects that in a mixed deal, the investors react positively due to both signal effect and synergy revaluation effect.

Key Findings

This study discloses that the shareholders of the Indian acquirer companies from the non-financial sector engaged in M&As experienced significant positive ARs on the event day as well as CAARs over the various size event window periods around the announcements. The M&A deals financed with cash and mixed deals generated higher abnormal returns than stock payment method deals. These findings are consistent with both free cash flow hypothesis and asymmetric information hypothesis. The results also illustrate that in stock payment method deals, the stock returns are negative in various window periods across the announcement day. Based on these findings, it is concluded that stock payment method in M&A deals could be bad news in the stock market. Ownership structure hypothesis and hubris hypothesis may be the probable reasons for these results. When M&A deals are financed with stock, the shareholders of the acquirer companies perceive higher chances of ownership dilution in the acquirer. One notable observation is that in case of mixed payment method deals, the acquiring firms' shareholders gain significantly positive abnormal returns in the Indian context.

Conclusion

Evidence from past empirical research shows that the stock price usually reacts to M&A announcements, but this study extends past research by investigating the impact of different types of payment methods employed in M&As on stock price reaction of Indian acquirer companies from the non-financial sector during the announcement period. The empirical analytical results of the study indicate that an investor can earn considerable returns during the pre-event announcement days. This study empirically tested investors' reactions that are different depending upon the payment methods in M&A deals. The results also show that mixed payment method creates a significantly positive abnormal return for acquiring firms' shareholders in the Indian context, which is consistent with the findings of Eckbo et al.'s (1990) model. It is observed that in stock offer deals, the stock market reacts negatively in the various sizes of window periods; however, in cash and mixed offer deals, the acquirer shareholders earn substantial returns during the announcement periods. As per the financial theory developed by Myers and Majluf (1984), the issue of new stock is perceived negatively by stock markets. Our results are in line with this financial theory. The important observation of this study is that the CAARs values for cash and mixed deals are higher than stock deals on the announcement day. The results of this study contradict the findings of Jucunda and Sophia (2014). This study has certain implications for both corporate managers and the policy makers.

Research Implications

Method of payment has a large impact on the shareholders of both acquirer and target firms. Hence, this study would be useful for the investors and acquirer firms' shareholders to know how to gain more returns on the announcements of different payment methods deals. The study would be helpful for corporate managers and the policymakers as well for decision making. These results would assist acquirer firms' managers to negotiate with the target firm during the finalization of payment methods in M&A deals. The empirical findings confirm the argument that there is negative reaction for stock deals in M&As. These findings will encourage researchers to further investigate the causes for negative reaction for stock deals and understand any new rationale for the use of cash offers. Through the help of this study, the shareholders and short-term investors can generate wealth during the M&A announcements.

Limitations of the Study and Scope for Future Research

There are some areas, which have limited the scope of this research. Foremost, this study lays emphasis on M&As carried out by the Indian companies only. Consequently, the findings may be generalized for the Indian corporate sector. This study only examines the impact of three payment methods (i.e. cash, stock, and mixed of cash & stock) on the short-term performance of acquirers due to M&A announcements. The study only considers acquirers from non-financial companies. The results may not be very conclusive for all M&A deals in India.

The limitations show that there are more paths for future research. Future research can be directed towards the use of sample of other Asian countries, such as Thailand, Singapore, and Japan where M&A studies are not much comprehensive. Apart from this, further research can be extended to other methods of payments, including the earn-out method and seller financing to obtain additional deep insights. Future research could also investigate the long-run stock performance due to different payment methods of M&As and analyze whether there is any significant difference in short-term and long-run performance of acquiring companies in India. Extensive work is done to know the effect of payment methods in M&As of stock prices of acquirer firms. This denotes a hopeful path for further research for short - term performance of Indian non - financial target firms.

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