Impact of Open Offer Announcements on Shareholders' Wealth of Target Companies in India: A Test of Market Efficiency

Rajit Verma[1] and Anil K. Mittal[2]

[1]Research Scholar, Kurukshetra University, India
[2]Professor, Kurukshetra University, India

ABSTRACT

Acquisitions and takeovers always play a vital role in corporate restructuring of many companies worldwide. Open offer is a prominent tool of takeovers in India which safeguards the rights of minority shareholders (SAST 2011). Many Indian studies investigated that in the shareholders of the target companies can get the substantial advantage by participating in the open offers. The present study tried to examine the effects of open offer announcements on the wealth of shareholders and further it tested the efficiency of Indian capital market though such announcements. The current study initially used a sample of 175 target companies listed on S&P BSE but only 75 companies qualified for the final analysis for the period 2014-2017. The study utilized event study and ARs, CARs & CAAR was used to analyze the anomalous price behavior of sample firms within an event window of 61 days. The results reflected that most of the companies have significant positive impact of open offer announcement. The study concluded that market takes time to absorb the new information about corporate which supported the existing literature and tested the efficiency of Indian market in semi strong form.

Keywords: Open offers; Market efficiency; Target companies.

1. INTRODUCTION

Corporate restructuring has various forms by which companies can do the financial reengineering in their business. As the companies advance through progressive phases of development and improvement the tools for financial reengineering such as business mixes and combinations, corporate restructuring, mergers, acquisitions, and takeovers plays a vital role in it. Among the various tools the takeover is the most common form and Securities and Exchange Board of India provided various takeover codes for the Indian companies. According to SEBI (SAST 2011) "Takeover regulations govern the acquisition of shares and the voting rights of the target company and also provide the framework by which the interest of small

investors can be safeguard." There are three types of underlying motives for takeovers such as: Substantial Acquisition, Consolidation of holdings and Change in control.
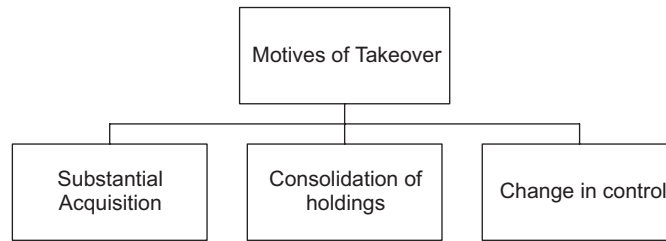

Figure 1: Motives of Takeover (Open Offer)
Source: **Substantial acquisition of shares and takeovers (SAST 2011)**

1.1. About Open Offer

When one company (acquirer or PAC together) tries to obtain twenty five percent or additional stake in another listed company, an open offer program gets activated. This implies that the acquirer or the PAC (persons acting in concert) must make an open offer to the target company's existing shareholders of to purchase an extra 26% stake in the company. The open offer usually kept open for about 20 days, from the date of public announcement of open offer. The offer provides an exit option to the shareholders the target company as there may be the change in control or change in management post-acquisition phase and investors may perceive potential risks in the business. According to SEBI SAST rules 2011 the acquirer or PAC must follow the following procedure of Open Offer.
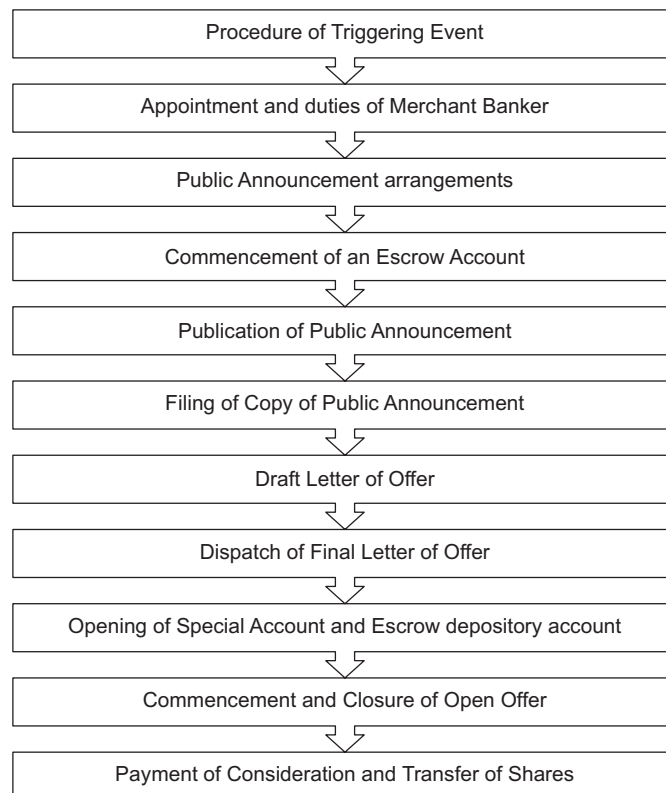
Figure 2: Process of Open Offer as per SEBI SAST 2011
Source: www.sebi.gov.in

2. LITERATURE REVIEW

Numerous foreign studies have focused on short term price and wealth effect of takeover announcements. Majority of the studies analyzed the impact of announcements on the wealth of the target companies. **Dodd and Ruback (1977), Jensen and Ruback (1983), Jarrell, Brickley, and Netter (1988)** and **Bradley, Desai, and Kim (1988)** examined in their respective studies the impact of tender offers in United States of America. The study suggested that the target companies earned significant positive abnormal returns during one month after the announcement date. **Firth (1980), Franks and Harris (1989) and Limmack (1991)** analyzed the acquisition and takeover announcements impact on the target companies in the United Kingdom and the shareholders earned substantial gains during and after the announcement date. **Datta, et. al., (1992)** explained in their study about wealth creation using M&A announcements in USA. The shareholders of the target companies gained significant returns as they participated in such offers. **Bruner (2002)** analyzed the effects of takeover announcements on the wealth of shareholders of target companies and found out that such announcements provided abnormal market return to the shareholders. **Pandey (2001)** and **Chakraborty (2010)** discussed the reaction of takeover announcements on the price movement of the target companies in the short run i.e. 61 days event window. **Pandey** analyzed the impact on large cap companies and **Chakroborty** used various parametric and non-parametric tests and apparently they found out that the shareholders can gain significant abnormal return in the short run. **Rachappa and Satyanarayana (2007)** analyzed the price movements of the acquiring companies using Capital Asset Pricing Model and found out the genesis of significant abnormal return in the small event windows within the normal event window. **Gupta (2008)** discovered the negative and positive returns using the mergers announcements in India during 2003-2007. **Ramakrishna (2010)** analyzed the merger announcements effects in Indian context during 1996-2002 and emphasized that change in control give significant wealth gains. **Mallikarjunappa and Nayak (2013)** discovered that out of 227 companies during 1998 to 2007 majority of the target companies shareholders showed significant abnormal returns using the market model.

3. RESEARCH METHODOLOGY

3.1. Objectives

- To analyze the impact of open offer announcements on price behavior and on the wealth of target companies shareholders.

- To examine the form of market efficiency using open offer announcements

3.2. Theoretical Framework

Standardized event study is being used to analyze the market efficiency and the behavior of price on the occurrence of takeover announcements. Event studies serves as an important tool to check the market efficiency of the capital market. **Brown and Warner (1980) and Fama, French (1991)** event studies focused on the impact of events which provide the strong evidences to predict the market efficiency in both long term and short term. An event study is use to analyze the price behavior of the sample of companies who are witnessing similar type of events. It can be conducted on different time intervals or it might be clustered at a given period which can be analyzed through time series analysis and cross sectional analysis.

Standardized event study examines the price behavior of the company's performance before and after the event date and it also takes in to the consideration abnormal gains and losses during the event window. For the current study three things are essential i.e. Estimation window (to calculate expected return), Event window (Pre and post period of event) and event day (date of public announcement). Estimation window has 120 days (−150 to −30), event window has the size of 61 days (−30, 0 day and +30).
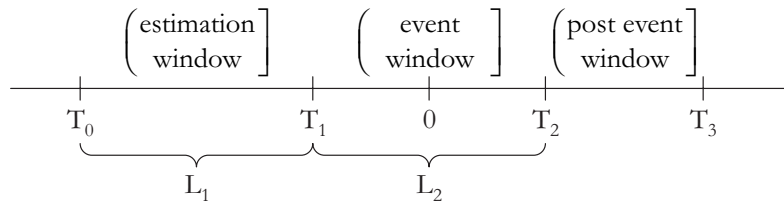

Figure 4.1: Source: Author's computation

For the standardized event study methodology the market model which implies ordinary least squares (OLS) linear regression is being used to predict the expected return of the target companies and S&P BSE 500 used as proxy for the market return calculations

This model provides a linear relationship between the market return (BSE 500 Index) and the individual stock return (daily basis).

$$R_{i,\tau} = \alpha_i + \beta_i R_{M,\tau} + \varepsilon_{i,\tau}$$

R_j = return on stock *j*, a_j = Intercept of security *j*, β_j = Slope of security *j*, R_m = Market return

Using these estimates, abnormal returns for security '*i*' using market model of **Sharpe (1963)** in the event window computed as:

$$AR_{jt} = R_{jt} - (\alpha'_j + \beta'_j R_{mt})$$

Some of the studies which have followed the above model are Dodd and Ruback (1977), Marsh (1979), Dodd (1980), Dodd and Warner (1983), Wansley, Lane, and Yang (1983, 1987), Dyckman, Philbrick, and Stephan (1984), Collins and Dent (1984), Brown, and Warner (1980, 1985), Lewellen, Loderer, and Rosenfeld (1985), Jain (1986), Chatterjee (1986), Singh, and Montgomery (1987), Bradley et. al., (1988), Bertin, Ghazanfari, and Torabzadeh (1989), Seth (1990), Limmack (1991), Sudarsanam, et. al., (1996), Cornett, and De (1991), Cornett, and Tehranian (1992), Briston, Saadouni, Mallin, and Coutts (1992), Moeller, et. al., (2005), Houston, and Ryngaert (1994), Rhoades (1994), Anand, and Singh (1997), Kothari, and Warner (1997), Gregory (1997), Cybo-Ottone, and Murgia (2000), Pandey (2001), Delong (2001), Delong (2003), Kumar (2004), Dash (2004), Creighton, Gower, and Richards (2004), Mishra, and Goel (2005), Gupta (2006), Das, Pattanayak, and Pathak (2007), Abad-Romero, and Robles-Fernandez (2007). This is a very famous and widely used model which predicts the market. The used log returns to evaluate the performance of the target companies using open offer.

Every day average abnormal returns (AAR$_t$) for of the event window is calculated as per the following equation:

$$AAR_t = \frac{1}{N}\left(\sum_t^n AR_{it}\right)$$

Cumulative abnormal return (CAR) is computed by summing up the total of daily abnormal returns over the complete event window cycle (−30, +30).

$$CAR_{i(\tau_1, \tau_2)} = \sum_{t = \tau_1}^{\tau_2} AR_{i, t}$$

3.3. Sampling Design

To measure the effect of open offer announcements on the price behavior of target companies and shareholders wealth, the sample of companies is selected on the basis of the following criteria:

All the target companies should be listed on the Bombay Stock Exchange (S&P BSE 500) and must have sufficient number of trading days for the calculations. The data should be available for computation for an event window 61 days (30 days before, 30 days after and the day of announcement, i.e., day '0') and for an estimation window of 120 days (from −150 to −31 trading days) the data must be available.

All additional announcements such as dividend announcement/buyback announcement/stock split announcements relating to the companies given in the sample if found out would be eliminated for the calculations. As it can neutralize the impact of open offer announcements.

Market index S&P BSE 500 is being used as a proxy for the market model to predict the expected returns of the securities using OLS.

Total 175 companies have announced the open offer during the period April 2014 to March 2017. As per the criteria mentioned above only 71 companies has qualified for the analysis. List of companies on the basis of three motives of takeovers are given below:

Table 1
Number of Open Offers based on the motives during the year (2014-17)

	Open Offer announcements for the period 2014-2017			
Years	*Substantial acquisition*	*Change in control*	*Consolidations of holdings*	*Total*
2014-15	08	51	01	60
2015-16	06	61	06	73
2016-17	02	35	05	42
Total	16	147	12	175

Source: www.sebi.gov.in

4. ANALYSIS AND INTERPRETATION:

The study is intended to examine the announcements impact of Open Offer on the shareholders' wealth of target companies in India. The study is based on the year wise analysis of all the sample firms and further the hypothesis testing is done using various non parametric and parametric tests at a significance level of 1% and 5%. The calculation of the abnormal returns is based on **OLS model** of regression and **Sharpe (1963)** market model with the use of 120 days of estimation window to predict expected returns and 61 days of

event window to identify the abnormal returns (30 days before and 30 days after the announcement). On the basis of these analysis finally the study would intend to draw a conclusion about the market efficiency of Indian capital market.

For the year 2014-15 a total number of 60 open offers announcements were made out of which 24 open offers were selected for the analysis. The table below showing the results of Average abnormal returns (AAR) and Cumulative average abnormal returns (CAAR) of all 24 target firms for the year 2014-15.

Table 2
Computation of AAR and CAAR of Open Offer announcements during 2014-15

Days	AAR	CAAR	Days	AAR	CAAR	Days	AAR	CAAR
−30	−0.0104	−0.0104	−10	0.0074	−0.0213	10	−0.0003	0.0835
−29	0.0039	−0.0065	−9	0.0021	−0.0193	11	0.0035	0.0870
−28	−0.0060	−0.0125	−8	0.0112	−0.0080	12	0.0000	0.0871
−27	0.0051	−0.0074	−7	0.0085	0.0005	13	−0.0140	0.0731
−26	−0.0039	−0.0113	−6	0.0142	0.0147	14	−0.0020	0.0711
−25	−0.0067	−0.0180	−5	0.0159	0.0307	15	−0.0032	0.0678
−24	−0.0030	−0.0210	−4	−0.0070	0.0237	16	−0.0014	0.0664
−23	0.0003	−0.0207	−3	−0.0047	0.0190	17	0.0033	0.0697
−22	0.0074	−0.0133	−2	0.0037	0.0227	18	−0.0011	0.0687
−21	−0.0042	−0.0175	−1	0.0131	0.0357	19	−0.0040	0.0647
−20	−0.0029	−0.0204	0	0.0158	0.0515	20	0.0031	0.0678
−19	−0.0130	−0.0333	1	0.0157	0.0672	21	−0.0029	0.0649
−18	0.0047	−0.0286	2	−0.0050	0.0622	22	−0.0074	0.0575
−17	−0.0048	−0.0335	3	−0.0055	0.0567	23	−0.0020	0.0556
−16	−0.0037	−0.0372	4	−0.0006	0.0561	24	−0.0022	0.0534
−15	0.0010	−0.0362	5	0.0049	0.0610	25	−0.0005	0.0529
−14	−0.0045	−0.0407	6	0.0072	0.0681	26	−0.0013	0.0516
−13	0.0034	−0.0373	7	0.0116	0.0797	27	−0.0002	0.0513
−12	−0.0031	−0.0404	8	0.0024	0.0821	28	0.0010	0.0523
−11	0.0117	−0.0287	9	0.0017	0.0838	29	−0.0103	0.0420
						30	−0.0013	0.0407

Source: Author's computation

The results of AAR and CAAR reflecting that during the pre-phase of open offer the sample firms were able to generate only 1% to 3% cumulative returns during −15 day to −1. On day −20, −18, −16, −9 the cumulative returns were below than 1%. On the announcement day of open offer (0 day) the cumulative returns increased by 2% and it was found that in the post phase of announcement all the sample firms were able to generate 5% to 8% cumulative returns during day 0 to +21. After day 21 the cumulative returns gradually decreased and sustained around 4% to 5% till day +30. Figure 3 showing the movement of CAAR with in the event window of 61 days.
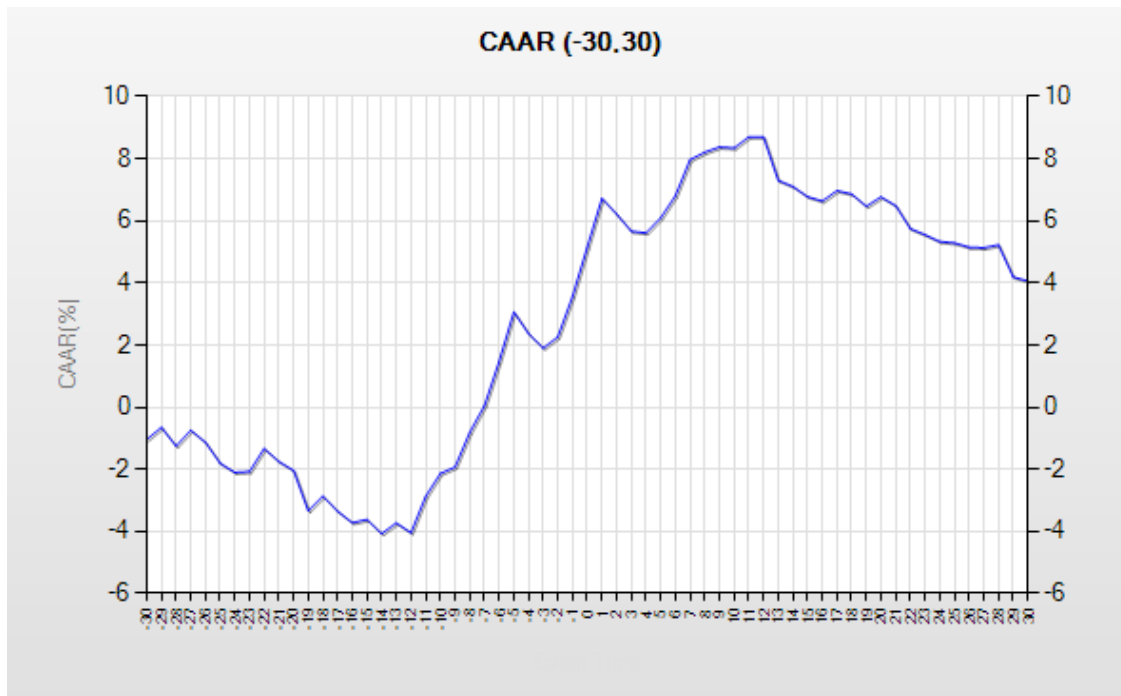
Figure 3: Showing the movement of CAAR of all sample target firms within the event window of 61 days (-30 days, 0 day, and +30 days) for the year 2014-15.
Source: **Author's computation**

Various test statistics used to examine the significance of announcement effect on the wealth of shareholders in different sub event windows i.e. (−30, 30), (−20, 20), (−10, 10), (−5, 5), (−4, 4), (−3, 3), (−2, 2) and (−1, 1). The results of **time series *t* test, Patell Z** test indicating that the sub event windows (−10, 10) reflecting the significant results at a confidence level of 1% while **Boehmer et. al., and Corrado rank** test showed significant results for same window at 5%. Further the sub event windows (−2, 2) and (−1, 1) showed the significant results at a confidence level of 5% using *t* test, Patell Z test.

Table 3
Showing the parametric and non parametric Test statics for the different sub event windows at different level of significance i.e. 5% and 1%

Event windows	CAAR	Time-series t-test	p value	Patells' z test	p value	Boehmer et. al., test	p value	Corrado's rank test	p value
(−30...30)	0.0407	0.7454	0.4560	1.2047	0.2283	0.7259	0.4679	0.1915	0.8481
(−20...20)	0.0853	1.9060	0.0567	2.4149	0.0157[*]	1.3253	0.1851	1.1816	0.2374
(−10...10)	0.1122	3.5051	0.0005[**]	3.7299	0.0002[**]	2.4928	0.0127[*]	2.3320	0.0197[*]
(−5...5)	0.0462	1.9956	0.0460[*]	2.2768	0.0228[*]	1.1982	0.2308	0.5540	0.5796
(−4...4)	0.0254	1.2137	0.2249	1.3578	0.1745	0.7729	0.4396	−0.2180	0.8274
(−3...3)	0.0330	1.7841	0.0744	2.1600	0.0308[*]	1.2292	0.2190	0.3307	0.7409
(−2...2)	0.0431	2.7620	0.0057[**]	3.6780	0.0002[**]	1.5928	0.1112	1.2130	0.2251
(−1...1)	0.0445	3.6814	0.0002[**]	4.8151	0.0000[**]	1.6978	0.0895	1.7992	0.0720

Source: Author's computation ([*]at 5% confidence level, [**]at 1% confidence level)

For the year 2015-16 a total number of 73 open offers announcements were made out of which 29 were selected for the analysis. The results of AAR and CAAR mentioned below:

Table 4
Computation of AAR and CAAR of Open Offer announcements during 2015-16

Days	AAR	CAAR	Days	AAR	CAAR	Days	AAR	CAAR
−30	0.0017	0.0017	−10	−0.0007	0.0084	10	−0.0036	0.1694
−29	−0.0097	−0.0080	−9	−0.0044	0.0040	11	0.0087	0.1781
−28	0.0012	−0.0068	−8	0.0023	0.0063	12	−0.0038	0.1743
−27	−0.0021	−0.0089	−7	0.0026	0.0089	13	0.0022	0.1765
−26	0.0026	−0.0062	−6	−0.0031	0.0057	14	0.0015	0.1780
−25	0.0044	−0.0018	−5	−0.0078	−0.0021	15	0.0044	0.1824
−24	−0.0048	−0.0067	−4	0.0254	0.0233	16	0.0008	0.1832
−23	−0.0027	−0.0093	−3	0.0141	0.0374	17	−0.0039	0.1793
−22	−0.0151	−0.0244	−2	0.0054	0.0428	18	0.0063	0.1856
−21	−0.0002	−0.0246	−1	0.0213	0.0641	19	0.0025	0.1881
−20	−0.0005	−0.0251	0	0.0288	0.0929	20	0.0015	0.1895
−19	0.0107	−0.0145	1	0.0432	0.1361	21	−0.0057	0.1839
−18	0.0132	−0.0012	2	0.0281	0.1642	22	0.0142	0.1981
−17	0.0087	0.0074	3	0.0037	0.1679	23	−0.0012	0.1969
−16	0.0060	0.0135	4	0.0082	0.1761	24	−0.0005	0.1964
−15	0.0094	0.0229	5	−0.0035	0.1726	25	0.0054	0.2018
−14	−0.0065	0.0164	6	−0.0017	0.1709	26	0.0011	0.2029
−13	0.0028	0.0193	7	0.0017	0.1725	27	−0.0062	0.1966
−12	−0.0031	0.0162	8	−0.0007	0.1718	28	0.0027	0.1993
−11	−0.0072	0.0090	9	0.0012	0.1730	29	0.0098	0.2091
						30	0.0030	0.2122

Source: Author's computation.

The results of AAR and CAAR reflecting that during the pre-phase of open offer the sample firms were able to generate −2 % to 6% cumulative returns during −22 day to −1. On the announcement day of open offer (0 day) the cumulative returns increased by 3% and it was found that in the post phase of announcement all the sample firms were able to generate 9.29% to 21.22% cumulative returns during day 0 to +21 and indicates the market efficiency.

The results of various test statistics indicated that the announcement effect on the wealth of shareholders is significant in almost every single event window i.e. -30 to 30, -20 to 20, -10 to 10, -5 to 5 for the year 2015-16. The results of **time series t test, Patell Z test, Boehmer et. al., and Corrado rank** test indicating that the main event window (-30 to 30) and all sub event windows found the significant results at a confidence level of 1%. This is a strong indicator that market took the open offer announcements positively and the present study showing consistent results with prior studies in similar area of research. Hence the null hypothesis which states CAAR = 0 has been rejected as per results.
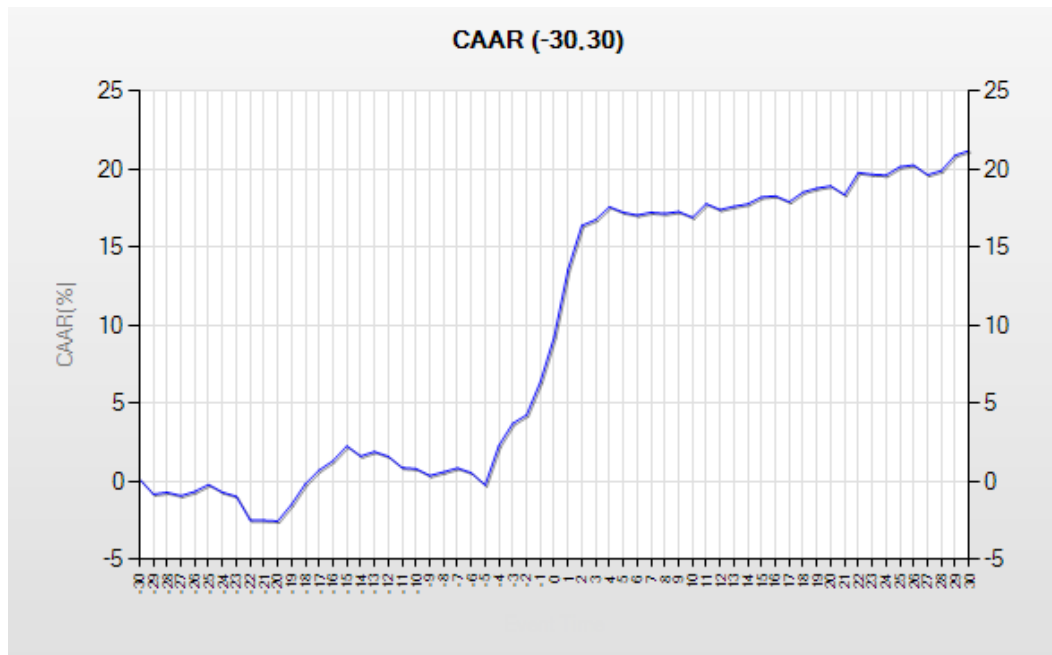
Figure 3: Showing the movement of CAAR of all sample target firms within the event window of 61 days (–30 days, 0 day, and +30 days) for the year 2015-16
Source: **Author's computation**

Table 5
Showing the parametric and non parametric Test statics for the different sub event windows at different level of significance i.e. 5% and 1%

Event windows	CAAR	Time-series t-test	p value	Patells' z test	p value	Boehmer et. al., test	p value	Corrado's rank test	p value
(–30...30)	0.2122	3.8428	0.0001**	3.8282	0.0001**	2.8027	0.0051**	2.2910	0.0220**
(–20...20)	0.2142	4.7315	0.0022**	4.6843	0.0020**	3.7407	0.0002**	2.9797	0.0029**
(–10...10)	0.1604	4.9502	0.0003**	5.0657	0.0029**	2.9997	0.0027**	3.4813	0.0005**
(–5...5)	0.1668	7.1159	0.0098**	7.4241	0.0087**	3.8576	0.0001**	5.0523	0.0011**
(–4...4)	0.1782	8.4028	0.0073**	8.5226	0.0001**	4.3446	0.0003**	5.9367	0.0002**
(–3...3)	0.1446	7.7331	0.0010**	8.1015	0.0003**	4.5727	0.0029**	5.6330	0.0003**
(–2...2)	0.1268	8.0189	0.0009**	8.3455	0.0002**	4.3689	0.0002**	5.7127	0.0003**
(–1...1)	0.0932	7.6151	0.0001**	7.8524	0.0001**	4.3667	0.0001**	4.8153	0.0002**

*Source:* Author's computation (* at 5% confidence level, ** at 1% confidence level)

For the year 2016-17 a total number of 42 open offers announcements were made out of which 18 were selected for the analysis. The results of AAR and CAAR mentioned below:

The results of AAR and CAAR reflecting that during the pre-phase of open offer the sample firms were able to generate negative returns (AAR) in the initial pre phase of announcement. But day -18th to day 1 the sample firms were able to generate 1 % to 8.44% cumulative returns. On the announcement day of open offer (0 day) the cumulative returns increased by 1% and it was found that in the post phase of announcement all the sample firms were able to generate 9.59% to 24.35% cumulative returns during day 1 to +21 and indicates the market efficiency.

Table 6
Computation of AAR and CAAR of Open Offer announcements during 2016-17

Days	AAR	CAAR	Days	AAR	CAAR	Days	AAR	CAAR
−30	0.0134	0.0134	−10	0.0102	0.0615	10	−0.0017	0.1623
−29	−0.0044	0.0090	−9	0.0107	0.0721	11	0.0159	0.1782
−28	−0.0141	−0.0051	−8	−0.0002	0.0719	12	0.0071	0.1853
−27	−0.0030	−0.0082	−7	0.0141	0.0860	13	0.0157	0.2010
−26	0.0045	−0.0037	−6	−0.0030	0.0830	14	0.0058	0.2069
−25	−0.0036	−0.0073	−5	0.0056	0.0887	15	0.0047	0.2116
−24	0.0005	−0.0068	−4	−0.0036	0.0850	16	0.0262	0.2378
−23	0.0074	0.0006	−3	−0.0010	0.0840	17	0.0054	0.2432
−22	−0.0060	−0.0054	−2	0.0043	0.0883	18	0.0003	0.2435
−21	0.0006	−0.0048	−1	−0.0039	0.0844	19	−0.0072	0.2363
−20	−0.0049	−0.0097	0	0.0114	0.0959	20	−0.0124	0.2238
−19	0.0009	−0.0088	1	0.0076	0.1034	21	−0.0033	0.2206
−18	0.0143	0.0055	2	0.0135	0.1169	22	−0.0009	0.2196
−17	0.0028	0.0084	3	0.0153	0.1322	23	−0.0111	0.2086
−16	0.0021	0.0105	4	0.0219	0.1541	24	−0.0112	0.1974
−15	0.0179	0.0284	5	0.0099	0.1640	25	0.0086	0.2060
−14	−0.0001	0.0282	6	−0.0030	0.1610	26	−0.0052	0.2008
−13	0.0131	0.0413	7	0.0030	0.1640	27	0.0044	0.2052
−12	0.0030	0.0442	8	−0.0083	0.1557	28	−0.0024	0.2028
−11	0.0070	0.0512	9	0.0084	0.1640	29	0.0038	0.2066
						30	−0.0096	0.1970

Source: Author's computation.
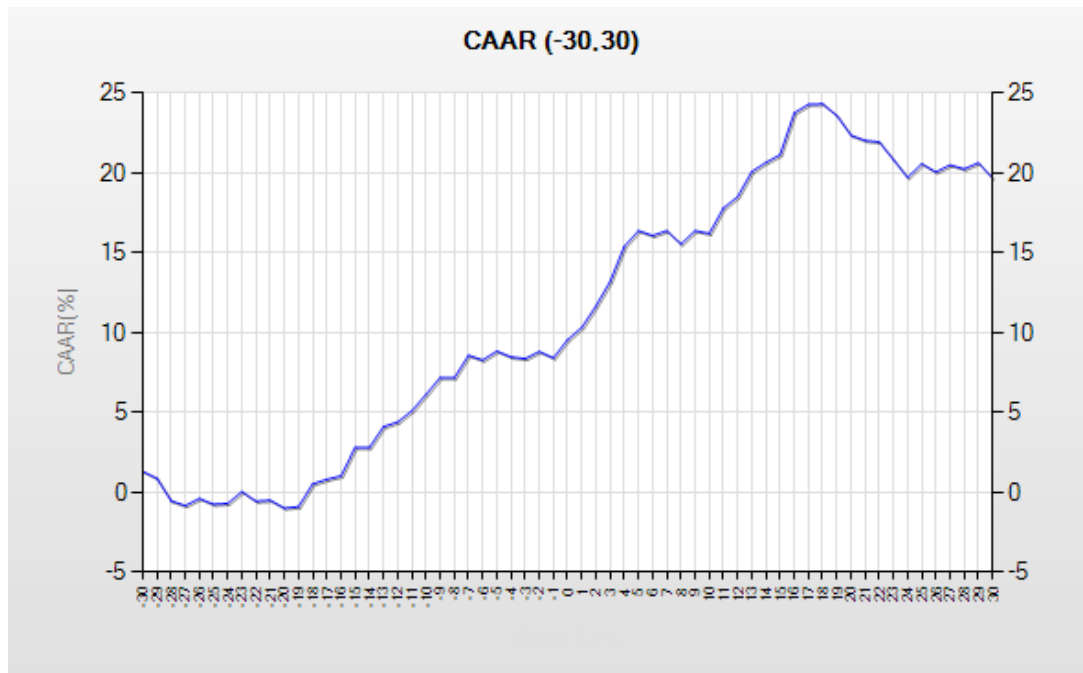
Figure 3: Showing the movement of CAAR of all sample target firms within the event window of 61 days (−30 days, 0 day and +30 days) for the year 2016-17
Source: **Author's computation**

Table 7
Showing the parametric and non parametric Test statics for the different sub event windows at different level of significance i.e. 5% and 1%

Event windows	CAAR	Time-series t-test	p value	Patells' z test	p value	Boehmer et. al., test	p value	Corrado's rank test	p value
(−30...30)	0.1970	2.5199	0.0117*	3.8911	0.0001**	1.9197	0.0549	1.8338	0.0667
(−20...20)	0.2286	3.5676	0.0004**	5.2369	0.0000**	2.4371	0.0148*	3.1079	0.0019**
(−10...10)	0.1111	2.4229	0.0154*	3.9382	0.0001**	2.1187	0.0341*	2.2572	0.0240*
(−5...5)	0.0810	2.4401	0.0147*	2.4676	0.0136*	1.9469	0.0516	2.2702	0.0232*
(−4...4)	0.0654	2.1796	0.0293*	2.1142	0.0345*	1.5575	0.1194	1.9332	0.0532
(−3...3)	0.0472	1.7835	0.0745	1.9572	0.0503	1.4718	0.1411	1.7689	0.0769
(−2...2)	0.0329	1.4709	0.1413	1.7227	0.0849	1.4955	0.1348	1.5698	0.1165
(−1...1)	0.0151	0.8718	0.3833	1.4068	0.1595	0.9640	0.3350	1.1909	0.2337

Source: Author's computation (*at 5% confidence level, **at 1% confidence level)

The results of test statistics showed the significant results during most of the event windows i.e. (−30, 30), (−20, 20), (−10, 10), (−5, 5), (−4, 4). The results of **time series *t* test, Patell Z** test and **Corrado rank test** indicating that the sub event window (−20, 20) reflecting the significant results at a confidence level of 1% while **Boehmer et. al., and** showed significant results for same window at 5% and so on.

5. FINDINGS AND CONCLUSION

This study has empirically investigated the impact of open offer on the price behavior and shareholder's wealth. Open offers of takeover announcements and the major findings of the research is mentioned as follows:

The study showed the movement in the stock price of the target firms and also the yield of abnormal returns before and after the open offer announcements. The study also investigated that whether the open offer announcement gave consistent and symmetric returns or the abnormal returns were day specific and inconsistent.

The study found that on the announcement day the cumulative abnormal returns started inclined and it showed a positive response of the shareholders and investors towards open offer which also enhance the wealth of shareholders.

Further the results are supporting the efficiency of Indian capital market in a semi strong form as Indian capital market takes time to absorb the new information which float in the market. But unlike the developed economies like US, the persistence of abnormal return in India is not statistically much significant and there are days in the sub event windows where results were consistent with the prior studies **Pandey (2001), Gupta LC (2006) Mallikarjunappa and Nayak (2013), Parkash (2016).**

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