

**Does Frequent Buy-Back Announcement Increase Shareholder Value: With Special Reference
to Indian IT Company**

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Abstract

This paper aims to examine frequent buy-back announcements to evaluate the event's impact on the stock return through a standard event study methodology. The event indicates that Abnormal Return (AR) and Cumulative Abnormal Return (CAR) are positive and statistically significant on the event announcement date during FY 2017-18, but not significant in FY 2018-19 and 2020-21. It indicates that the frequency of buy-back announcement does not always positively impact on the share price return. The positive CAR and CAAR in the post-announcement period supports the signaling hypothesis. The study concludes that the mixed result of announcements reflects that the Indian stock market has not reacted as perceived by the company, and the effect of buy-back announcement was not strong in all event periods.

Key Words: buy-back of Shares, Event study, abnormal return, Cumulative Abnormal Return, Shareholders' value.

1. Introduction

In recent year Indian corporate witnessed a restructuring revolution. In a dynamic environment, the financial market is affected by each small and big event. Thus, it becomes essential to study these events which affect the sentiments of investors. Buy-back of shares is one of the events firms use to distribute surplus cash, support undervalued share price, positive information signaling, prevent takeover threat (Ditmar, 2000; Andrisopoulos & Hoque, 2013; Gupta, 2016; Gan et.al., 2017; Alghamdi 2018). Thus, companies like to return their surplus cash if they cannot put it into any profitable investment. Buy-back of shares is used by firms to avoid the potential waste of cash by management as a substitute for cash dividends and to boost the share price. Stock repurchase is a way for corporations to return surplus cash reserve to shareholders without increasing periodical dividend payouts.

Previous studies found that buy-back announcements significantly positively impact market reaction for stocks (Jensen, 1986; Dann, 1989; Nohel & Tarhan, 1998; Ramana & Harikrishna, 2014; Kaur & Danda, 2016; Farooq, 2016; Gupta, 2016). Some studies found insignificant impact on market reaction to buy-back announcement (Hyderabad, 2009; Jariwala, 2011; Arora, 2012;

Chatterjee & Mukherjee, 2015). This paper aims to evaluate the impact of frequent buy-back announcements on share price return with the help of event study methodology.

2. Review:

Hatakeda & Isagawa (2004) studied buy-back announcements made by Japanese firms listed on Tokyo Stock Exchange (TSE) and found that the firms announcing buy-backs experienced average abnormal returns of 2.36% in the three-event day window surrounding the announcement. The study supports the information signaling hypothesis of buy-back where Isa, Ghani & Lee (2011) study supports the signalling effect with the undervaluation hypothesis as they found that firms made their repurchase after a period of consecutive price decline. Purohit, Dua & Chattwal (2012) concluded that overall findings support the stock market efficiency in semi-strong form, which is concerned with the direction of change in the stock prices; it is also concerned with the magnitude of change. From an analytical perspective, the calculated percentage CAAR is positive before the -6 days of the buy-back of shares and remains positive until 2 days after the event date and percentage CAAR is on peak this date. The market reacted as per the expectation. So, it can accept that the Indian stock market is, by and large, efficient in its semi-strong form. In series of positive impact of Buy-back announcement, Harikrishna & Ramana (2014) concluded that shares relatively undervalued before the share repurchase program's information. Positive abnormal return indicates that the market reacts positively to the news of share repurchases announcement. There is an increase in the mean share price after buy-back as compared to mean share prices for pre buy-back period.

Further on the study of Buy-back announcement of individual company Avantel Ltd., Aravamudhan & Meena (2016) found that the share prices after the buy-back period were higher when compared with before and during buy-back. It shows that the main aim of share buy-back to increase the share price in the market and wealth of the shareholders has been achieved by Avantel Ltd. This study concluded that capital reconstructing through buy-back enables the companies to increase the share price in the market, increase the EPS and net worth, and increase the power of the promoters. Like above, Kaur & Danda (2016) found a positive impact of buy-back on stock returns. The study found that AR and CAR are positive on event day and statistically insignificant at a 5% level. But it observed that after the announcement, buy-back of shares hurts stock price returns. Kumar (2017) study supports an improvement in the financial performance of the companies after share buy-back. The buy-back of shares enhances the value of equity shareholders. A statistically insignificant results study concluded a slight change in the shareholder's value after the buy-back of shares. Guo (2020) found that demand for buy-back shares in the stock market is large, and buy-back is one way for companies to reward shareholders and rejuvenate the stock market.

Some of the studies have opposite findings than previous reviews and do not support the Buy-back announcement's significant impact. In series of these findings, Sarin (2013) found that the positive effects are more common than negative. The EPS of the non-buy-back companies also increases when the total earnings of the particular company had gone up. Therefore, it may infer that share buy-back is not a universal fact that always raises the share price and EPS of the company. Ishwar & Crippa (2012) found that AR was negative for 17 days and positive for 13 days before the announcement and was negative for 29 days and positive for 2 days after the announcement of stock buy-back. In his study, they concluded that buy-back announcement has no significant effect on the stock price. Gupta, Kalra & Bagga (2014) findings also supported the previous results. Their study found that the market had not given any scope for earning abnormal returns. They found no association of earning abnormal return with the announcement of buy-back in the Indian capital markets.

The same result has also seen in Shaw & Rakshit's (2017) finding that there is no proper evidence to justify that share buy-back acts as a tool for a company's value creation. The result does not show

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any positive impact of the financial instruments taken for measurement. The share price analysis of the buy-back company and the control company also does not reveal a positive effect of buy-back on the stock prices as said theoretically.

Soni & Trivedi (2018) studied on buy-back announcement made by Indian IT companies in 2017-18. Their finding reveals that IT companies' buy-back in 2017-18 are excess cash with the company and not positive investment opportunities for IT companies in US. The study found that around the buy-back announcement EPS was positive but average abnormal return showed mixed reaction on the overall event window period. The study concluded that the assumption that buy-back always leads to positive impact on market price is not always possible. Dave (2018) found overall positive short-term abnormal return in the post-event period compared to the pre-event period. The study analyzed the impact of buy-back in the long run, and found that initial 2 years generated negative returns but after 2 years, returns showed good improvement. This research reports no evidence of the signaling hypothesis, and for both time horizons, the results show the same status near the buy-back event period. Ong & Ng (2018) found in their study that investors are more likely to invest in a growth opportunities company. Therefore, perception of market valuation is not one of the firm characteristic in engaging share repurchase announcements in Malaysia. Event firms do not show over-performance, possibly because the firms in the same industry and that too of similar size tend to move together. The standard deviations of the returns of the event firms and the matched firms are calculated and found to be very similar (Seal & Matharu, 2018). A study by Bukalska et.al. (2018) does not support any of the known hypotheses that could explain the pattern of market reactions. The study suggests that market reaction to a share repurchase announcement is only in a very short run.

3. Regulatory Framework for Buy-back of Shares in India:

Section 77 of the Companies Act, 1956 had laid restrictions on repurchase activities by a company in India. However, by an amendment in the Act, new proviso 77A, 77AA, and 77B had been added, which permitted a company to acquire its shares or other specified securities under the buy-back scheme. Under Sections 68, 69, and 70 of the Indian Companies Act of 2013, the buy-back of shares or specified securities, has now been permitted. With the inclusion of Section 77A in Companies Act 1956, the Securities and Exchange Board of India (SEBI) had notified the Securities and Exchange Board of India (Buy-back of Securities) Regulations, 1998 and these regulations apply to the buy-back of shares or other specified securities.

4. Frequent buy-back by Indian IT Companies:

Buy-back announcements by Indian companies got momentum with the beginning of FY 2016-17. For five financial years after that, a record number of buy-back offers have floated by cash-rich Indian companies. During FY 2016-17 to FY 2020-21, buy-back offers by Indian companies had been Rs. 344.68 billion, Rs. 533.07 billion; Rs. 555.87; Rs. 199.72 and 266.89 billion, respectively. Top four Indian IT Companies Tata Consultancy Services, Infosys Ltd. , Wipro Ltd. and HCL Technologies Ltd. have announced buy-back more than one time for last five years. One of the Indian IT companies listed on Bombay Stock Exchange, TCS (Tata Consultancy Services), made the highest and most frequent buy-back offer since its inception in India. Refer Table 1.

Table 1: Summary of TCS buy-back for four years.

		2017-18	2018-19	2020-21
1	Announcement date	February 20, 2017	June 15, 2018	October 7, 2020
2	Start to End date	May 18-31, 2017	Sept 6-21, 2018	December 18, 2020 – Jan 1, 2021
3	Buy-back Offer size % of total paid up equity share capital)	2.85% of total Paid up share capital (5,61,40,351 equity Shares	1.99% of total Paid up share capital (7,61,90,476 equity	1.42% of total Paid-up Share Capital(5,33,33,333 equity shares)
4	Buy-back Offer price	Rs. 2,850	Price: Rs. 2100/-	Price : Rs. 3000/-
5	Offer size (% of total)	Rs. 16,000 crore	Rs. 16,000 crore	Rs. 16,000 crore

Compiled from Letter of Offer of the Company

Above table represents the buy-back offer announced by TCS over the four years spanning 2017-18 to 2020-21. Tata Consultancy Services has announced biggest share buy-back of Rs. 16,000 crore in the history of Indian capital markets in the year 2017-18 via tender offer. The company again announced buy-back in 2018-19 and 2020-21 via tender offer with the same offer size of Rs. 16,000 crore. The amount is 21.89%, 21.09% and 19.96% of aggregate of fully paid-up equity share capital and free reserves of respective years. Thus, the company gets approval of buy-back through special resolution by the company's equity shareholders via postal ballot.

5. Need of the Study:

Indian markets are less researched in the area of buy-back announcement by Indian IT companies. This article consists of a research study which gives a clear idea on the impact of frequent buy-back in the Indian IT Industry with evidence from the buy-back events that occurred between the periods of April 2017 to March 2021. Some of the literature review shows that there has always been a positive market reaction to buy-back announcement where some do not support the positive impact of buy-back announcement. But it remains unanswered that is the announcement returns are independent of the frequency of buy-back announcements i.e, one announcement or five announcements; the announcement returns do not vary. This article tries to understand the frequent buy-back announcements associated with the market return and shareholder value.

6. The objectives and methodology of the study:

The study is exploratory and empirical. Since the inception of buy-back in India, during FY 2016-17, the average buy-back offer had been Rs. 7.03 billion (aggregate amount: Rs. 344.68 billion of 49 companies), the highest in 19 years. During FY 2016-17 to FY 2020-21, buy-back offers by Indian IT companies had been Rs. 25 billion, Rs. 470.63 billion; Rs. 416.98; Rs.124.56 and Rs. 255 billion, respectively. This study analyzes the buy-back practices in India with special reference to the case studies of IT industry.

The leading Indian IT company TCS, listed on BSE, has been the company that has made the highest buy-back offerings since inception of buy-back in India, and has been made three share buy-back announcements in the five year period spanning 2016-17 to 2020-21. Thus, the sample of the

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study is all three announcements made by TCS. The closing stock price of TCS and Sensex has been taken from the website of Bombay Stock Exchange www.bseindia.com.

The objectives of the paper are to-

- Analyze the buy-back activity of Tata Consultancy Services Limited.
- Evaluate the impact of buy-back announcements on stock price returns in all three announcements (31 days and 245 days event and estimation windows).
- Evaluate the impact of frequent buy-back on shareholder's value.

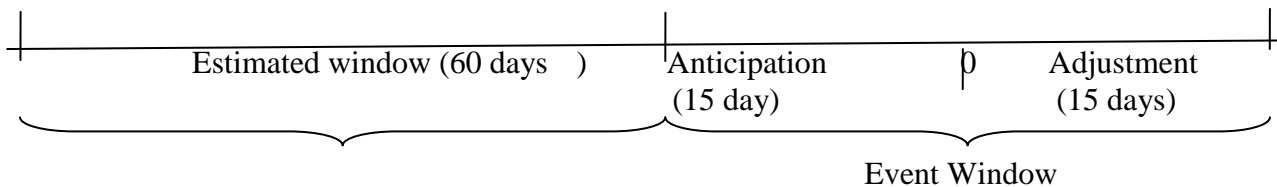
Relevant data from secondary sources has collected for exploratory and empirical analysis. Event study methodology is applied to process and analyze the collected data to reach logical findings and conclusions.

6.1 Methodology : The event study method is used to analyze and investigate how the buy-back announcement event influences the company's stock returns. It requires calculating the abnormal returns and cumulative abnormal returns by using market returns to show the positive or negative effect of buy-back.

To evaluate the stock price of the public announcement the prominent method is an event study. Many researchers used this method for study, notable amongst which are Daniel et.al.(1998), Hatakeda & Isagava (2004), Ishwar & Crippa (2012) and Kaur & Danda (2016).

Steps to build a model of event study:

1. Identify the time frame: The two-periods are involved, namely, (i) Estimation period; and(ii) Event window (Anticipation Period, Event Day, and Adjustment Period). The estimation period span is before the event window period. (Ex. -21 to 250) or (-11 to 200). In the event window/ period, pre and post announcement dates are selected. (Ex. -20, 0, +20) or (-15, 0, +15). The announcement date is denoted as day 0.



2. Calculation of market and stock returns: The raw returns of the estimation window and also for the event window are calculated using the returns of the estimation window and also for the event window using the following equation:

$$R_{st} = \ln(P_{st}/P_{st-1})$$

Where, R_{st} is the daily return on security's' on the day' t'.

P_{st} is the daily adjusted price of the security's' at the end of the period 't'.

P_{t-1} is the daily adjusted price of the security's' at the end of period 't-1'.

$$R_{mt} = \ln(P_{mt}/ P_{mt-1})$$

Where, R_{mt} is the daily return on the market index on day 't'.

P_{mt} and P_{mt-1} the closing index values on current and previous days, respectively

- a. Calculation of abnormal returns: In the market model, we regress returns on security against returns of the market index. The market model is given by the regression equation.

The predicted return represents the return that would be expected if no event took place. The predicted return for a firm for a day in the event period is given by the following market model:

$$E(R_{st}) = \alpha + \beta R_{mt}$$

Where, R_{mt} is the return on the market index for the day 't' in the event period. Since the market model takes explicit account of both the risk associated with the market and mean return, it is used to estimate the expected return

An insignificant intercept value indicates that stock returns are perfectly dependent on market returns. As there is a significant relationship between the market and the stock index, we predict estimated returns with the help of intercept and Beta value.

$$E(R_{st}) = \alpha + \beta R_{mt} + es$$

Abnormal return is calculated as the difference between the stock return on a given day (t) and the expected return on a given day.

$$AR_{st} = R_{st} - E(R_{st})$$

$$AR_{st} = R_{st} - (\alpha + \beta R_{mt} + es)$$

Where,

α : intercept. (Mean return over the period not explained by the market).

$E(R_{st})$ is the expected return on security s,

R_m is the expected market return,

β is the slope of the regression and,

es is the error term (with a zero mean and constant standard deviation).

b. Calculation of Cumulative Abnormal Return:

The abnormal daily returns are cumulated over the window period to compute cumulative abnormal return (CAR) using the following formula:

$$CAR_t = CAR_{t-1} + AR_t$$

Where, t and t-1 are the current and previous day, respectively.

c. Calculation of average abnormal return and cumulative average abnormal return:

Average abnormal return is calculated by average of daily abnormal returns.

$$AAR = 1/N \sum_{t=-d}^d AR_{st}$$

The average abnormal daily returns are cumulated over the window period to compute cumulative average abnormal return (CAAR) using the following formula:

$$CAAR = \sum_{t=-d}^d AAR_{st}$$

Where, -d and d are the commencement and closing of the event or window period, respectively.

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7. Data Analysis and Interpretation:

In this study, the estimation period is 245 days before the event window. The event window examined is 31 days, comprising 15 trading days before the announcement date (AD-15), 15 trading days after the announcement days (AD+15), and the announcement date itself.

TCS has announced buy-back offers in 2017-18, 2018-19, and 2020-21. For the event study, we have taken the announcement date as event date, pre-announcement as anticipation period to understand whether insider trading activities have taken place, and post-announcement as an adjustment period. Refer Table 2:

Table 2: Estimation and event period of study

	2017-18	2018-19	2020-21
Event date	20-Feb-17	15-Jun-18	07-Oct-20
Anticipation period	15	15	15
Adjustment period	15	15	15
Estimation period	245	245	245

With the help of event study abnormal return is calculated for all three years analysis. Refer Table 3

Table 3: Regression Analysis of all three announcements

Year	Intercept	Slope	R ²	Standard Error
2017-18	0.00*	0.74	0.21	0.012
2018-19	0.001*	0.45	0.04	0.014
2020-21	0.001*	0.49	0.28	0.019

Source: Author's own calculation

*Insignificant at 1%, 5% and 10%

An insignificant intercept value indicates that stock return is perfectly dependent on market returns.

Table 4: Abnormal return (AR) and cumulative abnormal return (CAR) around buy-back announcement, 2017-18, 2018-19 and 2020-21

Event day	2017-18				2018-19				2020-21			
	AR	t-stat	p-value	CAR	AR	t-stat	p-value	CAR	AR	t-stat	p-value	CAR
-15	0.01	0.833	0.405	0.01	-0.004	-0.286	0.775	-0.004	-0.001	-0.053	0.958	-0.001
-14	-0.046*	-3.833	0	-0.036	-0.024	-1.714	0.088	-0.028	0.005	0.263	0.793	0.004
-13	-0.027*	-2.25	0.025	-0.063	0.005	0.357	0.721	-0.023	-0.017	-0.895	0.372	-0.013
-12	0.017	1.417	0.158	-0.046	-0.001	-0.071	0.943	-0.024	-0.004	-0.211	0.833	-0.017
-11	0.013	1.083	0.28	-0.033	-0.008	-0.571	0.568	-0.032	0.006	0.316	0.752	-0.011
-10	0.003	0.25	0.803	-0.03	-0.007	-0.5	0.618	-0.039	0.024	1.263	0.208	0.013
-9	0.002	0.167	0.868	-0.028	0.007	0.5	0.618	-0.032	-0.023	-1.211	0.227	-0.01
-8	0.008	0.667	0.506	-0.02	-0.013	-0.929	0.354	-0.045	-0.057*	-3	0.003	-0.067
-7	0.027*	2.25	0.025	0.007	0.004	0.286	0.775	-0.041	0.038*	2	0.047	-0.029
-6	0.031*	2.583	0.01	0.038	0.004	0.286	0.775	-0.037	0.001	0.053	0.958	-0.028
-5	0.006	0.5	0.618	0.044	0.008	0.571	0.568	-0.029	0.025	1.316	0.189	-0.003
-4	-0.003	-0.25	0.803	0.041	0.001	0.071	0.943	-0.028	0.002	0.105	0.916	-0.001
-3	0.005	0.417	0.677	0.046	0.017	1.214	0.226	-0.011	0.012	0.632	0.528	0.011
-2	0.013	1.083	0.28	0.059	0.024	1.714	0.088	0.013	0.07*	3.684	0	0.081
-1	-0.016	-1.333	0.184	0.043	-0.018	-1.286	0.2	-0.005	0.003	0.158	0.875	0.084
0	0.04*	3.333	0.001	0.083	0.027	1.929	0.055	0.022	0.008	0.421	0.674	0.092
1	-0.017	-1.417	0.158	0.066	-0.006	-0.429	0.669	0.016	0.031	1.632	0.104	0.123
2	-0.022	-1.833	0.068	0.044	-0.003	-0.214	0.831	0.013	-0.003	-0.158	0.875	0.12
3	0.029	2.417	0.016	0.073	0	0	1	0.013	0.006	0.316	0.752	0.126
4	0.003	0.25	0.803	0.076	-0.004	-0.286	0.775	0.009	-0.002	-0.105	0.916	0.124
5	-0.009	-0.75	0.454	0.067	-0.004	-0.286	0.775	0.005	-0.006	-0.316	0.752	0.118
6	0.005	0.417	0.677	0.072	0.005	0.357	0.721	0.01	-0.026	-1.368	0.172	0.092
7	0.008	0.667	0.506	0.08	0.018	1.286	0.2	0.028	0.009	0.474	0.636	0.101
8	-0.004	-0.333	0.739	0.076	0.004	0.286	0.775	0.032	-0.019	-1	0.318	0.082
9	-0.009	-0.75	0.454	0.067	-0.007	-0.5	0.618	0.025	0.01	0.526	0.599	0.092

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10	0.012	1	0.318	0.079	0	0	1	0.025	-0.023	-1.211	0.227	0.069
11	0.005	0.417	0.677	0.084	0.005	0.357	0.721	0.03	-0.002	-0.105	0.916	0.067
12	0.002	0.167	0.868	0.086	0.011	0.786	0.433	0.041	0.006	0.316	0.752	0.073
13	0.009	0.75	0.454	0.095	-0.003	-0.214	0.831	0.038	0	0	1	0.073
14	0.008	0.667	0.506	0.103	0.006	0.429	0.669	0.044	-0.021	-1.105	0.27	0.052
15	-0.025	-2.083	0.038	0.078	0.017	1.214	0.226	0.061	-0.004	-0.211	0.833	0.048

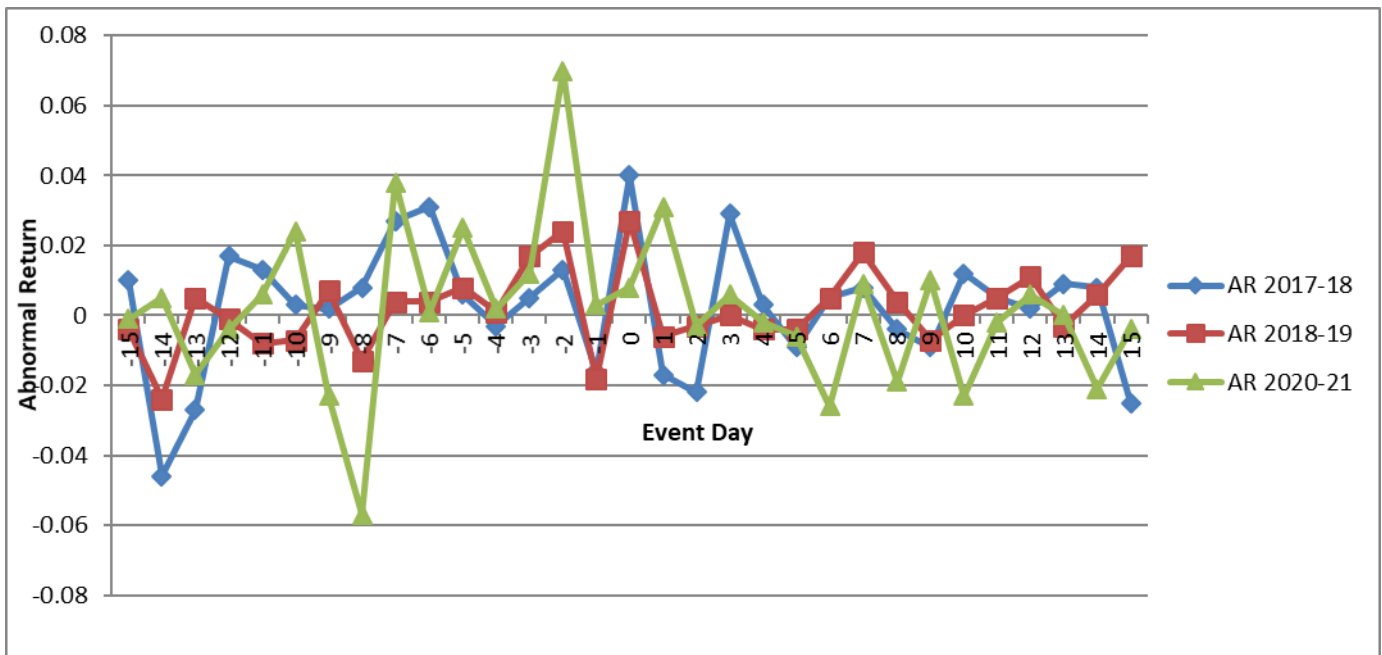
*indicate Statistically significant at 5%

It is examined from Table 4 that on announcement date, abnormal return is 0.04, which is statistically significant at 5% .It is also noticed that AR is significant at 6th, 7th, 13th and 14th day of pre event date of announcement, whereas AR is significant on only 3rd day and 15th day of post announcement. Company found positive CAR just before the event days to after the announcement days, especially between -7 to +15. The CAR of the event window clears that the market was experiencing positive AR after the announcement.

It is inferred that on announcement date in 2018-19, the abnormal return is positive 0.027, which is statistically insignificant. It has also been noticed that there is no significant AR during days before the announcement and during post announcement period, which suggests that effect of buy-back announcement was not strong in 2018-19 in Indian stock market. In 2018-19 it is found positive CAR from event date under 0 to +15 event period. The CAR of the event window clears that the market was experiencing positive AR after the announcement although AR is statistically insignificant in all pre and post window days.

On analysis of buy-back announcement of 2020-21, it is inferred that on announcement date, the abnormal return is positive 0.008, which is statistically insignificant. It is also noticed that AR is significant at 2nd, 7th and 8th day of pre event date of announcement, where as there is no significant return witnessed under 1-15 post event period. It suggests that there is no signaling effect of buy-back announcement on the Indian stock markets. Where company found positive CAR just before the event days to after the announcement days, especially between -3 to +15. The CAR of the event window clears that the market was experiencing positive AR after the announcement though it is statistically insignificant.

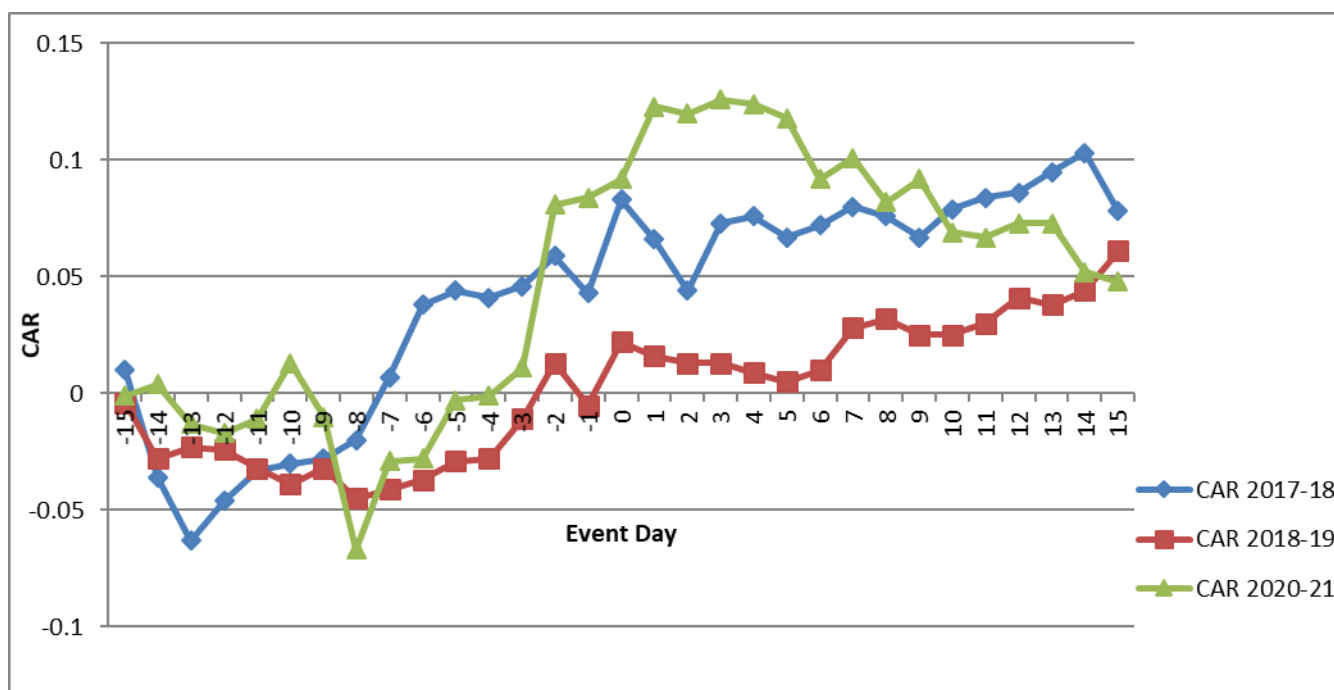
Graph :1 Abnormal Return for 2017-18 to 2020-21



Graph 1 indicates that abnormal returns are positive on event day on all three announcements and experienced mixed return in pre and post event window. From table 4 we find that in first announcement of buy-back, return shows positive and statistically significant impact on announcement day but consecutive announcements for further years have shown positive impact but not statistically significant.

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Graph: 2 Cumulative Abnormal return for 2017-18 to 2020-21



Above graph: 2 indicates cumulative abnormal return (CAR) on the event window and found that the CAR tend to be positive from -7 to +15 day in 2017-18, from announcement date to +15 in 2018-19 and from -4 to +15 day in 2020-21. It inferred that AR shows positive trend in all the announcements especially in 2017-18.

Table 5: Average abnormal return (AAR) and average cumulative abnormal return (CAAR) around buy-back announcement, 2017-21

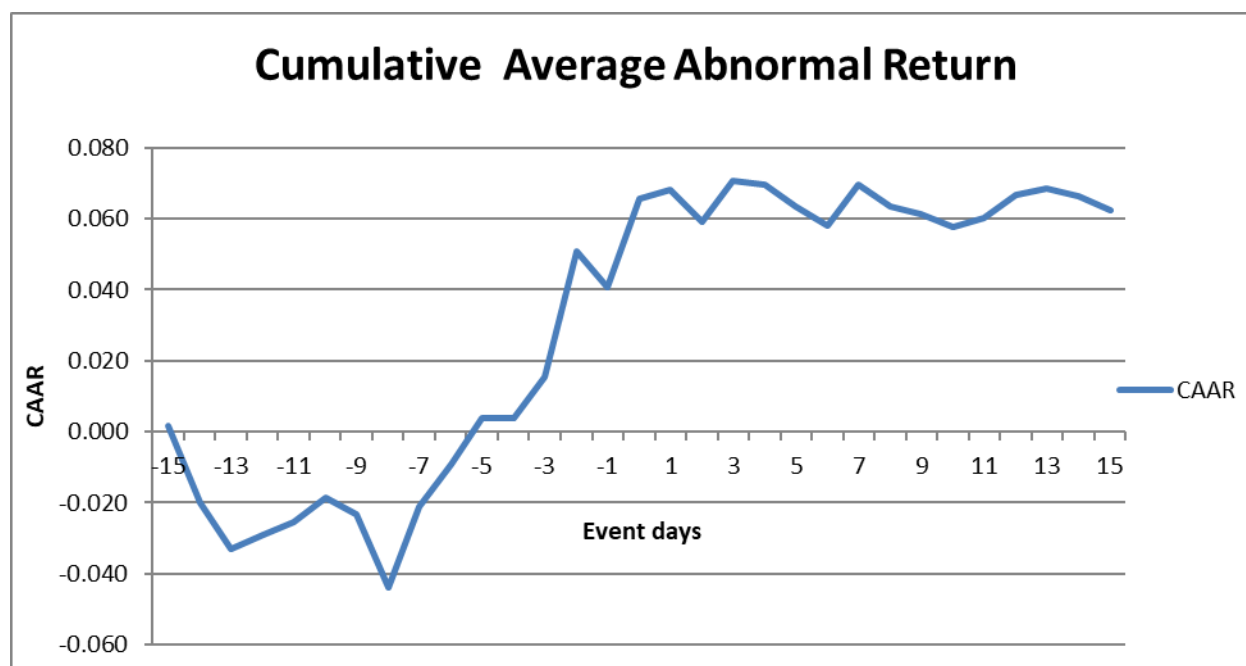
Event Days	AAR	t-statistics	p-value	CAAR
-15	0.002	0.889	0.375	0.002
-14	-0.022*	-11.553	0.000	-0.020
-13	-0.013*	-6.932	0.000	-0.033
-12	0.004*	2.133	0.034	-0.029
-11	0.004	1.955	0.052	-0.025
-10	0.007*	3.555	0.000	-0.019
-9	-0.005*	-2.488	0.014	-0.023
-8	-0.021*	-11.020	0.000	-0.044
-7	0.023*	12.264	0.000	-0.021
-6	0.012*	6.399	0.000	-0.009
-5	0.013*	6.932	0.000	0.004
-4	0.000	0.000	1.000	0.004

-3	0.011*	6.043	0.000	0.015
-2	0.036*	19.018	0.000	0.051
-1	-0.010*	-5.510	0.000	0.041
0	0.025*	13.330	0.000	0.066
1	0.003	1.422	0.156	0.068
2	-0.009*	-4.977	0.000	0.059
3	0.012*	6.221	0.000	0.071
4	-0.001	-0.533	0.594	0.070
5	-0.006*	-3.377	0.001	0.063
6	-0.005*	-2.844	0.005	0.058
7	0.012*	6.221	0.000	0.070
8	-0.006*	-3.377	0.001	0.063
9	-0.002	-1.066	0.287	0.061
10	-0.004*	-1.955	0.052	0.058
11	0.003	1.422	0.156	0.060
12	0.006*	3.377	0.001	0.067
13	0.002	1.066	0.287	0.069
14	-0.002	-1.244	0.215	0.066
15	-0.004*	-2.133	0.034	0.062

*Statistically significant at 5%

It is inferred from Table 5 that on announcement date, the average abnormal return is 0.025, which is positive and statistically insignificant at 5%. It is noticed from the table that under 1-15 pre-event period, significant returns are witnessed for 12 days, whereas insignificant returns are found 3 days, under 1-15 post event period significant returns are witnessed for 9 days and insignificant returns are experienced for 6 days. It suggests that there is possibility of insider trading before announcement of the buy-back effect by the company. AR's mixed nature implies that the investors are not much likely to benefit during the post-announcement period of the buy-back.

Graph 4: Cumulative abnormal return (CAR) around buy-back announcement, 2017-21



The table data and graph display that the company found positive CAAR just before the event days after the announcement days, especially between -5 to +15. The CAR of the event window evidences that the market was experiencing positive AR after the announcement.

8. Discussion:

The market reacts positively to the repurchase announcement as abnormal return is positive on all three buy-back announcements. The data show positive AR on event day of buy-back in 2017-18 and are statistically significant at 5%, but insignificant during anticipation and adjustment periods. In the year 2018-19 and 2020-21, there is positive AR experienced on event day but it was not statistically significant. Same as adjustment period also show statistically insignificant return for the entire event window in 2018-19 and 2020-21. Thus, all three announcements show mixed and similar results, which reflect that, the Indian stock markets have not reacted as perceived by the company. This rejects information signaling hypothesis of buy-back announcement.

The result shows the mixed nature of AR. The positive AR during pre-event days indicates that the market does not give much scope for earning AR on a sustained basis. It implies that the investors are not much likely to benefit during the post-announcement period on all given days of the window. During the post-announcement event, the market responds more positively. Still, negative mixed return explains that there is no significant impact of buy-back announcement on the company's stock returns. The CAR investigation in different event windows showed a positive trend of share price returns, which reflects that the market recognized the firm's buy-back announcement as positive information but have not significant impact on stock return..

The study reports positive announcement effect of the share price of the company as the company experienced positive abnormal return on all three announcements. The positive CAR and CAAR in post-announcement period supports the signaling hypothesis. It indicates that the event helps correct the negative trend in the price of the shares before the announcement. But the mixed effect of buy-back announcement as seen in the study shows that buy-back announcement failed to create any significant impact on the company's share price. This reflects that there is no significant impact on the mind of the investors after the announcement. The observation seen to be inconsistent with the

idea of an efficient market. Our result is different from many of the previous studies such as Ikenberry et.al (1995), Grullon & Michaely (2002), Hatakeda & Isagava (2004), Purohit, Dua & Chattwal (2012), which support the idea of efficient markets. The findings of the study support the previous findings of Gupta, Kalra & Bagga (2014), Shaw & Rakshit's (2017), Soni & Trivedi (2018).

9. Conclusions:

Corporate events create a difference in the opinion of investors in making an investment decision. In this study buy-back announcement taken as an important event that can influence the investment decision and the stock returns of a particular firm. The overall findings consider the directional change of stock price from an analytical point of view. The study found that the market did not react as per expectations based on theory. Thus, it is not clear that the buy-back announcement affects stock price positively, as its return shows a mixed nature around the event date. The study concludes, based upon the mixed results of all three announcements, that Indian stock markets have not reacted as perceived by the company, which indicates that the effect of buy-back announcements was not strong in event periods. The study also concludes that the frequency of buy-back announcement does not always positively impact share price return. Hence, the study does not support the universal belief that the buy-back alone helps increase shareholders' wealth in the long term.

10. Scope of the study:

The study findings may have important implications for all the market participants. In terms of scope, the paper helps to provide a comprehensive study in the Indian context, specifically for Indian IT companies, that buy-back announcement have not always significantly impacted the stock return and shareholder value. The abnormal returns are found to be negative or smaller even in the years with few buyback announcements. Thus, the single or frequent buy-back announcements may not always reliable for increasing shareholder's value. The difference in returns over the several years can be explained to many other factors as market conditions during that year, investors' perception for the company, motives of announcing firm, extent of perceived undervaluation, etc. A further investigation is very much desired to understand the impact frequent buy-back announcement of the company by extending the study on other companies.

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