

# Short Term Effects of Stock Prices as a Result of the Share Buyback Process of Indian IT Companies Observed on National Stock Exchange of India During the Years 2013 to 2018

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## Abstract

Share buybacks refer to the repurchasing of shares of stock by the company that issued them. There can be several reasons for a company to go for share buyback:

- To utilise unused cash
- To preserve the share price
- To take benefit of undervalued share

In this study, we examine the effects on the share price as a result of share buyback. It is important to understand the reasons behind undertaking this study. While share buybacks have been chosen by a few companies in the recent past - this becomes a helpful tool to understand performance and motivation for stock market trades placed on stock exchanges in the country. This study could help predict possible price movement of stocks prior to a possible share buyback officially announced by the company. As the companies being discussed are large-cap and stable companies; analysts predict the possibility of a share buyback as a possible alternative well in advance before such an activity actually happens with the company. Hence understanding the possible impact, if any of short term effects of stock prices due to share buyback process on Indian stocks listed on the stock exchanges become important; thereby validating the need for this study.

The target sector and companies selected for this study are Indian IT companies which have undergone buyback in the period 2013 to 2018. This research aims at analysing the past five-year data of top 5 IT companies in India and listed on the National Stock Exchange, i.e., Infosys, HCL Technologies, Wipro, TCS, Tech Mahindra and determine the short term effects of share buyback. Due to excess cash reserves, share buyback has been a common phenomenon in Indian IT companies recently. We shall be taking into account changes in share prices after the buyback announcement. Our analysis will include studying the effects on factors like price volatility, excess returns and value created for the companies, after share buyback.

**Keywords:** Impact on Stock Prices, Indian IT Companies Stock Prices, Share Buyback

## 1. Introduction

Stock prices in emerging markets such as India are volatile and for varied reasons as such. Interestingly, emotions, perception and stock tips do play an essential

role in the determination of stock prices, especially in Indian markets. However, various market movements and company announcements remain one of the most significant determinants of price changes as such. One such factor is the announcement of share buybacks. Indian

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markets have witnessed share buyback announcements from companies from varied sectors and companies. In this study, we take a look at the IT sector in India and study the short term effects of share buyback process of Indian IT companies, especially those carried out on the National Stock Exchange during the period 2013 to 2018.

## 2. Literature Review

Chatterjee and Mukherjee (2015) have used the market model to find out the abnormal returns. They conclude that share repurchase by Indian companies does not hold any information as the average abnormal returns are not statistically different from zero.

Similarly, a study by Shaw and Rakshit (2017) reveal that there is no proper evidence to justify that Share Buyback acts as a tool for creating value for the company. The tools used were Earning Per Share (EPS), Dividend Per Share (DPS), Return On Investment (ROI) and Market value to Book value ratio (M/B) and modern tools like Economic Value Added (EVA), Market Value Added (MVA) and Shareholders Value Added (SVA).

A study of tender offer buyback and open market repurchase by Indian companies by Varma, Singh and Munjal (2018) concentrates on the motivations of the respective methods. Motivations included excess liquidity for a tender offer and open market buyback. For a tender offer buyback, lower profitability is a significant driver only in the case of large-sized firms; whereas for open market repurchase, dividend substitution and capital structure correction act as the significant drivers.

Manconi, Peyer and Vermaelen (2014) studied buybacks on a global platform, comparing non-US buybacks to US buybacks, focusing on the long-run abnormal returns after buyback announcements as one of the aspects of their study. They think that abnormal returns can be due to two hypotheses: undervaluation and agency costs. They find that no country has significantly negative announcement returns, regardless of the event window. The average abnormal returns outside the US are significantly positive.

Bhargava and Agrawal (2015) have used a market model to analyses the announcement returns for buybacks. The study uses 252 days estimation period and event window of 31 days, i.e. 15 days prior and 15 days post the share announcement. The research uses data of 42 buyback announcements made April 2010 to March

2014. The study found that the average abnormal return was not significant.

Mishra (2005) have used the data of 25 share buybacks between 1999 and 2001 to find the effect of the share buyback on the stock price. The study shows that out of 25 companies, 14 have outperformed Sensex after share buyback in the short run, while in the long run only 11 of them have out performed the Sensex. The study found that the share buyback has, in fact ended up with the capital erosion of Rs.1942 crore of the market cap of these 25 companies. The research illustrates that the share buyback did lead to an increase in share price, but it was a short-term phenomenon, but the share prices did not appreciate in the long term sustainable basis.

Kaur (2012) investigated that the impact of open market shares buyback announcements on share prices of Bombay Stock Exchange listed companies. The study observed that significant positive mean daily returns were analysed for a two days observation period. The study examined a sample of 172 events of shares buyback through open market repurchase announced March 2001 to 2012. The study found that the share buyback announcement created a positive market reaction in the stock market, which suggested that the stock market welcomed share buybacks.

Kaur & Singh (2010) the study tested abnormal returns for information. The study analysed that buybacks are emerging as a tool for capital restructuring. It made an empirical analysis by taking the data for the year 1999-2004. It used data from 100 events of share buybacks as available on companies listed on the Bombay Stock Exchange. The results indicated that the market reaction to share buyback announcement was positive. It observed that the positive price reaction started even before the public announcement. It was reported that the mean abnormal returns were about 2.22 percent on the day of the announcement of share buybacks.

Kaur and Dhandha (2016) in their paper "Buyback of shares in India: Impact on Stock Price Returns" examined the impact of share buybacks on the stock price by considering two event window periods of 61 days and 181 days whereby it analysed the average normal returns and cumulative normal returns using the T statistic. The Average abnormal returns are significant at 5 percent, while cumulative average abnormal returns are insignificant even on 61 days event window; while for 181 days event window they are both at an insignificant level of 5 percent. It observed that the buyback of

shares has a negative impact on stock price returns after announcement, but it is statistically insignificant at 5 percent.

Råsbrant (2013) examined the share price behaviour surrounding initiation announcements of open market share repurchase programs, the price impact of repurchase trading, and the long-run abnormal stock performance following the announcements. The study used a dataset on open market share repurchase programs by Swedish firms. The results showed that initiation announcements of open market share repurchase programs exhibit a two-day abnormal return of approximately 2%. The price impact on the actual repurchase days was positively correlated with the daily repurchase volume and is statistically and economically significant during the first 3 days of repurchase. The long-run abnormal stock performance is positively associated with the fraction of shares and was approximately 7% for the first year following the initiation announcement.

Purohit et al. (2012) analysed financial event buyback of shares to evaluate the impact of its announcement on stocks listed on National Stock Exchange S&P CNX 500 (index). The present study could not find evidence of abnormal returns associated with the announcement of buyback of shares in the Indian capital market. In this paper, impact of mode of buyback has also been analysed. No significant effect of method of buyback has been seen from the analysis. The market reacted positively but insignificantly in case of buyback through an open offer.

### 3. Data, Methodology and Analysis

The data included in the study has been obtained from the National Stock Exchange. Our period of study is 2013 to 2018. The Indian IT companies included in this study are given below in (Table 1).

**Table 1.** Details of company and announcement of buyback

Company	Announcement Date	Buyback Size (Rs crores)	% Paid up capital
Wipro	27 <sup>th</sup> April 2016	2500	1.62%
TCS	16 <sup>th</sup> February 2017	16000	2.85%
HCL	22 <sup>nd</sup> May 2017	3500	16.39%
Wipro	7 <sup>th</sup> September 2017	11000	7.06%
Infosys	12 <sup>th</sup> October 2017	13000	4.92%

All the buybacks were carried out through tender offer route. We have considered the day of the announcement as time  $t = 0$  for our analysis. The time window extends from time  $t = -30$  to  $t = +30$  in days. Our analysis has been carried out through the event study methodology. We have used the market model, in which basic assumptions of Capital Market Theory are involved. A linear relationship between the market return and the stock return has been calculated to calculate abnormal returns for each stock. Daily abnormal returns were calculated, utilising the opening and closing stock and index value.

The linear relationship was calculated as follows and was used to establish the expected return of the stocks.

$$R_s = \alpha_s + \beta_s * R_m + \varepsilon_s$$

Where,

$R_s$  is Return on stock  $s$

$R_m$  is the Market return

For the expected market return calculation, the time window of  $t = -90$  to  $t = -31$  for the respective stock has been used. In the observation period, the actual returns were then compared to expected returns to find the Abnormal Returns (AR).

$$AR = R_s - \alpha_s - \beta_s * R_m$$

Average Abnormal Returns (AAR) will be calculated for all the days from  $-30$  to  $+30$ . For each of the days, we shall test the hypothesis that the return is significantly different from zero. As the sample size is less than 30, the t-test will be used for hypothesis testing.

Similarly, Cumulative Abnormal Returns (CAR) will be calculated by taking different ranges of day's pre and post the announcement date. The ranges used are pre and post 3 days, 7 days, 14 days and 21 days. Hypothesis test shall be carried out to examine whether these returns are significantly different from zero.

We shall also examine if the returns pre and post the announcement for the same time durations are significantly different from each other. The AARs for pre and post 30 days will be calculated by taking averages of the daily returns. Here, we shall be using the paired t-test for hypothesis testing.

All hypothesis testing has been carried out at 5% level of significance.

### 4. Results

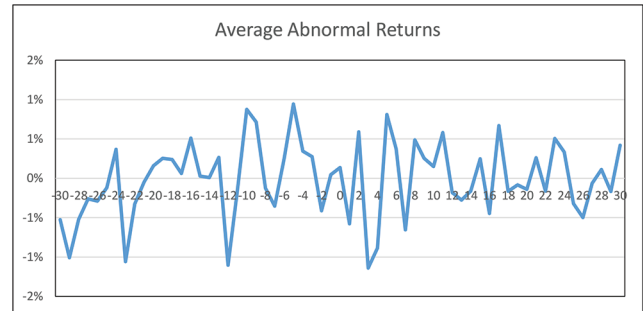
For 14 days before and after the day of the announcement, T-values are given in (Table 2). The critical t - value for

comparison is 2.776. The t-statistic tests the hypothesis that the returns are equal to zero. The results show that most of the t-values are positive. However, only on the 3rd day after announcements are the results significant and negative at a 95% confidence level. This indicates that there are no significant abnormal returns around the buyback announcement of an IT company in India with respect to daily returns. There is also no pattern found in the returns post the announcement.

**Table 2.** Average Abnormal Returns (AAR) pre and post share buyback announcement

Day	AAR	t-value	t-critical
-14	0.01%	0.026	2.776
-13	0.26%	0.627	2.776
-12	-1.10%	-1.264	2.776
-11	-0.14%	-0.156	2.776
-10	0.88%	1.676	2.776
-9	0.72%	1.185	2.776
-8	-0.13%	-0.310	2.776
-7	-0.35%	-0.733	2.776
-6	0.25%	0.566	2.776
-5	0.94%	2.533	2.776
-4	0.34%	0.321	2.776
-3	0.27%	1.207	2.776
-2	-0.41%	-2.767	2.776
-1	0.05%	0.157	2.776
0	0.14%	0.234	2.776
1	-0.58%	-0.979	2.776
2	0.59%	0.884	2.776
3	-1.14%	-3.594	2.776
4	-0.89%	-2.407	2.776
5	0.81%	1.343	2.776
6	0.37%	1.288	2.776
7	-0.65%	-0.733	2.776
8	0.49%	1.012	2.776
9	0.25%	0.701	2.776
10	0.15%	0.835	2.776
11	0.58%	0.800	2.776
12	-0.18%	-0.450	2.776
13	-0.28%	-0.982	2.776
14	-0.16%	-0.707	2.776

It is observed from (Figure 1) that prior to the announcement; the AAR is on the positive side.



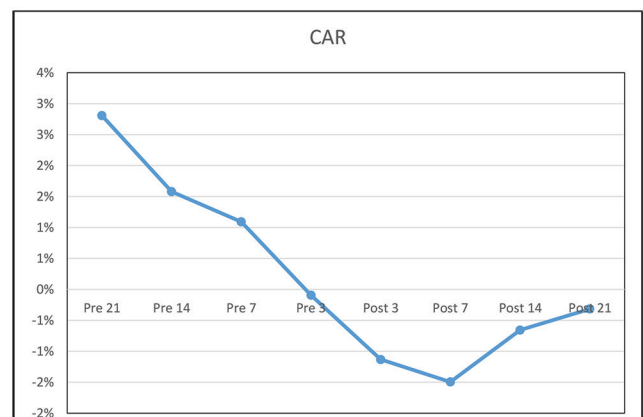
**Figure 1.** Average abnormal returns pre and post share buyback announcement.

For the t-test to compare whether cumulative returns for different time windows are different from zero, the CARs and T-values are given in (Table 2). On comparing the CARs prior to and post the announcement, the returns are significantly positive prior to the announcement and significantly negative post it.

**Table 2.** CAR pre and post share buyback announcement

Window	CAR	Std Dev	t-value	t critical
Pre 21	2.81%	0.0045	27.767	2.086
Pre 14	1.58%	0.0055	10.450	2.160
Pre 7	1.09%	0.0046	5.808	2.447
Pre 3	-0.09%	0.0035	-0.376	4.303
Post 3	-1.13%	0.0088	-1.813	4.303
Post 7	-1.49%	0.0078	-4.674	2.447
Post 14	-0.65%	0.0061	-3.901	2.160
Post 21	-0.32%	0.0053	-2.658	2.086

The same can be observed in the (Figure 2). Post the repurchase announcement, the returns start to become less negative.



**Figure 2.** CAR pre and post share buyback announcement.

The paired t-test has been carried out which tests the hypothesis that the returns pre and post the announcement are not different. The t-values are shown below in (Table 3).

**Table 3.** Paired t-test values for pre and post share buyback announcement

Window	AAR	Window	AAR	Window	AAR
Pre 30	-0.032%	Pre 7	0.16%	Pre 3	-0.03%
Post 30	-0.004%	Post 7	-0.21%	Post 3	-0.38%
t value	-0.2195	t value	1.1590	t value	0.7720
t critical	2.0017	t critical	2.1788	t critical	2.7764

None of the time windows shows that there is a significant difference in returns prior to and post the announcement. Our analysis indicates that significant results are obtained only in cumulative average returns.

## 5. Conclusion

The research paper aims at examining the effects of the share buyback on the share price in the case of the top 5 Indian IT companies for the last 5 years. The CAPM model is used to find out the abnormal returns. The statistical analysis shows us some interesting observations. The presence of positive average abnormal returns before the announcement and significantly positive cumulative abnormal returns before the announcement shows the possibility of insider trading as the positive returns cease to exist after the buyback announcement date. It raises some critical questions on the company's code of ethics and the role of regulator; and that whether it has happened or not in the past needs to be investigated further.

It has also been observed that the share buybacks have been unable to lift share prices and hence has been a failure at its intended objective of increasing the shareholder's value through buyback.

## 6. Limitations

Every research attempt is fraught with certain restrictions; and this study is no different. Efforts/Methods, time available and data available at the disposal of the researcher is a common limitation to this every research study. This

study faces limitations due to the selection of stocks for the purpose of this research in the form of IT Stocks and Large Cap by way of its market capitalisation. The time duration of the study from 2013 till 2018 could also be a limiting factor. It is quite possible that the findings of this study could have been different with the advent of these limitations being absent in this research study.

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