



Impact of Buyback on Share Prices of Companies: An Event Study Approach

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ABSTRACT: Share buybacks also known as share repurchases in the West have been used by the companies as one of the methods of restructuring themselves to maintain their financial stability. Several previous studies have talked about various reasons behind the companies going in for buyback and the most common among them was undervaluation. Examining this, the present study employed a market model of event study methodology to test the impact of buyback announcements on share prices. Buyback announcements made between the period from 1st April 2019 to 31st January 2020 were considered and a sample of 41 companies was selected. A single sample T-test was used to test the significance of the results. The analysis showed that the AAR on the day of announcement is - 0.0456% and the CAAR is 3.9568%. The overall cumulative average abnormal return for the 41-day event started declining after the announcement day. The positive abnormal returns before the announcement day revealed that the market reacted to the buyback announcement way before the announcement day. The AAR is maximum significant day before announcement day supporting the fact that information reached the market beforehand. Overall the results supported the efficient market hypothesis which states that stock prices reflect all available information and the market adjusts rapidly to any new information.

KEYWORDS: Buyback of Shares, Share Repurchase, Open Market Buybacks, Event Study, Abnormal Returns, Single Sample T Test.

I. INTRODUCTION

Dynamic market conditions and increased competition in today's world have posed a threat to the survival of companies. Thus the companies to survive are resorting to various capital restructuring activities. These are the activities undertaken to change the capital structure of a to maintain the financial stability of the company. Buyback of

shares is among the most commonly used methods by companies nowadays to restructure themselves. Buybacks are very popularly known as share repurchases in the West. It is very commonly used nowadays due to its benefits for both the company and its leaving shareholders who surrender their shares in buyback activity. Thus it has been rightly said by Warren Buffet that "it is the technique which benefits both the shareholders leaving and staying back with the organisation by optimum utilisation of cash and buyback triggering the intrinsic value of stock." Companies repurchase shares to reduce the outstanding shares circulated in the market and improve upon the share prices of the company (Grullon and Michaely, 2004).

The Companies that are more prone to agency problems having high free cash flow and low growth opportunities are more likely to repurchase their shares (Li and McNally, 2007). The current study is thus undertaken to study the impact of these buyback practices on the share prices of the companies as most of the earlier studies have been undertaken to test the signalling effect of buyback and check the effectiveness of motives of buybacks and analyse the link between motives and share performances.

II. REVIEW OF LITERATURE

Vermaelen (1981) investigated the price behaviour of securities that have been repurchased by the companies. The results supported the signalling hypothesis stating that companies pay a premium to repurchase when they have positive information about future earnings. Similarly, the study by Wansley, Lane & Sarkar (1989) revealed that managers used share repurchase prominently to signal confidence in firms.

Sinha (1991) found that repurchases were being used as a defensive mechanism to avoid takeovers as due to buybacks, the firm became a less attractive target due to the shrinking equity base after the buyback. Moreover examining large



corporations in the US Cudd, Duggal & Sarkar (1996) found that repurchases are undertaken for control reasons such as defending against takeover, and increasing insider shareholding were positively related to changes in shareholder wealth. Their study also showed partial support for the signalling hypothesis as well.

A study in the US by Vermaelen & Ikenberry (1996) for identifying several factors that explain positive announcement returns revealed that buybacks through the open market are not a firm commitment as companies have the flexibility to forego them. They tend to buy only when they view stock as undervalued or they want to maximize the wealth of long-term shareholders otherwise they forego these announcements. Similar results were observed by D Mello & Shroff (2000) that in 74% of cases from a sample of 166 buybacks, firms were undervalued relative to Prior announcements and managers set tender premiums based on the degree of undervaluation. They also revealed that small firms were more undervalued than large firms and the decision to repurchase was consistent with firms that had private information about future earnings prospects.

In 2004, Grullon and Michaely investigated the announcement effects of buyback through the open market by the US corporations. The results revealed that the reaction is positive only for firms likely to reinvest. Moreover, the declining performance after the repurchase indicated no growth in the profitability of companies undergoing buybacks.

Lie (2004) undertook a study to analyse the impact of buyback announcements via the open market. Dividing the sample of more than 4000 announcements into two categories those that announce but do not repurchase and those that repurchase after the announcement, it revealed that the companies which repurchase within the same fiscal quarter have shown positive earnings and improvement in operating performance of 6-15%. Those who only announce but do not repurchase don't show any improvement, but their announcement induces an immediate stock price increase which reverted back shortly by the efficiency in the stock market. Zhang (2005) analysed 135 cases of actual share repurchase in Hong Kong to know the performance surrounding the repurchase. He showed that no superior abnormal results were observed following the share repurchase. Moreover, the market responds favourably only to buybacks undertaken by small and value firms. Somewhat similar results were observed by Mishra (2005) in his study dealing

with buyback cases between 1999 and 2001 in India. His study revealed that prices fell after the buyback even below the buyback prices. He found that in India buybacks are used as a tool to improve the shareholding of promoters and impart them short-term gains.

The study by Li & McNally (2007) analysing the importance of firm characteristics in affecting stock returns revealed that the market reacts more to the reasons given for undergoing repurchase. Their findings exhibited that companies that have free cash flow, lower market-to-book ratio, and poor prior stock performance are more likely to go for buybacks and significant abnormal returns were experienced in cases where the insiders possessed certain private information. Similarly, in a study by Babenko, Tserlukevich & Vedrashko (2012) it was seen that the market responded favourably to announcements whose insiders recently purchased and less to firms who underwent buybacks for reasons other than under-pricing. Thus, it could be said that the investors benefit from corporate events in conjunction with the information role of insider trading.

The results of a study by Bhargava & Agarwal (2015) revealed that for companies listed on the national stock exchange average abnormal returns were not significant as news was already reflected in the share prices. It showed the growing maturity and efficiency of the stock market of India and thus the investors looking for abnormal returns do not get much gain. Similarly, in the Indian context, Hyderabad (2009) revealed that market reaction in India is higher than in the UK and the US indicating capital markets are more undervalued and have a great degree of information asymmetry. He found that repurchases in India are undertaken to thwart MNCs from acquiring undervalued companies. Stankeviciene & Akelaitis (2014) examined if a relation can be observed between stock prices and price changes after public announcements by companies listed at the Vilnius stock exchange. They showed that a more remarkable reaction was observed with good sentiment of news. Their results proved that the type and category of public announcement do not play any role, higher average abnormal returns were observed for positive content news than for negative content. Kaur and Dhanda (2016) analysed pre and post-performance of buybacks and their impact using the market model and found a negative impact of buybacks on stock price returns after the announcement. It showed no significant difference between pre and post-performance abnormal returns.



Sivashanmugam & Somya (2019) analysed the effect of buyback in manufacturing companies between 2000 to 2019 and revealed positive reactions and significant abnormal returns indicating seepage of information before the announcement. The returns in the post-announcement period were not so significant showing that buybacks only fascinated for the short period. Similar results were observed by Kapoor, Sharma & Verma (2019) while analysing the information content of repurchase of various IT companies. They observed an increase in shareholder wealth before the announcement due to the leakage of information.

The results of the previous literature relating market reactions to the buyback announcements have depicted the efficiency of the capital market but most studies are concerning the motives and management expectations regarding buybacks. Thus, the present study is undertaken to analyse the reaction of the market regarding the present buybacks in the Indian stock market.

III. OBJECTIVE AND HYPOTHESIS

The objective of the study was to check the impact of the buyback announcement on the share prices of the company and to investigate the effect of the buyback event on the returns of the company. This led to the formulation of the hypothesis;

Null Hypothesis (H1): There are no abnormal returns i.e. $AR = 0$

IV. DATA AND METHODOLOGY

Buyback announcements made by the companies during the period from 1st April 2019 to 31st January 2020 have been taken into consideration. The public announcement of buyback dates has been extracted from the website of the Securities and Exchange Board of India (SEBI). Further for the data relating to share prices PROWESS database maintained by the Centre for Monitoring Indian Economy (CMIE) has been used. A list of 47 companies was extracted from the website of SEBI which was reduced to 41 companies due to the non-availability of data. Standard event study methodology has been used to analyse the impact of the buyback of shares by companies on their share performance.

Microsoft Excel has been used in the study for the calculation of abnormal returns and for testing its significance using the t-test. Event study is a statistical method to assess the impact of an event, the idea is to find abnormal return earned due to the event. A market model has been used for the study

(Ball and Brown 1980) to analyse the impact on returns. In the present study, 41 days have been taken as the event window; -21 to 21 and 0 as the day of the buyback announcement. Further, 252 days have been taken as the estimation window and the S&P 500 has been taken as a benchmark for comparing the results of individual companies. Daily returns for the company and the index have been calculated. For the calculation of abnormal returns, firstly expected returns by the company in normal circumstances have been calculated using;

$$E(R)_{it} = \alpha_i + \beta_i (R_{mt})$$

Where, $E(R)_{it}$ = expected return of company i in t period; α_i = alpha or the intercept; β_i = sensitivity of the company i stock; R_{mt} = market index return

Then abnormal returns are calculated by subtracting the expected return from the actual returns earned by the company on a particular day which were cumulated to get the cumulative abnormal returns (CARs) of the company for each day in the event window. The average abnormal returns during the event window have been cumulated to arrive at the cumulative average abnormal returns to know the impact of the event surrounding the announcement day. This is calculated as:

$$CAAR = \sum AAR_t$$

AR and AAR have been tested for significance during the event window using the single sample t-test at a 5 % level of significance. T statistic has been calculated using the below formulae-

$$T \text{ statistic} = AAR_t / s / \sqrt{N}$$

Where, AAR_t = average abnormal returns in period t; s = standard deviation; N = number of companies in the sample

V. EMPIRICAL RESULTS AND DISCUSSION

Using the event study methodology the abnormal and cumulative abnormal returns are calculated. The positive intercept for most companies depicts the optimistic returns compared to the expected returns. The negative returns regarding a few companies reflect the riskiness of the company's returns and actual returns being not as positive as expected. The slope of all the companies except eight companies is positive which shows less volatility involvement in the returns of those companies.

Table 1 includes the average abnormal returns, cumulative average abnormal returns and t statistic for the average abnormal returns. The average abnormal return on the announcement day is -0.0456% and the cumulative average abnormal return is 3.956%. The average abnormal returns are



more on the positive side, during the pre-announcement period compared to the post-announcement period and was maximum on -8 day of announcement. Cumulative average abnormal returns are maximum on day -5 i.e. 4.274% and after the announcement it started declining steadily and reached to the lowest on day 18. The AAR's t statistic is positively significant on day -6 at 2.126

at a 95% level. The negative significant t value on day 17 is due to the slow reaction of the market in the case of some companies in the sample. The positive AAR's, increasing CAAR and maximum significant t statistic before the announcement reveal the leakage of information of buyback in the market way before the announcement.



Table 1: AAR and CAAR for the event during the event window with AAR T- statistic
 (*significant at 90% level **significant at 95% level)

EVENT WINDOW	AVERAGE ABNORMAL RETURNS (AAR's)	CUMULATIVE AVERAGE ABNORMAL RETURNS (CAAR's)	T STATISTIC
-21	0.1524%	0.1524%	0.481843703
-20	-0.4470%	-0.2947%	-1.136859822
-19	-0.4445%	-0.7392%	-0.774962087
-18	0.3469%	-0.3923%	0.561527688
-17	0.1535%	-0.2388%	0.361885919
-16	0.4709%	0.2321%	1.148184783
-15	0.1322%	0.3644%	0.336870616
-14	0.5278%	0.8921%	0.998549727
-13	-0.4444%	0.4478%	-0.904541568
-12	0.2309%	0.6786%	0.526398342
-11	-0.0788%	0.5998%	-0.19126854
-10	0.9460%	1.5458%	2.104085498**
-9	0.4765%	2.0223%	1.252510541
-8	1.1483%	3.1705%	1.886459874*
-7	0.3045%	3.4750%	0.736410562
-6	0.5464%	4.0214%	2.126473787**
-5	0.2529%	4.2742%	0.510492053
-4	-0.0177%	4.2565%	-0.024522037
-3	-0.2311%	4.0255%	-0.522917774
-2	0.3171%	4.3426%	0.8048042
-1	-0.3402%	4.0024%	-1.017447586
0	-0.0456%	3.9568%	-0.128893961
1	0.2030%	4.1598%	0.494430119
2	0.1546%	4.3144%	0.423614404
3	-0.5333%	3.7811%	-1.594755354
4	-0.2599%	3.5212%	-0.902211637
5	-0.8485%	2.6727%	-1.497848606
6	-0.6847%	1.9880%	-1.641894773*
7	-0.6421%	1.3459%	-1.768711745*
8	-0.5375%	0.8083%	-1.613556882
9	-0.1471%	0.6613%	-0.414779417
10	-0.3014%	0.3599%	-0.6566325
11	0.0656%	0.4255%	0.212203173
12	0.0691%	0.4947%	0.16970184
13	-0.0912%	0.4035%	-0.304337705
14	-0.3508%	0.0526%	-0.987197889
15	0.0116%	0.0642%	0.044242042
16	-0.4463%	-0.3821%	-1.183172421
17	-0.9724%	-1.3545%	-2.754461125**
18	-0.1835%	-1.5380%	-0.44553079
19	0.6984%	-0.8396%	2.153867831**
20	-0.0248%	-0.8644%	-0.054116459
21	0.7429%	-0.1215%	1.666058394*

Figure 1 depicts the CAARs during the event window. It can be seen from Figure 1 that before the announcement the returns were comparatively

positive and had reached their highest but after the announcement they have turned negative. The figure of cumulative average abnormal returns



shows that the returns reached their high point before the announcement and started declining after the announcement. Thus, the returns chart supports the fact of leakage of information into the market and rapid adjustment of the market and the share prices to the information. The results depicted the efficiency of the capital market in adjusting the share prices to the new information rapidly to avoid any abnormal returns. The not-so-significant results after the buyback show that the buyback or any new information could fascinate the market only for a short while. Investors could earn abnormal returns only for a short period as,

when the event is announced the market would revert back its prices and adjust with the new piece of information complying with the efficient market hypothesis.

The overall results of the study support the null hypothesis as positive abnormal returns are offset by the negative returns and thus we accept the null hypothesis that the abnormal returns are equal to 0 due to the efficiency of the capital market and seepage of information into the market.

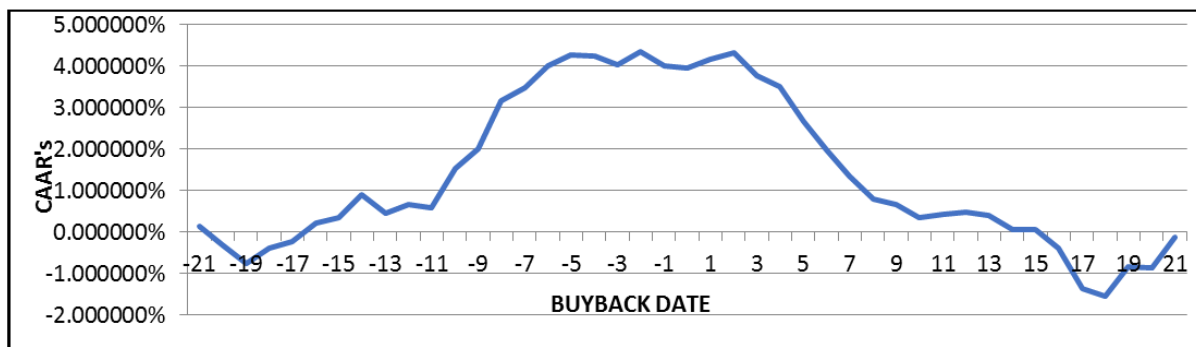


Figure 1: Cumulative average abnormal returns during the event window

VI. CONCLUSION

The present paper examines the impact of share price announcements of Indian companies on the share prices in the 41-day event window. The positive average abnormal returns and the increasing cumulative average abnormal results in the pre-announcement period show the seepage of information into the market before the announcement. The similarity of results with the other previous studies completely supports the efficient market hypothesis and advocates that the market adjusts rapidly to new pieces of information. The underperformance of stock prices and not-so-significant results in the post-announcement period lead to the conclusion that the buybacks fascinate the market only for a short duration. Thus, the investors could earn abnormal returns only for a small period as the market would adjust itself rapidly and the positive abnormal returns would be offset by the negative returns. There are certain limitations of the study which should be taken into consideration. Firstly, no distinction has been made between the two methods of buyback used by the companies' i.e. Tender offer and open market. Secondly, the period of the study is short which could be increased in further studies to get better results.

Notwithstanding these limitations, the present study is relevant due to divergent results in certain studies and the lack of empirical studies in this regard. Further research could be undertaken to analyse the impact of buybacks through different methods on the share prices of companies. Another direction of further work could be the comparison of the impact of announcements and actual buybacks on the share prices of the companies.

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