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An Empirical Study on Abnormal Return Around Buyback Announcements by Indian Firms

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ABSTRACT

This paper examines the market response surrounding the share buyback announcements of large capitalised Indian companies from years 2010 to 2016 covering 73 firms. T-test was carried out to identify the abnormal return in the range before and after 10 days from share buyback announcements. The result shows a significant positive abnormal return during that period. The finding is supported with information asymmetric, which shows that stock market reacts more favourably through the repurchase announcements by large firms. This study is consistent with the signalling hypothesis that shows share repurchase announcement can be an effective tool generating abnormal return to the shareholders in the stock market in India.

KEYWORDS — Buyback, Event study, Shareholders value, JEL classification: G14; G32, G34;

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INTRODUCTION

Buyback of stock one of the effective and now quite common tools of capital restructuring in India same as around the world is being considered to have been a very important financial strategy. Over the past 20 years, stock repurchase expenditures in the U.S. grew at a much higher rate than cash dividends[1]. Comparatively it is recent tool for Indian firms that Indian government implemented regulations allowing firms to buyback their outstanding shares. Hundreds of Indian firms have made a stock repurchase announcement since 1999. Today, stock buyback is becoming a popular financial strategy among all types of firms including large to small capitalised firms.

With the opening up of economy in India and various measures taken by successive governments since 1991 have put Indian economy on track to grow at a rapid pace which have resulted into higher disposable income in the hand of common man, and support the growth of business in India. This fuel upunparalleled increase in demand of both basic as well as luxury goods and services. This has made India world third largest economy in purchasing power parity behind only US and China.

This phenomena works extensively for business to generate return above normal market return for the investors. Equity investors have larger expectation of wealth creation through their investments forces firms to use innovative financial tools to upgrade their returns. This led the acceptance of buyback quite easy in Indian market to serve as alternative tool to generate return to the equity investors. This study is an extension of previous work where we noted that small capitalised firms are unable to generate market sentiments of abnormal return through buyback announcements. Here, we have cater the announcements of buyback by firms with large market capital in recent time from 2010 to 2016. This paper is an attempt to gather detail awareness about literary and technical aspect of the topic, which is an attempt to check whether firms in India also generate abnormal return i.e. return which is above the market return to the equity investors; with below mentioned flow of study.

- Literature review of the topic
- Objectives and methodology of the study
- Data analysis
- Findings and scope of further studies

LITERATURE REVIEW

Firm's pay-out policy is irrelevant in a perfect market. Their theorem is widely accepted; firm value is determined by its earning power and the risk of its underlying assets, regardless of financing or capital structure decisions[2]. US companies offered 131 buyback through tenders. This study actually attributed to the positive reaction of the stock market to an information signalling effect where by management undertakes the share buy-back strategy to inform to investors that the shares of the company have been undervalued and the company has enough faith on its future prospects[3]. It is also found that positive market reaction to repurchase announcements attributed to insider signalling that the stock price was low relative to its intrinsic value[4]. Repurchase program is an exchange option that gives the firm the ability to exchange its market value for its true value if, in the future, prices become lower than the true value[5]. Further it was observed although the announcement of a targeted buy back registered a negative price reaction, over the entire time frame, non-participating shareholders received positive share returns of more than 12 percent covering the share prices of 77 US firms undertaking target buy back[6]. Undervaluation theory befitting the buyback announcements when managers have private information that the firm is undervalued and had great potential[7]. Some authors concluded the other way that the repurchase program serves as an "option," but it is not an option that creates any value[8] .In a study on the price impact of open market repurchase trade by analysing a data base of 60,000 + individual buy-back trades from Toronto Stock Exchange. Showing that, intra- day price impact of repurchase trades was negative, because of execution rule, 60% percent were seller initiated. However, the study also found that repurchasing companies experienced abnormal losses (gains) before (after) the repurchase trades[9].

There have been several studies conducted in Indian context also , A study ~~Mohanty (2002)~~ covered 25 companies announcing buyback during 1999 till 2001 and empirically found return of 3.86% on the day of announcements[10]. Further, in a a study on 25 selected buyback cases by Indian companies and examined the impact of buy back on share prices. In his study, the author observed the mixed result in respect of changes in ROE and EPS. In majority of the cases, positive movements have been noticed in share prices. Finally, he concluded that, distributing surplus cash to the shareholders is an incidental objective. The basic motive behind buy back is to enhance promoters' stake[11]. In a study that scrutinized 46 buybacks between 1999 and 2005 and documented further evidence for the positive signalling by having observed a significant abnormal return of 1.66 percent[12]. Also,availability of information plays the vital role to trade of the return. Asymmetry of information between management as insider and investors as outsiders can be match up with proper and timely announcements. Announcement for the buyback is opined by as such remedy which

provides option though not obligation. As most of the announcements make the difference and not the execution of it[13]. A studyfound a statistically significant average abnormal return of 2.76 percent on the announcement day for the 70 corporate buyback announcements made during the period 1999 to 2007 to support undervaluation hypothesis and documented non sustainability of abnormal returns in the post event period[14]. In a study conducted on 106 companies listed on BSE companies, which announced buybacks during the period from 1999 to 2006 and found an average abnormal return of 2.23 percent, on the event day to signal the under-pricing of securities but that was not statistically significant. The author opined that the market has not found any news in the announcement as revealed by the continuing trend that started before the announcement and the market anticipate the information and incorporated into prices before the announcements[15]. Further it was documented that a statistically significant abnormal return of 2.55 percent on the event day for 40 cases listed in BSE for a period between 2004 and 2009, thereby signalling undervaluation[16].

OBJECTIVES

Buyback is one of the important tool of capital restructuring along with many other forms of internal or external tools like merger, acquisition, take over etc. Identifying the firms with larger capital is important to focus as these businesses are highly explored and less volatile in comparison of other firms. Thus, the primary objective of the study is evaluate the large capitalised firms generating abnormal return surrounding buyback announcements in India.

METHODOLOGY

As discussed above, most theories attempt to establishrationale for stock repurchases and some find support for short-term or modest benefits, but few answers are found as to the longer term results of a stock repurchase program and its true value creation.

Contrary, noted that nothing actually commits a firm to acquire shares after an announcement, yet the abnormal announcement return suggests in may studies that the market holds it as good news. As an initiative structural changes for the better option to the shareholders announcements typically associated immediate and positive market response even if many time it is not accomplished fully or stretched in quite long time horizons[8].

Buyback program can be undertaken with varied methods to accomplish and also take quite long tenure to complete entire process. So, we have taken announcements as the base to calculate abnormal return. Asymmetry between availability and non-availably of information plays vital role to generate return above normal market return. Thus, immediate reaction of announcements plays

crucial role than actual buyback process stretched in long time horizon. Categorization of the event was important from the point of view of an investor who wants to predict the abnormal returns associated with a random event.Shareholders' wealth created if they able to make abnormal return by minimising the time gap between availability and non-availability of information[17]. Thus, evaluation of the announcement of share buyback by the company is taken as event for the research using event study methodology. Event studies have long history to its side. Since then many researchers have contributed towards developments of the study[18]. In the late 1960s seminal studies introduced the methodology that is essentially the same as that which is in use today[19].

The preliminary task of conducting an event study is to identify the event of significance and recognise the duration over which the security prices of the firms involved in this event will be examined this is called the event window. In this research, the event that is under study is the announcement of buyback by a company. As is customary to define the event window to be larger than the specific period of interest the paper takes 10 days prior and post announcement of buyback– event under study. This permits examination of periods surrounding the event. After identifying the event, it is necessary to determine the selection criteria for the inclusion of a given firm in the study. The criteria may involve restrictions imposed by data availability such as listing on the Bombay Stock Exchange or National Stock Exchange in India.

The Companies Act, 1956 was amended in 1999 and new sections called Section 77 A, 77 AA and 77B were inserted with retrospective effect from 31.01.1998 empowering companies to buy back their shares as well as other specified securities were taken under research the announcement of buyback of the listed company which has declared corporate action under the said act (now, section 68,69 and 70 of the Companies Act 2013 notified with effect from 1st April 2014) has been taken from database Capital Line and ACE Equity. Then the data has been filtered and cleaned by re-checking from the NSE websites Share prices and the benchmark index values have been taken from ACE Equity. For this study, the price taken for shares are the adjusted closing prices of the shares.

It is also argued that category wise returns should be studied, as they are more accurate in capturing the total wealth effects of events. The implications for market efficiency can be completely different than this categorization[19]. This was illustrated where they present a scenario in which a sample companies which have a $1 million market capitalization are called the ''small firms'' and one firm that market capitalization greater than $1 million are called the ''large firm''[20].

This research, taking clue from, to segregate companies through their announcements of buyback. Companies are categorized as large cap, mid cap and small cap, based on their relative market capitalizations[18,20]. Market capitalization is simply the market value of the company, calculated by multiplying the share price of a company with the company's total number of shares outstanding. Bombay Stock Exchange (BSE) categorizes companies into market cap segments based on the 80 – 15 – 5 rules. In the 80 – 15 – 5 rule, companies listed on BSE are arranged in descending order of market cap (highest to lowest) and starting from the top (company with highest market cap), the largest market companies which cover 80% of the total market cap of all the companies listed on the BSE are categorized as large cap companies. The next set of companies which cover 80 to 95% of the total market cap of all BSE listed companies are categorized as mid cap companies. The last set of companies, covering 95 to 100% of total market cap of all BSE listed companies, are small cap companies. But the anomaly is with dynamic market prices, it is difficult to categorize the companies in specific mode for permanent basis. With the guideline of US market cap we have taken companies with more than 5000 crores during referred time as large capitalized companies. To have concentrated study here, companies having market capitalisation of more than 5000 crores were chosen with a tag of 'large capitalised companies' for the period of 2010 to 2016 reaching total of 73 firms.

Table -1: Total announcements of buyback of shares

Year of Announcements	**No. of Companies**
2010	4
2011	9
2012	11
2013	12
2014	16
2015	4
2016	17
Total	**73**

As discussed shareholders' wealth in numeric term is abnormal return generated over market return. The abnormal return is the actual ex-post return of the security over the event window minus the normal return of the firm over the event window. The normal return is defined as the expected return without conditioning on the event taking place.

H_0 = There is no significant relation between buyback announcements and abnormal return to shareholders.

H_1 = There is significant relation between buyback announcements and abnormal return.

The event study can be done with different models. Here, 'market return model' is used. It builds on the actual returns of a reference market and the correlation of the firm's stock with the reference market.

Equation (1) describes the model formally, the abnormal return on a distinct day within the event window represents the difference between the actual stock return $R_{i,t}$ on that day and the normal return, which is predicted based on two inputs; the typical relationship between the firm's stock and its reference index (expressed by the α and β parameters), and the actual reference market's return ($R_{m,t}$).

$$AR_{i,t} = R_{i,t} - \beta_i R_{m,t}$$

In the above equation, β_i is the Beta is the measure of a stock's sensitivity of returns to changes in the market. $R_{m,t}$ is the return on the market i.e. Nifty Index return over the period time$t$.

$$\beta = \frac{covarianceofstocktothemarket}{varianceofthemarket}$$

$$\beta = \frac{cov(Ri, Rm)}{\sigma 2}$$

As per the market return model, event study methodology β is taken as 1, because of the following reasons (1) fundamental issue in calculating beta, (2) beta in this period is quite distorted (3) there is no data to estimate future beta of the subsidiary (4) Pre-transaction beta does not reflects the post-transactionrisk-return profile[19].

Such an analysis performed for multiple events of the same event type (i.e., a sample study) may yield typical stock market response patterns, which have been at the center of prior academic research. Typical abnormal returns associated with a distinct point of time before or after the event day are defined as follows.

$$AAR = \frac{1}{N}\sum_{i=1}^{N} AR_{i,t}$$

To calculate the total impact of an event over a particular period of time (termed the 'event window'), one can add up individual abnormal returns to create a 'Cumulative Average Abnormal Return'. Equation (2) formally shows this practice.

$$CAAR(t_1, t_2) = \sum_{t=t_1}^{t_2} AAR_{i,t}$$

To check the statistical significance of the abnormal return, t-test has been used.

$$t = \frac{AAR}{\hat{\sigma}ar}$$

Where, $\hat{\sigma}ar$ is an estimate of the standard deviation of the average security's return. It is calculated from the -10 to 10 day's pre and post announcement of the demerger. A t-statistic with a p-value (i.e. the observed significance level) less than or equal to 0.05 is considered to be significant.

DATA ANALYSIS

After the discussion of methodology, AAR i.e. average abnormal return and CAAR cumulative average abnormal return is summarized in following tables.

As discussed earlier the abnormal return is individual return of the share over index return. As shown in Table 2 AAR average abnormal return of all the seventy three companies for 21 days are narrated here along with CAAR cumulative average abnormal return. As seen above AAR is positive as well as negative cascading the effects in CAAR. The return generated on day 0 i.e. on the day of announcements is significantly high 1.17% along with CAAR on the same day is positive at 1.90% showing high positive return to investors over span of 11 days. CAAR suggesting continuous positive return to the shareholders in short time of 21 days covering 10 days each in pre and post announcement date.

Table 2 : Cumulative average abnormal return(with 21 days event window)

Days	AAR	CAAR
-10	0.06%	0.06%
-9	0.19%	0.25%
-8	-0.35%	-0.10%
-7	0.16%	0.06%
-6	0.27%	0.34%
-5	0.40%	0.74%
-4	0.25%	0.99%
-3	0.00%	0.99%
-2	0.09%	1.07%
-1	-0.34%	0.74%
0	1.17%	1.90%
1	-0.40%	1.50%
2	-0.20%	1.31%
3	0.47%	1.78%
4	-0.42%	1.36%
5	-0.33%	1.03%
6	0.55%	1.57%
7	-0.37%	1.20%
8	-0.46%	0.75%
9	0.12%	0.87%
10	-0.43%	0.44%

Table 3 : Data analysis of all large capitalized firms

Surroundings Days	Event window	CAAR	Std. Dev.	P-value
0 and+1	2 days	1.70%	0.28%	0.00437
-1 to +1	3 days	1.38%	0.59%	0.0128731
-2 to +2	5 days	1.30%	0.44%	0.0007643
-3 to +3	7 days	1.33%	0.43%	6.081E-05
-5 to +5	11 days	1.22%	0.39%	5.255E-07
-7 to +7	15 days	1.10%	0.50%	4.877E-07
-10 to +10	21 days	0.90%	0.57%	6.2E-07

As discussed above the large capitalised firms show positive return though out the selected time. The CAAR is highest on the day 0 i.e. on the day of announcement. The extension of the study is narrated above in Table 3, where analysis is shown taking range of days for different event windows from very short span of 2 days around announcements to 21 days from 10 days pre and post announcement for short term effects of the announcements of the buyback. At 5% level of significance, p values for all the ranges (from quite narrow 2 days to stretched 21 days window) suggest rejection of hull hypothesis. Rejection of H_0 and accepting alternative hypothesis i.e. accepting H_1; suggesting there is significant relation between announcements of buyback and abnormal return. PositiveCAAR supportingalternative hypothesis by establishing strong relation between average abnormal return of large capitalised firms and announcements of the buyback. The result interestingly contradicts with our previous finding[20]; suggesting no relation between buyback announcements and shareholders' value for small capitalised firm in Indian context. The findings supporting undervaluation hypothesis where the large capitalised firms having potential for the future performance and ability of the management being well taken by the investors converting it into the abnormal return in short span of announcements.

CONCLUSION

Our results are in line with and support the findings by several published studies on positive abnormal return around the announcement days for the large capitalised firms in India[24,25,26,27,28,29]. Hypothetically the perfect market is one where prices provides precise signal foe resource allocation. in simple way it is acceptable to investors that at any time prices always reflects correctly. However, is that the potential investors do not need to be afraid about whether prices are fair or not if they can

assume that prices already "fully reflect" all available information. But creation of wealth through abnormal return is all about timely availability and non-availability of information among the investors. Here, we can observe that large capitalised firms do provide abnormal return in short term. This study can further be extended with actual evaluation of the financial data for fundamental analysis.

SCOPE OF RESEARCH

This study is based on the data of companies who have undergone corporate restructuring in general and buyback in particular during the years 2010 to 2016. This time horizon can be increased horizontally for several more years to analyse the announcement day return of buyback as well as long term performance of buyback. The methodology can also be used to analyse other events than buyback such as demergers, dividend announcements and delisting etc.

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