



STOCK MARKET REACTION TO THE BUYBACK ANNOUNCEMENT -- AN ABNORMAL RETURNS ANALYSIS

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ABSTRACT

The main objective of the paper is to analyze and interpret the impact of the buyback of equity announcement on the market price in the Indian context. The sample size of the paper consists of 64 initial buyback programs of listed companies announced from 1998 to 2013 For the purpose of the study, the daily actual returns for the company and for the NSE Nifty Index are calculated to estimate the expected returns by employing the market model. The actual returns are then compared with the expected returns to compute the abnormal returns for 91 days window period. A large sample t – test has been conducted to test whether abnormal returns from the buyback announcement are statistically significant. The paper finds that there are no abnormal returns for 91 days window period from buyback announcement.. The paper therefore concludes that the market does not react to the buyback announcement positively in the Indian context.

KEYWORDS : Buyback, Abnormal returns, Window period, Company and Index.

INTRODUCTION

When a company announces stock buyback, it signals to the market that it is financially and fundamentally strong and it has better and bright prospects in the future. The market normally reacts to the positive information of the announcement of buyback positively. As a result, the stock price of the company moves upward. If the stock price of the company out performs the market, the actual returns from the stock will be more than the expected returns. The difference between the actual returns and the expected returns results into abnormal returns. The study, therefore, in this chapter, calculates and analyzes the abnormal returns from the announcement of buyback both before and after the announcement in order to assess and ascertain whether stock buyback announcement signals the abnormal returns.

METHODOLOGY

The main objective of the paper is to analyze and interpret the impact of the buyback of equity announcement on the market price in the Indian context. The sample size of the paper consists of 64 initial buyback programs of listed companies which were announced during the period from 1998 to 2013. For the purpose of the study, the daily actual returns for the company and for the NSE Nifty Index are calculated to estimate the expected returns to compute the abnormal returns from the company for 91 days i.e., - 45 days and + 45 days window period. The study employed market model to estimate the expected returns from the company. A large sample t – test has been conducted to test whether abnormal returns from the buyback announcement are statistically significant.

Hypotheses

The following hypotheses have been developed to test the objective of the paper;

H0: Abnormal returns from buyback announcement are equal to zero.

$$(AR \text{ from BB} = 0)$$

H1: Abnormal returns from buyback announcement are not equal zero.

$$(AR \text{ from BB} \neq 0)$$

Classification of the Window Period

The window period of – 45 days to + 45 days i.e. 91 days has been classified into the following five categories;

- i) Announcement Day
- ii) Pre announcement Period (- 1 to -45 days)
- iii) Post announcement Period (+ 1 to + 45 days)
- iv) Pre vis-à-vis Post announcement Period (- 1 to – 45 days to + 1 to + 45 days)
- v) 91 days Window Period (- 45 days to + 45 days).

Abnormal Returns

The abnormal returns for the company i on day t are calculated as;

$$AR_{it} = R_{it} - \bar{R}_{it} \text{ ----- (1)}$$

Where;

- AR<sub>it</sub> --Abnormal returns for the company i on day t
- R<sub>it</sub> -- Actual returns for the company i on day t
- $\bar{R}_{it}$  --Expected returns for the company i on day t

Returns for the Company

The actual returns for the Company i on day t are computed by;

$$R_{it} = (P_{it} - P_{it-1}) / P_{it-1} \text{ ----- (2)}$$

Where;

- R<sub>it</sub> -- Actual returns for the company i on day t
- P<sub>it</sub> -- Share Price of the company i at time t
- P<sub>it-1</sub> -- Share Price of the company i at time t-1

Expected Returns

The expected returns for the company i on day t are ascertained by using the following market model (regression);

$$\bar{R}_{it} = \alpha_i + \beta_i R_{mt} + \epsilon_{it} \text{ ----- (3)}$$

Where,

- $\bar{R}_{it}$  -- Expected returns for the company i on day t
- $\alpha_i$  -- Intercept term (alpha) of the company i
- $\beta_i$  -- Beta (systematic risk component) of the company i
- R<sub>mt</sub> --Returns on the market portfolio on day t
- $\epsilon_{it}$  -- Error term of the company i on day t

Returns on the Market portfolio

The actual returns for the index i on day t are calculated by;

$$R_{mt} = (I_{it} - I_{it-1}) / I_{it-1} \text{ ----- (4)}$$

Where;

- R<sub>mt</sub> --Returns on the market portfolio (Index) on day t
- I<sub>it</sub> -- Index value of index i at time t
- I<sub>it-1</sub> --Index value of index i at time t-1

Average Abnormal Returns

The Abnormal returns are averaged over the number of sample companies in order to eliminate the effect of any one company or group of companies on the abnormal returns. The abnormal returns of individual companies are averaged for each day, surrounding the event day as;

$$CAARs_t = \sum_{t=t_1}^{t_2} AARs_t \text{ ----- (6)}$$

Where;

AAR<sub>t</sub> --- Average abnormal returns for sample companies on day t

AR<sub>it</sub> --Abnormal returns for the company i on day t  
 N ---Number of companies in the sample

### Cumulative Average Abnormal Returns

The Cumulative Average Abnormal Returns (CAARs) are computed with a view to know the cumulative effect of average abnormal returns on the days surrounding the event days, t<sub>1</sub> through t<sub>2</sub>, by summing the average abnormal returns for these days as;

$$CAARs_t = \sum_{t=t_1}^{t_2} AARs_t \quad \text{----- (6)}$$

Where;

CAARs<sub>t</sub> -- Cumulative Average Abnormal Returns for sample companies on day t

AARs<sub>t</sub> -- Average Abnormal Returns for samples companies on day t

### Sample Size of Buyback Companies

As per the SEBI's report on the status of the buyback of shares, 289 buyback programs were announced by the listed companies during 1998-99 to 2012-13. Of which 164 buyback programs were initial buyback programs. The sample of the study consists of 64 initial buyback companies i.e., 39% of the total population.

### Review of Literature on Buyback of Shares

**Young (1967)** analyzed 152 tender offers of companies listed on US stock exchanges during 1944 to 1965. He compared the mean of common stock experiencing tender offer with that of S & P's 500 companies stock index four times i.e., on the day of announcement, after three months, after six months and one year after the announcement. He found that the subsequent price action of the common stocks for which tender offers have been issued were significantly less favorable than the general market for equity securities during this time.

**Dielman, Nantell and Wright (1980)** studied the stock behavior of 174 repurchases of 139 firms during 1957 to 1974 by way of open market and through tender offer. They employed regression model and found that i) open market repurchases have no economic significance i.e., repurchase effects on rates of return are uniformly negligible and in respect of tender offer, repurchase is associated with significant increase in return in the month of announcement and ii) announcing a buyback is announcing to the market that the firm has run out of profitable investment opportunities. This implies a negative relationship between buyback and stock price.

**Masulis R (1980)** analyzed 199 tender offers for stocks listed on the NYSE and ASE for the period between 1963 to 1978 by employing comparison period research approach and found that i) announcement period generates 17% return much higher than pre-announcement period of 40 days and ii) there is no announcement day price effect.

**Dann (1981)** found that the share buyback led to shareholders experiencing positive share returns approximately 15%. These positive returns were mostly permanent in the share price. They did not return to their pre-buyback date levels.

**Vermaelen (1981)** studied 131 tender offer announcements during the years 1962 to 1977. He found that i) on an average, the studies in the US and other nations document event returns of 2.5% to 3%, ii) the abnormal returns increase when the managers have greater stake in the announced portion of the outstanding equity shares to be purchased, iii) repurchases are used as mechanism to correct market mispricing, iv) unless the percentage of shares tendered by the share holders is exactly equal to the percentage of shares purchased by the company, the expected price to prevail after the buyback will always be lower than the offer price, v) it will be incorrect to use

share price increase after the announcement as a measure of the value change per share resulting from the tender offer, vi) signaling effect can explain most of the value increase due to buyback in the US i.e., evidence of about 16% value increase after share buyback in the US and vii) debt financed buybacks have got a higher impact on the stock price (24%) as compared to cash financed buybacks(18%) in the US.

**Lakonishok and Vermaelen (1990)** analyzed 258 repurchase tender offers during 1962 to 1986 by firms traded on NYSE, AMEX and OTC and indicated that i) it was possible to generate abnormal returns of more than 9% in a period of less than one week by following a trading strategy of buying shares after the repurchase announcement and tendering it to the firms before the expiration date., ii) repurchasing companies experience statistically significant abnormal returns in two years after the buyback and iii) signaling effect is generally believed to be stronger for small companies due to the fact that they are more likely to receive less attention from market analysts and therefore the chances are that they are more likely to remain under priced.

**Neena Puri (2001)** analyzed 14 buyback programs announced by the listed companies in India from 1999 to 2001. She found that only 2 out of the 14 companies which came up with buyback offers have been successful in having the desired effect of achieving superior share price performance and returns for the shareholders. She concludes that the result of the study goes against the commonly held belief that the buyback of shares is accompanied by an increase in the share price.

**Pitabas Mohanty (2002)** analyzed share buyback of 12 companies during the period from 1999 to 2001. He used Event Study Methodology, 61 days window period and 24 months sample period to find out the market reaction to the buyback announcement. He finds i) cumulative abnormal returns of 11.25% for a 61 days window period, ii) cumulative abnormal returns of 3.86% on announcement day and iii) gain at about 24%, on an average, (non-annualized) for an ordinary investor. The study concludes that i) stock prices do move up because of the high offer premium only to fall back to their original level , ii) buyback does not result in any perceptible long run increase in the value and iii) evidence of insider trading before the share buyback is announced.

**Kai Li and William McNally (2003)** analyzed 329 repurchases during the period 1989 to 1992. They used conditional event study methodology to examine whether role of insider holdings affects the decision to announce repurchase and associated announcement period stock returns. They find that i) repurchases are more likely from firms where insiders have large share holdings, ii) repurchasing firms have greater free cash flow and tend to have experienced a stock price decline prior to the announcement and iii) announcement returns are larger for firms where insiders have greater insider holdings, larger for small firms and larger for firms with greater free cash flow.

**Karamjeet Kaur and Balwinder Singh (2003)** analyzed 77 buyback programs announced by 60 companies during 1999-2003. They used comparison period returns approach to study the response of the stock market to the announcement of buyback programs. They found that the buyback announcements are associated with positive returns considering the stock markets to be fairly efficient. This can be attributed to informational asymmetries between managers and investors. The study concludes that the companies are able to successfully achieve their motive of correcting the undervaluation of stock and signaling their future prospects.

**Amitabh Gupta (2006)** examined 46 buyback of shares made

by listed companies during the period 1999-2004. He employed the Standard Event Study Methodology to calculate AARs and CARs around the buyback announcements and z statistics for testing cumulative excess returns. He finds an announcement day AARs of 1.67% and AARs of 11.82% and CARs of 12.69% for 61 days window period. He concluded that i) announcement of share buyback significantly increases the share price around the time of the announcement, ii) AARs of companies which have come out with a subsequent repurchase program is smaller than the AARs of their previous buyback program, iii) large companies generate lower abnormal returns than small companies because of low information asymmetry between the management and the investors of large companies and iv) AARs do not increase with the increase in proportion of shares to be bought back as investors do not perceive an increase in proportion of shares as a positive signal.

**R.L. Hyderabad (2009)** studied 70 buyback announcements for the period from 1999 to 2007. He employed market model to examine the excess returns on the announcement of share buyback and t- test and z-test values for judging the significance of daily average returns. Besides the over-all analysis of returns from buyback announcements, he also studied method-wise announcement returns. The study finds that i) significant announcement day AARs of 2.77% and CARs of 7.91% and ii) over-all CARs of 7.24% for a 41 day window period. He concluded that i) result of the study contradicts the prediction of signaling hypothesis and ii) Fixed price tender offer yields higher announcement returns than the open market repurchase in the Indian context.

**Lars Manor Paulsen (2011)** analyzed 113 open market repurchases by Danish companies between 2000 and 2010. He used absolute and relative returns approach. His analysis showed that more than half of the buyback in the sample had a negative absolute returns of -1.5%, -0.8%, -7.8% and -21.6 in the 1st, 2nd, 3rd, and 4th years respectively. Similarly, more than half of the buyback had negative relative returns in all the periods. He further stated that the relative returns was in general lower than the absolute returns indicating that the negative absolute returns was not due to a general development in the market. The study concluded that the share buyback in general does not create value for shareholders as both the absolute and relative returns are negative.

**Pournima Jariwala (2011)** examined buyback of 82 companies through open market repurchase in India over the period from 2000 to 2009.. She employed Mean price to study the movement of the stock price and Ratio analysis to measure the operating performance before and after the announcement of buyback. She found that i) share price, generally, on an average, react positively to buyback announcement, ii) share buyback signals increase in the operating efficiency in the future and iii) stock buyback creates value for shareholders. She concluded that there should be strict regulations disallowing the companies to make the fresh issue of shares at least for one year after buyback and thereby to avoid manipulation in the share price.

**Research Gap**

The empirical studies in the past on the buyback of shares have examined signaling hypothesis to identify the effects of stock buyback on the stock price for a maximum window period of 61 days, i.e., 30 days before and 30 days after the event day. These studies have found a positive price reaction on and around the announcement day of buyback. The present paper therefore adopts signaling hypothesis under the investigation. It makes an attempt to ascertain the effects of stock buyback announcement on the stock price for a window period of 91 days i.e. 45 days before and 45 days after the event day which is more than the 61 days window period

used by the studies in the past.

**Average Abnormal Returns (AARs) from Buyback for 91 days Window Period;**

The average abnormal returns for - 45 days and + 1day window periods are compared with the average abnormal returns for -1 day and +45 days window periods respectively to assess whether there is any change in the average abnormal returns during those window periods. Similarly, the average abnormal returns for + 1 day to + 45 days window period are compared with the average abnormal returns for - 1 day to -45 days window period to ascertain whether average abnormal returns for plus window period differ from the minus window period. Moreover, the average abnormal returns for - 45 days to + 45 days i.e., 91 days window period are assessed to know whether there are abnormal returns during the entire period of 91 days.

**Analysis and Interpretation of AARs for 91 days Window Period from Buyback**

The average abnormal returns for - 45 days to + 45 days i.e., 91 days window period from the announcement of buyback of equity shares have been analyzed and interpreted with the following tables;

**1) Announcement Day Returns**

The average abnormal returns from the stock buyback on the announcement day are -0.1855.

**2) Pre announcement Period**

**Table No. 1 Pre announcement Period (-45 to -1 days Window Period)(Test Statistics)**

Window Period	N	Mean	Std. Deviation	Test statistics	Sig. (2-tailed)
-45 to -1	45	0.0729	0.1699	2.878**	0.0062

*Note:*, \*\* indicates significant at 1%

The Table No.1 indicates that the average abnormal returns before the announcement of buyback for -45 to -1 day window period are negative (Mean < 0). Null hypothesis is rejected at 1% level of significance. **The average abnormal returns from the buyback before the announcement are less than zero (AARs ≠ 0). Therefore, there are negative abnormal returns from the buyback of equity in the pre announcement period.**

**3) Post announcement Period**

**Table No. 2 Post announcement Period (+1 to +45 days Window Period)(Test Statistics)**

Window Period	N	Mean	Std. Deviation	Test statistics	Sig. (2-tailed)
+1 to +45	45	0.0028	0.2852	0.065	0.9481

From the Table No.2, it is clear that the average abnormal returns after the announcement of buyback for +1 to +45 days window period are zero (Mean = 0). Null hypothesis is accepted at 1% level of significance. **The average abnormal returns from the stock buyback in the post announcement period are zero (AARs = 0). Hence, there are no abnormal returns from the stock buyback after the announcement.**

**4) Pre vis-à-vis Post announcement Period**

**Table No. 3 Pre vis-à-vis Post announcement Period (- 45 to -1 and +1 to +45 days Window Periods) (Test Statistics)**

Group	N	Mean	Std. Deviation	Test statistics	Sig. (2-tailed)
-45 to -1	45	-0.0729	0.1699	-1.529	0.1299
+1 to +45	45	0.0028	0.2852		

The above table shows that the average abnormal returns before the announcement of buyback for -45 to -1 days window

period are equal to the average abnormal returns after the announcement of buyback for +1 to +45 days window period (Mean = 0). Null hypothesis is accepted at 1% level of significance. The average abnormal returns from the buyback in both the periods do not differ or equal to zero (AARs = 0). The abnormal returns from the buyback therefore neither increase nor decrease but remains the same in the post announcement period as compared to the pre announcement period..

**5) 91 days Window Period**

**Table No. 4 91 days Window Period (-45 to +45 days Window Period) (Test Statistics)**

Window Period	N	Mean	Std. Deviation	Test statistics	Sig. (2-tailed)
-45 to +45	91	-0.0350	0.2365	1.406	0.1633

The Table No.4 exhibits that the average abnormal returns from the buyback for -45 to +45 days i.e. 91 days window period are zero (Mean = 0). Null hypothesis is accepted at 1% level of significance. The average abnormal returns from the buyback of equity for 91 days window period are zero (AARs = 0). Therefore, there are no abnormal returns from the stock buyback for the entire window period of 91 days.

**AARs for Different Window Periods from Buyback**

The average abnormal returns for -5 days window period to -45 days window periods and +5 days window period to +45 days window periods are compared with the average abnormal returns for -1 day window period and +1 day window period respectively to assess the trend in the average abnormal returns over different window periods. The average abnormal returns, similarly, for different plus window periods are compared with the average abnormal returns for different corresponding minus window periods to ascertain whether average abnormal returns for different plus window periods differ from the different corresponding minus window periods. The average abnormal returns for different plus and minus window periods are also analyzed to ascertain whether average abnormal returns for shorter window periods differ from the longer window periods and vice versa.

**Analysis and Interpretation of AARs for Different Window Periods from Buyback**

The average abnormal returns for different window periods from the announcement of stock buyback have been analyzed and interpreted as in the following;

**1) Pre announcement Period**

**a) Difference in AARs from -1 to -45 days Window Periods**

**Table No. 5. a Difference in AARs from -1 to -45 days Window Periods**

Window Periods	AARs(-1WP)	AARs (-WPs)	AARs (Difference)
-1 to -5	-0.0211	-0.0380	+0.0169
-1 to -10	-0.0211	-0.0556	+0.0345
-1 to -15	-0.0211	-0.0531	+0.0320
-1 to -20	-0.0211	-0.0536	+0.0325
-1 to -25	-0.0211	-0.0537	+0.0326
-1 to -30	-0.0211	-0.0493	+0.0282
-1 to -35	-0.0211	-0.0446	+0.0235
-1 to -40	-0.0211	-0.0629	+0.0418
-1 to -45	-0.0211	-0.0682	+0.0471

**b) Test Statistics for difference in AARs from -1 to -45 days Window Periods**

**Table No. 5. b Difference in AARs from -1 to -45 days Window Periods**

Window Periods	Mean	Std. Deviation	t- value	p-value
-1 to -5	-0.0381	0.0557	1.5281	0.2012
-1 to -10	-0.0556	0.1235	1.4238	0.1882

-1 to -15	-0.0532	0.1535	1.3414	0.2011
-1 to -20	-0.0536	0.1726	1.3894	0.1808
-1 to -25	-0.0537	0.1561	1.7207	0.0982
-1 to -30	-0.0564	0.1546	1.9966	0.0553
-1 to -35	-0.0506	0.1652	1.8135	0.0786
-1 to -40	-0.0682	0.1668	2.5848*	0.0136
-1 to -45	-0.0729	0.1699	2.8780**	0.0062

*Note: \* indicates significant at 5%, \*\* indicates significant at 1%*

From the above tables, it is clear that the negative average abnormal returns do not significantly differ from -1 day window period to -5, -10, -15, -20, -25, -30, and -35 days window periods. However, there is a significant difference in negative average abnormal returns between -1 day window period and -40 days and -45 days window periods at 5% and 1% level of significance respectively. Therefore, the abnormal returns on an average do not differ significantly from -1 day window period to the rest of the minus window periods.

**2) Post announcement Period**

**a) Difference in AARs from +1 to +45 days Window Periods**

**Table No. 6. a Difference in AARs from +1 to +45 days Window Periods**

Window Periods	AARs(+1WPs)	AARs(+WPs)	AARs (Difference)
+1 to +5	+0.0936	-0.0327	+0.1263
+1 to +10	+0.0936	+0.0763	+0.0173
+1 to +15	+0.0936	+0.0997	-0.0061
+1 to +20	+0.0936	+0.0643	+0.0293
+1 to +25	+0.0936	+0.0371	+0.0565
+1 to +30	+0.0936	+0.0271	+0.0665
+1 to +35	+0.0936	+0.0158	+0.0778
+1 to +40	+0.0936	-0.0002	+0.0934
+1 to +45	+0.0936	+0.0027	+0.0909

**b) Test Statistics for difference in AARs from +1 to +45 days Window Periods**

**Table No. 6. b Difference in AARs from +1 to +45 days Window Periods**

Window Periods	Mean	Std. Deviation	t- value	p-value
+1 to +5	-0.0327	0.1887	0.3870	0.7184
+1 to +10	0.0763	0.2168	1.1134	0.2944
+1 to +15	0.0997	0.2486	1.5537	0.1426
+1 to +20	0.0644	0.2692	1.0697	0.2982
+1 to +25	0.0371	0.2518	0.7376	0.4679
+1 to +30	0.0272	0.2400	0.6201	0.5400
+1 to +35	0.0159	0.2347	0.4007	0.6912
+1 to +40	-0.0003	0.2516	0.0068	0.9946
+1 to +45	0.0028	0.2852	0.0654	0.9481

The Table Nos. 6..a and 6. b indicate that there is no significant difference in average abnormal returns between +1 day window period and the rest of the window periods. Hence, there is no difference in abnormal returns between +1 day window period and the rest of the plus window periods.

**3) Pre vis-à-vis Post announcement Period**

**a) Difference in AARs from +1 to -1 to +45 to -45 days Window Periods;**

**Table No. 7. a Difference in AARs from +1 to -1 to +45 to -45 days Window Periods**

Window Periods	AARs(+WPs)	AARs(-WPs)	AARs (Difference)
+1 to -1	+0.0936	-0.0211	+0.1147
+5 to -5	-0.0327	-0.0380	+0.0053
+10 to -10	+0.0763	-0.0556	+0.1319
+15 to -15	+0.0997	-0.0531	+0.1528
+20 to -20	+0.0643	-0.0536	+0.1179

+25 to -25	+0.0371	-0.0537	+0.0908
+30 to -30	+0.0271	-0.0493	+0.0764
+35 to -35	+0.0158	-0.0446	+0.0604
+40 to -40	-0.0002	-0.0629	+0.0627
+45 to -45	+0.0027	-0.0682	+0.0709

b) Test Statistics for difference in AARs from +5 to -5 to +45 to -45 days Window Periods;

Table No. 7. b Difference in AARs from +5 to -5 to +45 to -45 days Window Periods

Window Periods	Mean	Std. Deviation	t- value	p-value
+5 to -5	-0.0354	0.1312	0.8522	0.4162
+10 to -10	0.0104	0.1846	0.2509	0.8046
+15 to -15	0.0233	0.2174	0.5867	0.5620
+20 to -20	0.0054	0.2311	0.1470	0.8839
+25 to -25	-0.0083	0.2123	0.2762	0.7836
+30 to -30	-0.0146	0.2045	0.5527	0.5826
+35 to -35	-0.0174	0.2043	0.7117	0.4791
+40 to -40	-0.0342	0.2149	1.4247	0.1582
+45 to -45	-0.0350	0.2365	1.4058	0.1633

The above analysis shows that the average abnormal returns for different plus window periods do not significantly differ from the average abnormal returns for different minus window periods. Hence, the abnormal returns from the buyback announcement for different plus window periods do not significantly differ from the different minus window periods. Similarly, the abnormal returns of shorter window periods do not differ from the abnormal returns of longer window periods.

**Findings**

The study makes the following statements on the findings of abnormal returns from the announcement of buyback on the announcement day, for 91 days window period and for different window periods;

- i) The **average abnormal returns (AARs)** from the announcement of buyback on the **announcement day are -0.1855.**
- ii) The **cumulative average abnormal returns (CAARs)** from the announcement of buyback for **91 days window period are -3.3396.**
- iii) There are **no abnormal returns and cumulative abnormal returns** from the stock buyback announcement for **91 days window period**
- iv) The **abnormal returns** from the announcement of stock buyback for different **plus window periods are equal to the different corresponding minus window periods.**
- v) The **abnormal returns** similarly for the **shorter window periods do not differ from the longer window periods.**

**Comparison of the Findings of the Study with the Findings of the Studies in the past**

There are **no abnormal returns from the announcement of buyback of equity in the Indian context.** The findings of the study on the abnormal returns from the announcement of **buyback are similar** to the findings of Young (1967) and Lars, Manor Paulsen (2011) and **contradict** the findings of Dielman et.all. (1980), Masulis, R. (1980), Dann (1981), Vermaelen (1981), Lakonishok and Vermaelen (1990), Mohanty, Pitabas (2002), Kai, Li and William, McNally (2003), Kaur, Karamjeet and Singh, Balwinder (2003), Gupta, Amitabh (2006) and Hyderabad, R. L. (2009)

**CONCLUSION**

There are no abnormal returns and cumulative abnormal returns from the buyback announcements. **Therefore, on the basis of the abnormal returns and the cumulative abnormal returns, the announcement of stock buyback does not create the value for the shareholders.**

**Scope for further research**

A further research can be carried on the topic Stock Market Reaction to the Buyback Announcement-- an Abnormal Returns Analysis: i) A longer window period of more than 91 days, ii) A larger sample size of more than 64 companies, iii) For subsequent buyback announcements and iv) Comparison of abnormal returns from initial buybacks with the subsequent buybacks

**Appendix - A**

**AARs, CAARs and Companies with Positive AARs of Buyback Companies for - 45 days to + 45 days i.e., 91 days Window Period**

Days	AARs	CAARs	No. of companies With +AARs
-45	-0.084	-0.084	24
-44	-0.2255	-0.3094	34
-43	0.1003	-0.2091	31
-42	0.0634	-0.1457	28
-41	-0.4065	-0.5522	26
-40	-0.117	-0.6692	29
-39	-0.3718	-1.041	27
-38	-0.0973	-1.1383	31
-37	-0.0745	-1.2128	33
-36	-0.2938	-1.5067	24
-35	-0.0871	-1.5937	32
-34	0.0679	-1.5258	32
-33	0.2529	-1.2729	33
-32	-0.3854	-1.6583	32
-31	0.0696	-1.5887	33
-30	-0.2641	-1.8528	22
-29	-0.232	-2.0848	29
-28	0.0354	-2.0494	33
-27	0.0586	-1.9908	28
-26	0.0547	-1.9361	35
-25	-0.0701	-2.0062	26
-24	-0.032	-2.0382	32
-23	-0.1481	-2.1864	32
-22	-0.0609	-2.2472	32
-21	0.0407	-2.2065	27
-20	-0.0613	-2.2678	27
-19	-0.3441	-2.6119	27
-18	-0.0963	-2.7082	24
-17	0.3305	-2.3777	37
-16	-0.104	-2.4817	30
-15	-0.1826	-2.6642	31
-14	-0.0704	-2.7347	30
-13	-0.1795	-2.9142	23
-12	-0.1445	-3.0587	28
-11	0.3357	-2.723	41
-10	0.2188	-2.5042	35
-9	-0.1179	-2.6221	28
-8	-0.19	-2.8121	36
-7	-0.0596	-2.8717	26
-6	-0.2173	-3.089	27
-5	-0.0989	-3.1879	22
-4	-0.0607	-3.2486	33
-3	0.0485	-3.2	28
-2	-0.0581	-3.2581	35
-1	-0.0211	-3.2793	31
0	-0.1855	-3.4648	30
1	0.0936	-3.3712	30
2	0.2202	-3.1509	38
3	-0.2404	-3.3913	28
4	-0.0699	-3.4612	31
5	-0.167	-3.6281	35
6	0.1367	-3.4914	38
7	0.1061	-3.3853	36

8	-0.0472	-3.4325	35	27	0.2311	-2.3995	36
9	0.4961	-2.9365	36	28	-0.0885	-2.488	39
10	0.235	-2.7014	35	29	-0.2439	-2.7319	36
11	-0.0578	-2.7592	29	30	0.0821	-2.6498	29
12	0.5246	-2.2346	36	31	-0.2476	-2.8974	29
13	0.4523	-1.7823	36	32	-0.0044	-2.9017	29
14	-0.2214	-2.0037	27	33	-0.0616	-2.9634	27
15	0.0351	-1.9686	32	34	0.2758	-2.6876	32
16	-0.1549	-2.1235	35	35	-0.2208	-2.9084	31
17	-0.3038	-2.4274	22	36	-0.6784	-3.5868	26
18	0.5353	-1.8921	39	37	0.1454	-3.4414	30
19	-0.1192	-2.0112	25	38	-0.2727	-3.7141	26
20	-0.166	-2.1772	30	39	0.0784	-3.6356	34
21	-0.2171	-2.3943	25	40	0.1599	-3.4757	31
22	0.0883	-2.3059	35	41	-0.0342	-3.5099	33
23	-0.1726	-2.4786	26	42	0.0208	-3.489	34
24	-0.0995	-2.578	31	43	0.0417	-3.4473	25
25	0.0416	-2.5364	37	44	-0.6882	-4.1355	26
26	-0.0942	-2.6306	30	45	0.7959	-3.3396	24

**Appendix - B**  
**Sample Size of Buyback Companies**

Sr. No.	Name of the Company	Industry	Announcement of Buyback
1	Addi Industries Ltd.	Textiles	14/11/2002
2	Alembic Automobile Ltd.	Auto Ancillary	24/11/2008
3	Allcargo Logistics Ltd.	Miscellaneous	26/06/2012
4	Allied Digital Services Ltd.	Computer Software	11/04/2011
5	Amtex Automobile Ltd.	Auto Ancillary	24/11/2011
6	Balrampur Chini Mills Ltd.	Sugar	01/03/2011
7	Binani Metals Ltd.	Miscellaneous	23/12/2008
8	Blue Star Ltd.	Air Conditioning	15/02/2002
9	Bright Bros Ltd.	Plastic and Plastic Products	29/12/2009
10	Britannia Industries Ltd.	Food Processing	10/09/2001
11	Eicher Motors Ltd.	Automobile - LCV & HCV	06/02/2009
12	EID Parry ( India ) Ltd.	Sugar	15/12/2008
13	FDC Ltd.	Pharmaceuticals	26/10/2001
14	Fine Line Circuits Ltd.	Electronic- equipments/components	02/06/2003
15	G C Ventures Ltd.	Pesticides - Agro Chemicals	22/02/2010
16	Gandhi Special Tubes Ltd.	Steel - Tubes	05/09/2000
17	Gateway Distriparks Ltd.	Miscellaneous	11/08/2008
18	Gemini Communication Ltd.	Telecommunication - Equipments	11/11/2011
19	Geodesic Ltd.	Computer Software	19/05/2010
20	Godavari Power and Ispat Ltd.	Steel - Sponge Iron	03/11/2008
21	Godrej Industries Ltd.	Chemicals	25/05/2009
22	Goldiam International Ltd.	Diamond Cutting/Precious Metals	22/11/1999
23	HEG Ltd.	Electrodes - Graphite's	25/03/2011
24	Heritage Food ( India ) Ltd.	Food Processing	24/01/2002
25	Hindalco Industries Ltd.	Aluminium Products	08/02/2002
26	Hindustan Composites Ltd.	Automobile	28/01/2011
27	Hindustan Unilever Ltd.	Personal Care	03/10/2007
28	Hydro S and S Industries Ltd.	Plastic and Plastic Products	26/02/2009
29	ICI India Ltd.	Paints - Varnishes	18/07/2006
30	India Nippon Electricals Ltd.	Auto Electrical	25/06/2001
31	Infinite Computer Sol. (I) Ltd.	Computer Software	19/12/2011
32	IPCA Laboratories Ltd.	Pharmaceuticals	26/11/2008
33	J K Lakshmi Cement Ltd.	Cement	15/02/2012
34	Kale Consultants Ltd (Accelya)	Computer software	06/02/2012
35	KRBL Ltd.	Commodities - Trading Rice	18/02/2013
36	LKP Finance Ltd.	Finance and Investment	24/02/2009
37	Maestros Medline Systems Ltd.	Medical Equipment and Accessories	11/11/2008
38	Manugraph Industries Ltd.	Engineering - General	15/10/2001
39	Mastek Ltd.	Computer Software	27/05/2004
40	Merck Ltd.	Pharmaceuticals	01/06/2009
41	Monnet Ispat and Energy Ltd.	Steel - Sponge Iron	21/11/2008
42	Natco Pharma Ltd.	Pharmaceuticals	06/09/2006
43	OCL India Ltd.	Cement	08/10/2001

44	Onmobile Global Ltd.	Telecom – Service Provider	05/09/2011
45	Panama Petrochem Ltd.	Chemicals Speciality /Others	07/03/2013
46	Piramal Health Care Ltd.	Pharmaceuticals	10/12/2010
47	Poddar Pigm Ltd.	Dyes and Pigments	16/10/2009
48	Polaris Software Lab. Ltd.	Computer Software – Large	24/05/2005
49	Prime Securities Ltd.	Finance and Investment	30/06/2005
50	Rain Commodities Ltd.	Cement	25/09/2008
51	Reliance Industries Ltd.	Diversified – Refineries	02/08/2000
52	Reliance Infrastructure Ltd.	Power Generation and Supply	25/02/2009
53	Sandesh Ltd.	Printing, Publication and Stationery	16/04/2009
54	Sasken Com. Technology Ltd.	Computer Software	22/04/2008
55	Selan Exploration Techno. Ltd.	Oil Drilling and Exploration	08/03/2000
56	Sirpur Paper Ltd.	Paper and Paper Products	09/08/2002
57	SRF Polymers Ltd.	Textiles – Manmade	13/12/2005
58	Tips Industries Ltd.	Entertainment and Multi Media	30/08/2010
59	TTK Health Care Ltd.	Pharmaceuticals	25/02/2009
60	Tube Investment of India Ltd.	Cycles and Accessories	09/12/2002
61	United Phosphorus Ltd.	Pesticides and Agro Chemicals	11/05/2012
62	Venky's (India) Ltd.	Livestock, Hatcheries and Poultry	19/09/2002
63	Winsome Yarns Ltd.	Textiles – Spinning	20/08/2001
64	Zee Entertainment Enterprise Ltd.	Entertainment –Multimedia software	13/04/2012

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