STOCK PRICE RESPONSES TO THE ANNOUNCEMENT OF BUYBACK OF SHARES IN INDIA.

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ABSTRACT

In this paper an attempt has been made to examine the short term market reaction to the buyback announcement on stock price in India. A number of studies have examined the effect of buyback on share price behaviour and empirical evidence from the prior studies report that negative long run abnormal returns following the buyback announcement in U S, U K and Canada. Market reaction in the UK differs from that in the US for short term market. In this direction an empirical study has been carried out to know the Indian stock markets reaction to Buy-back of shares. This study is confined shares buyback of listed companies for the period 1996 to 2006. The sample consists of 106 companies, which are listed in the BSE. The adjusted daily stock prices and BSE 200 index are collected for each of the firms from day – 331 to + 30. If the share price data is not available due to non-trading, such companies are eliminated. In order to analyze the impact of the announcement of buyback of shares on stock price, the event period is centered on the announcement date of buyback of shares. The announcement date is designated as day "0" in the event period and used 61 days event period, i.e. 30 trading days before the announcement of the buyback of shares to 30 trading days after the announcement of the buyback of shares, 0 being the day of the announcement of the buyback of shares. The methodology of the study involves use of market model which was developed and suggested by Sharpe (1963). The effect of stock prices is measured in an event period using the abnormal return associated with this event. The researcher computed the Expected Returns (ER), Abnormal Returns (AR), Average Abnormal Returns (AAR) and Cumulative Average Abnormal Returns (CAARs) to examine the stock price reaction. To measure the stock price response to the buyback of shares announcement, it is necessary to segregate the returns attributed to the market movement and those that are not attributed to the market movement, but to buyback announcement. This adjustment is made using the market model. The estimation period used was -31 days to -330 days. If there is no trading in the market on the announcement day, the immediate next trading day is considered as event-day for those firms. To examine the statistical significance of the average abnormal returns z–statistic is constructed and the hypothesis that the AAR is equal to zero is tested. The study reveals, buyback announcement have not provided any additional information to the market. Market has not found any news in the announcement as revealed by the continuing trend that started before the announcement. In the nutshell, study shows negative and insignificant abnormal returns for majority of the days in the event period.

Keywords : Stock Price, buyback, share

INTRODUCTION

The buyback of shares provides a flexible financial mechanism to adjust the capital structure and financial position of a company when warranted. It is a tool to enhance the shareholder value. It can also be used to defend the company from hostile takeovers. The share buyback is a virtuous tool in the hands of the company. Company's primary objective, here is not to boost its share price but rather to distribute excess cash to shareholders in lieu of dividend. The buying shareholders will benefit since the company generally offer a price higher than the current market price of the share. The share price of a number of companies may be undervalued. This may be especially true for the developing capital markets. Companies may buy back shares at higher prices to move up the current share price. Primary objectives of this study are the stock price reaction to the announcement of share buyback in India.

Shareholders often wonder as to why a company would buy back its shares. In fact, they are left confused regarding their course of action in such an event: should they return the shares for cash or keep holding on to them? There could be several reasons behind a buyback. However, these reasons are analyzed from two angles.

Share holders: More often than not, buyback is intended at benefiting the common shareholders of the company. A company could believe that its shares are worth more than their existing market price. In that case, it would like to lend some support to the stock- it offers to buy back its share at a price higher than the existing market price. The result is that the company's share price moves up towards the buyback offer price. A company often uses buyback to boost its stock's price in depressed market conditions. Companies can also use buyback to reward their shareholders. When there are few investment opportunities for a company and it has surplus cash, it could decide to reward its shareholders by giving cash for shares.

A company has to pass a special resolution in its general meeting to go ahead with a buyback. However, this is not required if the buyback amount is less that 10 per cent of company's paid up capital and free reserves. Therefore, we have to be careful about the company's motive behind buying back its shares. We should be suspicious when it doesn't have surplus cash and enough investment opportunities. We often look at the buyback price in relation to the current market price. However, sometimes the existing low price could be a result of temporary market mispricing. In that case, even slightly higher buyback price could drive us to tender our shares for sale.

Promoter's shield: Sometimes, promoters try to raise their stake in the company through a buyback. A buyback reduces the number of outstanding shares of the company, and when promoters do not tender their shares for buyback, their stake is automatically increased following it. Promoters often do this to thwart takeover attempts.

REVIEW OF LITERATURE

Empirical evidence from the prior studies report that negative long run abnormal returns following the buyback announcement in U S, U K and Canada. Market reaction in the UK differs from that in the US for short term market. In Canada Ikenberry et.al (2000) found that the Canadian experience is similar to the earlier evidence obtained for US buyback and the initial market reaction to repurchase programs is small; the abnormal return is less than 1 % in the announcement month. They also found that the market on average seems to under estimate the information contained in repurchase announcements. Further using a three-factor model, abnormal performance over a three year holding period is about seven percent per year. Their finding is consistent with well documented findings in the United States, that long run abnormal stock returns for these cases are negative. Ikenberry and Vermaelen (1996) found that

announcement returns are directly related to the volatility of the stock and the fraction of shares to be purchased. They also found that the market reaction is negatively related with the correlation co-efficient between stock returns and market returns. McNally. W, (1998), suggests that the two types of offers generate roughly the same total returns (about 10–11%, on average, during the offering period) to shareholders who do not tender. Fixed-price offers involve considerably larger premiums (over the new, "full-information" price) and wealth transfers than Dutch auctions. Reflecting the higher premiums, shareholders tendering into fixed-price offers receive higher returns than those tendering into Dutch auctions (13.8% vs. 11.3% during the announcement period). He also finds some evidence of fixed-price offers involve a considerably larger wealth transfer from non-tendering to tendering shareholders, fixed-price repurchases compensate the non-tendering shareholders for the larger wealth transfer with larger increases in "intrinsic value," thus generating the same total return as Dutch auctions. Moreover, despite the large premiums offered in both types of offers, the wealth transfer implicit in the premium represents a small cost (less than 1% in fixed-price offers, and less than 0.1% in Dutch auctions) to non-tendering shareholders. Isagawa (2002) examined corporate open market repurchase strategy and stock price behavior. He establishes a signaling equilibrium with the assumption that the firm is committed to an announcement of open-market repurchase intention. He also found that positive long run stock returns as well as positive announcement effects following open-market repurchase announcements. Schaub, Mark (2008), provides some evidence that debt buybacks may have beneficial impacts on stockholders' holding period returns and cash flows. His analysis is based on the 'all things constant' model popularized by Modigliani and Miller in the capital structure and dividend policy papers. He concludes, firms can obviously benefit by repurchasing their debt when market values have decreased. His study also suggests debt buybacks may be valuable to stockholders in and of themselves, not just in times of rising interest rates and downgraded bond ratings. Schaub, Mark (2009) finds some evidence of wealth effects associated with debt buyback announcements. He observed significant positive average returns on the announcement date reflect investors' opinion that the event is considered 'good' news. He also suggest further research to find out whether there are long-term positive effects or even intra-industry information effects associated with such announcements.

SAMPLE AND DATA

The share prices and buyback details of shares will be collected from the Prowess, the corporate database of Centre for Monitoring Indian Economy (CMIE). For the purpose of detailed investigation of stock price responses to the announcement of buyback of shares, 10 years time horizon from 1996 to 2006 are taken into consideration. The study restricted sample to the buyback of listed companies and for which data is available in Prowess. The adjusted daily stock prices and BSE 200 index are collected for each of the firms from day – 331 to + 30. If the share price data is not available due to non-trading, such companies are eliminated. Our initial sample consists of 149 companies and the final sample in our study consists of 106.

METHODOLOGY

Event study methodology to analyze the impact of the announcement of buyback of shares on stock price put to use. The event period is centered on the announcement date of buyback of shares. The announcement date is designated as day "0" in the event period. Prior studies consider different event period to analyse the effect of an event on stock price. Brown and Warner (1985) used eleven day event period (– 5 to + 5) to analyse daily stock returns. Wansley et.al, (1987) and Dodd Peter (1980) used – 50 to

+50 event period to examine the effect of merger announcement on stock return. To examine the effect of buyback of shares, I propose to use 61 days event period, i.e. 30 trading days before the announcement of the buyback of shares to 30 trading days after the announcement of the buyback of shares, 0 being the day of the announcement of the buyback of shares. The market proxy used in the study is BSE 200.

The effect of stock prices is measured in an event period using the abnormal return associated with this event. We compute the expected returns (ER), abnormal returns (AR), average abnormal returns (AAR) and cumulative average abnormal returns (CAARs) to examine the stock price reaction. To measure the stock price response to the buyback of shares announcement, it is necessary to segregate the returns attributed to the market movement and those that are not attributed to the market movement, but to buyback announcement. This adjustment is made using the market model. The estimation period used was -31 days to -330 days. If there is no trading in the market on the announcement day, the immediate next trading day is considered as event-day for those firms.

The methodology of the study involves use of market model which was developed and suggested by Sharpe (1963). The prior studies use extensively the market model to determine the expected return on specific asset, given the return on market and the two parameters of the market model (alpha and beta of the security). Market model is based on the fact that the most important factor affecting stock returns is market factor and it is captured in the market model in the form of the parameters. It is a model to analyse the riskness of stocks in terms of systematic risk and unsystematic risk. In market model we regress returns on a security against returns of the market index. The market model is given by the following regression equation:

$$E(Rjt) = \alpha j + \beta j\, Rm + ej$$

Where,
α is intercept. (Mean return over the period not explained by the market).
E (Rjt) is the expected return on security j,
Rm is the expected market return,
βj is the slope of the regression and,
ej is the error term (with a zero mean and constant standard deviation).

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

$$E(Rjt) = \alpha j + \beta j\, Rmt$$

Where Rmt is the return on the market index for day 't' in the event period. Since the market model takes explicit account of both the risk associated with the market and mean return, it is used to estimate the expected return (Weston and Kwang, 1996). The residual is calculated for each day and for each firm. The residual is the actual return for that day for the firm minus the predicted return.

The raw return of the estimation window and also for event window is calculated using the following equation.

$$Rjt = (Pjt/\ Pjt\text{-}1)/\ \ Pjt\text{-}1$$

Where

Rjt is the daily return on security 'j' on day't'.

Pjt is the daily adjusted price of the security 'j' at the end of period't'.

Pjt-1 is the daily adjusted price of the security 'j' at the end of period't-1'.

Rmt = (I.t/ I t-1)/ I t-1

Where,

Rmt is the daily return on market index on day 't'. I.t and I t-1 is the closing index value on day't' and't-1', respectively

The log return of the estimation window and also for event window is calculated using the following equation.

Rjt = ln (Pjt/ Pjt-1)

Where

Rjt is the daily return on security 'j' on day't'.

Pjt is the daily adjusted price of the security 'j' at the end of period't'.

Pjt-1 is the daily adjusted price of the security 'j' at the end of period't-1'.

Rmt = ln(I.t/ I t-1)

Where,

Rmt is the daily return on market index on day't'. I.t and I t-1 is the closing index value on day't' and 't-1' , respectively.

The abnormal return is the difference between the actual return on day t and the predicted return i.e.,

ARjt = Rjt − E(Rjt)

The residual ARjt represents the abnormal return, that is, the part of the return that is not predicted and is, therefore, an estimate of the change in firms share price on that day which is caused by the announcement of buyback of shares.

Abnormal returns are averaged across firms to produce AARt for day 't' using the following formula,

$$AARjt = \sum_{j-1}^{N} \frac{AR_{jt}}{N}$$

N is the number of firms in the sample. Finally we calculate the cumulative average abnormal return (CAAR) for the event period. The cumulative average abnormal return represents the average total effect of the event across all firms. Where,

$$CAAR = \sum_{t=-30}^{+30} AARjt$$

The first set of estimated coefficients is used to estimate E(Rjt) for t less than or equal to the announcement day, and the second set is used for t greater than the announcement date. The slope, βj, of the regression measures the variability of the security's returns relative to the market returns and it is the security's beta. Beta is the ratio of the covariance between the security's returns and the market returns to the variance of the market returns. Alpa (α) indicates the return on the security when market return is zero. It could be interpreted as return on the security on account of unsystematic risk. Over a long period of time α should be zero given the randomness of unsystematic risks.

To examine the statistical significance of the average abnormal returns z–statistic is constructed and the hypothesis that the AAR is equal to zero is tested. The test statistics for significance of AAR is given by,

$$Z = \frac{\sum_{j=1}^{N} SER_{j.t.}}{\sqrt{N}}$$

N denotes the number of companies in the study.

SERit is the standardized prediction error for firm 'j' on day 't'.

The abnormal returns are standardized before they are aggregated and the standardized aggregates form the basis of the test statistics. Brown and Warner (1985, p.28) illustrate the technique while discussing tests assuming cross-sectional dependence. For each security, 'j', the excess return (ARjt) or the prediction error (PEjt), for each of the days in the event period is standardized by dividing the ARjt by the standard deviation, (Sjt), to yield a standardized excess return, SERit.

The standardized excess return (SER) is calculated as:

$$SER_t = AR_{jt} / S_{jt}$$

$$S_j = \sqrt{\sum_{t=1}^{T} (AR_{jt} - \overline{AR_j})^2 / T - 1}$$. T is the number of days in the estimation period.

$$\overline{AR_j} = \frac{1}{T} \sum_{t=1}^{T} AR_{j.t}$$

In our study, the number of days in the estimation period, are 300 days (-330 to -31days).
The standardized cumulative excess returns (CAAR) for firms:

The standardized cumulative excess returns for firm 'i' is the sum of the SPEi between any periods of interest, adjusted for the number of days (M) being considered, starting at t1 and ending at t2.

$$SCER_j = (\sum_{t=1}^{T} SER_{jt}) / \sqrt{M}$$ i.e. t = -30……0…..+30 days

The test statistic for N firms is the sum of the SCERi divided by square root of the number of firms:

$$Z = (\sum_{j=1}^{N} SCER_j) / \sqrt{N}$$ and N is number of firms

RESULTS AND DISCUSSION

Table No.1

AAR's for Buy back Announcement

Days	AAR	z-Value	Days	AAR	z-Value
-30	0.00363	-0.20808	1	-0.00745	-0.97731
-29	0.002417	-0.62476	2	0.003815	-0.44545
-28	0.002851	0.368526	3	-0.01103	-0.53546
-27	0.013141	0.95968	4	-0.00189	0.667308
-26	-0.00016	-1.06576	5	-0.01243	-1.3817
-25	-0.0063	-0.87152	6	-0.01019	-1.67002
-24	0.010895	0.681763	7	-0.01865	-2.69924
-23	0.006079	-0.42974	8	-0.00556	0.10008
-22	0.01362	1.545111	9	0.005003	0.956677
-21	-0.00402	0.049508	10	0.000586	-0.0161
-20	0.000214	0.532957	11	-0.00237	-0.24402
-19	0.01093	1.393909	12	-0.0032	0.116788
-18	-0.00944	-1.11682	13	-0.00707	-1.47952
-17	-0.00589	-0.74854	14	-0.00236	0.374514
-16	-0.00039	0.148205	15	0.001524	-0.08603
-15	0.010384	1.204023	16	-0.00587	0.076952
-14	-0.00047	-0.6997	17	-0.00719	-1.54505
-13	0.007619	-0.11411	18	-0.0082	-0.10975
-12	0.009577	1.039109	19	-0.00737	-0.38206
-11	-0.00855	-1.32884	20	4.7E-05	-0.73648
-10	0.0019	-0.96954	21	-0.00377	-0.70127
-9	0.007784	1.284524	22	-0.00147	-0.32889
-8	-0.00994	-1.68701	23	-0.00536	-0.95682
-7	0.004282	1.724019	24	-0.00749	-1.76606
-6	0.005659	1.765531	25	0.007066	1.209894
-5	0.017379	3.827757	26	-0.01249	-1.67666
-4	0.010671	1.47379	27	-0.00643	-0.91373
-3	0.001018	1.787194	28	0.002635	0.415656
-2	0.011768	2.62632	29	-0.00287	-0.17455
-1	0.017079	2.891064	30	0.003043	0.148693
0	0.054682	6.920911			

*Critical z- value at 5 percent is 1.96

The above result reveals that AAR's are negative for 9 days and positive for 21 days before the announcement of buyback. During the whole event period AAR's are negative for 31 days and positive for 29 days. AAR's is positive and insignificant on the day of announcement. The movement of AAR's after

the announcement of buyback indicates that the share price movements persist. It shows that, AAR's are statistically insignificant for 56 days of the 61 days.

Table No.2

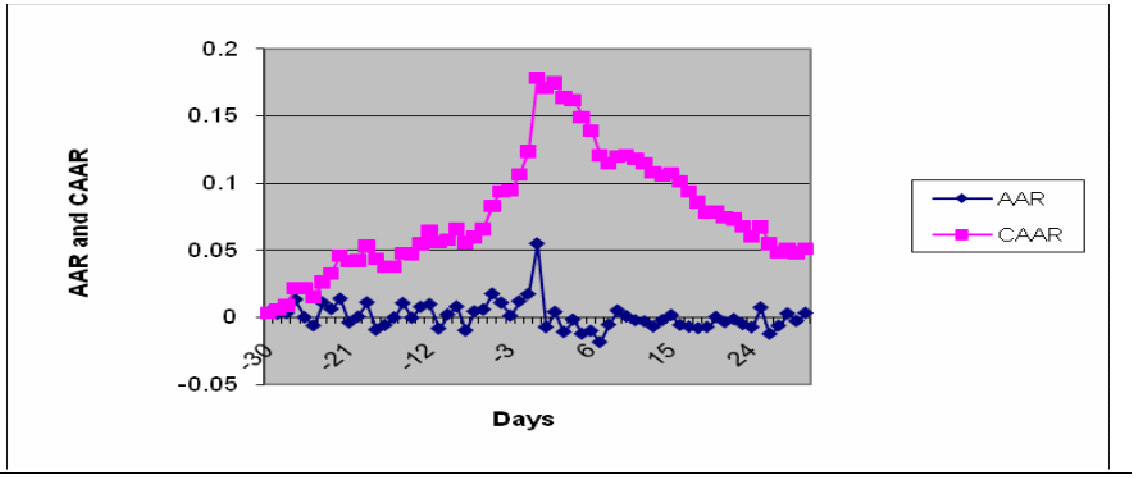
CAAR's for Event Period

Days	CAAR	z-Value	Days	CAAR	z-Value
-30	0.00363	-0.20808	1	0.170975	3.779867
-29	0.006047	-0.58891	2	0.17479	3.644612
-28	0.008898	-0.26807	3	0.163761	3.498785
-27	0.022039	0.247682	4	0.161867	3.561235
-26	0.021879	-0.25509	5	0.149438	3.281142
-25	0.015576	-0.58866	6	0.139246	2.961949
-24	0.026471	-0.28731	7	0.120598	2.484842
-23	0.03255	-0.42069	8	0.115037	2.468804
-22	0.04617	0.118402	9	0.120041	2.589012
-21	0.042149	0.127982	10	0.120626	2.55473
-20	0.042363	0.282719	11	0.118254	2.486481
-19	0.053293	0.673069	12	0.115052	2.475208
-18	0.043857	0.336914	13	0.107979	2.223873
-17	0.037969	0.124604	14	0.105623	2.254853
-16	0.037578	0.158645	15	0.107147	2.217525
-15	0.047962	0.454613	16	0.101273	2.205032
-14	0.047495	0.271338	17	0.094079	1.958934
-13	0.055114	0.236796	18	0.085884	1.923163
-12	0.064691	0.468869	19	0.078512	1.849802
-11	0.05614	0.159858	20	0.078559	1.728449
-10	0.05804	-0.05557	21	0.074793	1.6145
-9	0.065825	0.219573	22	0.073323	1.55402
-8	0.055887	-0.13702	23	0.067966	1.409357
-7	0.060169	0.217779	24	0.060475	1.15835
-6	0.065828	0.566486	25	0.067541	1.30964
-5	0.083207	1.30617	26	0.055048	1.076022
-4	0.093878	1.565384	27	0.048622	0.946727
-3	0.094896	1.874925	28	0.051257	0.992783
-2	0.106664	2.33001	29	0.048391	0.961942
-1	0.123744	2.818681	30	0.051434	0.973062
0	0.178425	4.015878			

*Critical z- value at 5 percent is 1.96

Chart No. 1

AAR's and CAAR's for Buy back announcement



The above table and chart shows that CAAR is positive throughout the event period and started increasing before the announcement and declined after the announcement of buyback. It is insignificant for majority of the days in the event period. CAAR is significant on the day of announcement. It is significant for two day before the announcement and sixteen days after the announcement.

Table No.3

CAAR's for Different Event Period

SL.NO	Window Period	CAAR	z-Value
1	-30 to +30	0.0514340	0.973062
2	-25 to + 25	0.0456619	1.45221
3	-20 to +20	0.0364101	1.86454
4	-15 to + 15	0.0695688	2.59091
5	-10 to + 10	0.0644863	3.41366
6	-5 to + 5	0.0836092	5.0818
7	-4 to +4	0.0786597	4.80279
8	-3 to +3	0.0698831	4.63659
9	-2 to +2	0.0798946	4.9263
10	-1 to +1	0.0643113	5.1007
11	-30 to 0	0.1784252	4.01588
12	-25 to 0	0.1565461	1.45221
13	-20 to 0	0.1362761	4.79092
14	-15 to 0	0.1408471	5.43626
15	-10 to 0	0.1222853	6.52608
16	-5 to 0	0.1125968	7.97188
17	-4 to 0	0.0952179	7.020931
18	-3 to 0	0.0845472	7.11274
19	-2 to 0	0.0835294	2.67688

20	-1 to 0	0.071761	6.93811
21	0 to +1	0.0472318	4.20276
22	0 to +2	0.0510468	3.17436
23	0 to + 3	0.0400175	2.48135
24	0 to +4	0.0381233	2.51781
25	0 to +5	0.0256939	1.73436
26	0 to +10	0.1169233	0.2773
27	0 to +15	-0.016597	-0.0996
28	0 to +20	-0.045185	-0.6754
29	0 to +25	-0.056203	-1.1057
30	0 to +30	-0.072310	-1.4079

CAAR's are positive for shorter and longer windows and statistically significant for smaller window periods (-1 to +1, -2 to +2, -3 to +3, -4 to +4, -5 to +5, -10 to +10 and -15 to +15) and insignificant for longer window period (-30 to + 30, -25 to +25, -20 to + 20). However it is significant for the window period staring from -30 to 0 and 0 to +4.

Table No. 4

AAR's for Log Returns

Day	AAR	z-Value	Day	AAR	z-Value
-30	-0.00358	-3.56599	1	-0.01001	-0.08205
-29	-0.00422	-3.35073	2	-0.00767	-0.08971
-28	-0.00769	-2.05786	3	-0.01559	-0.1053
-27	0.004448	-1.33748	4	-0.0084	-0.1137
-26	-0.02187	-6.59666	5	-0.0192	-0.1329
-25	-0.01446	-3.65677	6	-0.01226	-0.14516
-24	0.005996	-1.08391	7	-0.02331	-0.16847
-23	0.000574	-2.42784	8	-0.01562	-0.18408
-22	0.006391	-0.96738	9	-0.00282	-0.18691
-21	-0.01401	-2.22835	10	-0.00826	-0.19517
-20	-0.00545	-0.81616	11	-0.00496	-0.20013
-19	0.003855	-0.18534	12	-0.01337	-0.2135
-18	-0.02058	-4.01282	13	-0.01089	-0.22439
-17	-0.00986	-2.95996	14	-0.01148	-0.23587
-16	-0.01207	-3.44188	15	-0.00058	-0.23645
-15	0.001993	-2.00437	16	-0.0135	-0.24995
-14	-0.01065	-3.94657	17	-0.01685	-0.2668
-13	0.004217	-1.34675	18	-0.01277	-0.27957
-12	0.001467	-0.96795	19	-0.01254	-0.29211
-11	-0.0114	-3.28213	20	-0.00473	-0.29684
-10	-0.00225	-1.62845	21	-0.00938	-0.30622
-9	-0.0029	-1.78803	22	-0.00775	-0.31397
-8	-0.01919	-4.08031	23	-0.0115	-0.32547

-7	-0.00249	-0.42754	24	-0.01368	-0.33915
-6	9.09E-05	-0.48261	25	0.001606	-0.33754
-5	0.015782	2.379232	26	-0.01698	-0.35452
-4	0.006401	-0.00825	27	-0.01134	-0.36585
-3	-0.00011	0.215369	28	-0.0063	-0.37215
-2	0.009585	0.651355	29	-0.00942	-0.38157
-1	0.007627	0.377673	30	-0.00367	-0.38524
0	0.022319	3.206951			

*Critical z- value at 5 percent is 1.96

Table No. 5

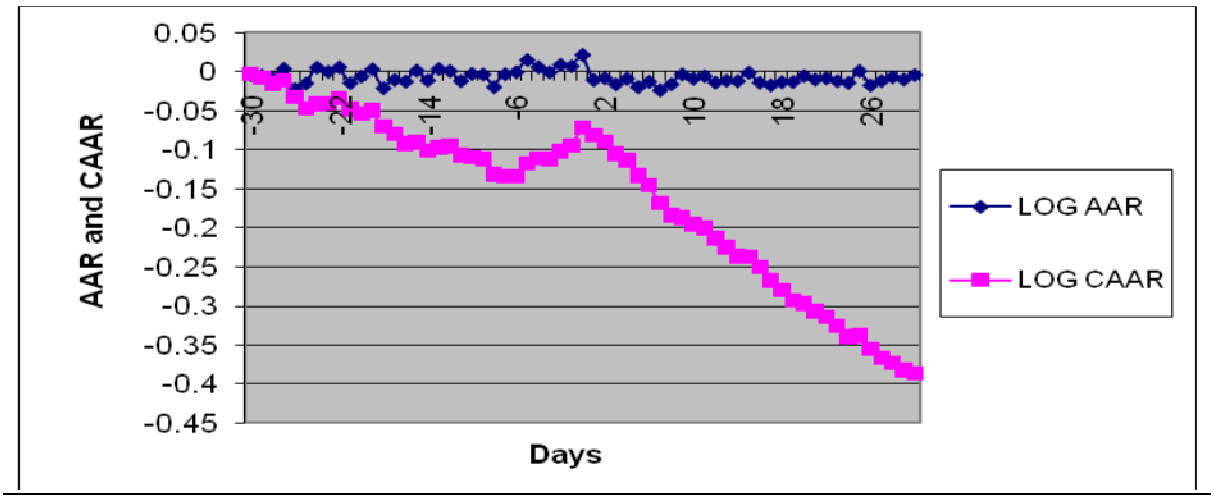
CAAR's for Log Returns

Day	CAAR	z-Value	Day	CAAR	z-Value
-30	-0.00358	-3.06068	1	-3.28457	-9.70789
-29	-0.00779	-4.64492	2	-3.24811	-10.1667
-28	-0.01549	-4.99722	3	-2.40275	-10.4103
-27	-0.01104	-5.03019	4	-1.39838	-10.5246
-26	-0.03291	-7.54734	5	-3.39726	-10.9402
-25	-0.04737	-8.43173	6	-3.14695	-11.2811
-24	-0.04137	-8.25137	7	-4.69339	-11.9058
-23	-0.0408	-8.52268	8	-2.97987	-12.2233
-22	-0.03441	-8.31962	9	-2.24136	-12.4097
-21	-0.04842	-8.6477	10	-3.26171	-12.7669
-20	-0.05387	-8.50079	11	-2.579	-13.0417
-19	-0.05002	-8.17951	12	-2.47251	-13.263
-18	-0.07059	-8.96428	13	-3.81444	-13.6678
-17	-0.08045	-9.46021	14	-2.6801	-13.9338
-16	-0.09252	-10.0258	15	-0.65944	-13.8803
-15	-0.09053	-10.1592	16	-3.19843	-14.1934
-14	-0.10118	-10.8493	17	-4.22062	-14.651
-13	-0.09697	-10.9032	18	-2.17398	-14.823
-12	-0.0955	-10.843	19	-2.48563	-15.0461
-11	-0.1069	-11.328	20	-2.79199	-15.2988
-10	-0.10915	-11.4408	21	-2.97751	-15.5625
-9	-0.11205	-11.562	22	-3.06975	-15.8385
-8	-0.13124	-12.1672	23	-2.81685	-16.0928
-7	-0.13373	-11.976	24	-4.20958	-16.5155
-6	-0.13364	-11.8112	25	-1.39071	-16.5422
-5	-0.11786	-11.1344	26	-3.66133	-16.8849
-4	-0.11146	-10.9013	27	-2.76749	-17.1152
-3	-0.11157	-10.6068	28	-2.99555	-17.3583
-2	-0.10198	-10.3042	29	-2.25754	-17.512

-1	-0.09436	-10.0668	30	-2.07262	-17.6406
0	-0.07204	-9.3294			

Chart No. 2

AAR's and CAAR's for Buy back announcement For Log Returns



The study results reveal that AAR's are negative for 17 days and positive for 13 days before the announcement of shares buyback, where as they are negative for 29 days and positive for 2 days after the announcement of stock buyback. During the whole event period, AAR's are negative for 46 days and positive for 15 days. The movement of AAR's after the announcement reveals that the share price movements persist after the buyback announcement. AAR's are statistically significant for 16 days at 5 % level of significance and it is significant for 30 days at 1 % level of significance during the event window. CAAR's are negative and significant for the entire window period. CAAR's are positive and insignificance for shorter window at 1 % level of significance. It is insignificant at 5 % for shorter windows except for -5 to +5. We find persistence of negative trend in CAAR's for the longer windows period

CONCLUSION

The buyback of shares is the repurchase of its own shares by a company. Section 77 of the Indian companies Act prohibits the share repurchase by the companies. As a result of the companies (Amendment) Act 1999, a company in India can now buyback its own shares. Our study examines the stock price reaction to the announcement of buyback for the period 1996 to 2006. Examination of 106 buyback announcement reveal that buyback announcement have not provided any additional information to the market. Market has not found any news in the announcement as revealed by the continuing trend that started before the announcement. The absence of any change in the movement of stock price reaction to buyback reveals that market anticipates the information provided by these announcements and incorporates this before the announcement.

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Appendix

List of Company

SL.NO	COMPANY NAME	ANNOUNCEMENT DATE
1	A D F Foods Ltd.	29/07/2003
2	Aarti drugs ltd	1/12/2002
3	Aarti Industris ltd	7/5/1999
4	Abbott India Ltd.	12/4/2002
5	Acce Software Exports Ltd.	2/7/2003
6	Addi Industries Ltd.	3/9/2002
7	Aditya Birla Nuvo Ltd.	16/08/1999
8	Ador Welding Ltd.	22/01/2002
9	Advik Laboroties Ltd.	1/10/2003
10	Aegis Logistics Ltd.	13/09/2001
11	Apar Industris Ltd.	1/9/1999
12	Apollo Finvest Ltd.	21/09/2004
13	Avery India Ltd.	10/12/2003
14	Balrampur Chini Mills Ltd.	24/12/2001
15	Berger Paints India Ltd.	28/04/2005
16	Bhagyanagar India Ltd.	22/04/1999
17	Blue Dart Express Ltd.	18/08/2006
18	Blue Star Ltd.	23/11/2001
19	Britannia Industries Ltd.	14/06/2001
20	Carborundum Universal Ltd.	1/7/2000
21	Carol Info Services Ltd.	11/6/2005
22	Century Enka Ltd.	9/5/2005
23	Cera Sanitaryware Ltd.	7/7/2006
24	Continental Controls Ltd.	27/07/2002
25	Coral Laborotories Ltd.	1/6/2002
26	Coromondel Fertilisers Ltd.	6/4/1999
27	Cybertech Systems & Software Ltd.	18/08/2000
28	D I L Ltd.	19/03/2005
29	Deepak Fertilisers & Petrochemicals Corporation Ltd.	29/04/2002
30	Ema India Ltd.	30/07/2001
31	Essel Propack Ltd.	29/06/1999
32	Exide Industries Ltd.	1/11/2001
33	F D C Ltd.	6/6/2001
34	Fine-Line Circuits Ltd.	16/05/2003
35	Finolex Industries Ltd.	28/11/2000
36	Fortune Financial Services(India) Ltd.	6/10/1999
37	G G Dandekar Machine Works Ltd.	8/1/2002

38	Gandi Special Tubes Ltd.	29/05/2000
39	Garden silk Mills Ltd.	28/06/2002
40	Genus Commu-Trade Ltd.	9/7/2002
41	Glaxosmithkline cosumer Healthcare Ltd.	2/12/2004
42	Godrej Commodities Ltd.	2/7/2002
43	Godrej Industries Ltd.	25/02/2002
44	Goldiam International Ltd.	11/10/1999
45	Great Eastern Shipping Co. Ltd.	31/10/2000
46	Gujrat Petrosynthese Ltd.	19/07/2003
47	H B L Power Systems Ltd.	17/04/2002
48	Heritage Foods (India) Ltd.	1/1/2002
49	I C I India Ltd.	18/07/2006
50	I V P Ltd.	29/06/2001
51	Ind-Swift Ltd.	10/6/2005
52	Indian Hume Pipe Co. Ltd.	28/06/2002
53	Indian Oil Corpn. Ltd.	13/10/2004
54	Indian Resort Hotels Ltd.	29/01/2002
55	Infomedia India Ltd.	11/1/2006
56	Jay Shree Tea & Inds. Ltd.	25/01/2000
57	Kesoram Industries Ltd.	28/04/2000
58	Khoday India Ltd.	17/02/2001
59	Kirloskar Brothers Ltd.	16/07/2001
60	Kirloskar Oil Engines Ltd.	25/04/2003
61	L G Balakrishnan & Bros. Ltd.	24/10/2002
62	Lakhani India Ltd.	6/10/2001
63	Mac Charles (India) Ltd.	25/08/2003
4	Manna Glass-Tech Inds. Ltd.	1/7/2002
65	Manugraph India Ltd.	2/7/2001
66	Mastek Ltd.	10/5/2004
67	Mazda Ltd.	4/10/2001
68	Moh Ltd.	12/10/2001
69	Monsanto India Ltd.	25/04/2003
70	Mphasis Ltd.	10/9/2005
71	Nagreeka Exports Ltd.	30/01/2004
72	Natco Pharma Ltd.	6/9/2006
73	Novartis India Ltd.	14/06/2003
74	Numero Uno Projects Ltd.	11/7/2002
75	O C L India Ltd.	9/5/2001
76	Oil & Natural Gas Corpn. Ltd.	13/10/2004
77	Phoenix Lamps Ltd.	1/7/2002
78	Poddar Pigments Ltd.	26/07/2001
79	Polaris Software Lab Ltd.	27/04/2005
80	Prime securities Ltd.	30/06/2005
81	Punjab communications Ltd.	4/7/2003

82	Raymond Ltd.	6/1/2001
83	Reliance Industries Ltd.	12/4/2000
84	Revathi Equipments Ltd.	29/06/2006
85	Rishi Laser Cutting Ltd.	27/05/2002
86	S B & T International Ltd.	25/07/2006
87	S I L Business Enterprises Ltd.	26/11/2001
88	S R F Ltd.	2/9/2002
89	Sanwaria Agro Oils Ltd.	31/01/2002
90	Selan Exploration Technology Ltd.	27/09/1999
91	Shalibhadra Infosee Ltd.	27/04/2002
92	Siemens Ltd.	4/5/2001
93	Sirpur Paper Mills Ltd.	24/01/2002
94	Solitare Machine Tools Ltd.	4/5/2002
95	Sterlite Industries (India) Ltd.	1/11/2000
96	Sun Pharmaceutical Inds. Ltd.	28/10/2002
97	T T Ltd.	31/07/2002
98	Tata Chemicals Ltd.	13/08/2001
99	Titanor Components Ltd.	25/04/2003
100	Toyama Electric Ltd.	6/11/2003
101	United Credit Ltd.	3/5/2002
102	Venky's (India) Ltd.	9/9/2002
103	vital Communications Ltd.	4/6/2002
104	Winsome Yarns Ltd.	29/09/2000
105	Zenith Computers Ltd.	28/09/2001
106	Zenith Infotech Ltd.	28/09/2001
