MARKET REACTION TO MULTIPLE BUYBACKS IN INDIA

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Abstract

This paper examines the characteristics of share repurchasing firms and market reaction to multiple offers in India. The study finds limited offers of multiple repurchases. Only 30% of initial repurchasers return to the market with the offer of second share buyback with an average time gap of 1.64 years. Large firms with more variable operating income, lower MTB ratios and paying lower dividends are frequent repurchasers while small firms with stable operating income, higher MTB and payout ratios are infrequent repurchasers. Market reaction to multiple offers is in contradiction to signalling hypothesis predictions. The initial or infrequent repurchasers earn lower announcement day returns than frequent or subsequent repurchasers. Further, the overall Cumulative Abnormal Return (CAR) is negative in post-offer period indicating that all positive returns are realised in pre-offer period only. We conclude that rather than signalling hypothesis, market reaction to subsequent buybacks is better explained by free cash flow hypothesis.

Key words: Share Repurchases, Signalling, Multiple Buybacks, Average Abnormal Returns, and Cumulative Abnormal Returns.

1. Introduction

The extant literature available on share buybacks in UK and US is vast and wide. They have been thoroughly examined by various researchers in the West. Various aspects like motives, announcement returns and their determinants, post-offer operating performance, timing of buyback announcement, etc., have been analysed and examined. The increased interest of academia on buybacks is on account of increased use of share buybacks or share repurchases by companies in distributing cash amongst the stockholders. The dividends are now less preferred methods of returning cash as compared to share repurchases (Skinner, 2008). The expenditure on share repurchase programmes (relative to total earnings) increased from 4.8% in 1980 to 41.8% in 2000. Further, the share repurchases grew at an average annual rate of 26.1% over the period 1980-2000 while dividends grew at an average annual rate of 6.8% (Grullon and Michaely, 2004). According to Standard & Poor's, share repurchases of S&P 500 companies amounted to nearly EUR 400 bn. in 2007, which is more than double the amount of dividend payouts (Wolfgang et al. 2009).

The signalling hypothesis has been viewed as a basic explanation for the share repurchases (Vermaelen, 1981; Dann, 1981; Comment and Jarrell, 1991; D'Mello and Shroff, 2000; Ikenberry et al. 1995; Stephens and Weisbach 1998, etc). According to this hypothesis, manager's employ repurchases to reduce information asymmetry and signal their desire for improved market valuations. The announcement of premium buybacks conveys to the market the managers' confidence that the share is worth more than current market value

and also relating to the fundamentals or the future increase in cash flows of the firms. Jensen (1986), Grullon and Michaely (2004) and Lie (2004) support the agency theory as an explanation for the use of share buybacks by firms. Share repurchases redistributes cash flow from managers to shareholders and resolves the agency conflict over the use of excess funds. Jensen and Meckling (1976) argue that managers would have all incentives to over invest excess funds or consume them in the form of perquisites. The reduction in cash forces managers to resort to market borrowing or issue shares and subject them to market regulation. Kahle (2002), Chan et al. (2004), Babenko (2009), etc., find evidence to an alternate hypothesis that firms use buybacks to fund the exercisable stock options of executives and employees. Capital structure, taxes, dividend substitution, pre-empting hostile takeovers, etc., are other explanations given by the researchers.

Studies carried out in US and other countries find an average Cumulative Abnormal Return (CAR) of 2.5% to 3% around the date of announcement of buybacks (Comment and Jarrell, 1991; Ikenberry et al. 1995; Grullon and Michaely, 2002). The empirical research also indicates that open market repurchases (OMRs) are the popular methods of distributing cash as compared to fixed price tender offers (FPTs). Grullon and Ikenberry (2000) and Fairchild (2006) find that OMRs account for 90% of share buyback programmes in US.

Though value maximising properties of share buybacks are well documented, there are studies, which cast doubts over signalling power of repurchases carried through OMRs. Chan et al. (2006) conclude that OMRs are used to mislead market. OMRs are viewed as costless signalling mechanisms as firms are under no obligation to complete them. In fact, OMRs are rarely completed. On average, firms take three years to complete OMRs (Jagannathan and Stephens, 2003). Comment and Jarrell (1991) find a CAR of only 2.3% for OMRs as against 11% for FPTs.

2. Review of Literature

Relatively speaking, multiple repurchase offers have received less research interest in both US and India. Jagannathan and Stephens (2003) analyse motives and market reaction for a sample of 3,598 distinctive OMR multiple announcements. The study concludes that motives vary across multiple buybacks. Frequent repurchasers are much larger, have significantly less variation in operating income and adopt higher dividend payout ratios. The frequent repurchasing firms may be using regular repurchases as a substitute for increasing dividends, but are unlikely to be repurchasing shares because the firm is undervalued. Smaller firms with potentially high degrees of asymmetric information make infrequent repurchases. Infrequent repurchases tend to be preceded by relatively poor market performance, have more volatile operating income, and significantly lower institutional ownership and significantly higher managerial ownership. Further, infrequent repurchasers have lower market-to-book ratios, suggesting that they are more likely to be undervalued.

The market reactions to the repurchase announcements are consistent with these ideas; infrequent repurchases are greeted much more favourably than more frequent repurchases. The announcement of a first or infrequent repurchase programme is accompanied by

abnormal returns averaging about 3.4%; the subsequent repurchase programmes result in significantly lower abnormal returns. The average abnormal returns around the announcement of second and third repurchase programmes in five years are only 2% and 1.1% respectively.

Skjeltorp (2004) analyses the market reaction to share repurchases by Norwegian companies for 1998-2001 period and finds statistically significant two-day CAR of 0.88% for 100 companies announcing first repurchase. For subsequent repurchases, the CAR shows a decreasing trend. The CAR for second buyback of 81 companies is 0.39%. The CAR becomes negative when 22 Norwegian companies announce 10th buyback. Howe and Jain (2006) study share repurchase programmes of banks in US and find a CAR of 1.86% for first buyback, 2.15% for second buyback and 0.50% for third buyback, which is statistically insignificant.

India has few cases of buyback announcements and academic studies. Gupta (2006) finds significant CAR of 12.89% for 46 buybacks for 61-day event period. The announcement day average abnormal return (AAR) is 1.68%, significant at 1% level. Mohanty (2002) analyses 12 buybacks and finds an AAR of around 0.56% on the announcement day and an overall CAR of 11.26% for 61-day event period. Mishra (2005) finds that the positive announcement day returns are not sustained on long-term basis and market price in post-offer period falls to the pre-offer level. Kaur and Singh (2003) and Thirumalvalvan and Sunitha (2006) too analyse the market reaction to buybacks in India.

Gupta (2006) makes an attempt in his study to find the announcement returns for seven subsequent repurchases. He observes a decline in the AAR for -1, 0 and +1 days for five companies announcing second repurchase programme as compared to first repurchase announcement.

We feel a broad and scientific analysis of multiple offers of repurchases in India is conspicuous by its absence. The study fills this vacuum. Besides, repurchases should have a rationale and wealth effects. The first and other subsequent buybacks must benefit shareholders who stay back with the firm. A buyback, which benefits more the departing than staying shareholders, is an unfriendly shareholder action. An understanding on these lines is the basic lesson for managers before employing multiple offers. We feel our analysis would provide some valuable insights in framing a desirable payout policy.

3. Multiple offers of repurchases

In recent years, firms are repurchasing shares on a frequent or regular basis. We term such frequent announcements as multiple buybacks. This necessitates an understanding of the reasons for multiple offers and the extent of wealth generated, in the form of excess returns, by all these offers. Multiple offers may have varied motives. Market signalling can be a motive. However, it is unlikely that a firm could credibly signal that its stock is undervalued on a regular basis (Jagannathan and Stephens, 2003). Cash flow distribution may be another motive. The cash flow may be operating or non-operating. Jagannathan et al. (2000) find evidence that repurchasing firms link their repurchasing decisions to non-operating cash flow. They find that firms use regular and operating cash flows to pay

dividends and non-operating cash flows to announce repurchases. Therefore, it can be hypothesized that multiple offers may be used to payout non-operating cash flows generated on a regular basis. The success or failure of initial offer would also decide the firm's decision to announce multiple offers. Firms failing to buy the intended quantity of shares in first offers may be little hesitant to announce subsequent offers. On the other hand, those firms repurchasing more shares than originally announced initiate subsequent repurchase programmes or announce expansion of their existing programmes (Jagannathan et al., 2000). Multiple offers may be motivated by desire to finance the exercisable stock options. Studies show that the propensity of managers to repurchase shares increases with the incentives of their employees (Kahle, 2002; Chan, et al., 2004; Babenko, 2009, etc). The use of repurchases for stock options is viewed as anti-dilutive as compared to fresh issue of shares (Babenko, 2009). Some of the motives may be hidden and will become apparent in the long run. Several MNCs in India delisted their entities from bourses through a series of buyback offers (Muralidhar, 2002; Murthy, 2002). Notable among them are Phillips India Limited, BOSCH, Cadbury Limited, Oatis Elevators, etc.

Besides motives, multiple offers needs to be examined from wealth perspective. How do markets react to multiple offers? Do all announcements generate equal positive returns? Studies in US and other countries show that infrequent repurchasers earn higher returns than frequent repurchasers. Signalling ability decreases with the increase in number of offers. Subsequent offers may have less to signal than initial offers. We attribute this to reduced information asymmetry between managers and shareholders in subsequent offers. Information asymmetry exists because managers, being insiders, have better understanding of the firm's financials than investors and repurchases are used to convey this understanding. Frequent repurchasing reduces this gap to a considerable extent. The market will discount the managers' conviction that shares are undervalued. Even the free cash flow hypothesis would fail to hold good as the increased cash distributions may signal negatively. It may signal that the firm is matured and has no growth prospects.

The share buybacks in India are of recent phenomenon. The Companies Act, 1956 was amended in October, 1998 for permitting buyback of shares by Corporate India. Three new sections, namely, 77A, 77B, and 77AA, were added. The Securities and Exchange Board of India (SEBI) is the market regulator for buyback decisions of firms. As per SEBI's Status Report on buybacks, 149 offers of buybacks have been made in India till 31st March 2008. Several cases of multiple announcements have also been observed. We aim to find the characteristics of Indian firms announcing multiple offers and the return generated by such offers. Multiple offers may be completed either through OMR or FPT methods. Since signalling ability differs between the methods, we analyse returns generated method-wise also.

The remainder of the paper runs as follows: Section 3 reviews earlier literature while section 4 is used to explain the research methodology. We use section 5 to analyse the progress of buybacks in India and Section 6 to analyse the market reaction to repurchase announcements. Section 7 accounts for method-wise market reaction to multiple offers. Section-8 concludes.

4. Research Methodology

The SEBI's Status Report on Buybacks in India shows 149 offers till 31st March 2008. We use this official report in computing excess returns for multiple buybacks. A list of 79 announcements out of 149 has been selected for analysis of market reaction and the following two criteria are used for inclusion in the sample:

- Availability of public/media announcement date
- Price data for all trading days included in estimation and event periods.

The reconciliation of sample units with total announcements is provided in subsequent pages. The study uses market model for computing abnormal returns involved in buyback announcements. According to this model, the abnormal returns on a given trading day, t, for a given security, i, are computed by the following formula:

$$AR_{it} = R_{it} - \hat{\alpha}_i - \hat{\beta}_i R_{mt} \quad (1)$$

Where AR_{it} is the abnormal return for firm/security *i* on day *t*; R_{it} is the return on security *i* on day *t*; R_{mt} is a proxy measure of the return on the market portfolio and $\hat{\alpha}_i$ and $\hat{\beta}_i$ are OLS estimates of the market model parameters and are intercept and beta coefficients of security *i* respectively. We estimate the values of various parameters using the following equation:

$$R_{it} = \hat{\alpha}_i + \hat{\beta}_i R_{mt} + \hat{\varepsilon}_{it} \quad (2)$$

R_{mt} is estimated using BSE-500 index as a proxy for market portfolio and $\hat{\varepsilon}_{it}$ is a statistical error having a zero value. Since BSE - 500 index was started only on 9th August 1999, we exclude all announcements made prior to this date. An estimation period of 200 days is used for predicting the parameters of market model. In addition to 41-day as event window, we use short-windows like 3-day, 5-day, 7-day, 11-day and 21-day. A 41-day event period includes 20 days before announcement (-20 days), announcement date (0) and 20 days subsequent to announcement date (+20 days).

The required information for the study was primarily accessed from CMIE Prowess database. Earlier, public or media announcement date was taken as announcement date. The adjusted daily closing share prices of sample offers are employed for computing excess announcement returns. (Appendix-1 gives the names of sample companies along with their media or public announcement dates)

The average abnormal return (AAR) on day *t* for all firms in the sample is given by the following formula:

$$AAR_t = \frac{\sum_{t=1}^{n} AR_{it}}{N} \quad \text{Where N is the number of firms in the sample} \quad (3)$$

The average daily returns are cumulated over the window period to compute cumulative abnormal return (CAR) using the following formula:

$$CAR = \sum_{t=-d}^{d} AAR_{it} \quad (4)$$

Where -d; d represent the event or window period.

To test the null hypothesis that CAR on the announcement day is not equal to zero, the t-test is computed as given below:

$$t = \frac{CAR}{\hat{S}(CAR_t)} = \frac{\overline{CAR}}{\sqrt{N}\sum_{t=1}^{n}\hat{S}(CAR_t)} \quad (5)$$

Where $\overline{CAR} = \frac{\sum_{t=id}^{d} CAR_t}{N}$ and $\hat{S}(CAR_t) = \sqrt{\sum_{t=-d}\left(CAR_t - \overline{CAR}\right)^2}$

In addition to testing the significance of CAR, the study employs t-test or z-test values for judging the significance of daily average returns in 41-day window period. For this purpose, the study employs the approach used by Gupta (2006; 2008). The standard deviation of abnormal returns for the estimation period -220 days to -21 days has been computed. The Standardised Abnormal Returns (SAR) for each company is estimated by dividing abnormal returns of the event period, i.e., -20 to +20 by the standard deviation obtained. For the event day t, the Z-statistic for the AARs on N securities is calculated as:

$$Z_t = \sum_{t=1}^{N} SAR_{it} / \sqrt{N} \quad (6)$$

The AAR and CAR are analysed in the study for:

- All buyback announcements of companies for which complete information is available
- First buybacks and subsequent buybacks
- Companies with only one buyback and companies with more than one buyback announcement
- First, second, third buyback, etc.
- Different methods of buyback employed in both first & subsequent buybacks

5. Progress of buybacks in India

5.1 Reconciliation of sample offers with total offers

Table 1: Information relating to total announcements and their reconciliation with sample size

I	Companies Completing Buyback	
	Fixed Price Tender Offers	29
	Open Market Repurchases	87
II	Companies advised not to Proceed	20
III	Buybacks withdrawn	08
IV	Companies yet to complete buybacks	05
	Total	149
	Sample Selected	79
I	Fixed Price Tender Offers - 20	
	Open Market Repurchases - 59	
II	Companies Advised not to Proceed	20
III	Buybacks withdrawn	08
IV	Listed on other stock exchanges	09
V	Estimation period being less than 200 days	22
VI	Price data not available	10
VII	Lack of announcement date	01
	Total	149

Source: SEBI's Status Report on Buybacks, March 2008

The list of 149 announcements includes 20 buybacks advised by SEBI 'not to proceed ahead for some technical reasons' and 8 are withdrawn offers (notably 2 buybacks of Reliance Industries Limited), leaving only 121 as effective announcements. Complete information is available in respect of 79 buybacks. 42 announcements are left out on account of non-availability of announcement dates and price data for estimation and/or event period, listing on other stock exchanges, non-availability of a broad-based proxy index prior to BSE-500 index, etc. A reduction in estimation period to 100 days saw an increase in sample size to 89 offers. However, for the robustness of the values of the parameters used in the market model, we dropped the idea of reducing estimation period and retained the earlier estimation period of 200 days and a sample size of 79.

Table 2: First and Subsequent Buybacks

Buybacks	Total	Sample	% of Sample to Total
First	107	47	43.93
Second	31	22	73.33
Third	07	06	75.00
Fourth	02	02	100.00
Fifth	01	01	100.00
Sixth	01	01	100.00
Total	149	79	53.20

Source: Computed from SEBI's Status Report, March 2008

There are 107 first-time buyback offers in India out of 149 total announcements made during October, 1998 and March, 2008. The subsequent buybacks are only 42, which include 31-second offers. We have almost two offers of second buyback for every seven initial offers. In other words, around 30% of initial repurchasers return to the market with second offers. The subsequent offers include seven offers of third buybacks and the ratio appears as one offer of third buyback for every four offers of second buyback. In other words, 25% of second-time repurchasers return with third buyback. This clearly shows buybacks are yet to make serious inroads into the corporate sector of India. In fact, Selan Exploration Technology Limited (SETL) and Godrej Consumer Products Limited (GCPL) are the only two companies announcing more than 3 buybacks in India. The GCPL has made 6 buyback offers. The sample size of 79 offers constitutes 53% of total offers and 66% of effective 121 offers. We include 44% of first offers; 68% of second offers; 88% of third offers and 100% of fourth, fifth and sixth offer.

Table 3: Classification of 79 sample buybacks into infrequent buybacks and frequent buybacks

I	Infrequent buybacks/Only one buyback	33
II	Frequent buybacks/More than one buyback	
	First	14
	Second	22
	Third	06
	Fourth	02
	Fifth	01
	Sixth	01
	Total	79

Source: Computed from SEBI's Status Report, March 2008

We define infrequent buybacks as one-time announcements. The frequent buybacks are those where first offer is followed by subsequent offers of buyback. The sample includes 33 infrequent/single announcements and 46 frequent/more than one announcement. The frequent buybacks include 14 first and 22 second offers. For difficulties stated already, every second offer does not have a first offer in the sample size.

5.2 Average time gap between various announcements

We compute the average time-gap between first and second offers and so on of frequent repurchasers by computing the time-gap between the two offer dates. This has been done to know how frequently Corporate India announces its subsequent offers.

Table 4: Average time gap in buyback announcements

	Average	Median
First and second buyback	598	473
Second and third buyback	549	449
Third and fourth buyback	338.5	338.5
Fourth and fifth buyback	184	184
Fifth and sixth buyback	169	169

Source: SEBI's Status Report, March 2008

The Indian companies, on average, take 1.64 years (598 days) to announce second buyback offer. However, this average time gap decreases with the increase in number of subsequent offers indicating that frequent repurchasers take a liking for further offers. The average time gap between second and third announcements is 1.5 years (549 days) while a fourth announcement is made within one year after the third announcement. Only GCPL has made six announcements in India and the company makes fifth and sixth announcements with a time gap of 6 months. Jagannathan and Stepehens (2003) find for US that firms that repurchase most frequently do so, on average, every 463 days (median of 370 days). Firms that repurchase only occasionally do so approximately every 794 days (median of 679 days), and firms that repurchase infrequently do so only about every 2,663 days (median of 2,471 days).

5.3 Quantum of buyback

The provisions of buyback offers in India permit companies to buy back 25% of the paid-up share capital in a given year. There is no bar on a company in announcing multiple offers in a year provided the 25% limit is not exceeded. Who would repurchase more shares - the frequent or infrequent repurchasers? Studies show that the infrequent repurchaers buy in large numbers than frequent repurchasers. The frequent repurchasers alternate share buybacks to dividends in distribution of cash and employ OMRs. For them buybacks are seen more as methods for absorbing the temporary shocks in cash flows

(Guay and Hardford, 2000). Skinner (2008) observes that firms increasingly use repurchases to absorb the variation in earnings. The motives of infrequent repurchasers are either to ward off imminent threat of takeovers or correct market under pricing by buying larger quantities of outstanding shares through FPTs. Jagannathan and Stephens (2003) find for their sample of US companies that infrequent repurchase programmes are significantly larger than the more frequent repurchase programmes; on average, firms that repurchase infrequently are seeking to acquire almost 8% of their outstanding stock, while firms that repurchase occasionally and frequently are seeking to acquire 7.1% and 6.7% of their outstanding stock respectively. Table 5 gives data relating to quantity of share buybacks in India:

Table 5: Quantum of buybacks in first and other buybacks

	Less than 10%	>10% but <15%	>15% but <20	> 20% but <25%	Total
First	44	19	07	14	84
Second	15	08	02	01	26
Third	05	---	--	02	07
Fourth	02	--	--	--	02
Fifth	01	--	--	--	01
Sixth	01	--	--	--	01
Total	68	27	09	17	121

Source: SEBI's Status Report, March 2008

The Indian evidence is contrary to the findings of Jagannathan and Stephens (2003) for US. Majority of frequent and infrequent repurchasers in India buy in smaller quantities. 56% of effective offers (121) buy less than 10%. Only 17 offers buy in the range of 20% and 25%; of them 14 offers are first-time offers. The SETL and GCPL bought less than 10% in subsequent buybacks.

Table 6: Quantum of buybacks by the sample offers

	Less than 10%	> 10% but <15%	> 15% but <20%	> 20% but <25%	Total
First	30	8	4	5	47
Second	16	5	1	-	22
Third	5	---	-	1	06
Fourth	2	-	-	-	02
Fifth	1	-	-	-	01
Sixth	1	-	-	-	01
Total	55	13	05	06	79

Source: SEBI's Status Report, March 2008

We find 79% of sample announcements buying less than 10% of outstanding stock. The frequent repurchasers are more in this category. Only six announcements, who are infrequent repurchasers, buy in the range of 20% and 25%.

Why do firms in India buy in smaller quantities? The firms that repurchase in smaller quantities are also dividend-paying firms (Jagannathan and Stepehens, 2003). Do Indian firms repurchase and pay dividends? An empirical research on this line is very much required. The smaller quantities of share buybacks point to certain characteristics of Corporate India. The Corporate India is yet to view buybacks as a significant part of firm's overall payout policy. We may view this sceptical approach to inhibiting provisions of buybacks in India. Some of these restrictions include prohibition on promoters from selling their holdings in open offers; ban on negotiated deals and treasury operations; physical destruction of securities within seven days of repurchase, etc. A relaxation in some of these norms would see an upswing in the quantum of buybacks.

5.4 Methods of buybacks employed

A buyback may be completed either through open market route or through tender offers. The SEBI permits other buyback methods also. The open market repurchases (OMRs) dominate the US buyback activity. Almost 90% of US buybacks are done through OMRs (Grullon and Ikenberry, 2000). Do buyback methods vary between frequent and infrequent repurchases? The infrequent repurchases are generally accomplished through FPTs while frequent repurchases are done through OMRs. For frequent repurchasers, the buyback is a substitution to dividend and would prefer to use less powerful and non-serious method of buyback, i.e., OMRs.

Table 7: Methods of buyback in sample

	OMRs	FPTs	Total
First	34 (72)	13 (28)	47 (100)
Second	16 (73)	06 (27)	22 (100)
Third	05 (83)	01 (17)	06 (100)
Fourth	02 (100)	--	02 (100)
Fifth	01 (100)	--	01 (100)
Sixth	01 (100)	--	01(100)
Total	59 (75)	20 (25)	79 (100)

Source: SEBI's Status Report, March 2008

The figures in parenthesis are percentages

OMRs account for 75% of total sample size considered by the present study. We observe OMRs dominating in both first and subsequent repurchases. The third, fourth, etc.,

repurchasers use only OMRs. This Indian evidence is in conformity with the US evidence. The dominance of OMRs generally points out that firms in India may be using buybacks more to distribute free cash flow than to correct market undervaluation. We are able to conclude like this because of the nature of OMRs and FPTs. OMRs are weak in signalling and are better employed in the world for cash flow distribution.

5.5 Characteristics of firms announcing frequent and infrequent repurchases

We present repurchasing firms characteristics in Table 8 by classifying firms into frequent and infrequent repurchasers. The detailed methodology is elaborated in the exhibit. We compiled all statistics from CMIE Prowess database for total assets, market-to-book value ratio (MTB ratio), total debt ratio, payout ratio, promoters and non-promoters holding and standard deviation of the ratio of operating profits to total assets. Jagannathan and Stephens (2003) make similar analysis for US infrequent and frequent repurchasers. They find frequent repurchasers are much larger, have significantly less variation in operating income and adopt higher payout ratio. These firms almost substitute dividends by repurchases and seldom announce repurchases for undervaluation reason. On the other hand, infrequent repurchases are motivated by undervaluation and are announced by smaller firms with high degrees of information asymmetry. The firms that repurchase infrequently have more volatile operating income; have significantly lower institutional ownership and significantly higher managerial ownership. Further, infrequent repurchasers have lower MTB ratios, suggesting that they are more likely to be undervalued.

Table 8: Characteristics of frequent and infrequent repurchasers

	Infrequent repurchases	Frequent repurchases
Total assets - prior to announcement year in Rs. Crores	961.70 (200.87)	2452.38 (243.59)
Market to book value ratio (times)	1.51 (0.41)	1.48 (0.58)
Total Debt Ratio (%)	40.96 (41.40)	38.81 (42.40)
Payout ratio (%)	44.43 (25.78)	19.48 (14.69)
Promoters' holding (%)	47.00 (48.83)	46.70 (47.58)
Non-promoters; holding	54.00 (51.17)	53.30 (52.42)
Standard deviation of Operating Profit	3.85 (2.87)	6.05 (3.39)

We use this table for identifying the firm characteristics around repurchase announcements. Both mean and median values are reported; medians are reported in parentheses. We compile all statistics from data obtained from CMIE Prowess Database. Total assets are the total assets in the year prior to the year of announcements (Year -1). The market-to-book ratio is the ratio of the market value of equity, given by the year-end price per share multiplied by the number of shares outstanding, to the book value of equity, which we calculate by multiplying the year-end book value per share by the number of shares outstanding. We define debt ratio as total debt divided by total assets. Promoters' holding and non-promoters' holding are the percentages of shares owned by promoters and non-promoters in Year -1. Payout ratio is the ratio of total equity dividend for the Year-1 divided by profits after tax in Year -1. The standard deviation of operating profits (PBIT) is the standard deviation of the ratio of operating profits (PBIT) to total assets measured over the 5-year from year -5 through Year -1.

The infrequent repurchasers are only 40% of the size of frequent repurchasers in India. In other words, frequent repurchasers are 2.5 times larger than infrequent repurchasers. The mean values of total assets for the infrequent and frequent repurchasing firms are Rs. 961.70 crore and Rs. 2,452.38 crore in the year prior to the announcement year (year -1) respectively. Jagannathan and Stephens (2003) find similarly for US repurchasing firms. They find that firms that repurchase frequently are about 30% larger than the firms that repurchase occasionally and occasional repurchasers are more than twice the size of the firms that repurchase infrequently.

Lintner (1956) argued that managers pay dividends out of long run, sustainable earnings. His model suggests that the dividend-paying firms are larger than non-dividend paying firms and have higher and more stable cash flows. Jagannathan and Stephens (2003) find evidence to Lintner model in their work. They find that most frequently repurchasing firms pay more dividends and have more stable operating income. Their evidence is also consistent with the findings of Jagannathan et al. (2000) who report that dividend paying firms have less variable income than repurchasing firms and may suggest that frequent repurchases are used as a substitute for dividends or dividend increases. Though Indian frequent repurchasers are larger firms, we did not find evidence to say that they also pay more dividends out of stable income. The average payout ratio is 19.48% for frequent repurchasers and 44.43% for infrequent repurchasers. Further, the frequent repurchasers have more variable operating income than infrequent or single share buyback companies. Even median value is higher for infrequent repurchasers. This may clearly indicate that Indian large firms are yet to employ share repurchases as substitutes.

The lower market valuation is one reason why some firms repurchase shares. Jagannathan and Stephens (2003) conclude that infrequent repurchases are more likely to be undervalued or at least more likely to be perceived as undervalued. They find a mean MTB ratio of 2.05 for infrequent repurchasers and 2.33 for firms repurchasing frequently. Compared to US firms, Indian frequent and infrequent repurchasers have lower MTB ratios. The MTB ratio of infrequent repurchasers is 1.51 and frequent repurchasers 1.48 times. We may conclude that both frequent and infrequent repurchasers in India have strong motive to buyback shares for undervaluation. The lower MTB ratio of Indian firms may also indicate

relative underperformance by Indian managers and/or market inefficiency.

The frequent repurchasers in India have more volatile operating incomes and pay lower dividends than infrequent repurchasers. Such firms may be paying lower dividends on account of uncertain operating income and use their large assets base to repurchase shares frequently for correcting market valuations and for other reasons. They may be repurchasing frequently out of excess non-operating cash flows. The higher dividend payout ratio of infrequent repurchasers may be explained to stable operating income and repurchase only when it has excess non-operating cash flows. We find evidence similar to Jagannathan et al. (2000) for infrequent repurchasers. They find that dividend-paying firms have more stable operating income and may repurchase to payout non-operating cash flows. An analysis of the composition of the asset-base and cash flows would throw a further light on Indian firms repurchase decisions.

Frequent and infrequent repurchasers may have alternative debt policies. The frequent repurchaser is a low-levered firm than infrequent firm and may use debt to reduce its bloated equity. Jagannathan and Stephens (2003) find evidence in support of this hypothesis. They find a lower debt ratio for most frequent repurchasers, although the differences are not statistically significant. The long-term debt to total assets ratio is 37.94% for frequent repurchasers and 32.63% for infrequent repurchasers and conclude that frequent repurchasers replace expensive equity by cheaper debt through repurchase announcements, i.e., a desire to move towards optimum debt-equity ratio. The total debt ratio for Indian firms is 38.81% for frequent repurchasers and 40.96% for infrequent repurchasers. We may restrain ourselves before commenting that Indian frequent repurchasers are low-levered firms and may be employing buybacks to achieve an optimum debt-equity mix. We feel a further research is warranted in this respect.

Ownership pattern would have different influencing behaviour on repurchasing firms. It is hypothesised that a firm having a greater percentage of institutional ownership is less likely to over invest in negative NPV projects. Such firms would be more frequent repurchasers. The watchful eyes of institutional investors would act as better governance mechanism. Jagannathan and Stephens (2003) find evidence in this respect. They find 50.92% of institutional ownership in frequent repurchasing firms and 37.71% in infrequent repurchasers. We analyse on similar lines for Indian repurchases using non-promoters' and promoters' holdings data and find no difference in promoters' holding between frequent and infrequent repurchasers. Since Indian firms are generally family-owned firms, we find a higher promoters' holding in both types of firms indicating Indian corporate governance problem is more of dominant versus minority shareholders than managers versus shareholders.

We conclude that Indian frequent repurchasing firms are larger firms with greater variation in operating income who would be announcing multiple repurchase plans for reasons including undervaluation. These firms are also low-levered and low-dividend paying firms. The infrequent repurchasing firms are small-size firms with lower variations in operating income. Being small in size, they face the greater degree of information asymmetry and announce repurchases to correct the presumed market undervaluation.

6. Analysis of Market Reaction

6.1 Announcement returns for overall sample

Table 9: AAR and CAR for 79 buybacks in 41-day window period

Days	AAR (%)	t-test	CAR (%)	% of Cos with +ve AAR
-20	0.23	0.88	0.23	54.43
-19	0.14	0.79	0.37	49.36
-18	-0.35	-0.39	0.02	41.77
-17	0.36	0.83	0.37	53.16
-16	-0.16	-0.44	0.21	46.83
-15	-0.18	0.06	0.04	44.30
-14	-0.18	-0.70	-0.14	44.30
-13	0.38	0.90	0.24	44.30
-12	0.15	0.87	0.39	45.56
-11	-0.50	-0.93	-0.10	36.70
-10	0.55	0.97	0.45	45.56
-9	0.35	1.01	0.80	45.56
-8	0.93	1.19	1.73	45.56
-7	0.62	1.43	2.35	46.83
-6	0.00	-0.57	2.35	44.30
-5	1.11	2.13**	3.46	55.69
-4	-0.43	-0.20	3.02	50.63
-3	0.31	0.55	3.33	48.10
-2	0.61	1.03	3.95	45.56
-1	0.40	0.43	4.35	45.56
0	2.73	6.28*	7.08	70.88
1	-0.18	-0.89	6.89	51.89
2	-0.84	-1.15	6.05	44.30
3	0.40	1.04	6.46	46.83
4	0.61	1.09	7.06	56.96
5	-0.21	-0.25	6.86	43.03

Days	AAR (%)	t-test	CAR (%)	% of Cos with +ve AAR
6	0.85	1.27	7.70	53.16
7	-0.77	-0.47	6.93	35.44
8	-0.10	-0.13	6.83	48.10
9	-0.91	-1.16	5.92	36.70
10	0.57	0.99	6.50	59.49
11	-0.43	-0.31	6.06	46.83
12	0.14	-0.16	6.20	46.83
13	0.30	0.07	6.50	40.50
14	-0.37	-0.56	6.13	40.50
15	-0.14	-0.22	5.99	48.10
16	-0.58	-1.10	5.40	44.30
17	-0.09	-0.25	5.31	48.10
18	0.63	1.37	5.95	54.43
19	-0.65	-1.64	5.30	40.50
20	0.60	1.25	5.90	53.16
Avg	0.14	0.36	3.91	
Std dev	0.65	1.30	2.76	
Sqrt	0.10	0.20	0.43	
t-test	1.68	1.79	9.07*	

*** and ** indicates significance level at 1% and 5% level respectively**

The announcement day (0 day) return for 79 buybacks is 2.73%, statistically significant at 1% level. The average abnormal return (AAR) tends to be negative in initial days prior to announcement date and becomes positive even before the announcement. The AAR is negative for majority of days after the announcement indicating that buyback euphoria is only a temporary phenomenon and fails to provide benefits over longer-time horizon.

The CAR on the announcement day is 7.08% while for the entire 41-day period it is 5.9%, significant at 1% level. The overall CAR falls by 1.18% in the post-offer period. The fall in CAR in post-offer period is attributed to negative movement in prices. The negative overall CAR in post-offer period is anathema to the signalling hypothesis, which predicts that the repurchase announcements are made to reverse the negative trend in market prices in pre-offer period. In other words, the signalling hypothesis predicts that all positive announcement returns are recorded in post-offer period than in pre-offer period. We find a contradictory result for India.

Vermaelen (1981) concludes that significant abnormal returns before the announcement can always be explained on the basis of information leakages or prior insider trading. Barclay and Clifford (1988) find the existence of insider trading in US as manager's use inside information to benefit at shareholders' expense. They find that bid-ask spreads widen when firms engage in a repurchase. Mohanty (2002) finds evidence for insider trading in pre-offer period for India. Subscribing Vermaelen's view, we suspect the insider-trading practices in India. The positive CAR in pre-offer period may also be attributed to listing norms of stock exchanges in India. These norms mandate companies to inform the concerned exchange, a week before, the date and agenda of the proposed board meeting where buyback decision would be considered. This particular norm may be playing a significant role in deciding the extent of CAR for Indian buybacks.

Since overall CAR decreases in post-offer period, we conclude that buybacks in India benefit only the short-term investor than the long-term investor. He who buys on -20th day and sells at the end of +20th day earns 5.9% for 41 days, an annualised return of 52%. On the other hand, an investor who buys on -10th day and sells on +6th day earns 7.25% (7.70% - 0.45%) for 16 days resulting into an annualised return of 156%. We also find how positive returns on the offer day are distributed among all the offers by computing percentage of positive AARs on the offer day to total offers and only 71% offers are showing positive AARs on the announcement day. This percent is the highest in the entire 41-day event period. For the remaining days it hovers in between 60% to 37%. This again proves that gains on account of buyback offers are not widely spread.

The results of our study are on higher side compared to US, UK, etc., studies. Vermaelen (1981) finds an abnormal return of 1% on the announcement day for OMRs; Ikenberry et al. (1995) find 3% and Grullon and Ikenberry (2000) 2.94%. Using UK data, Lasfer (2002) finds a CAR of 1.64%. Similarly, Rau and Vermaelen (2002) and Oswald and Young (2004) find a CAR of 1.14% and 1.95% respectively for UK companies. Li and McNally (2004) find 3.6% for Canadian buybacks for the period 1989-1992.

Gupta (2006) finds an AAR of 1.66% for 46 buybacks in India while this study finds an almost 3% average return. Mohanty (2002) finds an AAR of 0.56% for 12 buybacks on the announcement date. Thirumalvalavan and Sunitha (2006) find a CAR of 2.35% for a 5-day window period for a sample of 22 buybacks.

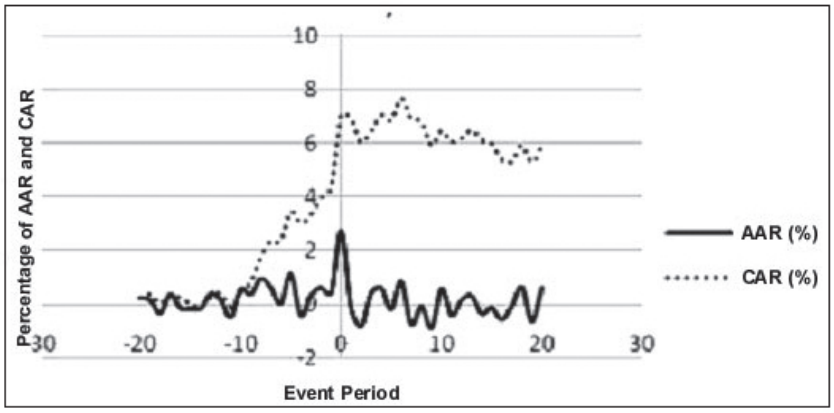

Fig. 1: Behaviour of AAR and CAR over 41-day window period

6.2 Announcement returns for first and subsequent buybacks

We subdivide the sample buyback offers into first/initial offers and subsequent offers. There are 47 first buybacks and 32 subsequent buybacks in the sample. We hypothesise that subsequent offers earn lower announcement day returns than initial offers.

Table 10: AAR and CAR for 41-day window period for all first and subsequent buybacks

Window Period	First Buyback (47)			Subsequent Buybacks (32)		
Days	AAR (%)	t-test	CAR (%)	AAR (%)	t-test	CAR (%)
-20	0.36	0.90	0.36	0.02	0.27	0.02
-19	-0.15	0.98	0.21	0.58	0.09	0.60
-18	-0.66	-0.93	-0.45	0.10	0.50	0.70
-17	0.66	1.01	0.21	-0.09	0.08	0.62
-16	-0.67	-0.82	-0.46	0.59	0.23	1.20
-15	-0.76	-0.33	-1.22	0.68	0.49	1.89
-14	-0.09	-0.01	-1.32	-0.30	-1.10	1.59
-13	0.14	0.96	-1.17	0.72	0.27	2.31
-12	0.03	-0.01	-1.15	0.34	1.41	2.65
-11	-0.49	-0.39	-1.63	-0.51	-0.95	2.14
-10	0.73	0.70	-0.90	0.29	0.76	2.43
-9	-0.10	0.06	-1.00	1.01	1.46	3.44
-8	1.89	2.62*	0.89	-0.47	-1.33	2.97
-7	0.55	0.93	1.43	0.73	1.14	3.70
-6	0.31	-0.39	1.74	-0.45	-0.45	3.25
-5	1.80	2.59*	3.54	0.09	0.15	3.34
-4	-0.80	-0.48	2.74	0.11	0.28	3.45
-3	0.38	0.40	3.11	0.21	0.46	3.66
-2	0.49	0.24	3.60	0.79	1.41	4.45
-1	0.67	0.57	4.27	0.08	-0.07	4.46
0	2.49	4.53*	6.76	3.09	4.37*	7.54
1	0.52	0.78	7.29	-1.22	-2.32**	6.32
2	-0.60	-0.74	6.69	-1.19	-0.89	5.13
3	0.64	1.43	7.33	0.06	-0.05	5.18

Window Period	First Buyback (47)			Subsequent Buybacks (32)		
Days	AAR (%)	t-test	CAR (%)	AAR (%)	t-test	CAR (%)
4	0.75	0.75	8.07	0.40	0.78	5.59
5	-1.05	-1.57	7.02	1.02	1.37	6.61
6	1.34	1.49	8.37	0.12	0.31	6.72
7	-1.47	-1.77	6.90	0.25	1.32	6.98
8	-0.27	-0.75	6.62	0.16	0.70	7.14
9	-1.17	-1.34	5.45	-0.52	-0.26	6.62
10	0.86	0.94	6.31	0.15	0.45	6.77
11	-0.85	-0.61	5.46	0.17	0.27	6.94
12	0.16	-0.59	5.62	0.12	0.46	7.06
13	1.03	1.45	6.65	-0.77	-1.60	6.29
14	-0.23	-0.03	6.42	-0.58	-0.88	5.70
15	-0.26	-0.30	6.16	0.03	-0.00	5.73
16	-0.91	-1.06	5.25	-0.10	-0.44	5.63
17	0.58	1.04	5.83	-1.08	-1.60	4.55
18	0.27	-0.20	6.10	1.16	2.43**	5.71
19	-0.53	-0.63	5.58	-0.83	-1.80	4.88
20	1.30	2.48**	6.87	-0.42	-0.98	4.47
Avg	0.17	0.34	3.65	0.11	0.16	4.30
Std dev	0.87	1.26	3.30	0.76	1.21	2.15
Sqrt	0.14	0.20	0.52	0.12	0.19	0.34
t-test	1.23	1.72	7.07	0.92	0.87	12.83*

*** and ** indicates significance level at 1% and 5% level respectively**

We find a higher AAR and CAR on the announcement day for subsequent buybacks than for first buybacks. This finding for Indian buybacks is contrary to US studies and rejects our hypothesis. The AAR on announcement for first buybacks is 2.49% while for subsequent buybacks it is 3.09%, both significant at 1% level. The announcement day CAR is 6.76% and 7.54% for first and subsequent announcements respectively. However, the trend is reversed on +1 day. The CAR of subsequent offers is 6.32%, lower than 7.29% noted for initial offers. For a 3-day interval (-1; 0; +1), initial offers are more profitable than subsequent. The 3-day overall CAR is 3.68% and 1.87% for initial and subsequent offers respectively. We observe wide fluctuations in CAR in post-offer period. The overall CAR for 41-day period is higher for initial offers (6.87%) than for subsequent offers (4.47%).

The 41-day overall CAR of initial offers is marginally (0.11%) higher than the announcement day CAR whereas for subsequent offers it falls by 3.07%. This signifies that subsequent offers record all their positive returns in pre-offer than in post-offer period and shows the existence of a greater degree of information leakage in subsequent than initial offers.

Further analysis of benefits from short-term and long-term investors' perspective shows that a short-term and more knowledgeable investor reaps more gains than a long-term and gullible investor. An investor who buys on -20th day and sells on +20th day, gains 61% in initial offers and 40% in subsequent offers on annual basis. On the other hand, an investor who buys on -10th day and sells on +6th day earns almost 200% in initial offers and 92% in subsequent offers on annual basis. This could point fingers at individuals who are privy to inside information gaining more than others.

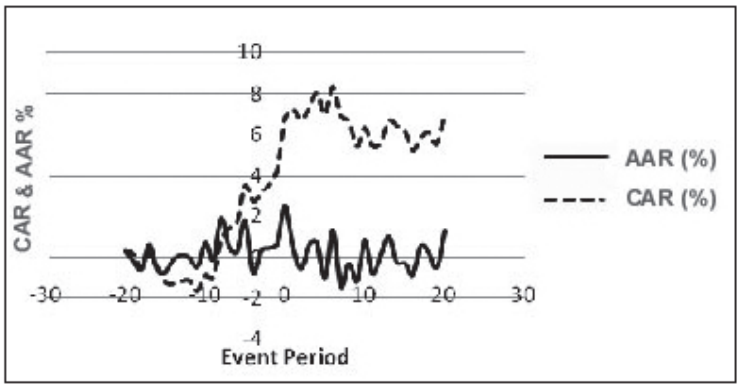

Fig. 2: Movement of AAR and CAR for the first buybacks over 41- day window period

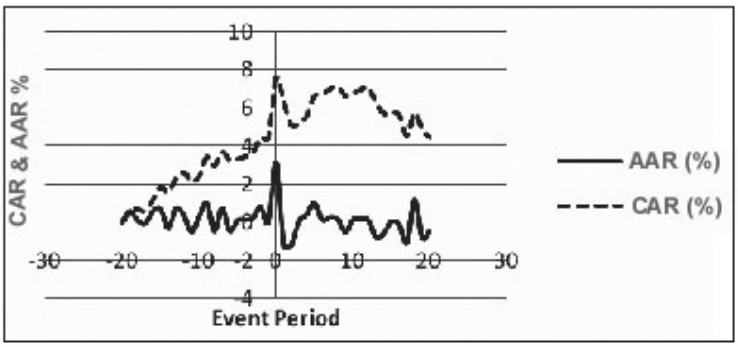

Fig. 3: Movement of AAR and CAR for the subsequent buybacks over 41- day window period

6.3 Announcements returns for infrequent and frequent buybacks

We have made a further classification of buybacks announcements into infrequent and frequent offers. Companies with single announcements are known as infrequent repurchasers and with more than one announcement as frequent repurchasers. The sample includes 33 infrequent and 46 frequent announcements. The frequent offers include 14 first and 32 subsequent buybacks.

Table 11: Returns involved in infrequent and frequent repurchase announcements

Days	Infrequent Repurchases (33)			Frequent Repurchases					
				First Buyback (14)			Subsequent Buyback (32)		
	AAR (%)	t-test	CAR (%)	AAR (%)	t-test	CAR (%)	AAR (%)	t-test	CAR (%)
-20	0.73	1.06	0.73	-0.50	0.02	-0.50	0.02	0.29	0.02
-19	-0.15	0.61	0.58	-0.16	0.86	-0.66	0.58	0.06	0.60
-18	-0.35	-0.82	0.21	-1.39	-0.44	-2.05	0.10	0.51	0.70
-17	0.72	1.27	0.95	0.51	-0.11	-1.54	-0.09	0.08	0.62
-16	-0.38	-0.64	0.57	-1.35	-0.52	-2.89	0.59	0.30	1.20
-15	-0.16	-0.05	0.40	-2.17	-0.53	-5.06	0.68	0.49	1.89
-14	0.00	-0.11	0.41	-0.32	0.14	-5.38	-0.30	-1.11	1.59
-13	0.03	1.04	0.44	0.40	0.17	-4.98	0.72	0.23	2.31
-12	-0.41	-0.51	0.03	1.05	0.76	-3.93	0.34	1.40	2.65
-11	-0.43	-0.48	-0.39	-0.62	0.02	-4.56	-0.51	-0.96	2.14
-10	0.94	0.98	0.55	0.24	-0.21	-4.31	0.29	0.67	2.43
-9	0.24	-0.25	0.78	-0.89	0.50	-5.21	1.01	1.51	3.44
-8	1.84	2.80*	2.62	2.00	0.51	-3.21	-0.47	-1.31	2.97
-7	0.52	1.01	3.14	0.61	0.16	-2.60	0.73	1.11	3.70
-6	-0.49	-1.33	2.65	2.21	1.32	-0.39	-0.45	-0.44	3.25
-5	1.06	2.06**	3.71	3.53	1.59	3.15	0.09	0.24	3.34
-4	-0.91	-0.52	2.80	-0.55	-0.09	2.60	0.11	0.24	3.45
-3	0.80	0.94	3.60	-0.63	-0.72	1.97	0.21	0.36	3.66
-2	0.22	0.23	3.82	1.12	0.09	3.09	0.79	1.37	4.45
-1	0.85	0.62	4.67	0.24	0.08	3.33	0.01	-0.02	4.46
0	2.47	4.27*	7.14	2.52	1.75	5.86	3.09	4.38*	7.54
1	0.64	0.87	7.78	0.26	0.09	6.11	-1.22	-2.34**	6.32
2	-0.74	-1.17	7.04	-0.26	0.44	5.85	-1.19	-0.89	5.13
3	0.93	1.08	7.97	-0.04	0.97	5.82	0.06	-0.08	5.18
4	-0.05	0.51	7.92	2.62	0.59	8.44	0.40	0.78	5.59

5	-0.79	-1.31	7.13	-1.65	-0.87	6.79	1.02	1.47	6.61
6	1.00	1.37	8.12	2.16	0.64	8.95	0.12	0.22	6.72
7	-0.96	-1.39	7.16	-2.67	-1.12	6.27	0.25	1.40	6.98
8	-0.36	-0.79	6.80	-0.06	-0.16	6.21	0.16	0.71	7.14
9	-0.75	-1.35	6.04	-2.16	-0.37	4.05	-0.52	-0.19	6.62
10	-0.21	-0.11	5.83	3.39	1.88	7.44	0.15	0.39	6.77
11	-0.48	-0.67	5.35	-1.71	-0.09	5.73	0.17	0.28	6.94
12	-0.01	-0.17	5.34	0.55	-0.83	6.28	0.12	0.44	7.06
13	0.55	1.19	5.89	2.14	0.82	8.42	-0.77	-1.63	6.29
14	-0.17	-0.16	5.72	-0.37	0.19	8.06	-0.58	-0.83	5.70
15	-0.02	0.02	5.71	-0.84	-0.57	7.22	0.03	0.04	5.73
16	-0.83	-0.69	4.88	-1.09	-0.88	6.13	-0.10	-0.45	5.63
17	0.50	0.88	5.38	0.76	0.55	6.89	-1.08	-1.64	4.55
18	0.21	-0.05	5.59	0.43	-0.28	7.31	1.16	2.40**	5.72
19	-0.06	0.02	5.53	-1.64	-1.19	5.68	-0.83	-1.81	4.88
20	0.90	1.79	6.44	2.23	1.80	7.90	-0.42	-1.035	4.47
Avg	0.16	0.29	4.07	0.19	0.17	2.64	0.11	0.16	4.30
Std dev	0.75	1.18	2.75	1.55	0.78	4.82	0.76	1.22	2.15
Sqrt	0.12	0.18	0.43	0.24	0.12	0.75	0.12	0.19	0.34
t-test	1.34	1.59	9.48*	0.80	1.38	3.51*	0.92	0.85	12.83

*** and ** indicates significance level at 1% and 5% level respectively**

The infrequent repurchases generate a return of 2.47% on the announcement day, lower than the return on frequent repurchases. The first buybacks of frequent repurchasers generates an announcement day return of 2.52% and subsequent offers a return of 3.09%, statistically significant at 1%. The overall CAR is higher for subsequent buybacks. The overall CAR decreases in post-offer period for infrequent repurchases and for subsequent offers of frequent repurchases.

These results are inconsistent with signalling hypothesis. Jagannathan and Stephens (2003) find a higher CAR for infrequent repurchases and a lower CAR for frequent repurchases. The subsequent buybacks have lower signalling strength than initial or first offers.

6.4 Announcement returns buyback-wise

Earlier analysis of returns clubs all offers of buyback into infrequent and frequent. Frequent offers include first and subsequent offers. Therefore, for better analysis of return, offers

are divided based upon the sequence of announcement, i.e., first, second, third, etc. We hypothesise that first offer of buyback will have a higher announcement day return than other offers. We present announcement returns for -1 to +1 days of the 41-day window in Table 12 and movement in overall CAR over several sub-periods of 41-day window period in Table 13.

Table 12: AAR on -1 to +1 days for all announcements

Days	I BB	II BB	III BB	IV BB	V BB	VI BB
-1	0.67	0.27	1.22	0.02	6.17	2.76
0	2.49	3.08	3.51	4.09	4.13	1.73
+1	0.52	-1.92	1.32	-0.54	-2.63	-0.02

Table 13: Movement of CAR for all buybacks in 41-day window

Days	I BB	II BB	III BB	IV BB	V BB	VI BB
-20; -11	-1.63	1.70	0.03	5.38	6.90	0.89
-10; -1	4.27	2.99	3.14	-7.83	10.74	4.49
0	6.76	7.27	6.67	1.65	21.77	-1.87
-1; +1	3.68	1.42	5.06	3.55	7.67	-1.04
-5; +5	5.28	2.68	5.21	1.76	17.16	-0.40
+1; +10	-0.35	-2.61	-0.75	4.64	11.46	6.13
+11; +20	0.56	-1.91	-4.58	-5.04	2.60	-0.96
+1; +20	0.11	-5.51	-4.24	-0.39	13.86	8.91
-1; +20	6.87	2.76	1.35	1.25	35.63	7.04
Average	3.65	3.48	2.43	1.52	22.00	1.94
Std dev	3.31	1.62	2.64	3.53	10.82	4.93
t-test	7.07*	13.81	5.91	2.75*	13.02*	2.52**

*** and ** indicates significance level at 1% and 5% level respectively**

The announcement day AAR has been positive for all buyback offers (Table -12). The second and other subsequent offers yield AAR greater than the first offer. There are positive returns both in -1 and +1 days. Exhibit -13 is useful to us in comparing announcement day CAR and overall CAR. Barring 5th and 6th announcements, overall CAR of first offers is higher than other subsequent offers. It is also lower than announcement day CAR indicating that positive returns are earned prior to the announcement of buyback decision. CAR is positive for all offers in -10 to -1 day pre-offer period as compared to +1 to +10 post-offer period. The overall CAR of all offers is statistically significant.

6.5 CAR for several window periods for first and subsequent buybacks

We employ several short-windows for better analysis of announcement returns for multiple offers. A 3-day window is a popular event window for measuring event returns (Gregory et al 2001). In addition, the study uses 5-day, 7-day, 11-day and 21-day event windows.

Table 14: Details relating to CAR for all these windows: Returns for first and subsequent buybacks over several windows

Window Periods	First Buybacks				Subsequent Buybacks			
	AAR on (0) day (%)	CAR on (0) day (%)	Overall CAR (%)	t-test	AAR on (0) day (%)	CAR on (0) day (%)	Overall CAR (%)	t-test
-1; +1	2.53	3.18	3.67	2.67*	2.75	2.69	1.65	1.78***
-2; +2	2.52	3.79	3.57	3.67*	2.74	3.25	1.01	2.89*
-3; +3	2.41	3.73	4.14	4.15*	2.75	3.42	1.36	3.28*
-5; +5	2.58	4.72	4.51	5.91*	2.74	3.58	2.73	4.20*
-10; +10	2.55	8.12	7.31	9.62*	2.79	4.68	3.74	8.58*
-20; +20	2.43	6.76	6.87	7.07*	3.09	7.54	4.47	12.83*

*** and *** indicates significance level at 1% and 10% level respectively**
Note: (0) day means announcement day

We find positive returns for all offers in all event windows. Though subsequent offers have higher AAR on the announcement day as compared to initial offers in all windows, the CAR of initial offers exceeds that of subsequent offers. Using announcement day AAR, we conclude that subsequent offers yield results in contravention to the predictions of signalling hypothesis. By and large, we find a lower overall CAR than the announcement day CAR, which again shows that returns from buyback offers to a considerable extent are influenced by listing disclosure norms and/or existence of insider trading.

7. Market reaction under different methods of buyback

An OMR differs from an FPT. An FPT is a buyback offer for a specific quantity of shares at a specific price. The offer price is generally at a premium to market price. It is well documented that the FPTs carry greater market signalling than OMRs. Chan et al. (2006) view FPTs to carry greater signalling and conclude that markets do not question the credibility of such programmes. Comment and Jarrell (1991) find 11% CAR for their sample FPTs as against 2.3% for OMRs.

The Indian companies employ OMRs more than FPTs. Nearly 2/3rd of buybacks are carried through OMRs.

Table 15: Market reaction to multiple buybacks classified by methods employed

Days	First Buybacks				Subsequent Buybacks			
	OMRs (34)		FPTs (13)		OMRs (25)		FPTs (7)	
	AAR (%)	CAR (%)	AAR (%)	CAR (%)	AAR (%)	CAR (%)	AAR (%)	CAR (%)
-20	-0.20	-0.20	1.84	1.84	0.07	0.07	-0.16	-0.16
-19	-0.28	-0.48	0.18	2.01	0.61	0.68	0.46	0.31
-18	-0.40	-0.88	-1.34	0.67	0.16	0.84	-0.10	0.21
-17	1.22	0.34	-0.81	-0.14	-0.17	0.67	0.21	0.41
-16	-0.92	-0.58	-0.02	-0.16	0.43	1.11	1.13	1.54
-15	-1.08	-1.66	0.07	-0.09	0.88	1.99	-0.02	1.52
-14	-0.23	-1.88	0.26	0.17	-0.36	1.63	-0.08	1.44
-13	0.65	-1.23	-1.18	-1.02	0.74	2.37	0.65	2.10
-12	-0.14	-1.38	0.47	-0.55	-0.02	2.35	1.63	3.73
-11	0.13	-1.24	-2.11	-2.66	-0.67	1.68	0.05	3.78
-10	0.13	-1.11	2.31	-0.35	0.06	1.74	1.12	4.90
-9	-0.16	-1.27	0.06	-0.29	1.51	3.25	-0.76	4.14
-8	2.01	0.74	1.55	1.26	-0.60	2.64	0.01	4.15
-7	0.68	1.43	0.18	1.45	0.68	3.32	0.93	5.08
-6	0.73	2.15	-0.77	0.67	-0.44	2.88	-0.51	4.57
-5	1.04	3.19	3.78	4.45	-0.93	1.95	3.75	8.32
-4	-0.38	2.81	-1.91	2.54	0.13	2.08	0.02	8.34
-3	0.58	3.40	-0.16	2.38	0.37	2.45	-0.37	7.96
-2	0.78	4.17	-0.26	2.12	0.88	3.33	0.50	8.47
-1	0.55	4.72	0.97	3.09	0.53	3.86	-1.87	6.60
0	2.29	7.01	3.01	6.10	3.30	7.16	2.32	8.93
1	0.41	7.42	0.83	6.93	-1.80	5.36	0.83	9.76
2	-0.57	6.85	-0.67	6.27	-1.45	3.90	-0.27	9.49

3	0.81	7.65	0.21	6.47	-0.21	3.69	1.02	10.51
4	0.65	8.31	0.99	7.46	0.58	4.27	-0.24	10.28
5	-0.81	7.49	-1.66	5.80	1.08	5.36	0.80	11.07
6	1.14	8.63	1.86	7.67	0.23	5.58	-0.28	10.79
7	-1.77	6.87	-0.70	6.96	0.21	5.80	0.40	11.20
8	-0.23	6.64	-0.38	6.59	0.19	5.98	0.05	11.25
9	-1.44	5.20	-0.48	6.11	-0.75	5.24	0.31	11.55
10	1.20	6.39	-0.01	6.10	0.09	5.33	0.34	11.90
11	-0.77	5.62	-1.05	5.05	0.09	5.41	0.49	12.39
12	0.12	5.74	0.27	5.32	0.18	5.60	-0.11	12.28
13	1.48	7.21	-0.15	5.17	-0.92	4.68	-0.25	12.04
14	-0.34	6.87	0.07	5.24	-0.59	4.08	-0.54	11.50
15	-0.12	6.75	-0.62	4.62	-0.04	4.04	0.27	11.76
16	-0.49	6.26	-2.02	2.60	0.02	4.06	-0.55	11.22
17	0.36	6.62	1.16	3.77	-1.45	2.61	0.27	11.49
18	0.16	6.77	0.58	4.35	1.44	4.05	0.19	11.68
19	-0.56	6.21	-0.45	3.89	-1.00	3.05	-0.24	11.44
20	1.39	7.60	1.07	4.96	-0.42	2.63	-0.43	11.01
Avg	0.19	3.78	0.12	3.29	0.06	3.38	0.27	7.58
Std dev	0.89	3.57	1.28	2.80	0.91	1.71	0.90	4.23
Sqrt	0.14	0.56	0.20	0.44	0.14	0.27	0.14	0.66
t-test	1.34	6.80*	0.60	7.53*	0.45	12.66*	1.91	11.47

*** and ** indicates significance level at 1% and 5% level respective**

The sample includes 59 OMRs and 20 FPTs. OMRs include 34 and 25 first and subsequent offers respectively. On the other hand, there are 13 and 7 first and subsequent FPT announcements respectively in the sample. We observe positive announcement returns for all offers under both the methods. The AAR on the announcement day hovers around 2.29% to 3.3% and is higher for subsequent offers than for initial offers. The 41-day CAR of first offers of OMRs is 7.60%, higher than 2.63% observed for subsequent OMRs whereas the 41-day CAR for first FPTs is 4.96% and for subsequent FPTs it is 11.02%.

We observe a positive CAR even before the announcement for both initial and subsequent OMRs and FPTs. The CAR is positive from - 8th day onwards in initial OMRs and FPTs but is positive for all - 20days for subsequent OMRs and FPTs.

7.1 Market Reaction under different windows for OMRs and FPTs

Since short window yields results more consistent with signalling hypothesis, we employ several short-windows for analysis of announcement returns for OMRs and FPTs.

There are no negative returns on the announcement day for Indian OMRs and FPTs in any window period. The announcement day AAR is in the range of 2.5% to 3% for both OMRs and FPTs. We find contrasting announcement day and overall CAR results for initial and subsequent OMRs and FPTs. The subsequent OMRs have higher AAR and lower overall CAR than first OMRs while the initial FPTs have higher AAR and lower overall CAR than subsequent FPTs. The overall CAR is by and large lower than announcement day CAR in majority cases of OMRs and FPTs, raising a concern relating to source of these gains.

Table 16: Returns involved in multiple offers distributed by methods over several windows

Window Periods	OMRs							
	First Buybacks (34)				Subsequent Buybacks (25)			
	AAR on (0) day (%)	CAR on (0) day (%)	Overall CAR (%)	t-test	AAR on (0) day (%)	CAR on (0) day (%)	Overall CAR (%)	t-test
-1; +1	2.32	2.84	3.22	2.60	2.79	3.23	1.68	2.21
-2; +2	2.31	3.75	3.45	4.29	2.78	3.86	0.83	2.94
-3; +3	2.15	3.70	4.30	4.71	2.79	4.26	1.15	3.47
-5; +5	2.32	4.39	4.48	5.35	2.78	3.41	1.62	1.61
-10; +10	2.35	7.79	6.95	8.67	2.84	4.45	2.33	6.92
-20; +20	2.29	7.01	7.60	6.80	3.30	7.16	2.63	12.66
	FPTs							
	First Buybacks (13)				Subsequent Buybacks (07)			
1; +1	3.09	4.08	4.85	2.81	2.59	0.73	1.56	0.14
-2; +2	3.08	3.87	3.89	2.72	2.59	1.04	1.63	1.08
-3; +3	3.08	3.82	3.73	2.96	2.58	0.41	2.09	0.44
-5; +5	3.09	5.58	4.58	6.97	2.61	4.21	6.68	9.79
-10; +10	3.10	8.99	8.24	12.02	2.61	5.51	8.81	8.55
-20; +20	3.01	6.10	4.96	7.53	2.32	8.93	11.02	11.47

*** and ** indicates significance level at 1% and 5% level respectively**

8. Conclusion

The Corporate India has limited cases of multiple offers. Only two offers of second buyback are made for every seven offers of first buyback, i.e., 30% of initial repurchasers return to the market with a second offer in a time-gap of 1.64 years. We find that frequent repurchasers are larger firms with lower payout ratio. However, such firms have more variable income than infrequent repurchasers. The infrequent repurchasers are small firms, holding only 40% of assets held by the frequent buyers and have more stable operating incomes. The MTB ratio for Indian firms is relatively lower than US firms as computed by Jagannathan and Stephens (2003) in their study. In other words, relatively speaking both frequent and infrequent repurchasing firms in India are undervalued and may have a strong motive to repurchase shares for undervaluation.

Besides undervaluation, the repurchasing decisions of Indian firms may be attributed to excess cash flow or non-operating income as analysis reveals that frequent repurchasers pay lower dividends due to higher variable operating income while infrequent repurchasers pay higher dividends out of stable operating income. This may be the reason why subsequent or frequent repurchasers earn higher announcement returns than initial or infrequent repurchasers. Market appreciates the distribution of cash flows that otherwise could be wasted in the form of perquisites or investment in negative NPV projects. Analysis of cash flows and Tobin's - q ratio would throw a light on whether Indian firms are really using free cash flow.

The market reaction to buyback offers, in general, has been positive. The announcement day return is 2.73%, comparable to the studies on buybacks in US and other countries. The returns involved in multiple offers are inconsistent with the predictions of signalling hypothesis. The announcement day returns are higher for frequent or subsequent offers than for infrequent or initial offers. However, the overall CAR is lower than the announcement day CAR. This truth holds well for frequent and infrequent repurchases and in all event periods and in both OMRs and FPTs. This peculiar behaviour of CAR in India is in abhorrence to the signalling hypothesis and points fingers at much feared information leakage or insider trading. Earlier studies both in India and US attribute this positive CAR in pre-offer period to insider trading.

The listing norms in India mandate companies to inform, a week before, the date and agenda of proposed board meeting. We feel SEBI is required to modify the listing norm and companies may be asked to intimate only the date and not the agenda of the proposed board meeting. The particular listing norm is benefiting only the informed or insider or short-term investor at the expense of uninformed and long-term investor. Unethical practices of insider trading needs to be curbed to repose investors' confidence in the process.

Buybacks are a part of overall financial policy of the firm. A firm's financial policy is expected to generate shareholders value. The policy may be either raising capital in equity and debt forms or returning surplus funds in dividend and share repurchase forms. The share repurchase, may be first announcement or subsequent announcements. The use of

subsequent repurchase is not in shareholders' interest if returns are either lower or negative. The financial executive must justify the use of subsequent buybacks and corporate board has an important duty to perform in this respect. The boards must insist on adequate explanation for use of subsequent repurchases.

In India, multiple repurchases are used to delist firms. Many MNCs and other Indian firms - MICO Industries, Selan Exploration Limited, Godrej Consumer Products Limited, etc., - have employed subsequent repurchases to reduce public holdings and improve promoters holding. Such an intention acts against the interest of minority holders and in developing the equity cult in the society. Multiple offers buybacks are desirable to return non-operating or free cash flow and buybacks for any other purpose can be viewed as shareholder unfriendly action.

A further research into dividend policy of share repurchasing firms in India is necessary as majority of Indian firms buyback in lower quantities. Firms which repurchase in smaller quantities are also dividend-paying firms. Do Indian firms repurchase and pay dividends or substitute repurchases for dividends? The Indian firms repurchase frequently in spite of higher variability in operating income. Analysis of motives for such frequent repurchases and sources of cash flows employed is a useful exercise. The influence of debt policy, composition of board and institutional investors' shareholding percentage on repurchase policy needs to be examined for better understanding of frequent repurchase decisions.

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Appendix 1: Media or Public Announcement Dates

Sl. No	Name of the Company	Media / Public
1	Aarti Drugs	09.12.2002
2	Abbott India Ltd 1st BB	18.04.2002
3	Abbott India Ltd 2nd BB	26.08.2006
4	ACE Software Ltd	01.10.2003
5	Addi Ind Ltd	14.11.2002
6	Advani-Oerlikon Ltd	23.01.2002
7	Apollo Fin Ltd	27.12.2004
8	Avery India Ltd 1st BB	09.03.2004
9	Avery India Ltd 2nd BB	10.06.2004
10	Bhagyanagar M Ltd 3rd BB	29.08.2001
11	Blue Star Ltd	05.02.2002
12	Bombay Dy MFT Co. Ltd 1st BB	29.08.2001
13	Bombay D MFT Co. Ltd 2nd BB	28.10.2002
14	Britannia Ind Ltd 1st BB	28.08.2001
15	Britannia Ind Ltd 2nd BB	26.08.2002
16	Britannia Ind Ltd 3rd BB	09.06.2004
17	Chordia Food Pr Ltd	02.09.2002
18	DIL Ltd	19.03.2005
19	Exide Ind Ltd	26.12.2001
20	FDC Ltd	26.12.2001
21	Fineline Cir Ltd 1st BB	17.05.2003
22	Fineline Cir Ltd 2nd BB	30.08.2004
23	Finolex Cables Ltd 3rd BB	24.04.2002
24	Finolex Ind Ltd 1st BB	11.04.2001
25	Finolex Ind Ltd 2nd BB	31.07.2002
26	G G Dandekar M W Ltd	18.01.2002
27	GCPL 2nd BB	05.08.2002
28	GCPL 3rd BB	16.01.2003
29	GCPL 4th BB	23.10.2003
30	GCPL 5th BB	27.04.2004
31	GCPL 6th BB	16.10.2004
32	GE Shipping Co. Ltd 1st BB	01.11.2000

Sl. No	Name of the Company	Media / Public
33	GE Shipping Co. Ltd 2nd BB	11.08.2001
34	GSK Healthcare Ltd	02.12.2004
35	Heritage Foods (I) Ltd	16.01.2002
36	Hindalco Industries Ltd	30.01.2002
37	ICI India Ltd	18.07.2006
38	Indiabulls Ltd	28.10.2005
39	Indian hume-pipe Co Ltd	20.08.2002
40	Indian Resorts Hotels Ltd	29.01.2002
41	Jay Shree Tea Ltd 2nd BB	24.05.2001
42	John Fowler (I) Ltd 2nd BB	22.10.2001
43	Kesoram Ind Ltd 2nd BB	28.04.2000
44	M/s GSK Pharmace Ltd	15.03.2005
45	Madura Coats Ltd	24.01.2001
46	Manugraph Ind Ltd	15.10.2001
47	Mastek Ltd	20.05.2004
48	MICO Ltd 2nd BB	04.11.2000
49	MICO Ltd 3rd BB	07.12.2001
50	Natco Pharma Ltd	06.09.2006
51	OCL (I) Ltd 1st BB	26.09.2001
52	OCL (I) Ltd 2nd BB	20.01.2003
53	Prime Sec Ltd 2nd BB	30.06.2005
54	Punjab Com Ltd	22.10.2003
55	Raymond Ltd	06.01.2001
56	Reliance Ind Ltd 3rd BB	27.12.2004
57	Revathi Eq Ltd	29.06.2006

Sl. No	Name of the Company	Media / Public
58	Selan Ex Tech Ltd 2nd BB	26.03.2001
59	Selan Ex Tech Ltd 3rd BB	01.04.2002
60	Selan Ex Tech Ltd 4th BB	11.05.2003
61	Siemens (I) Ltd	18.06.2001
62	Solitaire M Tools Ltd 1st BB	01.08.2002
63	SRF Ltd	28.06.2006
64	Sun Pharmace Ltd 1st BB	31.12.2002
65	Sun Pharmace Ltd 2nd BB	22.04.2004
66	Titanor Comp Ltd	02.05.2003
67	Tube Invest of India Ltd	09.10.2002
68	Venky's (India) Ltd	11.09.2002
69	Winsome Yarns Ltd 1st BB	30.06.2001
70	Winsome Yarns Ltd 2nd BB	18.04.2002
71	Gujarat Ambuja Exports Ltd	05.04.2007
72	Ace Software Exports Ltd 2nd BB	21.04.2007
73	MRO-TEK Ltd	01.04.2007
74	ICI India Ltd 2nd BB	26.07.2007
75	GTL Ltd	10.08.2007
76	Hindustan Unilever Ltd	29.07.2007
77	Apollo Finvest (I) Ltd 2nd BB	23.10.2007
78	Madras Cements Ltd	11.02.2008
79	Reliance Energy Ltd 2nd BB	05.03.2008

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