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Analysis of Open Market Share Repurchases -Selected Indian Companies

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Abstract

One way for a company to change its capital structure is through Share Repurchase. In this type of restructuring, the equity of the company gets cancelled or reduced and hence the proportionate debt increases. This alters the capital structure of the company. Any type of restructuring activity basically is aimed at increasing the shareholders' wealth or improving the financial status of the company. This study strives to understand the implications of repurchases through open market offers on the share prices. It has been found that repurchases lead to increase in abnormal returns to share holders post announcement of the offer.

1. Introduction

A change in the existing environment of business, calls for a change in the way in which companies within that business environment operate. If the change in environment is drastic, then the change in companies would also have to be as dramatic, sometimes even more so. When this dramatic change is to do with changing the entire structure of the company, it is known as Corporate Restructuring. Any type of restructuring is aimed at either growth or achieving sustainability.

Share Repurchase is also a type of restructuring activity that a company may undertake under certain situations. Usually restructuring activities can be classified into four categories- Expansion, Sell-offs, Corporate Control and Changes in ownership structure. Share repurchases are a part of Changes in Ownership structure. So, one way for a company to change its capital structure is through Share Repurchase. In this type of restructuring, the equity of the company gets cancelled or reduced and hence the proportionate debt increases.

Share repurchase is the purchase of common stock from the market by the company itself. The company gives cash offer in lieu of outstanding equity shares of the company. The company can do this by open market repurchase, tender offer or private negotiation. Open market repurchases are technically identical to what happens when any investor purchases shares from the market through a broker and they occur more frequently than a tender offer repurchase.

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However, open market repurchases are more appropriate when a small fraction of shares are to be repurchased whereas a tender offer is more appropriate when a huge chunk of shares is to be repurchased from the investors. Negotiated repurchases are appropriate when a small number of investors hold a large block of the company's shares.

2. Review of Literature

Warren Buffet, the most sought after investor billionaire often has advised to invest in companies which invite share repurchases or buybacks. It has been theorized that companies which buy back their shares are often undervalued according to the information signaling hypothesis.

The following theories of share buybacks augment that hypothesis that Share buybacks create value for shareholders (Weston, Chung, & Hoag, 2007):

1. Dividend or personal taxation hypothesis
2. Leverage hypothesis
3. Information or signaling hypothesis
4. Bondholder expropriation hypothesis
5. Wealth transfers among shareholders
6. Defense against outside takeovers

Vermaelen(1981) conducted a study on oversubscribed and undersubscribed share repurchase offers. It was found that the Cumulative Abnormal Returns for both under and oversubscribed issues were almost the same but the premiums were much higher for oversubscribed issues than for undersubscribed issues. There was a difference of about four percent in the premiums of the two. The average target fraction to be repurchased was about 13 percent for oversubscribed issues and about 18 percent for undersubscribed issues. The fraction of shares actually purchased were 16 percent for oversubscribed issues and about 12 percent for under subscribed issues.

A study which was carried out in Australia which studied 30 share buybacks found that relatively small companies with an average market capitalization of $ 23 Mn. in Australia undertook the buyback route. The study tried to analyse if there was significant improvement in the share returns of the companies which went for a buyback. The event study methodology was used and the returns before the buyback and returns after the buyback were compared using the two tailed t-test. Cumulative abnormal returns were calculated for each

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company and it was found that CARs were larger for companies undertaking buy-back and the probable reason for this could be because buybacks are usually done at a large premium to the market price (Harris & Ramsay, 1995).

A McKinsey quarterly report (Dobbs & Rehm, 2005) studied buybacks which took place in the companies in the US which were valued at US $ 1 Billion or more and has a total of US $ 1 trillion in cash. It was found that after a buyback, the companies are usually rewarded because of the increase in their share prices. But the report also says that the buybacks do not increase the companies' interest value. Any mechanical increase in EPS would mostly be offset by a reduction in the Price earnings ratio of the company. Rather, share buybacks do not create value due their effect on EPS but rather due to the signals that they send to the markets. It was concluded in the report that buybacks create value because they help improve the tax efficiency of the companies and also prevent the company from using the excess cash unwisely in imprudent investments or acquisitions. Only if share buybacks are taken up for the fundamental reason of actually improving efficiency by reducing the equity borrowing of the company rather than for meeting the EPS targets, then the companies will able to create value in the long run.

In another research paper, the market's reaction to the announcement of share buybacks was examined (Lamba & Ramsay, 2005). The study was conducted on Australian buybacks which took place after 1989. It was found from this study that the markets reacted most positively to open market repurchases; while reactions to other types of repurchases (such as equal access buybacks, employee share buybacks, minimum holding buybacks) were positive but not statistically significant.

This study has been based on similar lines in terms of methodology. The companies in concern are Indian Corporates which have undergone a repurchase through open market method in the years 2011 and 2012.

3. Research Methodology

The main objectives of this study are

1) To study the changes in share prices of the companies going for a share repurchase or buyback. (i.e. to ascertain whether there are any abnormal returns or not)
2) To compare the changes in returns to shareholders before, during and after the repurchase offer.

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3) To examine if the size of the buyback/repurchase makes any impact on the returns.

The data of 25 companies which went for a share repurchase through open market offer in the years 2011 and 2012 have been incorporated in this study. Out of these 25 again, 6 companies' data was not available hence, 19 companies have been incorporated in the study.

Measurement Techniques:

The analysis has been done in two parts:

a. To ascertain whether there are any abnormal returns
b. To compare the returns in three different time periods (pre announcement, post announcement and during announcement) and to see if there are any significant differences in the returns.

One sample t-test has been used to check the abnormality of returns.

Three time periods have been considered for the study. Pre announcement period of 15 days, during offer period 15 days immediately after the announcement and 15 days post announcement period.

Repeated Measures Anova has been used for the above analysis.

4. Data Analysis and Interpretation

4.1. Examining the presence of abnormal returns:

4.1.a. Checking for the assumption of Normality:

Table 1 Tests of Normality

	Kolmogorov-Smirnov(a)			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Cumulative Average Abnormal Returns before share repurchase announcement	.143	15	.200(*)	.952	15	.557
Cumulative Average Abnormal Returns after share repurchase announcement	.187	15	.166	.926	15	.236

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Cumulative Average Abnormal Returns before share repurchase after closure of repurchase	.133	15	.200(*)	.977	15	.946

* This is a lower bound of the true significance.

A Lilliefors Significance Correction

From the above table, it can be seen that the data of Cumulative average abnormal returns confirms to normality and hence, one can go ahead with further parametric statistical analysis.

Abnormal returns of the companies were calculated using the market adjusted returns model.

4.1.b. One Sample t-test:

A statistical significance test for ARi,t is then employed using one sample T-test to determine the standardized Average Abnormal Returns (AARt).

Here the null and the alternate hypothesis are as follows:

H0: The mean Cumulative average abnormal return during the 15 days pre and post announcement period is not significantly different from zero. i.e. $\mu=0$

H1: The mean Cumulative average abnormal return during the 15 days pre and post announcement period is significantly different from zero. i.e. $\mu\neq0$

H0: The mean Cumulative average abnormal return post closure of repurchase programme is not significantly different from zero. i.e. $\mu=0$

H1: The mean Cumulative average abnormal return post closure of repurchase programme is significantly different from zero. i.e. $\mu\neq0$

The stock returns are adjusted to market returns. According to the market adjusted abnormal return model, if the difference between stock return and market return is zero, then there is absence of abnormal returns.

Hence, Market adjusted abnormal average returns of companies were considered, 15 days prior to announcement of repurchase and 15 days post announcement of repurchase. These returns were cumulated to get CAAR (Cumulative Market adjusted abnormal returns).

The results of the t-test are as under:

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Table 2 One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Cumulative Average Abnormal Returns before and after share repurchase announcement	31	.68000000	1.500299970	.269461829
Cumulative Average Abnormal Returns after closure of repurchase offer	16	-.16312500	.708620432	.177155108

Table 3 One-Sample Test

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Cumulative Average Abnormal Returns before and after share repurchase announcement	2.524	30	.017	.680000000	.12968553	1.23031447
Cumulative Average Abnormal Returns after closure of repurchase offer	-.921	15	.372	-.163125000	-.54072217	.21447217

Here, the t - value for CAAR before and after the repurchase announcement is 2.524 and the associated significance value is 0.017 which is less than 0.05. Hence, it can be said that the null hypothesis fails to be rejected and that the mean abnormal returns are significantly different from zero which indicates a presence of abnormal returns in the pre and post announcement periods.

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However, the t-value for CAAR after closure of open market repurchase offer is -0.921 and the associated significance value is 0.372 which indicates that there is an absence of abnormal returns in the post closure period.

4.2. Examining the difference in returns over three different time periods:

- 15 days prior to announcement of buyback/repurchase
- 15 days after the announcement of repurchase
- 15 days after the repurchase offer is closed

In order to examine the difference in more than two related samples, Repeated Measures Anova has been used.

Repeated Measures Anova:

H0: There is no significant difference in the mean cumulative average abnormal returns of companies before announcement of repurchase, after announcement of repurchase and after closure of repurchase.

H1: There is a significant difference in the mean cumulative average abnormal returns of companies before announcement of repurchase, after announcement of repurchase and after closure of repurchase.

Table 4 Descriptive Statistics

	Mean	Std. Deviation	N
Market adjusted abnormal return before announcement of repurchase	.0333333	.57870134	15
Market adjusted abnormal return after announcement of repurchase	-.07333333	.546739252	15

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Market adjusted abnormal return after closure of repurchase offer	-.1020000	.60435562	15

It can be observed that the means of all the three time period returns is different.

Table 5 Multivariate Tests(b)

Effect		Value	F	Hypothesis df	Error df	Sig.
MAAR	Pillai's Trace	.025	.168(a)	2.000	13.000	.848
	Wilks' Lambda	.975	.168(a)	2.000	13.000	.848
	Hotelling's Trace	.026	.168(a)	2.000	13.000	.848
	Roy's Largest Root	.026	.168(a)	2.000	13.000	.848

a Exact statistic

b Design: Intercept

Within Subjects Design: MAAR

Table 61 Mauchly's Test of Sphericity(b)

Measure: MEASURE_1

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon(a)		
					Huynh-Feldt	Lower-bound	Greenhouse-Geisser
MAAR	.996	.052	2	.974	.996	1.000	.500

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.,b Design: Intercept

Within Subjects Design: MAAR

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From the above table one can see that Mauchly's W is 0.996 and the significance is 0.974 which is greater than 0.05. This means that the null hypothesis is not rejected and the variances of all the groups are equal. It can be said that the assumption of sphericity is not violated.

Since Mauchly's test shows that the variances of all groups are equal, the F- ratio associated with in the test of Within subject Effects table is to be noted.

Table 7 Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
MAAR	Sphericity Assumed	.153	2	.076	.185	.832
	Greenhouse-Geisser	.153	1.992	.077	.185	.831
	Huynh-Feldt	.153	2.000	.076	.185	.832
	Lower-bound	.153	1.000	.153	.185	.673
Error(MAAR)	Sphericity Assumed	11.534	28	.412		
	Greenhouse-Geisser	11.534	27.888	.414		
	Huynh-Feldt	11.534	28.000	.412		
	Lower-bound	11.534	14.000	.824		

The F ratio is 0.185 and the associated significance level is 0.832. Hence the null hypothesis is not rejected. Hence, it can be said that the mean average abnormal stock returns during the three time periods is same.

Table 8 Tests of Between-Subjects Effects

Measure: MEASURE_1

Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Intercept	.034	1	.034	.575	.461
Error	.818	14	.058		

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Table 9 Pairwise Comparisons

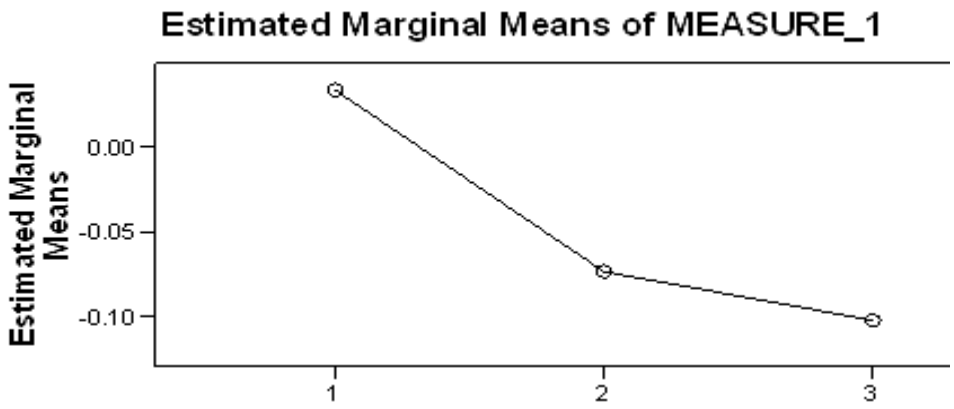
Measure: MEASURE_1

(I) MAAR	(J) MAAR	Mean Difference (I-J)	Std. Error	Sig.(a)	95% Confidence Interval for Difference(a)	
					Upper Bound	Lower Bound
1	2	.107	.241	1.000	-.549	.762
	3	.135	.233	1.000	-.498	.769
2	1	-.107	.241	1.000	-.762	.549
	3	.029	.229	1.000	-.592	.650
3	1	-.135	.233	1.000	-.769	.498
	2	-.029	.229	1.000	-.650	.592

Based on estimated marginal means

a Adjustment for multiple comparisons: Bonferroni.

Chart 1 Estimated Marginal Means of Returns



Hence, the results of the ANOVA suggest that there is no statistically significant difference between the market adjusted abnormal returns during the three time periods in consideration. (15 days prior to announcement of repurchase, 15 days post announcement of repurchase and15 days after the repurchase offer was closed)

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5. *Findings and Conclusion*

5.1. Abnormal Returns

In the 15 days prior to and 15 days post repurchase announcement in the case of companies offering buyback through open market repurchases, it was found that the mean returns were significantly different from zero. Hence, it can be said that the cumulative market adjusted average returns were abnormal. The same was the case for the returns post closure of the open market repurchases.

5.2. Differences in means across three time periods

Mauchly's W is 0.996 and the significance is 0.974 which is greater than 0.05. This means that the null hypothesis is not rejected and the variances of all the groups are equal. It can be said that the assumption of sphericity is not violated.

The results of the ANOVA suggest that there is no statistically significant difference between the market adjusted abnormal returns during the three time periods in consideration. (15 days prior to announcement of repurchase, 15 days post announcement of repurchase and15 days after the repurchase offer was closed)

Conclusion:

In the study it was found that abnormal returns accrue to tendering company prior to and post announcement but no significant abnormal returns were found post the closure of the announcement deal. It can be said that for the particular data set, shareholders do get abnormal returns when the repurchase offer is announced in the open market.

However, for the particular data set, there is no significant difference in the abnormal returns between the three time periods i.e. before announcement, after announcement and post closure of offer. It means that abnormal returns accrue in the three different time periods but are not statistically different from each other.

Hence it can be said that for the companies under study, open market repurchase offers give statistically significant abnormal returns.

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Appendixes:

All Indian companies listed on the Bombay stock exchange which repurchased shares through open market in the years 2011 and 2012 have been included in the study. However, the data for three companies were not available and they have been excluded from the study. The list includes 19 companies. The companies are as follows:

CRISIL Limited
Eon Electric Ltd
PVR Limited
Deccan Chronicle Holdings Limited
Balrampur Chini Mills
Sasken Communication Technologies Limited
Hindustan Composites Limited
M/s Ansal Housing and Construction Limited
Gemini Communications Limited
Borosil Glass Works Limited
Onmobile Global Limited
Amtek Auto Limited
Praj Industries Limited
Zee Entertainment Limited
Bhagyanagar India Limited
Allied Digital Services Limited
De Nora India Limited
FDC Limited
Avantel Limited