

## AN ANALYSIS OF STOCK REPURCHASES THROUGH TENDER OFFERS- SELECTED INDIAN COMPANIES

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### ABSTRACT

Share repurchases are done in order to utilize the free cash reserves of the company. The company may have two options, one is to pay dividends and another is to retain its earnings for future growth. But sometimes, instead of giving out dividends which attract lot of tax, the company decides to go in for a share repurchase. So basically share repurchase is a way to distribute dividends to shareholders. The other prominent reason for a company to announce a share repurchase is undervaluation. The company management feels that the market is undervaluing the company and as a resort to correct this valuation, shares are repurchased at a premium to market price and in most cases, subsequently cancelled out.

There are several methods of share repurchase. One of the methods of share repurchase is through tender offers. This study tries to understand the impact of the announcement of repurchase offer through tender offer and its impact on the share price of the tendering company.

In this study, it was found that there were abnormal negative returns for the shareholders after the closure of repurchase. It was also found that there were no abnormal returns to the shareholders pre and post announcement of the repurchase programme.

In comparing the differences in the returns of the three time periods (namely before announcement, after announcement and post closure of announcement), repeated measures ANOVA was used and it was found that there was no significant difference between the returns to shareholders in the three periods. The returns to the shareholders was affected by the number of shares repurchased by the company but not so much by the amount of money spent by the company in repurchasing the shares. It was also found that the returns to shareholders for tender offer companies are significantly different from the returns to shareholders of companies opting for an open market repurchase.

**Keywords:** Stock Market, Stock Repurchases, tender-offers, Indian Stock Market.

### I. INTRODUCTION

Share Repurchase is 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. 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.

#### **A. Share Repurchases:**

- Share repurchase generally deals with cash offers for outstanding shares of common stock.
- The share holders are offered cash and their stock is repurchased by the company.
- The effect of this transaction is that the capital structure of the firm changes.

#### **B. Conceptual Framework:**

Companies which make a profit can adopt one of the two routes: Pay dividends or Retain Earnings. If it retains its earnings, it should be able to reinvest these earnings into more profitable projects which are able to give a higher Return on Investment than before. But every time it is not possible for companies to be able to do this. Hence, it goes for the dividend option. However, dividends attract lot of dividend distribution tax and sometimes companies pay out dividends through a method called share repurchases. Hence, the company buys back its own shares from the existing equity share holders and in return the shareholders are given cash. The shares which are repurchased are cancelled by the company. In this way the company reduces its equity base. Hence, there will be a change in the capital structure and the debt equity ratio will also change. The proportion of equity will go down hence the relative proportion of debt will increase in the capital structure.

Apart from paying of dividends, share repurchases may also be done to give out some signals to the market. For example, a company which goes for a share repurchase may signal to the market that it is undervalued. Usually, the repurchase offer is always at a premium to the market price. Investors may feel that the shares have potential hidden value that is why the company itself is buying out its own shares. Hence, the price of the share may increase after the announcement of the repurchase offer as it gives a signal to the market that the share is undervalued.

Share repurchases may also be done to distribute executive compensation. In companies where there are few opportunities for organic growth, share repurchases may represent one of the few ways of improving earnings per share to meet targets.

Share repurchases avoid the accumulation of excessive amounts of cash in the corporation. Companies with strong cash generation and limited needs for capital spending will accumulate cash on the balance sheet, which makes the company a more attractive target for takeover, since the cash can be used to pay down the debt incurred to carry out the acquisition. Anti-takeover strategies, therefore, often include maintaining a lean cash position and share repurchases bolster the stock price, making a takeover more expensive.

Only the repurchases carried out through a tender offer have been included in this study.

## **II. REVIEW OF LITERATURE**

Empirical studies suggest that firms which announce share repurchases in the USA get about 2 to 3.5 percentage abnormal returns in the short term and about 7 to 11 percentage abnormal returns in the long run. Canadian Share repurchases involve a short term return of 0.93 percentage to 1.30 percentage in the short run and between 10 and 15 percentage in the long run.(Mishra, Racine, & Schmidt, 2011)

In the USA between the years 1980-2000, share repurchases grew at the average rate of 26.1 percentage whereas dividends grew by a mere 6.8 percentage. This trend continues and it is a clear indication that share repurchases have become more popular than cash dividend payouts. In a study conducted to understand the reasons why more and more firms are now opting for share repurchase rather than dividend payouts, it was found that when a corporation repurchases shares, the payment is considered as a capital gain in the hands of the

shareholder and hence he/she is in a position to save more tax. It was found that market reaction to share repurchase offer were more positive when the tax gains from repurchases were larger. It was also found that dividend payout and share repurchases are negatively correlated. (Grullon & Michaely, 2002)

Leng and Noronha studied share repurchase announcement in the context of private information of managers. The hypothesis that share repurchases are undertaken by companies when they feel that they are undervalued by the market; and it is this information when announced in the form of a repurchase offer leads to abnormal returns. In their study, they were able to find significant correlation between managerial private information and post-announcement abnormal returns for actual repurchase firms but not for nonactual repurchase firms. Overall, our results indicate that the market is unable to fully understand managers' private information ambiguously revealed by the repurchase announcement, and so awaits the firm's subsequent actions, such as actual repurchase, to further interpret the private information. Overall, in their results, they find that announcement of share repurchases actually indicates some good news and hence the market reacts positively to this news.(2013)

Consistent with the signaling/undervaluation hypothesis, numerous studies document positive and significant abnormal returns around buyback program announcement dates. For example, Peyer and Vermaelen (2009) report that the average 3-day CAR surrounding the initiation of repurchase programs is 2.39% from 1991 to 2001.

A study of Australian Share repurchases presented the abnormal returns around initial program announcements. It was noted that repurchase program announcements follow poor stock price performance. The market's reaction to the announcements was significantly positive with an abnormal return of 3.06% in the (-1, +1) window. Unlike in the United States, in Australia firms must cancel the shares and cannot treat them as treasury shares. This implies a stronger initial response to repurchase program announcements. The full sample was divided into two sub samples- firms which undertook positive repurchase and firms which undertook zero repurchase. The market's reaction to the announcements is significantly positive for both groups (3.01% and 3.49%).(Akyol & Foo, 2013)

In another study, long-horizon returns for a sample of over 4,000 open market programs announced by U.S. firms from 1980 to 1996 were examined. Using six years of post-1990 data, this study also reported evidence of abnormal stock

returns. In addition, the study found some evidence of excess performance by growth stocks. (Chan, Ikenberry, & Lee, 2004)

In a very prominent study which examined long-run firm performance following open market share repurchase announcements in the USA between 1980 and 1990 it was found that the average abnormal four-year buy-and-hold return measured after the initial announcement was 12.1%. For 'value' stocks, companies more likely to be repurchasing shares because of undervaluation, the average abnormal return was found to be 45.3%. (Ikenberry, Lakonishok, & Vermaelen, 1995)

### **III. RESEARCH METHODOLOGY**

#### **A. Research Problem:**

To understand the impact of share repurchases/buybacks on the share prices of the companies.

#### **B. Research Plan:**

a) Objectives Of The Study:

- 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.
- 3) To examine if the size of the buyback/repurchase makes any impact on the returns.
- 4) To understand the difference in the mean returns between tender offers and open market offers.

#### **C. Sampling Design**

##### **b) Type of Universe**

The universe contains all Indian Public Limited companies which have repurchased shares through a tender offer or open market repurchase.

##### **c) Sampling Unit**

Public Limited companies which have undertaken a repurchase programme through tender offers between the years 2008 to 2012 have been included in the study.

Approximately 27 companies went for a repurchase through a tender offer between 2008 and 2012. However, the data relating to 19 companies were available from the website of the Bombay Stock Exchange. A few companies have been delisted and their data was not available. 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.

**IV. DATA ANALYSIS AND INTERPRETATION**

All the Indian companies listed on BSE which repurchased shares between the years 2008 and 2012 have been considered in this study. This list includes 19 companies for which data are available. About 5-6 companies have either been delisted or their repurchase offer did not materialize. These were excluded from the study.

**A. Examining The Presence Of Abnormal Returns:**

Fifteen day pre announcement and fifteen day post announcement returns were estimated from the data of BSE Stock Archives. The estimation of abnormal returns employs the Market-adjusted Abnormal return Model (MAAR). MAAR assumes that equilibrium expected returns exist where alpha is equal to zero and the average systematic risk is equal to one.

Market adjusted abnormal returns are computed as follows:

$$AR_{i,t} = R_{i,t} - R_{m,t} \text{ -----(1)}$$

Where AR represents Abnormal Returns,  $R_{i,t}$  represents returns for stock i on event day t and  $R_{m,t}$  is market returns of BSE Sensex on event day t.

The daily return for each stock in the sample is computed using the following using the following formula:

$$R_{i,t} = \frac{(P_{i,t} - P_{i,t-1})}{P_{i,t-1}} \text{ -----(2)}$$

Where  $P_{i,t}$  indicates closing price for stock i at day t, and  $P_{i,t-1}$  is the closing price for stock i at day t-1. Similarly, daily market returns were also calculated using BSE Sensex closing price historical data.

The next step is to compute the daily cross sectional Average Abnormal Return (AARt) for a specific event day, t, which is calculated, based on:

$$AAR = \frac{1}{N} \sum_{i=1}^N AR_{i,t} \text{ -----(3)}$$

Where AARt is the average abnormal return on day t,  $AR_{i,t}$  represents the abnormal return of each firm on day t (i=company 1 to 19) and N denotes the total number of firms in sample from each day during the period under consideration.

Besides computing the Average Abnormal Returns, the cumulative daily average abnormal returns for the securities were aggregated within the event window (-15 to +15).

### **B. Checking The Assumption Of Normality:**

The normality of the data was tested and it was found that CAAR observations before announcement of repurchase and CAAR observations after closure of repurchase adhered to normality. The CAAR observations after announcement were not normal. However, for small samples, t-test is robust for non-normal data hence it was found appropriate to use the t-test. Refer Table No. 1.

### **C. 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.  $\mu \neq 0$

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 depicted in table no. 2 and table no. 3.

Here, there are 31 observations; hence the degrees of freedom are 30. The t value is 0.249 and the associated significance p-value is 0.805 which is more than 0.05. Therefore, the null hypothesis fails to be rejected at 95 per cent confidence level and it can be said that the mean cumulative average abnormal returns are not significantly different from zero which technically means that there is an absence of abnormal returns during the pre and post announcement window of share repurchases.

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.  $\mu \neq 0$

The similar t-test was conducted on the CAARs of sample companies post the closure of share repurchase programme. The results of this test are given in table no 4 and table no. 5.

The t- value is -7.949 and the associated p-value is 0.000 which is less than 0.05. Hence, the null hypothesis is rejected and the alternate hypothesis fails to be rejected. Hence, it can be said that the abnormal returns post the closure of repurchase programme are significantly different from zero. Since the mean is -5.658, it can be said that the mean abnormal returns are negative.

#### **D. 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.

##### **a) Repeated Measures ANOVA:**

The repeated measures ANOVA is a member of the ANOVA family. ANOVA is short for ANalysis Of VAriance. All ANOVAs compare one or more mean scores with each other; they are tests for the difference in mean scores. The repeated measures ANOVA compares means across one or more variables that are based on repeated observations. A repeated measures ANOVA model can also include zero or more independent variables. Again, a repeated measures ANOVA has at least 1 dependent variable that has more than one observation.

The repeated measures ANOVA is similar to the dependent sample T-Test, because it also compares the mean scores of one group to another group on different observations. It is necessary for the repeated measures ANOVA for the cases in one observation to be directly linked with the cases in all other observations. This automatically happens when repeated measures are taken, or when analyzing similar units or comparable specimen.

As in this study, the same companies' mean returns are to be compared over three different time periods. Hence, it has been found appropriate to use this test.



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.

The descriptive statistics suggest (refer table no. 6) that the mean and standard deviation of all the three sets of returns are different. It was observed that the mean of AAR before announcement was the highest at 0.1276, post announcement it fell to -0.4923 and post closure of the issue, it was -.04653.

#### **b) The Multivariate Tests That All Mean Differences Are 0.**

The first tests performed in repeated measures ANOVA are Multivariate Tests. They are called so because they are a test of the hypothesis that the multiple difference variables are all 0. So they're multivariate tests.

Four different multivariate tests are performed (Table no. 7). Each is based on slightly different assumptions, and in some instances, the results for the four may be different. In this case, they are all equivalent.

The multivariate tests are the most robust tests of the null hypothesis. This means that they are less affected by nonnormality of the distributions than are the tests that follow. The price paid for that robustness is loss of power. The multivariate tests are less powerful than those that follow. This means that one is hoping to reject the null hypothesis, rejecting the null hypothesis with the multivariate tests means that further tests may most likely reject the null hypothesis.

In this case the null hypothesis is rejected using the multivariate tests.

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: Returns

### c) The Test Of Sphericity:

When conducting a one-way repeated measures ANOVA, the values within the matrix of variances and covariances should fall within specific ranges. If this is so, the matrix is said to meet the sphericity condition. If the sphericity condition is met, then the most powerful test of the null can be employed. If it not met, then either the multivariate test must be used, or one of the special tests devoted to getting around the failure to find sphericity must be employed. The null hypothesis in Mauchly's test is that the sphericity condition holds, so we generally hope to not reject the null hypothesis.

In this instance, the condition of sphericity does not hold as Mauchly's  $W$  is 0.488 (refer table no. 8) and this value is 0.009 (the  $p$  value is significant). In this study, the Mauchly's test suggests that the variances of all groups are not equal. In this case one has to look at the Greenhouse-Geisser correction if the Epsilon value. If the Epsilon value  $> 0.75$ , then Huyn Feldt correction factor has to be used (refer table no. 9) and if  $\epsilon < 0.75$ , then the Greenhouse-Geisser correction factor must be used. In this study, the  $\epsilon < 0.75$ , hence the Greenhouse-Geisser correction factor should be used.

### d) The Univariate Tests:

The  $F$  Value for Greenhouse-Geisser correction factor is 1.895 and the significance level is 0.185. In this study, the Mauchly's test itself suggests that the null hypothesis is rejected and that the mean AAR for the companies between the time periods is not equal. But applying the Greenhouse Geisser Correction factor one can say that now there is no significant difference in the mean returns of the three time periods.

The interpretation of between subject effects: The difference between the mean of all observations and zero is known as the intercept in regression parlance. The null hypothesis is that the intercept is equal to zero. The null hypothesis fails to be rejected here. The intercept is not significantly different from zero. (Refer table no. 11)

From the results of within subjects contrasts it can be observed that there is no significant difference between the mean returns of level 1 and 2 or level 2 and level 3 as the significance values are more than 0.05 for both the groups (refer table no. 12). The same result can be observed in chart no. 1.

It can be implied from the Within subjects effect that the returns decreased post the announcement of buyback but however, the decrease was not significant; as also in the post closure period the increase in returns is not significant.

**e) Multiple Regression Analysis:**

Theory suggests that the returns to shareholders post buyback may be affected by the percentage of shares that the company repurchases and also on the amount that the company shells out for repurchasing the shares. A multiple regression analysis has been carried out in order to assess the association between the afore mentioned variables and the CAARs post closure of buyback. Before reporting the results of the regression analysis, it is appropriate to report that the problem of multicollinearity does not exist in this study (refer table no.13). Hence, one can go ahead and run the regression. The multicollinearity can be assessed from the variation inflation factor. If VIF values are more than or equal to 10, then the problem of multicollinearity exists. In this case, the VIF factors are less than 10; hence there is no correlation between the independent variables.

a - Predictors: (Constant), Amount spent from reserves/borrowing for repurchase by company, Percentage of shares repurchased

b - Dependent Variable: Immediate return to non tendering shareholders

R is the square root of R-Squared and is the correlation between the observed and predicted values of dependent variable. In this study, R is 0.688 and the dependent variable is the immediate cumulative average abnormal return to non tendering shareholders post closure of buyback.

R square shows the total variation in the dependent variable which can be explained by the independent variables. In this case, R square is 0.473. It can be said that 47.3 percent of the variation in CAAR post closure of buyback can be attributed to the two independent variables namely percentage of shares repurchased by the company and the amount spent from reserves for repurchase. The adjusted R square attempts to yield a more realistic picture of the fit of regression value to estimate the R squared for the population. In this case the adjusted R square is 0.407.

The standard error of estimate is the standard deviation of the error term which is 0.56491. (Refer table no. 14)

The total variance is partitioned into two parts: the variance which can be explained by the independent variables and the variance which is explained by the residuals.

a Predictors: (Constant), Amount spent from reserves/borrowing for repurchase by company, Percentage of shares repurchased

b Dependent Variable: Immediate return to non tendering shareholders

The F value is 7.174 (table no. 15) and the P value associated with it is 0.006 which is less than 0.05. Hence, one can say that the independent variables jointly and reliably explain the variations in the dependent variable. It can be interpreted that the regression is valid.

B Values:

These values for the regression equation are for predicting the dependent variable from the independent variable. They are called unstandardized coefficients as they are measured in their natural units.

The regression equation which can be formed:

$$y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 \text{-----(4)}$$

$$y = 0.241 - 0.068x_1 + 1.33x_2$$

The sign of  $\beta_1$  is negative which indicates that there is a negative relationship between the dependent variable Returns and the independent variable percentage of shares repurchased. Hence for one percent increase in shares repurchased, the returns decrease by 6.8 percent.

And for 1 unit increase in Amount spent by company for repurchase, the returns will increase by 1.33 units.

However, from the p values, it can be interpreted that the percentage of shares repurchased significantly affects the returns whereas the association between returns and amount of consideration given by the company is not statistically significant.

Difference Between: The Returns Between Shares Repurchased Through Tender Offers And Share Repurchased Through Open Market (Stock Exchanges)

It was found appropriate to ascertain whether there exists any difference between the cumulative market adjusted abnormal returns of companies when the method of repurchase was different. Hence the means of CAARs of

companies which undertook share repurchase through Tender offers and the means of CAARs of companies which undertook share repurchase with the open market method were compared using the independent samples t-test. There were 19 companies which undertook repurchase through open market method. Their share price data was also obtained from the BSE website.

The hypothesis:

H<sub>0</sub>: There is no significant difference in the mean cumulative average abnormal returns between the two groups.

H<sub>-1</sub>: There is a significant difference in the mean cumulative average abnormal returns between the two groups

The results of the independent samples t-test are as follows:

The Mean value of CAAR for tender offers is 8.06 whereas for open market repurchases is 0.68. The difference in mean is considerable (Refer Table no. 18). In order to ascertain whether the difference is statistically significant or not, the results for Levene's test for equality of variances are examined. The F value is 23.274 and the p-value for significance is 0.000(Refer Table no. 19). It means that there is a statistically significant difference between the means of the returns of the two data sets. It can be said that the mean CAARs for companies going for open market repurchases through stock markets is significantly lesser than the mean CAARs for companies which went for share repurchases through tender offers.

In the same way the cumulative average abnormal returns after closure of repurchases (15 days) were compared and it was found that there is a considerable difference between the means of the two returns. The difference was also found to be statistically significant and in this case the returns earned by the shareholders for companies in which repurchases done through open market offers were more than the returns earned by shareholder of tender offer companies(Refer table nos. 20 & 21)

## V. FINDINGS

### A. Abnormal Returns

For the period of 15 days prior to and 15 days post announcement of share repurchase by companies through the method of tender offers, it was found that the mean returns were not significantly different from zero. However, when the returns data for 15 days post closure of repurchase offer were tested, they were found to be significantly different from zero. Hence, abnormal returns were

observed in the post closure period (15 days). The returns were cumulative market adjusted average returns.

### **B. Differences In Means Across Three Time Periods**

Repeated measures ANOVA was run on the average returns data for companies which repurchased share through the tender offer method. Three time periods were considered (15 days prior to announcement, 15 days post announcement and 15 days after closure of announcement). It was found that the mean returns of companies during these three time periods were significantly different from each other.

Mauchly's test indicates that the assumption of sphericity is violated as  $\chi^2$  is 9.329 and the significance value is 0.009 which is less than 0.05. Hence, the results of the Greenhouse Geisser test were considered and it was found that there is no significant difference between the means of the three time periods.

### **C. Relationship Between Returns And Percentage Of Shares Repurchased And Consideration Given For Buyback (Multiple Regression Analysis)**

The F value is 7.174 and the P value associated with it is 0.006 which is less than 0.05. Hence, one can say that the independent variables jointly and reliably explain the variations in the dependent variable. It can be interpreted that the regression is valid. The independent variables are the percentage of shares repurchased and the consideration paid for repurchase. The dependent variable is the market adjusted average abnormal return post closure of share repurchase. It can also be termed as the immediate returns earned by the non tendering shareholders.

### **D. Differences Between The Returns To Shareholders (Share Repurchases Through Tender Offers And Share Repurchases Through Open Market)**

An independent samples t-test was conducted to compare the mean Cumulative average abnormal returns of the two types of Repurchase offers namely tender offers and open market offers.

The means CAARs of tender offers were found to be significantly higher than the mean CAARs of open market repurchases during the time period of 15 days prior to and 15 days post announcement of the repurchase offer.

However, the mean CAARs of open market repurchases were found to be significantly higher than the mean CAARs of tender offers in the 15 days post closure period.

Hence, overall it was found that the returns from both the types of offers were significantly different from each other. The tender offers give more returns during the time period when the offer is open whereas the open market repurchases give more returns during the time period after the closure of the offer.

It has been found there is a wide difference in the results of the two types of repurchases. Hence, though technically tender offers and share repurchases are both aimed at changing the capital structure of the company by reducing the equity shares, thereby increasing the debt equity ratio, their effects on the returns to shareholders differ significantly from each other.

## VI. CONCLUSION

Share repurchases are done in order to utilize the free cash reserves of the company. The company may have two options, one is to pay dividends and another is to retain its earnings for future growth. But sometimes, instead of giving out dividends which attract lot of tax, the company decides to go in for a share repurchase. So basically share repurchase is a way to distribute dividends to share holders. There are several methods of share repurchase. The repurchase of shares through tender offers has been studied.

Tender offers are usually open for a shorter period of time than open market repurchases. Hence, during the time period when the offer is open, it was observed that the returns to shareholders were significantly higher in case of tendering companies. However, this observation cannot be generalized as the economic conditions may also have some impact on the stock prices.

Negative Abnormal returns were observed in companies which went for tender offers but only after the closure of the offer. Hence, it can be said that in case of such companies, the non tendering shareholders (shareholders who do not sell their shares back to the company) got a lower return than the ones who sell their shares. This is an important result because the Basic share repurchase valuation model suggests that the total wealth created after repurchases can be divided into two parts - the wealth created by the non tendering shareholders and the wealth created by tendering shareholders.(Weston, 1990) Here the non tendering shareholders get a negative return of around 5 percent after closure of the tender offer.

No significance difference in mean returns was observed over three time periods in tender offer companies.

In the companies under consideration for the study, the effect of percentage of shares repurchased was found to have a significant effect on the returns to shareholders. However, the relationship is negative as the beta value is negative. Hence, when the company purchases higher percentage of shares, the returns were found to decline.

It can also be concluded for this study that the returns to shareholders due to tender offers and open market repurchases significantly differ from each other. The returns of shareholders were found to be significantly higher in case of tender offer companies during the pre and post announcement period whereas the returns of companies opting for an open market repurchase were found to be higher than the return of tender offer companies in the post closure period. Hence in this study, the basic hypothesis that 'share repurchases through tender offers lead to gains' is not fulfilled and on the whole it was found that for the companies under consideration, in the 15 day window pre, post announcement and post closure of offer, no abnormal gains were found. The reason for the negative gains post closure of the repurchase tender offer needs to be examined in more detail.

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**Tables:****Table 1 Tests of Normality**

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Cumulative Market Adjusted Abnormal Return Before Announcement of Share Repurchase	.162	15	.200(*)	.942	15	.403
Cumulative Market Adjusted Abnormal Return After Announcement of Share Repurchase	.231	15	.030	.845	15	.015
Cumulative Market Adjusted Abnormal Return After Closure of Share Repurchase	.225	15	.039	.885	15	.056

\* This is a lower bound of the true significance.

a Lilliefors Significance Correction

**Table 2 One-Sample Statistics**

	N	Mean	Std. Deviation	Std. Error Mean
Cumulative Average Abnormal Returns before and after share repurchase announcement	31	.07785573	1.742506397	.312963388

**Table 3 One-Sample Test**

	Test Value = 0					
	t	df	Sig.(2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
	Lower	Upper	Lower	Upper	Lower	Upper
Cumulative Average Abnormal Returns before and after share repurchase announcement	.249	30	.805	.077855729	-.56130078	.71701224

**Table 4** One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Cumulative Average Abnormal Returns after closure of share repurchase programme	16	-5.6587500	2.84755538	.71188885

**Table 5** 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 after closure of share repurchase programme	-7.949	15	.000	-5.65875000	-7.1761052	-4.1413948

**Table 6** Descriptive Statistics

	Mean	Std. Deviation	N
Market Adjusted Abnormal Return Before Announcement of Share Repurchase	.1276022	.48079540	15
Market Adjusted Abnormal Return After Announcement of Share Repurchase	-.4923686	1.41455804	15
Market Adjusted Abnormal Return After Closure of Share Repurchase	-.4653333	.88634778	15

**Table 7** Multivariate Tests(b)

Effect	Value	F	Hypothesis df	Error df	Sig.
Returns Pillai's Trace	.487	6.175(a)	2.000	13.000	.013
Wilks' Lambda	.513	6.175(a)	2.000	13.000	.013
Hotelling's Trace	.950	6.175(a)	2.000	13.000	.013
Roy's Largest Root	.950	6.175(a)	2.000	13.000	.013

a Exact statistic

b Design: Intercept

Within Subjects Design: Returns

**Table 8** Mauchly's Test of Sphericity(b)

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	Df	Sig.	Epsilon(a)		
	Greenhouse-Geisser	Huynh-Feldt	Lower-bound	Greenhouse-Geisser	Huynh-Feldt	Lower-bound	Greenhouse-Geisser
Returns	.488	9.329	2	.009	.661	.704	.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: Returns

**Table 9** Tests of Within-Subjects Effects

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
Returns	Sphericity Assumed	3.683	2	1.842	1.895	.169
	Greenhouse-Geisser	3.683	1.323	2.785	1.895	.185
	Huynh-Feldt	3.683	1.407	2.617	1.895	.183
	Lower-bound	3.683	1.000	3.683	1.895	.190
Error(Returns)	Sphericity Assumed	27.207	28	.972		
	Greenhouse-Geisser	27.207	18.518	1.469		
	Huynh-Feldt	27.207	19.702	1.381		
	Lower-bound	27.207	14.000	1.943		

**Table 10** Tests of Within-Subjects Contrasts

Source	Returns	Type III Sum of Squares	df	Mean Square	F	Sig.
Returns	Linear	2.637	1	2.637	4.321	.057
	Quadratic	1.047	1	1.047	.785	.391
Error(Returns)	Linear	8.543	14	.610		
	Quadratic	18.664	14	1.333		

**Table 11** Tests of Between-Subjects Effects  
Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Intercept	3.445	1	3.445	3.207	.095
Error	15.042	14	1.074		

**Table 12** Tests of Within-Subjects Contrasts

Source	MAAR	Type III Sum of Squares	df	Mean Square	F	Sig.
MAAR	Level 1 vs. Level 2	5.765	1	5.765	4.518	.052
	Level 2 vs. Level 3	.011	1	.011	.003	.955
Error(MAAR)	Level 1 vs. Level 2	17.864	14	1.276		
	Level 2 vs. Level 3	46.671	14	3.334		

**Table 13** Collinearity Statistics

Collinearity Statistics	
Tolerance	VIF
.927	1.079
.927	1.079

**Table 14** Model Summary(b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.688(a)	.473	.407	.56491

a Predictors: (Constant), Amount spent from reserves/borrowing for repurchase by company, Percentage of shares repurchased

b Dependent Variable: Immediate return to non tendering shareholders

**Table 15** ANOVA(b)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	4.579	2	2.289	7.174	.006(a)
	Residual	5.106	16	.319		
	Total	9.685	18			

- a Predictors: (Constant), Amount spent from reserves/borrowing for repurchase by company, Percentage of shares repurchased
- b Dependent Variable: Immediate return to non tendering shareholders

**Table 16 Coefficients**

		Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.283	.241		1.173	.258		
	Percentage of shares repurchased	-.068	.018	-.708	-3.756	.002	.927	1.079
	Amount spent from reserves/borrowing for repurchase by company	1.33E-011	.000	.103	.545	.593	.927	1.079

a. Dependent Variable: Immediate return to non tendering shareholders

**Table 17 Residuals Statistics(a)**

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	-1.4181	.2212	-.4846	.50436	19
Residual	-1.09663	1.05173	.00000	.53260	19
Std. Predicted Value	-1.851	1.399	.000	1.000	19
Std. Residual	-1.941	1.862	.000	.943	19

a. Dependent Variable: Immediate return to non tendering shareholders

**Table 18 Group Statistics**

GRPS	N	Mean	Std. Deviation	Std. Error Mean
CAAR 1	31	8.06806452	3.229072539	.579958549
2	31	.68000000	1.500299970	.269461829

**Table 19 Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
CAAR	Equal variances assumed	23.274	.000	11.553	60	.000	7.388064	.6395010	*****	*****
	Equal variances not assumed			11.553	42.376	.000	7.388064	.6395010	*****	*****

**Table 20 Group Statistics**

grpscls	N	Mean	Std. Deviation	Std. Error Mean
Cumulative average abnormal returns after closure of repurchase 1	16	-5.6588	2.84756	.71189
2	16	-.1626	.70802	.17700

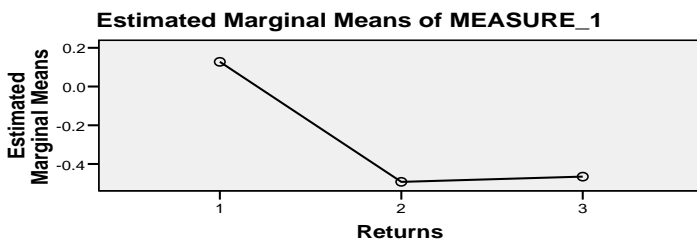
**Table 21 Independent Samples Test**

	Levene's Test for Equality of Variances		t-test for Equality of Means							
	F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference		Std. Error Difference	95% Confidence Interval of the Difference	
						Lower	Upper		Lower	Upper
	Cumulative average abnormal returns after closure of repurchase	23.361	.000	-7.492	30	.000	-5.49615	.73356	-6.99429	-3.99801
-7.492							16.848	.000	-5.49615	.73356

As it can be seen from the table no. 21 that F value is 23.361 and the significance value is 0.000 which is less than 0.05.

**Charts:**

**Chart no. 1**



**APPENDICES**

Tender Offers	Open Market Repurchases through Stock Exchanges
Zensar Technologies Ltd.	CRISIL Limited
Eicher Motors Ltd.	Eon Electric Ltd

Gee Cee Ventures Ltd.	PVR Limited
Piramal Healthcare Ltd.	Deccan Chronicle Holdings Limited
Lakshmi Machine Works Ltd.	Balrampur Chini Mills
Navine Flourine International Ltd.	Sasken Communication Technologies Limited
Akzo Nobel Indian Ltd.	Hindustan Composites Limited
Monnet Ispat and Energy Ltd.	M/s Ansal Housing and Construction Limited
ABG Infralogistics Ltd.	Gemini Communications Limited
FDC Ltd.	Borasil Glass Works Limited
IPCA Laboratories Ltd.	Onmobile Global Limited
Merck Ltd.	Amtek Auto Limited
Bhagyanagar India Ltd.	Praj Industries Limited
Madras Cements Ltd.	Zee Entertainment Limited
Assam Carbon Products Ltd.	Bhagyanagar India Limited
Apollo Finvest India Ltd.	Allied Digital Services Limited
GTL Ltd.	De Nora India Limited
Ace Software Ltd.	FDC Limited
Abbott India Ltd.	Avantel Limited

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