

Share Buyback and Firms' Performance: A Study of Selected Indian Companies

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Abstract-- Buyback of shares in India has been allowed in 1999. Since then it has been used widely as a means of financial restructuring. It is a process through which a company distributes its excess cash among the shareholders by way of buying back its own shares. It may affect the performance of the company in various ways. The present paper examines the impact of buyback of shares on the operating and financial efficiency of the firms. A sample of 128 buyback announcement made by 102 companies listed on BSE during 1999-2012 has been taken to analyse the impact. Eight different measures viz. net profit ratio, return on net worth, return on capital employed, current ratio, earnings per share, proprietary ratio, dividend payout ratio and price earnings ratio have been used to analyse the impact of buyback of shares on the operating and financial performance of the companies. Paired t-test has been used to examine these ratios before and after the buyback. The paper finds that there is improvement in financial position of the firms after the buyback. Operating ratios have shown a decreasing impact in the post buyback period. However the pre-buyback ratios are not statistically significantly different from the post buyback ratios at 5 % level of significance.

Keywords-- Share buybacks, financial position, operating efficiency

I. INTRODUCTION

Buyback of shares is dominated by many factors. There is no single factor which governs the repurchase activities of the firms. In fact there is a long list of factors that motivates a firm to indulge in buyback activity. For example undervaluation, signalling, free cash flows, preventing hostile takeovers and improving the EPS and thereby the operating and financial performance of the firms. When a firm announces the repurchase of shares, it usually buys back its shares at a price higher than the prevailing market price and thereby conveys an information signal in the market that the in view of management either the shares are undervalued because either the market is not correctly pricing the stocks or because the prices of the stock are not able to describe the future growth of the profitability of the firm. Thus the buyback of share affects the market price of the shares and generates short term abnormal returns and it also affects the operating and financial efficiency of the firms in terms of liquidity and solvency. The free cash flow hypothesis proposed that there must be an increase in the operating profits and cash flows of the firm after the share buyback. Further the share buyback involves a large amount of cash outflow and thus it may affect the liquidity position of the firm as well.

II. BUYBACK OF SHARES IN INDIA

The main legislation governing the buyback of shares in India was declared in 1999 by making necessary amendments in the Companies Act 1956. Sections 77A, 77AA and 77B were inserted to provide space for the introduction of buyback of shares. SEBI also put in force some fresh guidelines for the buyback of securities. However after the introduction of New Companies Act 2013 the provisions of buyback of shares have

been further revised and some necessary changes were made. Similarly SEBI also issues some amendments in the regulation of buyback of securities from time to time. Thus at present there are two different regulations viz. Companies Act and SEBI provisions to provide the conditions under which an Indian company can purchase its own shares. Moreover in the New Companies Act 2013 there is a mention of Rule 17 of *Companies (Share capital and Debentures) 2014* to govern the buyback of securities by the private companies and unlisted public companies.

Immediately after the enactment of the share buyback few companies like Reliance Industries Ltd., Kesoram Industries Ltd., Compton Greaves and Tisco Ltd. took the legal authority to announce the buyback of their shares. Still the buyback activity remained very low in the initial two years. Only 13 buyback announcements were made in first two years 1998-2000 involving an amount of around rupees 300 crores (Table 2.1). This less number of buyback leads to the relaxation in the buyback rules and provisions in October 2001. As a result there were 72 buyback announcements made in the next three years from 2001 to 2003 with an amount of around rupees 4500 crores. However a decline in the buyback activity was again noticed from 2004 to 2007 where in only 47 buyback was undertaken over the period of four years. The reason may be the subprime crisis in U.S stock market crisis of the year 2006 because after that there was a tremendous increase in the buyback activity from 2008 till date as mentioned in Table 1. There were 196 buyback announcements with an amount of approximately rupees 39000 crores over a period of eight years i.e. from 2008 to 2015.

Table 1: Buyback Announcements in Indian Capital Market

Year	Amount (Rs. Cr.)	No. of Buyback Announcement
1998-99	1	1
1999-00	300	12
2000-01	1,297	14
2001-02	2,154	27
2002-03	1,011	31
2003-04	52	8
2004-05	3,600	11
2005-06	363	10
2006-07	295	7
2007-08	2,004	10
2008-09	4,218	46
2009-10	824	20
2010-11	4,295	20
2011-12	13,765	31

2012-13	1,694	21
2013-14	11,380	32
2014-15	605	10
2015-16	1834	16
Total	49692	327

Thus it is cleared that buyback of shares in India has been gaining its space. Large numbers of companies are using buyback of shares as an effective mechanism for corporate and financial restructuring. The present paper is an attempt to discover whether the buyback of shares increases the value to the shareholders and maximises their wealth.

III. REVIEW OF LITERATURE

Vermaelen (1995) in his study examined 131 buy-back tender offers and 243 open market repurchase. He found the average abnormal return of 3.67% and 13.9% for an open market repurchase and tender offer announcements respectively. He found that the earnings per share were found to be abnormally high for the years following a tender offer and used as a proxy for cash flow per share. He examined a period from 1962-1977 when most of the firms repurchasing shares were small firms, normally not followed by many researchers. These firms were mostly considered to be undervalued and thus required a greater need to follow tender offer. He endorsed that the management undertakes buy-back to satisfy the investors that the shares of the company are undervalued. Nohel and Tarhan (1998) examined 242 tender offers during the period 1978-1991 and argued that the effects of buyback announcement is not adequate to conclude that the signalling or the free cash flow hypothesis holds true. They observed some improvement in the performance of the companies buying back but there were sheer differences between high-growth and low-growth firms.

Weisbenner (1999) found that if the firms grant stock options, it will reduce earnings per share because the number of shares over which earnings are divided would be increased. EPS is an important determinant of the performance of a company. Once the share are bought back, the number of outstanding shares is reduced. However the cash utilised repurchase the shares is not taken out of earnings. Weisbenner concluded that the companies carry out gradual share repurchase in order to offset the adverse earnings per share resulting out of stock option programmes.

The study of Ben, Nagar, Skinner and Wong (2003) also examined that corporate executives' stock repurchase decisions are affected by their incentives to manage diluted Earnings Per share. They found that dilutive effects of employee stock option plans on diluted EPS help explain executives' stock repurchase decisions. Brav et al. (2005) findings further supported this argument and found that to counteract the adverse effect of employee share option is the third most significant cause of share buyback decision. In order to examine the price reaction of the share buyback announcement Mishra (2005) studied 25 buybacks in India during the period between 1999 and 2001. He mentioned that the company's intention to reveal its high confidence in itself is the major reason behind the buyback of shares. He tried to find out whether the management took best care of the interest of the non tendering shareholders when it decided to go for buyback of shares. In order to describe the trends of various performance measures like share prices, a trend analysis was

carried out for pre and post buyback period. The study established that the repurchase returns were generally momentary and the markets came back to the previous level after only three months. Thus share buyback was used to increase promoter's shareholdings.

Brav et al. (2005) found after interviewing 384 CFO's that increase in earnings per share is the second main important factor which affects a company's decision of share buyback. The reason supporting this argument is that if share are repurchased, the number of shares outstanding is reduced and as a result EPS will grow assuming net income remains unchanged. However, there are various reasons which may contradict the apparent association between EPS and share buyback. First, a share buyback will not necessarily boost earnings if positive NPV investments opportunities exist that is the funds used for the buyback would not succeed to earn the desired cost of capital. In this case it is better to invest in the company's own stock than other available investments otherwise executing a share buyback may actually bring down the shareholder value.

Li and McNally (2007) in their paper found that the average number of shares outstanding actually grows by 4.7 percent for the companies buying back shares, in comparison with a sample of non-repurchasing where number of share outstanding increased firms by 10.0 percent for the same time period. This further means that all share buyback programs do not reduce the number of shares outstanding.

In their conceptual study Nadarajan, Ahmad and Chandren (2009) attempted to examine the share buyback announcement effects on earnings within the jurisdiction of Malaysian Stock Market. The study concluded with a conceptual model, which provides with an insight of valuable connection between share buyback targets and earnings per share, Dividend Payout ratio and cash flows of firms making share repurchase announcements in Malaysian markets. Secondly, it may be quite possible that repurchase of shares does not always result into a decrease number of shares outstanding at the end of the buyback program as on one hand a firm is repurchasing its shares, and on the other it may also be issuing shares to execute employee stock options. There are studies which proved that the number of shares outstanding actually increases as a result of share buyback.

B Ramesh and P Rane (2013) examined the sample of 27 Indian companies and 5 Multinational companies belonging to 21 different industries listed on BSE to measure the performance of share repurchase during the period 2005 to 2010. The study analysed the effect of share repurchase on the shareholder value creation. It was considered that the Earnings per share increased because the number of shares reduced after the buyback of shares. The study revealed that there was increase in EPS for 78% of the buyback programmes included in the sample. For the remaining a reduction in EPS was registered. Thus it was concluded that the buyback of shares created value to the shareholders through share buyback programmes.

Abdul Wahid (2014) discovered that the operating performance of the companies was improved just because of the reduction in the number of outstanding shares. It was also found that the important factors for improving the operating efficiency were earnings per share, return on assets, returns on equity and market to book value of equity. The sample included 101 companies listed on Main and Second Board of Malaysia and that had undergone through the share repurchase

during 1999 to 2005. Share buyback was considered as a method of returning excess cash to its shareholders.

Lately Dhanda and Kaur (2014) had published their research paper to discuss the benefits of share repurchase to the shareholders and the companies. The prime intention of the study was to test the impact of the share repurchase on the performance of the companies. They analysed the companies listed on the BSE and undergone the share buyback programme between 2009 to 2011. To measure the pre and post performance of the companies ratio analysis technique was used. Liquidity ratios are calculated to test the financial stability of the companies after the buyback of shares and to find the association between the liquidity ratio and the performance of the companies. They believed that if the firm is not able to provide the returns equivalent to what is required it should return funds to the investors so that they can invest such funds elsewhere to get their desired returns.

IV. RESEARCH METHODOLOGY

A. Objectives

The study has the following objectives:

1. To investigate whether the buyback of shares helps in enhancing the operating performance of the companies.
2. To examine the impact of buyback of shares on the financial efficiency of the firms.

B. Hypothesis

Following hypotheses are tested to study such impact of buyback of shares on the efficiency of the companies:

a. Hypothesis 1

H₀: There is no difference in financial position of the companies after the buyback of shares

H₁: There is difference in financial position of the companies after the buyback of shares

b. Hypothesis 2

H₀: There is no difference in operating efficiency of the companies after the buyback of shares

H₁: There is difference in operating efficiency of the companies after the buyback of shares

C. Methodology

The study is based on the secondary data. The companies listed on Bombay Stock Exchange which have declared and conducted the share buyback programme from 2000 to 2012 through open market purchase are selected. 128 companies have been selected on the basis of availability of data. Out of this 20 companies have conducted buyback for more than once but since they have done buyback with different offer amount and the offer price therefore each buyback offer is treated as a separate sample.

The data for six years pre and post buyback period is collected for all the companies into consideration. The pre buyback period consists of three years prior to the financial year in which the announcement of buyback is made while the post buyback period comprises of three years after the financial year in which the buyback is announced. The data has been collected on annual basis with the help of PROWESS 19. For the purpose of measuring the impact of share buyback on the operating efficiency following ratios have been selected:

D. Net Profit Margin

Net profit margin ratio explains the relationship between net profit and sales of a company. This ratio also measures the efficiency of the management in operating the business successfully not only to recover the cost of merchandise or services, the expenses of operating the business (including depreciation) and the cost of the borrowed funds, but also to provide a sufficient level of margin to the owners for providing their capital at risk. This ratio shows the overall profitability of the company and therefore it is considered as an important measure of the operating performance. If sufficient net profit margin is favourable for the firm because it signifies sound management and efficiency. Such a firm is in better position to stand under adverse conditions like reduction in selling price or the demand of the product, increase in the cost of production and so on. On the other hand if the net profit margin is not adequate the company will not be able to survive under such circumstances and as a result may not be able to provide the reasonable returns to the shareholders. Net profit margin is calculated as follows:

$$\text{Net Profit Margin} = \frac{\text{Net Profit}}{\text{Net Sales}} \times 100$$

E. Return on Net Worth

Return on Net worth (RONW) is used as a measure of a company's overall efficiency in finance as it signifies the primary objective of the company i.e., maximization of earnings. This ratio indicates how much a company produces with the amount invested by the shareholders. Therefore it is also known as Return on Equity (ROE). The analysis of this ratio depicts the growth and prosperity, or deterioration in the company's efficiency and profitability and therefore it is very important for the present and prospective shareholders as well as the management of the company. This ratio is calculated by dividing profits available for equity shareholders by the average net worth of the company. As this ratio is used as an indicator of overall efficiency, higher the ratio the better is the overall efficiency of the firm.

Return on net worth =

$$\frac{\text{Profit After Tax - Preference Dividend}}{\text{Average Net Worth}} \times 100$$

F. Return on Capital Employed

The return on capital employed is the measure of company's profitability and efficiency with which its capital is employed. It can be used to assess the ability of the company to convert its capital employed into profit before interest and taxes thus it can be considered as the total return available for the providers of the capital. A high ROCE signifies the efficiency of the company in the utilisation of capital. ROCE should ideally be higher than the cost of borrowings otherwise the earnings for the shareholders will be reduced if there is any rise in the cost of borrowings. Return on Capital Employed (ROCE) is calculated as:

Return on Capital Employed =

$$\frac{\text{Profit before Interest and Tax}}{\text{Average Capital Employed}}$$

G. Current Ratio (Times)

Current ratio is widely used in financial reporting. It is considered as an important way to measure the short term

solvency of the firm. Short term solvency means the ability of a firm to meet its current obligations as and when they become due. The idea behind calculating this ratio is to find out whether a company's short term assets are timely available to pay off its short term liabilities. The current ratio is also expressed as working capital or short term solvency ratio. It is calculated by dividing the total current assets by total current liabilities as:

Current Ratio =

$$= \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

A higher current ratio is considered good for a firm. Normally a current ratio of 2:1 is preferred but one should be very careful while interpreting this. This may be due to the reason that sometimes a company with a very high current ratio is not able to meet its current liabilities because a large amount of its current assets includes poor receivables or slow moving inventory turnover. This fact may limit the usefulness of the ratios as the reported amount of these components of current assets may not actually interpret the ability of the company to liquidate its sources in time. Insufficient working capital may result in inability of the company to pay out the wages, materials and other expenses well in time. In order to measure the impact of buyback of shares on financial performance of the companies following ratios have been considered:

H. Proprietary Ratio

Proprietary ratio is a variant of the debt equity ratio which explains the relationship between the shareholders' fund and total assets of a company. The proprietary ratio is also known as the equity ratio. As it measures the proportion of shareholders' equity to total assets, it presents a rough approximate of the amount of capitalisation used to support a business at present. A higher ratio signifies that the better long term solvency position of the company in the sense that the company has enough amount of equity to support the business and there is no need to raise the additional debts. On the other hand if a company has low proprietary ratio, it means the company may be using too much of debt rather than equity to support its business. Thus a high ratio is considered good for a company as it ensures that business is mainly run through owners' funds rather than the outside funds which indicates less pressure and less interference from outside. To determine the proprietary ratio the total shareholders' equity is divided by the total assets excluding intangibles assets.

Proprietary Ratio =

$$\frac{\text{Shareholders' Fund}}{\text{Total Assets Excluding Intangible Assets}}$$

I. Dividend Payout Ratio (%)

The dividend payout ratio means that part of the portion of the net income of the company which is paid as a dividend to its shareholders. The remainder is available for investing for future growth and expansion. Thus the ratio is calculated as under:

Dividend Payout Ratio =

$$\frac{\text{Equity Dividened}}{\text{Profit After Tax}}$$

A higher dividend payout ratio shows that the company is paying more of its income as dividend and keeping less for

reinvestments. the investors who want more capital growth may prefer lower dividend payout ratio. On the other hand the investors normally prefer the companies with high dividend payout ratio if they seek more current income and less capital growth.

J. Earnings per Share (EPS)

Earnings per share are defined as an amount which a company freely pay to its shareholders as dividend or can plough back into the company or a combination of both without any obligation. It is regarded as an indicator of the profitability of a company. because it is considered as that portion of a company's profit which is allocated to each equity share outstanding. EPS is calculated by dividing the profits after tax by the total number of equity shares outstanding. Thus

Earnings Per Share =

$$\frac{\text{Net Profit Available to Equity Shareholders}}{\text{Number of Equity Shares Outstanding}}$$

This ratio shows the amount of earnings per equity share. However EPS does not represent how much is distributed as dividend and how much is ploughed back into the company. Still a higher the ratio is considered as good because it shows better earnings to the shareholders.

K. Price Earnings Ratio

The price earnings ratio is considered as an important tool to value the performance of a firm as expected by the shareholders. It is regarded as a valuation ratio of the share price of a company to its earnings per share. Thus it is calculated as under

$$\text{Price Earnings Ratio} = \frac{\text{Market Value Per Share}}{\text{Earnings Per Share}}$$

Thus is provides an estimation of what the market is ready to pay for the earnings of the company. It also presents whether a stock is correctly valued in the market or not. A very high PE ratio generally advocates that market participants required that the company should post higher earnings growth. However it can also be taken as the stock is overpriced in the market. On the other hand a low PE ratio is regarded as an undervaluation of the stock. This interpretation however may be different for different industries. For example the sectors that are cyclical like fertilizers may have a low PE ratio while the sectors like FMCG and It may command a higher PE ratio.

L. Statistical tools used for analysis

The analysis is done for all the companies without any differentiation. For the analysis, year wise performance of sample companies for different parameters (variables) has been considered. Pre-buyback data includes pre-buyback three years' average and post-buyback data includes post-buyback three years' average. The paired sample t-test has been used to measure the statistical implication of pre-buyback and post-buyback financial performance. Further non parametric test e.g. Wilcoxon and Sign test are also used to prove the robustness of the results. Statistical software package SPSS 19 has been used for the statistical analysis.

The difference observed mean, t-value and p-value are considered for the purpose of analysis at 95% level of significance. The acceptance of the null hypothesis (H_0) indicates that there is no change observed in the performance of the companies after the buyback. If null-hypothesis is

rejected, it signifies that there is a change in the performance, either increase or decrease. The hypotheses are tested at the 0.05 significance level.

V. ANALYSIS AND INTERPRETATION OF DATA

A. Impact on financial performance

Sometimes a company may go for buyback of shares as a substitute of paying dividends. It may be because of many reasons e.g. potential tax benefits, managerial flexibility, signalling and improved financial leverage. In such cases the buyback of shares is considered as a better substitute of dividend payment and therefore the dividend payout ratio becomes less irrelevant. Thus an effort is made to analyse the dividend payment pattern of the companies after the buyback of shares by examining their dividend payout ratios before and after the buyback of shares.

Buyback of shares may also have an impact on the earnings per share. This may be because of the reasons that the number of outstanding shares is reduced as a result of share repurchase and therefore the earnings per share is assumed to be increased provided the profits after tax does not change. Since the buyback of shares reduces the number of outstanding shares,

its great effect can be noticed in per share measure of profitability i.e. EPS before and after the buyback of shares. The reduction in EPS as a result of buyback of shares may reduce the PE ratio of the company if the market value remains the same. On the other hand if there is a corresponding increase in the market price of the share and such increase is more than increase in EPS, the P/E will increase at a rate more than increase in the EPS.

It has been observed that the share repurchase is undertaken for increasing the price in the market, if it is true it may affect the PE of the companies also. Therefore an analysis is made to study the impact of the buyback of shares on the PE ratio of the sample companies. The results are presented in Table 2 and Table 3.

It is evident from Table 2 that the proprietary ratio has been reduced slightly after the buyback of shares while all other three indicators recorded an increase in the post buyback period. Standard deviation of proprietary ratio is more after the buyback while that of other three ratios is less after the buyback of shares indicating less dispersion in these variables in post- buyback period.

Table 2: Financial performance of the Companies: Comparison of Pre and post Buyback

Ratio	Pre Buyback		Post Buyback		Paired Difference	
	Mean	S.D	Mean	S.D	Mean	S.D
PR	56.2677	19.65662	56.0637	19.66268	0.20398	15.00408
DP Ratio	17.3062	62.50026	27.6304	33.32833	-10.324	70.19961
EPS	17.6598	40.61879	19.1144	30.7161	-1.45461	40.90536
PE Ratio	13.0835	60.75178	14.9554	43.23701	-1.87189	74.29911

Table 3: Financial performance of the Companies: Results of test statistics

	T test		Wilcoxon		Sign test		Correlation	
	t Statistics	p Value	z Statistics	p Value	z Statistics	p Value	Correlation	p Value
PR	0.154	0.878	-0.291	0.771	-0.442	0.659	0.709	0*
DP Ratio	-1.664	0.099	-0.703	0.482	0	1	0.021	0.811
EPS	-0.402	0.688	-2.945	0.003*	-2.917	0.004*	0.369	0*
PE Ratio	-0.284	0.777	-0.555	0.579	-0.887	0.375	0.008	0.933

The test results in Table 3 indicate a very high and statistically significant positive correlation in pre and post buyback proprietary ratio. However the correlation in pre and post buyback dividend payout ratio and price earnings ratio is very less and statistically insignificant. This means that as such there is no relationship between pre-and post-buyback dividend payout ratio and price earnings ratio. The p value for t test is more than 0.05 in case of all ratios which leads to the acceptance of null hypothesis. The p value for Wilcoxon and Sign tests are also more than 0.05 except in case of EPS. Hence, it may be concluded that there is no significant difference in the performance of these ratios after the buyback of shares.

From the above analysis of shareholders' value after considering the proprietary ratio, dividend payout ratio, earnings per share and price earnings, it is clear that that dividend payout ratio, earnings per share and price earnings ratio have been increased after the buyback of shares. The

value of proprietary ratio has shown a slight decrease in the post- buyback period. However the t-test analysis gives such value of p for all of these four ratios which is more than 0.05 significance levels. While Wilcoxon and Sign test provide lower value of p in case of earnings per share. Hence, no sufficient evidences are drawn to reject null hypothesis.

B. Impact on operating Efficiency

Profitability and liquidity indicators concentrate on the ability of the company to produce sufficient profits and adequate returns on the assets and equity. These ratio help in measuring how effectively a company manages its operation and how efficiently it utilises its assets. One of the objectives behind buyback is to provide better returns to the remaining shareholders. As it is assumed that the EPS improves after the share buyback because the number of outstanding shares are reduced. The company can further improve EPS if the income is also grown. Thus net profit margin of the sample companies

are being analysed as it may help in analysing the success of buyback programme to some extent. Further Return on net worth can be increased if a company announces the buyback of shares because the equity share capital has been reduced and thereby the net worth of the company. But on the other hand if the company goes for new debts simultaneously it may bring increased cost of debt in the form of fixed income charge. Thus the return on net worth should be assessed to analyse the impact of the buyback activity on the operating and financial performance of the firm. The return on capital employed is also considered because ROCE depicts the efficiency of the company in utilising both equity and debt to produce the returns. An attempt has been made to find whether there is any impact on ROCE of the companies after the buyback of shares. Liquidity ratios measure the ability of the company to meet its short term obligations in time when

they fall due. A company going for buyback of shares may have some impact on its liquidity position. One of the reason supporting buyback is the presence of free cash flows. Further buyback of shares also result in outflows of cash in the form of amount paid for the shares repurchased. Table 4 exhibits the operating position of the sample companies before and after the buyback of shares.

Table 4 presents that there is decrease in all four ratios after the buyback of shares. The standard deviation of these ratios is very high depicting that in the post-buyback period these variables are dispersed from the mean values. This may be because of different line of business of companies and the trends in the industry they belong to. Table 5 shows the results of various test statistics to check whether the difference in these variables before and after the buyback is significant or not.

Table 4: Operating Efficiency of the Companies: Comparison of Pre and post Buyback

Ratio	Pre Buyback		Post Buyback		Paired Difference	
	Mean	S.D	Mean	S.D	Mean	S.D
NPR	15.7584	19.34138	13.6928	27.32627	2.06563	30.15659
RONW	26.3505	41.94576	21.73	57.41853	4.62055	32.33346
ROCE	30.1102	23.64744	24.872	20.63885	5.2382	21.13989
CR	2.4531	4.36743	2.0427	3.61724	0.41047	3.54118

Table 5: Operating Efficiency of the Companies: Results of test statistics

Ratio	T test		Wilcoxon		Sign test		Correlation	
	t Statistics	p Value	z Statistics	p Value	z Statistics	p Value	r	p Value
NPR	0.775	0.44	-0.108	0.914	-1.149	0.251	0.2	0.024*
RONW	1.617	0.108	-2.075	0.038	-1.326	0.185	0.833	0*
ROCE	2.803	0.006*	-2.535	0.011	-1.679	0.093	0.551	0*
CR	1.311	0.192	-2.700	0.007*	-2.386	0.017*	0.621	0*

All the three variables recorded a positive significant correlation. However there is maximum correlation in pre and post buyback return on net worth (0.833). The significant value for t test is more than 0.05 in case of net profit margin, return on net worth and current ratio. This advises to accept the null hypothesis and thereby conclude that the difference in NPR, RONW and CR in pre and post buyback period is not statistically significant. Wilcoxon and sign test also support the same result except in case of current ratio. However the null hypothesis is rejected for return on capital employed as the p value is 0.006 which is less than 0.05. Thus it indicates the change in the return on capital employed is statistically significant at 5% level.

It is observed from the above results of three performance variables relating to the operating efficiency that null hypothesis is accepted in case of net profit ratio for all of three analysis. No significant difference is proved in case of return on net worth as per t test and sign test. Thus there is no difference found in return on net worth after the buyback of shares. While for return on capital employed the null hypothesis has been rejected according to t test and Wilcoxon test and thus proved that there is significance difference in this variable of profitability. But the sign test does not support the same result by accepting the null hypothesis. The p value of t

test is more than 0.05 in case of current ratio which leads to the acceptance of null hypothesis. So it may concluded that there is decrease in the liquidity of the firm after the buyback of shares but such decrease is not statistically significant as per the t test. However the analysis of Wilcoxon test and Sign tests are in favour of rejecting the null hypothesis because the p value is much less than significance value of 0.05. Thus it suggests that the difference in the pre and post- buyback liquidity position is statistically significant.

CONCLUSION

Share buyback is considered as an effective mechanism of financial restructuring. It affects the financial and operating performance of the companies. The study observed that there is improvement in the financial performance of the companies after the buyback of shares while the operating performance of the companies has recorded a decrease. Three out of four measures i.e. earnings per share, dividend payout ratio and price earning ratio have been increased in the post buyback period. However proprietary ratio recorded a slight decrease after the share buyback. While all the measures of the operating efficiency have decreased after the buyback of shares. However such changes in the financial and operating performance are found to be statistically insignificant which leads to the acceptance of null hypothesis. Thus it can be

concluded that there is no change in the financial and operating efficiency of the companies after the buyback of shares.

References

- [1] Bens, D. A., Nagar, V., Skinner, D. J., & Wong, M. F. (2003). Employee stock options, EPS dilution, and stock repurchases. *Journal of Accounting and Economics*, 36(1), 51-90.
- [2] Brav, A., Graham, J. R., Harvey, C. R., & Michaely, R. (2005). Payout policy in the 21st century. *Journal of financial economics*, 77(3), 483-527.
- [3] Dhanda, N., & Kaur, K. (2014). Why Companies Use the Policy of Buyback of Shares in India. *International Journal of Emerging Trends in Science and Technology*, 1(05).
- [4] Dol, A. H., & Wahid, A. (2014). Measuring the Motivating Factor for Share Buyback: Evidence from Malaysian Companies.
- [5] Ikenberry, D., Lakonishok, J., & Vermaelen, T. (1995). Market underreaction to open market share repurchases. *Journal of financial economics*, 39(2), 181-208.
- [6] Kaur Ramesh and Rane ,P.(2013). Shareholder value creation through buyback of equity .*Indian Journal of Accounting Vol xliv .pp.1-5.*
- [7] Li, K., & McNally, W. (2007). The information content of Canadian open market repurchase announcements. *Managerial Finance*, 33(1), 65-80.
- [8] Mishra, A. (2005). An empirical analysis of share buybacks in India. *ICFAI Journal of Applied Finance*, 11(5), 5-24.
- [9] Nadarajan, S., Ahmad, Z., & Chandren, S. (2009). The effects on earnings from announcement of open market Malaysian corporate share buyback. *European Journal of Social Sciences*, 11(3), 378-390.
- [10] Nohel, T., & Tarhan, V. (1998). Share repurchases and firm performance:: new evidence on the agency costs of free cash. *Journal of Financial Economics*, 49(2), 187-222.
- [11] Weisbenner, S. J. (2000, May). Corporate share repurchases in the 1990s: What role do stock options play?. In *AFA 2002 Atlanta Meetings*.