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A study on Shareholders value added of select Indian LBO companies

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Abstract
This study examines impact of leveraged buyout on the shareholders value added of the select Indian companies. For this purpose seven sample leveraged buyout companies have been taken into consideration during the study period 2005-06 to 2009-10. Mean and coefficient of variation of SVA of the sample companies have been computed before and after three years period of leveraged buyout in order to measure the change in performance related to shareholders value added. Event study approach has been adopted to measure the change in performance of the sample companies. Finally, it is found that there is improvement in shareholders' value after leveraged buyout since Paired t test has depicted a statistically significant result.

Keywords: Leveraged buyout (LBO), shareholders' value added (SVA), event study approach, market value added (MVA)

Introduction

The term leveraged buyout (LBO) is an acquisition or purchase of a business, typically a mature company, financed through substantial use of borrowed funds or debt by a financial investor whose objective is to exit the investment after 3-7 years. Leverage implies acquisition of significant amount of debt in the capital structure of the firm in order to take the advantage of trading on equity. There is large number of research studies in the field of leveraged buyout abroad but a few number of research studies have been found in India. Some literatures which disclosed the impact of leveraged buyout on shareholders' value have been discussed below:

Baker, G. P., & Wruck, K. H. (1989) [3-5] have found that the pressure of servicing a heavy debt load and management equity ownership lead to improved performance. As a result, LBO has positive impact on shareholders' value.

Baker, G. P. (1992) [3-5] has analyzed the value consequences of the firm's acquisition and divestiture policies, its organizational strategy, and its governance. The analysis sheds light on a number of issues in organization theory, strategy, and corporate finance, including the sources of value in diversifying acquisitions, the cost of over- centralization and weak corporate governance, and the mechanisms of value creation in the market for corporate control.

Daren (2003) has developed a shareholders' value creation chain to analyze the potential performance bases for executive incentive. The chain is composed of a series of value drivers which share cause- effect, or interacting, or parallel cooperative relationship. According to the chain, the potential performance bases for executive incentive can be classified into accounting - based performance and market - based performance, both of which comprise a series of specific performance measures. Moreover, both individual performance evaluation and subjective performance evaluation can serve as the complements to the above performance bases in executive incentive contracts.

Andres, C., Betzer, A., & Hoffmann, M. (2004, April) [2] have analyzed different sources of value creation for pre-Private to Public (P2P) shareholders. The results of their cross-sectional regression support the agency cost theory as companies with a high pre-Private to Public free float and thus conceivably weak monitoring by shareholders tend to show high abnormal P2P returns. They have found that companies whose stock performed badly before the buyout as well as companies which are undervalued with respect to their industry peer group tend to have higher abnormal returns.

Bergst, Grubb röm, C, M., & Jonsson, S. (2007) [6] have suggested that buyouts have a significant positive impact on the companies' operating performance. They have found that measurable variables commonly associated with the private equity value creation process, such as wage-level reductions, labor force restructuring, leverage and management ownership, which have a low explanatory value for the magnitude of the operating impact.

Cui, B (2008) [11] has investigated the significant changes in leveraged buyout (LBO) deal characteristics, sources of value created for shareholders of LBO target firms through LBO transactions, and motivations behind LBOs over an extended and recent period (1985-2005). According to the author findings, there are three subtopics which shed further light on the three key working theories, namely, the free cash flow hypothesis (the FCF hypothesis), the heterogeneity hypothesis, and the overheated market hypothesis. Finally the author has found significant improvement in shareholders' value after LBO transactions.

Achleitner, A. K., Braun, R., & Engel, N. (2011) [1] have shown that deals conducted by first time funds which are realized in a later stage of a fund's life cycle are associated with lower exit prices which can be explained by the increased exit pressure for the PE sponsor.

Singh, P. K., & Pattanayak, J. K. (2014) [32] have examined the impact of customer satisfaction on shareholders' value creation. Customer satisfaction involves behavior of customers that typically relate to purchase or consumption of product or services. Theoretically, managers wish for a balanced performance on both the dimensions *viz*. marketing and finance as both the dimensions are reciprocal in nature. Customer satisfaction increases future cash flows and reduces their variability and thereby the shareholders' wealth gets maximized in the long run. The authors have identified the linkage existing between customer satisfactions with shareholders' value maximization.

Ilg, D. (2015) [20] has focused on the impact of the holding period, the effects of divesting activities and expectations about the future shape of the economy on the performance of deals. According to the author, a longer holding period is associated with a lower internal rate of return. The author has also found a return diminishing effect of selling subsidiaries of target companies. Finally, the author has shown that larger deals are financed more aggressively with debt and generate more value by multiple expansions than smaller deals.

Cao, K., Coy, J., & Nguyen, T. (2016) [10] have opined that market volatility plays an important role in determining all three elements under investigation due to its effect on the market value of the firm. According to the authors, management's involvement has a strong positive effect on offer premiums indicating that positive information asymmetry remains to be a motive for management's involvement in LBOs. The agency cost hypothesis is also supported in all three analyses and there is evidence that increased financial distress costs are a concern to private equity groups.

Hung, Y. D., & Tsai, M. H. (2017) [19] have examined the tactics and strategies that LBOs use to capture and transfer value, and study emerging markets outside the traditional territories of LBO activities. This article reveals concerns that may be of interest to investors and regulators, elucidates clues for PE firms managing differences when investing in emerging markets, and provides an integrated view of LBO activities for countries seeking the introduction of private equity.

Gao, L. (2019) [17] has estimated an empirical model of two-sided many-to-many matching game in which private equity investors acquire publicly traded companies in leveraged buyouts, and examines the value creation of these transactions. This method calculates match-specific values by exploiting the characteristics of both private equity investors and companies. It is therefore able to identify and quantitatively estimate the value created through investor influence and that created through debt. In public-go-private transactions completed between 1986 and 2007, the direct influence of private equity investors generates a significant value which is equal to 7.8 percent of the pre-buyout market capitalization of the going private companies. However, the value generated through debt is insignificant.

Mittoo, U., Ng, D., & Yan, M. (2020) [26] have investigated the impact of lending conditions and undervaluation on the buyout choice and offer premiums in MBO versus LBO decisions. According to the authors, firms with higher insider ownership are more likely to select an MBO, whereas easy lending conditions increase the likelihood of an LBO. Determinants of offer premiums are also significantly different. Their main conclusion is that many factors (in addition to managerial ownership) should be accounted for to better understand the sources of value creation in going private transactions. In this backdrop, the study has focused on the shareholders' value creation aspect of some leveraged buyout firms in India.

Objectives of the study

The objective of the study is to find out performance of the LBO sample companies on the basis of Shareholders' Value Added. That means, our objective is to calculate the Shareholders' Value Added (SVA) of the sample LBO companies.

Hypothesis of the study

Following is the hypothesis of the study

H_0: Leveraged Buyout (LBO) has no significant impact on Shareholders' Value Added (SVA).

H_1: Leveraged Buyout (LBO) has significant impact on Shareholders' Value Added (SVA)

Database and methodology: The whole study is based on secondary data collected from various recognized official publications. Data have been collected from "Capita Line Software Package 2000". The selected sample companies are registered under the National Stock Exchange. The basic data which have been collected for analysis of sample companies during the entire study period are Dividend Per Share (DPS), number of outstanding equity shares both at the end and at the beginning, Dividend paid/declared by the companies, Market value per share at the end of the financial year, Total debt and closing share prices. Seven years have been selected for the study period for each select LBO Company including the year of LBO where three years have been for post-LBO period and three years have been for pre-LBO period. Year (t-3), (t-2) and (t-1) are three, two, one year before LBO and year (t+3), (t+2) and (t+1) are three, two, one year after LBO respectively and year t is the LBO year. During the study period, a total of seven sample companies which had undergone LBO in India has been selected for the study.

Shareholders value added (SVA)

In case of SVA both realized and unrealized gains have been considered. SVA may be measured in two common approaches namely, (1) Economic Value Approach and (2) Market Value Approach. Under economic value approach, SVA is calculated by deducting gains on debt capital and preference share capital from economic value added. Therefore, SVA can be computed by means of capitalization of EVA which represents the addition of real value rather than true value added. Under market value approach SVA is the sum of MVA and other realized gain like dividend received, benefit from right issue, bonus issue etc. Hence, SVA may be calculated as follows-

SVA = MVA + Total equity dividend

It is also necessary to make adjustment for change in the number of outstanding shares and proportionate dividend for the change. Considering the change SVA is calculated by using following formula-

$$SVA = MVA + T.D \pm \frac{\text{No.f days adjusted number of shares remains invested}}{365} * DPS * \text{Increase or decrease in number of share adjusted.}$$

Where, T.D is the Total Equity Dividend and DPS is Dividend per Share.

Summary of major findings

Table 1: Shareholders value added (Rs. in crore)

Name of company	(t-3)	(t-2)	(t-1)	t	(t+1)	(t+2)	(t+3)	Mean		CV	
								Pre-LBO	Post-LBO	Pre-LBO	Post-LBO
UB Group	236.5	516.12	1047.3	2454.28	1245.36	1582.8	2291.04	599.97	1706.40	68.65	31.28
Tata Steel	10308.7	9166.13	8507.51	-2211.87	27924.29	35811.09	41649.62	9327.45	35128.33	9.77	19.61
United Spirit Ltd.	105.77	928.12	3696.08	2590.25	7537.41	8647.41	9929.18	1576.66	8704.67	119.30	13.75
Tata Motors	14558.62	924.06	5759.48	13492.16	6180.65	17842.23	37528.14	7080.72	20517.01	97.63	77.22
Dr. Reddys Laboratory	-1292.77	537.59	-1757.24	5295.94	1187.97	2055.58	-1608.75	-837.47	544.93	144.87	351.41
Aban Offshore	46.17	282.62	1021.54	2634.44	3276.72	4200.83	9859.22	450.11	5778.92	113.04	61.67
Tata Coffee	105.24	160.91	332.58	200.39	110.82	88.99	-11.14	199.58	62.89	59.38	103.41

Source: *Self-generated data*

Table 2: Summary result of change in SVA of the sample companies

Change in SVA	Number of sample companies	Percent of sample companies in terms of change in Mean SVA	Number of sample companies	Percent of companies in terms of change in CV on SVA
Increase in SVA	6	85.71	3	42.86
Decrease in SVA	1	14.29	4	57.14
Total	7	100.00	7	100.00

Source: *Self-generated data*

Table 3: Results of paired sample t test on SVA at different time window

Time window	Variables	Mean	t
(t-1) to (t+1)	Mean $SVA_{(t-1)}$	2658.18	-1.825*
	Mean $SVA_{(t+1)}$	6789.03	
(t-1) to (t+2)	Mean $SVA_{(t-1)}$	2658.18	-2.019*
	Mean $SVA_{(t+2)}$	10032.7	
(t-1) to (t+3)	Mean $SVA_{(t-1)}$	2658.18	-2.413**
	Mean $SVA_{(t+3)}$	14233.9	
(t-2) to (t+1)	Mean $SVA_{(t-2)}$	1787.94	-2.326**
	Mean $SVA_{(t+1)}$	6789.03	
(t-2) to (t+2)	Mean $SVA_{(t-2)}$	1787.94	-2.331**
	Mean $SVA_{(t+2)}$	10032.7	
(t-2) to (t+3)	Mean $SVA_{(t-2)}$	1787.94	-2.412**
	Mean $SVA_{(t+3)}$	14233.9	
(t-3) to (t+1)	Mean $SVA_{(t-3)}$	3438.32	-1.294
	Mean $SVA_{(t+1)}$	6789.03	
(t-3) to (t+2)	Mean $SVA_{(t-3)}$	3438.32	-2.301**
	Mean $SVA_{(t+2)}$	10032.7	
(t-3) to (t+3)	Mean $SVA_{(t-3)}$	3438.32	-2.706**
	Mean $SVA_{(t+3)}$	14233.9	

Notes: *** implies significant at 1% level, ** implies significant at 5% level, * implies significant at 10% level. Author's calculation is based on SPSS

Interpretation of result on Shareholders value added (SVA) of select LBO companies

UB group

It is noticed from Table1 that there has been a remarkable increase in average SVA of UB Group in the post-LBO period (1706.40) in comparison to that of pre-LBO period (599.97). It implies that post-LBO SVA of the sample company has increased. CV on SVA of the company has decreased in the post-LBO period (31.28) which implies more consistency in the post-LBO period as compared to pre-LBO period.

Tata steel

A notable increase in average SVA has been observed from

Table1 in the post-LBO period (35128.33) in comparison to that of pre-LBO period (9327.45). Yearwise trend in SVA of the company has shown an upward rising trend after LBO from year (t+1) to (t+3). It indicates that the company has created shareholders' value in the post-LBO period. However, CV on SVA of the company has increased in the post-LBO period which implies relatively less consistency in SVA after LBO.

United spirits

United Spirits has depicted a notable improvement in average SVA in the post-LBO period (8704.67) as compared to that of pre-LBO period (1576.66). It actually implies that the company has generated shareholders' value after LBO period. However, there has been stability in SVA of the company after LBO as its CV on SVA has decreased remarkably in the post-LBO period. Yearwise SVA of the company has enhanced over the study period from year (t+1) to (t+3).

Tata motors LTD

From Table1 it is evident that there has been an enormous increased in average SVA of Tata Motors Ltd in the post-LBO period (20517.01) in comparison to that of pre-LBO period (7080.72). Yearwise trend in post-LBO SVA of the company has shown an upward rising trend, which indicates value creation to shareholders as a result of LBO. On the other hand, CV on SVA of the company has declined in the post-LBO period (77.22) which means that there has been a more stability in generating shareholders value in the post-LBO period than pre-LBO period.

Dr. Reddys' laboratory

In case Dr. Reddys' Laboratory a remarkable improvement in shareholders' value has been observed in the post-LBO period (544.93) in comparison to that of pre-LBO period (-837.47) as is evident from Table1. It implies that the company has generated shareholders' value after LBO. However, there has been a fluctuation in SVA of the company throughout the study period. CV on SVA of the firm has increased remarkably that indicates inconsistency in shareholders' value after LBO.

Aban offshore

From Table1 it is evident that there has been enormous improvement in average SVA of Aban Offshore in the post-LBO period (5778.92), which indicates that the company has created sufficient shareholders value in the post-LBO period. It means that LBO has a positive impact on shareholders' value creation. Yearwise SVA of the company has also reflected upward rising trend in the post-LBO period from year (t+1) to (t+3). CV on SVA of the company has decreased in the post-LBO period, which indicates that there has been more stability in generation of SVA in the post-LBO period as compared to that of pre-LBO period.

Tata coffee

There is remarkable decrease in average SVA of Tata Coffee in the post-LBO period (62.89) in comparison to that of pre-LBO period (199.58) which is reflected by Table1. It actually implies that the company has destructed shareholders' value in the post-LBO period. As a result of this, yearwise data on SVA after LBO has disclosed a downward trend. CV on SVA of the company has increased in the post-LBO period (103.41) as compared to that of pre-LBO period (59.38). It indicates that there has been relatively less stability in SVA of the company after LBO.

Interpretation of summary results of change in SVA

The summary results of change in SVA of the sample companies have been presented in Table2. It is observed that there has been an increase in average SVA for 6 sample companies out of total 7 sample companies. The results indicate that LBO leads to shareholders' value creation as 85.71% of the sample companies have depicted an improvement in average SVA in the post LBO period and remaining 14.29% of the sample company have disclosed decreased in average SVA after LBO. On the other hand, there has been an increased in CV on SVA for 3 (42.86%) sample companies out of 7 sample companies and remaining 4 (57.14%) sample companies have disclosed decrease in CV in the post LBO period which is a good indicator of shareholders' value creation.

Interpretation of paired t test results on SVA of the sample companies at different time windows

It is required to test the statistical significance of average SVA of sample companies at different time windows [before and after LBO]. For this purpose, we have applied paired t test on the variable, average SVA. The result is presented in Table3. It is observed that t values are significant either at 5% level or at 10% level for the time windows *viz*, (t-1) to (t+3), (t-2) to (t+1), (t-2) to (t+2), (t-2) to (t+3), (t-3) to (t+2), (t-3) to (t+3), (t-1) to (t+1) and (t-1) to (t+2). Hence, Null Hypothesis (H_0) is rejected for the above mentioned time windows and Alternative Hypothesis (H_1) is accepted. It indicates that there is statistically significant difference in average SVA of the sample companies in the pre-LBO and post-LBO period. These results statistically confirm that LBO has significant impact on shareholders' value of the sample companies.

Conclusion

The analysis has shown that 86 percent of the sample LBO companies have recorded an increase in their average SVA after LBO. The results of paired t test have shown that the difference on mean SVA has been significant for the time windows *viz.*, (t-1) to (t+3), (t-2) to (t+1), (t-2) to (t+2), (t-2) to (t+3), (t-3) to (t+2), (t-3) to (t+3), (t-1) to (t+1) and (t-1) to (t+2). In other time windows t values are insignificant. Hence, it can be statistically confirmed that LBO has significant impact on SVA of most of the sample LBO companies. It may be concluded from the study that LBO leads to shareholders value creation to firms as SVA of the sample LBO companies have shown an improvement in shareholders' value creation in the post-LBO period as compared to that of pre-LBO period.

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