

EVA as Performance Indicator

A Case Study of Ucal Fuel Systems Pvt Ltd

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Abstract

Economic Value Added is a value-based framework that provides a unique insight into value creation and unites the finance theory with the competitive strategy framework. The concept of Economic Value Added is better than the concept of accounting profit as a tool of value creation because it considers the overall cost of capital. EVA has become a popular and powerful tool for managers to measure performance and for guiding investment decisions. Of late, there has been a steady rise in the number of Indian companies, which talk about the value they have created for their shareholders. In India also, EVA is gaining acceptance. In this paper an attempt has been made to analyze the financial performance of Ucal Fuel Systems Ltd., on the basis of traditional parameters like ROCE, ROE, EPS etc., and the new performance measure EVA.

Key words: Intrusion detection, Feature selection, Machine learning

INTRODUCTION

Economic Value Added [EVA] measures the profitability of a company after taking into account the cost of capital employed including the equity. It is the post tax returns on capital employed minus the cost of capital employed in the business. It represents the value added to the shareholders by generating operating income in excess of the cost of capital employed in the business. As observed by management Guru Peter Drucker, 'EVA is based on something we have known for a long time: what we call profits, the money left to service equity, is usually not profit at all. Until a business returns a profit that is greater than its cost of capital, it operates at a loss. Never mind it pays taxes as if it had a genuine profit. The enterprise returns less to the economy than it devours in resources....until then it does not create wealth, it destroys it'.

The idea behind EVA is that shareholders must earn a return that compensates the risk taken. In other words, equity capital has to earn at least same return on similarly risky investments at equity markets. If that is not the case, then there is no real profit made and actually the company operates at a loss from the view point of shareholders. On the other hand if EVA is zero, this should be treated as a sufficient achievement because the shareholders have earned a return that compensates the risk. This approach using average risk-adjusted market return as a minimum requirement is justified since that average return is easily obtained from diversified long-term investments on stock markets. Average long-term stock market return reflects

the average return that the public companies generate from their operations.

EVA is not a novel breakthrough. A financial performance measure called residual income is defined to be operating profit subtracted with capital charge. EVA is thus one variation of residual income with adjustments to how one calculates income and charge. In the 1970s or earlier, residual income did not get wide publicity and it did not end up to be the prime performance measure in great deal of companies. However EVA, practically the same concept with a different name, has done well in the recent years. Furthermore, the spreading of EVA and other residual income measures does not look to be on a weakening trend. On the contrary, the number of companies adopting EVA is increasing rapidly. One of the possible reasons is that EVA has been marketed with a concept of MVA and it did offer a theoretically sound link to market evaluation. Moreover, it may be a good bite when investors demand focus on shareholder value issues.

To conclude, it can be believed that the concept of Economic Value Added, which is reasonably old in the west, appears relatively a new magic potion to Indian corporatism and this has basically required the investigators to glimpse through its nuts and bolts particularly to value what EVA is all about in Indian context.

Objectives of The Study

This study has the following broad objectives:

1. To examine whether the Ucal Fuel Systems Ltd., has been able to generate value for its shareholders.

2. To compare the performance of the company applying traditional parameters such as ROCE, EPS and ROE with that of EVA.
3. To find out the relationship between ROCE and EVA as a Percentage of Average Capital Employed [EVACE].

Methodology

The financial data of the UCAL, Selected for this study has been collected from the published annual reports for the period 1999-2000 to 2003-04. The financial performance of the company has been analysed by making a use of some traditional parameters such as

ROCE, EPS and ROE. The statistical technique of regression has been used to estimate the values of EVACE taking ROCE as an independent variable and thereafter, chi-square test of goodness of fit have also been applied to test whether there is a significant difference between observed and estimated values of EVACE.

Case Study Of Ucal Fuel Systems Ltd.

[Table 1] depicts the EVA statement of UCAL for ten years 1994 to 2003. It can be seen from the table that the absolute figures of EVA fluctuates during the period of study and reaches the peak value in the year 2003. The EVACE, also, registered an upward trend except in 2002 when it decreased to 6.8% as against 7.25% in 2001 but in the last year of the study it recovered sharply and reached to 16.8% being the highest during the period of study.

TABLE 1. ECONOMIC VALUE ADDED STATEMENT

Year ended March 31 st	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Average capital employed (Rs '000)	230199	336961	451464	598507	654301	819127	1105999	1274931	1158616	1272279
2. Beta Variant	0.02	0.7	0.52	0.20	-0.20	0.27	-5.55	0.18	1.198	0.14
3. Risk-free debt cost (%)	11	10	10.8	10	9	10	8	7	5.87	6
4. Market Premium	11.90	7.4	9.4	8.88	9.31	10.51	9.93	7.68	9.53	8.72
5. Cost of Equity (%)	11.018	8.18	10.07	9.77	8.93	10.13	-2.71	7.12	10.25	6.38
6. Weighted average cost of capital [WACC] (%)	8.97	7.79	8.28	8.11	8.32	8.09	6.16	7.14	10.36	6.39
7. PAT as a percentage of average capital employed (%)	15.13	16.30	20.72	16.20	23.11	13.54	11.27	14.38	17.12	23.17
8. NOPAT (Rs. '000)	34841	54933	93585	96999	151225	110934	124741	183440	198368	294880
9. Cost of Capital (Rs. '000)	20649	26249	37381	48539	54438	66267	68130	91030	120033	81299
10. Economic Value Added (Rs '000)	14192	28684	58204	48460	96787	44667	56611	92410	78336	213581
11. EVA as a percentage of average capital employed (%)	6.17	8.51	12.89	8.10	14.79	5.45	5.12	7.25	6.77	16.78

* The cost of equity is calculated = Risk free debt cost + [Market premium x Beta variant]
 [SOURCE : ANNUAL REPORTS AND ACCOUNTS OF UCAL FUEL SYSTEMS LTD., FROM 1994-2003]

Regression Analysis And Chi-Square Test

It has also been analysed whether Return on Capital employed and EVACE have any relationship between them. For this purpose statistical techniques of correlation and regression have been used. The Karl Pearson's coefficient of correlation between ROCE and EVACE came to 0.97 which indicates that both ROCE and EVACE have a high degree of positive correlation. The study of

correlation have been further extended to establish a cause and effect relationship between the two variables by using the technique of regression analysis . The regression equation of EVACE[Y] on ROCE [X] comes to $Y = 0.8891X - 3.568$. The estimated values of EVACE on the basis of above regression equation and the original values of the same and also the application of chi-square test are given below [**TABLE 2**]

TABLE 2. ORIGINAL AND ESTIMATED VALUES OF EVACE AND CALCULATION OF CHI-SQUARE

Year ended March 31 st	Original Values [O]	Estimated Values [E]	[O - E]	[O - E]**2	[O-E]**2 / E
1994	6.17	9.884	-3.714	13.793	1.3954
1995	8.51	10.924	-2.414	5.827	0.5334
1996	12.89	14.854	-1.964	3.857	0.2596
1997	8.10	10.835	-2.735	7.480	0.6903
1998	14.79	16.979	-2.189	4.791	0.2821
1999	5.45	8.4704	-3.020	9.122	1.0770
2000	5.12	6.4521	-1.332	1.774	0.2750
2001	7.25	9.2172	-1.967	3.869	0.4198
2002	6.77	11.653	-4.883	23.843	2.0460
2003	16.78	17.032	-0.252	0.063	0.003728
				CHI-SQUARE = 6.9823	

STATING THE PROBLEM SYMBOLICALLY in CHI-SQUARE TEST.

NULL HYPOTHESIS [H₀] : There is no significant difference between observed and expected values of EVACE.

It is clear from the TABLE 2 that the original and estimated values of EVACE moved in a very narrow range. The difference between original and estimated values varied in a negative direction from 1994 to 2003. The Calculated value of chi-square [6.9823] is less than the critical value of chi-square [16.919] at 5% level of significance for nine degrees of freedom. Hence , the Null

Hypothesis is accepted which means the differences between original and estimated values are insignificant and they have arisen due to sample fluctuations only.

Traditional Performance Indicators Versus EVA

The financial performance of UCAL , based on traditional parameters and EVA have been presented in [TABLE-3]

TABLE 3. TRADITIONAL VERSUS EVA PERFORMANCE INDICATORS OF UCAL FUEL SYSTEMS LTD

Year ending March 31 st	Return on capital employed [ROCE] (%)	Return on Equity [ROE] (%)	EPS (Rs. in '000)	EPS GROWTH(%)	EVACE (%)
1994	9.8	29.5	4.38	-	6.2
1995	13.2	23.2	7.65	74.65	8.5
1996	18.3	31.6	11.87	55.16	12.9
1997	13.4	24.7	11.53	-2.864	8.1
1998	20.7	31.08	19.55	69.55	14.8
1999	11.7	18.8	13.64	-30.23	5.5
2000	9.2	17.4	14.68	7.624	5.1
2001	11.1	20.4	20.40	38.96	7.2
2002	14.0	21.9	23.39	14.65	6.8
2003	22.12	28.69	40.51	73.19	16.78

Source : Annual Reports of UCAL FUEL SYSTEMS LTD., 1994 TO 2003.

As it appears from table 3 that both ROCE and ROE marked a fluctuating Trend during past ten years under study. ROCE shows about 20.7% during the year 1998 and decreases to 11% at 1999 & 2001 and moves to an increasing trend at 2003. Similarly ROE also showed a fluctuating trend during the past ten years and reduces to 24.7% during the year 1997 as compared to 31.6% the highest during the year 1996. During the initial stages at 1994 ROE shows about 29.5% and during the last year 2003-04 it reaches to 28.69%. EPS on the other hand , registered an upward trend during this ten years period. It was as high as Rs.40.51 during the year 2003-04 and low as Rs.4.38 during the year 1993-94.

It can be further seen from the TABLE that EPS has shown more than 100% growth in all the years except during the year 1997 & 1999. As rightly observed by Ravi M.Kishore ' The Growth in EPS is more relevant for pricing

of shares from absolute EPS'. A steady growth in EPS year after year indicates a good track of profitability . An analysis of financial performance of the company revealed an impressive performance throughout the period under study except 1997 & 1999. This was due to some unprecedented turbulence in the automobile sector which in turn has contributed a slow down in overall economy.

The EPS growth rate is maximum during 1995 and 2003. This indicates that the company reaches the maximum growth rate after all the fluctuations in the market within the past 10 years.

CONCLUSIONS

- The Company has been successfully able to create value for its shareholders. The company's earnings are comparatively fluctuates with the overall cost of capital.
- The traditional performance indicators are showing quite high values of ROCE , ROE and EPS growth as compared to EVACE. It is observed that the traditional parameters indicates quite a rosy and healthy picture of the company during all the years of the study. It is , therefore suggested that the companies must compute and publish EVA statistics also in their annual reports. The concept of EVA emphasis on quality of earnings and not just the quantity as it takes into account the overall cost of capital employed in the business including the cost of equity.
- It is further concluded that both ROCE and EVACE are positively correlated.

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