Shareholders Value Creation in Indian Petroleum Industry: An Empirical Analysis

Pratapsinh Chauhan

Abstract—This study examines the shareholder’s value creation in the Indian petroleum industry. Indian petroleum industry is dominated by public sector firm and private sector firm. The real owners of business are equity shareholders. Equity shareholders invest their money in equity shares of a company with the primary motive of achieving good capital appreciation and regular & stable return (i.e., dividends). The investors’ objectives are purely based on overall performance of the company. So, investors before taking their investment decisions, they consider several factors which influence the corporate performance. In the present study to analyse the performance of the company we have divided petroleum into public sector firm and private sector firms. We have used EVA, MVA, NOPAT, PAT, Market Capitalization and EPS data provided by CMIE Prowess database for the period of 10 years (2001-02 to 2010-11). For each of the 07 companies, we have calculated the 10-year correlation between EVA of each year and each year’s MVA, NOPAT, PAT, EPS and Market Capitalization. To test hypothesis in the present research t test applied. EVA has been found to have significant correlation with OP, NOPAT, PAT, EPS and Market Capitalization. To test hypothesis in the present study to analyse the overall performance of the company we have divided petroleum into public sector firm and private sector firms. We have used EVA, MVA, Shareholders’ Value.

Keywords— EVA, MVA, Shareholders’ Value.

I. INTRODUCTION

The primary objectives of any organisations are to maximize profit and maximise shareholders wealth. To measure shareholders wealth various traditional and modern measure are among them Economic value added is a powerful new management tool which is considered to be important source of corporate governance. It is an alternate performance measurement technique which is used to overcome the limitation of traditional measurement criteria by correlating with shareholder's wealth and action of a company's manager. Various performance measurement criteria have been adopted by corporate entities, among accounting profitability measures include ROI, ROE, EPS, ROCE and DPS etc., Shareholders valued based measures include EVA and MVA. The main aim of every corporate management is to maximise its shareholder's value and value of business. There are a number of value based management (VBM) frameworks, shareholder value analysis (SVA) Rapport (1986) and Economic Value Analysis (EVA) developed by Stern Stewart (1990) is the two well-known ones. From past few years EVA has emerged as a new way to measure financial performance of highly reputed corporation like Coca-cola, AT&T, Quaker, Oats and Briggs and Stratton have set up EVA measurement system throughout their organisation. Economic value added is considered to be tool for measuring corporate performance not only for evaluating performance of companies out also for determination of incentive pay. It tries to cope with the tension that exists between the need to come up with a performance measure which is correlated with shareholder's wealth and at the same time less subject to random fluctuations in stock prices. EVA is a rupee amount rather than a ration remaining after capital charge or cost of capital is deducted from the amount of operating profits. It also provides a roadmap to the ultimate goal of improving Market Value Added (MVA).

II. LITERATURE REVIEW

KPMG-BS Study (1998) assessed top companies on EVA, sales, PAT (Profit after Tax), and MVA criteria. The survey has used the BS 1000 list of companies using a composite index comprising sales, profitability and compounded annual growth rate of those companies covering the period 1996-97. Sixty companies have been found able to create positive shareholder value whereas 38 companies have been found to destroy it. Accounting numbers have failed to capture shareholder value creation or destruction as per the findings of the study. 24 companies have destroyed shareholder value by reporting negative MVA.

Anand, et.al. (1999) revealed that EVA, REVA (Refined Economic Value Added) and MVA are better measures of business performance than NOPAT and EPS in terms of shareholders’ value creation and competitive advantage of a firm. Since conventional management compensation systems emphasize sales / asset growth at expense of profitability and shareholders’ value. Thus, EVA is a measure that shifts focus on an organizational culture of concern for value.

Banerjee and Jain (1999) examined the relationship between shareholder wealth and certain financial variables. This study was conducted with a sample of top 50 companies from Drugs and Pharmaceutical industry. This study concluded that out of select independent variables, EVA has proved to be the most explanatory variable and the capital productivity is a predictor of shareholder wealth.

Madhu Malik (2004) examined the relationship between shareholder wealth and certain financial variables like EPS, RNOW and ROCE. By using correlation analysis, it was found that there was positive and high correlation between

Pratapsinh Chauhan, Department of Business Management, Saurashtra University, Rajkot, India.
EVA and RONW, ROCE. There was a positive but low correlation between EVA and EPS. By using co-efficient of determination ($r^2$), EVA was compared with Traditional performance measures and it was found that not a single traditional performance measure explains to the fullest extent variation in shareholder wealth.

Panigrahi (2005) examined how the Economic Value Added (EVA) is superior to Market Value Added (MVA). This has been examined by financial performance of ITC Ltd, which has adopted the EVA as its performance measurement. This study found that by increasing Economic Value Added (EVA), Shareholder Wealth is created and established the fact that the Economic Value Added (EVA) is superior to the Market Value Added (MVA).

Bhayani (2006) studied economic value added of Cholamandalam Investment and Finance Co. Ltd for the period of 1998-99 to 2002-03. The company has been successfully able to create value for its shareholders. The company’s earnings are much higher than the overall cost of capital. The traditional performance indicators are showing quite high values of ROCE, EPS growth as compared to EVACE. It is observed that the traditional parameters indicated quite a rosy and healthy picture of the company during all five years of the study.

Kaur and Narang (2009) in his study an attempt has been made to explain the application of EVA for selected companies. The sample for the study was top 205 companies has been selected form BT-500 India’s most valuable companies. The study period was of 12 years (1995-96 to 2006-07). The results of the study indicate negative EVA for eight years consecutively.

Chauhan and Bhayani, (2010) has examined the impact of mergers on shareholders value creation in Indian industry. This study includes companies which have undergone merger during the period 1st April, 1999 – 31st March, 2000. There are about 196 merged companies in India during above period and we have selected 56 firms for the research to examine pre and post merger performance of firms covered under the study. The result suggests that firm’s shareholders value creation is highly dependent on Operating expenses, Profit margin, ROCE and Expense ratio. The inter company and inter industry analysis results indicate there is no positive impact of mergers on shareholder value creation.

Khatik and Singh, (2010) studied economic value added in 10 selected companies of India for the period of 1998-99 to 2007-08. The results of the study indicate there are no any uniform EVA trends in selected firms.

Sharma and Kumar (2010) have analyzed effectiveness of Economic Value Added in selected companies for the period of 2001-02 to 2008-09. Researcher has used traditional measures along with EVA to measure effectiveness of the firm. The result of statistical tools reveals that except few majorities of the sample companies are able to continuously create value for their shareholders during the study period. The study finds that EVA is gaining popularity in India as important measures of firm performance.

Sakthivel (2011) analyzed shareholder's value in Indian pharmaceutical industry for the period of 1997-98 to 2006-07. It is concluded that the companies under pharmaceutical industry has succeeded to meet public expectations in terms of shareholders’ value creation through EVA either by increasing operating income from assets in place through reducing cost of production or increasing sales, or reducing the cost of capital by changing the financing mix in capital structure. This study showed that shareholders’ value creation tend to go up every year for pharmaceutical industry since 2000-01.

The detailed review of literature indicates that very few studies have been conducted in India to study the shareholders value creation. It is very clear from the above literature in India no industry specific study has been conducted to examine the trend of shareholders value creation. At present India is the fastest developing economy in the world. In India during the last decade petroleum industry has got prominent importance, because of the development of our economy is became dependent on petroleum industry. Indian petroleum product consumption has increased day by day and we are dependent on imported petroleum product. So, researcher has conducted present research on petroleum industry of India and tried to study the shareholders value creation in it.

III. OBJECTIVES OF THE STUDY

The primary objectives of the study are as under:
To examine the concept of shareholders value creation and value based management.
To analyze the trend and growth of shareholders’ value in Indian Petroleum Industry in terms of EVA (Economic Value Added) and MVA (Market Value Added).
To study the correlation between EVA with OP, NOPAT, EPS, Market Capitalization and MVA.

IV. METHODOLOGY OF THE STUDY

A. Research Hypotheses

The following hypotheses have been laid down for the present study:
H1: Indian Petroleum Industry does not create any EVA.
H2: There is no difference between average values of EVA of both the sector of petroleum industry, public as well as private.
H3: There is no correlation between EVA and OP, NOPAT, EPS, Market Capitalization and MVA.

B. Sources of Data:

This study is based on the secondary data. To analyze the trend and growth of value addition in terms of EVA, and MVA in Indian Petroleum Industry, Required financial data of sample companies were collected from “Prowess” Database of Centre for Monitoring Indian Economy (C.M.I.E.), and from published annual reports of companies.

C. Sample Design:

There are 19 petroleum firm are listed on BSE in public and
private sector of India. All 19 listed firms consider as universe of the study. Out of 19 firms only 07 firms required data were available for ten years (2001-02 to 2010-11), so these firms have been selected for the purpose of the study. Thus, the sample consists of 03 public sector petroleum firm and 04 private sector petroleum firm.

D. Tools of Data Analysis:

For analyzing the trend and growth of value addition in terms of EVA, and MVA in Indian Petroleum Industry, the present study used statistical tools like mean, standard deviation, correlation, chi-square test and ‘t’ statistic for analyzing the financial data of sample petroleum firms.

V. EVA ANALYSIS

EVA analysis is presented for sample petroleum firms below. Thereafter, inter sector comparison and correlation analysis of EVA and other related measures are elaborated.

The average amount of EVA created by public sector petroleum firms during the period of study has been Rs. 3034.15 cr. The Indian Oil Corporation (IOCL) reported the highest average EVA (Rs. 6249.22 cr) followed by the Bharat Petroleum Corporation Ltd. (BPCL) (Rs. 1473.11 cr) and the Hindustan Petroleum Corporation Ltd. (HPCL) (Rs. 1380.10 cr). Only IOCL created EVA above the average of entire public sector group. As far as variability of EVA for ten years are concerned, Bharat Petroleum Corporation Ltd. (BPCL) reported the highest inconsistency as evident by the highest Coefficient Variation (CV) (89.45%), the lowest positive CV (44.79 %) is reported by IOCL. It indicates that there is uniformity in EVA in ten years in case of IOCL as compared to other petroleum firms in the public sector. The year 2009-10 may be considered as successful year for the sector because public sector petroleum firms reported the highest average EVA (Rs. 5172.89 cr). While the year 2008-09 is considered the worst year from the shareholders point of view, because public sector petroleum firm generated the lowest EVA (Rs. 449.20 cr) at an average.

The variability in the performance of public sector petroleum firms in creating EVA over the period of analysis has been fairly low (average of firm-wise CV being 49.92%). On the other hand, variability among EVA figures year-wise has been much higher (average of year wise CV being 97.60%). This phenomenon may be because of the high degree of size variation among the sample petroleum firms.

The average EVA of selected private sector petroleum firms for study period was Rs. 4622.58 cr. Three petroleum firm reported positive average EVA value for ten years while, EOL reported negative average EVA value for ten years of study period. The RIL reported the highest average EVA value (Rs. 17558.20 cr) followed by the MRPL (Rs. 648.64 cr) and the CPCL (Rs. 432.19 cr). Essar oil Ltd. not only reported the least average EVA (Rs. -148.69 cr), but also reported negative EVA in three years (2004-05, 2005-06, 2006-07, 2008-09 and 2009-10). Year-wise performance of private sector petroleum firm in this regard has been considerably better in the later two years (2009-10 and 2010-11) as compared to the former ones. Petroleum Firm-wise average of EVA for the period has shown fairly low (CV being 63.80%), while year-wise EVA average has been fairly high consistency (average CV being 192.98.).

A. Inter-Sectoral Comparison of EVA

The public sector petroleum firms EVA (Rs.3034.15 cr) is less than that of the private sector petroleum firms (Rs. 4622.58 cr). Year-wise comparison between averages EVA of the petroleum firms in two sectors portrays consistent out-performance of private sector petroleum firms over the public sector ones.

The trend ratios of EVA, when compared for the two sectors, highlight a major decline in public sector figure against a substantial rise in that of private sector. This situation was mainly due highest average EVA value of Reliance Industries Ltd. in private sector. While on other hand public sector petroleum firm average EVA value were consistent as compared to private sector petroleum firm. The average trend ratio of private sector petroleum firm and public sector petroleum firm were 468.91 and 255.27 respectively.

On observation it is revealed that there is significant difference between mean value of EVA of both public and private sector since the calculated value of t during the entire study period is higher than the critical value at 5"10 level of significance except year 2001-02. Hence, the null hypothesis is rejected. In the year 2001-02 it can be inferred that there is no significance difference in the value of EVA in the public sector and private sector of petroleum firm.

VI. MVA ANALYSIS

MVA figures for the public sector petroleum firms under study. It is reveals from the table; the average amount of EVA created by public sector petroleum firms during the period of study has been Rs. 7669.16 cr. The Indian Oil Corporation (IOCL) reported the highest average MVA (Rs. 17191.81 cr) followed by the Bharat Petroleum Corporation Ltd. (BPCL) (Rs. 4322.63 cr) and the Hindustan Petroleum Corporation Ltd. (HPCL) (Rs. 1493.03 cr). Average MVA value of IOCL was higher than the average of entire public sector group. Looking to the variability of MVA for ten years are concerned, Hindustan Petroleum Corporation Ltd. (HPCL) reported the highest inconsistency as evident by the highest Coefficient Variation (CV) (235.79%), the lowest positive CV (61.92%) is reported by Bharat Petroleum Corporation Ltd. (BPCL). The coefficient of variation of IOCL is 83.07. In the year 2003-04 public sector petroleum firm have created highest average MVA (Rs. 17636.98 cr) and in the year 2008-09 public sector petroleum firms have created lowest average MVA (Rs. 693.69 cr).

The variability in the performance of public sector petroleum firms in creating MVA over the period of analysis has been fairly low (average of firm-wise CV being 75.88%). On the other hand, variability among MVA figures year-wise has been much higher (average of year wise CV being 255.27) respectively.
A. Inter-Sectoral Comparison of MVA

Public sector petroleum firms MVA (Rs.7669.16 cr) is higher than that of the private sector petroleum firms (Rs. 4147.99 cr). Year-wise comparison between averages MVA of the petroleum firms in two sectors portrays consistent out-performance of public sector petroleum firms over the private sector ones.

The trend ratios of MVA present in the chart. It is clear from chart that trend of MVA of private sector petroleum firms is highly improved from the year 2005-06 as compared to public sector petroleum firm. The average trend ratio of private sector petroleum firm and public sector petroleum firm were 3020.48 and 626.83 respectively.

It is revealed that in the first two years of the study period null hypothesis accepted it means no significance difference in the mean MVA value of public sector petroleum firm and private sector petroleum firm. In last eight years of study period (2003-04 to 2010-11) the calculated t value is higher than critical value so null hypothesis is rejected and it can be inferred that there is significance difference in the mean value of MVA in the public sector and private sector of petroleum firm.

VII. CORRELATION ANALYSIS BETWEEN EVA AND SELECTED MEASURES

Correlations between EVA and OP for both public and private sector petroleum firms have been high and positive (coefficient being 0.957 and 0.997, respectively). In case of correlation of EVA with NOPAT, however, high positive correlation has been found for both public sector and private sector petroleum firms 0.99 in both the sectors.

Correlation between EVA and EPS in both the cases (0.708, and 0.859, respectively) has been high correlation. Similar has been the case regarding correlation between EVA and market capitalization (correlation coefficient being 0.989 and 0.995, respectively). This may indicate market capitalization has been highly sensitiveness to EVA creation. Correlation of coefficient of EVA and MVA in private sector is very high but in public sector petroleum firm it is law as compared to private sector firms.

VIII. CONCLUSION

The present study reveals positive EVA and MVA creation by the Indian petroleum Industry, both by public and private sector firms. EVA has been found to have significant correlation with OP, NOPAT, EPS, Market Capitalization and MVA figures of firms of both the sectors. This may lead to the following conclusions for further deliberations:

Performance of the Indian Petroleum Industry may be termed as satisfactory regarding shareholder value creation over the years during study period.

It is also found that the private sector petroleum firm’s trend of EVA and MVA was higher than public sector petroleum firm.

EVA, and MVA which are considered to be an effective indicator of shareholder value creation, is also highly sensitive associated with the market capitalization of firm and market value added in both sectors.

REFERENCES


Dr. Pratapsinh Chauhan earned his Ph.D. at the Saurashtra University, Rajkot (India) in 1993. Currently he is a Professor and Dean at Department of Business Management, Saurashtra University, Rajkot, India, and Chief Editor of the Journal of Management Trends. He has completed major research project funded by UGC.