

## **A Study On Determinants Of Market Value Added Of Selected Oil And Natural Gas Companies In India**

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**Abstract:** *Maximization of shareholders' wealth has become the predominant goal of every industry in India. Indian companies are understood that the need to create shareholders wealth is paramount and they are responding to the pressure to create wealth by applying new models and metrics for managing their companies. The present research work tries to identify the factors which determine the market value added. For the study, a sample of six companies from oil and natural gas sector in India with a total asset more than 30,500 crores in the year 2013-14 has been selected. The study period is from 2004-05 to 2013-14. For ascertaining the determinants of Market Value Added, Market value added has been used as a dependent variable and Economic value added, Net operating profit after tax, Earnings per share, Leverage and Size have been selected as independent variables. This study concludes that GAIL ( India) Limited, Bharat Petroleum Corporation Ltd., Indian Oil Corporation and Hindustan Petroleum Corporation Ltd., have Net operating profit after tax as the stronger determinant of Market value added on the other hand Oil and Natural Gas Corporation Limited, and Oil India Ltd. have no strong determinants of Market Value Added. These companies are expected to reduce the operating expense and increase the profit. Earnings per share determine the value of share in the market so all the sample companies should make efficient policies to increase the earnings per share.*

**Keywords:** Bharat Petroleum Corporation Ltd., GAIL ( India) Limited, Market Value Added, Net operating profit after tax, shareholders wealth

### **Introduction**

The analysis of determination of Market value added has a special significance for the management and stakeholders, especially for investors. Actually, Market value added is highly sensitive economic variable; it is affected by various factors through number of ways. Long run and short run corporate policies relating to various functions will have impact on MVA. MVA theory cannot be build because it is affected by number of factors. Due to these difficulties it is advisable to analyse the variation in MVA by taking the partial approach. The effect of certain major variables is ascertained, ignoring the implications of other left out independent variables at a time. The present study of examine determinants of MVA is based on the above direction. The main objective of establishing the key factors that determine Market value added is to remove negative influences and to enhance the positive impact on the selected large scale oil and natural gas companies in India during the period 2004-05 to 2013-14.

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## A Study On Determinants Of Market Value Added Of Selected Oil And Natural Gas Companies

### Need of the Study

The study aims to identify and analyse the determinants of Market Value Added of oil and natural gas companies in India. The study has used the financial facts of the selected companies from 2004-05 to 2013-14. The scope of determinants of Market Value Added is very wide and the study is based on accounting information.

### Sampling Design

The companies which have invested more than 30,500 crore in “Total Assets” during the year 2013-14 have been selected. They have been listed below.

Sl. No.	Company Name	Total Assets as on 31.03.2014
1	GAIL ( India) Limited	51,321.36
2	Oil and Natural Gas Corporation Limited	2,20,651.67
3	Indian oil corporation	1,58,016.09
4	Bharat Petroleum Corporation Limited	53,385.12
5	Hindustan Petroleum Corporation Limited	61,309.46
6	Oil India Limited	30,628.13

### Statement of Problem

The primary motive of equity shareholders is to invest their money in equity shares of a company where they get capital appreciation or profit, in addition to constant regular dividend yields. Before investing their funds in share, shareholders consider safety of principal and satisfactory return. So, based on the corporate performance of the concern, investment decisions are taken by the investors. Hence, it is essential to study the determinants of Market value added. The present research is mainly focused on identifying factors that determines the Market value added and the way and extent to which they influence it to create wealth to shareholders.

### Objectives of the Study

The following are the main objectives of the study:

- To identify the factors which determine the Market Value Added in selected oil and natural gas companies in India.
- To analyse the determinants of Market Value Added of selected oil and natural gas companies in India.
- To find out the impact of determinants of Market Value Added against profitability.
- To offer valueable suggestion to manage the wealth of the shareholders of selected oil and natural gas companies in the competitive business world.

### Methodology

The present study is based on secondary data and is collected from the compilation made by the Capitaline, Prowess, moneycontrol, indiastata, annual reports of selected companies, annual report of ministry of oil and natural gas for a period of 10 years starting from 2004-05 to 2013-14. To analyse determinants of MVA of selected companies, certain variables are chosen based on earlier empirical studies. Market value Added (MVA) has been used as dependent variable and Economic Value Added (EVA), Net operating Profit After tax (NOPAT), leverage, Earnings per share and Size have been employed as independent variables.

The following model has been used to measure the determinants of MVA.

$$P = \{ \beta_0 + \beta_1 \text{EVA} + \beta_2 \text{NOPAT} + \beta_3 \text{EPS} + \beta_4 \text{LEV} + \beta_5 \text{SIZE} \}$$

Where,

- P = Market Value Added
- EVA = Economic Value Added
- NOPAT = Net Operating Profit After tax (in log value)
- EPS = Earnings per share
- LEV = Leverage (Debt – Equity Ratio)
- Size = Total assets in log value.

### Analysis and Interpretation of Data

**Table 1: Determinants of Gail**

<b>MVA Determinants of GAIL</b>			
<b>Variables</b>	<b>Beta co-efficient</b>	<b>T-value</b>	<b>Significant/not significant</b>
<b>Constant</b>	-893136	-3.075	
<b>Economic value added(EVA)</b>	1.377	0.764	Not significant
<b>Net operating profit (NOPAT)</b>	476689.1	2.299	Significant *
<b>Earnings per share (EPS)</b>	805.412	0.905	Not significant
<b>Leverage (LEV)</b>	-154288	-3.197	Significant *
<b>Size (Total asset in log value)</b>	-180093	-1.662	Not significant
<b>R<sup>2</sup>=0.909</b>	<b>Adj R<sup>2</sup>=0.796</b>		<b>F=8.011</b>

\*\* Significant at 1 per cent level, \*Significant at 5 per cent level, Source: Computed

Determinants of Market Value Added (MVA) of the GAIL have been depicted in Table-1. The table shows that Net operating profit after tax and Leverage are statistically significant at 1 percent level. From the above table it is clear that NOPAT and Leverage are the determinants of MVA. The regression co-efficient values reveal that the NOPAT has positively influenced the MVA. From the regression it is ascertained that the explanatory power is good, this may be inferred from the co-efficient of determinants ( $R^2 = 91$ ), which is the measure of the extent of movement in the dependent variable that is explained by the independent variable. The overall explanatory power of regression reveals satisfactory.

### Determinants Of ONGC

Determinants of Market Value Added (MVA) of the ONGC have been explained in Table-2. The table reveals that Economic value added, Net operating profit after tax, Earnings per share, Leverage and Size are statistically insignificant at 1 percent and 5 per cent significant level. From the regression it is ascertained that the explanatory power is not so good, they have to improve their Market Value added. This may be inferred from the co-efficient of determinants ( $R^2 = 85$ ), which is the measure of the extent of movement in the dependent variable that is explained by the independent variable. The overall explanatory power of regression reveals satisfactory.

**Table 2: MVA Determinants of ONGC**

Variables	Beta co-efficient	T-value	Significant/not significant
Constant	-1929388	-1.662	
Economic value added (EVA)	-0.22	-1.099	Not significant
Net operating profit (NOPAT)	145213.6	0.492	Not significant
Earnings per share (EPS)	53.412	0.053	Not significant
Leverage (LEV)	450156.1	0.899	Not significant
Size (Total asset in log value)	284875.2	1.462	Not significant
<b>R<sup>2</sup>= 0.845</b>	<b>Adj R<sup>2</sup>=0.651</b>		<b>F=4.363</b>

\*\* Significant at 1 per cent level, \*Significant at 5 per cent level, Source: Computed

**Table 3: Determinants of IOC**

MVA Determinants of IOC			
Variables	Beta co-efficient	T-value	Significant/not significant
Constant	372642.4	1.283	
Economic value added (EVA)	6.832	2.634	Significant*
Net operating profit (NOPAT)	89529.35	1.245	Not significant
Earnings per share (EPS)	-1301.06	-2.913	Significant *
Leverage (LEV)	40714.79	0.889	Not significant
Size (Total asset in log value)	-140089	-1.646	Not significant
<b>R<sup>2</sup>= 0.803</b>	<b>Adj R<sup>2</sup>=0.558</b>		<b>F=3.269</b>

\*\* Significant at 1 per cent level, \*Significant at 5 per cent level, Source: Computed

Determinants of Market Value Added (MVA) of the IOC have been depicted in Table-3. The table shows that Economic value added and Earnings per share are statistically significant at 1 percent level. From the table it is clear that EVA and EPS are the determinants of MVA. The regression co-efficient values reveal that the EVA has positively influenced the MVA. From the regression it is ascertained that the explanatory power is good, this may be inferred from the co-efficient of determinants ( $R^2 = 80$ ), which is the measure of the extent of movement in the dependent variable that is explained by the independent variable. The overall explanatory power of regression reveals satisfactory.

**Table 4: Determinants of BPCL**

MVA Determinants of BPCL			
Variables	Beta co-efficient	T-value	Significant/not significant
Constant	-204467	-3.565	
Economic value added (EVA)	8.388	1.722	Not Significant
Net operating profit (NOPAT)	43672.88	2.343	Significant
Earnings per share (EPS)	-537.647	-1.777	Not Significant
Leverage (LEV)	-3080.55	-0.308	Not Significant
Size (Total asset in log value)	16672.6	0.723	Not Significant
<b>R<sup>2</sup>=0.901</b>	<b>Adj R<sup>2</sup>=0.777</b>		<b>F=7.266</b>

\*\* Significant at 1 per cent level, \*Significant at 5 per cent level, Source: Computed

Determinants of Market Value Added (MVA) of the BPCL have been presented in Table - 4. The table shows that Net operating profit after tax is the only variable statistically significant at 1 percent level. From the table it is clear that NOPAT is the determinants of MVA. The regression co-efficient values reveal that the NOPAT has positively influenced the MVA. From

the regression it is ascertained that the explanatory power is good, this may be inferred from the co-efficient of determinants ( $R^2 = 90$ ), which is the measure of the extent of movement in the dependent variable that is explained by the independent variable. The overall explanatory power of regression reveals satisfactory.

**Table 5: Determinants Of HPCL**

<b>MVA Determinants of HPCL</b>			
<b>Variables</b>	<b>Beta co-efficient</b>	<b>T-value</b>	<b>Significant/not significant</b>
<b>Constant</b>	16729.62	0.466	
<b>Economic value added (EVA)</b>	-5.169	-2.305	Significant*
<b>Net operating profit (NOPAT)</b>	-37979.8	-2.594	Significant*
<b>Earnings per share (EPS)</b>	246.839	2.484	Significant*
<b>Leverage (LEV)</b>	3563.225	1.198	Not Significant
<b>Size (Total asset in log value)</b>	26284.9	2	Significant*
<b>R<sup>2</sup>=0.938</b>	<b>Adj R<sup>2</sup>=0.786</b>		<b>F=4.411</b>

\*\* Significant at 1 per cent level, \*Significant at 5 per cent level, Source: Computed

Determinants of Market Value Added (MVA) of the HPCL have been depicted in Table-5. The table shows that Economic value added, Net operating profit after tax, Earnings per share and Size are statistically significant at 1 percent level. From the table it is clear that EVA, NOPAT, EPS and Size are the determinants of MVA. The regression co-efficient values reveal that the EPS and Size have positively influenced the MVA. From the regression it is ascertained that the explanatory power is good, this may be inferred from the co-efficient of determinants ( $R^2 = 93$ ), which is the measure of the extent of movement in the dependent variable that is explained by the independent variable. The overall explanatory power of regression reveals satisfactory.

**Table 6: Determinants of OIL**

<b>MVA Determinants of OIL</b>			
<b>Variables</b>	<b>Beta co-efficient</b>	<b>T-value</b>	<b>Significant/not significant</b>
<b>Constant</b>	19672.9	2.137	
<b>Economic value added (EVA)</b>	0.015	0.445	Not significant
<b>Net operating profit (NOPAT)</b>	13348.21	1.131	Not significant
<b>Earnings per share (EPS)</b>	9.194	0.335	Not significant
<b>Leverage (LEV)</b>	1761.759	0.169	Not significant
<b>Size (Total asset in log value)</b>	-8979.26	-0.93	Not significant
<b>R<sup>2</sup>=0.429</b>	<b>Adj R<sup>2</sup>=-0.286</b>		<b>F=0.600</b>

\*\* Significant at 1 per cent level, \*Significant at 5 per cent level, Source: Computed

Determinants of Market Value Added (MVA) of the OIL have been explained in Table-6. The table reveals that Economic value added, Net operating profit after tax, Earnings per share, Leverage and Size are statistically insignificant at 1 percent and 5 per cent significant level. From the regression it is ascertained that the explanatory power is not so good, they have to improve their Market Value added. This may be inferred from the co-efficient of determinants ( $R^2 = 42$ ), which is the measure of the extent of movement in the dependent variable that is explained by the independent variable. The overall explanatory power of regression reveals not satisfactory.

### **Conclusion**

Determinants of MVA reveals that the net operating profit after tax and leverage are the strongest determinants of MVA of GAIL, economic value added and earnings per share are the strongest determinants of MVA of IOC, net operating profit after tax is the strongest determinant of MVA of BPCL, economic value added, net operating profit after tax, earnings per share and size are the strongest determinants of MVA of HPCL on the other hand ONGC and OIL have no strong determinants of MVA. According to the results of this study, it was found that GAIL, BPCL and HPCL have NOPAT as the stronger determinant of Market value added. These companies are expected to reduce the operating expense and increase the profit. EPS determine the value of share in the market so all the sample companies should make efficient policies to increase the earnings per share.

### **Limitation of the Study**

The study is subject to the following limitations:

- The study period is restricted to 2004-05 to 2013-14 only.
- This study is based on secondary data, accuracy of findings entirely depends on the secondary data taken for the present study.
- The present study is largely based on ratio analysis which has its own limitations.
- There are different methods to evaluate the financial performance of companies, so experts' views differ from one another.
- This study has focused only on large scale oil and natural gas companies in India. So, the conclusion drawn from the present study could not be generalized to small and medium size oil and natural gas companies in India.
- However, these limitations do not affect the worth of this research work

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