

Fundamental Analysis of Navaratna Oil PSU Companies

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Introduction

The economic reality of the nation in the early nineties made the country look at its financial organization in a different way. In order to stabilize a dwindling economy, the first step was to decrease the pressure on the exchequer. One sure way to do this was to reduce the burden of expenses that was carried out in the Public Enterprises (PE). The way out was to divest these companies. However it was under a compelling situation that the government thought of 'disinvesting' instead of 'divesting' the PEs. These in lay man's parlance meant that the holding of the government in the PE's had to be offloaded in the market.

One great hindrance in the process was that, not all the PE's were lucrative investment for the investors. Hence the government had to devise a mechanism to attract the investors. These gave birth to the 'Navaratna' companies the best nine performing companies of the PE's lot. It is now a decade and half that the execution of disinvestment has taken place. Questions arise did the execution create a model could the fundamentals of the company be alienated to the revolute aspiration. This paper tries to evaluate the fundamental performance and technical performance of some Navaratna PSU company, under these circumstances it has taken only four oil sectors companies against the others companies to explain the position. This includes the list below:

- ◆ Bharat Petroleum Corporation Ltd (BPCL)
- ◆ Hindustan Petroleum Corporation Ltd (HPCL)
- ◆ Indian Petrochemicals Corporation Ltd (IPCL)
- ◆ Indian Oil Corporation Ltd (IOCL)

In 1996-97, these companies had a combined turnover of Rs.1, 43,961 crores and made profits of Rs.8, 128 crores. The purpose of evaluating performance of these companies by using fundamental and technical analysis is very useful because these companies are well established public organization on which Indian economy is depended and major reason behind that out of nine some are listed in 'Fortune Global 500'.

The study revolves around fundamental analysis which involves delving into the financial statements. Also known as quantitative analysis, this involves looking at revenue, expenses,

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assets, liabilities and all the other financial aspects of a company. Fundamental analysts look at this information to gain insight on a company's future performance. A good part of this analysis will be spent learning about the balance sheet, income statement, cash flow statement and how they all fit together.

Company profile

a) *Bharat Petroleum Corporation Ltd (BPCL)*

Bharat Petroleum Corporation Limited (BPCL) is one of India's largest PSU companies. As the name suggests its interests are in Petroleum sector. It is involved in the refining and retailing of petroleum products. Bharat Petroleum Corporation Ltd. (BPCL) a Government company incorporated under the Companies Act, 1913, is in the business of Refining, Storing, Marketing and distributing petroleum products. The Paid up Capital of BPCL is Rs.300 crores of which Government of India (GOI) holds 54.93% and the balance 33.8% equity are held by Foreign Institutional Investors, Financial Institutions, Employees and other Investors.

b) *Hindustan Petroleum Corporation Ltd (HPCL)*

HPCL a Fortune 500 company, with an annual turnover of over Rs 74,044 crores, 20% refining & marketing share in India and a strong market infrastructure. The Corporation operates 2 major refineries producing a wide variety of petroleum fuels & specialties, one in Mumbai (West Coast) of 5.5 MMTPA capacity and the other in Visakhapatnam (East Coast) with a capacity of 7.5 MMTPA. HPCL holds an equity stake of 16.95% in Mangalore Refinery & Petrochemicals Limited, a state-of-the-art refinery at Mangalore with a capacity of 9 MMTPA. In addition, HPCL is progressing towards setting up of a refinery in the state of Punjab.

c) *Indian Petrochemicals Corporation Ltd (IPCL)*

Indian Petrochemicals Corporation Limited (IPCL) is a pioneering petrochemicals company in India. It was established on March 22, 1969, with a view to promote and encourage the use of plastics in India.

Its business comprises of polymers, synthetic fibre, fibre intermediaries, solvents, surfactants, industrial chemicals, catalysts, adsorbents and polyesters. The Company operates three petrochemical complexes, a naphtha based complex at Vadodara and gas based complex each at Nagothane near Mumbai and at Dahej on Narmada estuary in bay of Khambhat.

d) *Indian Oil Corporation Ltd (IOCL)*

Indian Oil Corporation is India's largest commercial enterprise, ranking 135th on the Fortune Global 500 listing. It began operation in 1959 as Indian Oil Company Ltd. The

Indian Oil Corporation was formed in 1964, with the merger of Indian Refineries Ltd. Indian Oil and its subsidiaries account for 47% share in petroleum products market, 40.4% share in refining capacity and 67% downstream sector pipelines capacity in India. The Indian Oil Group of Companies owns and operates 10 of India's 19 refineries with a combined refining capacity of 60.2 million metric tons per annum.

Literature survey

Fundamental analysis is based on the premise that a security has an intrinsic value at any given time because this value is a function of underlying economics value specially expected returns and risk.

Graham (1963) & Dodd (1964) gave general definition of intrinsic value of a security is that value which is justified by the facts like assets, earnings, dividends, definite prospects, including the factor of management.

Benjamin King (1966) analyzed the relationship between market returns and individual stock returns. King found that for the period 1927-1960, roughly half of the variance for an average stock was explained by the overall market.

McKinsey & Company a leading international consultancy firm has developed an approach to value-based management which has been very well articulated by Tom Copeland, Tim Koller, and Jack Murrian of McKinsey & Company. According to them: Properly executed, value based management is an approach to management whereby the company's overall aspirations, analytical techniques, and management processes are all aligned to help the company maximize its value by focusing decision making on the key drivers of value.

The studies done by Barua and Verma (1991) and Obaidullah et al (1991) show that mutual fund do provide abnormal return as stock price moved in a random fashion by the help of Efficient Market Hypothesis (Run Test & correlation test).

Methodology

There are different methods to solve the project related work. One has to follows various fundamental principle of fundamental performances like- economic analysis, industry analysis, company analysis and last but not the least technical performance. Different methodologies are as follows-

Fundamental analysis

a) EVA analysis:

EVA is based on the idea of residual income (Economic Profit) which states that wealth is create only when company covers all operating cost and the cost of capital. EVA is just alternative way of viewing of corporate performance. On the other hand EVA is-

- ◆ The Economic Value Added (EVA) is a measure of surplus value created on an investment.
- ◆ The return on capital (ROC) to be the cash flow return on capital earned on an investment.
- ◆ The cost of capital as the weighted average of the costs of the different financing instruments used to finance the investment.

Table 1- Calculation of Economic value added

Operating Income
+ Interest Income
+ Equity income or – Equity Loss
- Income Taxes
- Tax shield on interest expenses
=Net Operating Profit After Tax (NOPAT)
Short term debt
+ Long term debt (including Bonds)
+Other long term liabilities (deferred tax and provisions)
+share holders equity (including minority interest)
=Invested capital
Average IC = $(IC_{BEG} + IC_{END})/2$
NOPAT–Capital charges (Average IC x cost of capital)
=EVA

Source: Valuation:Aswatha Damodaran

b) Ratio analysis:-

Ratio analysis is comparing different numbers from the balance sheet, income statement, and cash flow statement. Also for comparing the number against previous years, other companies, the industry, or even the economy in general. Ratios look at the relationships between individual values and relate them to how a company has performed in the past, and might perform in the future.

i. Liquidity ratio:-

These are ratios which measure the short term solvency or financial position of a firm. These ratios are calculated to comment upon the short term plying capacity of a concern or firm's ability to meet its current obligation.

- ◆ Current ratio - current assets/current liabilities
- ◆ Quick ratio - Quick assets/current liabilities
(Cash + marketable securities + receivables)/Current liabilities

ii. Leverage ratio:

Long term solvency ratios are convey a firm's ability to meet the interest costs and repayments schedules of its long term obligation

- ◆ Debt/Equity ratio - Total debt/ shareholder's investment
- ◆ Interest coverage ratio - EBIT/Interest expense

iii. Activity ratio:

These ratios are calculated to measure the efficiency with which the resources of a firm have been employed. These ratios are also called turnover ratio.

- ◆ Inventory turnover ratio - Cost of goods sold/ Inventory
- ◆ Total asset turnover ratio - Sales/ Average total asset
- ◆ Working capital turnover ratio - Cost of sales/ Net working capital

iv. Profitability ratio:

The issue of effectiveness with which management has employed both the total assets and the net assets as recorded on the balance sheet. This is judged by relating net profit, defined in a variety of ways, to the resources utilized in generating the profit, for the company as a whole or for any of its parts. Different profitability ratios are as follows-

- ◆ Gross profit ratio- $\text{Gross profit/net sales} * 100$
- ◆ Operating profit ratio- $\text{Operating profit /net sales} * 100$
- ◆ Net profit ratio- $\text{Net profit/net sales} * 100$
- ◆ Return on investment- EBIT/total assets
- ◆ Return on equity- ROE- $(\text{net profit/sales}) (\text{sales/assets}) (\text{assets/net worth})$
- ◆ Return on equity capital-
 $\text{Net profit after tax - preference dividend}$
 $\text{Paid up capital + reserve}$
- ◆ Earning per share- $\text{PAT - preference dividend/ No. of outstanding equity share}$
- ◆ Price earning ratio- $\text{Market price per share/ Earnings per share}$

- ◆ Book value per share-
Equity share capital + reserve - accumulated loss
Numbers of outstanding shares
- ◆ Payout/Retention ratio - Cash dividend per share/Earning per share
- ◆ Return on assets - (EBIT/Sales) (Sales/total assets) (EBT/EBIT) (1- Tax rate)

4.2 Statistical model

i) Correlation Test:

The degree of relationship between the variable under consideration is measured through correlation analysis. Correlation deals with the association between two or more variable. The correlation analysis refers to the techniques used in measuring the closeness of the relationship between the variables.

In general when the relationship is of a quantitative nature, the appropriate statistical tool for discovering and measuring the relationship and expressing it in brief formula is known as correlation.

To move with 4 stocks have been selected. For a particular period, the changes in the prices of these stocks were observed. Then in another period, for the same stocks the changes in the stock prices were noted. For these changes correlation analysis was conducted. If the correlation between these changes is near or equal to zero it implies that the price changes are independent of each other.

The general form of a simple linear regression is

$$Y = a + b X$$

$$\bar{a} = Y - b X$$

$$r^2 = \frac{a \Sigma Y + b \Sigma XY - n \cdot Y^2}{\Sigma Y^2 - n \cdot Y^2} \quad b = \frac{\Sigma XY - nXY}{\Sigma X^2 - NX^2}$$

ii) Run Test:

This test can detect a monotonic trend in a time series $x(i)$, $i=1, \dots, N$, by evaluating the number of runs in a second time-series derived from $x(i)$. A "run" is defined as a sequence of identical observations that is followed or preceded by a different observation or no observation at all. First, the median MD of the observations $x(i)$ is evaluated, and the series $y(i)$ is derived from $x(i)$ as: $y(i)=0$ if $x(i)<MD$; $y(i)=1$ if $x(i)>MD$ or $=MD$.

Then the number of runs in $y(i)$ is computed. If $x(i)$ is a stationary random process, the number of runs is a random variable with mean $=N/2+1$ and variance $=(N(N-2))/(4(N-1))$. An observed number of runs significantly different from $N/2+1$ indicates nonstationarity because of the possible presence of a trend in $x(i)$.

Total numbers of runs - n

Numbers of run - r

Numbers of +ve price changes - n_1

Numbers of -ve price changes - n_2

$$\mu_r = \frac{2 \cdot n_1 \cdot n_2}{n_1 + n_2} + 1 \quad \sigma_r = \frac{\sqrt{\{2 \cdot n_1 \cdot n_2 (2n_1n_2 - n_1 - n_2)\}}}{(n_1 + n_2)^2 (n_1 + n_2 - 1)}$$

Sources of data

The data has been sourced from both secondary and primary source such as CMIE data base and business daily's like the Economic Times and the Business Standard

Scope of the study

The scope of the study is limited to the four oil sector PSU under consideration.

Objective of study

- ♦ To understand the fundamental analysis in context of the selected oil sector PSUs.
- ♦ To Assess the quality of assets and quality of management of these PSUs
- ♦ To examine the underlying forces that affect the well being of the economy, industry groups, and companies in respect of these PSUs

Limitation of study

The study was limited by several data availability constraint.

Analysis of d data

Performance analysis

The performances in term of the various companies under study are indicated below.

- i) ***Bharat Petroleum Corporation Ltd (BPCL)***

Table 2- Ratio analysis of BPCL

	(Rs crore)				
Per share ratio	Mar' 03	Mar' 04	Mar' 05	Mar' 06	Mar' 07
EPS(Rs)	41.67	56.95	32.19	9.72	49.94
DPS(Rs)	15	17.5	12.5	2.5	16
Book Value per share(Rs)	158.25	194.99	212.95	302.6	284.16
Operating profit per share(Rs)	78.92	95.63	56.41	36.71	102.81
Profitability ratio					
Operating Margin (%)	5.48	5.97	2.92	1.45	3.85
Net Operating profit Margin (%)	2.87	3.49	1.65	0.38	1.85
Return on net worth (%)	26.33	28.96	15.11	3.21	17.57
Leverage Ratio					
Debt Equity ratio	0.69	0.45	0.6	0.92	1.05
Liquidity Ratio					
Current Ratio	0.95	0.9	1.02	1.23	1.15
Quick Ratio	0.43	0.42	0.39	0.38	0.45
Payout Ratio					
Dividend Payout	39.99	34.95	44.21	35.33	37.12
Earning Retention Ratio	60.01	65.34	55.87	76.88	68.82

Source: Complied

From the table2 of ratio analysis for BPCL it is observed that its per share ratio is increasing on a year to year basis which shows a positive trend for the company. Since the earning per share is high, investor can invest in this company to gain return in long run.

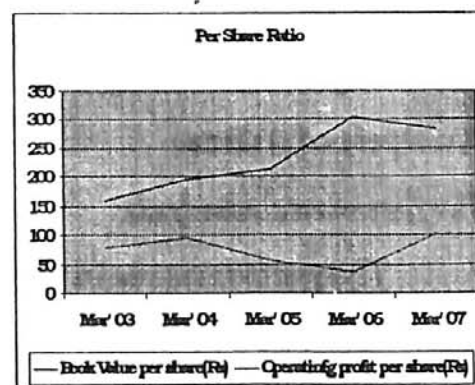
As all values of ratios are increasing by approx of 20 %, it indicates that the company has strong fundamentals.

It can be observed from the fig 1, that with an increase in the operating profit, the book value per share also increase.

The fig 2 and fig 3 indicate exponential growth in Profitability and per share ratios including payouts. This is indeed a very strong indicator for the company.

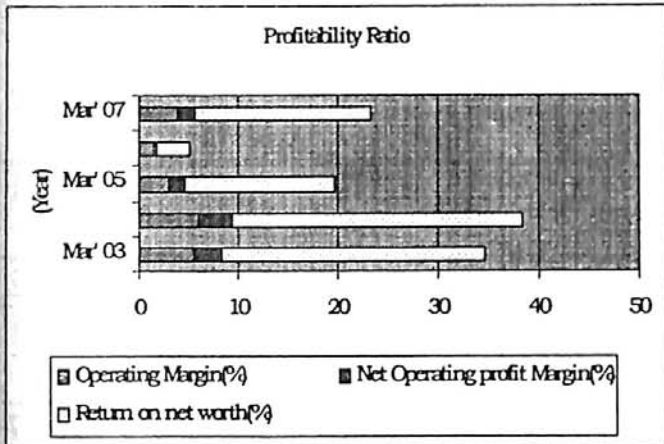
Since a rational customer always search for a company which will give always positive return and easily liquidity facility this can be found in case of BPCL stock.

Fig.1: Per share ratio of BPCL



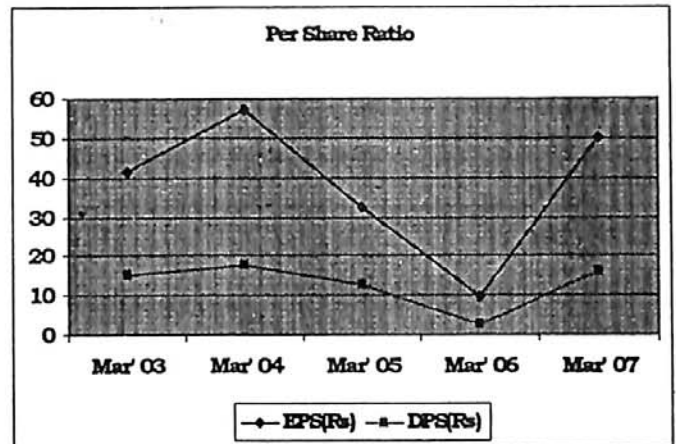
Source: computed

Fig.2- Profitability ratio of BPCL



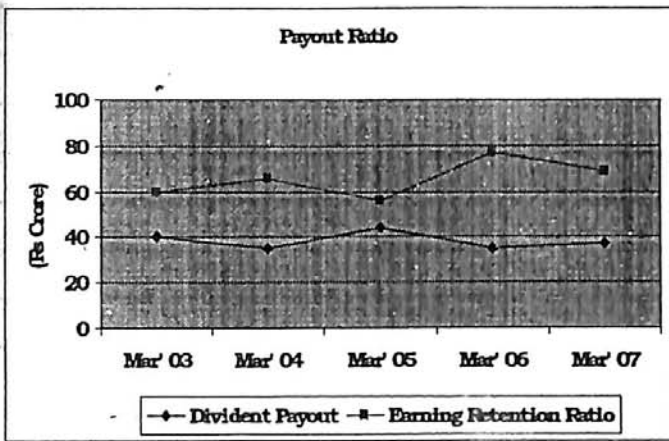
Source: computed

Fig.3- Per share ratio of BPCL



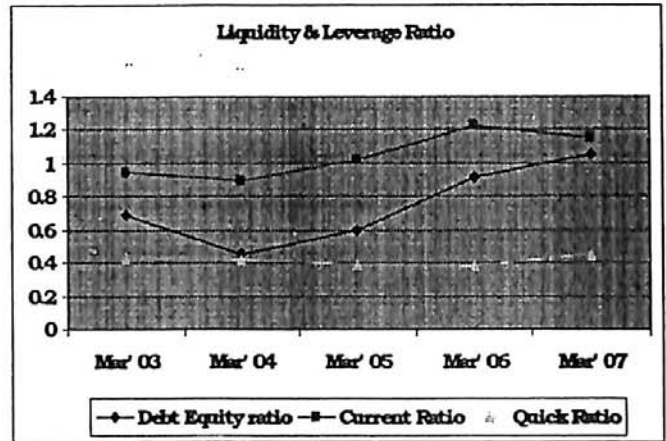
Source: computed

Fig.4- Payout ratio of BPCL



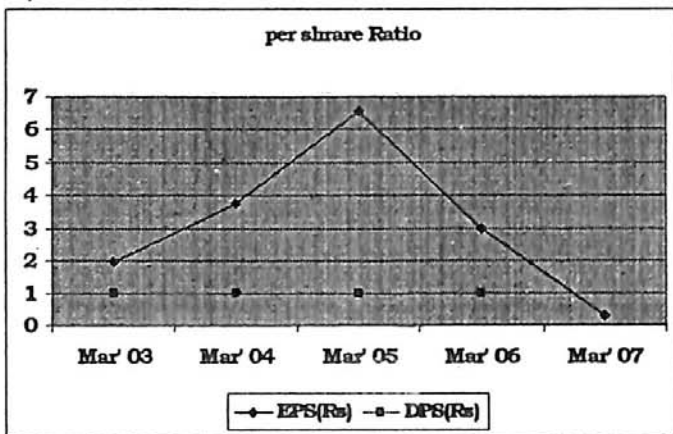
Source: computed

Fig.5- Liquidity & Leverage ratio of BPCL



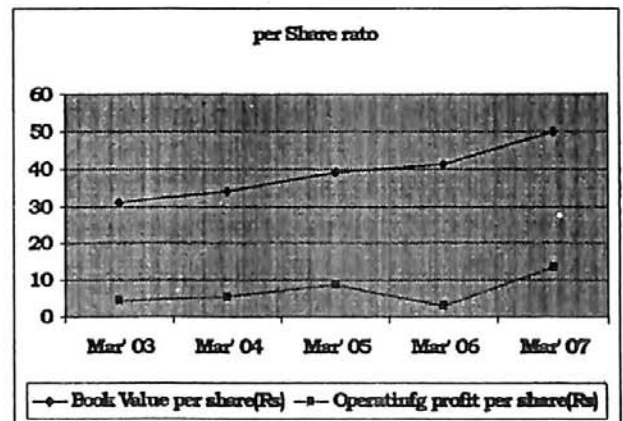
Source: computed

Fig.6- Per share ratio of HPCL



Source: computed

Fig.7- per share ratio of HPCL



Source: computed

ii. Hindustan Petroleum Corporation Ltd (HPCL):-

Table 3:- Ratio analysis of HPCL

	(Rs crore)				
Per share ratio	Mar' 03	Mar' 04	Mar' 05	Mar' 06	Mar' 07
EPS(Rs)	1.98	3.77	6.55	2.98	0.11
DPS(Rs)	1	1	1	1	
Book Value per share(Rs)	31.14	33.79	39.2	41.04	49.82
Operating profit per share(Rs)	4.18	5.48	8.72	2.76	13.31
Profitability ratio					
Operating Margin (%)	47.58	83.95	59.86	17.23	91.07
Net Operating profit Margin (%)	19.11	47.96	39.23	16.34	1.93
Return on net worth (%)	6.34	11.14	16.71	7.25	0.63
Leverage Ratio					
Debt Equity ratio			0.11	0.06	0.33
Liquidity Ratio					
Current Ratio	4.5	2.95	2.74	1.64	2.23
Quick Ratio	3.93	2.95	2.34	1.47	1.48
Payout Ratio					
Dividend Payout	45.67	29.95	17.4	38.3	
Earning Retention Ratio	78.61	75.4	82.6	61.7	100

Source: Compiled

Fig.8-Profitability ratio of HPCL

It can easily be analyze by looking towards Graphs that HPCL is a good company with it high earning per share during March 2003 but it is going down.

Though it has less EPS but one can see that its high Book value per share which indicates that there are chances for its Stock Price will go up in future period of time.

Source: Computed

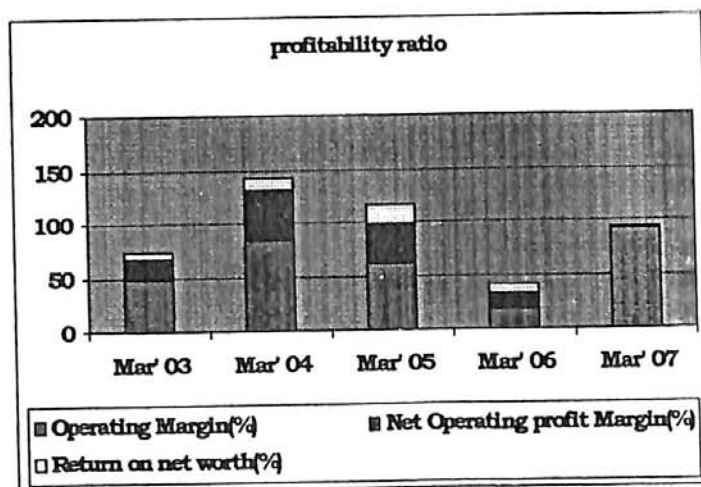
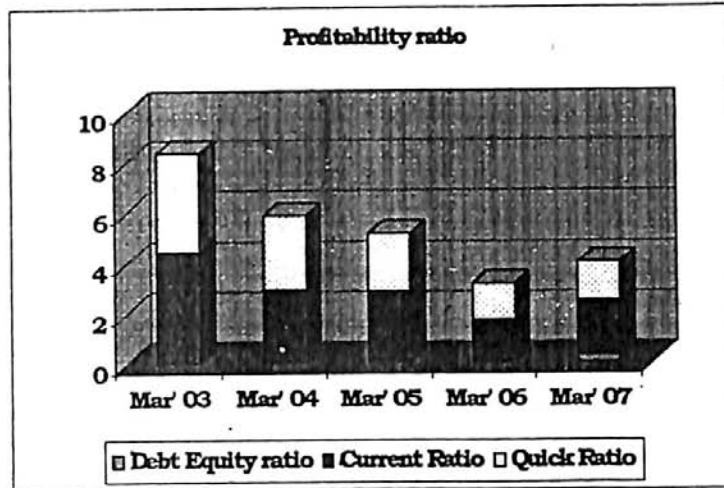
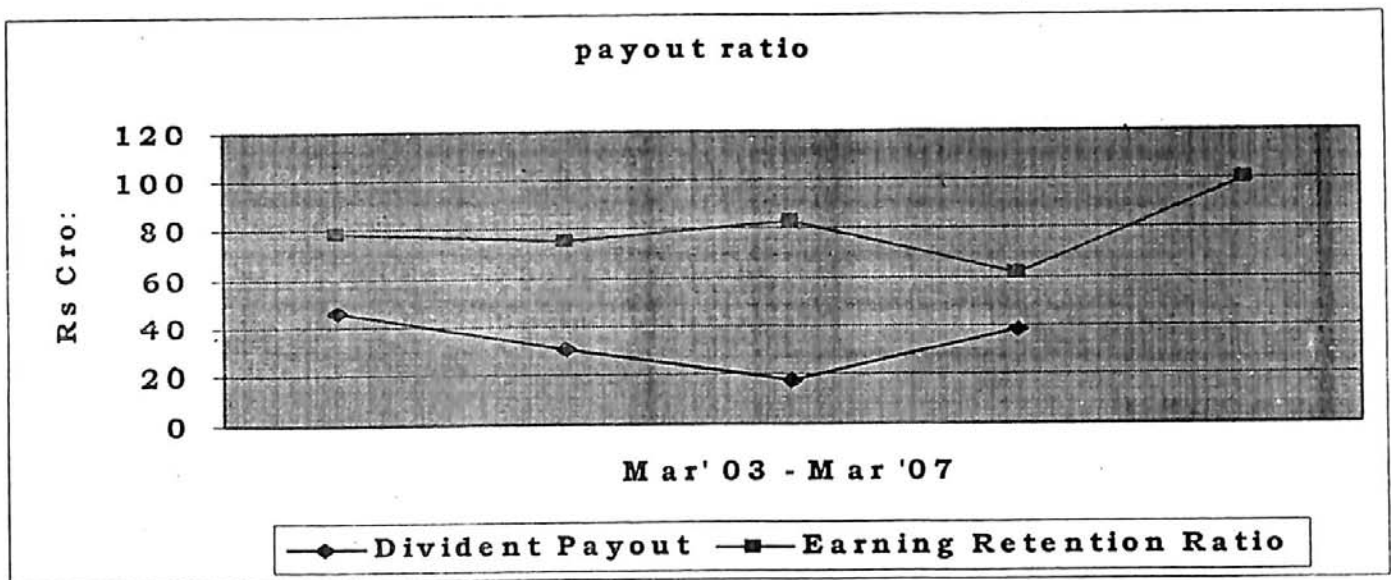


Fig.9: Leverage & Liquidity ratio of HPCL



Source: Computed

Fig.10 - Payout ratio of HPCL



Source: computed

Despite the fact that the profit has decrease in profitability, the pay out of the company has gone up. As indicated earlier this could possibly because of the fact that there has been higher book value for the company and this in anticipation has increased the payout for the company. The other indicates could be the governmental requirement and then the classic argument that the payout increases as there is a decrease in the profitability since the internal rate become less then the market rate during that period, which necessitates the company to payout in order to increase the value of the firm.

iii) Indian Petrochemicals Corporation Ltd (IPCL)

Table 4:- Ratio analysis of IPCL

	(Rs crore)				
	Mar' 03	Mar' 04	Mar' 05	Mar' 06	Mar' 07
EPS(Rs)	4.33	8.23	11.02	31.65	46.88
DPS(Rs)	2	2.25	2.5	4.5	5.5
Book Value per share(Rs)	112.5	91.19	91.53	117.68	198.65
Operating profit per share(Rs)	30.38	47.7	51.2	72.96	87.37
Profitability ratio					
Operating Margin (%)	15.73	23.61	15.52	21.85	19.9
Net Operating profit Margin (%)	2.19	4.02	3.32	9.43	10.55
Return on net worth (%)	3.84	9.02	12.03	26.89	23.6
Leverage Ratio					
Debt Equity ratio	1.31	1.46	0.95	0.26	0.24
Liquidity Ratio					
Current Ratio	1.02	0.79	0.59	0.61	1.01
Quick Ratio	0.57	0.3	0.28	0.45	0.71
Payout Ratio					
Dividend Payout	46.19	30.85	25.58	16.23	13.37
Earning Retention Ratio	160.64	75.2	55.88	85.14	85.18

Source: Compiled

Fig.11- per share ratio of IPCL

IPCL is a well recognized organization jointly work with ONGC and it has high operating per share. It has again high EPS and DPS so that retail investors can be attracted by it.

The company is also liquid and current ratio shows its ability to meet its current obligations well.

Source: computed

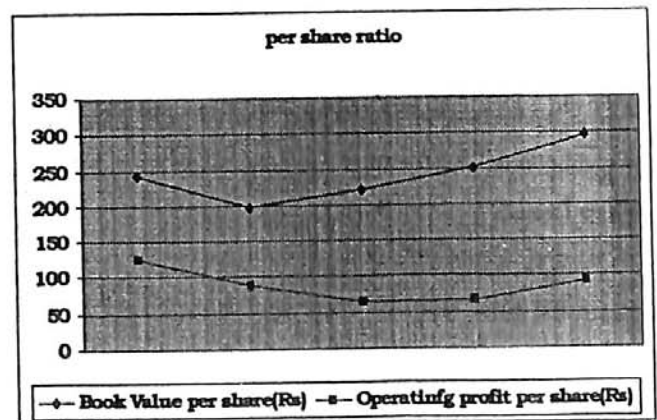


Fig.12- per share ratio of IPCL

Though the companies payout ratio is decreasing but profitability ratio is increases. There fore one can conclude that it is a good company to invest.

Source: computed

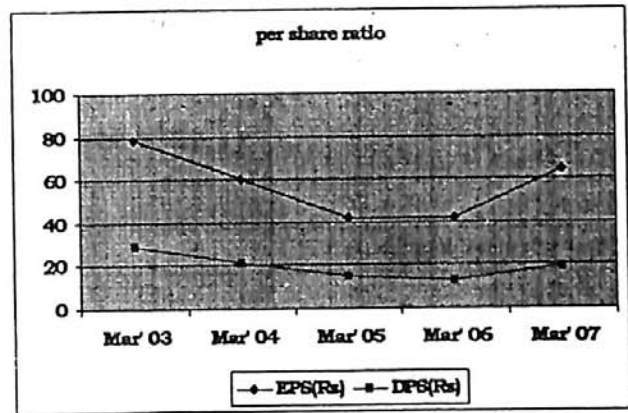
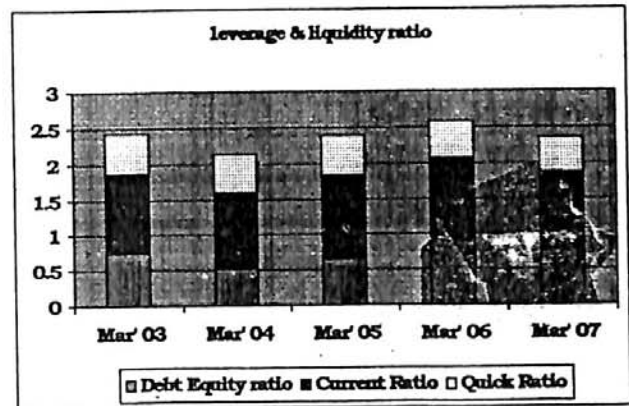
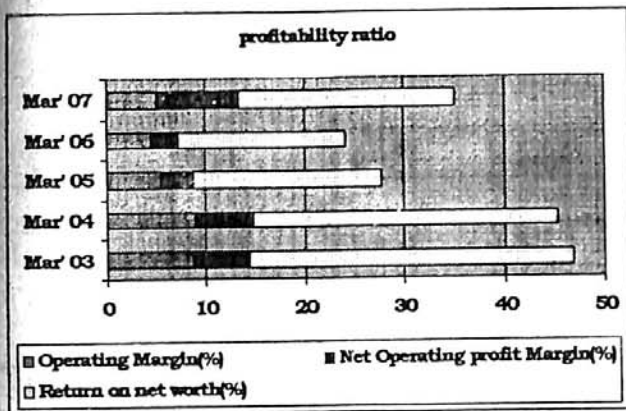


Fig.13- Profitability ratio of IPCL

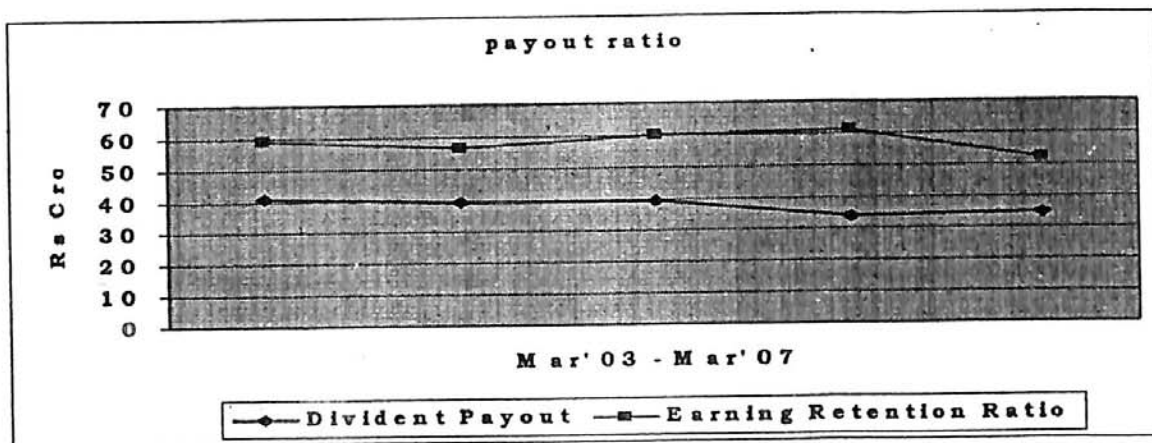
Fig.14 - Leverage & Liquidity ratio of IPCL



Source: computed

Source: computed

Fig.15 - payout ratio of IPCL



Source: computed

However one may note that the Earning retention ratio is decreasing and the dividend payout is increasing, which may be taken as a bad fundamental indicator as there may be payout problems in future.

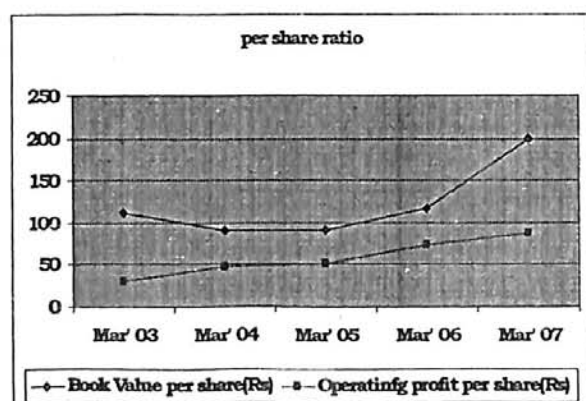
iv) Indian Oil Corporation Ltd (IOCL):-

(Table 5:- Ratio analysis of IOCL)

	(Rs crore)				
Per share ratio	Mar' 03	Mar' 04	Mar' 05	Mar' 06	Mar' 07
EPS(Rs)	78.53	59.97	41.88	42.08	64.21
DPS(Rs)	29	21	14.5	12.5	19
Book Value per share(Rs)	241.81	196.69	222.18	250.38	296.88
Operating profit per share(Rs)	123.73	88.67	63.47	66.86	92.14
Profitability ratio					
Operating Margin (%)	8.83	8.86	5.32	4.46	4.97
Net Operating profit Margin (%)	5.54	5.94	3.48	2.78	8.43
Return on net worth (%)	32.47	30.49	18.84	16.8	21.62
Leverage Ratio					
Debt Equity ratio	0.76	0.52	0.66	0.9	0.77
Liquidity Ratio					
Current Ratio	1.11	1.08	1.18	1.18	1.1
Quick Ratio	0.56	0.55	0.55	0.49	0.47
Payout Ratio					
Dividend Payout	40.84	39.5	39.47	33.87	34.83
Earning Retention Ratio	58.9	56.24	59.72	60.73	52.06

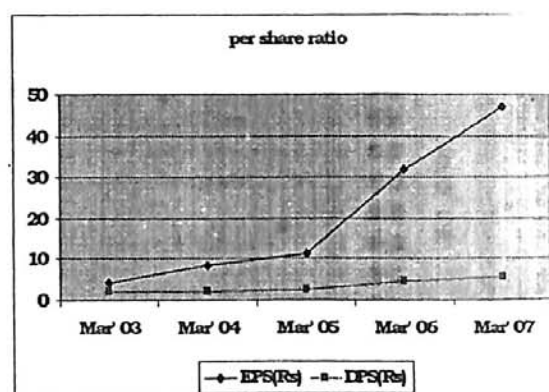
Source: compiled

Fig.16- per share ratio of IOCL



Source: computed

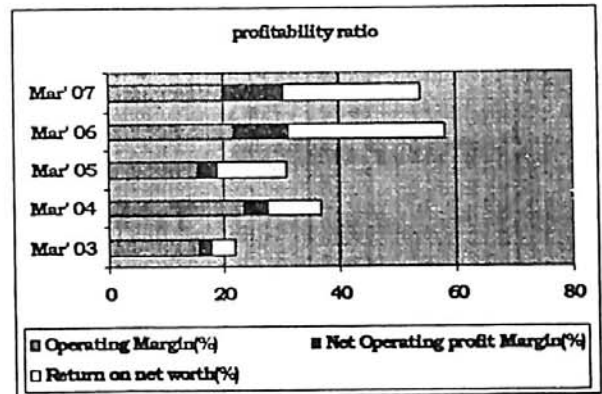
Fig.17- per share ratio of IOCL



Source: computed

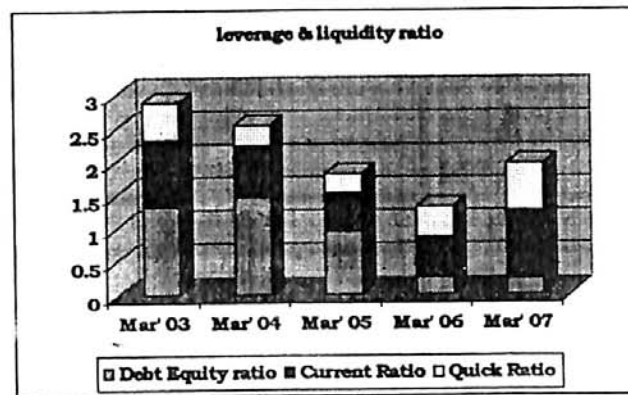
Fig.18- Profitability ratio of IOCL

As already been discussed in above companies that a Good company should have well managed capital High EPS, DPS. IOCL has large capitalization value. Its Profitability and liquidity ratio are also efficient. In IOCL it is observed that EPS and DPS are growing exponentially in compare to other oil companies discussed above. The companies EPS has increased significantly whereas DPS is marginally low and



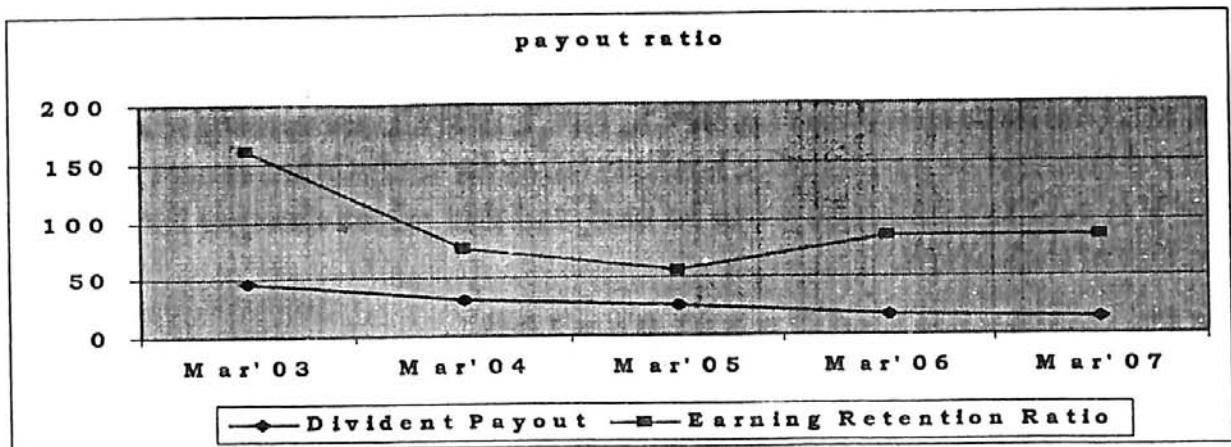
Source: Computed constant.

Fig.19- Leverage & Liquidity ratio of IOCL



Source Computed

Fig.20 - Payout ratio of IOCL



Source: computed

The companies' payout ratios are also falling. This is company with moderate profit scenario and depleting payout. The book value is high which means that the company has ability. But investing in such a company require patience, since there fundamentals give conflicting results.

b) Correlation analysis

Table 6:- Correlation Analysis

Regression	BPCL	HPCL	IOCL	IPCL
∑ X	60.425	64.375	-33.6	2.375
∑ X ²	6403.56	4142.97	6577.39	4770.14
∑ Y	48.35	59.2	-21.125	32.915
∑ Y ²	8405.57	5054.66	4169.63	3987.15
∑ XY	3785.7	2697.89	51715.4	256.44
XY-Bar	151.4	107.91	2068.6	10.25
X-Bar	2.417	2.575	-1.4	0.098
X ² -Bar	5.841	6.6306	1.96	0.0097
Y-Bar	1.934	2.368	-0.8802	1.371
Y ² -Bar	3.74	5.6074	0.774	1.88
B	0.001	0.0037	-65.7	0.004
A	1.931	2.35	-9.2	1.37
r ²	3.64	8.917	3.39	0.88
R	1.91	2.98	1.84	0.938

Source: compiled

From the above calculation regarding coefficient correlation it is being analyzed that as 'r' value of all the three companies i.e. BPCL, HPCL & IPCL are coming above one so its values are dependent on past data that has been taken for analysis but except IOCL whose value or 'r' is near to zero hence it can be analyzed that prices changes for this stock is independent of each others.

Test at 5% significance level ($\alpha = 0.05$ & $z = 1.96$)

BPCL :- lower limit = $25.24 - 1.96 * 3.42 = 18.53$ (Accepted as observed run is 25)

Upper limit = $25.24 + 1.96 * 3.42 = 31.94$

c) Run test

Table 7:- Run Test Analysis

	BPCL	HPCL	IOCL	IPCL
n	50	50	50	50
r	25	26	24	30
n1	27	26	30	29
n2	22	23	19	20
μ_r	25.24	25.4	24.26	24.67
σ_r	3.42	3.43	3.285	3.34
α	0.05	0.05	0.05	0.05

Source: compiled

HPCL:- lower limit = 17.67 (Accepted as observed run is 26)
Upper limit = 31.12

IPCL:- lower limit = 17.82 (Accepted as observed run is 24)
Upper limit = 30.69

IOCL:- lower limit = 18.12 (Accepted as observed run is 30)
Upper limit = 31.21

Test at 10% significance level ($\alpha = 0.1$ & $z = 1.65$)

BPCL :- lower limit = 19.59 (Accepted as observed run is 25)
Upper limit = 29.88

HPCL:- lower limit = 19.74 (Accepted as observed run is 26)
Upper limit = 31.05

IPCL:- lower limit = 18.83 (Accepted as observed run is 24)
Upper limit = 29.68

IOCL:- lower limit = 19.16 (Accepted as observed run is 30)
Upper limit = 30.18

Test at 20 % significance level ($\alpha = 0.2$ & $z = 1.28$)

BPCL :- lower limit = 20.86 (Accepted as observed run is 25)
Upper limit = 29.61

HPCL:- lower limit = 21 (Accepted as observed run is 26)
Upper limit = 29.79

IPCL:- lower limit = 20.05 (Accepted as observed run is 24)
Upper limit = 28.46

IOCL:- lower limit = 20.39 (Rejected as observed run is 30)
Upper limit = 28.94

The results of the run test indicate that the data is static and the results obtained from the regression are non spurious.

d) Risk Factors:

Table 8:- Risk factors of companies

	BPCL	HPCL	IOCL	IPCL
σ^2	1.79082	19.9449	152.263	7.98813
σ	1.33821	4.466	12.3395	2.82633
Covariance	0.18425	0.3116	1.34621	0.03136
Market Variance	0.1841	0.1841	0.1841	0.1841
σ_m	0.4291	0.4291	0.4291	0.4291
β	1.63953	0.0449	0.98417	0.18921

Source: compiled

From the above table the beta value of all four companies were found. Except HPCL others beta values are more than one which indicates that returns tend to be more risky than the market. Beta value of HPCL indicates that it is below average risk which means it is less risky than market portfolio risk. One can conclude that both HPCL and IPCL are less risk and return oriented investment in comparison to the other two companies.

e) NOPAT analysis

$$\text{NOPAT} = \text{Operating Income} + \text{Interest Income} + \text{Equity income or - Equity Loss} - \text{Income Taxes} - \text{Tax shield on interest expenses}$$

Table 9:- Net operating profit

Net Operating Profit					
	2007	2006	2005	2004	2003
BPCL	1805.48	291.61	965.8	1694.57	1250.03
HPCL	1571.17	405.63	1277.33	1903.94	1537.34
IPCL	1157.79	790.14	59.58	-479.17	-39.51
IOCL	7499.47	4925.12	4891.38	7004.82	6114.89

Source: compiled

The above table shows how net operating profit for all oil companies that have chosen for analysis are increasing giving a idea of upward trend and which symbolize that market is good to invest by selecting good stocks and creating efficient market portfolio. The fundamental indicators in term of NOPAT is encouraging for the companies under study.

Conclusion

Fundamental analysis of a company give proper idea about company and its business progress. To know in depth of any business organization it is advisable to gain information about company and for retail investors it is wise to analyzed fundamental performance of that company.

In this paper we have taken four oil sector PSUs which are treated as blue chip as they figure in the navarata classification and some of them are in the list of Fortune 500 companies. It was observed from the study by using standard fundamental tools that most of the oil companies in public sector has higher book value then the stocks market price indicating growth in future. These companies have a strong payout which may elicit retail interest. But as is known that the increasing payout may be used as a wrong signal by the market, hence it may be advisable for the investors to look into more detail of the industry as well as the company. This study is only exploratory and not advisory in nature. The idea behind this study is to show how a fundamental analysis can be done with a critique point of view.

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