

COMPARATIVE ANALYSIS OF PUBLIC SECTOR COMPANIES OIL BASED COMPANIES –WORKING CAPITAL MANAGEMENT (WITH REFERENCE TO HPCL)

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ABSTRACT

The Oil sector is considered to be one of the important areas of concern in today's world scenario. Most financial statement analyses focus on firms belonging to industries that either contribute significantly to economic figures or posit in a highly competitive business environment. The objective of this paper is to analyze comparative financial performance of the Indian oil companies like Indian Oil Corporation Ltd, Bharat Petroleum Corporation Ltd. Hindustan Petroleum Corporation Ltd., and during 2015-19. Various ratios like liquidity ratios, activity ratios, leverage ratios, profitability ratios have been used to measure financial performance of selected oil companies. Result reveals that the current ratio of Bharat Petroleum Corporation Limited is better in the given period, which shows good short term financial strength of the company. It was found that Indian Oil Corporation limited has better assets turnover and Net Profit margin is also better. Over the period of 2015-2019, the Indian Oil PSU's had generated more earning during the period. However, profitability of Indian Oil Corporation Limited and Hindustan Petroleum Corporation Limited was much better in the period of 2015-19 as compared to all Indian oil companies.

Keywords: Current Ratio; Acid Test Ratio; Asset Turnover Ratio; Net Profit Margin.

INTRODUCTION

The basis for financial planning, analysis and decision-making is the financial information. Financial information is needed to predict, compare and evaluate the firm's earning ability. It is also required to aid in economic decision-making, investment and financing decision-making. The financial information of an enterprise is contained in the financial statements or Accounting reports. Three Basic financial statement of great significance to owners, management and investors are balance sheet, profit and loss account and cash flow statement.

When we concern with Financial management, it just talk about the time based analysis of financial resources and its management, so there is two type of time based analysis which are Long term financial management and short term financial management. On one side long term financial management is concern with the growth of industries and on the other side short term financial management is concern with day to day business activity of company which lay down the base for growth.

The technique which is suggested for the financial

analysis is Capital Budgeting Management and Working Capital Management one for long term and other one for short term respectively. Researcher is concern with comparing study of Working Capital Management of leading Oil Corporation of India – Indian Oil Corporation limited, Bharat Petroleum Corporation Limited, and Hindustan Petroleum Corporation Limited with major ratios analysis.

A brief discussion on major public sector oil and natural gas Corporation of India are as follows:

Major Public Sector Oil Corporation

1. Indian Oil Corporation Limited

Indian Oil Corporation Limited (IOCL) is an Indian state-owned oil and gas corporation with its headquarters in New Delhi, India. It is one of the largest public corporations in India. Indian Oil and its subsidiaries account for 49% share in the petroleum product market, 31% share in refining capacity and 67% downstream sector pipelines capacity in India. The Indian Oil group of companies owns and operates 11 of India's 23 refineries with a combined refining capacity of 65.7 million metric tons per year.

1. Bharat Petroleum Corporation Limited

Bharat Petroleum Corporation Limited (BPCL) is a Government stake Oil and Natural Gas Corporation in India, also having a Maharatna Status. The company's headquarter in Mumbai. The corporation operates two larger refineries of the country located in Kochi and Mumbai.

It was incorporated on 24 January 1976, the Burmah Shell was taken over by the government of India to form Bharat Refineries Limited. On 1st August 1977, it was renamed Bharat Petroleum Corporation Limited. It was also the first refinery to process newly found indigenous crude from Bombay High. It has four major refineries namely Mumbai refinery, Kochi refinery, Bina refinery and Numaligarh refinery. Some of its prominent product range is Bharat gas, Mak lubricant, High speed, and In & Out- a convenience store.

The company is second largest oil downstream company in India. In the other context it ranked 275th in the list of Fortune 2019 of the world's biggest corporations. In the ranking of Forbes 2018 list, ranked 672.

2. Hindustan Petroleum Corporation Limited

Hindustan Petroleum Corporation Limited is one of the Public Sector Corporation and major refineries in India, also having Navarathan status, owned by Oil & Natural Gas Corporation of India, its Head office in Mumbai, Maharashtra.

It was incorporated in 1974, after the takeover & merger of Erstwhile ESSO Standard & Lube India Limited by the ESSO (Acquisition of Undertaking in India) Act 1974. Caltex Oil Refining India Limited (CORIL) was taken over by Government, HPCL operate two major refineries producing a wide variety of petroleum fuel and specialities, one in Mumbai (west coast) of 6.5 million metric tonnes per annum (MMPTA) capacity and the other one is Vishakapatnam (East Coast) with a capacity of 8.3 MMPTA.

Presently it is having 25% market share in India

as well as Strong Marketing Infrastructure, as per **FORTUNE GLOBAL 500** list ranked 367th world biggest corporation as of 2016. After incorporation it was showing steady growing over the year, its refining capacity increases from 5.5 million metric tonnes in 1984/85 to 24.5 million metric tonnes as of March 2018 also its revenue from operation grew from rupees 2687 crores in 1984/85 to rupees 298,618 crores in 2019.

LITERATURE REVIEW

According to Dr. Rohit Bansal, Dr. Saroj Mishra and Sanjay Kumar Kar in their researcher paper "**Comparative financial performance analysis of Indian Oil Companies during 2010-2014**" concluded that profitability and performance of private sector petroleum companies are better than Indian PSU especially the performance of Crain India and British Petroleum.

According to Brigham and Houston (2009), financial analysis involves comparing the firm's performance to that of other firms in the same industry and evaluating trends in the firm's financial position over time.

According to **Pamela E. Drake** (2010) in his publishing "**Financial Ratio Analysis**" Financial statement analysis is the selection, evaluation, and interpretation of financial data, along with other pertinent information, to assist in investment and financial decision-making. The operating performance of a company is a measure of how well a company has used its resources-its assets, both tangible and intangible- to produce a return on investment.

Pandey (2010) sees financial analysis as a process of identifying the financial strengths and weakness of the firm by properly establishing relationships between the firm by properly establishing relationships between the items of the balance sheet and the profit and loss statement. Research paper of Dr. (Mrs) **Asha Sharma** "**A Comparative Analysis of Working Capital Management between Public and Private sector Steel companies in India**" conclude business can be strength it managed their working capital more effective way. It can be managed by taking appropriate care to maintain appropriate Ratio of working capital to fixed asset, total asset and Sales

Research paper of Dr. Satya Ranjan Doley “Profitability analysis of Hindustan Petroleum Corporation and Bharat Petroleum Corporation Limited a comparative study” concluded Operating ratio of HPCL is higher than BPCL but other Ratio are less than BPCL study also concluded that BPCL is performing better than HPCL.

RESEARCH METHODOLOGY

This study is based on the secondary data, Researcher has taken 5 year data from 2014-15 to 2018-19 for the comparative financial analysis of public sector oil companies IOCL, BPCL, HPCL among the analysis researcher is focusing on the Working Capital Management for the respective companies. Data are collected from the annual report of the respective companies. In this study, researchers used key Financial Ratios for analysis, Hence there is short span of data so researcher used DUPONT analysis and graphical presentation technique to analysis the trend and feasibility, efficiency and profitability position of the respective firm. Whereas researcher especially focusing working capital management of HPCL. Brief discussions on the key financial ratios are as follows

Key Financial Ratios

There are five categories of ratios used in financial statement analysis. These are

- Liquidity ratios, which measure a firm's ability to meet cash needs as they arise
- Profitability ratio, which measure the overall performance of a firm and its efficiency in managing assets, liability, and equity.
- Activity ratios or turnover ratio, which measures the liquidity of specific assets and the efficiency of managing assets.
- Assets Turnover or management, which evaluates how well a company, is utilising asset to produce revenue.
- Long Term Debt or Leverage ratio, which measure the extent of firm's financing with debt relative to equity and its ability to cover interest and other fixed charges.

• Liquidity Ratios:

- i) Current Ratio or Working Capital Ratio: it refers the ratio between Current asset of the

firm to its Current Liabilities.

$$\text{Current Ratio} = \frac{\text{Current Asset}}{\text{Current Liability}}$$

- ii) Quick Ratio or Acid test Ratio or Liquid Ratio: it indicates either the firm is in position to pay its current Liabilities within a month. Its determined by ratio of Liquid asset to the current Liability.

$$\text{Quick Ratio} = \frac{\text{Liquid Asset}}{\text{Current Liability}}$$

• Activity Ratio:

- a) Inventory Turnover Ratio: This ratio indicates the relationship between the cost of revenue from operation during the year and average inventory kept during period.

$$\text{Inventory Turnover Ratio} = \frac{\text{Cost of Revenue from Operations}}{\text{Average Inventory}} \text{ times}$$

- b) Trade Receivable Turnover Ratio: this ratio indicates the relationship between credit revenue from Operations and average trade receivables during the year.

$$\text{Trade Receivable Turnover Ratio} = \frac{\text{Credit Sales}}{\text{Average Debtors}}$$

- c) Fixed Asset Turnover Ratio: this ratio explains how a company utilise its fixed asset to generate its revenues.

$$\text{Fixed Asset Turnover Ratio} = \frac{\text{Net Revenue}}{\text{Average Fixed Asset}}$$

• Leverage Ratio:

- a) Debt –Equity Ratio: it indicates the proportionate of fund acquired by long term barrowing in comparison to shareholder fund.

$$\text{Debt – Equity Ratio} = \frac{\text{Debt}}{\text{Equity}}$$

- b) **Interest Coverage Ratio(ICR):** it also termed as Debt Service Ratio, this ratio indicates how many times the interest charges are covered by the Profit available to pay interest charge.

$$\text{Interest Coverage Ratio} = \frac{\text{Profit before charging Interest and Income tax}}{\text{Fixed Interest charge}}$$

• **Profitability Ratio:**

- a) **Gross Profit Ratios:** this ratio establishes the relationship between Gross profit and Revenue from Operation i.e., Net Sales

$$\text{Gross Profit Ratio} = \frac{\text{Gross Profit}}{\text{Revenue From operation i.e., Net Sales}} \times 100$$

- b) **Operating Ratio:** This ratio measures the proportion of an enterprise's cost of Revenue from Operation and operating expenses in comparison to its Revenue from operation.

$$\text{Operating Ratio} = \frac{\text{cost of Revenue fom operations} + \text{operating Expenses} - \text{Operating income}}{\text{Revenue From Operation}} \times 100$$

- c) **Operating Profit Ratio:** This ratio shows the relationship between operating profit and net Revenue from Operation.

$$\text{Operating Profit Ratio} = \frac{\text{Operating Profit}}{\text{Revenue from Operations}} \times 100$$

- d) **Net Profit Ratio:** This ratio shows the relationship between net profit and Net Revenue from operations.

$$\text{Net Profit Ratio} = \frac{\text{Net Profit After Tax}}{\text{Revenue from Operation}} \times 100$$

- e) **Return on Capital Employed:** This Ratio reflects the overall Profitability of the business. It is calculated by comparing the profit earned and the Capital employed to earn it.

$$\text{Return on Capital Employed} = \frac{\text{Net Profit before Interest, tax and dividends}}{\text{Capital Employed}} \times 100$$

• **DU-PONT Analysis:**

It is the method of performance measurement which was started by the DuPont Corporation in the 1920s. With this method, assets are measured at their gross book value rather than at net book value in order to produce a higher Return on Equity (ROE). Higher is the result, higher the return on the equity. It shows the relationship among activity, Leverage, and profitability ratios. It is calculated as.

$$\text{DuPont Analysis} = \frac{\text{Profit After Tax}}{\text{Total Asset}}$$

OBJECTIVE OF THE STUDY

This study specifically aims to meet the following objectives:

- To determine the liquidity, activity, leverage, profitability of the respective firm.
- To find out comparative financial analysis among the public sector oil and gas industries.
- To evaluate financial performance using DuPoint analysis.

Brief and comparative analysis of financial ratios of IOCL, BPCL, HPCL are as fallows with their descriptive statistics

Table 1: To determine the Financial ratios of HPCL over the year of 2014 to 2019. Table is consisted of five major ratios and each ratio is further classified with accounting ratios, these are Liquidity Ratios (Current ratio and Acid Test ratio), Profitability Ratios (Return on net worth, Return on Capital Employed, Earning Per Share, Net Profit margin), Activity Ratios (Inventory Turnover Ratio and Debtor Turnover Ratio), Asset Turnover Ratio (Fixed Asset Turnover and Total Asset Turnover), leverage ratio (Debt equity, Interest Coverage ratio) and last one DuPont Analysis.

FINANACIAL YEAR	2014-15	2015-16	2016-17	2017-18	2018-19
Liquidity Ratios					
Current Ratio	0.61	0.53	0.54	0.58	0.53
Acid Test Ratio	0.31	0.30	0.27	0.35	0.42
Profitability Ratios					
RONW	11.00	28.05	39.08	28.27	22.00
ROCE	14.68	19.41	25.47	22.43	18.88
EPS	80.72	114.07	40.74	41.72	39.56
Net Profit Margin	0.69	2.36	4.39	3.28	2.42
Activity Ratio					
Inventory Turnover Ratio	16.75	15.58	11.51	13.25	14.70
Debtor Turnover Ratio	45.57	46.07	45.32	45.52	49.03
Asset Turnover					
Fixed Asset Turnover	4.33	3.29	4.60	4.86	5.40
Total Asset Turnover	6.29	5.84	5.04	5.09	5.20
Leverage Ratio					
Debt Equity	1.06	0.79	0.84	0.82	0.89
Interest Coverage Ratio	6.87	0.58	0.31	0.37	0.40
Du-Pont Analysis					
Return on Total Asset	0.040	0.055	0.079	0.073	0.058

Source Annual report of HPCL from 2014-15 to 2018-19

Table 2: To determine the Financial ratios of IOCL over the year of 2014 to 2019. Table is consisted of five major ratios and each ratio is further classified with accounting ratios, these are Liquidity Ratios (Current ratio and Acid Test ratio), Profitability Ratios (Return on net worth, Return on Capital Employed, Earning Per Share,

Net Profit margin), Activity Ratios (Inventory Turnover Ratio and Debtor Turnover Ratio), Asset Turnover Ratio (Fixed Asset Turnover and Total Asset Turnover), leverage ratio (Debt equity, Interest Coverage ratio) and last one DuPont Analysis.

FINANACIAL YEAR	2014-15	2015-16	2016-17	2017-18	2018-19
Liquidity Ratios					
Current Ratio	0.73	0.62	0.64	0.68	0.65
Acid Test Ratio	0.48	0.35	0.28	0.42	0.34
Profitability Ratios					
RONW	7.13	13.36	19.44	19.37	15.54
ROCE	7.50	14.42	19.28	21.21	14.34
EPS	21.72	47.44	40.31	22.52	18.40
Net Profit Margin	1.09	3.47	5.58	5.26	3.29
Activity Ratio					
Inventory Turnover Ratio	9.74	9.82	6.90	7.31	6.85
Debtor Turnover Ratio	44.51	45.15	42.86	43.02	39.87
Asset Turnover					
Fixed Asset Turnover	3.31	3.30	2.79	2.95	3.29
Total Asset Turnover	3.53	2.49	2.20	2.38	2.55
Leverage Ratio					
Debt Equity	0.84	0.54	0.58	0.55	0.82
Interest Coverage Ratio	2.28	5.75	8.34	9.80	6.02
Du-Pont Analysis					
Return on Total Asset	0.024	0.051	0.074	0.076	0.054

Source Annual report of IOCL from 2014-15 to 2018-19

Table 3: To_ determine the Financial ratios of BPCL over the year of 2014 to 2019. Table is consisted of five major ratios and each ratio is further classified with accounting ratios, these are Liquidity Ratios (Current ratio and Acid Test ratio), Profitability Ratios (Return on net worth, Return on Capital Employed, Earning Per Share,

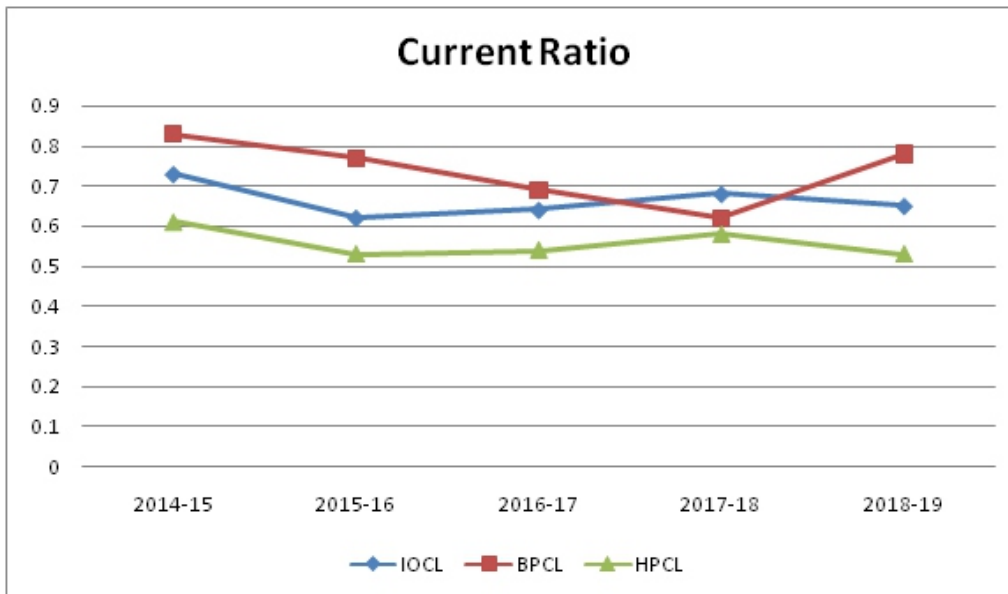
Net Profit margin), Activity Ratios (Inventory Turnover Ratio and Debtor Turnover Ratio), Asset Turnover Ratio (Fixed Asset Turnover and Total Asset Turnover), leverage ratio (Debt equity, Interest Coverage ratio) and last one DuPont Analysis.

Table-3: Financial Ratios of BPCL					
FINANACIAL YEAR	2014-15	2015-16	2016-17	2017-18	2018-19
Liquidity Ratios					
Current Ratio	0.83	0.77	0.69	0.62	0.78
Acid Test Ratio	0.42	0.38	0.35	0.38	0.47
Profitability Ratios					
Return on Asset					
RONW	22.63	27.36	27.09	26.36	19.41
ROCE	23.35	27.43	22.77	21.76	18.39
EPS	70.32	102.78	58.59	40.55	36.26
Net Profit Margin	2.13	3.92	3.97	3.37	2.39
Activity Ratio					
Inventory Turnover Ratio	17.52	15.92	12.23	13.28	15.67
Debtor Turnover Ratio	71.20	79.33	58.42	47.71	50.29
Asset Turnover					
Fixed Asset Turnover	5.72	4.09	5.79	4.83	5.36
Total Asset Turnover	6.97	4.69	4.00	4.16	4.67
Leverage Ratio					
Debt Equity	0.52	0.50	0.71	0.67	0.74
Interest Coverage Ratio	13.72	19.92	23.27	15.54	8.92
Du-Pont Analysis					
Return on Total Asset	0.073	0.097	0.087	0.079	0.061

Source Annual report of BPCL from 2014-15 to 2018-19

Results and learning Insight:

- Current Ratio: analysis and Insight

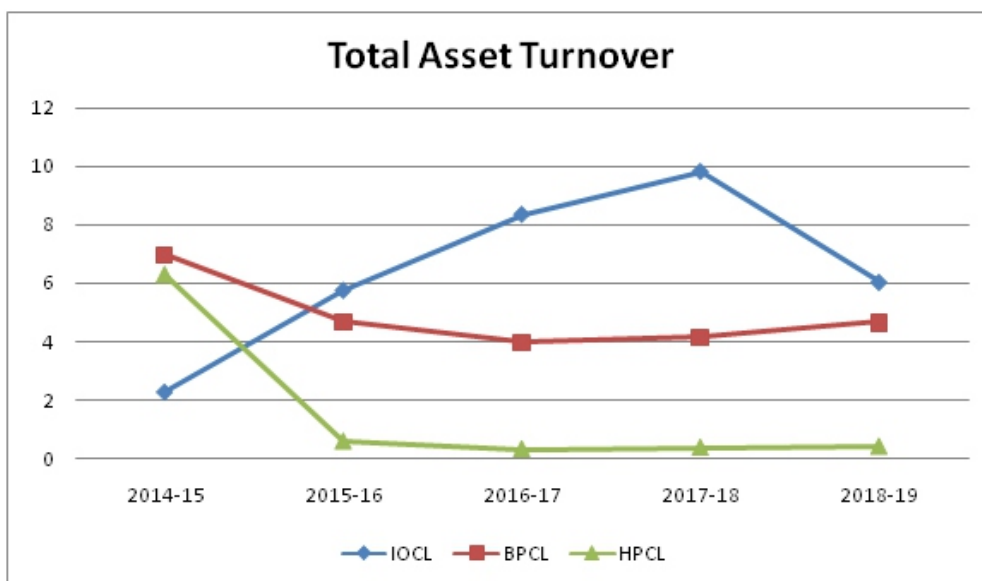


This ratio shows the relationship between current asset and current liability of a business. Generally this ratio is used to assess the firm's ability to meet its short term liabilities on time, and also helpful in determining working capital management of a business. Here in figure 1 current ratio trend of IOCL, BPCL, and HPCL are given over the period of 2015-19,

As the optimum current ratio for the firm should be 2:1 but trend showing not the healthy condition of the entire three firms, but in comparative

analysis of the entire three firms we observe BPCL is performance is better than IOCL and HPCL during the period of 2014 to 2018(also showing a decreasing trend) but afterward showing further increment in 2019, but the performance of HPCL is not much satisfactory as it showing steady decreasing trend over the period. This could be focused by the HPCL for better Working capital management, as trend showing not the better utilization of their current asset.

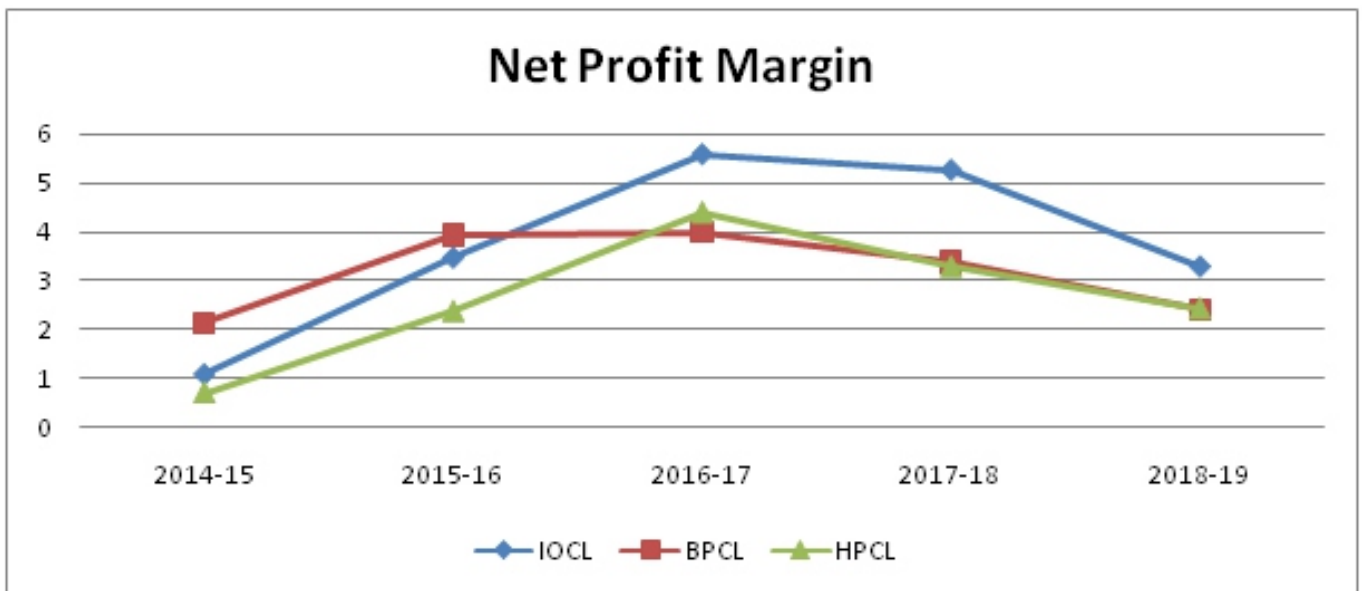
- Total Asset Ratio: analysis and Insight



This ratio indicates the effectiveness of using total assets to generate revenues. Similar to the previous financial ratio, as rule of thumb, to be considered effective, it should be at least 0.30 times. Using this, it can be said that the entire firm using their assets effectively in the given period, performance of IOCL is much better than HPCL and BPCL where it showing increasing trend from 2014 to 2018 and a fall in the year 2019, at the same time BPCL showing a steady performance not much fluctuation. In the case of HPCL it

observed that after a fluctuation in 2014-15 showing a steady situation in successive four year. In comparative analysis of HPCL, IOCL and BPCL it observed that performance of IOCL is much better than HPCL and BPCL. Researcher recommend trying and boosting the asset turnover by using different promotional strategies and making sure the resources are helping them to generate more revenue in the special recommendation for their management.

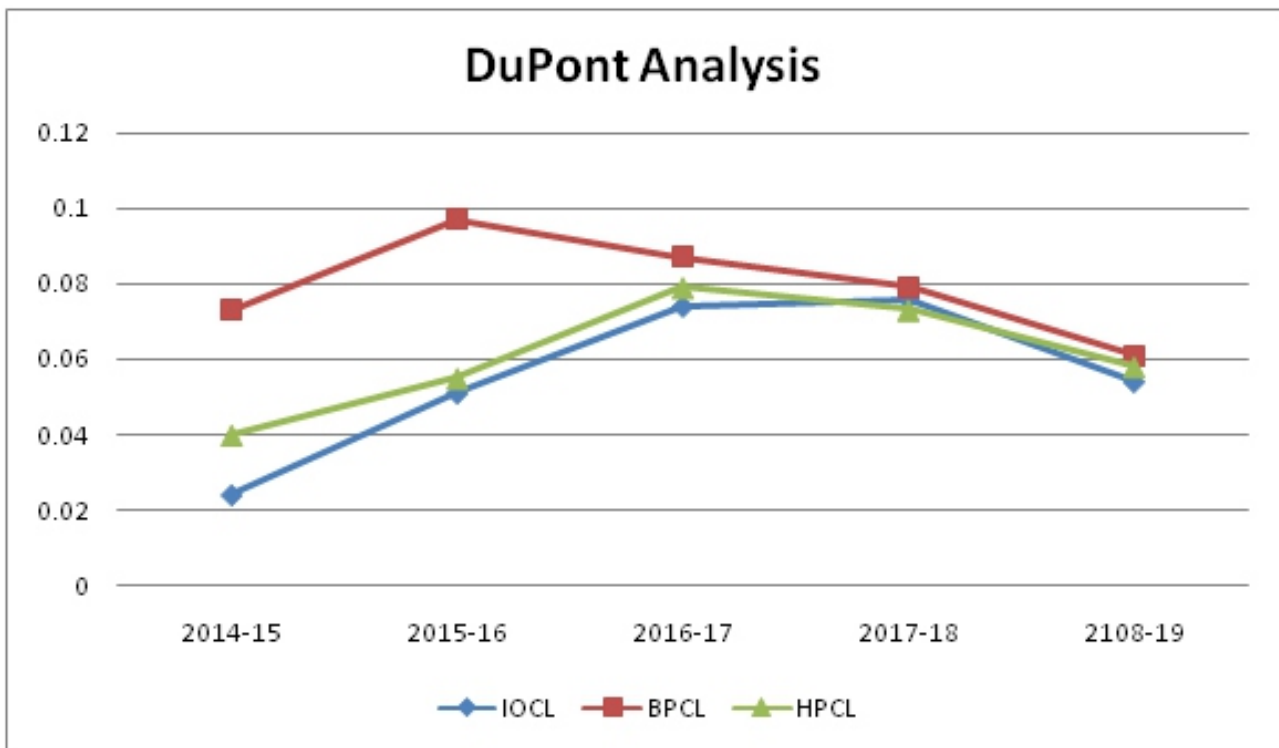
• Net Profit Margin: Analysis and Insight



A higher profit is always an ultimate objective of every business organisation for their better future growth and development, a higher profit margin is preferred since lower profit margin as compared with similar organisation may means interest charges because of higher debt. As Inferred from the above figure, over the period entire three firm IOCL, HPCL and BPCL showing gradual increase in the profit margin it may be happened

due Government Policy for determine oil product price as per global market price, in the comparative analysis of entire firm it observed that both IOCL, BPCL showing fluctuating trend rise and the decrease, and on the same time BPCL showing steady trend in the profit margin. Now it would be recommended that Indian oil companies should look their cut down of their cost in order to raise their profit margin.

- DuPont Analysis: analysis and insight



Having considered individual financial ratios as well as groups of financial ratios measuring short term liquidity, operating efficiency, capital structure and profitability, it is helpful to complete the evaluation of a firm by considering the inter relationship among the individual ratios. The DuPont equation ends up with ROE which is considered as the most important accounting ratios. With the above figure we observed BPCL performing better in the entire period for getting highest ROE. In the comparative analysis we observed that HPCL and IOCL return on asset in lower than BPCL which shows somehow managerial inefficiency. In the context Indian oil based companies don't performed well as to turning investment into profit.

CONCLUSION

After conducting a brief analysis of financial ratios especially on current ratio, Total Asset Turnover, Net Profit Margin of IOCL, BPCL and HPCL for the period of March 2014 to March 2019 we observed that Net Profit Margin of IOCL is better than BPCL and HPCL, where as current

ratio of BPCL is better than HPCL and IOCL and at the same time both IOCL and HPCL shows steady performance. As per the optimum norm of the current ratio, this was not fulfilled by any of the three companies; need much more attention in their Working Capital Management. However the performance of HPCL is not much satisfactory, during the period profit margin shows upward trend but lower than IOCL, this indicates somehow inefficiency of management and in the context of current ratio inefficiency of Working Capital management also found. The working capital management always the management of cash and cash equivalent daily requirement of the firm we conclude from the data analysis HPCL working is not so good and Healthy as well.

Abbreviations

- IOCL – Indian Oil Corporation Limited
- BPCL – Bharat Petroleum Corporation Limited
- HPCL – Hindustan Petroleum Corporation Limited

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