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A COMPARTIVE APPRAISAL OF FINANCIAL PERFORMANCE OF SELECT PETROLEUM COMPANIES IN INDIA THROUGH DU-PONT ANALYSIS -WITH SPECIAL REFERENCE TO HPCL AND OIL INDIA

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Abstract
Oil & Gas sector is the base that contributes in the economic development of a country. The production and consumption of oil & gas in a country has becomes an indicator like a barometer of its growth and prosperity.

The objective of this paper is to analyse comparative financial performance of Hindustan Petroleum Corporation Ltd (HPCL) And Oil India Ltd (OIL), during 2017-2021.Various ratios like activity ratios, leverage ratios, profitability ratios and market value ratios have been used to measure financial strength and weakness of selected petroleum companies. Result reveals that both the companies are better than each other in various ratios. HPCL has its strong grip on ROE, ATR, Interest and Tax impact and Oil India on NPM, FL and OPM. HPCL is better in terms of value but when it comes to performance, Oil India Ltd is better than HPCL.

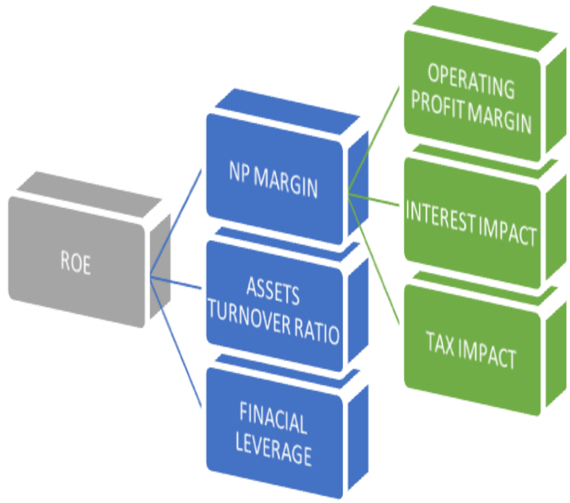
Keywords: Return on Equity, Assets Turnover Ratio, Net Profit Margin, Operating Profit Margin, Interest Impact, Tax Impact.

Introduction

For any business, there are number of models to describe how well the business is running. One very important and widely used model of those, the DuPont model was developed in the early 1900s and is still used for measurement of the profitability. The model was created by F. Donaldson Brown, an engineer, in 1918 who came up with the idea of creating this model when he was handed over the work to clean up the finances in General Motors that DuPont was acquiring and since then, its being an important model for financial analysis. He found that the product of two generally computed ratios, net profit margin and total asset turnover, equals to return on assets (ROA). The DuPont model was modified in 1970s to include the ratio of total assets to equity and for the financial analysis; the emphasis is shifted from ROA to ROE.

Three distinct versions of Du Pont have been created and used to help unwind the underlying drivers of profitability and return over time, beginning nearly a century ago.

The DuPont Model is a useful method in providing both, an overview and a focus for such analysis. It can be used as a direction to the analyst toward significant areas of strength and weakness explicit in the financial statements. This study attempts basically to measure the financial performance of the select Petroleum companies in India. The main objective is to find out the ratios of ROE for two petroleum industries namely Hindustan Petroleum Corporation Limited (HPCL) and Oil India Limited for a period of 5 years from 2017-2021. The aim of the study to rank the petroleum industry and evaluate its financial performance based on DuPont analysis which includes ROE.



Company Profile

Hindustan Petroleum Corporation Limited (HPCL)

Hindustan Petroleum Corporation Limited (HPCL) is a subsidiary of Oil and Natural Gas Corporation (ONGC) and was built-in on July 15, 1974. During FY 2020-21, HPCL has Annual Gross sales of Rs. 2,692.43 billion and was ranked 54th in top 250 Global Energy Company. HPCL has over 18% market share in India and is very active in Refining & Marketing of petroleum products in the country. HPCL owns and operates many refineries in different cities of India like Mumbai, Vishakhapatnam, Punjab and Karnataka.

The network length of HPCL is 3,775 km and it has the second largest petroleum product network. HPCL has many subsidiary companies through which HPCL conducts its business. One of those subsidiaries is M/s. Prize Petroleum Company Limited (PPCL) which is wholly owned by HPCL and operates in Exploration and Production (E&P) of hydrocarbons.

HPCL is a very committed company towards the environment and its employees. It remains stick to its objectives which are environment preservation, sustainable development, creating a safe and hygienic place for work, raising the standard of living of its employees, customers and the society.

Oil India Limited

The story of Oil India Limited (OIL) tells the story of growth and development of Indian Petroleum Industry. Since the invention of crude oil in the eastern city Digboi, Assam in 1889 till now, OIL has been so much developed after tackling so many problems. Oil India Private Limited was established on February 18, 1959 to expand and develop the brand-new fields of Naharkatiya and Moran in the North-Eastern India. In 1961, OIL was turned into a joint venture company between the Government of India and Burmah Oil Company Limited, UK. The Government of India got its full and complete ownership in 1981. Now days, OIL is a leading Indian National Oil Company involved in the business of exploration, development and production of crude oil and natural gas. It is also involved in transportation of crude oil and production of LPG. It provides various services related to exploration and production. It has about 26% equity holding in Numaligarh Refinery Limited. OIL is one of the 5 best major PSUs and one of 3 best energy sector PSUs in the India as per CRISIL-India Today survey.

Literature Review

Nissim & Penman (2001) in their study where they used new DuPont model, suggest that managers cannot control the effects of financial leverage and other factors. The performance measure of management is limited to those factors in which management has the most control when we use operating income to sales and assets turnover on the basis of operating assets. Now days, DuPont model became the most used model in financial analysis.

Soliman (2004) found that the multiplicative components specifically used for industry provide more accurate valuation than components used for economy. It means the ratios specifically used for industry are more valid.

Debasish Sur and kaushik Chakra borty (2006) in their study of financial performance of Indian Pharmaceutical Industry, found that they are very significant in increasing the rate of life expectancy and decreasing the mortality rate. The comparative analysis of the financial performance of six biggest companies of Indian pharmaceutical industry for the period of 1993 to 2002 is done. Almost all factors have been included by using relevant statistical tools for the comparative study.

T. Vanniarajan and C. Samuel Joseph (2007) in their study 'An Application of DuPont Control chart in Analysing the financial performance of Banks' found that all banks are able to evaluate their performance for comparison to others. Usually, the performance of the banks can be measured on three basis that are structural, operational and efficiency factors as announced by India Bank Association.

Mihaela Herciu, Claudia Ogre an & Lucian Belascu (2011) in their study found that the companies that earns more profit are not the companies that attracts investors by using DuPont analysis. For this study, top 20 most profitable companies in 2009 have been taken for study. The results revealed that ranking is not maintained when ROA or ROI, ROE or ROS ratios are used.

Dr Ahmed Arif Almazari (2012) done research with the objective to measure the financial performance of the Jordanian Arab commercial bank for the period of 10 years i.e., 2000-2009 and used the DuPont analysis which is based on two models. These are return on equity model and return on investment model. The performance of return on equity model is measured into three components: net profit margin, total asset turnover, and the equity multiplier. The results proved that financial performance of Arab bank remains constant in terms of ROE, Net profit margin and total asset turnover for the period from 2001 to 2009. The ratios declined from 2006-2009 which means that recently, the Arab bank had less financial which means the bank is using less debt to finance its assets.

Objectives Of The Study

This research paper aims to compare the financial performance and financial health of Hindustan Petroleum Corporation Ltd (HPCL) and Oil India Ltd during the period of 2017 – 2021.

To be precise, this study aims to meet the following objectives:

- To examine the financial performance and financial health of HPCL and Oil India Ltd.
- To determine the ROE, ATR, NPM, OPM, Interest and Tax impact of both the companies.
- To find out comparative financial analysis among the selected petroleum companies.

Research Methodology

Data Collection: The data for the study were obtained from audited annual financial statements of Hindustan Petroleum Corporation Ltd (HPCL) and Oil India Ltd. from 'Prowess' database and company's website for the period of five years from 2017 to 2021.Financial information necessary for financial ratios like activities ratio, profitability ratios, financial health ratios were derived from these financial statements. These financial ratios were used in the analysis phase.

Formulae Used:

Return on Equity = Earnings after Taxes (EAT) / Shareholders' Equity
Equity Multiplier Ratio = Total Assets / Shareholders' Equity
Assets Turnover Ratio = Net Sales / Total Assets
Tax Burden Ratio = Earnings after Taxes (EAT) / Earnings before Taxes (EBT)
Interest Burden Ratio = Earnings before Taxes (EBT) / Earnings before Interest and Taxes (EBIT)
Operating Profit Margin Ratio = Earnings before Interest and Taxes (EBIT) / Net Sales
Net Profit Margin Ratio = Net Income / Sales

Data Analysis and Interpretation

TABLE -1 Table showing relvent data of HPCL

	2017	2018	2019	2020	2021
Sales	187492	219509	275490	269091	233248
EBIT	9487	9406	9895	2971	15021
EBT	8878	8789	9110	1833	14058
Net Income	5916	5896	5760	3096	10524
Assets	80319	89671	107346	116906	134159
Equity	21071	25532	30400	30980	38080

Table 2: Calculated Ratio's of HPCL based on table 1

FINANCIAL YEAR	2017	2018	2019	2020	2021
ROE	39.68	28.27	22	8.51	28
NP Margin	3.15	2.68	2.09	1.15	4.51
Assets Turnover Ratio	233.43	244.79	256.63	230.17	173.85
Equity Multiplier	381.18	351.21	353.11	377.36	352.3
EBIT/Sales	5.06	4.2	3.6	1.1	6.44
EBT/EBIT	93.58	93.44	92.06	61.7	93.59
EAT/EBT	66.63	67.08	63.22	168.9	74.86

TABLE -3 Table showing relvent data of Oil India

	2017	2018	2019	2020	2021
Sales	9566	10697	13780	12166	22497
EBIT	2208	3610	4149	2827	4500
EBT	1768	3057	3526	2183	3840
Net Income	1072	1932	2086	2498	3617
Assets	51234	48634	52432	51443	55213
Equity	29518	29032	28974	28848	23666

Table 4: Calculated Ratio's of Oil India based on table 3

FINANCIAL YEAR	2017	2018	2019	2020	2021
ROE	5.4	9.41	11.17	13.22	14.9
NP Margin	11.2	18.06	15.14	20.53	16.08
Assets Turnover Ratio	18.67	21.99	26.28	23.65	40.74
Equity Multiplier	173.57	167.52	180.96	178.32	233.3
EBIT/Sales	23.08	33.75	30.11	23.23	20
EBT/EBIT	80.07	84.68	84.98	77.22	85.33
EAT/EBT	60.63	63.2	59.16	114.43	94.19

Return on Equity: The return on equity of HPCL was good in initial phase but it keeps on declining from 2017-2020. But in 2021, it maintained its average value. The return on equity of Oil India is very low in the initial phase but it is growing continuously. In a nut shell, the return on equity of HPCL is better than Oil India.

Net Profit Margin: The net profit margin of HPCL is very low and keeps on decreasing up to 2020 but in 2021 it increased a bit. The net profit margin of Oil India is good and is better than HPCL. Its average value is continuously growing.

Assets Turnover Ratio: The assets turnover ratio of HPCL is very fascinating and it keeps on increasing till 2019 but after that it starts declining. The assets turnover ratio is very poor but it is showing its continuous growth. So, the ATR of HPCL is far better than Oil India considering the research period.

Equity Multiplier: The equity multiplier of HPCL is very high. It means it used too much debt for financing its capital. The equity multiplier of Oil India is also high and also better than HPCL.

Operating Profit Margin (EBIT/Sales): The operating profit margin of HPCL is very low and also kept on declining up to 2020 but in 2021, it rises a little bit. The operating profit margin of Oil India is increased up to 2018 but after that, it continuously declined. Overall, the operating profit margin of Oil India is better than HPCL.

Interest Impact (EBT/EBIT): The interest impact of HPCL is averagely good up to 2019 but in 2020, it decreased which means the interest factor was increased which further means the company was using more debts. After that in 2021, it again came to its average value. The interest impact of Oil India is not as good as HPCL but it has maintained its average value.

Tax Impact (EAT/EBT): The tax impact of HPCL was poor up to 2020 and in 2020, it rises with a fast pace which means the tax burden is decreased but in 2021, again tax impact is decreased i.e., tax burden is increased. The tax impact of Oil India is almost same as HPCL but in last two years it is better than HPCL although its fluctuating direction is also same as HPCL.

Conclusion

After the whole analysis and research, we can conclude that HPCL is better in terms of Return on Equity, Assets Turnover Ratio, Interest impact and Tax impact as compared to Oil India and Oil India is better in terms of Net profit margin, financial leverage and Operating profit margin as compared to HPCL. Overall, we can say that HPCL is better than Oil India regarding calculative measures but Oil India Company's performance keeps on growing annually so its future prospects can be good regarding calculative measures also.

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