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Research Paper

A Research Study on Profitability Analysis of Selected Petroleum Companies of India

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ABSTRACT
The petroleum industries faces tremendous price changes in the market. In this research paper analysis of profitability of selected petroleum companies of India for the purpose of study, five petroleum companies are including Reliance Industries ltd.(RIL), Indian oil corporation of Ltd. (IOC), Oil and natural Gas Corporation Ltd.(ONGC), Hindustan Petroleum Corporation Ltd.(HPCL), Oil India Ltd.(OIL). Profitability ratio considered for the purpose of analysis of Net profit ratio, Return on Capital Employed, Return on Equity, Return on Assets. This five selected companies have been analyzed during the period of study i.e. FY 2016-17 to FY 2020-21.
***KEY WORDS**: Financial Performance, Profitability Ratio, Net Profit Margin Ratio, Return On Capital Employed (ROCE), Return On Equity (ROE), Return On Assets (ROA), Petroleum Industries*

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I. INTRODUCTION:

The Petroleum industry in India has witnessed remarkable growth and transformation since its inception. This section provides an overview of financial performance of petroleum industries and impact on the Indian economy. India is one of the fastest growing major economies in the world and the third largest consumer of petroleum products, after US and China. Although there is an increase focus on gas and renewables, demand for oil has always been rise and is estimate to grow at least until 2040. India's total oil imports rose 4.24 percent year on year to US$ 86.45 billion in 2016-17. India's oil consumption grew 8.3 percent year-on-year to 212.7 million tonnes in 2016, as against the global growth of 1.5 percent, thereby making in the third largest oil consuming nation in the word. India is the fourth largest liquefied natural gas (LNG) import after Japan, South Korea and China, and accounts for 5.8 percent of the total global trade.

Every business sectors including that of private sector, public sector or individual firms or companies all economic activity depend on finance. Financial performance analysis which measures the monetary evaluation of the strength and weakness of companies financial position.

II. REVIEW OF LITRATURE

Prathma Priya (2019), in the study the researcher has analysed the financial performance of HDFC ltd. Researcher studied on ratios which include liquidity ratio, solvency ratio and profitability ratios. Which are most useful for finding suggestion and conclusion. It was found that the financial performance of HDFC Ltd was at concluded to significant level.

Vipul C.Koradia (2013), researcher has studied on Profitability ratio, Operating ratio, Gross profit margin ratio, Net profit ratio and ROCE. In this paper researcher selected three public sector oil companies which including BPCL, HPCL, and IOCL and period of study is 2001 to 2008. There is significant difference between profitability ratio of the selected companies is satisfactory and is concluded to significant level during study period.

STATEMENT OF PROBLEM

Financial statement is used to judge the Profitability ratio, liquidity ratio and other Ratio analysis of any firm. In this study researcher found the financial strength and weakness based on profitability ratio and identify financial performance of selected petroleum five companies. The petroleum industry face huge price changes in the market. So I decided to make an analysis on the financial performance of selected petroleum industries in the fluctuating scenario.

SCOPE OF THE STUDY

The study is based on the accounting information of Petroleum industries in India. The study covers over a period of
five years for analysing the financial statement such us balance sheet and income statement of the petroleum industries. The main objective of the study is to analyze the Profitability ratio of the selected petroleum companies. The technique of ratio analysis in accounting tools and F test one way ANOVA in statistical tools will be used to identify the profitability.

OBJECTIVE OF THE STUDY

- To know the financial position of the selected petroleum industries in India.
- To know the financial strength and weakness of petroleum industries in India.
- To know the changes in Net profit margin ratio, Return on capital employed, Return on Equity and Return on Asset for the period of five years.
- To analysis the overall financial performance of the selected petroleum companies in India.

III. RESEARCH METHODOLOGY

SOURCE OF DATA

The study is financial performance so it based on secondary data. The required data were collected from NSE website, published annual report and www.moneycontrol.com and the personal sites of the companies.

PERIOD OF THE STUDY

The present study covers the period of five years from 2016-17 to 2020-21.

TOOLS AND TECHNIQUES

Ratio analysis is most useful technique in any business, firm or companies. It is important tools for financial performance. Ratio are calculated for analysing the financial performance of selected five petroleum industries

- Liquidity Ratio
  Current Ratio
  Quick Ratio
- Profitability Ratio
  Gross Profit Ratio
  Operating Ratio
  Net Profit Ratio
  Return on Capital Employed
- Turnover Ratio
- Solvency Ratio
- Earning Per Ratio(EPS)

For the statistical data analysis Minimum, Maximum, Average, Standard deviation and F test One way ANOVA has been used in this study.

RESEARCH HYPOTHESIS

Following hypothesis are helps to data analysing on Profitability ratio of the selected Petroleum companies in India during the study period.

H0 : There is no significant difference in the Net profit margin Ratio of the selected petroleum companies in India during the study period.

H1 : there is significant difference in the Net profit margin Ratio of the selected Petroleum companies in India during the study period.

H0 : There is no significant difference in the Return on Capital Employed (ROCE) Ratio of the selected Petroleum Companies in India during the study period.

H1 : There is significant difference in the Return on capital Employed (ROCE) Ratio of the selected Petroleum companies in India during the study period.

H0 : There is no significant difference in the Return on Equity (ROE) Ratio of the selected Petroleum companies in India during the study period.

H1 : There is significant difference in the Return on Equity (ROE) Ratio of the selected Petroleum companies in India during the study period.
H0 : There is no significant difference in the Return on Assets (ROA) ratio of the selected Petroleum companies in India during the study period.
H1 : There is significant difference in the Return on Assets (ROA) ratio of the selected Petroleum companies in India during the study period.

IV. DATA ANALYSIS

PROFITABILITY RATIO

Table 1. NET PROFIT MARGIN RATIO%

Net Profit margin ratio %

COMPANY	YEARS				
	2016-17	2017-18	2018-19	2019-20	2020-21
Reliance	11.75	12.98	11.58	9.46	9.17
IOC	3.23	5.3	5.03	3.2	0.27
ONGC	20.81	23.03	23.47	24.37	13.98
HPCL	2.15	3.31	2.89	2.19	0.98
Oil india Ltd	23.57	16.28	25.03	18.85	21.3
Minimum	2.15	3.31	2.89	2.19	0.27
Maximum	23.57	23.03	25.03	24.37	21.3
Mean	12.44	11.98	14.105	12.152	9.132
S.D	11.323	9.31	11.764	11.158	10.2721

Source: www.nseindia.com and researcher's calculation
F Test ANOVA of Net profit Ratio
Hypothesis:
H0 : There is no significant difference in the net profit margin ratio of petroleum companies in India under study period
H1 : There is significant difference in the net profit margin ratio of petroleum companies in India under study period
Level of significance : 5%
Net profit Ratio One way ANOVA Test

ANOVA

Source of Variation	*SS*	*Df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	53.7061	4	13.4265	0.152369	0.95971	2.86608
Within Groups	1762.375	20	88.1187			
Total	1816.081	24				

Source: Researcher' calculation

From the above table for 4 and 20 degree of freedom. Fcal is 0.152369and Ftab value is 2.866081. Thus Fcal < Ftab and p-value is 0.959718 greater than significance level of 0.05. So Null Hypothesis is accepted and it is conclude that there is No significant difference in Net Profit Ratio between selected Petroleum companies in India.

RETURN ON CAPITAL EMPLOYED

Table 2 Return on Capital Employed (%)

Return on Capital Employed (%)					
COMPANY	YEARS				
	2016-17	2017-18	2018-19	2019-20	2020-21
Reliance	8.24	11.04	11.8	9.95	8.84

IOC	8	22.73	24.84	18.14	8.59
ONGC	7.91	11.59	12.56	16.61	10.96
HPCL	8.84	29.21	24.77	21.48	6.41
Oil India Ltd	6.23	8.78	10.4	13.78	7.03
Minimum	6.23	8.78	10.4	9.95	6.41
Maximum	8.84	29.21	24.84	21.48	10.96
Mean	7.844	16.67	16.874	15.992	8.3666
S.D	0.9724	8.856	7.2813	4.373	1.775

Source : www.nseindia.com and Researcher's calculation

F test one way ANOVA of ROCE

Hypothesis:

H0 : There is no significant difference in the Return on Capital Employed of petroleum companies in India under study period.

H1 : There is significant difference in the Return on Capital Employed of petroleum companies in India under study period.

Level of significance : 5%

Return On Capital Employed One way ANOVA Test

ANOVA

Source of Variation	*SS*	*Df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	426.879	4	106.7197	3.44973	0.026752	2.8660
Within Groups	618.713	20	30.9356			
Total	1045.5921	24				

From the above AVONA table for 4 and 20 degree of freedom. Fcal value is 3.4497 and Ftab value is 2.8660. Thus Fcal > Ftab and p-value 0.026752 is less than significance level of 0.05 or 5%. So, Null Hypothesis is rejected and it is concluded that there is significant difference in Return on Capital Employed Ratio between selected petroleum companies in India.

RETURN ON EQUITY

Table 3. Return on Equity (%)

Return On Equity (%)					
COMPANY	YEARS				
	2016-17	2017-18	2018-19	2019-20	2020-21
Reliance	11.41	10.89	10.68	8.67	7.89
IOC	12.75	19.15	19.37	15.54	1.4
ONGC	9.73	9.64	10.31	13.16	6.91
HPCL	21.04	30.51	26.54	21.39	9.1
Oil India Ltd	9.23	5.32	9.55	9.33	10.59
Minimum	9.23	5.32	9.55	9.33	10.59
Maximum	21.04	30.51	26.54	21.39	10.59
Mean	12.832	15.102	15.29	13.618	7.178
S.D	4.795	9.963	7.453	5.176	3.51

Source : www.nseindia.com and Researcher's Calculation

F test One Way ANOVA of ROE

Hypothesis:

H0 : There is no significant difference in the Return on Equity of Petroleum companies in India under study period.

H1 : There is significant difference in the Return on Equity of Petroleum companies in India under study period.

Level of significance : 5%
Return on Equity One way ANOVA Test

ANOVA

Source of Variation	*SS*	*Df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	218.8813	4	54.72032	1.261218	0.317909	2.866081
Within Groups	867.7379	20	43.3869			
Total	1086.619	24				

From the above ANOVA table for 4 and 20 degree of freedom. Fcal value is 1.261218 and Ftab value is 2.866081. So, Fcal < Ftab and p-value is greater than significance level of 0.05 or 5%. Therefor Null hypothesis is accepted and it is concluded that there is a No significant difference in Return on Equity Ratio between selected Petroleum companies in India.

RETURN ON ASSTES

Table 4. Return on Assets (%)

Return On Assets (%)					
COMPANY	YEARS				
	2016-17	2017-18	2018-19	2019-20	2020-21
Reliance	5.98	5.74	5.44	4.53	3.18
IOC	5.09	7.37	7.6	5.35	0.42
ONGC	7.27	7.23	6.84	8.83	4.53
HPCL	5.48	7.91	7.32	5.81	2.31
Oil India Ltd	5.87	3.41	6.05	5.45	6.03
Minimum	5.09	3.41	5.44	4.53	0.42
Maximum	7.27	7.91	7.32	8.83	6.03
Mean	5.938	6.332	6.65	5.994	3.294
S.D	0.823	1.82	0.896	1.653	2.1362

Source : www.nseindia.com and Researcher's Calculation
F test one way ANOVA of ROA
Hypothesis:
H0 : There is no significant difference in the Return on Assets of Petroleum companies in India under study period.
H1 : There is significant difference in the Return on Assets of Petroleum companies in India under study period.
Level of significance : 5%
Return on Assets One way ANOVA Test

ANOVA

Source of Variation	*SS*	*Df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	36.08394	4	9.02098	3.730084	0.020024	2.866081
Within Groups	48.3688	20	2.41844			
Total	84.45274	24				

Source: Researcher's calculation.
From the above ANOVA table for 4 and 20 degree of freedom. Fcal values is 3.730084 and Ftab value is 2.866081. So, Fcal > Ftab and p-value is less than significance level 0.05 or 5%. Therefor Null hypothesis is rejected and it is concluded that there is a significant difference in Return on Assets Ratio between selected Petroleum companies in India.

LIMITATION OF THE STUDY

The data used as secondary data in this study it maybe changed in future estimation. The analysing data performed studied are from historical past.

V. CONCLUSION

On the basis of above study, it is concluded that the selected IOC (2020) stands in minimum value 0.27 % and Oil India Ltd (2018) stands in maximum value 25.03% in all over ratio in Net Profit Ratio. Selected Petroleum companies Net Profit Ratio is no significant difference between respectively period. Thus Null hypothesis is accepted in NP ratio during the study period. In Return on Capital Employed ratio 6.41% minimum value of HPCL in the year 2020 and 24.84% maximum value of IOC in the year 2018 and In Return on Equity Ratio 1.40% minimum value of IOC in the year 2020 and 30.51% maximum value of HPCL in the year 2017. The last Return on Assets ratio 0.42% minimum value of IOC in the year 2020 and 8.83% maximum value of ONGC in the year of 2019. Researcher conclude that there is difference in the ROCE and ROA under the study period and Alternative hypothesis is acceptable during the study. There is no significant difference in Return on Equity(ROE) of selected petroleum companies is India.

Among the selected companies, ONGC consistently demonstrated better performance in terms of profitability, both in term of Net Profit Margin and Return on Assets. HPCL also showcase commendable profitability with strong Return on Capital Employed and Return on Equity. On the other hand, IOC faced challenges in maintain higher profitability ratios.

It is crucial for this petroleum companies to continuously assess their financial performance and take appropriate measure to enhance profitability and efficiency. The finding of this research study can serve as a basis of future financial decision-making and strategic planning within the petroleum industry in India.

Overall, this research provides valuable insights into the financial performance of selected petroleum companies and contributes to the exiting body of knowledge in the field of finance and business management.