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A STUDY ON PROFITABILITY AND LIQUIDITY MANAGEMENT OF SELECTED COMPANIES OF INDIAN PETROLEUM INDUSTRY

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Petrol and gas are the two important factors for production in manufacturing and service sector of every country. India is also one of the major importers of crude oil and refined it and sold to public. This study makes an attempt to analyze three major petroleum companies profitability and liquidity management by using selected ratios, the companies selected for the study are IOCL, HPCL, BPCL. The statistical tools like percentage analysis, various financial ratios and chi-square test are used for analysis. Finally we observed that operating efficiency of the companies were comparatively better than their liquidity position.

Keywords: Liquidity, Profitability, Chi-square test, iocl, hpcl, bpcl, ratios

INTRODUCTION

In the modern world, every work is done through machineries. Fuel plays vital role in cost of production of every industry. India is one of the major crude oil importer in the world, price fluctuations of petrol is the major factor which directly affect the economy. Compared with other industries, due to the requirement of large capital investment, only limited companies are involved in petroleum refineries work in India. Their profitability is also affected heavily due to the price fluctuations of crude oil in recent times. This study attempt to analyze their strength and weakness in finance using selected ratios.

STATEMENT OF PROBLEM

This study focus on liquidity, profitability and turnover ratio of selected petroleum companies

in India. Role of petroleum industry in India's GDP is very significant as it is one of the biggest contributors to both central and state treasuries. However, around 70% of the demands for oil and gas have fed by the imports, this one of the reason for which price of the petroleum products get changes with the changes of price in international market.

Financial stability is the base for growth of every concern. Stability is measured by various ratios and financial parameters petroleum companies. The study shows the role of profitability position of public sector oil and gas companies. This is the process of comparing income and output and determining how much profit was made during a specific time period.

A properly conducted profitability analysis provides invaluable evidence concerning the

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earnings potential of a company and the effectiveness of management.

OBJECTIVES OF THE STUDY

The major objective and study analyze the profitability position of the oil and gas companies.

The following are the specific objective of the study:

- To view profitability position of some selected public sector petroleum companies. Indian Oil Corporation (IOCL), Hindustan Oil Corporation (HPCL), Bharat Petroleum Corporation (BPCL).
- The highlight profitability of petroleum companies (i.e.) net profit margins, return on net worth and return on asset.
- To compare the profit earning of the selected public oil and gas companies from the year 2005-2006 to 2014-2015.
- To investigate the factors affecting the profit earning of the selected petroleum companies during the period.
- It also studies the challenges and opportunities particularly faced by the public companies.
- To offer suggestions for improving the performance of the oil and gas companies.

RESEARCH METHODOLOGY

Data Collection

The study based on secondary data that has been collected from annual reports of the respective petroleum companies.

The study covers the period of 10 years, i.e., from year 2005-2006 to 2014-2015.

Research Design

The research designs refers to the overall

strategy that you choose to integrate the different components of the study in a coherent and logical way, thereby, ensuring you will effectively address the research problem, it constitutes the blueprint for the collection, measurement and analysis of data.

Sources of Information

Information required for the study has been collected from the annual report of IOCL, HPCL and BPCL oil and gas industries and journal, magazines and data collected from various websites.

Tools Used

In this study various statistical tools are used (i.e.) mean standard deviation, coefficient of variation & chi-square test has been used for data analysis.

LITERATURE REVIEW

Kaul (1991) in his study, an analysis of profitability of oil companies, he was conclude that, has mentioned that India's oil policy began in the third five year plan. Moreover it is also mentioned that most of the international oil companies were backed by their respective government which in course of time, strove to acquire certain rights under the guise of protecting their companies in the history of political pressure exercised by foreign countries.

Bhattacharya (2001) in his study, a performance of pricing position for oil and gas industry, he was concluded that, It has found that any hike in oil prices, apart from the direct impact, has an indirect impact on the prices of other commodities. However, the impact can be mollified through appropriate and judicious of monetary policy instruments.

Kumar (2002) in his study, financial performance of oil and gas industry, he was concluded that, the efficiency in investment management and current asset are important to improve profitability.

Gangopadhyay (2005) in his study, production of oil and gas in India, he was concluded that, studies have observed that LPG subsidy has largely used by the higher expenditure groups in the urban sector. Kerosene on the hand is widely used fuel. The Limited availability of subsidies Kerosene in rural areas biases it use in light rather than cooking. Further, the rural subsidy is regressive as higher expenditure groups receive more subsidy has diverted and never reaches customer. The subsidization of the urban poor could be ever larger if the poor had equal access to subsidized kerosene.

Beharia (2007) in his study, an oil company analysis of profitability of Indian refineries, he was concluded that, the down stream oil sector in India, dominated by PSU's and its has improve its productivity and adaptability with the fast changing and challenges are confronting the downstream oil sector on almost all fronts. One, there is a supply-constrained in global oil market; second, there is national economy undergoing a massive transformation; third; the downstream oil sector it self has many issues to deal with and stakeholders' interests to take care of Lead-time for equipment deliveries for Indian refineries is for project management and field marketing.

PROFILE OF THE COMPANIES

IOCL

Indian Oil Corporation is India's largest commercial enterprise, with a sale turnover of Rs. 4,50,756 cr and profit of Rs. 5,273 cr for the

year 2014-15. IndianOil is ranked 119th among the world's largest corporate (and first among Indian enterprises) in the prestigious Fortune Global 500 listing for the year 2015. As India's flagship national oil company, with a 33,000 strong work force currently, Indian oil has meeting India's energy demands for over half a century with a corporate vision to be 'The energy of India and to become' A globally admired company', Indian Oil's business interest straddle the entire hydrocarbon value-chain from refining, pipeline transportation and marketing of petroleum products to exploration and production of crude oil and gas, marketing of natural gas and petrochemicals, besides forays into alternative energy and globalization of downstream operations. Having set up subsidiaries in Sri Lanka, Mauritius and the UAE, the corporation is simultaneously scouting for new business opportunities in the energy markets of Asia and Africa. It has also formed about 20 joint ventures with reputed business partners from India and abroad to pursue diverse business interests.

HPCL

HPCL is a Government of India Enterprise with a Navratna Status, and a Forbes 2000 and Global Fortune 500 company. It had originally been incorporated as a company under the Indian Companies Act, 1913. It is listed on the Bombay Stock Exchange (BSE) and National Stock Exchange (NSE), India.

HPCL owns and operates 2 major refineries producing a wide variety of petroleum fuels and specialties, one in Mumbai (West Coast) of 6.5 Million Metric Tonnes Per Annum (MMTPA) capacity and the other in Visakhapatnam (East Coast) with a capacity of 8.3 MMTPA. HPCL also owns and operates the largest Lube Refinery in

the country producing Lube Base Oils of international standards, with a capacity of 428 TMT. This Lube Refinery accounts for over 40% of the India's total Lube Base Oil production. Presently HPCL produces over 300+ grades of Lubes, Specialities and Greases. HPCL in collaboration with M/s Mittal Energy Investments Pte. Ltd. is operating a 9 MMTPA capacity Refinery at Bathinda in Punjab and also holds an equity of about 16.95% in the 15 MMTPA Mangalore Refinery and Petrochemicals Ltd. (MRPL).

HPCL is committed to achieve the economic, ecological and social responsibility objectives of sustainable development consistently through varied operations and activities. HPCL's focus areas are in the fields of Child Care, Education, Health Care, Skill Development and Community Development, touching lives of weaker section of society.

BPCL

In the 1860's the world saw vast industrial development with an increase in petroleum refineries. Through incorporated in Scotland in 1866 the Burma oil company—an important player in the South Asian market at the time- grew out of an enterprise with the Rangoon oil company formed in 1871 to refine crude oil produced from primitive hand dug wells in Upper Burma.

The search for oil in India began in 1886, when Mr. Goodenough of McKillop Stewart Company drilled a well near Jaypore in Assam and struck oil. However, it wasn't until 1889 that the Assam Railway and Trading Company (ARTC) struck oil at Digboi, which started a chain reaction marketing the beginning of oil production in India.

While discoveries were made and industries expanded, John D Rockefeller together with his

business associates acquired control over numerous refineries and pipelines to later from the giant standard oil trust. Observing this the largest rivals of standard oil- Royal Dutch, Shell, Rothschilds—came together to form a single organization: Asiatic Petroleum to market petroleum products in South Asia.

In 1928, Asiatic Petroleum (India) joined hands with Burmah Oil Company—an active producer, refiner and distributor of petroleum products, particularly in Indian and Burmese markets and formed the Burmah—shell oil storage and distributing company of India limited.

On 15 October, 1932, when civil aviation arrived in India, the company had the honour of fuelling J.R.D. Tata's historic solo flight in a single engine De Havillan Puss moth from Karachi to Bombay (Juhu) via Ahmedabad. Thirty years later, i.e., in 1962, Burmah Shell again had the privilege to fuel JRD Tata's re-enactment of the original flight. As a true pioneer would, the company introduced LPG as a cooking fuel to the Indian home in the mid-1950s.

DATA ANALYSIS AND INTERPRETATION

Table 1 reveals the following results

- IOCL has highest average operating profit during the study period
- IOCL has highest average net profit during the study period
- BPCL has highest return on capital employed compared with other two companies
- BPCL has highest return on its networth compared with the two rivals
- In overall, we concluded that IOCL has highest average profitability ratio of 8.10, it is followed

Table 1: Profitability Ratios (Ten years Average)

Ratio	IOCL	HPCL	BPCL	Industrial average
Operating profit ratio	4.06	2.34	2.78	3.06
Net profit ratio	3.20	1.60	2.07	2.29
Return on capital employed	12.25	8.67	13.69	11.54
Return on networth	12.90	10.27	13.125	12.10
Average profitability ratio	8.10	5.72	7.92	7.25

by BPCL at 7.92%, HPCL has hold the last position at an average of 5.72%

Table 2 depicts the following results

- All the three companies have lower ratio than the ideal ratio of 2:1 in case of current ratios
- All the three companies have lower quick ratio than the ideal ratio of 1:1
- All the three companies have lower debt equity ratio compared with standard ratio of 2:1 with respect to debt equity ratio
- Liquidity and solvency ratios, in over all, all the three companies have lower than the ideal ratios, it will cause delay for the payment of short term obligations and insufficient working capital affect the profitability of the concern.

Table 3 conclude the following results

- Compared with two other companies, BPCL has highest inventory turnover ratio during the

study period, it implies that they are effectively utilize their inventory rather than other two

- In case of debtors turnover ratio, BPCL has secured highest ratio which means their credit policy is comparatively better than other two companies
- Fixed assets turn over ratio also indicates that BPCL has used its assets better than other two companies
- Investment turnover ratio also reveals the same result that BPCL has highest turn over than other two
- Finally, we conclude that with respect to effective utilization of fixed and current assets, BPCL has better performance compared with other two companies

CHI-SQUARE TEST

Table 2: Liquidity and Solvency Ratios

Ratios	IOCL	HPCL	BPCL	INDUSTRIAL AVERAGE
Current ratio	0.78	0.79	0.71	0.76
Quick ratio	0.56	0.47	0.57	0.53
Debt-Equity ratio	0.98	1.70	1.23	1.30
Average liquidity and solvency ratio	0.77	0.99	0.84	0.87

Table 3: Turnover Ratios (times)				
Ratios	IOCL	HPCL	BPCL	INDUSTRIAL AVERAGE
Inventory turnover ratio	8.87	11.39	13.41	11.22
Debtors turnover ratio	40.65	53.83	64.29	52.92
Fixed assets turnover ratio	4.48	5.72	6.38	5.53
Investment turnover ratio	8.99	11.00	13.67	11.22
Average turn over ratios	8.99	11	13.67	11.22

The χ^2 test (pronounced as chi-square test) is one of the simplest and most widely used non-parametric test in statistical work. The symbol χ^2 is the Greek letter Chi. The quantity χ^2 describes the magnitude of the discrepancy between the theory and observation . It is defined as:

HYPOTHESIS

Net Profit Ratio

$H_0: \mu_1 = \mu_2 = \mu_3$ (There is no significant relationship between net profit ratio among the selected petroleum companies in India)

$H_1: \mu_1 \neq \mu_2 \neq \mu_3$ (There is a significant relationship between net profit ratio among the selected petroleum companies in India)

Return on Network Ratio

$H_0: \mu_1 = \mu_2 = \mu_3$ (There is no significant relationship between return on networkratio among the selected petroleum companies in India)

$H_1: \mu_1 \neq \mu_2 \neq \mu_3$ (There is a significant relationship between return on network ratio among the selected petroleum companies in India)

Debt-Equity Ratio

$H_0: \mu_1 = \mu_2 = \mu_3$ (There is no significant relationship between Debt-Equity ratio among the selected petroleum companies in India)

$H_1: \mu_1 \neq \mu_2 \neq \mu_3$ (There is a significant relationship

between Debt-Equity ratio among the selected petroleum companies in India)

Interest Cover Ratio

$H_0: \mu_1 = \mu_2 = \mu_3$ (There is no significant relationship between Interest cover ratio among the selected petroleum companies in India)

$H_1: \mu_1 \neq \mu_2 \neq \mu_3$ (There is a significant relationship between Interest cover ratio among the selected petroleum companies in India)

Earnings Per Share Ratio

$H_0: \mu_1 = \mu_2 = \mu_3$ (There is no significant relationship between EPS ratio among the selected petroleum companies in India)

$H_1: \mu_1 \neq \mu_2 \neq \mu_3$ (There is a significant relationship between EPS ratio among the selected petroleum companies in India)

Table 4 exhibits the following results

- With respect to net profit ratio, calculated value (48.28) is more than the table value (28.86), so we can conclude that there is a significant relationship in net profit among the selected petroleum companies.
- With respect to return on network ratio, calculated value (124.46) is more than the table value (28.86), so we can conclude that there is a significant relationship in return on network among the selected petroleum

Table 4: Chi-Square Table

Ratio	Calculated value	Table value	Degree of freedom	Level of significance	Acceptance of null hypothesis
Net profit ratio	48.28	28.86	18	5%	Rejected
Return on network	124.46	28.86	18	5%	Rejected
Debt – Equity ratio	66.16	28.86	18	5%	Rejected
Interest cover ratio	19.36	28.86	18	5%	Accepted
EPS	936.81	28.86	18	5%	Rejected

companies.

- With respect to Debt-Equity ratio, calculated value (66.16) is more than the table value (28.86), so we can conclude that there is a significant relationship in Debt-Equity mix among the selected petroleum companies.
- With respect to Interest cover ratio, calculated value (19.36) is less than the table value (28.86), so we can conclude that there is no significant relationship in interest cover ratio among the selected petroleum companies.
- With respect to EPS ratio, calculated value (936.81) is more than the table value (28.86), so we can conclude that there is a significant relationship in EPS ratio among the selected petroleum companies.

FINDINGS

Profitability Ratios

- IOCL has highest average operating profit compared with other two companies.
- IOCL has highest average net profit ratio among three companies.
- BPCL has highest return on its network compared with other two firms.
- In overall, profitability ratios of selected petroleum companies revealed that IOCL has good performance record and BPCL has

effectively used its capital and network.

Liquidity Ratios

- Liquidity ratios revealed the ability of the firm to meet its short term obligations.
- In the study, all the three companies have lower current ratio than the ideal ratio of 2:1.
- In the study, all the three companies have lower liquid ratio than the ideal ratio of 1:1.
- Debt-equity ratio of the three companies are also lower than the ideal ratio of 2:1.

Activity or Turnover Ratios

- BPCL has the highest average inventory turnover ratio during the study period.
- BPCL has the highest average debtors turnover ratio during the study period.
- BPCL has the highest average fixed assets turnover ratio during the study period.
- BPCL has the highest average investment turnover ratio during the study period.

SUGGESTIONS

- Net profit margin of all the three companies are not sufficient, so they should restructure their expenditure pattern to minimize cost of production.
- Liquidity position of the companies are not

satisfactory, so they take necessary steps to increase their working capital by means of

- Quick recovery of debts with suitable credit policies.
- Proper inventory management.
- Adequate cash maintenance etc.
- Effective utilization of asset plays vital role to increase the profitability of concern, so the companies make better utilization of their assets to increase their profit.
- EPS is the communicator of profit to the stock

holders of the company, the companies should maintain stability in EPS to retain their market share.

CONCLUSION

The operating efficiency of selected petroleum companies were satisfactory but their liquidity position during the study period was not adequate. Their growth rate for the study period was also declined during the study period. The companies should maintain stability in their overall performance.



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