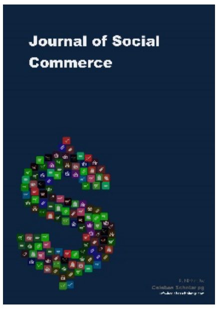

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An Analytical Study of Liquidity and Profitability: Analysis of Selected Oil and Gas Companies in India

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Abstract

Two of the most significant KPIs, liquidity and profitability, are used to gauge a company's success. In order to examine the financial health and profitability of selected Indian oil and gas businesses, this study was performed. From 2016-17 through 2020-21, the top five listed firms by market capitalization are Reliance Industries Ltd., Oil and Natural Gas Corporation (ONGC), Indian Oil Corporation (IOCL), Bharat Petroleum (BPCL), and Gas Authority of India Ltd. (GAIL). Four ratios have been used to evaluate the financial and profitability positions of chosen organizations, including the current ratio, the quick ratio, the net profit ratio, and the return on invested capital. An ANOVA with a 5% threshold of significance was employed to test the hypotheses. The study's main conclusion is that Reliance industries Ltd's liquidity and profitability performance is superior to those of other chosen oil and gas firms.

Introduction

The Indian oil and gas industry is one of the country's eight primary industries, and it has a significant impact on economic policy in all other areas. India is Asia's second biggest refiner. India's (Baskar, 2019) Oil and gas consumption is expected to rise in the next years, which bodes well for investors since economic development is heavily dependent on energy demand (Asif & Muneer, 2007; Wolfram et al., 2012). Several programs have been implemented by the government to meet the growing demand. Many parts of the business, including natural gas, petroleum product, and refineries, have been authorized 100% FDI. It is become a popular investment destination for both local and international investors. In 2040, India's GDP is

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predicted to rise to $8.6 trillion, while the country's main energy consumption is expected to almost double to 1,123 million tonnes of oil equivalent. The government set aside $1.71 billion in the Union Budget 2021 for LPG direct benefit transfers and $1.078 billion (US$147.31 million) for feedstock subsidies to BCPL/Assam Gas Cracker Complex in the Union Budget 2021. Refinery capacity in India is expected to rise to 400 million barrels per day by 2025, making it a major player in the global market.

Literature Review

Delta Brac Housing Finance Corporation Ltd.'s liquidity status and profitability have been investigated. Using secondary data acquired from DBH's audited financial statements and liquidity statements for the years 2008-2009 to 2012-2013, the researchers were able to complete their research project. It was discovered that throughout the research period, the current ratio, fast ratio, super quick ratio, cash ratio, and net working capital position were all significantly below the usual norm, indicating that they did not meet the conventional standard. The profitability ratios of DBH, such as the net interest income ratio, the non-operating profit after tax ratio, the net profit ratio, the return on total assets ratio, the return on capital employed ratio, and the return on equity capital ratio, have been highly satisfactory and have served the interests of all stakeholders during the period under study. When the net operating profit after tax ratio was calculated, it was discovered that DBH maintains excellent control over operating expenditures. In this way, the researchers came to the conclusion that the liquidity condition of DBH is undesirable and that the profitability condition of DBH is noteworthy throughout the research period (Mehdi, 2014).

Kulkarni (2016) has conducted a study on the liquidity and profitability of various industries, with a particular emphasis on the chemical and allied industries. This research is both a review and a descriptive piece. The researcher discovered that a high rate of return necessitates a lower level of operating expense. Inventory is reduced, and liquidity is reduced as a result. It is necessary to optimize a variety of aspects in order to maintain a healthy and long-term sustainable functioning of the industry. The chemical, pharmaceutical, oil, paint, and plastic sectors all over the globe are dealing with a variety of economic difficulties at the moment. Competition, environmental laws, the government licensing system, social and geographical concerns, as well as political restraints, are all factors that contribute to these difficulties. This study examines the profitability and liquidity analyses that have been conducted by many investigators throughout the years.

Khan & Safiuddin (2016) several Indian telecom businesses were chosen for investigation of their liquidity and profitability performance (Bharti Airtel and Vodafone India). For the five-year period from 2010-11 to 2015-16, the research relied on secondary data collected from various sources. Accounting ratios were employed by the researcher to evaluate the overall performance of the company. Because Vodafone had a superior current ratio and quicker response time than Bharti Airtel, the results indicated that Vodafone was more liquid than Bharti Airtel in terms of liquidity. The profitability ratios revealed that Vodafone's return on assets is greater than that of Bharti Airtel, implying that the former has a higher rate of profits than the latter. Furthermore, in terms of return on equity, Vodafone had outperformed Bharti Airtel by a significant margin. To summarize, there was a significant disparity in the financial performance of chosen telecommunications firms in terms of liquidity and profitability results.

Nabeel & Hussain (2017) the impact of liquidity management on profitability in Pakistan's banking industry has been investigated in this study. Profitability was a dependent variable, whereas liquidity management was an independent variable. The secondary data that was utilized ranged from 2006 to 2015. The data was analyzed with the use of correlation, descriptive statistics, and regression analysis techniques. It was decided that liquidity would be measured by the quick, current, cash, interest coverage, and capital adequacy ratios, while profitability would be measured by the return on assets, return on equity, and profits per share. The outcomes of the study revealed that interest coverage, capital adequacy, and quick ratio have a positive association with bank profitability, however the cash and current ratio had a negative link with bank profitability.

Baskar (2019) have conducted a study on the liquidity and profitability of a number of Indian tyre firms. The research was based on secondary data, and the time span of the study was from 2008-2009 to 2017-2018, a total of 10 years. The research made use of statistical methods such as the ratio, the mean, the standard deviation, and the coefficient of variation. According to the findings, Goodyear India Ltd's liquidity and profitability performance was good when compared to the performance of other tyre firms. The overall costs ratio of all of the tyre firms that were evaluated was more than 90 percent. As a result, businesses strive to cut their expenditures in order to maintain a minimal acceptable level of cash position.

bhai Sorathiya (2021) has conducted a study on the liquidity and profitability of a chosen cement sector in the country of India This research is concerned with the data analysis and interpretation of various liquidity and profitability ratios, such as the current ratio, the quick ratio, the operational margin, and the net profit margin, among other things. The hypothesis was tested using the t-test. In order to pick the sample, we employed the convenience sampling approach. The research was based on secondary data collected during a five-year period, from 2016-17 to 2020-21, for the purpose of this study. It was discovered that all of the null hypotheses were accepted as true. During the study period, we may conclude that there was no statistically significant change in the chosen ratio.

This research contributes to the current body of information on the liquidity and profitability of Indian oil and gas firms. This research will be beneficial to those who are interested in investing in the oil and gas industry as well as those who are already involved in the industry. This research is also beneficial to the government in terms of decision-making in the oil and gas industry.

Research Methods

Research design gives overview of roadmap for reaching to the conclusion. Following research design have been adopted for reaching to the findings of the study. This research paper analysed following objectives (1) To measure liquidity position of selected oil and gas companies. (2) To know profitability position of selected oil and gas companies.

Hypotheses for the Study

H_0 = There is no significant difference in current ratios among selected oil and gas companies during the study period.

H_0 = There is no significant difference in quick ratios among selected oil and gas companies during the study period.

H_0 = There is no significant difference in net profit ratios among selected oil and gas companies during the study period.

H_0 = There is no significant difference in return on capital employed among selected oil and gas companies during the study period.

The period of the study has been considered as 2016-17 to 2020-21 which consist of 5 years' time period. For the study scope have been divided in to two parts first one is functional scope and second one is geographical scope. Functional scope of the study has been considered as liquidity and profitability analysis for selected oil and gas companies. For the identification of liquidity and profitability researcher bifurcated into two segments like profitability ratios and liquidity ratios based on its respective ratios have been selected. The study has been indicated Indian origin selected companies so mainly geographic area is India territory and it's also included those area in which companies providing their goods and services.

This study included top five oil and gas companies like Reliance, Oil and Natural Gas Corporation Ltd (ONGC), Indian Oil Corporation Ltd (IOCL), Bharat Petroleum Corporation Ltd (BPCL), and Gas Authority of India Ltd (GAIL) based on market capitalisation as on (21st December 2021). The sampling technique is non probability in which judgemental sample method has been selected. These samples provide overall picture of population of oil and gas sector in India.

Data is most important instrument for reaching to the objective of the study, for this study secondary source of data have collected from annual report of the company as well as respective websites of the companies.

Results and Discussion

Current Ratio

Years	RELIANCE	ONGC	IOCL	BPCL	GAIL
2016-17	0.62	0.64	0.73	0.80	1.01
2017-18	0.59	0.62	0.76	0.89	0.97
2018-19	0.73	0.70	0.81	0.92	1.04
2019-20	0.63	0.65	0.69	0.72	0.96
2020-21	1.34	0.76	0.72	0.91	0.87
Avg.	0.78	0.67	0.74	0.85	0.97
Max.	1.34	0.76	0.81	0.92	1.04
Min	0.59	0.62	0.69	0.72	0.87

Source: www.moneycontrol.com

Above table showed current ratio for the time period of 2016-17 to 2020-21 for selected companies. Current ratio indicated proportion of current assets to current liabilities means in one rupee of current liabilities how much current assets. The standard current ratio is 2:1. From the above table we can see that no one company is satisfying the standard ratio. Average current ratio of Reliance Ltd is 0.78 and in the year 2020-21 the current ratio is 1.34 is highest compare to preceding years. ONGC & IOCL indicated zig-zag trend during the study period. In BPCL showed average current ratio is 0.85. In GAIL maximum current ratio is 1.04 in the year 2018-19 and minimum ratio is 0.87 in the year 2020-21.

Quick Ratio

Years	RELIANCE	ONGC	IOCL	BPCL	GAIL
2016-17	0.42	0.40	0.23	0.35	0.83
2017-18	0.39	0.36	0.25	0.39	0.80
2018-19	0.52	0.43	0.33	0.49	0.80
2019-20	0.45	0.38	0.27	0.35	0.71
2020-21	1.05	0.39	0.20	0.44	0.63

Avg.	0.57	0.39	0.26	0.40	0.75
Max.	1.05	0.43	0.33	0.49	0.83
Min	0.39	0.36	0.20	0.35	0.63

(Source: www.moneycontrol.com)

The above table indicated quick ratio of selected oil and gas companies for the period of 2016-17 to 2020-21. Quick ratio indicated measures a company's capacity to pay its current liabilities without needing to sell its inventory or obtain additional financing. In the Reliance Ltd highest quick ratio is 1.05 in the year 2020-21 which shows the better liquidity and financial health. In ONGC, IOCL and BPCL indicated the zig-zag trend during the study period. In GAIL shows decreasing trend during the study period. Reliance Industries Ltd shows good liquidity position comparison to other oil and gas companies during the study period.

Net Profit Ratio (in Percentage)

Years	RELIANCE	ONGC	IOCL	BPCL	GAIL
2016-17	9.8	9.33	5.55	4.25	8.13
2017-18	9.19	7.23	5.15	3.60	8.53
2018-19	6.98	7.22	3.00	2.54	7.58
2019-20	6.65	2.65	-0.67	0.79	10.02
2020-21	11.39	6.68	5.65	7.66	7.71
Avg.	8.80	6.62	3.74	3.77	8.39
Max.	11.39	9.33	5.65	7.66	10.02
Min	6.65	2.65	-0.67	0.79	7.58

Source: www.moneycontrol.com

Above table indicated net profit ratio of selected oil and gas companies for the period of 2016-17 to 2020-21. Net profit ratio shows relationship between net profit and sales. Net profit ratio indicated percentage of profit earn in concern with hundred rupees of sales earn during the particular year. In all the company in the year 2019-20 the net profit ratio is lowest except GAIL. In GAIL in the year 2019-20 net profit ratio is highest compare to all year. In concern with average net profit in Reliance has 8.8%, ONGC has 6.62%, IOCL has 3.74%, BPCL has 3.77% and in GAIL 8.39%, during the study period. In Reliance highest net profit ratio has 11.39 in 2020-21 and lowest has 6.65 in 2019-2020. In ONGC, IOCL and BPCL the trend of net profit ratio is continuous decrease in first four years and then started to increase. In GAIL the trend of net profit ratio has continuous increase in first four years and then started to decrease. Overall Net profit ratio of Reliance is good compared to other selected companies.

Return on Capital Employed (in Percentage)

Years	RELIANCE	ONGC	IOCL	BPCL	GAIL
2016-17	9.22	13.04	22.03	21.77	12.36
2017-18	11.42	12.01	23.97	18.87	14.08
2018-19	10.45	16.02	16.87	16.38	15.95
2019-20	10.62	8.97	5.55	6.83	13.59
2020-21	6.75	7.91	17.19	18.46	8.99
Avg.	9.69	11.59	17.12	16.46	12.99
Max.	11.42	16.02	23.97	21.77	15.95
Min	6.75	7.91	5.55	6.83	8.99

Source: www.moneycontrol.com

Above table shows return on capital employed of selected companies during the 2016-17 to 2020-21. Return on capital employed measures how efficiently a company can generate profits from its capital employed by comparing net operating profit to capital employed. Reliance shows decreasing trend of return from the year 2017-18. Average return on capital of Reliance is 9.69%. In ONGC highest return is 16.02% in the year 2018-19 and lowest is 7.91% in the year 2020-21. IOCL shows zig-zag trend of returns during the study period. BPCL indicate the decreasing trend of returns up to the year 2019-20 then started to increase. In GAIL maximum return is 15.95% and lowest is 8.99%. In concern with average return on capital employed highest percentage has 17.12% and lowest percentage has 9.69% possessed by IOCL and Reliance Industries Ltd respectively.

One-Way Anova as Statistical Tool

For the testing of hypotheses researcher used One-ANOVA Test at 5% level of significant and test result as follows.

Ratio	F- Value	F- Crit	P-Value	H_0 Accept / Reject
Current Ratio	2.712941	2.866081	0.059209	H_0 Accepted
Quick Ratio	10.24324	2.866081	0.000111	H_0 Rejected
Net Profit Ratio	6.04118	2.866081	0.002347	H_0 Rejected
Return on Capital Employed	2.408419	2.866081	0.083354	H_0 Accepted

Source: Calculated from MS Excel

The One-Way ANOVA test for chosen liquidity and profitability ratios is shown in the table above. It is indicated that Null hypothesis has been accepted at the 5% level of significance in the current ratio calculation because the calculated value (2.712941) is lower than the table value (2.866081). This means that there is no statistically significant difference in current ratios among selected oil and gas companies over the course of the investigation. When the calculated value of the quick ratio and net profit ratio is greater than the table value, it indicates that the null hypothesis has been rejected and that there is a statistically significant difference in the quick ratio and net profit ratio among selected oil and gas companies during the research period. In the case of Return on capital employed, the null hypothesis is likewise accepted, indicating that there is no statistically significant difference in return on capital employed among chosen oil and gas businesses over the research period, as evidenced by the results of the study.

In concern with current ratio the ideal ratio is 2:1 but no one company satisfied the standard so it indicted the liquidity position of companies are not good. Reliance industries ltd shows good liquidity position in the year 2020-21 compare to other companies. In Overall average liquidity position of GAIL is good compare to other companies and lowest average liquidity position showed by ONGC during the study period.

Conclusion

In quick ratio of Reliance in the year 2020-21 has 1.05 it indicted good liquidity position compare to other companies and also indicated that the company has an efficient current asset to pay current liabilities. In all the other company quick ratio is less than one it indicated that the company have not sufficient liquid assets to pay liquid liabilities. In net profit ratio all the companies show decreasing trend up to 2019-20 and in that year the net profit ratio of all the companies is lowest except GAIL. In IOCL the net profit ratio in the year 2019-20 is (-0.67) indicated loss may be due to Covid-19. In GAIL the trend of net profit ratio is zig-zag and in the year 2019-20 is highest. Average net profit ratio of Reliance has good compare to all other companies. Average return on capital employed of IOCL is highest compare to other selected companies. All the companies show decreasing return trend up to 2019-20 in that year its lowest and then started to increase in all the companies.

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