

**A STUDY ON EFFICIENCY ANALYSIS OF OIL AND GAS INDUSTRY IN INDIA****\*J.Suriya , \*\*Dr.J.Jayakrishana and \*\*\*Dr.R.Selvamathi**

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**ABSTRACT**

Financial statement is a compilation of financial and accounting data, which is logically and consistently organized according to some general, accepted accounting principles. Its purpose is to cover an understanding of financial aspects of a business firm. It may show the financial position at a particular moment of time, as in the case of balance sheet, or may reveal the financial flow over a given period of time, as in the case of income statements are major tools through which an enterprise presents its financial performance and financial condition on the various interested parties like shareholders, creditors, bankers, managers and investors. Majority of firms include extensive financial statements in their annual reports, which reflect the performance of the company over a period of time

**Keywords: Efficiency Analysis, Oil and Gas Industry, Financial Statement****1. INTRODUCTION**

The financial statements provide a summary of the accounts of a business enterprise, the balance sheet reflecting the assets, liabilities and capital as on a certain date and the income statement showing the results of operations during a certain period.” This definition emphasizes the traditional financial statements, viz., balance sheet and profit and loss account process of the evaluating businesses, projects, budgets and other finance- related entities to determine their suitability for investments. Typically, financial analysis is used to analyze whether an entity is stable, solvent, liquid, or profitable enough to be invested in when looking at a specific company, the financial analyst will often focus on the income statement, balance sheet, and cash flow statement. In addition, one key area of financial analysis involves extrapolating the company’s past performance into an estimate of the company’s future performance. According to Metcalf and Titard, “it is the process of evaluating the relationship between component parts of financial statements to obtain a better understanding of firm’s position and performance”.

**1.1. Significance or Importance of Financial Analysis**

- Significance of Managers
- Significance of Investors
- Significance of Creditors
- Significance of regulatory agency

- Significance for Employees
- Significance for other parties
- Significance for Government limitation of financial analysis

## 1.2.Purpose of Financial Analysis

- To know the earning capacity or profitability
- To know the solvency
- To know the financial strength
- To make a comparative study with other firms
- To know the capability of payment of interest & dividend
- To know the trend in business

## 2. NEED FOR THE STUDY

Applicability means the implementation of methods that are adequate in light of the practical possibilities and conditions of the company. Further, the company performs financial analysis efficiently if only benefits from an action exceed the costs spent on it. Lastly, financial analysis has to be objective and related to previously defined goals.

## 3. STATEMENT OF THE PROBLEM

Analysis of financial performance implies systematic scrutiny of gathered financial data. Financial evaluation is based on the following course of action the financial analysis allows the development of financial performance over time to be observed. On the grounds of retrospective historical data from financial statements, past development of a company's performance can be derived.

## 4. RESEARCH GAP

Presented that performance reporting by managers of oil and gas firms relies on three key measures: first, earnings (financial measure); second, cash flow from operations (financial measure) and last, oil and gas discoveries, extensions, and acquisition (non-financial measure). So, this research is an attempt to analyze the performance of the Indian oil and gas sector and come up with recommendations for improving the sector performance of the oil and gas companies which is based on the Bombay stock exchange were analyzed by Technique for Order preference by similarity to ideal solution (TOPSIS)

## 5. REVIEW OF LITERATURE

**Rosita, Ghozali, Harto, Susanto, and Zainuddin (2020)** there are existing studies relating to structural capital efficiency and financial performance. Apparently, these studies did not examine SCE in isolation but holistically as a component of VAIC. For instance, focused on the banking sector in Indonesia from 2012-2016 and found out that SCE has significant effect on ROA. Also, Khalique, Ramayah, Shah and Iqbal (2019) researched on the banking sector of Sialkot Pakistan with 210 respondents, structural capital was found to be insignificant in determining the financial performance of this case.

**Abiodun popoola and Dorothy Aje patrick Edem & Samuel Eniola Agbi (2019)** the study examined the effects of structural capital efficiency on financial performance of listed oil and gas firms in Nigeria for the period 2006 to 2018. The result of the regression analysis revealed that both ICY and ECY have positive and significant effect on ROA thus implying the prominence of these two variables in determining the financial performance of listed oil and gas firms in Nigeria. A recommendation of the study is that management of oil and gas firms should strengthen existing intangible structures such.

**Jun Yan, Lianyong Feng, Alina Steblyanskaya, Anton Sokolov and Nataliya Iskritskaya (2019)** in this paper we review the history of energy analysis in Russia from the early USSR period to today. Under the guidance of energy return on investment (EROI), we compare energy efficiencies indicators with financial efficiency coefficients. The results show that the value of the return on cost of sales (ROCS) is negative in certain instances, while the value of the energy return on cost of sales (EROCS) is extremely high under the example of the Russian energy company JSC" YATEC." Money-based indicator values (ROCS and return on fix assets (ROFA)) fluctuate with internal company financial management goals, and from the outside depending on market prices. Meanwhile energy-based values (EROCS) remain stable. Added financial analysis and energy analysis in companies' annual statements will supplement each other in practice and will present the full picture for company efficiency analysis. **Irina Filimonova, Anna Komarova, and Anastasia Chebotareva (2019)** The aim of the study is to decompose the factors of change in the return on equity (ROE) of Russian oil and gas companies. The authors used the Dupont method to identify the main factors affecting ROE. As a result of the study, it was found that in most companies the greatest impact on the change in ROE has a return on sales, primarily as a result of revenue growth due to favorable oil prices and positive exchange rate differences. A comparison of the results for 2017 and 2018 showed a significant difference in performance for many companies. Thus, we can conclude that the effect of a certain factor on the profitability of sales largely depends on the development strategy of the company for the coming year, the economic and political situation.

**Emrouznejad, A., Anouze, A. L., & Thanassoulis, E. (2010).** this paper aims to assess the application of seven statistical and data mining techniques to second-stage data environment analysis (DEA) for bank performance. Different statistical and data mining techniques are used to second-stage DEA for bank performance as a part of an attempt to produce a powerful model for bank performance with effective predictive ability. The projected data mining tools are

classification and regression trees (CART), conditional inference trees (CIT), random forest based on CART and CIT, bagging, artificial neural networks and their statistical counterpart, logistic regression. The results showed that random forests and bagging outperform other methods in terms of predictive power. This is the first study to assess the impact of environmental factors on banking performance in Middle East and North Africa countries.

## 6. RESEARCH METHODOLOGY

A research design helps to specify the sources and types of information pertinent to the research needs. This design helps the researcher to marshal the ideas in a form whereby it will be feasible to look for flows and inadequacies. Research design in the study of promising ideas in price performance of ipo, stimulating conditions is present. First is that the idea is worth pursuing, that is, an idea that could credibly inflame to, and support, identification of solutions to decisive price performance problems. Second is that every stage of the research process connected to learning a promising idea is rigorous. The research design used in this study is descriptive research. It makes a critical evaluation of the material and adopts quantitative methods. It strives to maximize objectivity, reliability, and generalizability of finding, exploration, description, diagnosis, experimental and its typically interested in forecast.

## 7. PERIOD OF THE STUDY

The study analysis efficiency performance of Indian oil and gas Industries during the period in from 2016 to 2021 because the particular period of study gives clarity with scope and need of the study. This study suitable for long run analysis with year wise time taken in the period of long-term analysis are quantitatively measured by five year from the previous year, examples for calculate 2016-2017, 2017-2018, 2018-2019, 2019-2020, 2020-2021 year wise.

### 7.1 Development at the main assets items of bharat Petroleum Corporation in the period 2017-2022(In Rs.cr. BPC)

In Rs. Cr. of BPC	2017-18	2018-19	2019-20	2020-21	2021-22
<b>Non-current assets</b>	57,731.51	63,128.67	68,990.00	85,405.75	89,642.19
Current assets	34,258.12	37,002.50	46.637.25	40,063.23	50,962.30
<b>Total assets</b>	<b>91,989.63</b>	<b>10,131.17</b>	<b>115,627.25</b>	<b>1,26,468.98</b>	<b>1,40,604.49</b>

Table 4.1.1 highlights the detailed computation of development at the main assets items of Bharat petroleum corporation during the study period from 2017-18 to 2021-22. It could be observed from the non-current assets are increased in year of 2021-22. At the same time of current assets are increased in Rs.50,962,30. Its high values of non-current assets and current assets are 89,642,19 crore and 50,962,30 crore. It also explains that non-current assets and

current assets are very much fluctuating in main assets of Bharat Petroleum Corporation are nature during the study period. Finally it is could be total assets are increased in 1,40,604.49 crore during the period of 2021-22.

**7.2 Development at the main assets items of gail India in the period 2017-2022 (In Rs.cr. Gail India)**

In Rs. Cr. of Gail India	2017-18	2018-19	2019-20	2020-21	2021-22
Non-current assets	46,205.74	47,973.55	54,071.00	57,419.69	63,657.33
Current assets	9,131.22	10,307.63	10,307.61	11,113.94	9,653.11
<b>Total assets</b>	<b>55,336.96</b>	<b>58,082.18</b>	<b>64,378.61</b>	<b>68,533.63</b>	<b>73,310.44</b>

**Table 4.2.1** provides the detailed computation of development at the main asset items of Gail India in the period 2017–2022. It can be seen that non-current assets increased by Rs. Cr.63, 657.33 during the period 2021—22. At the same time, current assets fell to Rs. 9,131.22 in 2017-18 and will rise to Rs. 11,113.94 in 2020-21. Finally it is could be total assets are increased in 73,310,44 crore during the period of 2021-22.

**7.2 Development of the main assets items of Hindustan Petroleum Corporation in the period 2017-2022(In Rs.cr. HPC)**

In Rs. Cr. of HPC	2017-18	2018-19	2019-20	2020-21	2021-22
Non-current assets	45,547.53	49,933.51	60,558.09	76,718.26	87,628.44
Current assets	32,922.32	36,873.71	43,192.76	37,292.57	43,610.74
<b>Total assets</b>	<b>78,469.85</b>	<b>86,807.22</b>	<b>103,750.85</b>	<b>114,010.83</b>	<b>131,239.18</b>

**Table 4.3.1** concerning the detailed computation of Development of the main assets items of Hindustan Petroleum Corporation in the period 2017-2022 (In Rs.cr. HPC). It could be observed from the non-current assets that they increased by Rs. 87, 628.44 of them during the period from 2021–22, followed by Rs. 76,718.26 of them during the period from 2020–21. At the same time of current assets are decreased in 2017-18 have Rs. 32,922.32 and increased for Rs.43,610.74 from the during period 2021-22. Finally, the total assets of Hindustan Petroleum Corporation could be increased to Rs.131,239,18 crore in 2021-22.

**7.3 Development at the main assets items of tata petroleum corporation petroleum in The Period 2017-2022(In Rs.cr.TM)**

In Rs. Cr. of TM	2017-18	2018-19	2019-20	2020-21	2021-22
Non-current assets	46,121.20	44,240.64	47,680.33	49,021.11	49,205.07
Current assets	12,757.08	14,971.66	13,229.30	13,568.76	15,854.59
<b>Total assets</b>	<b>58,878.28</b>	<b>59,212.30</b>	<b>60,909.63</b>	<b>62,589.87</b>	<b>65,059.66</b>

**The table 4.4.1** shows the development of Tata Petroleum Corporation's main asset items over the period 2017-2022 (in Rs.cr.TM). It is possible to see that non-current assets increased by Rs. Cr.49,205.07 during the period 2021—22, followed by Rs.49,021.11 during the period 2020-21. At the same time, current assets fell to Rs. 12,757.08 in 2017-18 before rising to Rs. 15,854.59 in 2021-22. To finish it is could be total assets are greater than before in Rs.65,

#### 7.4 Development of the main assets items of ONGC in the period 2017-2022(In Rs.cr. ONGC)

In Rs. Cr. of ONGC	2017-18	2018-19	2019-20	2020-21	2021-22
Non-current assets	217,342.21	269,711.63	273,844.46	469,694.75	286,676.13
Current assets	29,907,28	21,516.55	28,390.35	26,986.00	31,777.45
<b>Total assets</b>	<b>247,249.49</b>	<b>297,228.18</b>	<b>302,234.81</b>	<b>296,680.75</b>	<b>318,453.58</b>

**The table 4.5.1** as regards the development of the main asset items of ONGC in the period 2017–2022, in Rs. cr. ONGC, It can be deduced from the results that non-current assets increased in Rs. Cr.469, 694.75 during the period 2020—21, followed by Rs.286,676.13 during the period 2021-22. In addition, the current assets of ONGC are decreased in 2018-19 with Rs. 28,390.35 and mostly increased with Rs.31,777.45 from the period 2021-22. Finally, it is noted that the total assets of ONGC are greater than before, at Rs. 318,453,58 crore, for the period from 2021-2022.

#### 7.5 Development of the main assets items of Oil india in the period 2017-2022(In Rs.cr. Oil india)

In Rs. Cr. of Oil india	2017-18	2018-19	2019-20	2020-21	2021-22
Non-current assets	33,580.81	35,918	36,092.32	33,131.04	41,538.42
Current assets	11,758.74	8,115.93	11,372.98	9,710.35	9,086.00
<b>Total assets</b>	<b>45,339.55</b>	<b>44,034.18</b>	<b>47,465.30</b>	<b>42,341.39</b>	<b>50,624.42</b>

**Table 4.6.1** shows the development of Oil India's main asset items in Rs. crore from 2017 to 2022. It can be seen that non-current assets increased by Rs. Cr.41, 538.42 during the period 2021—22, followed by Rs.36,092.32 during the period 2019-20. At the same time, current assets decreased in 2018–19 and increased in 2017–18, for a total of Rs. 11,758.74. To end, it could be that total assets are greater than before in Rs. 50,624,42 crore of Oil India in the period 2021–2022.

## 8. Discussion and Conclusion

The industry with a low debt-to-equity ratio should try to improve their debt composition by increasing their borrowings at low rates of interest when compared to equity funds. With regard to the utilization of working capital, the sample units with low utilization should concentrate on how current assets and current liabilities are taken care of. This study will be beneficial because it imparts an understanding of the financial performance of the selected oil and gas industry in India and its effective utilization of working capital.

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