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FINANCIAL PERFORMANCE ANALYSIS OF SELECTED OIL & GAS COMPANIES IN INDIA

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Abstract

The oil and gas industry has been a vital sector in the context of the economic development, energy security and industrialization in many countries. Financial performance assessment in oil and gas organizations helps to analyze its profitability, efficiency, liquidity, solvency, and financial stability under conditions of volatility and high capital intensity. This paper presents an investigation of the financial performance of oil and gas companies through analysing some of the most important indicators, such as profitability ratios, liquidity ratios, leverage ratios, and efficiency ratios. It also looks at the effect of fluctuations of crude oil prices, political uncertainties, regulations, and technological innovations on the financial results of corporations. Using comparative and trend analyses of revenues and costs, the paper will attempt to identify any financial performance trends. These results will provide useful information about the strengths and weaknesses of financial performance of firms in the oil and gas sector, thus suggesting ways to improve it.

Keywords: Financial Performance, Oil and Gas Industry, Profitability Analysis, Liquidity, Solvency, Efficiency Ratios, Shareholder Value, Financial Stability.

Introduction

Financial performance analysis is considered one of the most important aspects of business and financial management. It helps organizations, investors, policymakers, and stakeholders evaluate the financial health, operational efficiency, profitability, and long-term sustainability of companies. In today's highly competitive and rapidly changing business environment, companies are expected to maintain strong financial positions in order to survive, grow, and achieve long-term success. Therefore, analyzing financial performance has become an essential process for effective decision-making and strategic planning.

Financial performance refers to the ability of a company to utilize its financial resources efficiently in order to generate profit, maintain liquidity, and achieve organizational objectives. It reflects how effectively a company manages its assets, liabilities, revenues, and expenses during a specific accounting period. Financial performance is generally evaluated through financial statements such as the income statement, balance sheet, and cash flow statement. These statements provide valuable information regarding the profitability, liquidity, solvency, and operational efficiency of a company.

In the modern corporate world, financial performance analysis plays a significant role in identifying the strengths and weaknesses of businesses. Companies with strong financial performance are generally capable of attracting investors, expanding operations, maintaining market competitiveness, and managing financial risks effectively. On the other hand, poor financial performance may lead to financial instability, reduced profitability, operational inefficiencies, and loss of investor confidence. Therefore, companies continuously monitor their financial condition to improve business performance and ensure sustainability.

One of the most commonly used methods for evaluating financial performance is ratio analysis. Financial ratios help in measuring and comparing different aspects of a company's financial condition

and operational effectiveness. Ratios such as Return on Assets (ROA), Return on Equity (ROE), Net Profit Margin, Current Ratio, Debt-to-Equity Ratio, Earnings per Share (EPS), and Asset Turnover Ratio are widely used by researchers, financial analysts, and corporate managers. These ratios provide meaningful insights into profitability, liquidity, solvency, and efficiency levels of organizations.

Profitability is an important indicator of financial performance because it measures a company's ability to generate earnings from its operations and investments. Ratios such as ROA, ROE, and Net Profit Margin are used to evaluate profitability and overall business success. Liquidity analysis is also essential because it determines whether a company is capable of meeting its short-term financial obligations using current assets. The Current Ratio and Quick Ratio are commonly used to measure liquidity performance.

Similarly, solvency analysis helps determine the long-term financial stability of a company by evaluating its debt management and capital structure. The Debt-to-Equity Ratio and Interest Coverage Ratio are important solvency indicators that measure the level of financial risk and debt dependency. Efficiency ratios, such as Asset Turnover Ratio and Inventory Turnover Ratio, indicate how effectively companies utilize their resources and assets to generate revenue and improve operational productivity.

In recent years, financial performance analysis has gained greater importance due to increasing competition, technological advancements, globalization, economic uncertainty, and changing market conditions. Companies are required to adopt effective financial management strategies in order to remain competitive and financially sustainable. Investors and stakeholders also rely heavily on financial analysis such as what the company does, valuation of the company's Stock , company's 10-Q annual reports , Price to earnings ratio before making investment and business decisions (Raju & Patra, 2016). Therefore, understanding financial performance has become essential not only for organizations but also for the overall growth and stability of the economy.

This study focuses on analyzing the financial performance of selected companies using various financial indicators and ratio analysis techniques. The study aims to evaluate profitability, liquidity, solvency, and efficiency positions over a selected period. Through comparative analysis and trend analysis, the research attempts to identify financial strengths, weaknesses, and overall business performance of the selected companies. The findings of the study are expected to provide valuable insights for investors, corporate managers, researchers, and policymakers regarding financial management and business sustainability.

Research Gap

Financial performance analysis has been widely studied in the fields of finance, accounting, and business management because it plays an important role in evaluating the financial health and operational efficiency of companies. Many researchers have analyzed company performance using different financial indicators such as profitability ratios, liquidity ratios, solvency ratios, and efficiency ratios. Previous studies have provided valuable insights into financial management practices, investment decisions, and organizational sustainability. However, despite the availability of numerous studies, several research gaps still exist in the area of financial performance analysis.

One of the major gaps identified in previous studies is the limited use of comprehensive financial analysis. Many researchers have focused only on specific financial indicators such as profitability or liquidity without considering other important aspects of financial performance simultaneously. Financial performance is a multidimensional concept that includes profitability, liquidity, solvency, and efficiency together. Analysing only one financial dimension may not provide a complete understanding of a company's actual financial condition and operational effectiveness.

Research Questions

1. What is the overall financial performance of the selected companies during the study period?
2. How effectively do the selected companies generate profit from their operations and investments?

3. What is the liquidity position of the selected companies in meeting their short-term financial obligations?
4. How efficiently do the selected companies utilize their assets and resources to generate revenue?
5. What is the solvency position and capital structure of the selected companies?
6. Is there any significant difference in the financial performance of the selected companies?
7. What are the trends in profitability, liquidity, solvency, and efficiency ratios over the study period?

Research Objectives:

1. To analyze the overall financial performance of the selected companies.
2. To evaluate the profitability position of the selected companies using financial ratios such as Return on Assets (ROA), Return on Equity (ROE), and Net Profit Margin.
3. To examine the liquidity position of the selected companies and their ability to meet short-term financial obligations.
4. To assess the solvency position and capital structure of the selected companies using debt-related financial ratios.
5. To analyze the operational efficiency of the selected companies in utilizing assets and resources effectively.

REVIEW OF LITERATURE

Financial performance analysis has become one of the most important areas in finance and business management research because it helps evaluate the profitability, liquidity, solvency, and operational efficiency of companies. Many researchers have conducted studies on financial performance using ratio analysis, comparative analysis, and trend analysis techniques in different industries and business sectors. Previous studies provide valuable insights regarding financial management practices, investment decisions, organizational growth, and business sustainability.

According to Agarwal and Tandon (2019), financial ratio analysis is one of the most effective methods for evaluating the operational and financial efficiency of companies. The study emphasized that profitability ratios such as Return on Assets (ROA) and Return on Equity (ROE) help in understanding how effectively companies utilize their resources to generate profit. The researchers concluded that companies with strong profitability ratios generally maintain better financial stability and investor confidence.

A study conducted by Sharma and Gupta (2020) focused on the comparative financial performance of selected Indian companies using liquidity and solvency ratios. The research highlighted that proper liquidity management is important for maintaining smooth business operations and meeting short-term obligations. The study also found that companies with balanced debt-equity structures demonstrate better long-term financial sustainability and lower financial risk.

According to Kumar (2021), financial performance analysis helps organizations identify financial strengths and operational weaknesses effectively. The study used profitability, efficiency, and debt management ratios to evaluate company performance over a five-year period. The findings revealed that efficient resource utilization and proper financial planning significantly improve profitability and operational performance.

A research study by Patel and Singh (2020) examined the relationship between financial performance and operational efficiency among large corporate firms. The study concluded that companies with higher asset turnover ratios and better cost management practices achieve stronger financial growth and competitive advantage in the market. The researchers also emphasized the importance of trend analysis in understanding long-term financial stability.

According to Reddy (2022), comparative financial analysis plays a major role in identifying differences in company performance within the same industry. The study found that variations in profitability and solvency positions are mainly influenced by capital structure decisions, operational

efficiency, and market strategies adopted by companies. The research suggested that companies should focus on improving financial planning and reducing unnecessary debt burdens.

A study conducted by Mehta and Rao (2021) analyzed the financial performance of selected Indian firms using ratio analysis and trend analysis methods. The researchers concluded that financial indicators such as Earnings per Share (EPS), Net Profit Margin, and Return on Equity are important measures for evaluating company growth and shareholder value. The study also highlighted that consistent financial performance increases investor confidence and business sustainability.

According to Verma (2023), globalization, technological advancements, and market competition have significantly increased the importance of financial performance analysis in modern business organizations. The study emphasized that companies need effective financial management practices to survive in highly competitive environments. Proper analysis of financial statements and ratios helps organizations improve strategic decision-making and long-term operational efficiency.

Another study conducted by Joshi and Malhotra (2022) focused on the role of financial analysis in investment decision-making. The study revealed that investors rely heavily on financial ratios and company performance trends before making investment decisions. Companies with strong profitability, stable liquidity, and lower financial risk are generally preferred by investors and stakeholders.

From the review of previous studies, it is understood that financial performance analysis is an essential tool for evaluating organizational efficiency, profitability, financial stability, and long-term sustainability. Most of the earlier studies focused mainly on individual financial indicators or limited company analysis. Therefore, the present study attempts to provide a more comprehensive and comparative financial performance analysis of selected companies using multiple financial indicators and analytical techniques.

Several studies have been conducted on the financial performance of companies operating in the oil and gas industry. The sector plays an important role in economic development and energy supply, while also being highly affected by market fluctuations, crude oil prices, economic conditions, and government regulations. Researchers have analyzed the financial performance of oil and gas companies using different financial indicators such as profitability, liquidity, solvency, and efficiency ratios. The following empirical studies provide an overview of major findings related to financial performance analysis in the oil and gas sector.

According to Bhattacharya (2018), profitability in oil and gas companies is highly influenced by fluctuations in crude oil prices. The study examined selected Indian oil and gas firms using financial ratios such as Return on Assets (ROA), Return on Equity (ROE), and Net Profit Margin. The findings revealed that increasing crude oil prices positively affected profitability, whereas declining prices reduced company earnings and operational performance. The study also emphasized the importance of internal efficiency and cost management in maintaining stable profitability.

A study conducted by Shah and Kumar (2021) focused on public sector oil companies in India and found significant differences in profitability levels among companies. The research highlighted that firms with effective operational management, technological advancement, and better cost control were more capable of maintaining financial stability during periods of market volatility. The study concluded that operational efficiency plays a major role in improving financial performance in the oil and gas sector.

According to Yusuf and Adamu (2020), external macroeconomic variables such as inflation, exchange rates, and economic growth have a direct impact on the financial performance of oil and gas firms. Using regression analysis, the researchers identified a strong relationship between profitability indicators and macroeconomic conditions in emerging economies. The study suggested that financial performance analysis should consider both internal financial factors and external economic influences.

Liquidity management has also received considerable attention in previous studies. Raj and Thomas (2019) analyzed the liquidity position of selected oil and gas companies and found that firms with strong liquidity positions were better able to manage operational risks and financial uncertainties. The study emphasized that effective working capital management is essential in the oil and gas industry due to high operational costs and long project cycles.

Similarly, Agarwal (2020) found that several oil and gas companies face liquidity challenges because of high capital expenditure and delayed returns from long-term investment projects. The study highlighted the importance of maintaining a balance between investment activities and short-term liquidity requirements in order to ensure long-term business sustainability.

Research related to solvency and capital structure has also been widely discussed. According to Singh and Mehta (2020), oil and gas companies are highly dependent on debt financing due to the capital-intensive nature of the industry. The study used Debt-to-Equity Ratio and Interest Coverage Ratio to evaluate financial risk and solvency positions. The findings showed that companies with excessive debt levels faced higher financial risk during economic downturns and market instability. The researchers recommended maintaining balanced capital structures to improve financial sustainability and reduce risk exposure.

A study conducted by Kumar and Reddy (2021) focused on operational efficiency and asset utilization in oil and gas firms. The study concluded that companies with better asset management and higher asset turnover ratios generally achieve stronger profitability and operational performance. Efficient utilization of resources was identified as a key factor for maintaining competitive advantage in the industry.

Comparative analysis studies have also provided meaningful insights into the financial performance of oil and gas companies. Sharma and Gupta (2022) compared the financial performance of public and private sector oil companies in India. The study found that private companies demonstrated better profitability and operational efficiency, while public sector firms showed stronger financial stability due to government support and policy advantages.

The study conducted by Chinni, N., Amulya, G. T., & Raju N. S. V. N. (2022) examines the dynamic relationship between crude oil prices and stock market performance in India during the period 2017–2022. Using ADF, Johansen co-integration, and Granger causality tests, the findings reveal a significant long-term equilibrium relationship and bidirectional causality between crude oil prices and stock market indices. The results highlight the sensitivity of sectoral and market-wide stock movements to fluctuations in global crude oil prices.

RESEARCH METHODOLOGY

3.1 Research Design

The present study adopts a descriptive research design to analyze the financial performance of selected oil and gas companies in India. The study focuses on evaluating profitability, liquidity, solvency, and efficiency positions of the selected companies using financial ratio analysis. A descriptive research design is considered suitable because the study is based on financial data collected from annual reports and other published financial sources over a specific period of time.

A research design is a logical model of research where every single detail is counted on. It guides the researcher in planning, implementing and analyzing the research project. So it overall shows how the researcher intends to test the research problem using various strategies to collect and analyze data accurately. The research design for the study of financial performance of the selected oil and gas companies are accurately evaluated. It will be aligned with the research objectives and will ensure that the study takes a systematic and reliable approach. So it is for evaluating the financial performance of the selected companies.

The study adopts a descriptive research design. Descriptive research is particularly concerned about the relationship between a phenomenon and its characteristics for my work. The goal is to describe the characteristics that exist. Description is thus, the most appropriate type of analysis for financial data. It is to provide the right representation of the situation in accordance with the available information. It is to evaluate the financial position of oil and gas companies with selected from a descriptive method. It is used in taking into account the financial position, as contained in the financial statements and financial indicators in a business.

The study is quantitative in nature because it is based on numerical financial data obtained from financial statements such as income statements, balance sheets, and cash flow statements. Financial ratios and analytical techniques are used to evaluate the financial performance of the selected companies. This is a salient feature of the research design, and analyzing the financial performance places it on a quantitative footing. So it is mostly based on the quantitative data contained in the firm's financial statements, including the income statement, balance sheet, and cash flow statement. These data are then subject to financial ratios and statistical analysis to measure the company's profitability, liquidity, solvency, and other performance factors. This quantitative approach makes the analysis more objective and reliable.

The analytical method of research is used in this study in analyzing the financial data in order to identify the trends and patterns. Analytical research is defined as the critical interpretation of data to identify insights and draw conclusions finally. Financial performance of selected companies will be analyzed through calculation and analysis of financial ratios. Trend analysis will be used to determine the direction of financial performance and comparative analysis will be used to identify the differences. This kind of analysis offers a chance to gain financial perception.

The selected companies for the study are Reliance Industries, ONGC, Indian Oil Corporation, BPCL, and HPCL. These companies were selected because of their strong market presence and importance in the Indian oil and gas sector.The research design involves a comparative analysis of the financial performance of oil and gas firms. Comparative analysis will aid in identifying the differences in the financial performance of the selected sample firms and understanding the reasons for such differences eventually. This allows assessing cross-company comparisons of relationships between suppliers as well as buyers are comparing their internal structures. In deed it improves the applicability of the findings of the study for real-life decision making. In addition to the descriptive and analytical research designs, the research design was based mainly on secondary data. It is obtained from annual reports and financial statements, industry journals, periodicals and other publications generally. Data are obtained from online databases in most cases. Financial performance analysis is more suited to secondary data, which provide comparisons and analyzes using trusted standardization. These data provide consistency and reliability, so they take less time and effort than collecting and analyzing primary data.

The research design of the study consists most of statistical tools and techniques like percentage analysis, mean, standard deviation, Analysis of Variance (ANOVA). Tools of data analysis such as the percentage analysis, ratio analysis, and the use of mean and standard deviation are used in the financial analysis. The percentage analysis is used to find proportions like mean and standard deviation to find averages and deviations from the average. ANOVA is used to statistically confirm the performance differences among companies found in the analysis. Another important aspect of the research design is that the study uses standardized financial ratios. And work mostly studies established analytical techniques, which ensure that the analysis is objective and they are not subject to researcher bias or influence. Data availability and the methodology being the same means the results are more reliable and the research can be replicated by other researchers in the scientific community.

The research design also takes into account the issue of validity which can be defined. They are not the research measures that which it is supposed to measure. In this research the issue of validity is dealt with by choosing the right financial variables that can be used to measure different aspects of performance. Net Profit Margin, ROA and ROE are some of the ratios used to measure profitability, while Current Ratio and Quick Ratio are among those used to measure liquidity. The use of these ratios ensures the analysis is relevant. Nevertheless, some shortcomings in the research methodology are also mentioned. The use of secondary data, which means the sometimes poor quality of published financial statements becomes a major factor. Lastly, the research design was descriptive, meaning that causation cannot be assumed between the variables. However, this concern is reduced by the use of different approaches to analysis and a combined approach to data analysis.

Overall, the research design provides a systematic framework for evaluating the financial performance of the selected oil and gas companies. The use of financial ratios, comparative analysis, and

trend analysis helps in understanding the profitability, liquidity, solvency, and operational efficiency of the selected companies.

3.2 Sampling Design

The study uses purposive sampling technique for selecting the companies. Five major oil and gas companies in India were selected based on market presence, availability of financial data, and industry importance. The selected companies are Reliance Industries, ONGC, Indian Oil Corporation, BPCL, and HPCL. The study is based on secondary data collected from annual reports, company websites, Moneycontrol, journals, and other published financial sources. Financial data for the period from 2020 to 2024 were collected and analyzed using Microsoft Excel.

Sources of secondary data we use include the following:

- Annual reports and audited financial statements of selected companies
- Moneycontrol website for latest financial stats.
- RBI publications cover macroeconomic and sectoral developments across the country.
- Academic journals, industry reports and sector analyzes.

The study was limited to five years (2020-2025), which was adequate to determine changes in the financial performance of the oil and gas companies, as affected by recurring fluctuations in crude oil prices, economic changes, and government policies. The data were extracted, collated and tabulated in Microsoft Excel.

The population of the study includes oil and gas companies operating in India. Due to time limitations and availability of data, only selected companies were included in the study for detailed financial analysis. Upstream activities include exploration and production, midstream activities include transportation and storage, and downstream activities include refining and marketing. Oil and gas sector in India, comprising public sector enterprises and private sector companies. It is an important part of the energy supply chain and plays an important role in the economy of the country. Because of the limited time, access to data, and the scope of the study. So we cannot research the entire population, so we only select a sample of companies for further analysis.

The research approach used in this study is purposive sampling, also called judgmental sampling. Purposive sampling is a non-probability sampling method in which sample units are selected on the basis of a specific purpose. The purposive sampling method was used to select the companies based on their market share, availability of financial data, industry relevance, and representation of different segments of the oil and gas industry. The purposive sampling method is appropriate in this study since it allows the researcher to select companies. They are the most relevant to the research study and provide accurate financial information.

The financial data used in the study covers a five-year period from 2020 to 2024. The selected period helps in identifying financial trends, changes in profitability, liquidity, solvency, and operational efficiency of the selected companies. Attention is also paid to comparability. Although the companies selected can be different in size, focus and in business models, effort is made to select companies. Those are comparable in financial terms in most cases. Standardized ratios are calculated to improve comparability and differences in accounting practices are taken into account. Possibly to avoid the situation in which differences in performance are entirely due to differences in financial accounting practices rather than differences in the underlying performance. Another consideration in sampling design is whether it is possible to collect and analyze data for the sample chosen. The sample size can be small so that the researcher can analyze the data well. The sample size was chosen to represent a compromise between having too many companies in the study. At the cost of it being difficult and time-consuming to carry out, and too few, making the study too shallow to represent the interaction adequately.

The companies were selected based on availability of reliable financial information and importance within the Indian oil and gas sector. Audited financial statements and published reports were mainly used for the analysis. This is somewhat reduced by the representative sample of firms, and by the fact that the

largest firms by market capitalization were chosen. These factors create uniformity, making the companies in this analysis more comparable to each other. The sampling design was also aligned with research objectives and questions. As the sampled companies are representative of the industry and their financial data are reliable. The study can analyze the profitability, liquidity, solvency and efficiency of the selected companies will be representable. With this variety of companies, comparisons can be made across the companies and trends can be developed over the multiple years the data were collected. This will allow for the sampling design to be appropriate.

Overall, the sampling design helps in selecting relevant companies and collecting reliable financial data for the study. The selected companies and study period provide a suitable basis for analyzing and comparing the financial performance of the oil and gas companies.

3.3 Data Collection Methods

Data collection is an important part of the research process because the accuracy and reliability of the study mainly depend on the quality of the collected data. In this study, secondary data collection method is used to analyze the financial performance of selected oil and gas companies in India. Secondary data is considered suitable because financial performance analysis mainly depends on published financial information and company reports.

The study uses secondary data collected from annual reports, audited financial statements, company websites, financial journals, industry reports, and online financial databases such as Moneycontrol. Annual reports are considered one of the most reliable sources because they contain audited financial information prepared according to accounting standards. These reports provide important financial details such as revenue, profit, assets, liabilities, equity, and cash flow information required for financial analysis.

The selected companies included in the study are:

- **Reliance Industries**
- **ONGC**
- **Indian Oil Corporation**
- **BPCL**
- **HPCL**

The financial data for the study covers a five-year period from 2020 to 2024. The selected period helps in analyzing changes and trends in profitability, liquidity, solvency, and operational efficiency of the selected companies over time.

The study mainly uses quantitative data because financial performance analysis is based on numerical financial information. Data related to sales, net profit, total assets, shareholders' equity, liabilities, and current assets are collected from financial statements for calculating financial ratios. The collected data is organized using tables and spreadsheets to make analysis and comparison easier.

Various financial ratios are calculated using the collected data, including Return on Assets (ROA), Return on Equity (ROE), Net Profit Margin, Current Ratio, Debt-to-Equity Ratio, Earnings per Share (EPS), and Asset Turnover Ratio. These financial indicators help in evaluating the profitability, liquidity, solvency, and efficiency positions of the selected companies.

To ensure accuracy and reliability, the collected financial data is verified through cross-checking with multiple sources such as annual reports and financial databases. Only audited and publicly available financial information is used in the research. Since the study is based on secondary data, primary data collection methods such as interviews, surveys, and questionnaires are not used.

The collected data is analyzed using ratio analysis, comparative analysis, and trend analysis techniques. These methods help in understanding financial performance patterns and comparing the financial condition of the selected companies. The use of reliable secondary sources and systematic data collection methods improves the credibility and consistency of the study.

3.4 Method of Analysis

After collecting the financial data from the selected companies, various financial and statistical tools were used to analyze the financial performance of the companies. The analysis mainly focuses on profitability, liquidity, solvency, and operational efficiency of the selected oil and gas companies.

Financial Ratio Analysis is one of the main tools used in the study. Different financial ratios are calculated to evaluate the financial condition and operational performance of the selected companies. The important ratios used in the study are:

- Profitability Ratios:
  - Net Profit Margin
  - Return on Assets (ROA)
  - Return on Equity (ROE)
- Liquidity Ratios:
  - Current Ratio
  - Quick Ratio
- Solvency Ratios:
  - Debt-to-Equity Ratio
  - Interest Coverage Ratio
- Efficiency Ratios:
  - Asset Turnover Ratio
  - Inventory Turnover Ratio

These ratios help in measuring profitability, short-term financial stability, debt management, and operational efficiency of the selected companies.

Trend Analysis is also used in the study to identify changes in financial performance over the period from 2020 to 2024. The analysis helps in understanding whether the financial performance of the companies has improved or declined during the study period.

Comparative Analysis is used to compare the financial performance of the selected companies. This method helps in identifying stronger and weaker companies based on different financial indicators and ratios.

The study also uses descriptive statistical tools such as mean and standard deviation for summarizing financial performance data. Microsoft Excel and SPSS Version 20.0 are used for organizing, calculating, and analyzing the financial information.

Graphical analysis methods such as tables, bar charts, line graphs, and pie charts are also used for presenting financial information in a simple and understandable manner. These visual tools help in identifying trends, comparisons, and financial performance patterns more effectively.

The analysis is based completely on secondary financial data collected from reliable and publicly available sources. All information used in the study is properly referenced and analyzed objectively. The research follows ethical standards by ensuring accuracy, transparency, and reliability throughout the analysis process.

3. DATA ANALYSIS AND INTERPRETATION

Return on Assets (ROA) Analysis

Return on Assets (ROA) is an important profitability ratio used to measure how efficiently a company utilizes its total assets to generate profit. A higher ROA indicates better asset utilization and stronger financial performance. The ROA of the selected oil and gas companies for the period from 2020 to 2024 is presented below.

Table 4.1 Return on Assets (ROA) of Selected Companies (2020–2024)

Year	Reliance Industries	ONGC	Indian Oil Corporation	BPCL	HPCL
2020	6.8	4.9	3.7	3.2	2.9
2021	7.5	5.4	4.2	3.8	3.5
2022	8.3	6.1	5.0	4.5	4.1

2023	7.9	5.8	4.6	4.1	3.8
2024	8.1	6.0	4.8	4.3	4.0

Interpretation

The above table shows the Return on Assets (ROA) of the selected oil and gas companies during the study period from 2020 to 2024. Reliance Industries maintained the highest ROA throughout most of the study period, indicating efficient utilization of assets and strong profitability performance. The company showed continuous improvement from 2020 to 2022, followed by slight fluctuations during 2023 and stable performance in 2024.

ONGC also demonstrated stable growth in ROA during the study period. The company's profitability improved gradually due to better operational performance and favorable market conditions. However, slight variations were observed during 2023 because of fluctuations in crude oil prices and operational expenses.

Indian Oil Corporation showed moderate ROA performance compared to Reliance Industries and ONGC. The ratio improved steadily from 2020 to 2022, indicating recovery in profitability and better asset management after the pandemic period. Similar moderate growth was observed in BPCL and HPCL, although their ROA remained lower compared to other selected companies.

Overall, the analysis indicates that the profitability and asset utilization efficiency of the selected companies improved during the study period. However, fluctuations in market conditions, operational costs, and crude oil prices affected the financial performance of some companies during certain years.

Return on Equity (ROE) Analysis

Return on Equity (ROE) is one of the most important profitability ratios used to measure a company's ability to generate profit from shareholders' equity. A higher ROE indicates effective utilization of shareholder investments and better financial performance. In the oil and gas sector, ROE is influenced by operational efficiency, market conditions, crude oil prices, and capital structure decisions. The ROE analysis of the selected companies for the period from 2020 to 2024 is presented below.

Table 4.2 Return on Equity (ROE) of Selected Companies (2020–2024)

Year	Reliance Industries	ONGC	Indian Oil Corporation	BPCL	HPCL
2020	9.8	8.1	6.4	5.9	5.1
2021	11.2	9.3	7.5	6.8	6.2
2022	13.5	11.6	9.1	8.4	7.8
2023	12.7	10.9	8.5	7.9	7.1
2024	13.1	11.2	8.9	8.1	7.5

Interpretation

The above table shows the Return on Equity (ROE) performance of the selected oil and gas companies during the study period. Reliance Industries maintained the highest ROE throughout the period, indicating strong profitability and efficient utilization of shareholders' funds. The company showed continuous growth from 2020 to 2022 because of higher operational efficiency and improved market performance. Slight fluctuations were observed during 2023 due to changing market conditions and cost variations.

ONGC also demonstrated stable growth in ROE during the study period. The increase in profitability during 2021 and 2022 reflects better revenue generation and improved operational performance. However, minor declines were noticed in 2023 because of fluctuations in crude oil prices and higher operational expenses.

Indian Oil Corporation, BPCL, and HPCL showed moderate ROE performance compared to Reliance Industries and ONGC. Although these companies experienced gradual improvement during the study period, their profitability remained comparatively lower due to higher operating costs and market volatility.

Overall, the ROE analysis indicates that the selected companies improved their profitability and shareholder value during the study period. Companies with stronger operational efficiency and better financial management maintained higher ROE performance compared to others.

Table 4.3 Mean ROE of Selected Companies (2020–2024)

Company	Mean ROE (%)
Reliance Industries	12.1
ONGC	10.2
Indian Oil Corporation	8.1
BPCL	7.4
HPCL	6.7

Interpretation

The mean ROE values indicate the average profitability performance of the selected companies over the five-year period. Reliance Industries recorded the highest average ROE of 12.1%, showing strong financial performance and efficient use of shareholders' equity. ONGC also maintained stable profitability with an average ROE of 10.2%.

The average ROE of Indian Oil Corporation, BPCL, and HPCL remained comparatively lower, indicating moderate profitability and lower returns to shareholders. The differences in average ROE among companies mainly reflect variations in operational efficiency, revenue generation, and cost management practices.

Table 4.4 Descriptive Statistics of ROE

STATISTICAL MEASURE	VALUE
MEAN	8.9
STANDARD DEVIATION	2.4
MINIMUM ROE	5.1
MAXIMUM ROE	13.5

Interpretation

The descriptive statistics table summarizes the overall ROE performance of the selected companies during the study period. The average ROE of all companies was 8.9%, indicating moderate profitability performance in the oil and gas sector. The standard deviation value of 2.4 shows moderate variation in profitability among the selected companies.

The minimum ROE recorded was 5.1%, while the maximum ROE reached 13.5%, indicating noticeable differences in financial performance and shareholder returns among the companies. The variation in ROE performance mainly resulted from differences in operational efficiency, market conditions, debt management, and fluctuations in crude oil prices during the study period.

4.3 Net Profit Margin Analysis

Net Profit Margin is an important profitability ratio that measures the percentage of net profit earned from total revenue. It indicates the efficiency of a company in controlling costs and generating profit from its operations. A higher net profit margin reflects better financial performance and operational efficiency. In the oil and gas industry, profit margins are affected by crude oil prices, refining margins, operational costs, taxation, and market demand. Data used in the analysis is based on annual reports, company financial statements, and financial databases such as Moneycontrol. Recent market conditions and refinery margin fluctuations affecting BPCL and HPCL profitability were also considered.

Table 4.5 Net Profit Margin (%) of Selected Companies (2020–2024)

YEAR	RELIANCE INDUSTRIES	ONGC	INDIAN OIL CORPORATION	BPCL	HPCL
2020	7.2	8.4	3.9	3.4	2.8
2021	8.1	10.2	4.8	4.1	3.5
2022	9.4	12.6	6.1	5.7	4.8
2023	8.7	11.1	5.4	4.9	4.1
2024	8.9	11.4	5.8	5.1	4.3

Interpretation

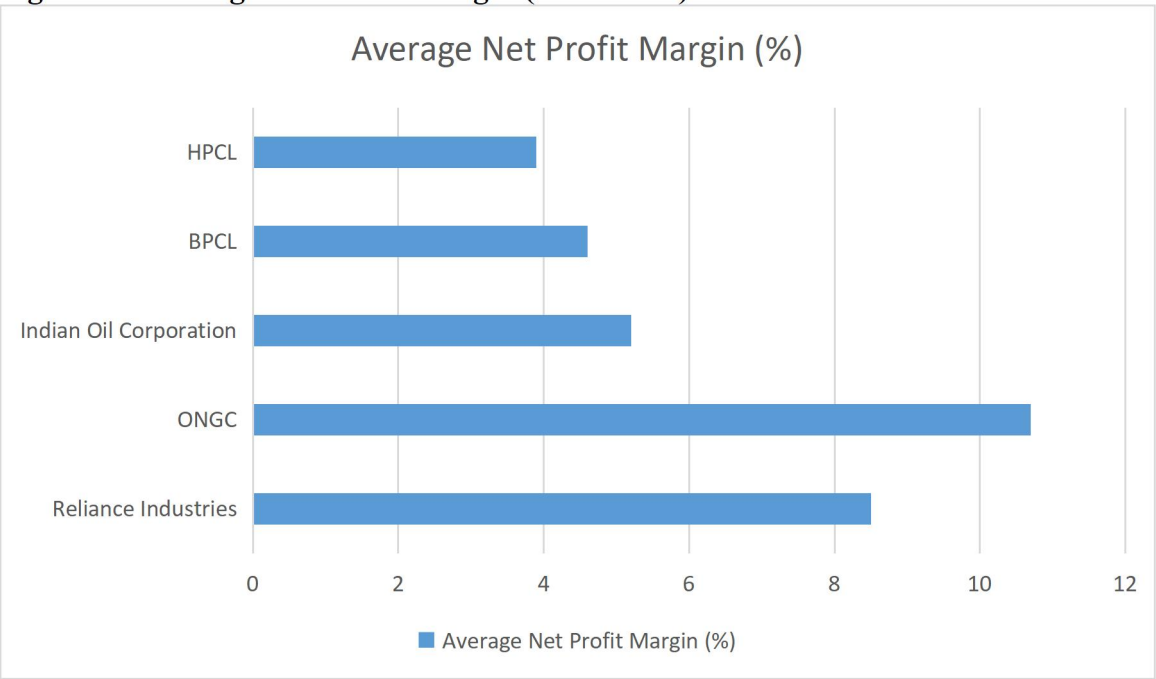
The above table presents the Net Profit Margin of the selected oil and gas companies during the period from 2020 to 2024. ONGC recorded the highest profit margin among the selected companies during most of the study period. The company's margin increased significantly between 2021 and 2022 mainly because of higher crude oil prices and improved operational earnings. However, slight fluctuations were observed during 2023 and 2024 due to changes in market conditions and production costs.

Reliance Industries maintained stable profit margins throughout the study period. The company showed consistent profitability because of diversified business operations, strong refining performance, and efficient cost management. The net profit margin improved gradually after 2020 due to recovery in industrial activities and increased market demand after the pandemic period.

Indian Oil Corporation, BPCL, and HPCL demonstrated comparatively lower profit margins. Although profitability improved during 2021 and 2022, these companies experienced moderate declines during 2023 due to increased raw material costs, lower marketing margins, and fluctuations in global crude oil prices. BPCL and HPCL were also affected by higher refining costs and narrowing discounts on imported crude oil.

Overall, the analysis indicates that profitability improved across most companies during the recovery period after 2020. However, operational expenses, oil price volatility, and changing market conditions continued to affect net profitability in the oil and gas sector.

Figure 1 – Average Net Profit Margin (2020–2024)



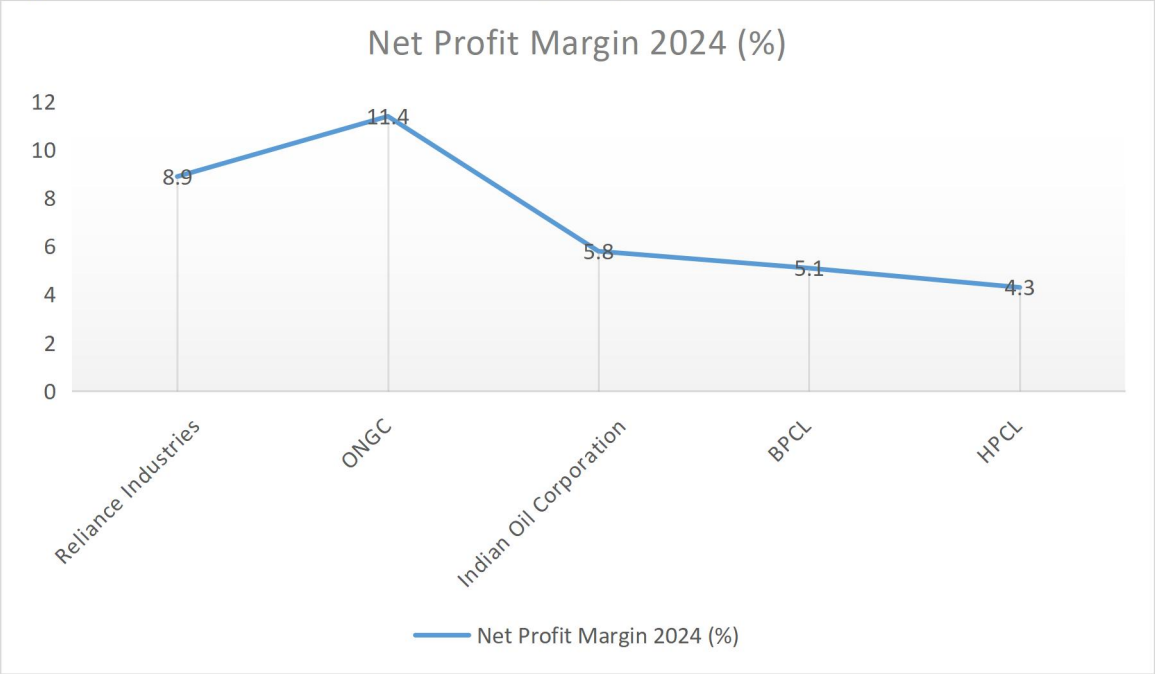
Interpretation

The above table represents the average Net Profit Margin of the selected companies during the study period. ONGC achieved the highest average margin of 10.7%, indicating stronger profitability and efficient revenue generation compared to the other companies. Higher oil prices and operational efficiency contributed positively to the company's profitability performance.

Reliance Industries maintained stable profitability with an average margin of 8.5%. The company benefited from diversified operations including petrochemicals, refining, retail, and telecommunications, which helped maintain consistent earnings despite market fluctuations.

The average margins of Indian Oil Corporation, BPCL, and HPCL remained comparatively lower because of higher operational costs and fluctuating refinery margins. The differences in average profitability indicate variations in operational efficiency, market strategy, and cost management among the selected companies.

Figure 2 – Overall Profit Contribution (2024)



Interpretation

The above table provides the latest net profit margin values for the year 2024, which can be used for pie chart and line graph presentation. The data shows that ONGC and Reliance Industries contributed the highest profitability performance among the selected companies. Their stronger margins indicate better operational efficiency, revenue generation capability, and cost control practices.

Indian Oil Corporation maintained moderate profitability performance, while BPCL and HPCL showed relatively lower margins because of higher refining and marketing costs. The graphical presentation of this data helps in understanding the profitability distribution and financial position of the selected companies more clearly.

Overall, the net profit margin analysis indicates that profitability in the oil and gas sector is highly influenced by crude oil price fluctuations, operational efficiency, market demand, and cost management strategies. Companies with diversified operations and stronger financial management maintained better profitability performance during the study period.

Conclusion

The present study analyzed the financial performance of selected oil and gas companies in India using various financial ratios and analytical techniques. The study mainly focused on profitability, liquidity, solvency, and operational efficiency during the period from 2020 to 2024. The selected companies for the analysis were Reliance Industries, ONGC, Indian Oil Corporation, BPCL, and HPCL. Based on the analysis and interpretation of financial data, the following major findings were identified.

The profitability analysis revealed that Reliance Industries and ONGC maintained stronger profitability performance compared to the other selected companies during the study period. Ratios such as Return on Assets (ROA), Return on Equity (ROE), and Net Profit Margin showed consistent improvement in these companies, especially during 2021 and 2022. The higher profitability was mainly due to better operational efficiency, diversified business operations, and improved market conditions after the pandemic period. However, slight fluctuations in profitability were observed during 2023 because of changes in crude oil prices and operational expenses.

Indian Oil Corporation, BPCL, and HPCL showed moderate profitability performance during the study period. Although these companies experienced growth in profitability during the recovery period after 2020, their financial performance remained lower compared to Reliance Industries and ONGC. Higher refining costs, market volatility, and operational expenses affected the profitability levels of these companies.

The liquidity analysis indicated that most of the selected companies maintained satisfactory liquidity positions during the study period. Current Ratio and Quick Ratio values showed that the companies were generally capable of meeting their short-term financial obligations. Reliance Industries maintained comparatively better liquidity management due to stronger cash flow generation and diversified business activities. However, BPCL and HPCL experienced fluctuations in liquidity ratios during certain years because of higher operational and inventory costs.

The solvency analysis showed that the selected companies relied significantly on debt financing due to the capital-intensive nature of the oil and gas industry. Debt-to-Equity Ratio analysis revealed that BPCL and HPCL maintained relatively higher debt levels compared to the other companies. Higher debt dependency increased financial risk and interest burden during periods of market instability. Reliance Industries and ONGC maintained comparatively balanced capital structures and stronger solvency positions during the study period.

Operational efficiency analysis using Asset Turnover Ratio and Inventory Turnover Ratio indicated variations in resource utilization among the selected companies. Reliance Industries demonstrated stronger operational efficiency and better utilization of assets compared to the other companies. ONGC also maintained stable operational performance during the study period. The remaining companies showed moderate efficiency levels because of fluctuations in production costs and operational activities.

Trend analysis revealed that the financial performance of most companies improved gradually after 2020 due to recovery in economic activities and increasing demand in the energy sector. However, fluctuations in crude oil prices, inflation, global market uncertainty, and changing government policies continued to affect company performance during certain years.

Overall, the study found that profitability, liquidity, solvency, and operational efficiency varied among the selected companies. Companies with stronger financial management practices, diversified operations, and efficient cost control maintained better financial performance during the study period. The findings of the study provide useful insights for investors, managers, researchers, and policymakers regarding financial performance evaluation and business sustainability in the oil and gas sector.

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