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A Study on Ratio Analysis Practices in Steel industry

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ABSTRACT

This practice involves the evaluation of various financial ratios derived from a company's financial statements, such as the balance sheet, income statement, and cash flow statement. The main objective of any company is profitable growth of enterprise to maximize the wealth of its shareholders. Analysis and interpretation of financial statements help in determining the liquidity position, profitability, efficiency and long-term solvency a firm. Ratio is an accounting technique to know the financial position of the business unit.

Ratio analysis is a fundamental tool utilized by companies to assess their financial performance and make informed decisions. It enables management to gauge the company's profitability, liquidity, solvency, efficiency, and overall financial health. It facilitates comparisons with industry benchmarks and historical performance, offering insights into relative strengths and weaknesses.

This research aims to evaluate financial viability and using of ratio analysis in the organization is being compared for five years from (2019-2023). By providing a comprehensive overview of financial performance and efficiency, ratio analysis serves as a crucial tool for stakeholders, including management, investors, creditors, and regulatory bodies, in assessing the company's financial viability and making informed decisions.

The Major source for this research is secondary data, based on that data various ratios, and statement of changes in Ratio analysis were Performed. The interpretations, conclusions, suggestions, Findings were drawn through them.

Keywords: Activity, Balance-Sheet, Financial Statements, Income Statement, Leverage, Liquidity, Profitability, Ratio Analysis etc.

Introduction

Ratio analysis is a powerful tool in financial analysis that involves the examination of relationships between different financial variables in a company's financial statements. The primary purpose of ratio analysis is to provide a quantitative understanding of a company's financial condition. This involves comparing different aspects of a company's financial statements, such as the income statement, balance sheet, and cash flow statement. The resulting ratios help in assessing key aspects of a company's financial position and performance.

Meaning: -

Ratio analysis is a financial analysis technique used to evaluate the relationship between different financial variables or metrics within a company. Ratio analysis refers to the process of evaluating and interpreting various financial ratios derived from a company's financial statements. These ratios are calculated by dividing one financial metric by another and provide insights into different aspects of a company's financial performance, position, and efficiency. These ratios help assess different aspects of a company's financial performance, position, and efficiency.

Ratio analysis is a fundamental tool in financial analysis, offering a systematic approach to assess and interpret financial data to support decision-making processes.

Definition: -

Ratio analysis is a quantitative procedure of obtaining a look into a firm's functional efficiency, liquidity, revenues, and profitability by analysing its financial records and statements. Ratio analysis is a very important factor that will help in doing an analysis of the fundamentals of equity. Ratios help evaluate the overall financial health of a company by examining its ability to meet short-term and long-term obligations, manage its resources efficiently, and generate profits. This assessment is crucial for investors, creditors, and management in gauging the company's stability and viability.

According to John J. Hampton: "Ratio analysis is a method of financial analysis used to assess a firm's performance. It involves comparing two figures from a firm's financial statements, such as sales and profits, to form a ratio that provides insight into the firm's activities."

According to Eugene F. Brigham and Joel F. Houston: "Ratio analysis involves the calculation of a number of ratios to evaluate the performance and financial condition of a firm. These ratios help assess liquidity, profitability, leverage, efficiency, and market performance."

According to Myers and Brealey: "Ratio analysis involves the use of various mathematical formulas to determine the relationship between different items appearing in the financial statements."

According to I.M. Pandey: "Ratio analysis is a technique of analysis and interpretation of financial statements to understand the financial strength, operational efficiency, profitability, and future prospects of the business."

Types of Ratio Analysis: -

- Liquidity Ratios:
- Current Ratio: Measures the company's ability to pay its short-term liabilities with its short-term assets.
- Quick Ratio (Acid-Test Ratio): Assesses the company's ability to cover its short-term liabilities with its most liquid assets.
- Profitability Ratios:
- Gross Profit Margin: Indicates the percentage of revenue that exceeds the cost of goods sold.
- Net Profit Margin: Measures the percentage of revenue that remains after deducting all expenses.
- Return on Assets (ROA): Measures the company's ability to generate profit from its assets.
- Return on Equity (ROE): Indicates the return generated on shareholders' equity.

Current Ratio:

The current ratio is a liquidity ratio that measures a company's ability to pay its short-term liabilities with its short-term assets. It is calculated by dividing the total current assets by the total current liabilities. The current assets typically include cash, cash equivalents, accounts receivable, inventory, and other assets that are expected to be converted into cash within one year. Current liabilities are obligations that are due within one year, such as accounts payable, short-term loans, and accrued expenses.

Current Ratio= Current assets / Current liabilities

Current Assets = Cash + Marketable Securities + Accounting Receivables +Notes and bills Receivables+ Inventories

Current Liabilities= Accounts Payable + Notes and bills +Outstanding Expenses + Short Term Loans

Quick Ratio:

The quick ratio, also known as the acid-test ratio, is a liquidity ratio that assesses a company's ability to cover its short-term liabilities with its most liquid assets. It provides a more conservative measure of liquidity than the current ratio because it excludes inventory, which may not be easily convertible into cash in the short term. The quick assets typically include cash, cash equivalents, short-term investments, and accounts receivable. These are assets that can be quickly converted into cash within a short period.

$$Quick\ Ratio = \frac{\text{current assets} - \text{inventory}}{\text{current liabilities}}$$

Gross Profit Margin Ratio:

The gross profit ratio (GP ratio) is a financial ratio that measures the profitability of a company by dividing its gross profit by net sales. The gross profit ratio is a percentage-based metric that shows how efficiently a company generates profit from its core business operations.

$$Gross\ Profit\ Margin = \frac{Revenue - COGS}{\text{Revenue}} * 100$$

Review of Literature

Maria Zain (2018), in this article he discusses about the return on assets is an important percentage that shows the company's ability to use its assets to generate income. He said that a high percentage indicates that company's is doing a good utilizing the company's asset to generate income. He notices that the following formula is one method of calculating the return on assets percentage. Return on Assets = Net Profit/Total Assets. The net profit figure that should be used is the amount of income after all expenses, including taxes.

James Clausen (2018), in this article expresses about the liquidity ratio. He Pronounce that it is analysis of the financial statements is used to measure company performance. It also analyses of the income statement and balance sheet. Investors and lending institutions will often use ratio analyses of the

financial statements to determine a company's profitability and liquidity. If the ratios indicate poor performance, investors may be reluctant to invest. Therefore, the current ratio or working capital ratio, measures current assets against current liabilities.

Khan (2019), found that the bank with higher total capital, deposits, credits, or total assets does not always mean that has better profitability performance. According to Dr. M. Ravichandran the financial performance can be measured by using various financial tools such as profitability ratio, solvency ratio, comparative statement, etc. Based on the analysis, findings have been arrived that the company has got enough funds to meet its debts & liabilities, the income statement of the company shows sales of the company increased every year at good rate and profit also increased every year.

M. Ganga (2020), on the evaluation of financial performance of Equites Micro Finance Private Limited in Chennai. According to them financial analysis is important to plan and control the firm's financial resources. They adopted various research techniques to find the evaluation of financial performance of the organization. They found that the managers must concentrate on gray area which would be useful for future growth of the company.

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Gopinathan Thachappilly (2020), in this article he discusses about the Financial Ratio Analysis for Performance evaluation. Its analysis is typically done to make sense of the massive number of numbers presented in company financial statements. It helps evaluate the performance of a company, so that investors can decide whether to invest in that company. Here we are looking at the different ratio categories in 10 separate articles on different aspects of performance such as profitability ratios, liquidity ratios, debt ratios, performance ratios investment evaluation ratios.

Research gap

The research gap identified in this study revolves around the current literature predominantly focuses on the application of traditional ratio metrics to assess a company's financial health. However, there is a scarcity of in-depth studies that delve into the effectiveness and limitations of ratio analysis in the context of emerging financial complexities, global economic shifts, and the dynamic business landscape within the company.

Many ratio analysis studies focus on general industries or sectors. There could be a research gap in conducting ratio analysis tailored to specific industries or niche markets, considering the unique dynamics and challenges they face.

Investigating the unique challenges and opportunities faced in ratio analysis, such as limited financial resources, access to credit, or reliance on non-traditional metrics, could help tailor ratio analysis frameworks to better suit their needs.

Scope of the Study

The scope of the study on ratio analysis encompasses a comprehensive exploration and evaluation of financial metrics to provide a nuanced understanding of an organization's financial performance. This study seeks to contribute to the existing body of knowledge by addressing these aspects and offering a more contemporary and holistic perspective on the concept of ratio analysis in financial analysis and decision-making. Further the study is based on last 5 years Annual Reports.

Need of the Study

Financial forecasting is an integral part of financial planning. Forecasting uses past data to estimate the future financial requirements. Ratio analysis is a powerful tool of financial analysis. A ratio is used as a benchmarking for evaluating the financial position and performance of the firm. Ratios help to summarizes large quantities of financial data and to make qualitative judgement about the firm's financial performance. With the help of ratio's one can determine.

- The ability of the firm to meet its current obligations.
- The extent to which the firms has used its long-term solvency by borrowing funds.
- The efficiency with the firm is utilizing its assets in generating sales revenue.
- The overall operating efficiency and performance of the firm.

Analysis and interpretation of various accounting ratios gives a skilled and experienced analyst, a better understanding of the financial condition and performance of the firm.

Thus, ratio analysis can assist management in its basic function of forecasting, planning, co-ordination, control and communication.

Hypothesis of the Study

A hypothesis is a proposed explanation or statement that can be tested through research and experimentation. In scientific research, hypotheses are formulated based on observations, existing knowledge, and theoretical frameworks. Hypotheses are used to make predictions about the outcome of experiments or investigations and are essential for the scientific method. A hypothesis serves as a testable statement or prediction that guides scientific inquiry and helps researchers draw conclusions about the relationships between variables.

Hypothesis used for the study:

HO- Null Hypothesis

- There is no significant difference in the profitability ratios (e.g., gross profit margin, return on equity) of manufacturing companies before and after implementing a new cost-saving technology.
- There is no significant relationship between leverage ratios (e.g., debt-to-equity ratio, debt ratio) and firm performance among technology companies.

H1-Alternative Hypothesis

- There is a significant difference in the profitability ratios of manufacturing companies before and after implementing a new cost-saving technology.
- There is a significant difference in the profitability ratios of manufacturing companies before and after implementing a new cost-saving technology.

Limitations of the Study

The following are the various limitations involved in the study.

- ➢ Ratios are generally calculated from past financial statements and they are not indicators for the future.
- ➢ Since financial matters are sensitive in nature, they could not be acquired easily.
- ➢ One serious limitation of ratio analysis is arises out of the difficulty associate with their comparison to draw inference.
- ➢ Most of the data is collected from secondary source and there may be chances for bias in case of result obtained.
- ➢ This study about the company is useful only where it is compared with standards of the industry.

Research Methodology & Design

The research will adopt a mixed-methods approach, combining quantitative surveys and qualitative interviews. Methodology refers to systematic procedure of collecting information in order to analyze and verify phenomena at Amma Try Sponge & Power (P) LTD.

The collection of information is done with two principal sources:

Primary data:

Collection of primary data and the information which is not available in Annual Reports by way of observations, interviews and discussions with the officials.

Secondary data:

This study is generally based on the secondary data, which was obtained from the published source i.e. annual reports for a period of five years from 2019 to 2023.

The secondary data is collected from the following sources

- ➢ Annual financial reports
- ➢ Books of the company

SAMPLING DESIGN

Sampling unit: Financial Statements.

Sampling Size: Last five years financial statement.

Statement of the problem

The problem addressed in this study revolves steel industry is playing a vital role in the factors like production, technology, personnel, finance etc. Financial aspects become more important for the development and expansion of the industry. Many researchers conducted the study on the Indian steel industry. Financial ratios of the company indicate the financial health of the company. Prior to recession Indian steel industry was suffering from financial crunches but it becomes acute after the recession. Various financial factors affect the profitability of the company.

Objectives of the study

- To analyze the liquidity position of the company.
- To analyze both long-term and short-term solvency of the company.
- To analyze the profitability position of the company.
- To analyze the management's efficiency of the company.
- To make the overall performance analysis of the company.

Data Analysis and Interpretation

Current Ratio

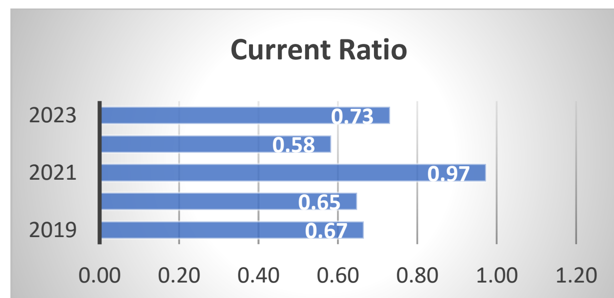
Current ratio represents the liquidity position and measures how far the society is able to pay to its obligation. This has been calculated by dividing current assets by current liabilities which indicates the availability of current assets in rupee for every one rupee of current liabilities. Generally, a current ratio of 2:1 is considered to represent a satisfactory current financial condition.

$$Current\ Ratio = \frac{\text{Current assets}}{\text{Current liabilities}}$$

Table-1: Showing Current Ratio

YEARS	CURRENT ASSETS	CURRENT LIABILITIES	RATIO
2019	17035.58	25593.65	0.67
2020	20009.19	30871.3	0.65
2021	29274.4	30067.6	0.97
2022	31289.57	53664.83	0.58
2023	33949.52	46437.3	0.73

Fig 1: Showing Current Assets Ratio



Inference:

It is inferred from the table that from 2021 current ratio is in increasing stage and from 2022-2023 is in decreasing stage. However, the ratio was above the standard norm so, the ratio was not satisfactory. The company's liquidity position has been fluctuating over the years. While there was improvement in 2021 and 2023, the current ratio dipped below 1 in the other years, suggesting potential challenges in meeting short-term obligations during those periods.

Quick Ratio

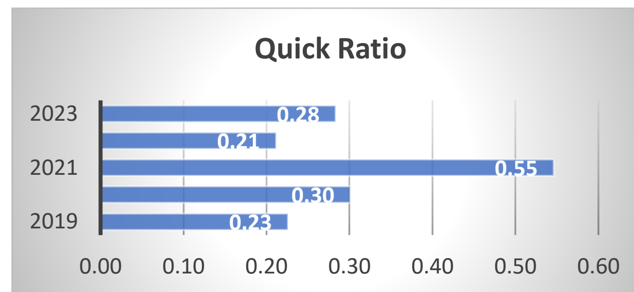
The quick ratio, also known as the acid-test ratio, is a financial metric used to evaluate a company's short-term liquidity and its ability to meet immediate liabilities without selling inventory. It's calculated by dividing the sum of a company's cash, cash equivalents, short-term investments, and accounts receivable by its current liabilities. A higher quick ratio indicates a stronger liquidity position, suggesting that a company is better equipped to cover its short-term debts.

$$Quick\ Ratio = \frac{Quick\ Assets}{\text{Current Liabilities}}$$

Table-2: Showing Quick Ratio

YEARS	QUICK ASSETS	CURRENT LIABILITIES	RATIO'S
2019	5780.24	25593.65	0.23
2020	9292.53	30871.3	0.30
2021	16416.89	30067.6	0.55
2022	11346.63	53664.83	0.21
2023	13153.96	46437.3	0.28

Fig 2: Showing Quick Ratio



Inference:

It is inferred from the table that from 2021 quick ratio is in increasing stage and from 2022-2023 is in decreasing stage. Quick ratio indicates the extent to which you could pay current liabilities without relying on the safe of inventory. The standard norm for the quick ratio is 1:1. However, the ratio was above the standard norm.

Net working capital Ratio:

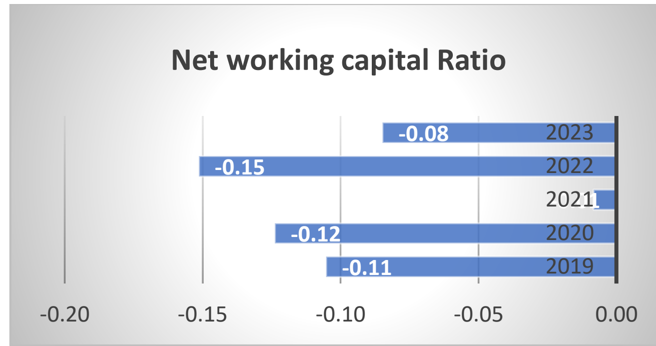
The net working capital ratio is a financial metric used to assess a company's liquidity and operational efficiency. It is calculated by dividing the difference between a company's current assets and its current liabilities by its total assets. A high net working capital ratio generally indicates that a company has more current assets than current liabilities, suggesting it is in a good position to meet its short-term obligations. Conversely, a low ratio may suggest potential liquidity issues.

$$Net\ working\ capital\ Ratio = \frac{\text{Net working capital}}{\text{Net assets}}$$

Table-3: Showing Networking capital Ratio

YEARS	NET WORKING CAPITAL	NET ASSETS	RATIO
2019	-8558.07	81,287.78	-0.11
2020	-10,862.11	87,700.23	-0.12
2021	-793.2	95,978.32	-0.01
2022	-22,375.26	1,47,809.02	-0.15
2023	-12,487.78	1,47,285.29	-0.08

Fig 3: Showing Networking capital Ratio



Inference:

It is inferred from the table that from 2021 is better than the remaining years. The negative values of the ratio indicate that current liabilities are consistently higher than current assets. This implies potential liquidity issues, as the company may struggle to meet its short-term obligations with its current asset base.

Gross Profit Ratio:

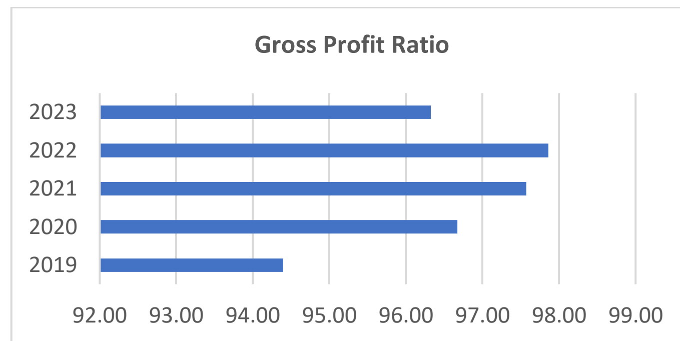
The gross profit ratio, also known as the gross profit margin, is a financial metric that measures the proportion of revenue that exceeds the cost of goods sold (COGS) as a percentage of total revenue. It indicates how efficiently a company is producing goods or services before considering other operating expenses. A higher gross profit ratio indicates that a company is generating more profit from each dollar of sales revenue, which is generally favourable. Conversely, a lower ratio suggests that a company's production costs are eating into its revenue, potentially impacting profitability.

$$\text{Gross Profit Ratio} = \frac{\text{Gross Profit}}{\text{Revenue}} * 100$$

Table-4: Showing Gross Profit Ratio

YEARS	GROSS PROFIT	REVENUE	RATIO*100
2019	68,923.36	73,015.79	94.40
2020	58,815.57	60,840.09	96.67
2021	82,828.16	84,888.03	97.57
2022	1,27,681.40	1,30,473.37	97.86
2023	1,27,466.52	1,32,332.10	96.32

Fig 3: Showing Gross Profit Ratio



Inference:

It is inferred from the above table that the trend in gross profit ratios shows an improvement in profitability from 2019 to 2022, with a slight dip in 2023. Analyzing these ratios over time can help identify trends, strengths, and areas for improvement in a company's financial performance. The trend indicates an improvement in the company's efficiency in managing production costs relative to revenue from 2019 to 2022, with a slight decline in 2023.

Findings:

- ❖ Company has reached the standard ratio in the present year i.e. 2:1. So, the company apposition to repayment of its short- term liabilities.
- ❖ The company is maintaining quick assets over the quick ratio. So, the quick assets would meet the quick liabilities.
- ❖ Current ratio during the period 2019-2023 is found to be fluctuations.
- ❖ Current ratio of firm was satisfactory but it has to take measures to improve further.

Suggestions:

- ❖ The company has to put effort to reach the 2:1 standard of current ratio. Hence it is advised to follow the same ratio in order to avoid unnecessary blockage of funds in current assets which will result in excessive cost for the company.
- ❖ To increase the liquidity position of the firm the company should make additional investment in current assets and reduce the current liabilities.
- ❖ The company is utilizing the fixed assets, which majorly help the growth of the organization. The company should maintain it perfectly.
- ❖ The gross profit decreased comparatively than previous year. So the gross profit must be improved.

Conclusion

As per the project data is concerned, it is concluded that the company's financial position is good because the company's leverage, activity and profitability positions are good and the company have to increase its liquidity position for better performance in future.

- ➢ This project is as a reference guide or as a source of information.
- ➢ It gives the idea about the financial analysis of firm.
- ➢ The study aims to study the liquidity position of the firm.
- ➢ Ratio analysis has been used to analysis the financial position of the firm.

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