International Journal of Scientific Research in Engineering and Management (IJSREM)
Volume: 09 Issue: 04 | APRIL - 2025 SJIF Rating: 8.586 ISSN: 2582-3930

Trend Analysis of Financial Performance by Using Ratios

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ABSTRACT

The assessment of financial performance is crucial for understanding the financial health, stability, and sustainability of any business organization. This research paper focuses on conducting a detailed trend analysis of financial performance using key financial ratios over a defined period. Ratio analysis is a widely used quantitative tool that aids in evaluating a company's profitability, liquidity, solvency, and operational efficiency. By analyzing financial ratios over multiple years, this study identifies trends and patterns that reflect the company's financial behavior, growth trajectory, and strategic direction.

The core objective of the study is to interpret the changing values of essential financial ratios such as the current ratio, quick ratio, debt-equity ratio, gross profit ratio, net profit ratio, return on assets (ROA), return on equity (ROE), and inventory turnover ratio. These ratios are calculated using secondary data collected from audited financial statements and annual reports of the selected organization or industry. The trend analysis helps in comparing the company's performance over different financial years, thereby highlighting strengths, weaknesses, and potential risks.

The findings of the study reveal significant insights into the firm's financial management practices, investment decisions, and cost control measures. Positive trends indicate strong financial discipline, while negative trends provide early warning signals that call for corrective actions. This research serves as a valuable tool for investors, creditors, management, and financial analysts to make data-driven decisions. Moreover, it reinforces the importance of continuous financial monitoring and the strategic use of ratio analysis in achieving long-term business sustainability and growth.

***Keywords*:** Financial performance, trend analysis, ratio analysis, liquidity ratios, profitability ratios, solvency ratios, efficiency ratios, current ratio, debt-equity ratio, return on equity, financial health, business sustainability, financial decision-making, operational efficiency, investment analysis.

1. INTRODUCTION

Trend analysis of financial performance using ratios is a method of evaluating a company's financial health over time by analyzing key financial ratios. This technique helps identify patterns, strengths, and weaknesses in a company's financial position by comparing ratios across multiple periods. By examining trends in profitability, liquidity, efficiency, and solvency ratios, businesses and investors can assess long-term financial stability and predict future performance. This analysis is crucial for making informed decisions related to investments, creditworthiness, and operational improvements.

Financial ratio trend analysis involves tracking ratios such as the Current Ratio, Debt-to-Equity Ratio, Net Profit Margin, and Return on Investment (ROI) over several years to detect growth patterns or financial distress. A rising profitability ratio, for example, indicates improved financial health, while declining liquidity ratios may signal potential cash flow issues. This method not only provides insights into past and present financial performance but also helps forecast future financial trends, enabling businesses to implement proactive financial strategies.

TREND ANALYSIS

Trend analysis is the widespread practice of collecting information and attempting to spot a pattern. In some fields of study, the term has more formally defined meanings.

Although trend analysis is often used to predict future events, it could be used to estimate uncertain events in the past, such as how many ancient kings probably ruled between two dates, based on data such as the average years which other known kings reigned.

Project Management

In project management, trend analysis is a mathematical technique that uses historical results to predict future outcome. This is achieved by tracking variances in cost and schedule performance. In this context, it is a project management quality control tool.

Statistics

In statistics, trend analysis often refers to techniques for extracting an underlying pattern of behavior in a time series which would otherwise be partly or nearly completely hidden by noise. If the trend can be assumed to be linear, trend analysis can be undertaken within a formal regression analysis, as described in Trend estimation. If the trends have other shapes than linear, trend testing can be done by non-parametric methods, e.g. Mann-Kendall test, which is a version of Kendall rank correlation coefficient. Smoothing can also be used for testing and visualization of nonlinear trends.

Trend analysis can be also used for word usage, how words change in the frequency of use in time (diachronic analysis), in order to find neologisms or archaisms. It relates to diachronic linguistics, a field of linguistics which examines how languages change over time. Google provides tool Google Trends to explore how particular terms are trending in internet searches. On the other hand, there are tools which provide diachronic analysis for particular texts which compare word usage in each period of the particular text (based on timestamped marks), see e.g. Sketch Engine diachronic analysis (trends).

FINANCIAL RATIO

A financial ratio or accounting ratio states the relative magnitude of two selected numerical values taken from an enterprise's financial statements. Often used in accounting, there are many standard ratios used to try to evaluate the overall financial condition of a corporation or other organization. Financial ratios may be used by managers within a firm, by current and potential shareholders (owners) of a firm, and by a firm's creditors. Financial analysts use financial ratios to compare the strengths and weaknesses in various companies. If shares in a company are publicly listed, the market price of the shares is used in certain financial ratios.

Ratios can be expressed as a decimal value, such as 0.10, or given as an equivalent percentage value, such as 10%. Some ratios are usually quoted as percentages, especially ratios that are usually or always less than 1, such as earnings yield, while others are usually quoted as decimal numbers, especially ratios that are usually more than 1, such as P/E ratio; these latter are also called multiples. Given any ratio, one can take its reciprocal; if the ratio was above 1, the reciprocal will be below 1, and conversely. The reciprocal expresses the same information, but may be more understandable: for instance, the earnings yield can be compared with bond yields, while the P/E ratio cannot be: for example, a P/E ratio of 20 corresponds to an earnings yield of 5%.

2. RESEARCH METHODOLOGY

SOURCES OF DATA

Primary data collection is necessary when a researcher cannot find the data needed in secondary sources. Three basic means of obtaining primary data are observation, surveys, and experiments. The choice will be influenced by the nature of the problem and by the availability of time. For this research study Questionnaire was the Primary Data source which is applied.

SAMPLE SIZE: It refers to the number of elements of the population to sample. Sample size here is 150.

DATA PROCESSING: The study has been carried out with the help of the following data:

Primary data

The primary data was collected through the use of structured questionnaire from the target respondents using survey method.

Secondary data

The secondary data was collected from journals and internet.

TOOLS FOR ANALYSIS

- Percentage Analysis
- Chart Analysis

3. DATA ANALYSIS

LIQUIDITY RATIOS

CURRENT RATIO:

Current ratio is caluculated by dividing the current assets by current liabilities. current assets include cash and those assets that can be converted into cash with in a year,such as marketable securities ,debtors and inventories .prepaid expenses also includes in current assets. Current liabilities include creditors , bills payable , arrived expenses , short term bank loan , income tax liability and long term debt maturing in the current year.

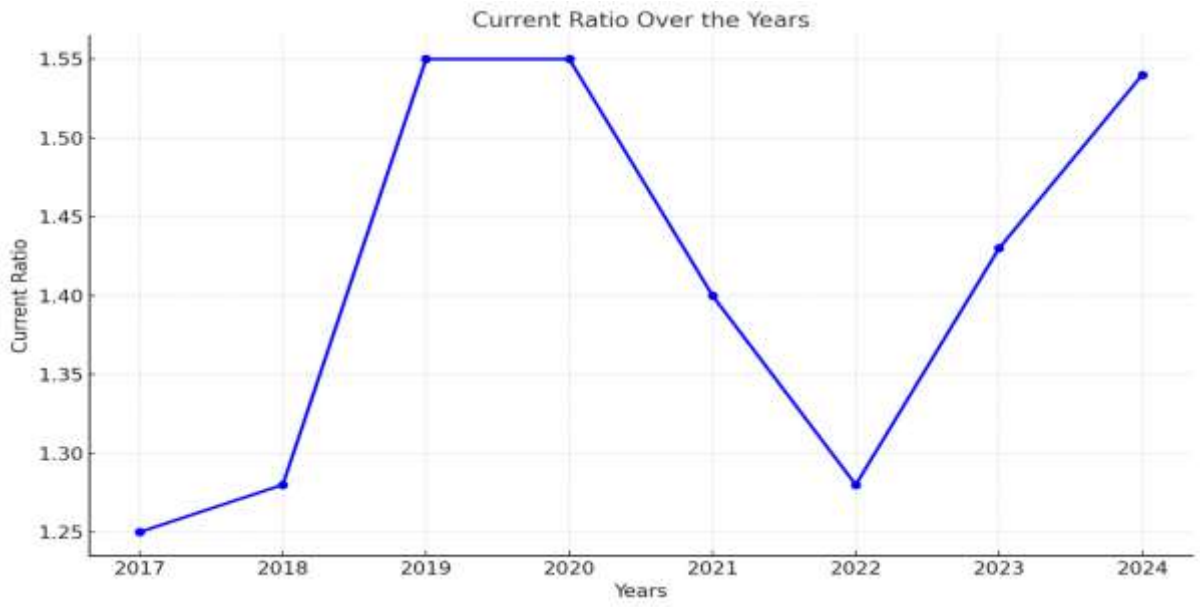
$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

TABLE:1-CALCULATION OF CURRENT RATIO OF CHAITANYA CHEMICALS

Years	Current Assets	Current Liabilities	Current Ratio
2017	71202015.47	57373712.67	1.25
2018	74246816.83	58326482.01	1.28
2019	69295863.95	44798523.28	1.55
2020	101626879	65846695.30	1.55
2021	81235678.72	58351874.11	1.40
2022	70031973.06	55044150.24	1.28

2023	78585416.87	55075807.53	1.43
2024	82758322.34	53873005.4	1.54

GRAPH: Representation of current ratio of Chaitanya chemicals.



INTERPRETATION:

The current ratio of the company shows fluctuating trend indicating higher ratio in the year 2018-19 and 2019-20 is 1.55 and 1.55 and low ratio and also decreased trend in the remaining years 2020 – 21 is 1.40 . The standard level of current ratio is 2:1 and in the next year it will be slight increased in 2023-24.

QUICK RATIO:

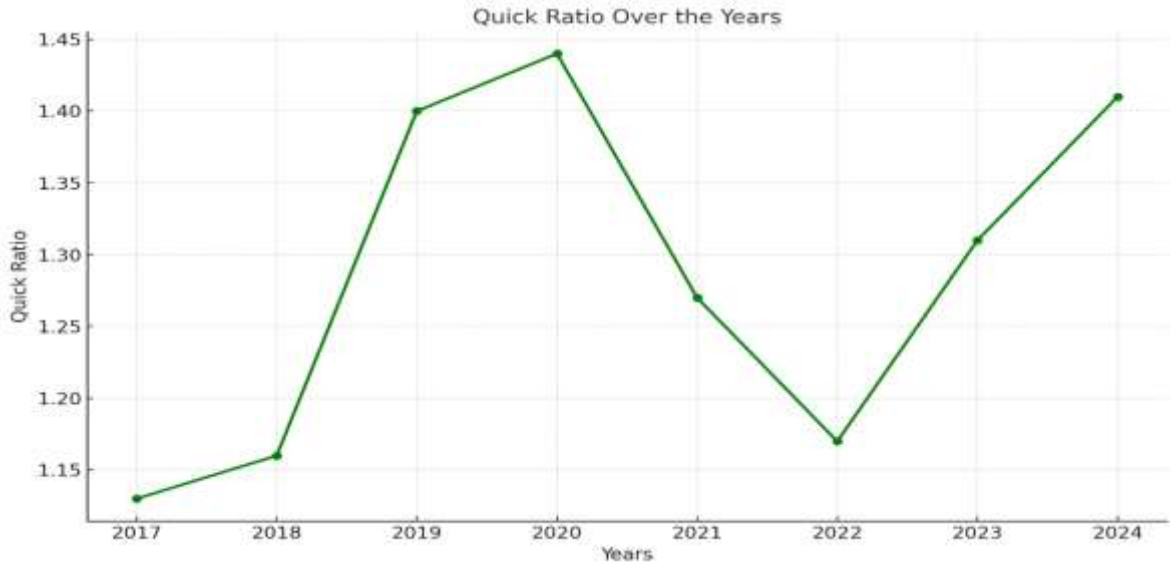
The above chart reveals that the quick ratio of chaitanya chemicals Pvt.Ltd. Quick ratio establishes a relationship between quick or liquid assets and liabilities. An asset is a liquid if it can be converted into cash immediately. inventories are considered to be less liquid. The quick ratio is found out by dividing quick assets by current liabilities. A quick ratio of 1 to 1 is considered to represent a satisfactory current financial condition.

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

TABLE:2-CALCULATION OF QUICK RATIO OF CHAITANYA CHEMICALS

Years	Quick Assets	Current Liabilities	Quick Ratio
2017	64680215.5	57337712.67	1.13
2018	67773000.8	58326482.01	1.16
2019	62697218	44798523.28	1.40
2020	94687172	65846695.30	1.44
2021	74208141.7	58351874.11	1.27
2022	63615144.88	55044150.24	1.17
2023	71957093.1	55075807.53	1.31
2024	75943409.32	53873005.4	1.41

GRAPH: Representation of quick ratio of chaitanya chemicals.



INTERPRETATION:

The Quick ratio of the company shows fluctuating trend indicating higher ratio in the year 2018-19 and 2019-20 is 1.40 and 1.44 and low ratio and also decreased trend in the remaining years 2020 – 21 is 1.27 . The standard level of quick ratio is 1:1 and in the next year it will be slight increased in 2023-24.

CASH RATIO:

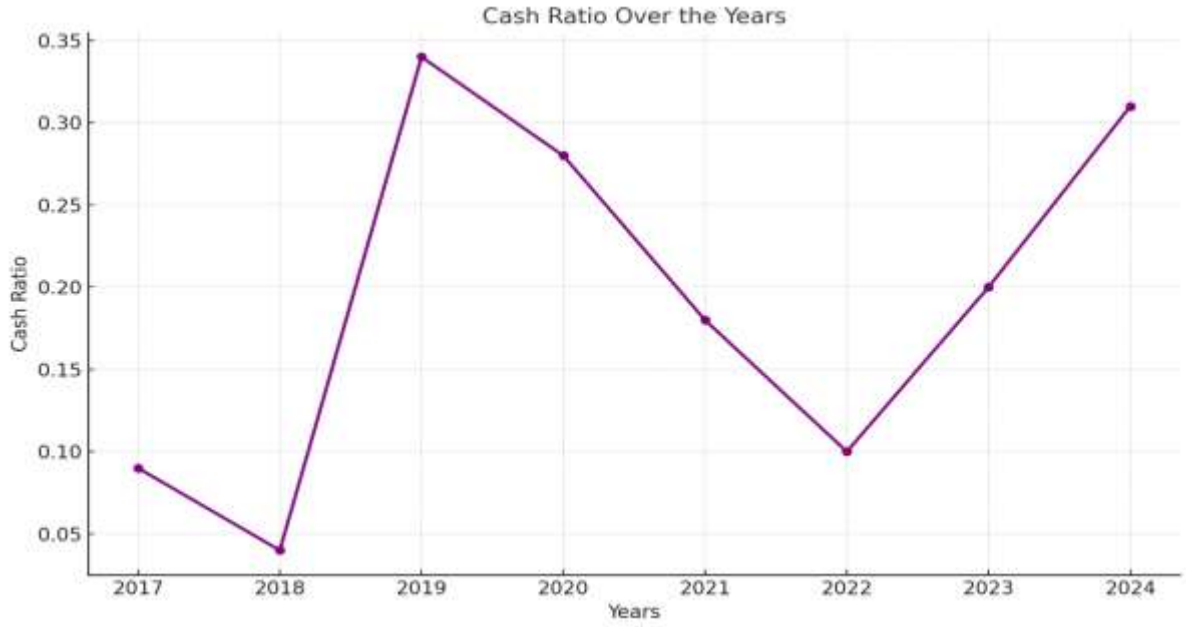
Cash is the most liquid asset. A financial analyst may examine cash ratio and it's equivalent to current liabilities. Trade investment or marketable securities are equivalent of cash. the standard ratio is 0.5:1 or 50:100(%).

$$\text{Cash Ratio} = \frac{(\text{Cash} + \text{Marketable Securities})}{\text{Current Liabilities}}$$

TABLE:3-CALCULATION OF CASH RATIO OF CHAITANYA CHEMICALS

Years	Cash	Current Liabilities	Cash Ratio
2017	5158132.91	57373712.67	0.09
2018	2475733.96	58326482.01	0.04
2019	15442122	44798523.28	0.34
2020	18169394.8	65846695.30	0.28
2021	10511643.8	58351874.11	0.18
2022	5071268.97	55044150.24	0.10
2023	10281914.34	55075807.53	0.20
2024	16578977.01	53873005.4	0.31

GRAPH: Representation of cash ratio of chaitanya chemicals.



INTERPRETATION:

The Cash ratio of the company shows fluctuating trend indicating higher ratio in the year 2018-19 and is 0.34 and low ratio and also decreased trend in the remaining years 2019-20 and 2020 – 21 is 0.28 and 0.18. The standard level of Cash ratio is 0.5:1 and in the next year it will be slight increased in 2021-22,2022-23 and 2023-24.

4. CONCLUSION

In essence, Chaitanya companies, operating across diverse chemical and pharmaceutical sectors, are driven by a shared vision of delivering high-quality products to a global clientele. Their commitment to rigorous quality standards, coupled with a focus on continuous research and development, underpins their pursuit of excellence. Whether specializing in catalysts and adsorbents or active pharmaceutical ingredients, Chaitanya entities prioritize strong customer relationships and aim to be reliable, innovative partners. This dual emphasis on

product quality and customer-centricity positions them for sustained growth and success in their respective industries.

5. REFERENCES

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