

Evaluating Working Capital Efficiency: A Case Study of Earthbe Agro Preserve Pvt. Ltd., Nashik, Maharashtra.

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ABSTRACT

This study analyses the working capital management of M/s. Earth Be Agro Preserves Pvt. Ltd., focusing on its impact on liquidity and profitability. The company, engaged in dehydrated food production, faces challenges like excess inventory and low receivable turnover, which strain liquidity. While accounts payable are well managed, inefficient working capital practices affect profitability. The study recommends improved inventory control, stricter credit policies, and better cash flow management to enhance financial performance.

A detailed analysis of four years' financial data was conducted using key ratios. The findings indicate the need for a balanced approach to working capital components. Implementing just-in-time inventory and strengthening customer payment follow-ups can improve efficiency. Enhancing financial planning will also support sustainable growth. Overall, the study offers practical insights to optimize working capital and strengthen the company's financial health.

KEYWORDS: Working Capital, Liquidity, Profitability, Inventory, Receivables, Payables, Cash Flow, Nashik.

INTRODUCTION

Income tax is a direct tax levied by the government on the income of individuals, Hindu Undivided Families (HUFs), companies, firms, associations, and other entities as per the Income Tax Act, 1961. Introduced by Sir James Wilson in 1860, income tax serves as a vital source of government revenue to fund law enforcement, national security, and socio-economic welfare programs aimed at reducing the wealth gap. Administered by the Central Board of Direct Taxes (CBDT) under the Ministry of Finance, income tax collections have grown significantly, reaching ₹11.17 lakh crore in 2018–19. Income is categorized into salary, business profits, house property, capital gains, and other sources. Taxpayers are required to file Income Tax Returns (ITRs) annually, using one of seven prescribed forms—ITR-1 to ITR-7—depending on their income type and taxpayer category. Income tax ensures balanced socio-economic growth and operates as a central subject under the Indian Constitution.

REVIEW OF LITERATURE

1. **Verma (2015)** study examined the working capital management in Tata iron and steel company ltd, Indian iron and steel company and steel authority of India ltd. during the period of 1978-1979 to 1985-1986 there are using various financial and statistical techniques finally concluded the three-firm use of bank borrowings to finance the working capital requirement.

2. **Vijaykumar and A. Venkatachalam (2016)** the study focuses Tamil Nadu Sugar Corporation for the period of 1985-86 to 1993-94. That indicate the corporation has maintain moderate level of working capital.in that long term funds have been used for meeting short term liability and excess liability. This period of study to as affected the profitability.
3. **Akash B. Selkari & Omdeo Ghyar (2016)** conducted a “Study on Working capital of Mahindra and Mahindra Ltd” for a period of 3 years from 2015-18. To study the working capital of the company ratio analysis technique was used. They came to an end that the working capital of the company was satisfactory because of maintaining proper inventory levels, cash, and other current assets and a decrease in the current liabilities and provisions.
4. **Bansal (2017)** researcher study the working capital management in Himachal Pradesh Agro industries for the period of 1985-86 to 1994-95 with the help of various financial tools that are define working capital, cash inventory, receivable and production capacity have not been managed properly by the company under study.
5. **Raheman Abdul and Mohamed Nasr (2018)** in that study he observed that working capital management and its effect on liquidity as well as profitability of firm. He selected 94 Pakistani firm on Karachi stock exchange for 6 years period i.e. 1999-2004.he used various tool and techniques of persons correlation and regression analysis. Finally find the negative and positive relationship in working capital management in a firm.
6. **Paul (2018)** this is comprehensive study of working capital management in motor industries company limited. During the period of 2001 to 2005 for 5year data collected. To analysis purpose uses various kinds of ratio analysis. Finally shows that working capital of company under study has not been managed efficiently and effectively.
7. **Dr. V. Bhuvanewari (2020)** highlighted the working capital which will determine whether the position of the company from the working capital point of view is sound and satisfactory. She concluded that the overall working stability, soundness and overall financial performance have improved over the years.
8. **Awalakki Manjunath (2020)** has studied the efficiency of working capital management an efficiency index is constructed and compared with firm’s profitability, and Return on Current Assets is used as proxy for measuring the firms’ Profitability. The paper used statistical tools like correlation, and regression model, with diagnostic tests for justification of accuracy of the model. The study highlights that selected firms doesn’t have significant relationship with earnings of the firms. The importance of Working capital management is not new the finance literature.

OBJECTIVES OF THE STUDY

1. To evaluate the effectiveness of working capital practices using ratio analysis.
2. To analyze liquidity and efficiency in working capital components.
3. To test the correlation between working capital efficiency and profitability
4. To identify gaps in current practices and propose improvements.

HYPOTHESES OF THE STUDY

❖ Hypothesis 1: Liquidity Management

H0: There is no significant difference in the liquidity position of Earth Be Agro Preserves Pvt. Ltd. between the current year and the previous year.

H1: There is a significant difference in the liquidity position of Earth Be Agro Preserves Pvt. Ltd. between the current year and the previous year.

❖ Hypothesis 2: Working Capital Efficiency

H0: There is no significant correlation between working capital efficiency and the Net and Gross Profit Ratios.

H1: There is a significant correlation between working capital efficiency and the Net and Gross Profit Ratios

RESEARCH METHODOLOGY

This project “A Study of Working Capital Management of M/s. Earth Be Agro Preservers Pvt. Ltd. For the year 2024-25” is based on an analysis of the company’s financial statements over the past four years. The study evaluates the company’s liquidity, selected for its relevance and purpose. Both primary and secondary data were collected using appropriate data collection methods.

Source of Data

Data for this study was collected through both primary and secondary sources. Primary data was gathered using a structured questionnaire. Secondary data was obtained from company websites, financial reports, journals, government publications, academic papers, media reports, and online databases, providing a comprehensive foundation for analysing working capital management.

Research Design

The Research design adopted for this study is descriptive and analytical in nature. It focuses on evaluating the working capital management practices of M/s. Earth Be Agro Preserves Pvt. Ltd. over a four-year period. The sample size includes financial data from one company over four financial years. Descriptive analysis helps understand the current status of working capital components, while analytical tools such as ratio analysis and trend analysis are used to assess efficiency and financial health. This structured design supports meaningful conclusions and practical recommendations.

Sampling Technique

The sampling technique used in this study is purposive sampling. It involves the deliberate selection of M/s. Earth Be Agro Preserves Pvt. Ltd. as the sample unit, based on the relevance of its operations to the research topic. The study focuses on four years of financial data to analyse working capital management practices and their impact on the company’s financial performance.

- **Type of Study:** Descriptive and analytical
- **Sampling:** Purposive sampling (one company over four years)
- **Data Sources:** Financial statements, interviews, internal documents
- **Tools:** Ratio analysis, trend analysis, Z-test, correlation coefficient
- **Limitations:** Short duration (2 months), single-company focus, limited external data

Limitations of the Study

This study on working capital management at M/s. Earth Be Agro Preservers Pvt. Ltd. has several limitations. The most significant is the short duration of just two months, which limits the ability to assess long-term trends. The focus on a single company incorporated in 2021 restricts the scope and generalizability of the findings. Data was collected only from internal sources within the company, with no external input. Additionally, the study relies heavily on secondary data such as annual reports and limited website information, which may not fully reflect the current financial condition. These factors may affect the accuracy of the conclusions.

DATA ANALYSIS

Table No.01 Calculation of Operating Cycle

Sr. No.	Particular	31/03/2021	31/03/2022	31/03/2023	31/03/2024
		Amt (Rs.)	Amt (Rs.)	Amt (Rs.)	Amt (Rs.)
1	Beginning Inventory	-	-	3,44,596	783336.85
2	Ending Inventory	-	3,44,596	7,83,337	326537.62
3	Beginning Trade Receivable	-	28,54,350	13,00,886	5543793
4	Ending Trade Receivable	28,54,350	13,00,886	55,43,793	11049166
5	Beginning Trade Payable	-	39,78,257	12,00,446	7660261
6	Ending Trade Payable	39,78,257	12,00,446	76,60,261	5518630
7	Credit Sale	40,57,822	34,97,731	78,39,190	24584488
8	Cost of Goods Sold (COGS)	39,78,257	34,69,170	67,68,398	23649056
Inventory Period (Days)		0.00	18.13	30.41	8.56
Account Receivable Period (Days)		128	217	159	123
Gross Operating Cycle (Days)		128	235	190	132
Less: - Account Payable Period		183	272	239	102
Net Operating Cycle		-54.13	-37.50	-49.16	30.04

Interpretation:

From 2021 to 2023, Earth Be Agro Preserves Pvt. Ltd. had a negative Net Operating Cycle, meaning it managed supplier payments better than inventory and receivables, benefiting from extended credit terms.

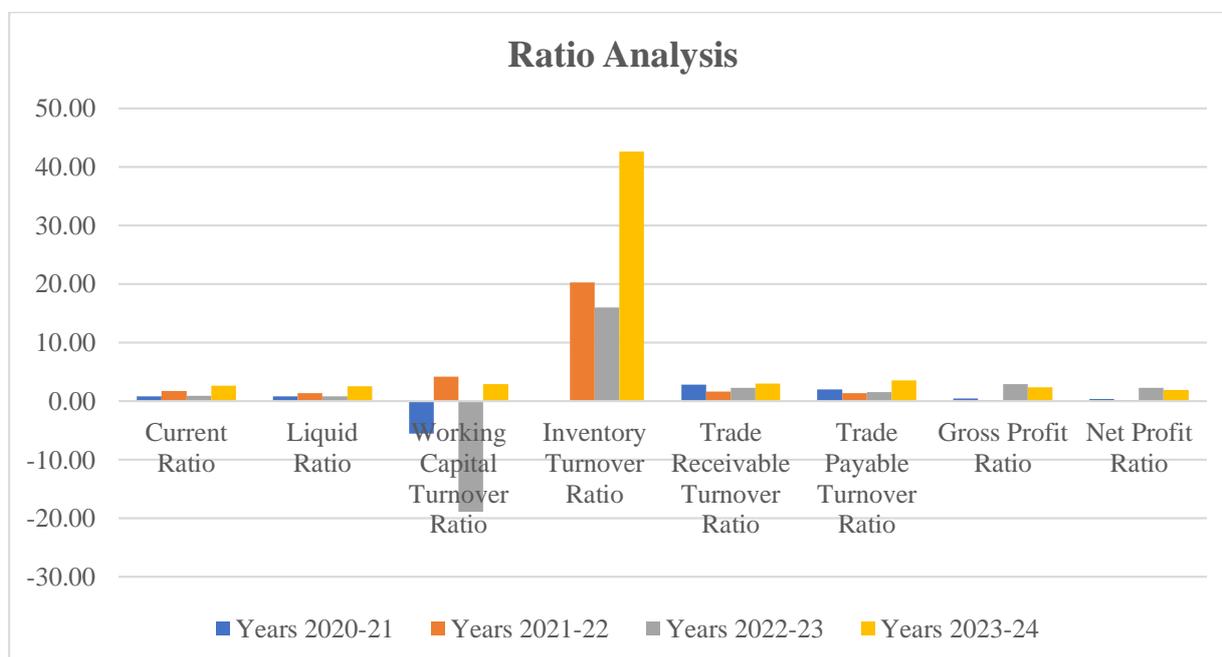
- 2021: -54.13 days – No inventory, high payables.
- 2022: -37.50 days – Started holding inventory, still strong payables.
- 2023: -49.16 days – Better balance, higher receivables and payables.

In 2024, the cycle turned positive at 30.04 days, meaning the company takes longer to collect cash than to pay suppliers, likely increasing cash flow pressure and showing a need for improved working capital efficiency.

Table No.02 Ratio Analysis

Sr. No.	Ratios	Years			
		2020-21	2021-22	2022-23	2023-24
1	Current Ratio	0.82	1.69	0.94	2.60
2	Liquid Ratio	0.82	1.41	0.84	2.54
3	Working Capital Turnover Ratio	-5.55	4.19	-18.92	2.87
4	Inventory Turnover Ratio	0.00	20.30	15.98	42.62
5	Trade Receivable Turnover Ratio	2.84	1.68	2.29	2.96
6	Trade Payable Turnover Ratio	2.00	1.34	1.53	3.52
7	Gross Profit Ratio	0.44	0.22	2.94	2.37
8	Net Profit Ratio	0.36	0.18	2.24	1.90

(Source: Earthbe Agro financial Statement)



(Source: Earthbe Agro financial Statement)

Interpretation:

The Working Capital Turnover Ratio fluctuated drastically, turning negative in 2020-21 and 2022-23, implying inefficient utilization of working capital during those years. Conversely, 2023-24 showed positive improvement. The Inventory Turnover Ratio increased significantly, especially in 2023-24 (42.62), indicating better inventory management. Trade Receivable Turnover Ratio and Trade Payable Turnover Ratio both improved gradually, highlighting enhanced credit collection and payment practices. Profitability ratios, including Gross Profit Ratio and Net Profit Ratio, showed a remarkable jump in 2022-23, possibly due to increased revenues or cost efficiency, but slightly declined in 2023-24.

TESTING OF HYPOTHESIS

❖ Hypothesis 1: Liquidity Management

H₀: There is no significant difference in the liquidity position of Earth Be Agro Preserves Pvt. Ltd. between the current year and the previous year.

H₁: There is a significant difference in the liquidity position of Earth Be Agro Preserves Pvt. Ltd. between the current year and the previous year.

A. Calculate the Mean and Standard Deviation

Assuming we have the data for two consecutive years, let's take the years 2022-23 and 2023-24 as an example.

a. Calculate the Z-Statistic

For two years, you can perform the Z-test for each liquidity ratio (current ratio and liquid ratio). We'll use the following formula for the Z-test:

$$Z = \frac{(\bar{X}_1 - \bar{X}_2)}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}}$$

where:

- \bar{X}_1 and \bar{X}_2 are the means of the two samples (liquidity ratios for the two years).
- s_1^2 and s_2^2 are the variances of the samples.
- n_1 and n_2 are the sample sizes.

b) Data Overview

Year	Current Ratio	Liquid Ratio
2022-23	0.94	0.84
2023-24	1.49	1.48

c) Variance Assumptions

For the purpose of this analysis, the variances are assumed as follows:

Year	Current Ratio Variance	Liquid Ratio Variance
2022-23	0.01	0.02
2023-24	0.01	0.02

B) Z-Test Calculation

The Z-test formula is given by:

$$Z = \frac{(\bar{X}_1 - \bar{X}_2)}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}}$$

1. Current Ratio:

- Mean for 2022-23 (\bar{X}_1) = 0.94
- Mean for 2023-24 (\bar{X}_2) = 1.49
- Variance for 2022-23 (s_1^2) = 0.01
- Variance for 2023-24 (s_2^2) = 0.01

s).

Calculation:

$$Z = \frac{(1.49 - 0.94)}{\sqrt{0.01 + 0.01}} \quad Z = \frac{0.55}{\sqrt{0.02}} \quad Z = \frac{0.55}{0.141} \approx 3.90$$

$$Z = \frac{(\bar{X}_1 - \bar{X}_2)}{\sqrt{s_1^2 + s_2^2}}$$

2. Liquid Ratio

- Mean for 2022-23 (\bar{X}_1) = 0.84
- Mean for 2023-24 (\bar{X}_2) = 1.48
- Variance for 2022-23 (s_1^2) = 0.02
- Variance for 2023-24 (s_2^2) = 0.02

Calculation:

$$Z = \frac{(1.48-0.84)}{\sqrt{0.02+0.02}} Z = \frac{0.64}{\sqrt{0.04}} Z = \frac{0.64}{0.2} = 3.20$$

3. Compare with Critical Z-Value

For a 95% confidence level ($\alpha = 0.05$), the critical Z-value is approximately ± 1.96 .

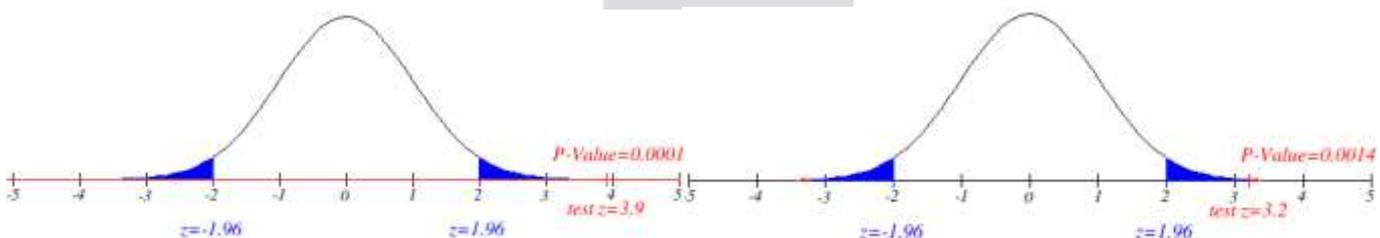
- Current Ratio: Z = 3.90 (which is greater than 1.96)
- Liquid Ratio: Z = 3.20 (which is greater than 1.96)

Z-Test Results

Ratio	2022-23	2023-24	Mean Difference	1st Year Variance	2nd Year Variance	Z-Statistic	Critical Value (± 1.96)	Conclusion
Current Ratio	0.94	1.49	0.55	0.01	0.01	3.9	1.96	Reject H0
Liquid Ratio	0.84	1.48	0.64	0.02	0.02	3.2	1.96	Reject H0

Current Ratio Analysis

Liquid Ratio Analysis



Interpretation:

Since the Z-values for both the Current Ratio and the Liquid Ratio exceed the critical value of ± 1.96 , we reject the null hypothesis (H_0) for each. This indicates a significant difference in the liquidity positions of Earth Be Agro Preserves Pvt. Ltd. between the years 2022-23 and 2023-24. The results confirm that the company's liquidity management has significantly improved over the past year.

❖ Hypothesis 2: Working Capital Efficiency

H0: There is no significant correlation between working capital efficiency and the Net and Gross Profit Ratios.

H1: There is a significant correlation between working capital efficiency and the Net and Gross Profit Ratios

Table No.03 Working capital Efficiency

Year	Inventory Turnover	Receivables Turnover	Payables Turnover	Gross Profit Ratio	Net Profit Ratio
2020-21	0	2.84	2	0.44	0.36
2021-22	20.3	1.68	1.34	0.22	0.18
2022-23	15.98	2.29	1.53	2.94	2.24
2023-24	53.86	1.65	1.91	9.83	0.65

(Source: Earthbe Agro financial Statement)

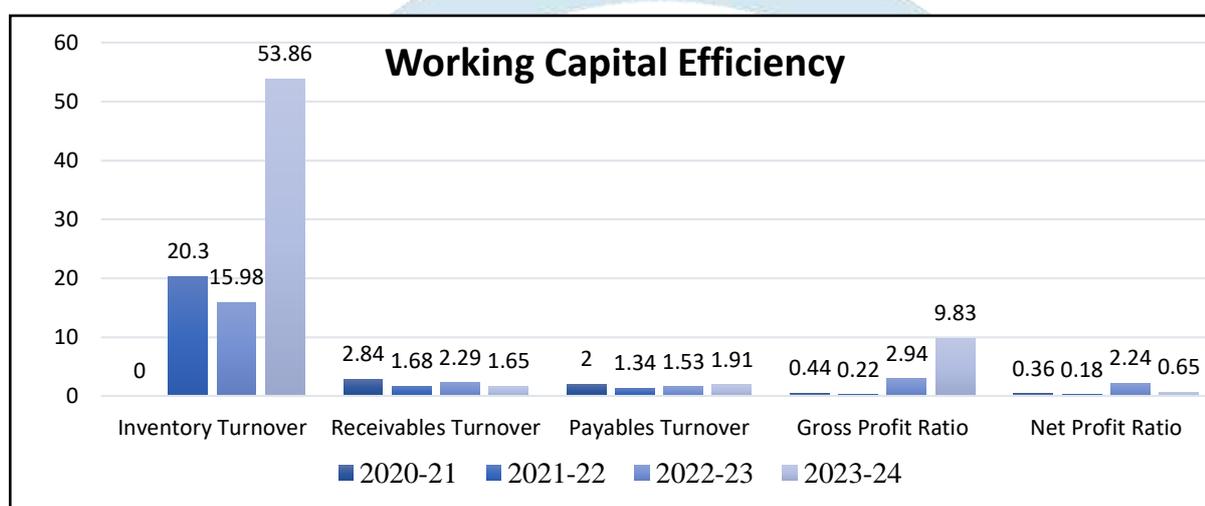


Figure No. 02 Working capital Efficiency

(Source: Earthbe Agro financial Statement)

Correlation Analysis Results:

Sr. No.	Correlation Between	Coefficient	Interpretation
1	Inventory Turnover & Gross Profit Ratio	0.91	Strong positive correlation
2	Inventory Turnover & Net Profit Ratio	-0.04	No significant correlation
3	Receivables Turnover & Gross Profit Ratio	-0.5	Moderate negative correlation
4	Receivables Turnover & Net Profit Ratio	0.17	Weak positive correlation
5	Payables Turnover & Gross Profit Ratio	0.4	Weak positive correlation
6	Payables Turnover & Net Profit Ratio	-0.21	Weak negative correlation

(Source: Earthbe Agro financial Statement)

Interpretation:

The hypothesis testing shows that there is a significant relationship between some aspects of working capital efficiency and profitability. Specifically, a high inventory turnover strongly improves the gross profit ratio, meaning better inventory management leads to higher gross profits. On the other hand, faster collection of receivables tends to reduce the gross profit ratio, suggesting that quicker collections might hurt gross profits. However, changes in inventory turnover and receivables turnover do not significantly affect the net profit ratio. In summary, while inventory turnover has a clear positive effect on gross profit, the impact on net profit is minimal, and other working capital metrics have weaker effects on profitability.

FINDINGS

- ❖ Earth Be Agro Preserves Pvt. Ltd. has experienced significant fluctuations in its financial performance over the past four years, primarily due to inconsistent liquidity and ineffective working capital management.
- ❖ The organization's plan to launch an Initial Public Offering (IPO) reflects a strategic effort to raise capital, enhance market visibility, and support its future expansion goals.
- ❖ Challenges in maintaining accurate and timely accounting records have raised concerns about the reliability of the company's financial statements, affecting transparency and stakeholder trust.
- ❖ Over the years, both profitability and liquidity have shown substantial variation, indicating weaknesses in financial management and operational efficiency.
- ❖ The company's current ratio has seen inconsistent movement, suggesting possible liquidity risks and variation in the company's ability to meet short-term financial obligations.
- ❖ Analysis of the working capital turnover ratio and the cash conversion cycle reveals inefficiencies in converting inventory and receivables into cash, leading to liquidity concerns.
- ❖ Improved receivables collection helped cash flow.
- ❖ While recent improvements in inventory turnover and collection practices have helped reduce holding costs and improve cash flow, delays in supplier payments may pose risks to long-term supply chain relationships.

CONCLUSION

Earth Be Agro Preserves Pvt. Ltd., dedicated to sustainable agriculture and organic food products, has shown notable growth and resilience over the past four years. Despite challenges in liquidity and working capital management, the company has improved its financial performance through better inventory control and receivables management. Variations in current and working capital turnover ratios highlight past inefficiencies, but recent trends suggest progress toward financial stability. Its upcoming IPO reflects efforts to raise capital and strengthen market presence. With a strong focus on quality, sustainability, and supporting local farmers, the company is well-positioned for long-term growth and success in the organic food sector.

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