

## ANALYZING INVENTORY MANAGEMENT EFFICIENCY THROUGH RATIOS: A CASE STUDY OF SRI ANANTHA LAKSHMI SPINNING MILLS PVT LTD

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### ABSTRACT

Inventory is one of the most valuable assets in any firm, whether in construction, manufacturing, retail, or other inventory-intensive Sri Anantha Lakshmi Spinning Mills Pvt. Ltd. It is equally crucial for industries of all sizes. Excess or shortages of inventory can be damaging to the Sri Anantha Lakshmi Spinning Mills Pvt. Ltd. It is described as the receipt, storage, and consumption of stock. These include the management of raw materials, materials in production, spare parts / components, and final goods, as well as the storage and processing of such commodities. As a result, inventory tracking and management are critical for businesses looking to increase cash flow and profitability. The data indicate that, while the textile industry practices good inventory management, there are potential to improve turnover rates and lower holding costs.

**Key Words:** Ratio Analysis, Inventory Management, Liquidity, turnover, working Capital.

### 1. INTRODUCTION

Inventory Management Plays a crucial role in the operational efficiency and financial health of any manufacturing enterprise, particularly in industries like textile manufacturing. Sri Anantha Lakshmi Spinning Mills, an outstanding player in the textile sector, recognizes the significance of effective inventory management in sustaining its competitive advantage and ensuring optimal utilization of resources. This study aims to examine into the inventory management practices at Sri Anantha Lakshmi Spinning Mills, employing a comprehensive analysis through ratios.

By analyze key financial ratios related to inventory, this research seeks to offer valuable insights into the efficiency, liquidity, and overall performance of the company's inventory management system. Ratios are powerful tools for assessing the relationships between different components of inventory, production, and sales. They provide quantitative measures that enable managers and stakeholders to evaluate various aspects of inventory management, including turnover, days sales outstanding, and inventory holding costs.

#### Need for Analyzing Performance of Inventory Management through Ratios

A study on inventory management through ratios at Industry is essential to ensure the company's operational efficiency and financial health. Effective inventory management is crucial in the textile manufacturing industry, where inventory represents a significant portion of assets and impacts profitability. By analyzing ratios related to inventory turnover, liquidity, and profitability, the study can provide insights into how efficiently the company utilizes its resources. Then, it can help identify areas for improvement in inventory management practices, such as reducing holding costs, optimizing inventory levels, and reduce risks like stockouts or old inventory. Additionally, by benchmarking against industry standards and competitors, the study can highlight areas where Industry can enhance its competitiveness.

#### Objectives for the study:

1. Assess the current inventory management practices and determine the inventory position of Sri Anantha Lakshmi Spinning Mills Pvt Ltd.
2. To evaluate the efficiency of inventory turnover at Industry by analyzing inventory turnover ratios over a specific period.
3. To identify potential areas for improvement in inventory management practices based on the findings of the ratio analysis.

### 2. RESEARCH METHODOLOGY

Methodology is a systematic procedure of collecting data in order to analyze and verify a phenomenon.

1. Primary data
2. Secondary data

**Primary Data:** The primary data is collected by interacting with the financial manager and other executive, staff of the company in a certain period.

**Secondary data:** The Data is collected through secondary sources during the project. That Data was utilized for calculating performance evaluating and based on that, interpretation was made.

The data is collected from various secondary sources such as annual reports, company's website, article etc.

**Limitations for the study:**

1. The inventory details of company are collected for 3 years only.
2. The Data provided by the company is limited to understand the inventory position of company.
3. The duration of the project is limited to a period of Six weeks only.

**Theoretical Frame work:**

**Inventory Turnover Ratio:** The inventory turnover ratio is a financial metric that measures how efficiently a company manages its inventory. It indicates how many times a company's inventory is sold and replaced over a specific period, usually a year. This ratio helps assess the efficiency of inventory management and is crucial for businesses to understand their stock control and sales performance.

**Formula:** Inventory Turnover Ratio = cost of goods sold / Average Stock

**Fixed Turnover Ratio:** The fixed assets turnover ratio is a financial metric that measures how efficiently a company is using its fixed assets to generate sales revenue. It indicates the number of sales generated for every dollar of fixed assets.

**Formula:** Fixed turnover ratio = Cost of sales / Fixed Assets

**Working Capital Turnover Ratio:** The working capital turnover ratio is a financial metric that measures how efficiently a company uses its working capital to generate sales revenue. It indicates the number of times a company turns over its working capital in a period, usually a year.

**Formula:** working capital turnover ratio = Cost of goods sold/ working capital

**Debtors:** The debtors' turnover ratio, also known as the receivable's turnover ratio, is a financial metric used to assess how efficiently a company collects its accounts receivable. This ratio indicates how many times a company collects its average accounts receivable during a specific period, typically a year. It helps in evaluating the effectiveness of a company's credit policies and the efficiency of its collections process.

**Formula:** Debtors' turnover ratio = Credit sales/ Average Debtors

**Total Assets:** The term "total assets ratio" can be interpreted in a few different ways depending on the context. However, in most financial contexts, it generally refers to a ratio that uses total assets as a denominator to measure how much of the total assets are financed by a specific component, such as sales and capital employed.

**Formula:** Total assets = Sales/ Capital Employed

**Average collection Period:** The average collection period ratio measures the average number of days it takes a company to collect payments from its credit sales. This ratio is a key indicator of how efficiently a company is managing its receivables and can highlight potential issues in credit policies or collection procedures.

**Formula:** Average collection period = Receivables/ Average collection period

**Current Ratio:** This ratio compares a company's current assets to its current liabilities. A ratio above 1 indicates that the company has more current assets than current liabilities, suggesting it can cover its short-term debts comfortably. However, a very high current ratio may imply that the company is not efficiently utilizing its assets.

**Formula:** Current ratio = current assets/ current liabilities

**Quick Ratio (Acid-Test Ratio):** This ratio is more stringent than the current ratio as it excludes inventory from current assets. It measures a company's ability to pay off its current liabilities without relying on the sale of inventory. A higher quick ratio indicates better short-term liquidity and financial health.

**Formula:** Quick ratio = liquid assets/current liabilities

**Super liquid Ratio:** The super liquid ratio, also known as the cash ratio, is an even more stringent measure of a company's short-term liquidity than the quick ratio. It assesses a company's ability to pay off its current liabilities using only its most liquid assets, such as cash and cash equivalents.

**Formula:** Super liquid ratio = super liquid assets/ current liabilities

**Net working capital:** The Net Working Capital Ratio is a financial metric that provides insight into a company's short-term liquidity and operational efficiency. It measures the proportion of a company's net working capital to its total assets, helping to assess how well a company can cover its short-term liabilities with its short-term assets.

**Formula:** Net working capital = Net working capital/ Total Liabilities

### 3. REVIEW OF LITERATURE

The usage of ratios to analyze inventory management efficiency offers a methodical way to evaluating the inventory management efficiency of Sri Anantha Lakshmi Spinning Mills Pvt Ltd. Important metrics that provide information about a company's operational efficiency include the Inventory Turnover Ratio, Liquidity Ratios, Gross Margin Return on Investment (GMROI), and Inventory to Sales Ratio. For example, the Inventory Turnover Ratio shows how frequently inventory is sold and replaced over time. It is calculated by dividing the Cost of Goods Sold (COGS) by the average inventory. A ratio that is higher indicates effective management, whereas a ratio that is lower may indicate slow-moving or overstocked inventories. The Inventory to Sales Ratio measures the amount of inventory in relation to sales and can be used to identify possible problems such as overstocking or stockouts. GMROI compares gross profit to average inventory cost to determine how profitable inventory investments are. We can learn a lot about Sri Anantha Lakshmi Spinning Mills Pvt Ltd.'s inventory management procedures and pinpoint areas for development, like improving demand forecasting or order quantity optimization, to raise overall productivity and profitability, by applying these ratios to the company's financial data.

### 4. DATA ANALYSIS

In order to maximize stock control and management, inventory-related data must be methodically examined and assessed. This is known as data analysis in ratio-based inventory management. This method gathers information about inventory performance, effectiveness, and efficiency using a variety of financial ratios.

#### 1. Total Assets:

Sales

Total Assets = -----

Capital employed

Table: 1 Total Assets

Years	Sales	Capital Employed	Ratios
2020-2021	882598117	379245361	2.3
2021-2022	1000201077.24	360863117	2.7
2022-2023	1062666262	364725844	2.9

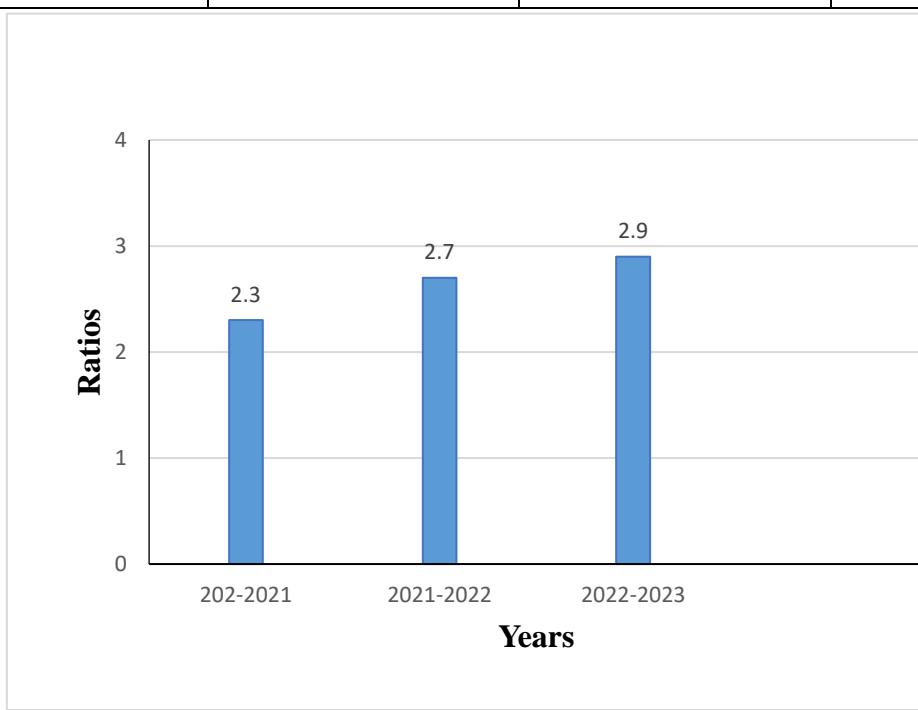


Chart.1 Total Assets

**Interpretation:** From the above table it is evident that the increase in the inventory turnover ratio is likely due to a combination of factors including higher sales volumes, efficiency use of capital, operational improvement, make sure products and services, and favorable market condition. Each of these factor's contributions to the company's ability to generate more sales relative to its employed, thereby improving the ratio over time.

## 2. Inventory Turnover Ratio:

Cost of goods sold

Inventory turnover ratio = -----

Average Stock

Table .2 Inventory turnover ratio

Years	Cost of Goods Sold	Average Stock	Ratios
2020-2021	801180055	178854460	4.4
2021-2022	920462798	450964072	2.0
2022-2023	962132328	282654019	3.4

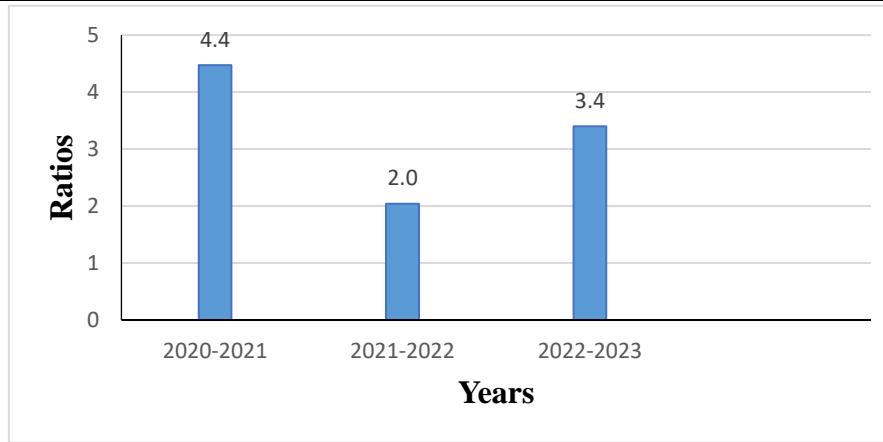


Chart.2 Inventory turnover Ratio

**Interpretation:** Above table indicates that the fluctuation in the inventory turnover ratio reflects changes in how efficiently the company managed its inventory relatives to sales. The significant decrease from 2020-2021 to 2021-2022 this indicates that the impact of the coronavirus pandemic affected the sales performance, while the increase in 2022-2023 indicates improvements inventory management and sales efficiency.

## 3. Working capital Turnover Ratio:

Sales/ Cost of goods sold

Working capital turnover = -----

Working capital

Table.3 working capital turnover ratio

Years	Cost of goods sold	Working capital	Ratios
2020-2021	801180055	56486966	14.1
2021-2022	920462798	55789547	16.4
2022-2023	962132328	60384694	15.9

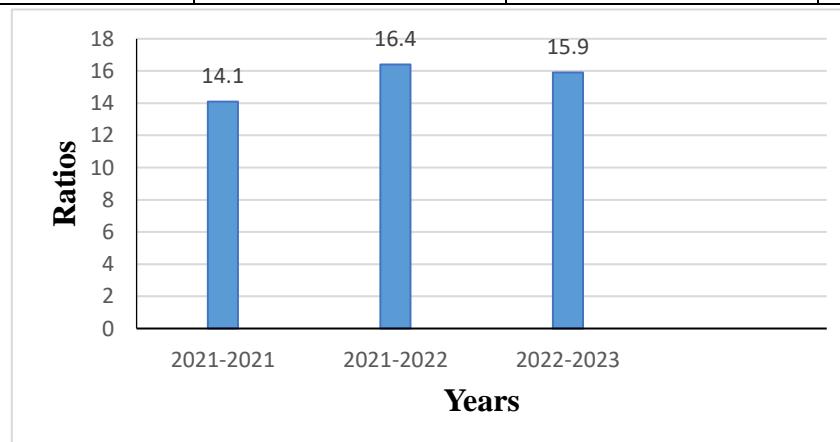


Chart .3 Working Capital turnover ratio

**Interpretation:** From the above table it is evident that the working capital turnover ratio. The increase in working capital turnover ratio from 2020-2021 to 2021-2022 indicated improved efficiency in using working capital to generate sales. The slight difference in the working capital turnover ratio from 2021-2022 to 2022-2023 reflects the company's strategic decisions to maintain higher liquidity, manage inventory levels and prepare for future growth, all of which can slightly impact the turnover ratio.

#### 4. Fixed Assets Turnover Ratio:

Sales/Cost of goods sold

Fixed assets turnover ratio = -----

Net fixed assets

Table. 4 Fixed assets turnover ratio

Years	Sales	Net fixed assets	Ratios
2020-2021	801180055	320814899	2.4
2021-2022	920462798	305230007	3.0
2022-2023	962132328	2891117184	3.3

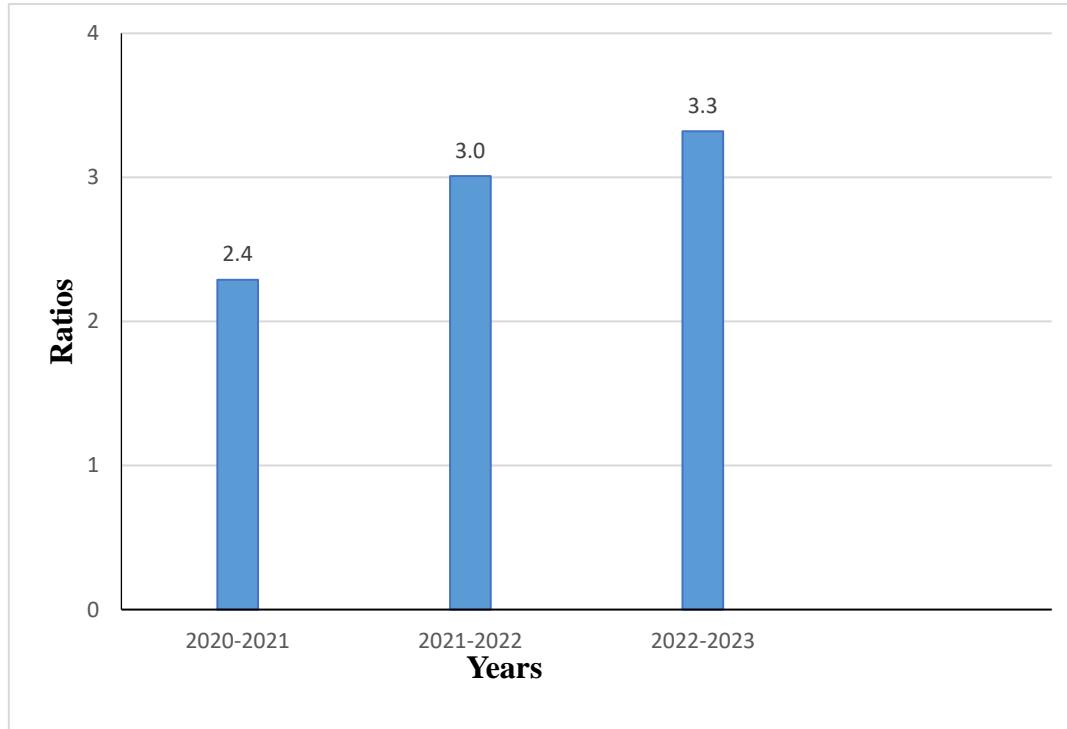


Chart.4 Fixed Assets turnover ratio

**Interpretation:** The above table shows that the increased fixed assets turnover ratio from 2020-2021 to 2022-2023 over the years indicates that the company is improving its efficiency in using its fixed assets to generate sales, reflecting positively on its asset management system. Look at the sales growth the changed the fixed assets values, and consider any strategic initiatives undertaken during the period.

#### 5. Debtor's Turnover Ratio:

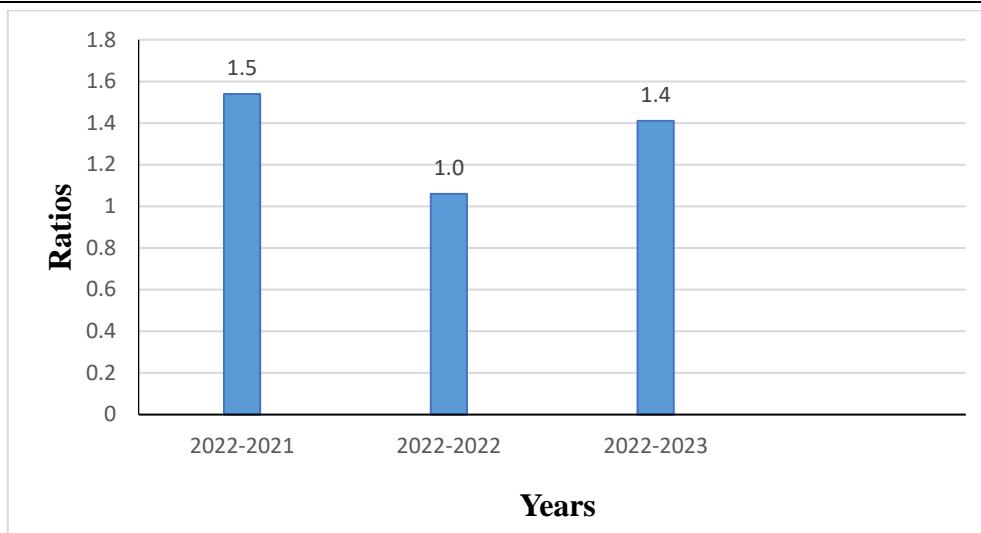
Credit sales

Debtors' turnover ratio = -----

Average debtors

Table.5 Debtors turnover ratio

Years	Credit sales	Average debtors	Ratios
2020-2021	24122196	15626384	1.5
2021-2022	43220563	40458328	1.0
2022-2023	14021699	9931159	1.4



**Chart.5** Debtors turnover ratios

**Interpretation:** From the above table indicates that the debtor's turnover ratio indicates fluctuating efficiency in the company ability to collect receivables. The ratio slowly down 1.5 in 2021-2022 this indicates that the impact of the coronavirus pandemic affected the trading of the sales, while they improved the ratio 1.4 in 2022-2023 debtor's turnover ratio.

#### 6. Average collection Period:

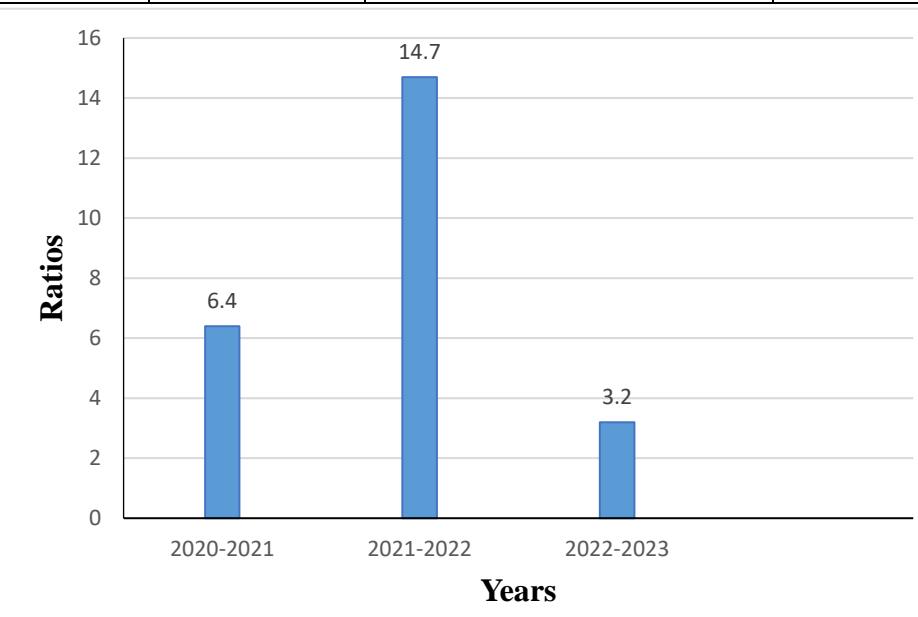
Receivables

Average Collection Period = -----

Average collection period

**Table 6.** Average collection period

Years	Receivables	Average collection period	Ratios
2020-2021	15626384	2418077.03	6.4
2021-2022	40458328	2740276.92	14.7
2022-2023	9391159	2911414.41	3.2



**Chart .7** Average collection Period

**Interpretation:** From the above table indicates that the company average collection period has fluctuated continuously over three years. In 2020-2021 the ratio was 6.4, increases to 14.7 in 2021-2022 this indicates that the impact of the coronavirus pandemic affected the sales performance, next year decreases the ratio 3.2 in the year 2022-2023.

**Analysis of Liquidity Ratios:**

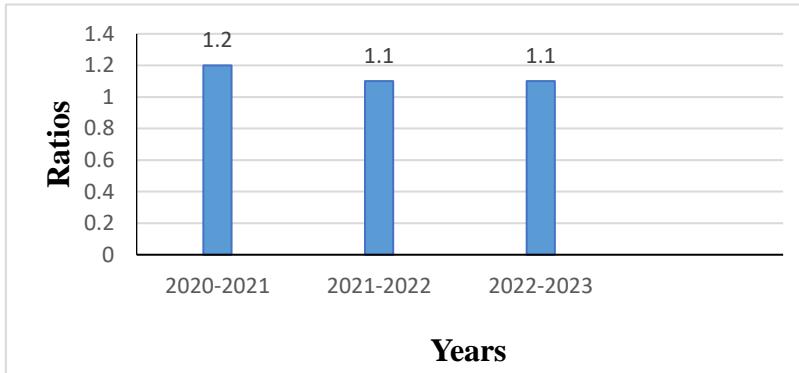
Current Assets

Current Ratio = -----

Current Liabilities

**Table.8 Current Ratio**

Years	Current Assets	Current Liabilities	Ratios
2020-2021	291247571	234760605	1.2
2021-2022	389686090	333896543	1.1
2022-2023	432782718	372398024	1.1



**Chart.9 Current Ratio**

**Interpretation:** From the above table indicated that the current assets. The company liquidity is stable but has small difference 1.2 to 1.1 over the three years this indicates that the impact of the coronavirus pandemic affected the sales performance. It still maintains more current assets than liabilities which is good for covering short term debts.

**8. Quick Ratio:**

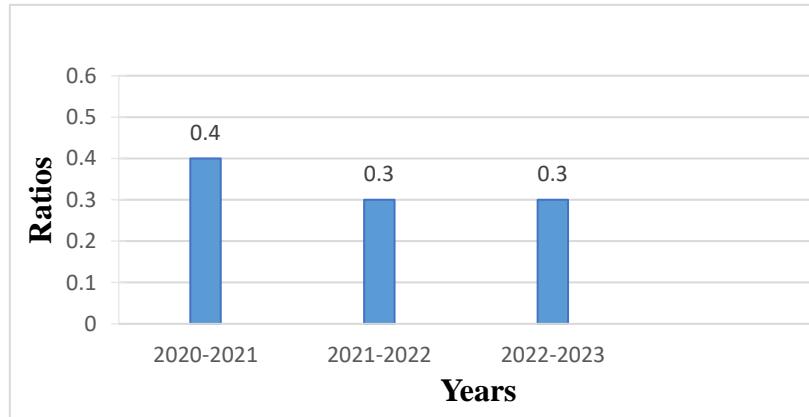
Liquid assets

Quick Ratio = -----

Current Liabilities

**Table.8 Quick Ratio**

Years	Quick Assets	Current liabilities	Ratios
2020-2021	104669730	234760605	0.4
2021-2022	118715697	333896543	0.3
2022-2023	133052430	372398024	0.3



**Chart.8 Quick Ratio**

**Interpretation:** From the above table indicates that the quick ratio. In 2020-2021 to 2021-2022 quick assets, I decreased this indicates that the impact of the coronavirus pandemic affected the sales performance than consistently has less than enough liquid assets to cover short term debts which may cause financial years

### 9. Super quick Ratio:

Super quick assets

super quick ratio = -----

Current liabilities

Table.9 Super quick ratio

Years	Super quick assets	Current liabilities	Ratios
2020-2021	20877804	234760605	0.09
2021-2022	1779437	333896543	0.01
2022-2023	30978301	372398024	0.08

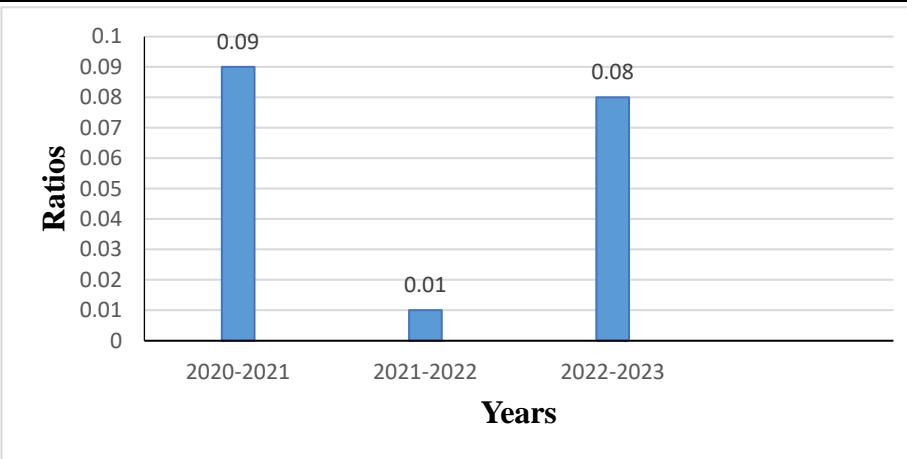


Chart.9 super Quick Ratio

**Interpretation:** From the above table indicates that the super quick ratio. The super quick ratio consistently indicates very low level of liquidity because this indicates that the impact of the coronavirus pandemic affected the sales. The company faced problems to maintain sufficient liquid assets to cover its current liabilities over these three years.

### 10. Net working Capital Ratio:

Net working capital

Net working capital = -----

Total Liabilities

Table.10 Net Working Capital

Years	Net working capital	Total Liabilities	Ratio
2020-2021	200371692	670647055	0.29
2021-2022	297663311	751942612	0.39
2022-2023	345551977	776398252	0.44

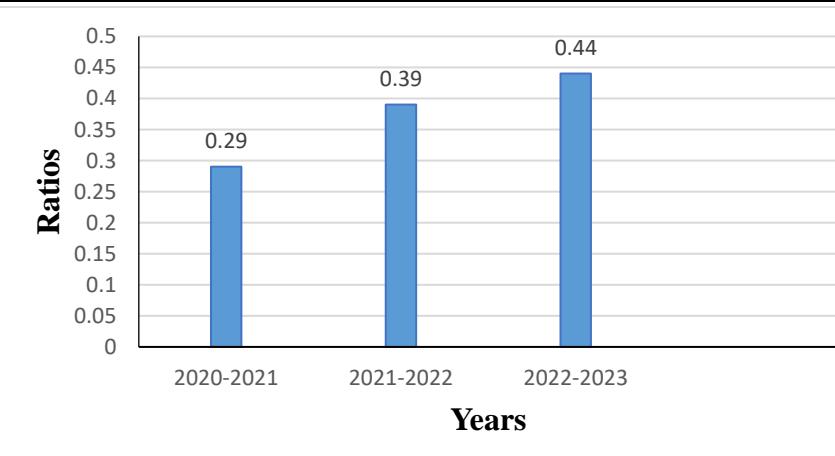


Chart.10 Net working capital

**Interpretation:** From the above table indicates that the net working capital. the comparison of net working capital and total liabilities, shows a positive trend three years. In 2020-2021 the ratio was 0.29, 2021-2022 the ratio was 0.39 and 2022-2023 this indicates that the impact of the coronavirus pandemic affected the sales the ratio was 0.44 improving the financial stability and liquidity management.

## 5. FINDINGS

- 1) There is a good increase from 2.3 in 2020-2021 to 2.9 in 2022-2023, indicating improved efficiency is using assets to generate revenue.
- 2) The ratio has fluctuated, down from 4.4 in 2020-2021 to 2.0 in 2022-2023 and then rising to 3.4 in 2022-2023.
- 3) The ratio increased from 14.1 in 2020-2021 to 16.4 in 2021-2022 but then decreased slowly to 15.9 in 2022-2023. This indicates a high efficiency in using working capital, though there's a minor decline in the last year.
- 4) The ratio increased from 2.4 in 2022-2021 to 3.3 in 2022-2023, indicating improved efficiency in utilizing fixed assets for revenue generation.
- 5) The ratios increased from 1.0 in 2021-2022 to 1.4 in 2022-2023. It showing the better performance from debtor's turnover ratio.
- 6) There was a significant decrease from 15 days in 2021-2022 to 3 days in 2022-2023. The company has greatly improved its efficiency in collection receivables.
- 7) Current ratio stable at 1.1 for the last two years slowly down from 1.2 indicating the company's short-term assets are consistently covering its short-term liabilities.
- 8) Quick ratio is constant at 0.3 for the last two years down from 0.4 reflecting a decrease in the company immediate liquidity excluding inventory.
- 9) Super quick ratio showed a slowly increase from 0.01 to 0.08 although it's still relatively low indicating limited immediate cash availability.
- 10) Net working capital ratio improved from 1.29 to 0.44 over the three years indicate hard efficiency in managing working capital.

## 6. SUGGESTIONS

- Calculate the inventory turnover ratio to assess how efficiently inventory is being used. Aim to increase this ratio by improving sales and reducing excess inventory.
- Measure the average number of days that inventory is held before it is sold. Work on reducing DSI to improve cash flow and reduce holding costs.
- Track the accuracy of order fulfillment to ensure that the correct products are delivered to customers. Aim to improve order accuracy rates to enhance customer satisfaction and reduce returns.
- The carrying cost of inventory to understand the total cost of holding inventory, including storage, insurance, and obsolescence. Aim to reduce carrying costs without compromising service levels.

## 7. CONCLUSION

Any company's ability to successfully manage its working capital will guarantee its success. The number of profits at Sri Anantha Lakshmi Spinning Mills Private Limited is consistent due to efficient working capital management. Nonetheless, the management might focus on increasing sales in order to demonstrate a superior business outcome. To improve inventory management and overall financial health, it is therefore advised to invest in technology, fortify supplier relationships, improve demand forecasts, and periodically review inventory policies.

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