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Inventory Management At Maria Aquacon Private Limited, Kootapuli

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Abstract

Inventory management is a key component in ensuring the financial health and efficiency of an organization. The present study aims the analysis of the inventory management system of Maria Aquacon Private Limited based on the financial data from five years time span. The secondary data obtained from financial statements and analytical tools are used such as ratio analysis, trend analysis and comparative balance sheet analysis. These results show the variation in inventory turnover, holding period and sales performance. The results indicate that, in some years, inventory control was not being performed effectively, causing holding costs to be higher, and in recent years, it was being controlled better. The study suggests that good inventory planning and control are beneficial in improving profitability and operational efficiency.

Keywords: Inventory Management, Inventory Turnover, Ratio Analysis, Trend Analysis, Working Capital.

Introduction

The term inventory management is used to describe the process of ordering, storing, and using a company's inventory in an efficient manner. It also contributes a great deal to the smooth production and sales activities. Proper inventory control helps in reducing costs, avoiding stock shortages, and improving profitability. In today's business climate, good inventory management is crucial for staying competitive. If inventory is not managed well, it can result in overstocking or running out of inventory, which can impact business performance. This study concentrates on analyzing the inventory management practices of Maria aquacon private limited to assess the efficiency and effectiveness of inventory management done by them in 5 years.

Literature Review

The study by Afolabi Ademola Joshua et al. 20262 investigated the effect of inventory planning and control on profitability of Small and Medium Scale Enterprises (SMEs). The results showed that good inventory management not only helps to reduce costs but also positively affects financial outcomes. The study came to a conclusion that business sustainability is essential with systematic inventory management. Tukamuhabwa et al. (2025)2 examined Just In Time Practices, Stocking Method of Safety Stock, and Inventory Accuracies. The results revealed that effective inventory management leads to better customer satisfaction and order processing. The research found that a good inventory control is beneficial for service quality and customer retention. Katta et al. (2025)3 reviewed inventory practices like EOQ, ABC analysis and JIT practices. The results revealed that proper inventory management resulted in cost reduction in holding inventory and reduced stock-outs. The study has concluded that modern inventory systems provide the benefit of efficient performance of the organization and the operations. Kumar (2024)4 conducted a study on inventory management in retail industry based on sales and stock data of retail sector. The results showed that adequate inventory control enhances the turnover and profitability and minimizes stock related problems. The study findings showed that good inventory management improves the competitiveness and operational efficiency. Salman et al. (2023)5 investigated the link between inventory management and financial performance by using ROA and ROE. Results have shown that maintaining an optimal inventory and liquidity management is a key to profitability and stability. It was found that inventory and financial control efforts positively influence organizational performance.

Objectives

- To gain insight of the inventory management of Maria Aquacon Private Limited, Kootapulli.
- To assess the effectiveness of the inventory through financial ratio.
- Work with students to explore changes over time in the amount of inventory.

Research Methodology

The present study is analytical in nature, and it is mainly aimed at the evaluation of the inventory management practices of 'Maria Aquacon Private Limited'. This study uses secondary data gathered from the financial statements of the company for five years (2009–2013), which include the balance sheet and profit and loss account. The gathered data has been systematically aaaaanalysed using some financial and statistical tools to check the effectiveness of inventory management. Tools used for the study are ratio analysis, trend analysis and comparative balance sheet analysis which helps to understand the changes in inventory levels, liquidity position and financial performance as a whole. The study is trying to make sense of the results and give meaningful insights on the effectiveness of inventory control practices in the organization.

Data Analysis

Ratio Analysis

Ratio analysis is a quantitative technique which uses data from the financial statements to gain insights into the liquidity, operating efficiency and profitability of a firm. This includes determining different ratios such as the current ratio or the turnover ratio of inventories, to assess financial health. The ratios are important for internal management and external parties like investors and creditors to take informed decisions.

Table 1 Inventory Turnover Ratio

Year	Ratio
2020-2021	1.37
2021-2022	1.33
2022-2023	1.29
2023-2024	1.77
2024-2025	1.40

Source: Annual Reports

In 2020-2021 the Inventory Turnover Ratio was 93.05, showing very fast sales of stock, and it improved to 95.13 in 2021-2022, which means inventory moved even faster. From 2022-2023 the ratio fell to 83.06 and further dropped to 70.48 in 2023-2024, showing slow movement of stock and more money blocked in inventory. It improved a little to 77.66 in 2024-2025, indicating better control over inventory. Overall, the company's inventory efficiency reduced after 2021-2022, so it should plan purchases better and sell old stock faster to improve cash flow.

Table 2 Inventory Holding Period

Year	Ratio
2020-2021	3.92
2021-2022	3.84
2022-2023	4.39
2023-2024	5.18
2024-2025	4.70

Source: Annual Reports

In 2020-2021, the Inventory Holding Period was 3.92 days, showing stock was sold in about 4 days. It improved to 3.84 days in 2021-2022, which means faster movement of inventory. The holding period increased to 4.39 days in 2022-2023 and 5.18 days in 2023-2024, showing slower sales and more money blocked in stock. It reduced to 4.70 days in 2024-2025, indicating better inventory control than last year. Overall, inventory efficiency fell after 2021-2022 and the company should plan sales better to reduce stock holding time.

Table 3 Inventory to Current Asset Ratio

Year	Ratio
2020-2021	0.17
2021-2022	0.17
2022-2023	0.20
2023-2024	0.03
2024-2025	0.15

Source: Annual Reports

In 2020-2021 and 2021-2022, the Inventory to Current Asset Ratio was 0.17, meaning inventory formed 17(%) of total current assets. It increased to 0.20 in 2022-2023, showing a higher portion

of current assets was blocked in stock. The ratio dropped sharply to 0.03 in 2023-2024, indicating very low inventory levels compared to other current assets like cash or debtors. It recovered to 0.15 in 2024-2025, which means inventory again formed 15(%) of current assets. Overall, the ratio was stable except for 2023-2024, and the company should maintain optimum inventory so that funds are not unnecessarily tied up in stock.

Table 4: Current Ratio

Year	Ratio
2020-2021	1.65
2021-2022	1.60
2022-2023	1.61
2023-2024	1.82
2024-2025	1.65

Source: Annual Reports

In 2020-2021, the Current Ratio was 1.65, which means the company had Rs. 1.65 of current assets for every Rs. 1 of current liability, showing good short-term liquidity. The ratio was 1.60 in 2021-2022 and 1.61 in 2022-2023, indicating stable ability to meet short-term obligations. It increased to 1.82 in 2023-2024, showing strong liquidity but also possible excess current assets not being used effectively. The ratio came back to 1.65 in 2024-2025, which is close to the ideal level of 2:1 and shows balanced liquidity. Overall, the company has maintained satisfactory liquidity throughout all five years, with no risk of short-term insolvency.

Table 5: Quick Ratio

Year	Ratio
2020-2021	1.37
2021-2022	1.33
2022-2023	1.29
2023-2024	1.77
2024-2025	1.40

Source: Annual Reports

In 2020-2021, the Quick Ratio was 1.37, meaning the company had Rs. 1.37 in liquid assets to meet every Rs. 1 of current liability, showing good short-term liquidity without depending on inventory. The ratio was 1.33 in 2021-2022 and 1.29 in 2022-2023, indicating a slight decrease but still above the ideal level of 1:1. It increased sharply to 1.77 in 2023-2024 due to very low inventory, which shows strong liquidity and quick payment ability. The ratio came down to 1.40 in 2024-2025, which is still healthy and shows the company can pay its short-term dues easily. Overall, the company maintained satisfactory quick liquidity in all five years, with no risk of immediate cash shortage.

Trend Analysis

Trend Analysis is a financial technique used to evaluate a company's performance over multiple periods by analysing changes in financial statement items. It helps identify patterns, growth, and direction of financial performance over time.

Table 6: Inventory Trend Analysis

Year	Inventory Value	Trend %
2021	26,51,212	100
2022	23,19,913	88
2023	25,17,871	95
2024	20,55,787	78
2025	18,46,800	70

Source: Annual Reports

Inventory value shows a declining trend from 2021 to 2025, with 2021 taken as the base year at 100(%). It decreased to 88(%) in 2022, then recovered slightly to 95(%) in 2023, indicating some restocking or higher purchases that year. From 2023 onwards, inventory consistently declined to 78(%) in 2024 and further to 70(%) in 2025, reaching Rs. 18,46,800. This continuous fall suggests either improved inventory management, lower sales requiring less stock, or reduced production levels. Overall, the company is holding 30(%) less inventory in 2025 compared to 2021, which frees up working capital but should be checked against sales to avoid stock-outs.

Table 7: Purchase Trend Analysis

Year	Purchase Value	Trend%
2021	242942205	100
2022	203324213	84
2023	220720610	91
2024	114956044	47
2025	130648856	54

Source: Annual Reports

Purchase value shows an overall declining trend from 2021 to 2025, with 2021 as the base year at 100% or Rs. 24,29,42,205. It dropped to 84(%) in 2022, then recovered slightly to 91(%) in 2023, indicating a temporary rise in purchase activity that year. A sharp decline occurred in 2024 where purchases fell to 47(%) of the base year at Rs. 11,49,56,044, showing a major reduction in buying. In 2025 there is a mild recovery to 54(%) with purchase value at Rs. 13,06,48,856, but it is still nearly half of 2021 levels. Overall, the company has significantly reduced purchases after 2023, which may reflect lower sales demand, better inventory control, or cost-cutting measures, but needs to be matched with sales trends to confirm efficiency.

Table 8: Sales Trend Analysis

Year	Sales Value	Trend %
2021	247195468	100
2022	207987976	84

2023	225525282	91
2024	119813832	48
2025	935737224	379

Source: Annual Reports

Sales value declined from 2021 to 2024, with 2021 as the base year at 100(%) or Rs. 24,71,95,468. It fell to 84% in 2022, recovered slightly to 91(%) in 2023, and then dropped sharply to 48(%) in 2024 at Rs. Weak sales performance – 11,98,13,832. In 2025 there was a significant rise in sales to Rs. 93,57,37,224, taking the trend to 379(%) of the base year. The sudden 3.8 growth is a sign of significant growth, new contracts, or diversification in the operations during 2025. Though sales have been down for the past 3 years, the Company has posted outstanding sales in 2025 and has to maintain proper working capital and inventory levels to sustain the same.

The study revealed the following:

- The Inventory Turnover Ratio went up from 93.05 in 2020-2021 to 95.13 in 2021-2022 because of quick inventory turnover and effective utilization. Later, it fell to 70.48 in 2023-2024, due to sluggish inventory movement and diminished sales activity, which resulted in additional funds being locked in inventory. Inventory control and stock management were improved, resulting in a slight improvement in the ratio in 2024 - 2025 of 77.66.
- Due to the quicker inventory turnaround, Inventory Holding Period reduced from 3.92 days during 2020-2021 to 3.84 days during 2021-2022. Due to a decline in sales and stock retention, it rose to 5.18 days in 2023 – 2024, which means that more money was being invested in inventory. It was subsequently lowered to 4.70 days in 2024–2025 after the movement of stock has improved.
- The inventory to current assets ratio grew from 0.17 in 2021–2022 to 0.20 in 2022–2023 due to a rise in the proportion of current assets that were invested in inventory. There was a very large decline in inventory levels relative to other current assets, resulting in a pronounced drop in the ratio to 0.03 in 2023-2024. The improvement was to 0.15 in 2024-2025, due to the recovery of inventory investment.
- Current Ratio during the study period has changed from 1.60 to 1.82 indicating satisfactory short term liquidity. The rise to 1.82 in 2023–2024 resulted from decrease in current liabilities and in inventory, suggesting good liquidity position.
- The Quick Ratio rose to 1.77 during the 2023–2024 period due to a sharp decline in inventory levels and a reasonable level of liquid assets. The ratio was higher than the desired ratio all the way through the study period, showing the company's sound strength in paying its short-term obligations without relying on inventory.
- The company's inventory value has reduced as per the Inventory Trend Analysis from 100(%) to 70(%) in 2025 due to reduction in inventory holding levels. This could suggest better inventory management and lower working capital investing in inventory.
- Purchase value dropped significantly to 47(%) in 2024, as a result of decreased business activities and sales demand. Recovery was seen in 2025, rising slightly to 54(%). This was driven by the improved purchasing activities and operational performance.
- Sales Trend Analysis indicated that sales has been falling steadily since 2024 due to poor business performance and less operational activity. Sales jumped significantly to 379(%) in 2025 due to growth in the business, market demand or the acquisition of new export orders.

Suggestion of the Study

- Ensuring the correct classification and the ongoing tracking of inventory items, allows for better movement of stock and boosts inventory effectiveness.
- Good coordinating of purchasing and sales activities can help to minimize the stock holding period and utilization of stocks.
- Optimum stock levels ensure more efficient use of existing assets and prevent unnecessary working capital from being tied up.
- The current ratio of current assets to current liabilities improves a company's short-term liquidity.
- Effective management of liquid assets and receivables, enhances the company's ability to pay current obligations.
- Periodic review and control of inventory levels enhances inventory performance, which prevents excess stock build-up.
- Purchase planning is accurate according to the sales requirement and operation requirement which in turn helps to achieve the effective purchasing efficiency and utilization of inventory.
- Market activities are expanded, and customers' demands are improved, which leads to steady sales results and business performance.

Conclusion

The research work conducted on Inventory Management in Maria Aquacon Private Limited proved that inventory performance of the company has been fluctuating from 2020-2021 to 2024-2025. The inventory turnover ratio has improved in 2021-2022 as stock turnover has improved, but decreased in 2022-2023 and 2023-2024 due to slower stock turnover and weakened sales activities. During the mid-period of the study, the inventory holding period grew, which suggests that more stocks were being kept, and in 2024–2025, there was an improvement. The current ratio and quick ratio were satisfactory throughout the study period, indicating a stable liquidity position. The inventory and purchase trend analysis showed deterioration in the operating activities up to 2023–2024 and sales trend analysis showed a great improvement in 2024–2025. In general, good inventory control, an appropriate mix of liquidity, purchasing, and sales growth boosts company efficiency and inventory usage.

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