

A Study on a Study on the Inventory Control Techniques on Metal Forms Private Limited, Chennai

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Abstract

This study looks into Metal Forms Private Limited's inventory management procedures. It focuses on analyzing the methods employed, like ratio analysis and daily operations, to determine how well they work to cut down on excess inventory, avoid stockouts, and boost productivity. The objective is to improve the company's resource usage, cost management, and operational efficiency.

1. INTRODUCTION

Since inventory connects production and distribution and aids in managing delays and demand variations, it is essential to the efficient operation of businesses. It makes up a significant portion of working capital, particularly in the trade and manufacturing industries. While reducing unnecessary expenditure, efficient inventory management guarantees that materials are available when needed. It entails meticulous preparation for handling, storage, and purchase. Stock levels must be balanced because understocking hinders production and overstocking ties up funds. Coordination and control are crucial because different departments may have divergent opinions about inventory.

2. OBJECTIVES

- To analyse the inventory turnover ratio.
- To understand the problem faced by company in handling inventory.
- To analyse the average days to sell inventory ratio.
- To evaluate the impact on inventory control techniques.
- To identify the challenges faced on managing raw materials.

3. SCOPE

Inventory valuation, tracking changes over time, and forecasting future inventory requirements are just a few of the functions of an inventory system. Accurate financial reporting on the balance sheet depends on the inventory's value at the conclusion of each period.

4. REVIEW OF LITRRATURE

H. M. Al-Mahadin and M. M. Al-Fawaz (2023) The effectiveness of various inventory management strategies in manufacturing, such as demand forecasting models, Just-in-Time (JIT), and automated systems, in enhancing operational efficiency in the metals sector is examined in this study.

K. V. Shashank, S. Yadav, and R. Kumar (2022) This review examines several inventory management models designed specifically for the metals sector, highlighting strategies that maximize stock levels, lower operating expenses, and avoid stockouts—all of which contribute to increased productivity.

S. A. Khan and R. Patil (2021) The difficulties with inventory management in the metal manufacturing sector are the main topic of this essay. In order to improve inventory control, it addresses the effects of supply chain interruptions, demand variability, and a lack of real-time data analytics.

Research Team of Sujana Metal Products Limited. (2020) The importance of inventory management in the production of metal is emphasized in this study. It addresses the difficulties of balancing inventory to meet demand without overstocking and explains how effective inventory control results in cost savings and enhanced service levels.

Waweru, W., and P.N. Njeri (2019) The study looks into how the steel industry manages its inventory. It emphasizes tactics like material control and Economic Order Quantity (EOQ), implying that these methods can reduce stockouts and enhance steel manufacturing efficiency.

5. RESEARCH METHODOLOGY

Since the proposed study is analytical in nature, a research design is necessary to guarantee its successful and efficient implementation. A good research design takes into account important aspects of the research problem and facilitates the smooth organization of research activities.

6. DATA ANALYSIS AND INTERPRETATION

6.1.1 Inventory turnover ratio

Table1: Inventory turnover ratio of respondents

INVENTORY TURNOVER RATIO			
Year	Cost of goods sold	Average inventory	Ratio
2018-2019	19095.33	819.58	23.29
2019-2020	22213.26	739.94	30.02
2020-2021	23355.9	864.34	27.02

2021-2022	11892.97	1081.68	10.99
2022-2023	21882.2	1280.76	17.08

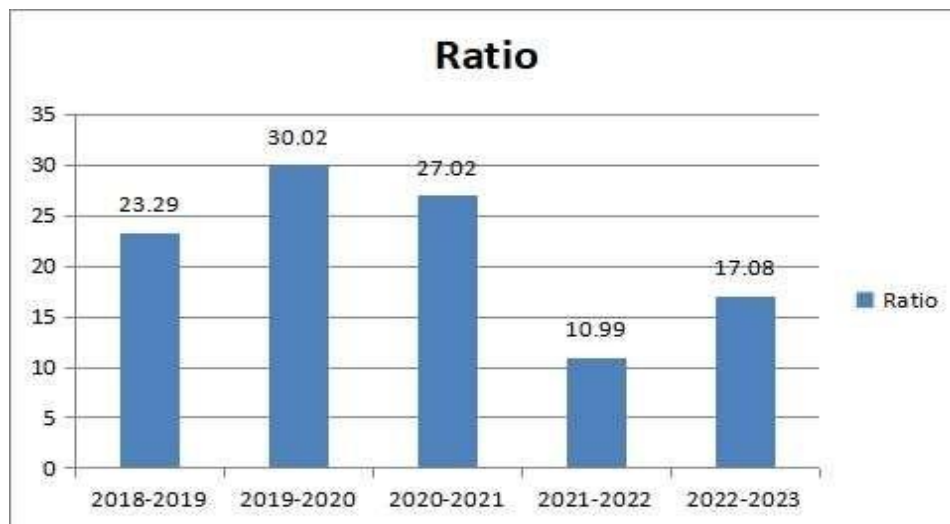
6.1.2 FINDINGS

The Inventory Turnover Ratio calculates how well a business converts its stock into revenue. Better efficiency is indicated by a higher ratio. The ratio varied greatly over the course of the five years: highest in 2019–2020 at 30.02, demonstrating extremely effective inventory management. 10.99 was the lowest in 2021–2022, indicating either overstocking or slower inventory movement. From 2020–2021 to 2021–2022, the ratio fell precipitously, and it only partially recovered in 2022–2023.

6.1.3 INFERENCE

With the exception of 2020–2021 and 2021–2022, the company's inventory turnover ratio increased from 2018–2019 to 2022–2023. The ratio decreased during these two years, which might be a sign of inventory management inefficiencies, but it recovered in 2022–2023.

Figure 1: Inventory turnover ratio of respondents



6.2 INVENTORY HOLDING PERIOD

The holding period refers to the time between an asset purchased and its sale. A short term holding period is defined as less than a year were as a long term holding period is more than a year.

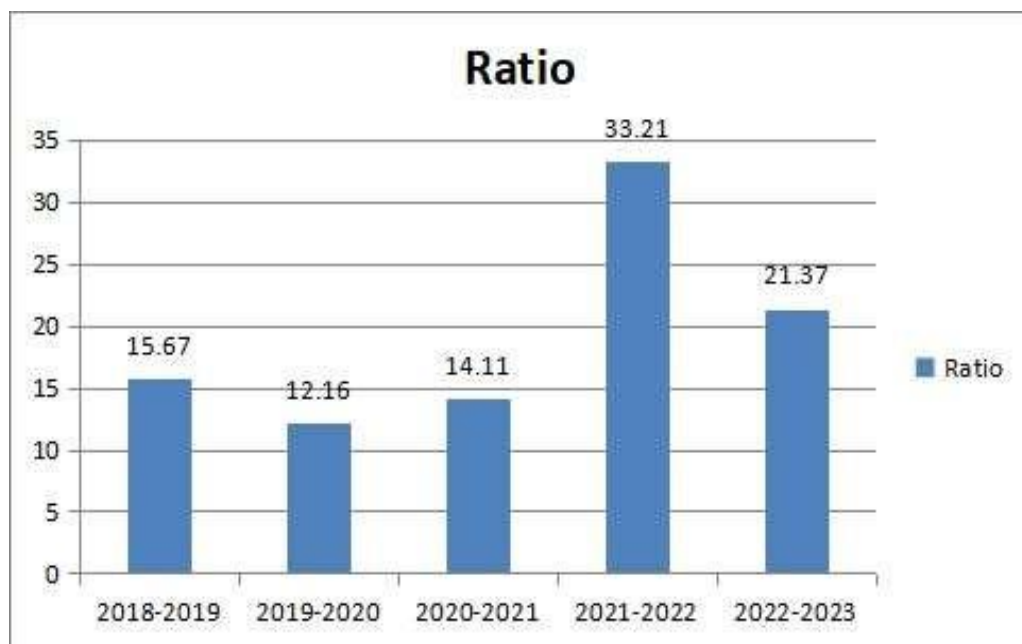
Table 2: Inventory holding period

Inventory holding period			
Year	No of days in a Year	Inventory turnover ratio	Ratio
2018-2019	365	23.29	15.67

2019-2020	365	30.01	12.16
2020-2021	365	25.86	14.11
2021-2022	365	10.99	33.21
2022-2023	365	17.08	21.37

6.2.1 Interpretation

From the above table shows that inventory holding period of the company under study is increasing year by year from 2018-2019 to 2022-2023 except 2019-2020 and 2022-2023.

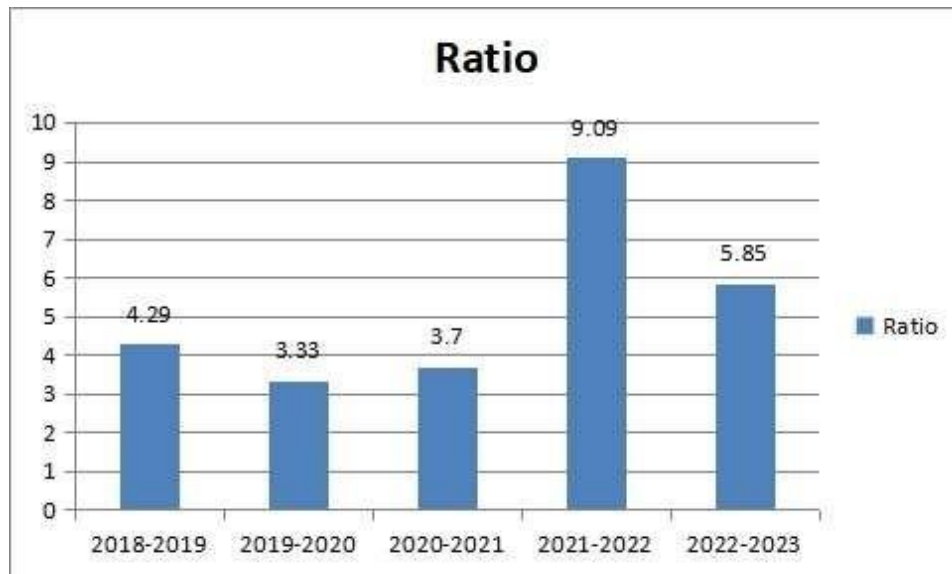


6.3 AVERAGE DAYS TO SELL INVENTORY RATIO:

This financial ratio shows how long it typically takes a business to convert its inventory—which includes goods that are still in the process of being made—into sales, measured in days.

Table3: Showing AVERAGE DAYS TO SELL INVENTORY RATIO.

Average days to sell inventory ratio			
Year	Average inventory	Cost of goods sold	Ratio
2018-2019	819.58	19095.3	4.29
2019-2020	739.94	22213.3	3.33
2020-2021	864.34	23355.9	3.7
2021-2022	1081.68	11893	9.09
2022-2023	1280.76	21882.2	5.85



6.3.1 Interpretation

The aforementioned table indicates that, with the exception of 2020–2021 and 2021–2022, the average day-to-sell inventory ratio of the company under study decreased annually from 2018–2019 to 2022–2023.

7 SUMMARY OFFINDINGS

- 1 Inventory turnover ratio of the company under study is increasing year by year from 2018-2019 to 2022-2023 except 2020-2021 and 2021-2022.
- 2 Inventory holding period of the company under study is increasing year by year from 2018-2019 to 2021-2022 except 2019-2020 and 2022-2023.
- 3 Inventory conversion period of the company under study is increasing year by year from 2021-2022 to 2022-2023 except 2018-2019 and 2020-2021.
- 4 Average days to sell inventory ratio of the company under study is increasing year by year from 2021-2022 to 2022-2023 except 2019-2020 and 2020-2021.
- 5 Raw materials conversion period of the company under study is increasing year, by year from 2018-2019 to 2022-2023.
- 6 Working progress conversion period of the company under study is increasing year from 2021-2022 to 2022-2023 except 2020-2021 and 2018-2019.
- 7 Finished goods conversion period of the company under study is increasing year by the year from 2018-2019 to 2022-2023 except 2020-2021 and 2022-2023.
- 8 Current ratio of the company under study is increasing year by year from 2018-2019 to 2022-2023 except 2020-2021 and 2022-2023.
- 9 Days payable outstanding ratio of the company under study is increasing year by year from 2018-2019 to 2022-2023 except 2020-2021 and 2022-2023.

8 CONCLUSION

This study looked with effective inventory use, the company's inventory management performance during the study period is deemed satisfactory. Timely information sharing with sales teams is supported by accurate inventory tracking, which includes finished goods, shipments, and returns. Supply and demand are balanced, expenses are kept under control, and regulatory compliance is guaranteed with efficient inventory management. The business gains from better customer satisfaction, higher revenue, and better employee morale when it has well-trained employees and high-quality software. According to the study's findings, the business should continue to operate its inventory efficiently.

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