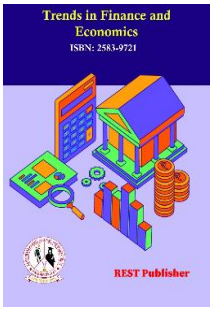
Trends in Finance and Economics

Vol: 2(2), June 2024

REST Publisher; ISSN: 2583-9721

Website: https://restpublisher.com/journals/tfe/

DOI: https://doi.org/10.46632/tfe/2/2/12



A Study on Stock Control System with Reference to Ultratech Cement

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Abstract. Every organization needs inventory for the smooth running of its activities. It serves as a link between production and distribution processes. The investment in inventories constitutes the most significant part of current assets/working capital in most of the undertakings. Thus, it is essential to have proper control and management of inventories. The purpose of inventory management is to ensure availability of materials in sufficient quantity as and when required and to minimize investment in inventories. So, to understand the nature of inventory management of the organization, I took this Inventory Management as a topic for my project, to give findings and suggestions by adopting and analyzing different inventory control techniques.

Keywords: Current Assets, Stock, Inventory Management

1. INTRODUCTION

Every enterprise needs Inventory for smooth running of its activities. It serves as a link between production and distribution process. There is generally a time large between the recognition of a need and its fulfillment. The higher the requirements for inventory. The unforeseen fluctuations in demand and supply of goods also necessitate the need for future price fluctuations. Inventory Management plays a vital role as a part of financial management. As most of the capital is locked up in the form of Inventory in firm. That Inventory must be managed efficiently to reduce the Investment in the Inventory. So, the management of Inventory has also been given a great importance. The purpose of Inventory Management is to ensure the availability of materials in sufficient quantity as & when required and to minimize Investment in inventories. There are three types of inventories. Raw materials, work-in-process, and finished goods. Raw materials are materials and components that are inputs in making the final product. Work-in-process, also called stock-in-process, refers to goods in the intermediate stages of production. Finished goods consist of final products that are ready for sale. While manufacturing firms generally hold all the three types of inventories, distribution firms hold mostly finished goods. Inventories are stock of the product a company is manufacturing for sale and components that make up the product. The various forms in which inventories exist in a manufacturing company are raw materials, work-in-process and finished goods.

2. REVIEW OF LITERATURE

R.S. Chadda (1964) Study had been made on inventory management practices of Indian companies. The analysis suggested application of modern scientific inventory control techniques like operations research. These modern scientific techniques furnish opportunities for the companies, Companies can minimize their investment in inventory but there is continuous flow of production. He argued that industrially advanced countries, like, USA, were engaged in developing highly sophisticated mathematical models and techniques for modernizing and redefining the existing tools of inventory investment. **Krishnamurthy and Sastry (1970)** It is the most comprehensive study on

manufacturers' inventories. They used the CMI data and the consolidated balance sheet data of public limited companies published by the RBI, to analyses each of the major components, like the raw materials, goods-in-process and finished goods, for 21 industries over the period ranging from 1946-62. The study was a time series one although there were some inter-industry cross-section analyses that were carried out in the analysis. The Accelerator, represented by changes in sales, bank finance and short-term interest rates, was found to be an important determinant. The utilization of productive capacity and price anticipations was also found to be relevant in the study.

3. SCOPE OF THE STUDY

The scope of the study is limited to collecting the financial data published in the annual reports of the company with reference to the objectives stated above. The main scope of the study is an analysis of the data with a view to suggesting favorable solutions to the various problems related to Inventory Control Management.

1. To give a plan to the company about what to order, when to order and how much to order.
2. It is useful for deciding operating policy & volume of inventory.
3. It helps to develop the policies for the executives in inventory.
4. It helps the company what items goods are categorized.
5. Project helps to deal with forecasting in inventory.

4. OBJECTIVES OF THE STUDY

1. To learn various Inventory Management procedures followed at Cement Industry of Ultratech Cement Ltd
2. To understand relative advantages and disadvantages of various techniques.
3. To review the ABC Analysis and understand the impact of business dynamics on inventory.
4. To study the stocking level of the company that is minimum level, maximum level & re- ordering level.
5. To study whether the company is facing any stock outs recently.
6. To make a brief study on the analysis of the store items.

5. METHODOLOGY OF THE STUDY

The study is based on both primary data and secondary data.

Primary Data: The information relating to study is collected with the collected with the cooperation of management of the company, who permitted me to carry on the study and providing with requisite data through oral interviews with the employees.

Secondary Data: Since the study is aimed at the financial aspects of Ultratech Cement Ltd, the whole data has been gathered from:

- Annuals reports of the company.
- Broachers of the company library books.
- Library books.

6. LIMITATIONS OF THE STUDY

1. Since the study covers only the Manufacturing division of the company, it may not represent the overall scenario of the Cement Industry.
2. Project duration of time is not sufficient.
3. One of the factors are the study was the lack of availability of information.
4. The information is mostly dependent upon the secondary data.

5. Main limitation is due to their busy schedule the employees in the organization are unable to spend their time with me.

7. DATA ANALYSIS AND INTERPRETATION

Inventory turnover: This ratio indicates the efficiency of the firm in selling its product. It is calculated by dividing the cost of goods sold by the average inventory.

$$\text{Finished goods turnover} = \frac{\text{Cost of goods sold}}{\text{Average inventory}}$$

$$\text{Cost of sod goods} = \text{opening stock} + \text{purchases} - \text{manufacturing Expenses} - \text{closing stock}$$

$$\text{Average inventory} = \frac{\text{Opening stock} + \text{closing stock}}{2}$$

The average inventory is the average opening and closing balances of inventory. In a manufacturing company inventory of goods is used to calculate inventory turnover. The manufacturing firm's inventory consists of two more components:

- Raw material
- Work in process.

Manufacturing also is interested in examining the efficiency with which the firm converts raw material into work in process and the work in process into finished goods. That this, he would like to know the levels of raw materials inventory and work in process inventory held by the firm on an average. The raw material inventory should be related to materials consumed, and work in process to the cost of production.

TABLE 1. Inventory Turnover Ratio

Year / Particulars	2019	2020	2021	2022	2023
Finished goods turnover	1.72 (104.36)	2.03 (88.63)	2.28 (78.91)	1.90 (94.64)	1.34 (134.50)
Work –in-process turnover	78.25 (2.30)	130.09 (1.38)	128.82 (1.40)	89.31 (2.01)	106.66 (1.69)
Sales to total turnover	2.06 (87.10)	2.64 (68.13)	3.30 (72.30)	1.98 (91.03)	1.51 (119.07)
Inventory to sales	48.4%	37.9%	40.17%	50.57%	66.15%
Inventory period	211.62	179.73	160.02	191.92	272.74
A/c receivable period	14.61	11.19	12.29	12.77	9.13
A/c payable period	132.6	128.7	126.70	147.01	141.99
Operating cycle	226.23	190.92	172.31	204.69	281.87
Cash cycle	93.66	62.23	45.6	57.68	140.87

Interpretation: Table shows the inventory turnover ratio. The inventory turnover ratio ranges from 48.99 TO 147.35. It indicates fluctuating inventory turnover, and it affects the liquidity position of the firm. At 2018-19 ITS 122.29.and its decreasing in next year 65.51. again, it decreases in respective years with 48.99. The next prospective years it's in increasing position with 63.91 and 147.35 respectively. We can observe that the firm's inventory turnover ratio is increasing at the present year.

TABLE 2. Finished Goods Turnover

S.no	Year	Cost of Goods sold	Avg inventory	F.g turnover
1.	2018-19	2,15,53,42,922	1,24,96,35,916	1.72
2.	2019-20	2,53,57,85,940	1,24,86,58,429	2.03
3.	2020-21	2,80,49,20,847	1,22,96,82,376	2.28
4.	2021-22	2,27,88,23,513	1,19,82,09,815	1.90
5.	2022-23	1,61,49,63,888	1,20,67,67,981	1.34

Interpretation: Table 1 shows the finished goods turnover. Finished goods turnover ratio ranges from 1.34 TO 2.28. It indicates fluctuating finished goods turnover and it affects the liquidity position of the firm. At 2018-19 Its 1.72 and its increasing in next year 2.03.again its increasing in respective years with 2.28. the next prospective years it's in decreasing position with 1.90 and 1.34 respectively. We can observe that the firm's finished goods turnover ratio is decreasing at the present year.

TABLE 3. W.I.P. Inventory Turnover

S.no	Year	Cost of production (rs)	Avg w i p inventory (rs)	Wip inventory turnover
1.	2018-19	1,89,76,80,764	2,42,52,724	78.25
2.	2019-20	2,69,56,01,423	2,07,20,307.5	130.09
3.	2020-21	2,94,61,75,988	2,28,69,783	128.82
4.	2021-22	2,09,76,46,507	2,34,86,016	89.31
5.	2022-23	1,61,63,41,752	1,51,54,556	106.66

Interpretation: Table shows the Work in process inventory turnover. Work in process inventory turnover ratio ranges from 78.25 to 130.09. It indicates fluctuating Work in process inventory turnover and it affects the liquidity position of the firm. At 2017-18 ITS 78.25 and its increasing in next year 130.09.again its decreasing in respective years with 128.82 the next prospective years its in decreasing position with 89.31.increasing in the next year 106.66 respectively. We can observe that the firm's work in process inventory turnover ratio is increasing at the present year.

TABLE 4. Inventories To Sales

S.no	Year	Sales(rs)	Total inventory (rs)	Ratio
1.	2018-19	2,95,87,24,922	1,43,18,24,825	48.4
2.	2019-20	3,59,13,09,940	1,35,93,30,982	37.9
3.	2020-21	3,30,49,74,847	1,32,75,07,945	40.17
4.	2021-22	2,50,68,97,513	1,26,77,78,839	50.57
5.	2022-23	1,94,19,89,888	1,28,45,84,247	66.15

Interpretation: Table shows the inventory to sales ratio. The inventory to sales ranges from 37.9 to 66.15. It indicates fluctuating inventory to sales turnover, and it affects the liquidity position of the firm. At 2018-19 Its 48.4 and its decreasing in next year 37.9. again, it increasing in respective years with 40.17. The next prospective years it's in increasing position with 50.57 and 66.15 respectively. We can observe that the firm's inventory to sales turnover ratio is increasing at the present year.

TABLE 5. Inventory Production of Total Current Assets

S.no	Years	Inventories (rs)	Total current assets (Rs)	Proportion of inventories in total current assets
1.	2018-19	1,43,18,24,825	1,98,52,25,857	72.12
2.	2019-20	1,35,93,30,982	2,00,35,49,011	67.84
3.	2020-21	1,32,75,07,945	1,76,18,14,461	75.34
4.	2021-22	1,26,77,78,839	1,74,18,02,606	72.78
5.	2022-23	1,28,45,842,47	1,59,49,54,210	80.50

Interpretation: From table 5 we can say the proportion of inventories to total current assets varies between 72.12 to 80.50 in the year 2018- 2019. The rate of current assets is ranges from 67.84 to 80.50 .the proportion of using current assets is gradually increasing from 2019-2020.we have observed in the year of 2018-19 the company uses the inventory 72.12. its decreasing in next year 67084.again its increasing in respective years with 75.34. The next prospective years it's in decreasing position with 72.78 and increasing the next year 80.50 respectively. We can observe that the firm's proportion of inventories to total current assets is increasing at the present year.

TABLE 6. Inventory Production of Total Current Liabilities

YEARS	Inventories (Rs)	Total current liabilities (Rs)	Proportion of inventories in total current liabilities
2018-19	1,43,18,24,825	1,35,19,50,925	105.91
2019-20	1,35,93,30,982	1,31,17,17,583	103.63
2020-21	1,32,75,07,945	1,25,07,21,521	106.14
2021-22	1,26,77,78,839	84,69,14,549	149.69
2022-23	1,28,45,842,47	70,85,40,086	181.30

Interpretation: From the table we can say the proportion of inventories to total current liabilities varies between 149.69 to 181.30 in the year 2021-2022.The rate of liabilities ranges from 103.63% to 181.30. The proportion of using current liabilities is gradually increasing from 2021-22. We have observed in the year of 2017-18 the company uses the inventory 105.91 of current liabilities. In the year of 2021-2022 the percentage of the current liabilities is increased by 31.61.The using of more current liabilities is give more losses to the company.

TABLE 7. Inventory Period

Years	Cost of goods sold (Rs)	Average inventory (Rs)	Inventory period. (days)
2018-19	2,15,53,42,922	1,24,96,35,916	211.62
2019-20	2,53,57,85,940	1,24,86,58,429	179.73
2020-21	2,80,49,20,847	1,22,96,82,376	160.02
2021-22	2,27,88,23,513	1,19,82,09,815	191.92
2022-23	1,61,49,63,888	1,20,67,67,981	272.74

Interpretation: From the table we can say the proportion of inventory period varies between 191.92 to 272.74 in the year 2021-2022. The inventory period ranges from 160.02 to 272074.we have observed in the year of 2017-18 the company spends more period 211.62. From the year 2018-19 the inventory period gradually increased. These leads the company gains more losses.

TABLE 8. Accounts Receivable Period

YEARS	Avg Debtors (Rs)	Annual sales (Rs)	Accounts receivable period (Days)
2018-19	11,85,09,829	2,95,87,24,922	14.61
2019-20	11,00,72,382	3,59,13,09,940	11.19
2020-21	11,12,60,542	3,30,49,74,847	12.29
2021-22	8,77,14,434	2,50,68,97,513	12.77
2022-23	4,85,92,344	1,94,19,89,888	9.13

Interpretation: Table shows the accounts receivable period ratio. Accounts receivable period ranges from 9.13 to 14.61. It indicates fluctuating accounts receivable period and it affects the liquidity position of the firm. At 2017-18 ITS 14.61 and its decreasing in next year 11.19.again its increasing in respective years with 12.29. The next prospective years it's in increasing position with 12.77. In the 2021-22 its decreasing position 9.13 respectively. We can observe that the firm's accounts receivable period is decreasing at the present year.

Table 9. Accounts Payable Period

Years	Annual cost of goods sold (Rs)	Average accounts payable period (Rs)	Accounts payable period (Days)
2018-19	2,15,53,42,922	78,28,21,338	132.57
2019-20	2,53,57,85,940	89,40,52,716	128.69
2020-21	2,80,49,20,847	97,37,27,596	126.71
2021-22	2,27,88,23,513	91,78,40,955	147.01
2022-23	1,61,49,63,888	62,82,72,959	141.0

Interpretation: The table we can say the proportion of Accounts payable period varies between 147.01 to 141. in the year 2022-2023. The Accounts payable period ranges from 126.71 to 147.01. We have observed in the year of 2021-22 the company pays highest Accounts payables 147.01 .From the year 2019-20 the Accounts receivable period is gradually decreased .these leads the company gains more profit.

TABLE 10. Operating Cycle

Years	Inventory Period (rs)	Accounts receivable period(rs)	Operating cycle
2018-19	211.62	14.61	226.23
2019-20	179.73	11.19	190.92
2020-21	160.02	12.29	172.31
2021-22	191.92	12.77	204.69
2022-23	272.74	9.13	281.87

Interpretation:
Operating cycle = Inventory period + accounts receivable period

The table we can say the proportion of operating cycle is varies between 204.69. to 281.87 in the year 2022-23. The Operating cycle ranges from172.31 to 281.87. We have observed in the year of 2022-23 the company spends more time 281.87. From the year 2020-21 the operating cycle gradually decreased due to the receivables should be taking within the time.

TABLE 11. Cash Cycle

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Years	Operating cycle (rs)	accounts payable period (rs)	Cash cycle
2018-19	226.23	132.57	93.66
2019-20	190.92	128.69	62.23
2020-21	172.31	126.71	45.6
2021-22	204.69	147.01	57.68
2022-23	281.87	141.0	140.87

Interpretation:

Cash cycle=Operating cycle – Accounts Payable period

The table we can say the proportion of cash is varies 57.68 between to 140.87 in the year 2022-2023.The cash cycle ranges from 45.6 to 140.87. We have observed in the year of 2022-23 the company receives the highest cash operations 140.87. From the year 2019-20 the cash operating cycle is gradually decreased these leads the company gains more profits

Findings

1. Inventory turnover ratio ranges from 48.99 to 147.35 from the years 2018 to 2023 we can observe that firm's inventory is increasing at the present year.
2. The Finished goods turnover ratio in the year 2018-2019 is 1.27 and it increased to 2.03 in the next year with 2.28 percent but in later years it decreased to 1.90 and 1.34 respectively.
3. We observe that work-in-process inventory turnover ranges from 78.25 to 130.09 from years 2018-2023 but has some fluctuations in middle but now it has increased.
4. Sales to turnover in the years 2018-2019 is 2.06. It increased to 3.30 in the years 2018-2022.sales to inventory turnover again decreased from 1.98 to 1.51.
5. The inventory period varies from 191.92 to 272.74 in the years 2020-2021 in these years the inventory period is gradually increasing this lead the company gain more losses.
6. The accounts receivable period ranges from 14.61 to 9.13 from the years 2019-2023.In these 5 years it indicated a fluctuating accounts receivable period. It is decreasing in the present year.
7. Accounts payable period varies from 132.57 to 141.0 in years 2018-2023.It has shown a highest increase in 2020 year i.e., 147.01 and thereby it has decreased.
8. The operating cycle ranges from 204.69 to 281.87 in the year 2021-2022. In the year 2019 it has decreased to 172.31 due to receivables should take within the time.
9. In the year 2018-2023 the cash operating cycle ranges from 93.66 to 140.87. In last year company gained more profits.

Suggestions

1. The investment in raw material should be made as per the requirement. Unnecessary investment may block up the funds.
2. Neither too high nor too low inventory turnover ratios may reduce the profit and liquidity position of the industry so a proper balance should be made to increase profits and to ensure liquidity.
3. The raw materials should be acquired from the right source of the right quality and at the right cost.
4. The process that was being used by **Ultra Tech Cements Ltd** with the purchasing department should undergo changes, so that it seeks enhance the clarity of the delivery of a product without compromising its quality by improving the utilization of materials, labor and equipment.
5. To reduce the work, the purchasing department may enter the purchasing order into database and did not send a copy to anyone. When the merchandise arrived, the receiving clerk would enter the database and determine whether the order agreed with the electronic purchase order.
6. If it did, payment was authorized to be made at the appropriate time. If it didn't match, the order would be returned until it is agreed by Ultra **Tech Cement Ltd.**

8. CONCLUSION

Today's business scenario inventory management is becoming very crucial part of the organization. The system of inventory management in Ultra Tech Cements Ltd is very effective. The organization is basically and assembling unit and thus inventory place a most significant role in the decision making process. From the various calculations and figures relating to the inventory management the inventory classification items are maintained for days, as a result it reduces investment in raw materials, reducing the lead time and also the large quantity discounts because the stock is kept for days. There has been a great improvement in the inventory turnover ratio over the last 5 years. It has increased from 12.54 to 18.68%. This position indicates that the stocks are fast moving and get converted into sales quickly in Ultra Tech Cement Ltd. Finally we conclude that Ultra Tech Cement Ltd inventory management is very good with high techniques.

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