

A STUDY OF IMPACT ON PROFITABILITY DUE TO INVESTMENT ON INVENTORY MANAGEMENT

Submitted in partial fulfillment of the requirements for the award of

MASTER OF BUSINESS ADMINISTRATION

by

SUSIL KUMAR C.K



SCHOOL OF MANAGEMENT STUDIES

SATHYABAMA

**INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)**

**Accredited with Grade "A" by NAAC | 12B Status by UGC | Approved by AICTE
JEPPIAAR NAGAR, RAJIV GANDHI SALAI, CHENNAI - 600 119**

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BONAFIDE CERTIFICATE

This is to certify that this Project Report is the bonafide work of **SUSIL KUMAR C.K 41410323** who carried out the project entitled "**Impact on employee attrition rate due to work environment**" under my supervision from January 2023 to March 2023.

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DECLARATION

I **SUSIL KUMAR C.K (41410323)** hereby declare that the Project Report entitled “**A Study of impact on profitability due to investment on inventory management**” done by me under the guidance of **Dr.M.LAVANYA** is submitted in partial fulfillment of the requirements for the award of Master of Business Administration degree.

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TABLE OF CONTENTS

CHAPTER NO.	TITLE	PAGE NO.
	ABSTRACT	(I)
	LIST OF TABLES	(II)
	LIST OF CHARTS	(III)
1	INTRODUCTION	
	1.1 Introduction	1
	1.2. Company profile	2-3
	1.3. Industry profile	3-4
	1.4. Statement of the problem	5-6
	1.5. objectives for study	6
	1.6 .Need for the study	6
	1.7 .Scope & Significance of the study	7
2	REVIEW OF LITERATURE	
	2.1 Review of Literature	8-20
3	RESEARCH METHODOLOGY	
	3.1 Methodology	21-22
	3.2. Research Design	21-22
	3.3. Sources of Data	21-22
4	DATA ANALYSIS AND INTERPRETATION	23-27
	Ratio analysis	23-27
5	FINDINGS, SUGGESTIONS AND CONCLUSION	
	5.1. Findings of the Study	27
	5.2. Suggestions & Recommendations	28
	5.3. Limitations of the study	29
	5.4. Conclusion	30
	REFERENCES	31
	ANNEXURE I – BALANCE SHEET	32-36

ABSTRACT

Among having dealing with so many challenges one of the main concerns of the modern companies is managing the inventory of the company. Inventory management is in short discussed as managing the overall raw materials, work in progress, Finished good of the company in total. When a company's inventory is not managed properly it will be the first and foremost loss for the company as you can see the process of goods starting from raw material to finished product in each and every process companies try to minimize the cost because total cost of the product will have a direct impact on the company's profit. So, inventory is a place where the company's livelihood is depended. Inventories are always prone to damage, theft, loss. So, it is in the hands of the management to place a proper inventory control management. Many companies are using data analysis and algorithms to tackle the inventory management problems. So, it is in the hands of the management to have a clear cut view in this regard, This project emphasizes how can an IT hardware systems or probably known as microprocessor and microcontroller manufacturing company to maintain its inventory. It also can act as a guide for the company which are in same IT product company to have a control and have a Bulls eye on their Inventories. Here the company's Top management will place a crucial place to view this Inventory management as a concern and take necessary action in this regard.

LIST OF TABLES

TABLE NO.	PARTICULARS	PAGE NO.
4.1.1	Current Ratio Analysis	23
4.1.2	Quick Ratio analysis	24
4.1.3	Inventory Ratio Analysis	25
4.1.4	Total Assets Turnover Ratio Analysis	26
4.1.5	Fixed Assets Turnover Ratio Analysis	27

LIST OF CHARTS

CHARTS NO.	PARTICULARS	PAGE NO.
4.1.1	Current Ratio Analysis	23
4.1.2	Quick Ratio analysis	24
4.1.3	Inventory Ratio Analysis	25
4.1.4	Total Assets Turnover Ratio Analysis	26
4.1.5	Fixed Assets Turnover Ratio Analysis	27

CHAPTER 1

INTRODUCTION

1.1. INVENTORY MANAGEMENT

Inventory constitutes a substantial proportion of the current asset group. It represents investments made for obtaining a return. Inadequate inventory has an adverse potential effect on the smooth running of the business, while excess inventory involves extra cost, which can reduce the firm's profits. Excessive stock is not desirable for longer periods because high inventory levels increase carrying cost and as inventory increases; the profitability decreases. Hence, a suitable inventory control strategy will help in ensuring that the firms always keep an optimal amount of assets. Freeing frozen amounts in the form of stocks or inventories increases the firm's efficiency in the use of its resource. As such, a well-functioning inventory system has a great effect on total firm's performance as well as that of the firm's managers. Inventories are part of current assets, which are convertible to other forms of working capital (cash and other receivables) in less than one year. The theory of inventory management involves making decisions that are in line with basic trade off among firm's objectives, costs and other constraint.

The economic order quantity theory, suggests that firms should maintain the quantity of inventory which provides the lowest total holding cost and acquiring cost. Inventory constitutes a large portion of total investment, it is vital that a firm adapts a good inventory management system to enable firm's growth and enhancement of firm's profitability. A study on effect of inventory management on performance of some firms established that a rate of returns is significantly affected by the level of inventory held. That is, high inventory level lowers the rate of returns. studied the relationship that exists between management of inventory and the general firm's performance

1.2 INDUSTRY PROFILE

Computer hardware components are fixed parts that make up a personal computer, on which software and operating systems are installed. Mass-market consumer computers use highly homogeneous components that are simple for end users to assemble without assistance. Standard desktop computers contain the following hardware components: a power supply, motherboard, and hard disk. Monitors, keyboards, and mice are external hardware devices that also connect to personal computers.

A microprocessor and microcontroller manufacturing company produces integrated circuits (ICs) that are used in a wide range of electronic devices, from smartphones and laptops to industrial automation systems and automotive applications. These ICs are essentially the "brains" of these devices, performing various processing tasks and controlling their operations.

The industry is highly competitive, with several large players dominating the market, including Intel, AMD, Samsung, and Texas Instruments. These companies invest heavily in research and development to stay ahead of the competition, constantly improving their products' performance and power efficiency.

The microprocessor and microcontroller manufacturing industry is driven by several factors, including technological advancements, consumer demand for high-performance electronic devices, and the need for more efficient and automated industrial systems. As technology continues to evolve rapidly, companies in this industry must stay up-to-date with the latest trends and innovations to remain relevant.

The demand for microprocessors and microcontrollers is expected to continue growing as more devices become connected to the internet and the Internet of Things (IoT) ecosystem expands. The automotive industry is also a significant market for these devices, with increasing demand for advanced driver assistance systems and autonomous vehicles.

The production process for microprocessors and microcontrollers involves several steps, including design, fabrication, packaging, and testing. The manufacturing process requires significant investment in research and development, as well as in manufacturing facilities and equipment.

Overall, the microprocessor and microcontroller manufacturing industry is a dynamic and fast-paced industry that plays a critical role in the development of modern technology.

This study identifies the increased proliferation of IoT as one of the prime reasons driving the microprocessor market growth during the next few years. Also, increasing investments in autonomous cars and increasing spending on consumer electronics will lead to sizable demand in the market.

Technavio has been monitoring the microprocessor market and is forecast to grow by USD 38.31 bn during 2022-2027, accelerating at a CAGR of 6.83% during the forecast period. Our report on the microprocessor market provides a holistic analysis, market size and forecast, trends, growth drivers, and challenges, as well as vendor analysis covering around 25 vendors.

1.3 COMPANY PROFILE



Registered in 2015, Lumisense Technologies PVT Ltd has made a name for itself in the list of top suppliers of Wireless Transceiver Module, Bluetooth Module in India. The supplier company is located in Chennai, Tamil Nadu and is one of the leading sellers of listed products.

PRODUCTS MANUFATURING

→ Development Boards

8051 controller board with UART the input supply to the board can be fed from both ac and dc. This board uses AT89S52 as a microcontroller unit. This board is designed with external pull up in port0. It uses a crystal oscillator for generating frequency. A serial communication is achieved by an UART protocol.

→ PIC Development Board

This board is built with PIC16F877A as a microcontroller unit. The input supply to the board can be fed from both ac and dc. It uses a crystal oscillator for generating frequency. A serial communication is achieved by an UART protocol. This board is specially designed for connecting digital and analog sensors which has input voltage range 5 or 12VDC as well as it can be interfaced with serial communication devices, relay boards etc.

→ ZigBee

ZigBee devices are required to conform to the IEEE 802.15.4-2003 Low Rate Wireless Personal Area Network (LR-WPAN) standard. The standard specifies the lower protocol layers are the physical layer (PHY), and the Media Access Control portion of the data link layer (DLL). The technology defined by the ZigBee specification is intended to be simpler and less expensive than other wireless personal area networks (WPANs), such as Bluetooth or Wi-Fi.

→ IBeacon

An iBeacon is a radio transmitter on Bluetooth Low Energy. Bluetooth Low Energy is a wireless personal area network technology used for transmitting data over short distances. As the name implies, it's designed for low energy consumption and cost, while maintaining a communication range similar to that of its predecessor, Classic Bluetooth. An iBeacon broadcast has the ability to approximate when a user has entered, exited, or lingered in region.

➔ IOT BOARD – WIFI

Internet of Things (IoT) is an environment in which objects, animals or people are provided with unique identifiers and the ability to transfer data over a network without requiring human-to-human or human-to-computer interaction. The IoT allows objects to be sensed and/or controlled remotely across existing network infrastructure, creating opportunities for more direct integration of the physical world into computer-based systems, and resulting in improved efficiency.

➔ Virtual Reality

Virtual reality comes, naturally, from the definitions for both 'virtual' and 'reality'. The definition of 'virtual' is near and reality is what we experience. Virtual Reality combines with the ZigBee transceiver unit for data transmission and an usb camera for image recognition and software for image processing. Virtual Reality can easily interface with PC or Laptop by the USB driver provided. By running the application, you can adjust the distance by viewing the camera image available in the PC or Laptop in which the optimize interaction can done.

1.4 STATEMENT OF THE PROBLEM

This study focuses on how the company manage it's inventories, Inventory is the major part of current assets of every company , The proper inventory management system should be maintained by the company to safeguard its profitability, Inventories are part of the final product If any theft or damage happens on inventory it in-turn have an effect on company's final product, In current Era reducing the cost or fixation of price of the final product is a challenging phenomena company's livelihood depends on it ,Companies are at keen competition phase in 2023 ,So this study analyzes how the company maintain it's Inventory management control system.

1.5 OBJECTIVES OF THE STUDY

This project is designed mainly to understand how much the company invest on its Inventory control and how it has impacted on its profitability.

1.5.1. Primary objective:

- To understand the inventory investment of the company

1.5.2. Secondary objectives:

- To understand the investment of the company on working capital
- To find a relationship between the firm's profits and Inventory
- To understand the policies of the firm in Inventory Management

1.6. NEED FOR STUDY

- The main goal of this study is to analyse the inventory management which is all about balancing the conflicting economics of not wanting to hold less stock or too much stock at any point in time. Return maximization on investment of inventories present a considerable proportion of firm's working capital which is a key function of the firm's financial manager.
- However, most managers ignore the saving potential that arise from proper management of inventories, trying to treat inventories as a necessary evil and not as an asset that require to be managed.
- As such, some firms do not or ignore to control their inventory holding, this usually leads to under stocking and causing the firm to stop or slow its production. This finally results to firm's ineffectiveness. According to a study many organizations

usually fail to examine its investment in inventory. They most focus on maximization of returns.

1.7. SCOPE AND SIGNIFICANCE OF THE STUDY

- The main advantage of this study is to we will first analyse the what are the current inventory practices followed by the entity in this MSME and analyse whether it holds any impact on profitability.
- If it is what is their relationship whether it is positively correlated or negatively correlated, this whole Idea or project will give an MSME industry to know that their inventory is properly maintained and valuated or not.

CHAPTER 2

REVIEW OF LITERATURE

2.1. INTRODUCTION

Sarangarajan, et al (2017), carried on his research works on the title of “Capital Structure, Efficiency of Cement Industry in Tamil Nadu”. Capital structures are evaluated by the debt-to-equity ratio. The researchers used Data Envelopment Analysis by applying of Kinsey DEA; an Analysis Used for Benchmarking Software Professional, Version 15 to find out the asset efficiency of the cement industry. Except during the years 1996 and 1999 to 2005 in Tamil Nadu the cement industry efficiently utilized their debts like a secured loan, unsecured loan and current liabilities to maximize the return in the form of shareholder’s fund, through an increase in securing loan resulted in a decrease in the unsecured loan which declined the operation and high cost. During the years 2003 and 2004 increase in interest rates and cost and costly unsecured loan affected the high negative bottom- line. Internal funds mobilization, higher internal accrual and right issue helped the companies to stand in the decent bottom the line.

B. Bagchi& B. Khamrui (2018) investigated the relationship between working capital management and firm profitability and to identify the variables that most affect profitability. In this study, they have selected a sample of 10 FMCG (Fast Moving Consumer Goods) companies in India from CMIE database covering a period of 10 years from 2000–01 to 2009–10. Profitability has been measured in terms of return on assets (ROA). Cash conversion cycle (CCC), interest coverage ratio, the age of inventory, the age of creditors, the age of debtors and debt-equity ratio have been used as explanatory variables. Pearson’s correlation and pooled ordinary least squares regression analysis are used in the study. The study results confirm that there is a strong negative relationship between variables of the working capital management and profitability of the firm. As the CCC increases, the profitability of the firm decreases, and managers can create a positive value for the shareholders by reducing the CCC to a possible minimum level. There is also a stumpy negative relationship between debt used by the firm and its profitability.

Md. Nazrul Islam Shamem Ara Mili (2019) investigated the Working Capital Investment and Financing Policies of Select Pharmaceutical Companies in Bangladesh. The study aims to examine the relative relationship between the working

capital investment and financing practices of the five select listed pharmaceutical companies in Bangladesh over a period of five years. The study found that there is a significant difference in adopting working capital investment and working capital financing policies among the select pharmaceuticals but there is an interrelation between the degree of aggressive working capital investment policies corresponding to conservative working capital financing policy of the pharmaceuticals and vice-versa. Finally, it can be concluded that if relatively aggressive working capital investment policies are followed, they are balanced by relatively conservative working capital financing policies in the select listed pharmaceutical companies of Bangladesh.

Dr. A. Bhunia & Khan (2020), exhibited that Current ratio, liquid ration, debt-equity ratio, cash position ratio, interest coverage ratio, inventory turnover ratio, debtor's turnover ratio, debtor's turnover ratio, creditors turnover ratio, inventory turnover ratio, debtor's turnover ratio, creditors turnover ratio has been taken as the explanatory variables and return on capital employed has been used as the dependent ariable. The result indicated in a lower degree of relationship between liquidity management and profitability. He mentioned that liquidity and solvency position was very satisfactory. Afza & Nazir (2011), used utilization index, performance index and total efficiency index to measure the efficiency of working capital management. They also tested the speed of achieving the target level of efficiency by an individual firm by using industry norms as the target level of efficiency. The findings of the study showed that the cement firms as a whole did perform remarkably well during the period of study. They pointed out that firms have to adopt sound working capital management policies.

N. Mohamad & N. Saad (2022), investigated the effects of working capital component (cash conversion cycles, current ratio, current asset to total asset ratio current liabilities to total asset ratio and debt to asset ratio) to the performance of firms by considering at the firm"s value i.e., Tobin Q and profitability i.e., Return on assets and return on invested capital. The study showed that out of five components select with Tobin Q, return on assets and return on invested capital, but cash conversion cycles, current liabilities to total asset ratio and a current asset to current liabilities ratio have negative significant relations with Tobin q, return on assets and return on invested capital. The conclusion of the result indicated that there were significant negative associations between working capital variables with the performance of the

firm. With this result, they highlight the importance of managing working capital requirements as part of the company's strategy to ensure an improvement in the firm's market value and profitability.

Sen & Oruc (2018), found that there was a significant negative relationship between net working capital level, cash conversion cycle, current ratio, inventory period accounts receivable period and return on total assets. They indicated that the cash conversion cycle should be developed to shorten and by improving short term sources the working capital can be at a minimum level. Bellouma (2009), concluded that a negative relationship identified between gross operating profitability and the days of sale outstanding, the days of payables outstanding, the days of inventory outstanding and the cash conversion cycle. There was a negative relationship between the cash conversion cycle and profitability. In addition, the researcher mentioned that the export intensity and the number of foreign markets positively influence corporate profitability. He suggested that managers can increase profits for the companies if he keeps accounts receivable, accounts payable and inventories at an optimum level. Mian Sajid Nazir & Talat Afza (2009), their result indicated that there is a negative relationship between the profitability measures of firms and degree of aggressiveness of working capital investment and financing policies, but they found investors giving more value to those firms that are more aggressive in managing their current liabilities.

Nazir & Afza (2019), opined that the working capital requirement was used as the dependent variable; various financial and economic factors (operating cycle of the firm, level of economic activity, leverage and growth of the firm, operating cash flows, size of firm, return on assets, industry and Tobin's q) were used as the determining factor of working capital management. The study indicated that operating cycle, return on assets, leverage and Tobin's q were the internal factors and influencing the working capital requirements significantly. Afza & Nazir (2008), identified that there was a negative relationship between the profitability and degree of aggressiveness of working capital investment and financing policies and no significant relationship between the aggressiveness and conservativeness of working capital policies of firms and their financial risk and operating.

Ganesan (2021), found that working capital management efficiency was negatively related to liquidity and profitability. He suggested that the manager can improve working capital efficiency by reducing days of working capital. In addition, he said that

the management of days sales outstanding showed no significant effect on the return on assets and profit margin because of the heavy fixed asset requirements in the telecommunication industry. It also had poor management of accounts payable and accounts receivable. Rehman A. (2007), concluded that there was a strong negative relationship between working capital ratios mentioned above and profitability of the firms. Furthermore, managers can create a positive value for the shareholders by reducing the cash conversion cycle up to an optimal level.

Padachi (2022), Profitability was a dependent variable and return on total assets used as a measure of profitability. The result indicated that with high investment in inventories and receivables, there was lower profitable. An investigation of the profitability, liquidity and operational efficiency of the five industries indicated significant changes and the paper and printing industry had been able to achieve high scores on the various components of working capital and this had positively impacted on the profitability of these firms.

Eljelly (2020), observed that there was a significant negative relationship between the profitability and liquidity level of the forms, as measured by the current ratio. The cash conversion cycle was more affected on liquidity than the current ratio that affected profitability and the size variable was found to have a significant effect on profitability at the industry level.

Ghosh & Maji (2021), presented the results the cement industry of India did not perform well during the period of study with respect of working capital management and there was further need to study the application of efficiency index to firms. Howorth & Westhead (2003), appraised the impact of sales and interest rate on working capital and its components. First, they took sales as an independent variable, coefficient of sales was more than unity in all the actions of working capital and its components display more than unity sales elasticity and diseconomies of scale. Then than unity in demand functions of working capital and its components except for cash. So far as capital costs were concerned, these had negative signs in all the equations, but significant only in inventory, gross working and networking capital showing the negative impact of interest rates on investment in working capital and its components.

Sharma (2016). Observed that the coefficient of inventory stock was found the negative sign and the coefficients of the accelerator and financial variables were found positive significant. He mentioned that no effort had been made to analyze working capital N.K. Agrawal (2019), concluded that although the working capital per rupee of

sales showed a declining trend over the years, still a sufficient scope for reduction in investment appeared in almost all the segments of working capital. An upward trend in cash to current assets ratio and a downward trend in cash turnover showed the accumulation of idle cash in these industries. Almost all the industries had overstocking of raw materials shown by an increase in the share of raw material in total inventory while the share of semi-finished and finished goods came down. It also revealed that long-term funds as a percentage of total working capital registered an upward trend, which was mainly due to the restricted flow of bank credit to the industries. Misra (1975), showed that the overstocking of inventory in regard to its each component, more cash as operational requirements and very low receivables turnover. The result indicated that there is mismanagement of working capital in the public sector in India.

Vinod Prakash (2019), examined the influence of structural changes in manufacturing activity on the relative size and composition of inventory in the large scale-manufacturing sector in India. Three different models for industry groups and for six important individual industries had been tried. Output/sales, capacity utilization, short- term rate of interest, money supply, foreign exchange availability and price index, size and time trend were taken as explanatory variables. The simple accelerator model with output gave better results for industrial groups, whereas the ratio model seemed to perform better in the analysis of the individual industry. The flexible accelerator models were found to be inferior. The impact of price index was found to be generally insignificant, while the impact of foreign exchange and money supply was absent. The rate of interest showed a perverse impact. Time trend appeared to be more important than the size of the establishment. The role of availability of funds was completely ignored in this study.

Paul Welter (2019), defines that working capital was created because of the time gap between „the moment expenditure for purchase of raw material was made" and „the moment when payment was received for the sale of finished product" he also identified that the delay centres are located throughout the production and marketing functions, therefore it is important to study found blocked in each delay centre with the help of information regarding average delay and added value. The researcher also emphasized on the rapid and accurate information through computers and improved the professional ability of management. The manager can reduce the working capital requirement of the firm by reducing the length of global delay among the different

delay centres but it is an involved cost. This study, ignored risk and it is concerned only with the return aspect of working capital management, however, if a firm reduces its working capital and follows this approach, it can adversely affect its short-term liquidity position for achieving to save and this approach ignores the relations between current assets and current liabilities.

Krishnamurthy & Sastry (2019), investigated the major components, i.e., raw material, goods-in-process and finished goods in their study and they also used inter-industry cross-section analysis. Accelerator denoted by a change in sales, short-term interest rate and bank financing was found to be significant factors. Utilization of productive capacity and price anticipations were found to be important determinants. Van Horne (1969), mentioned that the maximum possibility of lack of cash, the firm could determine the best alternative by balancing the risk of lack of cash against the cost of providing a solution to avoid such a possibility depending on management's risk to clearance limits. He studied a trade-off risk-return of working capital management in an entirely new perspective by considering some of the variables probabilistically but the usefulness of the framework recommended by him was limited because of the difficulties in getting information about the possible distributions of liquid-asset balances, the opportunity cost and the possibility of running out of cash for different alternative of debt maturities. Sagan 1955, emphasized the role and functions of the cash component of working capital management and declared that in the course of business transactions money manager's operations were primarily in the area of cash flows; but the money manager must be familiar with all accounts affect the cash position like payables, receivables and inventories. The researcher mentioned that the task of manager of money is to provide funding whenever it is required and to invest surplus funds in return-on-investment opportunities. He indicated that the manager of money should take decisions on the basis of cash budget and total current asset's position of the firm. He highlighted the need to improve the collection of funds, but he didn't discuss the method. The study was described without any empirical support

Madishetti (2017) Based on the data from two DSE-listed companies for eight years from 2006 to 2013, this study analyses the impact of inventory management efficiency on the profitability of Tanzania-listed Dar Es Salaam Stock Exchange (DSE) cement companies. Tanga Cement Limited (TCCL) and Portland Cement Limited (PLCCL) regressed by applying descriptive statistics, correlations, and Ordinary Least Squares

regression (OLS) tests. The Inventory turnover in Days (ITID) is considered as an independent variable. The company's current ratio (CR), the size of the company measured by the natural log of sales, CSLn has been use as a control variable. Logarithmic gross operating income is considered the dependent variable (GOPLn). According to the descriptive analysis, compared to industrial and TCCL, the performance of TPCCL in the case of CR is relatively better. In the case of ITID, the performance of TCCL is relatively better. The regression analysis results show that there is a positive correlation between Inventory turnover in Days (INTID) and profitability, which is not in line with expectations. The study result concluded that both companies have sufficient space to invest to improve the impact of Inventory Turnover in Days (ITID) on profitability and investigate the reasons for the positive association between these two variables. (Madishetti S. , Impact of Inventory Management on the Profitability of Listed Cement Companies in Tanzania, 2015).

Ndubuisi, O, Uche, & Chinyere (2018) The purpose of this research paper is to find out the association between inventory management and the financial performance of brewery companies listed on the Nigerian Stock Exchange for the seven (07) years from 2010 to 2016. Return on assets, company growth and return on equity are taken as a proxy of financial performance, and the ICP is used as a factor to measure inventory management. The panel data used in this study. Data were analysed by Correlation co-efficient and ordinary least square (OLS) regression method using SPSS. The survey results show that there is a significant positive association between the return on assets, the company's growth and the inventory conversion period. There is a positive and nonsignificant relationship between the return on equity and the inventory conversion period. This study suggests, among other things, that the management of brewery companies should put emphasis on proper inventory management methods and measure efficiency deviation to recognize limitation in the inventory management procedure. (Ndubuisi, O, Uche, & Chinyere, Inventory Management and Financial Performance: Evidence from Brewery Firms Listed on Nigeria Stock Exchange, 2018).

Hussein & Omar (2020) This study examines the role of inventory management and cost reduction in electronics company organizations. The study design of this study was quantitative. In addition, a clear definition of quantitative details makes the required statistical analysis possible and often improves the usefulness of the results. Electronics companies are the target group. Research tools may be useful tools for

this research, because it is easy and fast to gather the required information from the interviewees, and it is possible to target the interviewees who are scattered in a wide range of locations during the questionnaire process. The research tools used in data collection are questionnaires for measuring variables, characteristics or information of interest (usually behavioural or psychological characteristics). The data is presented in the form of frequency, crosstab percentages, and correlation analysis to establish relationships between variables. A multiple regression analysis was applied to measure the impact between the dependent variable (business performance) and the independent variable (inventory management). The results show that inventory planning, inventory records, and profitability have a noteworthy positive impact on the organizational performance of the electronic business of Mogadishu Somalia in the Bakara market. The study suggests that electronics companies should not only conduct inventory plans to improve operations and sustain failed businesses, but also improve their competitiveness and financial performance. (HUSSEIN & OMAR, 2016).

John (2022) The research study focused on the impact of inventory management on the profits of Nigerian manufacturing companies. The correlation research design was used for the study. The population includes eight beverage companies listed under the Nigerian Stock Exchange Manufacturing Industry. Simple random samples are used for sample selection. The study's information comes from secondary sources from the year 2008 to 2012. The return on equity is used to represent profitability, and the inventory conversion period is used to represent inventory management. Meanwhile, the current ratio represents the control variable. The data analysis outcome shows that there is a positive insignificant relationship between inventory management and the profitability of companies. The finding suggests that there is insignificant correlation between inventory management and the profitability of companies. (John, 2014).

Sunday & Joseph (2017) The rationale of the study was to inspect the impact of inventory management on the profits of small and medium-sized businesses in Nigeria. For the study researcher used a descriptive study design. The population includes all SMEs operating in the delta. The study used stratified random sampling. The data for this study was obtained through self-designed questionnaire surveys with sample managers or accountants. The structure of the questionnaire is designed to obtain information on transactions and financial activities in the last two fiscal years. Regression analysis was applied for the study. The results indicate that the inventory

turnover rate has a noteworthy positive correlation with the financial performance of SMEs and there is a negative relationship between the inventory conversion period and profitability. According to the research results, it is suggested that enterprises should adopt modern production technologies to increase production speed and shorten the inventory conversion period, thereby improving inventory turnover and profitability. (Sunday & Joseph, 2017).

Dedunu & Weerasinghae (2018) The study investigated the relationship between company performance and inventory management. Researchers use number of days in inventory as the dependent variable and gross profit margin and net operating profit margin as independent variables. Today, most companies attach great importance to inventory management. Some organizations have implemented different tools, such as JIT, and some have applied ERP and SAP systems to effectively control their inventory. Therefore, this study uses descriptive analysis, correlation analysis, and regression analysis. The analysis was performed (using the STATA software package). Investigate the impact of inventory management on the performance of listed manufacturing companies. According to the data analysis, the results confirm that there is a solid positive correlation between inventory management and gross profit margin, but a negative correlation between inventory management and net profit margin. The result of correlation analysis shows that inventory management has a significant relationship with gross profit margin and net profit margin. Researchers suggest that organizations must make the right decisions about the management and other related costs of inventory management to improve the performance of the organization. (Dedunu & Weerasinghae, 2018).

Panigrahi (2019) The aim of this research paper is to study the inventory management perform of Indian cement companies and their effect on working capital efficiency. The researcher had tried to examine the relationship between inventory conversion periods and Firm's profitability. In this study the regression analysis applied to determine the association of the inventory conversion period with the operating profit ratio, company size, and financial debt ratio as control variables. The results demonstrate that significant negative relationship exists between the inventory conversion period and profitability. The survey results show that the inventory conversion period is inversely relative to the company's profitability, that is, when the

number of days in the inventory conversion period raise, the company's profitability decreases, and vice versa. (Panigrahi, 2013).

Nwakaego, Dorathy, & Ikechukwu (2019) This study analyzes the impact of inventory management on the Nigerian construction/chemical and paint manufacturing companies' profitability. The reason of the study was to examine the impact of inventory turnover on the company's profitability, determine the impact of sales growth on the company's profitability, and determine the impact of debt ratios on the profitability of Nigerian Companies. The multiple regression analysis has been applied to test the hypotheses. The results of the analysis indicates that the inventory turnover ratio has a significant and negative impact on the profitability of the companies studied, and it is found that the sales growth rate has no significant and negative impact on the profitability. Similarly, the debt ratio has no significant impact on the profitability of companies. (Nwakaego, Dorathy, & Ikechukwu, 2014)

Agu, Happiness Ozioma, & Nnate (2019) The study aimed to determine the degree of impact of inventory control on the efficiency of selected manufacturing companies. The population size of the study was 996, in which by the researcher Taro Yemeni formula was used to achieve a 285-sample size. The tools used for data collection were mainly questionnaires and interviews. The study implemented a descriptive survey study design. The results of the study designated that inventory control has a significant impact on the efficiency of selected manufacturing companies. From the result of analysis, it is concluded that inventory management is vital to the operation of business. The study recommends that company should educate their workers in the area of inventory control management so that they can be liable for the soft running of inventory management programs. (Agu, Happiness Ozioma, & Nnate, Effect of Inventory Management on The Organizational Performance of The Selected Manufacturing Firms, 2016)

Lwiki, Ojera, Mugenda, & Wachira (2020) This research paper studies the effect of inventory management practices on the financial performance of Kenya based sugar companies by examining the area to which lean inventory systems, strategic supplier partnerships, and technology are functional in sugar companies. The research conducted between the year 2002 and 2007 for eight companies operating in the sugar industry. Key data were composed using structured and semi-structured

questionnaires applied with key information providers in organization. The secondary figures collected from the annual financial report of the companies. Descriptive statistics are used and correlation analysis is used to determine the nature and size of the relationships between variables. From the financial performance table and figures, each company has a different growth model, it means that, sugar's inventory management practices are same as the determinants of its performance level, the implementation of the practices is a response to the unique and different circumstances of each company. There is a favorable association between each inventory management practice. Specific performance pointer has established to depend on the level of inventory management practices. Return on sales has a significant positive correlation with strategic supplier partnerships. It is important that Return on Equity is closely related to lean inventory systems and strategic supplier partnerships. (Lwiki, Ojera, Mugenda, & Wachira, 2013).

Oballah, Waiganjo, & Wachiuri (2021) The motivation behind this examination was to explore the impact of inventory management rehearses on organizational performance in public health establishments in Kenya. The particular objective was to found: the impact of inventory shrinkage, inventory venture, inventory turnover, and inventory records precision on organizational performance. A descriptive analysis was utilized. Measurable investigation was done utilizing SPSS. The examination uncovered that inventory investment and inventory records precision impact on organizational performance. While inventory shrinkage negatively affects organizational performance of Kenyatta National hospital. Accordingly, this investigation suggests that the hospital ought to guarantee that misfortunes bringing about inventory shrinkage identified with medicines are diminished. This should be possible by guaranteeing that inventory records are precisely kept. The organization needs to deal with its inventory speculation by guaranteeing that the perfect measure of stock is kept consistently. (Oballah, Waiganjo, & Wachiuri, 2015).

Ogbo, Victoria, & Ukpere (2020) This investigation considered the relationship between the inventory management framework and organizational performance in the seven-man packaging organization, Nile Mile Enugu. A sum of 83 respondents comprised the sample of the investigation. Four research questions and four hypotheses were created and tried utilizing descriptive analysis and nonparametric tests at a 10% significance level. The examination results show that the adaptability

of inventory control management is a significant strategy to accomplish organizational performance. The aftereffect of the investigation suggested that associations receive the inventory maintenance technique that is generally appropriate for their operations. (Ogbo, Victoria, & Ukpere, 2014).

Etale & Bingilar (2022) This investigation analyzes the effect of inventory cost management on the profitability of Nigerian listed brewery works organizations. Inventory cost management operators dependent on raw material costs, work-in-measure costs, and finished products costs, benefit specialist's dependent on gross profit margin. Secondary time series data was gathered from the yearly reports and records of selected brew organizations from the Nigeria Stock Exchange from the year 2005 to 2014. The information got from NSE was dissected utilizing the multiple regression method with SPSS 20 version. The examination shows that effective inventory cost management positively affects the profitability of Nigerian brewery organizations. In light of the inspected outcomes, the examination proposes that brewery organizations should embrace dominant inventory cost management techniques. The arrangement of appropriate modern technology for powerful inventory cost management and the work of skilled and qualified staff ought to get regular training on proper and effective inventory cost management. (Etale & Bingilar, 2016).

Capkun, Hameri, & Weiss (2019) The motivation behind this examination article is to contemplate the relationship between inventory performance, total inventory (INV), and its discrete components (raw materials (RMI), work in progress (WIP) and finished goods (FGI)) and Manufacturing Company's financial performance. Measurable examination was applied to the financial information of manufacturing organizations situated in the United States during the 26 years from the year 1980 to 2005. This article is the first to efficiently dissect the relationship between inventory performance and the financial performance of an enormous number of organizations in all manufacturing businesses. This paper finds that there is a noteworthy positive correlation between inventory performance and financial performance markers of manufacturing organizations. The correlation between the performance of discrete sorts of inventory and financial performance shifts significantly between various kinds of inventory. Raw Material performance has the most elevated correlation with all financial performance pointers. Between item inventory and Finished Goods

performance, the previously has a higher correlation with net benefit pointers; while later has a higher correlation with operating profit indicators. (Capkun, Hameri, & Weiss, 2009).

CHAPTER 3

RESEARCH METHODOLOGY

3.1. METHODOLOGY:

Research methodology is mainly needed for the purpose of framing the research process and the designs and tools that are to be used for the project purpose. Research methodology helps to find the investment pattern of the company towards its inventory and its effect on profitability.

3.2. RESEARCH DESIGN:

Research type : Quantitative research

- This research is quantitative research. Quantitative research is the process of collecting and analysing numerical data. It can be used to find patterns and averages, make predictions, test causal relationships, and generalize results to wider populations.

3.3. SOURCES OF DATA:

Data collection is the term used to describe a process of preparing and collecting data.

Secondary data:

- The secondary data was collected from the published annual reports, including financial statement data by industry given in balance sheet, profit and loss account and key financial statement of the companies for the year 2017 to 2022 which will be directly obtained from the registered offices and other employees of the respective company. As it has been stated above, the research data is collected mostly from secondary source and secondary data was collected with the content analysis method.

3.4 DATA ANALYSIS AND CONCEPTS

-> In order to investigate the working capital effect on profitability and examine its relationship, relevant data for a period of ten years from the select automobile companies was gathered to examine other ratios such as leverage, asset management, liquidity and profitability.

3.4.1 WORKING CAPITAL

Working capital indicates the liquidity levels of businesses for managing day-to-day expenses and covers inventory, cash, accounts payable, accounts receivable and short term debt.

3.4.2. CURRENT RATIO

The current ratio measures a company's market liquidity and capacity to satisfy short-term commitments.

3.4.3. QUICK OR ACID TEST RATIO

The quick ratio assesses a company's capacity to repay current creditors using its most liquid assets.

3.4.4. INVENTORY TURNOVER RATIO

- Inventory turnover is a financial ratio showing how many times a company turned over its inventory relative to its cost of goods sold (COGS) in a given period.

3.4.5. TOTAL ASSETS TURNOVER RATIO;

The asset turnover ratio measures the efficiency of a company's assets in generating revenue.

CHAPTER 4

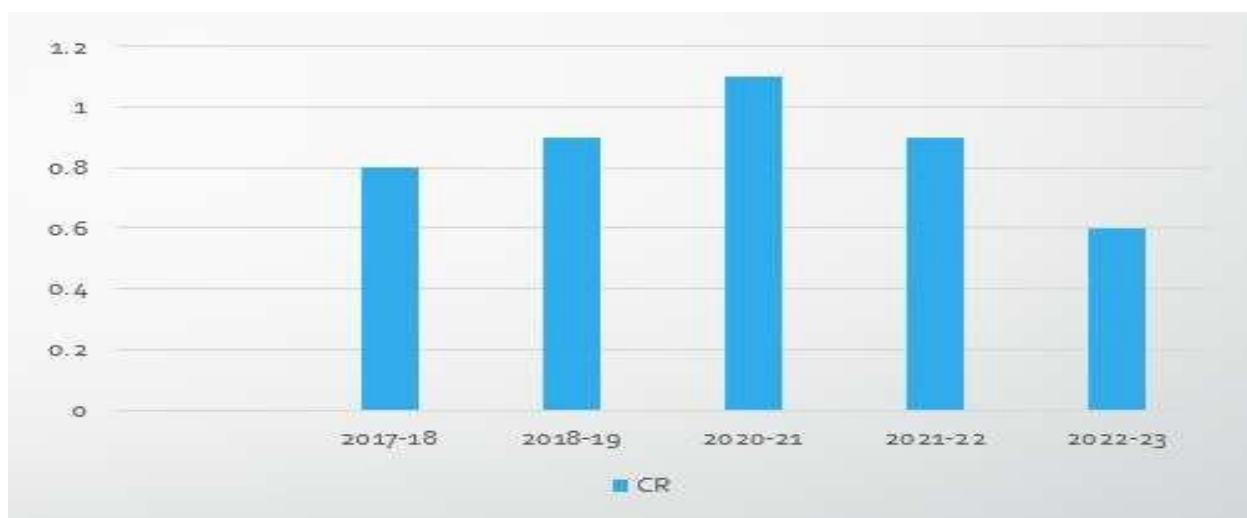
DATA ANALYSIS AND INTERPRETATION

4.1 RATIO ANALYSIS

Table.4.1.1. Current Ratio Analysis of Lumisense Technology

YEARS	CR	INDEX	AVERAGE	
			CR	INDEX
2017-18	0.8	90.7	0.8	68.8
2018-19	0.9	120.5	0.8	72.3
2019-20	1.1	112.8	0.8	75.7
2020-21	0.9	81.1	0.8	67.3
2021-22	0.6	68.6	0.8	67.3
AVERAGE	1.0	92.0	0.9	80.2

Chart.4.1.1. Current Ratio Analysis of Lumisense Technology



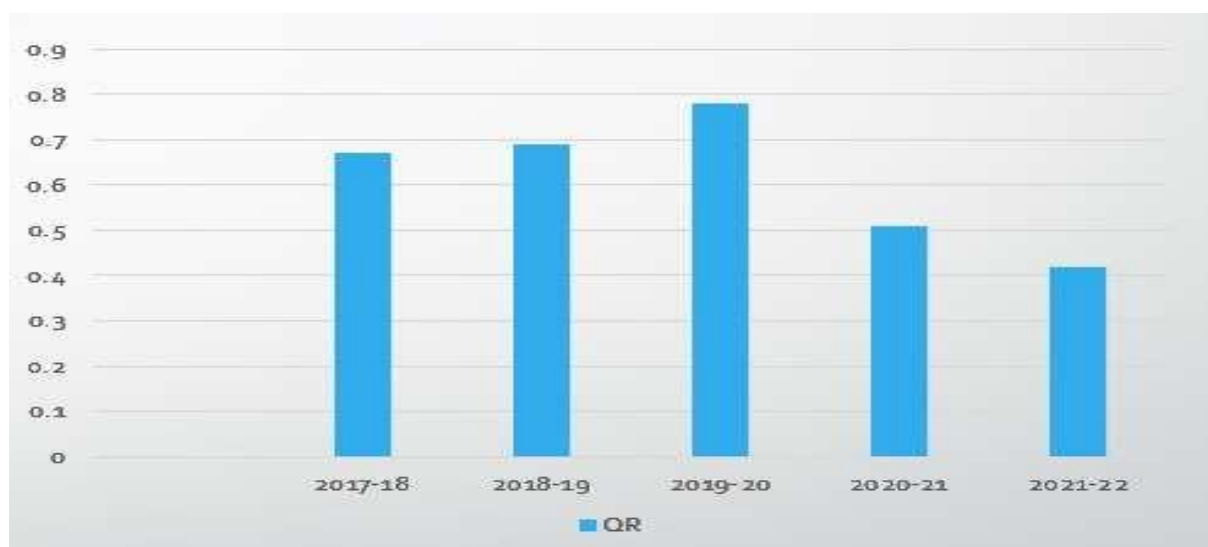
INFERENCE:

The current ratio index fell 32.4 percent to 68.6 in 2021-2022 over 2018-2019, while current liabilities and current assets grew proportionally. It dropped by 11.1 percent in 2021-2022. However, the index of the ratio grew considerably by 20.2 percent in 2017-2018, rising from 70.2 to 90.7 as current assets increased and current liabilities dropped. It steadily rose during the following two years. When compared to the average actual firm's ratio of 0.90, the average actual current ratio is 1.0.

Table.4.1.2.QUICK RATIO ANALYSIS OF LUMISENSE TECHNOLOGY

YEARS	QR	INDEX
2017-18	0.67	112
2018-19	0.69	115
2019-20	0.78	130
2020-21	0.51	85
2021-22	0.42	70
AVERAGE	0.61	102

Chart.4.1.2.QUICK RATIO ANALYSIS OF LUMISENSE TECHNOLOGY



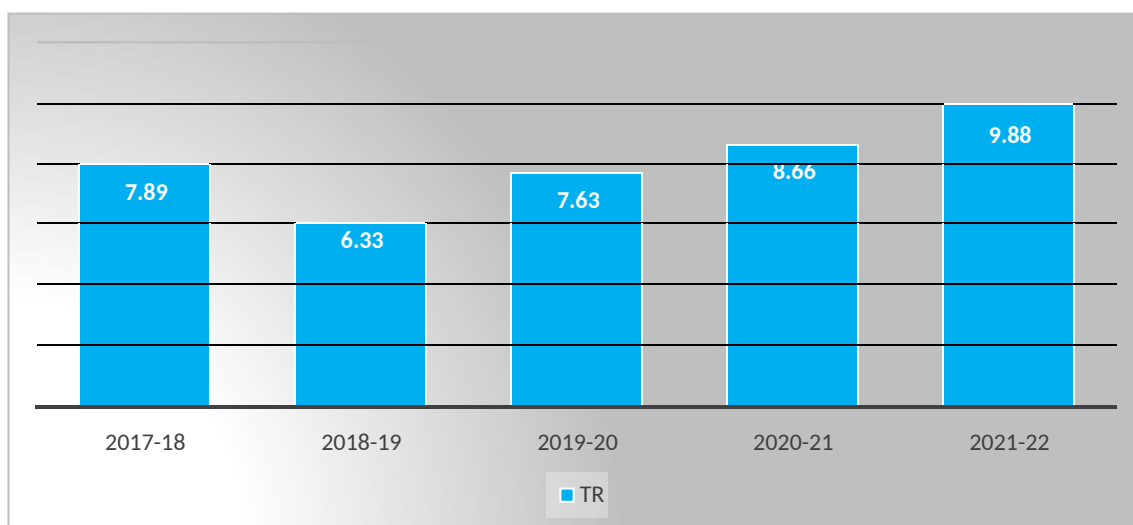
INTERPRETATION:

During 2019–2020, the ratio index climbed by 15% as current liabilities declined and liquid assets increased proportionately. The fast ratio index fell by 45 percent in 2020-2021, from 130 to 85, and continued to fall the following year.

Table.4.1.3.INVENTORY TURNOVER RATIO ANALYSIS OF LUMISENSE TECHNOLOGY

YEARS	TR	INDEX
2017-18	7.89	99.9
2018-19	6.33	80.01
2019-20	7.63	96.6
2020-21	8.66	109.6
2021-22	9.88	125.1
AVERAGE	7.13	90.2

Chart.4.1.3.INVENTORY TURNOVER RATIO ANALYSIS OF LUMISENSE TECHNOLOGY



INFERENCE:

Despite some fluctuations over the last five years, the inventory turnover ratio index increased to 125.1 in 2021-2022. However, the ratio index declined considerably by 10.7 percent in 2018-2019, from 67.7 to 57.0, as sales decreased and inventories grew. It resumed the next year. The ratio index grew by 7%, from 57.0 to 64.1 in 2019-2020, due to an increase in sales despite an increase in inventories. It was followed the next year.

The average real inventory turnover ratio is 7.13, which is lower than the average actual company ratio of 19.13. Because of lower average sales and greater average inventory levels.

Table.4.1.4FIXED ASSETS TURNOVER RATIO OF LUMISENSE TECHNOLOGY

YEARS	FAT	INDEX
2017-18	1.26	43.3
2018-19	1.25	43
2019-20	1.73	59.5
2020-21	1.98	68
COMPANY AVERAGE	2.606	89.6

Chart.4.1.4FIXED ASSETS TURNOVER RATIO OF LUMISENSE TECHNOLOGY



INFERENCE:

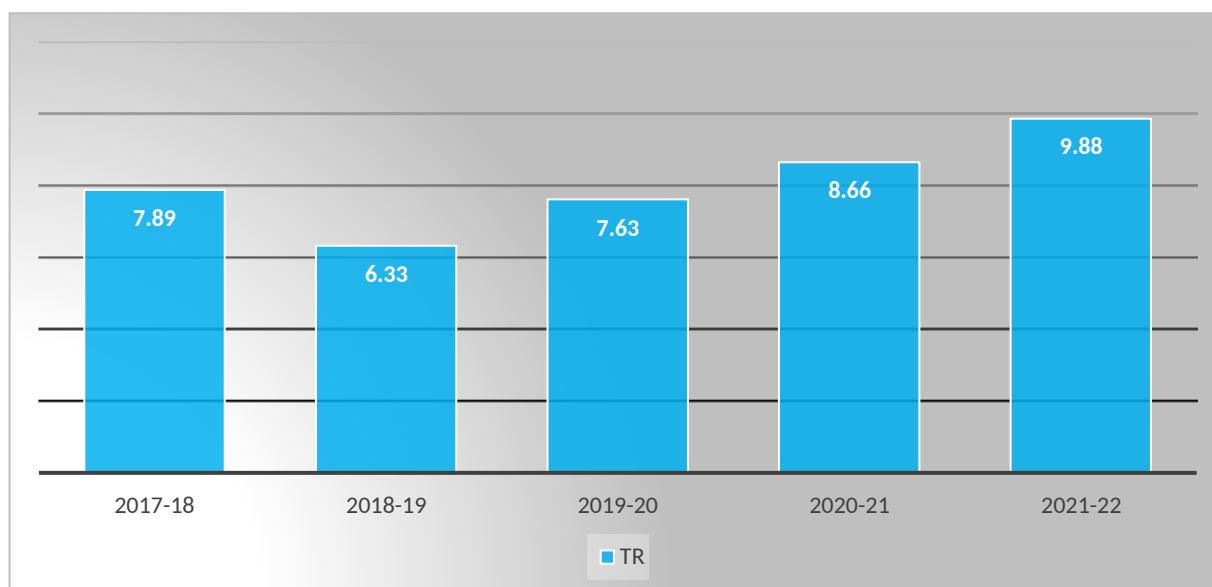
In 2018-2019, the minimum fixed assets turnover ratio chain index among selected enterprises was 43.

As sales climbed rapidly, the company's ratio index increased by 16.5 points, from 43.0 to 59.0 the next year.

Table.4.1.5.Total Assets Turnover Ratio of Lumisense Technology

YEARS	TATR	INDEX
2017-18	2.76	163.3
2018-19	1.54	91.1
2019-20	1.65	97.6
2020-21	2.19	129.6
2021-22	2.75	162.7
COMPANY AVERAGE	2.267	134.1

Chart.4.1.5.Total Assets Turnover Ratio of Lumisense Technology



INFERENCE:

In 2021-2022, the total assets turnover ratio grew to 162.72. It fell by 13.6 percent from 2017 and 2018. Because of an increase in total assets and a fall in net sales, the ratio index fell by 3.16 percent, from 57.01 to 53.85 in 2020-2021. The ratio index increased significantly between 2021 and 2022.

FINDINGS, SUGGESTIONS AND CONCLUSION

4.1.6 FINDINGS

- The minimum current ratio chain index was 68.6 in 2021-2022, the maximum current ratio chain index was 120.5 in 2017-2018.
- The current ratio index fell 32.4 percent to 68.6 in 2021-2022 over 2018-2019, while current liabilities and current assets grew proportionally. It dropped by 11.1 percent in 2021-2022. However, the index of the ratio grew considerably by 20.2 percent in 2017-2018, rising from 70.2 to 90.7 as current assets increased and current liabilities dropped. It steadily rose during the following two years. When compared to the average actual firm's ratio of 0.90, the average actual current ratio is 1.0.
- In 2021-2022, the quick ratio fell to 70. It climbed by 32% between 2017 and 2018, from 80 to 112.
- During 2019–2020, the ratio index climbed by 15% as current liabilities declined and liquid assets increased proportionately. The fast ratio index fell by 45 percent in 2020-2021, from 130 to 85, and continued to fall the following year.
- Despite some fluctuations over the last five years, the inventory turnover ratio index increased to 125.1 in 2021-2022. However, the ratio index declined considerably by 10.7 percent in 2018-2019, from 67.7 to 57.0, as sales decreased and inventories grew. It resumed the next year. The ratio index grew by 7%, from 57.0 to 64.1 in 2019-2020, due to an increase in sales despite an increase in inventories. It was followed the next year.
- The average real inventory turnover ratio is 7.13, which is lower than the average actual company ratio of 19.13. Because of lower average sales and greater average inventory levels
- In 2018-2019, the minimum fixed assets turnover ratio chain index among selected enterprises was 43.
- As sales climbed rapidly, the company's ratio index increased by 16.5 points, from 43.0 to 59.0 the next year.
- In 2021-2022, the total assets turnover ratio grew to 162.72. It fell by 13.6 percent from 2017 and 2018. Because of an increase in total assets and a fall in net sales, the ratio index fell by 3.16 percent, from 57.01 to 53.85 in 2020-2021. The ratio index increased significantly between 2021 and 2022.

4.1.7 SUGGESTIONS & RECOMMENDATIONS

- 1) The above ratios indicate that the company's huge amounts of investments are blocked in terms of inventory
- 2) High possibilities of damage ,threat ,loss in terms of goods Due to improper inventory control system
- 3) Company's working capital expenditures are huge Due to ineffective inventory control system
- 4) various inventory control methods are evaluated
- 5)The proper Just-in- Time technique will be an appropriate mode of inventory management
- 6)Just in time technique with proper EOQ ,ROL, ROQ and maintenance of safety stock ensure proper utilisation of inventory
- 7) Proper evaluation of inventory will help us to increase profit in an long term basis
- 8) Just in time method helps us to utilize the company space in an appropriate manner, This helps the company's to have an alternative layout design in terms of increased production.
- 9)ABC method is an current industrial practice but Due to the company's products Just in time is preferred
- 10)Just in time helps to have a quick control and help us to avoid possible threat like theft or loss of property

4.1.8 LIMITATIONS OF STUDY

- The study is confined to Chennai district only because the suggestions are based on specified location.
- This observation is carried only in **IT sector Hardware's** and major contributions are from **company's balance sheet**
- The data collected for the research is fully on secondary data given by the company only , so there may be chances of error in report too..
- Due to storage of time and other constraints, the study has been limited to ratio analysis study only.

4.1.9 CONCLUSION

- The above project helps the company to have a quick look over their current inventory system and existing threats and the method suggested like just in time will help them to have a proper inventory model and the internal control technique helps the company to remodel the structure of inventory it helps the company to increase the profits not only in terms of liquidity but also in good will ,like proper inventory helps us to build the quality product which in turn helps to build a loyal customer base ,This project helps the companies in all industries as a guide to how to have the proper inventory model.

REFERENCES

- **Sarangarajan, et al (2017)**, carried on his research works on the title of “Capital Structure, Efficiency of Cement Industry in Tamil Nadu.
 - **B. Bagchi& B. Khamrui (2018)** investigated the relationship between working capital management and firm profitability and to identify the variables that most affect profitability.
 - **Md. Nazrul Islam Shamem Ara Mili (2019)** investigated the Working Capital Investment and Financing Policies of Select Pharmaceutical Companies in Bangladesh.
 - **Dr. A. Bhunia & Khan (2020)**, exhibited that Current ratio, liquid ration, debt-equity ratio, cash position ratio, interest coverage ratio, inventory turnover ratio, debtor’s turnover ratio, debtor’s turnover ratio, creditors turnover ratio, inventory turnover ratio
 - **N. Mohamad & N. Saad (2018)**, investigated the effects of working capital component (cash conversion cycles, current ratio, current asset to total asset ratio current liabilities to total asset ratio and debt to asset ratio)
 - **Sen & Oruc (2019)**, found that there was a significant negative relationship between net working capital level, cash conversion cycle, current ratio, inventory period accounts receivable period and return on total assets.
 - **Nazir & Afza (2019)**, opined that the working capital requirement was used as the dependent variable; various financial and economic factors
 - **Ganesan (2021)**, found that working capital management efficiency was negatively related to liquidity and profitability.
 - **Padachi (2022)**, Profitability was a dependent variable and return on total assets used as a measure of profitability.
 - **Eljelly (2020)**, observed that there was a significant negative relationship between the profitability and liquidity level of the forms, as measured by the current ratio.
 - **Ghosh & Maji (2021)**, presented the results the cement industry of India did not perform well during the period of study with respect of working capital management and there was further need to study the application of efficiency index to firms
 - **Sharma (2016)**. Observed that the coefficient of inventory stock was found the negative sign and the coefficients of the accelerator and financial variables were found positive significant.
 - **Swamy & V.G. Rao (2019)**, concluded that inventory and fixed investment were found to be sensitive to variations in the availability of external funds. Monetary Policy affects the manufacturing sector through the fund’s availability, not through interest rates
 - **Vinod Prakash (2016)**, examined the influence of structural changes in manufacturing activity on the relative size and composition of inventory in the large scale-manufacturing sector in India.
- Paul Welter (2019)**, defines that working capital was created because of the time gap between „the moment expenditure for purchase of raw material was made" and „the moment

ANNEXURE I - BALANCE SHEET

BALANCE SHEET FOR THE YEAR ENDED 2018

I. EQUITY AND LIABILITIES					
1. SHAREHOLDERS' FUNDS					
(a) Share capital	2	138	643.78		638.07
(b) Reserves and surplus	3	140	18,532.87		18,496.77
				19,176.65	19,134.84
2. NON-CURRENT LIABILITIES					
(a) Long-term borrowings	4	141	9,746.45		8,051.78
(b) Deferred tax liabilities (net)	6	144	43.11		1,963.91
(c) Other long-term liabilities	7	145	1,155.48		1,238.44
(d) Long-term provisions	9	146	815.20		691.19
				11,760.24	11,945.32
3. CURRENT LIABILITIES					
(a) Short-term borrowings	5	141	4,769.08		6,216.91
(b) Trade payables	11	146	9,672.36		8,455.02
(c) Other current liabilities	8	145	2,463.18		4,923.10
(d) Short-term provisions	10	146	1,892.91		1,509.58
				18,797.53	21,104.61
TOTAL				49,734.42	52,184.77
II. ASSETS					
1. NON-CURRENT ASSETS					
(a) Fixed assets					
(i) Tangible assets	12	147	12,133.50		12,287.71
(ii) Intangible assets	13	147	3,107.07		3,168.03
(iii) Capital work-in-progress			1,716.85		1,507.84
(iv) Intangible assets under development			4,638.22		3,244.96
			21,595.64		20,208.54
(b) Non-current investments	14	148	18,357.57		18,171.71
(c) Long-term loans and advances	16	151	2,918.30		3,575.24
(d) Other non-current assets	18	152	123.85		94.32
				42,995.36	42,049.81
2. CURRENT ASSETS					
(a) Current investments	15	150	100.85		1,762.68
(b) Inventories	20	153	3,862.53		4,455.03
(c) Trade receivables	21	153	1,216.70		1,818.04
(d) Cash and bank balances	22	153	226.15		462.86
(e) Short-term loans and advances	17	151	1,223.77		1,532.09
(f) Other current assets	19	152	109.06		104.26
				6,739.06	10,134.96
TOTAL				49,734.42	52,184.77

BALANCE SHEET FOR THE YEAR ENDED 2019

I. ASSETS			
(1) NON-CURRENT ASSETS			
(a) Property, plant and equipment	3	72,619.86	73,867.84
(b) Capital work-in-progress		8,538.17	16,142.94
(c) Goodwill	5	747.87	116.45
(d) Other intangible assets	6(a)	37,866.74	47,429.57
(e) Intangible assets under development	6(b)	23,345.67	23,890.56
(f) Investment in equity accounted investees	8	4,743.38	4,887.89
(g) Financial assets:			
(i) Other investments	9	1,497.51	763.76
(ii) Finance receivables	17	22,073.17	15,479.53
(iii) Loans and advances	11	407.42	495.41
(iv) Other financial assets	12	2,809.18	4,563.87
(h) Deferred tax assets (net)	21	5,151.11	4,158.70
(i) Non-current tax assets (net)		1,024.56	899.90
(j) Other non-current assets	19	2,938.73	2,681.25
		183,763.37	195,377.67
(2) CURRENT ASSETS			
(a) Inventories	13	39,013.73	42,137.63
(b) Investment in equity accounted investees (held for sale)	8(c)	591.50	497.35
(c) Financial assets:			
(i) Other investments	10	8,938.33	14,663.75
(ii) Trade receivables	14	18,996.17	19,893.30
(iii) Cash and cash equivalents	15	21,559.80	16,716.75
(iv) Bank balances other than (iii) above	16	11,089.02	19,897.16
(v) Finance receivables	17	11,551.52	8,401.65
(vi) Loans and advances	11	1,268.70	1,451.14
(vii) Other financial assets	12	3,213.56	3,857.64
(d) Current tax assets (net)		184.37	208.91
(e) Assets classified as held-for-sale	46(b)	162.24	2,585.19
(f) Other current assets	20	6,862.22	7,662.37
		123,431.16	135,972.84
		307,194.53	331,350.51
II. EQUITY AND LIABILITIES			
EQUITY			
(a) Equity share capital	22	679.22	679.22
(b) Other equity*	23	59,500.34	94,748.69
Equity attributable to owners of Tara Motors Ltd		60,179.56	95,427.91
Non-controlling interests		523.06	525.06
		60,702.62	95,952.97
LIABILITIES			
(1) NON-CURRENT LIABILITIES			
(a) Financial liabilities:			
(i) Borrowings	25	70,973.67	61,199.50
(ii) Other financial liabilities	27	2,792.71	2,739.14
(b) Provisions	29	11,854.85	10,948.44
(c) Deferred tax liabilities (net)	21	1,491.04	6,125.80
(d) Other non-current liabilities	30	13,922.21	11,165.19
		101,034.48	92,178.07
(2) CURRENT LIABILITIES			
(a) Financial liabilities:			
(i) Borrowings	26	20,150.26	16,794.85
(ii) Trade payables			
(a) Total outstanding dues of micro and small enterprises		130.69	144.24
(b) Total outstanding dues of creditors other than micro and small enterprises		68,382.84	71,804.17
(iii) Acceptances		3,177.14	4,901.42
(iv) Other financial liabilities	28	32,855.65	31,267.49
(b) Provisions	29	10,196.75	7,953.50
(c) Current tax liabilities (net)		1,017.64	1,559.07
(d) Liabilities directly associated with Assets held-for-sale	46(b)	-	1,070.18
(e) Other current liabilities	31	9,546.46	7,634.55
		145,457.43	143,219.47
		307,194.53	331,350.51

BALANCE SHEET FOR THE YEAR ENDED 2020

I. ASSETS			
(1) NON-CURRENT ASSETS			
(a) Property, plant and equipment	3	18,316.61	18,192.52
(b) Capital work-in-progress		2,146.96	1,371.45
(c) Goodwill		99.09	99.09
(d) Other intangible assets	5 (a)	3,871.13	3,312.14
(e) Intangible assets under development	5 (b)	4,139.63	3,825.15
(f) Investments in subsidiaries, joint ventures and associates	6	14,770.81	13,950.60
(g) Financial assets			
(i) Investments	8	663.38	310.19
(ii) Loans and advances	10	143.13	141.96
(iii) Other financial assets	12	994.39	793.40
(h) Non-current tax assets (net)		715.30	695.75
(i) Other non-current assets	14	1,619.90	1,546.39
		47,680.33	44,240.64
(2) CURRENT ASSETS			
(a) Inventories	16	4,662.00	5,670.13
(b) Investments in subsidiaries and associate (held-for-sale)	7	257.81	681.91
(c) Financial assets			
(i) Investments	9	1,175.37	1,820.87
(ii) Trade receivables	17	3,250.64	3,479.81
(iii) Cash and cash equivalents	19	487.40	546.82
(iv) Bank balances other than (iii) above	20	819.21	248.60
(v) Loans and advances	11	200.08	140.27
(vi) Other financial assets	13	1,279.68	646.31
(d) Current tax assets (net)		-	73.88
(e) Assets classified as held-for-sale	38 (c)	162.24	223.33
(f) Other current assets	15	934.87	1,439.73
		13,229.30	14,971.66
TOTAL ASSETS		60,909.63	59,212.30
II. EQUITY AND LIABILITIES			
EQUITY			
(a) Equity share capital	21	679.22	679.22
(b) Other equity		21,483.30	19,491.76
		22,162.52	20,170.98
LIABILITIES			
(1) NON-CURRENT LIABILITIES			
(a) Financial liabilities			
(i) Borrowings	23	13,919.81	13,155.91
(ii) Other financial liabilities	25	180.80	211.28
(b) Provisions	27	1,281.59	1,009.48
(c) Deferred tax liabilities (net)		205.86	154.61
(d) Other non-current liabilities	30	218.24	291.09
		15,806.30	14,822.37
(2) CURRENT LIABILITIES			
(a) Financial liabilities			
(i) Borrowings	24	3,617.72	3,099.87
(ii) Trade payables			
(a) Total outstanding dues of micro and small enterprises		126.96	141.59
(b) Total outstanding dues of creditors other than micro and small enterprises		10,281.87	9,269.46
(iii) Acceptances		3,093.28	4,814.58
(iv) Other financial liabilities	26	2,237.98	4,091.16
(b) Provisions	28	1,148.69	862.92
(c) Current tax liabilities (net)		78.30	21.77
(d) Other current liabilities	31	2,356.01	1,917.60
		22,940.81	24,218.95
TOTAL EQUITY AND LIABILITIES		60,909.63	59,212.30

BALANCE SHEET FOR THE YEAR ENDED 2021

ASSETS			
Non-current assets			
Property, plant and equipment	3A	478.45	342.22
Right-of-use assets	3B	1.33	2.17
Capital work-in-progress	3A	1.61	179.41
Intangible assets	4	0.64	1.08
Investments in subsidiaries	5	1,689.03	1,622.26
Financial assets			
Investments	5A	12.54	6.94
Trade receivables	6	-	2,719.72
Loans	7	180.76	187.51
Other financial assets	8	56.14	55.66
Deferred tax assets (net)	9	715.99	437.08
Income tax assets (net)	9	90.26	233.24
Other non-current assets	10	74.50	88.81
Total non-current assets		3,281.25	5,875.10
Current assets			
Inventories	11	187.75	191.83
Financial assets			
Investments	12	3.00	3.00
Trade receivables	6	4,398.21	1,821.97
Cash and cash equivalents	13	228.17	85.92
Bank balances other than cash and cash equivalents	14	94.16	82.76
Loans	7	20.60	19.57
Other financial assets	8	102.80	98.81
Other current assets	10	2,447.48	2,695.63
		7,482.17	4,989.29
Assets classified as held for sale	15	6.49	64.78
Total current assets		7,488.66	5,054.07
TOTAL ASSETS		10,769.91	10,929.17
EQUITY AND LIABILITIES			
Equity			
Equity share capital	16	151.31	151.31
Other equity		460.55	1,027.43
Total equity		611.86	1,178.74
Liabilities			
Non-current liabilities			
Financial liabilities			
Borrowings	17	1,197.33	1,357.37
Other financial liabilities	18	1,467.89	1,187.18
Provisions	19	42.02	43.83
Total non-current liabilities		2,697.24	2,588.38
Current liabilities			
Financial liabilities			
Borrowings	20	1,995.94	1,368.01
Trade payables	21		
- Total outstanding dues of Micro Enterprises and Small Enterprises		48.00	23.27
- Total outstanding dues of creditors other than Micro Enterprises and Small Enterprises		1,601.90	1,757.34
Lease liabilities		1.36	2.33
Other financial liabilities	18	1,750.40	1,416.11
Other current liabilities	22	1,923.36	2,474.70
Provisions	19	138.85	120.29
Total current liabilities		7,480.81	7,162.05
TOTAL EQUITY AND LIABILITIES		10,769.91	10,929.17

BALANCE SHEET FOR THE YEAR ENDED 2022

I. ASSETS			
1. NON-CURRENT ASSETS			
(a) Property, plant and equipment	3		59,594.56
(b) Capital work-in-progress			10,186.83
(c) Goodwill	5		673.32
(d) Other intangible assets	6		35,676.20
(e) Intangible assets under development			23,512.01
(f) Investment in equity accounted investees	7		4,606.01
(g) Financial assets:			
(i) Other investments	8		690.76
(ii) Finance receivables	16		10,753.13
(iii) Loans and advances	10		753.66
(iv) Other financial assets	11		2,911.12
(h) Deferred tax assets (net)	20		4,457.34
(i) Non-current tax assets (net)			260.20
(j) Other non-current assets	18		2,847.36
			<u>156,922.50</u>
2. CURRENT ASSETS			
(a) Inventories	12		35,085.31
(b) Financial assets:			
(i) Other investments	9		15,041.15
(ii) Trade receivables	13		14,075.55
(iii) Cash and cash equivalents	14		13,986.76
(iv) Bank balances other than (iii) above	15		22,091.12
(v) Finance receivables	16		6,810.12
(vi) Loans and advances	10		710.45
(vii) Other financial assets	11		1,555.94
(c) Current tax assets (net)			935.47
(d) Other current assets	19		6,539.99
			<u>116,831.86</u>
TOTAL ASSETS			<u>273,754.36</u>
II. EQUITY AND LIABILITIES			
EQUITY			
(a) Equity share capital	21		679.22
(b) Other equity	22		57,382.67
Equity attributable to owners of Tata Motors Ltd.			58,061.89
Non-controlling interests			453.17
			<u>58,515.06</u>
LIABILITIES			
1. NON-CURRENT LIABILITIES			
(a) Financial liabilities:			
(i) Borrowings	24		60,629.18
(ii) Other financial liabilities	26		11,409.58
(b) Provisions	28		9,004.46
(c) Deferred tax liabilities (net)	20		1,174.00
(d) Other non-current liabilities	29		17,392.56
			<u>99,609.78</u>
2. CURRENT LIABILITIES			
(a) Financial liabilities:			
(i) Borrowings	25		13,859.94
(ii) Trade payables			57,698.33
(iii) Acceptances			4,834.24
(iv) Other financial liabilities	27		25,634.83
(b) Provisions	28		5,807.76
(c) Current tax liabilities (net)			1,392.58
(d) Other current liabilities	30		6,401.84
			<u>115,629.52</u>
TOTAL EQUITY AND LIABILITIES			<u>273,754.36</u>