

A STUDY ON INVENTORY MANAGEMENT SYSTEM IN RSPM INFOTECH

Submitted in partial fulfillment of the requirements for the award of
MASTER OF BUSINESS ADMINISTRATION

By

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**DEPARTMENT OF BUSINESS ADMINISTRATION
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

MAY 2023



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BONAFIDE CERTIFICATE

This is to certify that this project Report is the bonafide work of **SENTHILVEL. S 41410282** Who carried out the project entitled "**A Study On Inventory Management System In RSPM Infotech**" under my supervision from January 2023 to March 2023.

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DECLARATION

I **SENTHILVEL S (41410282)** hereby declare that the Project Report entitled “**A Study on Inventory Management System In RSPM Infotech**” done by me under the guidance of **DR. SASIREKHA K** is submitted in partial fulfillment of the requirements for the award of Master of Business Administration degree.

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ABSTRACT

A Business's inventory is one of its major assets and represents an investment that is tied up until the item is sold or used in the production of an item that is sold. It also costs money to store, track and insure inventory. Inventories that are mismanaged can create significant financial problems for a business, whether the mismanagement results in an inventory glut or an inventory shortage.

Successful inventory management involves creating a purchasing plan that will ensure that items are available when they are needed (but that neither too much nor too little is purchased) and keeping track of existing inventory and its use.

The main objectives of study are to study the inventory management process in the company. The other objectives are to learn how the company keeps all the data of inventory perfectly, to find out the composition of inventory, to study the various inventory ratio and to analyze the inventory management techniques used in the company.

Inventory management being a very important concept in all the company's having a void coverage often calls for the managerial attention. In the modern times inventory management has become the integral part of all companies.

So all the firms give special importance for inventory management. The major objectives of the study is to examine the effectiveness of inventory management system adopted by RSPM Infotech; the study mainly focuses on the techniques used by the company to control the inventory. The study also covers other areas like the financial ratios for the period of 2017 to 2022.

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CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION:

The key decision in manufacturing, retail and some service industry businesses is how much inventory to keep on hand. Inventory is usually a business's largest asset. The instant inventory levels are established; they become an important input to the budgeting system. Inventory decisions involve a delicate balance between three classes of costs: ordering costs, holding costs, and shortage costs.

Before we venture further, what does inventory mean? According to the Merriam-Webster Dictionary, Inventory is defined as, "the quantity of goods or 1materials on hand"

Inventory is also known as "an itemized list of goods or valuables, with their estimated worth; specifically, the annual account of stock taken in any business" by the online Dictionary.Com.

Inventory management is the system of keeping tab on the goods available and sold, along with managing stock so that the retailer is never out of it. Inventory management is a complex and time consuming process and is usually the top priority for retail decision makers. Unless you have a very specific and slim product mix, there is a high chance that you may end up spending lots of time just tracking inventory. This is of course a very important process and once finessed, will become the strength of the business. Remember, inventory management comprises of many units of the supply chain and each unit may end up using a different tracking system.

Inventory management is vast and covers many aspects of the retail business. Here are a few components that are part of the management system; - inventory forecasting, pricing, cost of storing inventory and replenishing exhausted goods, managing space to store inventory, shipping and return/exchange processes and policies, demand and sales forecasting, and inventory status.

So, why do we need Inventory Management?

There are many reasons why keeping an inventory is necessary.

With the modern day retail industry is booming and ecommerce penetrating into the market, it is very important for a retailer to not delay the product availability. If a customer doesn't find what he or she needs, they will simply move to another retailer. Inventory helps manage the time to delivery by always having a ready stock of products. There is also a high chance that production will be uniform through the year, but buying patterns will change; festivals and holidays will see a boom in purchase, whereas, the end of a financial year will see a dip in buying. Retailers may want to hold back goods during a price or stock revision, to increase demand or offer discounts.

Of course, there is the uncertainty of customer behavior which is hard to predict and is important to maintain inventory for scenarios like these.

Inventory Management will allow retailers to:

Focus on optimizing the product range. A narrow inventory leads to improved stock management, lower warehouse costs and also removes the possibility of good expiring or becoming harder to sell.

Although creating a lean inventory is ideal, this may be a hard task to achieve. With increased competition in the retail market, discount battles, retailers are rethinking and realigning their product lines to be more relevant and appealing to buyers. This often involves diversifying the products families as it is believed to increase revenues. Do keep in mind that introduction of newer products often kills the older products on shelves. Optimize before you diversify.

Build a computerized inventory management system with most repetitive tasks being automated. A digital inventory management system will allow retailers to keep a tab on ordering, shipping, delivery information, finances and costs involved. The system will help predict demand based on inventory status, historical data and user inputs.

To sum it up, remember the 5 R's of inventory management. The product should be available at the right time and at the right place. Customers should be able to acquire the right quantities, at the right price and the right quality.

Inventory Management Systems

There are a lot of cost effective inventory management systems available which offer a suite of tools that allows:

- In-depth and real time insights into the inventory, consumer and supplier, ultimately delivering the right goods at the right time and at the right cost.
- Product performance indicators with the ability to forecast.
- Customer support for vendors and customers; this could include self-help like what we see with many online retailers
- Keeping track of sales, costs, discounts and providing on-demand or timely reports
- Reducing the chance of fraud either by a customer or by an employee.

Modern day inventory management solutions are now cloud enabling their tools to allow on-demand and real time management of the process. Managers can now access their business ERP from virtually anywhere in the world, even using their own personal devices! The cloud provisions for systems to stay simple initially, and dynamically scale along with the business, a growth model many recommend.

Methods to Supervise Inventory

The success of a business depends on how well the owner(s)'s ability to maintain adequate quantities of items sold. Records provided by an inventory control system should call attention to the need for reorder when necessary or eliminate "dead wood" inventory when called for. Inventories are controlled and supervised by three (3) methods:

(a) Perpetual Inventory Control-

The perpetual method is the most frequently used method. It is more costly than the other two but it is an efficient way of keeping count. In this system, complete

data records are kept on each item of merchandise and additions or subtractions are made with each transaction. There is an inventory balance plus a receipt of sale, minus the actual sale to reflect the quantity at hand.

(b) Actual Counting Piece- This is another method used to control and supervise inventory. It is used to actually count inventory item-by-item. This is an exhausting task and not many companies or businesses do it. Salespeople are usually involve in this process and there is a large margin of error to be considered as the salespeople go through the monotonous and tiring task of counting everything.

(c) “Looking It Over”- The third method is “Looking over” the inventory. It is the easiest and cheapest way of controlling and supervising inventory, but there is bound to be errors. With this method, it is hard to pinpoint the inventory levels, the items that need to be ordered, and the items that the store is overstocked with. Almost all financial statements that include inventory figures based on this method cannot be completed accurately.

1.2 INDUSTRY PROFILE:

RSPM Infotech is proprietorship company incorporated on 18 June 2015. It is classified as a proprietorship company and is located in Chennai, Tamilnadu. It's authorized share capital is INR 5 Cr and the total paid-up capital is INR 2 Cr.

RSPM Infotech operating revenues range is over INR 10 Cr for the financial year ending on 31st March,2023. It's EBITDA has increased by 70% over the previous year. At the same time. It's book net-worth has increased by 200% other performance and liquidity ratios.

The company has 1 director and 5 associate director and 1 reported key management personal. The longest serving director currently on board are Mr. M. Suresh who were appointed on 18 June 2015. He have been on the board for more than 8 years.

The most recently appointed associate director is Mr. S. Rajkumar who was appointed on 1 July 2015.

The current status of RSPM Infotech is active. The last reported AGM (Annual General Meeting).

RSPM Infotech has Two branch office in India and it's located in Porur and Kunrathur.

RSPM Infotech per our records, was held on 30th march 2023 also as per our records, it's last balance sheet was prepared for the period ending on 31st March, 2023.

RSPM Infotech has one director and 5 associate directors-Director M. Suresh, and Associate Diretors are S. Rajkumar, S. Manikandan, E. Suresh, S. Prakash, T. Ruthramurthy. The Company GST Number - 33EIUPS4795E1ZH. The registered office of RSPM Infotech is at No 6A, Ground Floor, Kambar Street, Bharathidasan Nagar, Alapakkam, Porur, Chennai, Tamil Nadu, India.

1.3 COMPANY PROFILE:



RSPM Infotech is non-govt company incorporated on 18th June 2015. It's a listed company and is classified as company limited shares.

RSPM Infotech last annual general meet (AGM) happened on 1 Apr 2019. The company last updated its financial on 31 Jan 2019 as per ministry of corporate affairs (MCA).

RSPM infotech is majority in Business services business from last 8 years and currently. Company operations are active. Current board member, director and associate directors are - M. Suresh, S. Rajkumar. S. Manikandan, E. Suresh, S. prakash, T. Ruthramurthy.

Company is registered in Chennai register office No 6A, Ground Floor, Kambar Street, Bharathidasan Nagar, Alapakkam, Porur, Chennai, Tamil Nadu, India. And Main Office has addressed on 42/1, Ground Floor, Swami Vivekananda 2nd Street, Samayapuram Main Rd, Porur, Chennai, TamilNadu 600116.

RSPM Infotech is an 8 Years and 10 months old proprietorship company incorporated on 2015. It's registered office is in Chennai, Tamil Nadu.

About of RSPM Company:

RSPM INFOTECH is a leading IT Enabled Service provider, System integrator and Solution providing company especially in the field of RFID, Barcode, Biometric Solution, Access Control system, Industrial & Retail Automation Solution and Mobility Solution to across all industries and business verticals.

RSPM INFOTECH design, develop and implement customized application software solution for RFID automation, Label Printing solution, Gate Entry System, Visitor Management System, Vehicle management System, Biometric Solution and many other specific solution requirements and Quality Assurance is an essential part of any project, which ensures the top quality of our solutions.

1.4 PRODUCT PROFILE:

BARCODE SOLUTION:

Barcode is a traditional printed machine-readable representation of data that consists of parallel black lines and white spaces of different widths.

A Barcode has become an inevitable tool for automating the manual process happening in almost all the industries such as Manufacturing, Retail, Healthcare, Pharmaceutical, Automobiles, Courier & Logistics and many more. Various types of barcodes are 1d, 2d, Data matrix, PDF 417 and QR codes.

Barcode many require for material handling, WIP handling, MRP label printing, Asset Management, Retail sales, Visitor Management, Labor management, Library Management, Logistics, Patient management and much more areas of business process. RSPM provides complete solution at an affordable costs.

The idea behind barcodes is quite simple. Each different item has a unique number printed on it that a scanning device can read and identify. This makes it possible to automate the transfer of product information, such as its price, from the product to an electronic system such as a cash register.

Barcodes can be read by different kinds of technology. Scanners are specially programmed to transfer the data housed by the barcode to the application program, providing instant access to a wealth of information. An interface scanner connected to a computer transmits the barcode's information as if it was inputted on a keyboard.



BIOMETRIC SOLUTION:

Biometric Systems rely on several discrete processes: enrollment, live capture, template extraction, and template comparison. The purpose of enrollment is to collect and archive biometric samples and to generate numerical templates for future comparisons.

RSPM INFOTECH, supplies biometrics Finger, Face and many others. We can differentiate “live capture” from enrollment as the process of collecting live biometric “probe” samples upon an access and comparing them to a of previously enrolled templates.

We supplies customized according to its client requiements for all industries.

Biometric technology is fast-growing, whether in the fields of government, law enforcement or enterprise. The convenience of a biometric system brings benefits to millions of people while making various processes much easier and more accessible. The main advantages of implementing biometric systems are time efficiency, reliability, and precision of the results. For example, Innovatrics Biometric Identity Management System is built to suit the needs of any project even with minimal hardware requirements.



RFID:

RFID or Radio Frequency identification System is a technology based identification system which helps identifying objects just through the tags attached to them, without requiring any light of sight between the tags and the tag reader. All that is needed is radio communication between the tag and the reader.

RSPM INFOTECH, also supplies RFID printer, Desktop Reader, Handled Reader and many others. RSPM INFOTECH supplies customized according to its client requirement's for all industries. Passive RFID system: These are systems where the tag gets power through the transfer of power from a reader antenna to the tag antenna. They are used for long range transmission radio frequency level up to 865 to 868MHZ.

Types of RFID systems

- RFID frequencies. Frequency refers to the size of the wave that is used to communicate the different components of the system. ...
- Low frequency (LF) RFID. ...
- High frequency (HF) RFID. ...
- Ultra high frequency (UHF) RFID. ...
- Passive and active RFID systems and BAP.



RETAIL SOLUTION:

RSPM INFOTECH provides end to end solution for POS (Points of sales) to any kind of retails outlets, chain super markets, Hotels & Restaurants, Jewellery show rooms, Textile show room, bars & clubs, malls & cinemas, etc...,

Our POS system consists of three modules such as inventory, billing and accounts. We also provide relevant hardware for POS system such as touch display PC, receipt printer, barcode label printer, barcode scanner, cash drawers, etc.



MOBILITY SOLUTION:

Mobility Solution is becoming as centric and vital tool in information Technology. The corporate world has already started implementing and reaping the benefits of enterprise mobility solutions for its business process automation. Enterprise Mobility Solution can bring and engage every organization with their employees, customers and suppliers in to a close circle and empowers all them with accurate and timely information on the move and enable them to make a faster decision to achieve business excellence.

RSPM INFOTECH provides tailor made mobility solution for android & Windows to all industry verticals and for all business processes. RSPM INFOTECH provides solution for mobile phones, Tablets, Industrial rugged hand & vehicle mount terminals, etc...,

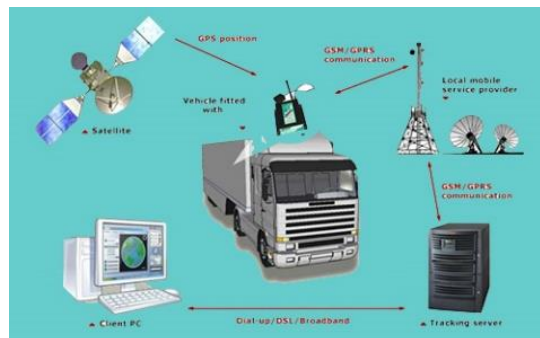


GPS SOLUTIONS:

GPS stands for Global Positioning System by which anyone can always obtain the position information anywhere in the world.

Space segment (GPS satellites): A number of GPS satellites are deployed on six orbits around the earth at the attitude of approximately 20,000 km (four GPS satellites per one orbit), and move around the earth at 12hour intervals.

Control segment (Ground control stations): Ground control stations play roles of monitoring, controlling and maintaining satellite orbit to make sure that the deviation of the satellites from the orbit as well as GPS timing are within the tolerance level.



ACCESS CONTROL SYSTEM:

Access control is a security technique that can be used to regulate who or what can view or use resources in a computing environment.

There are two main types of access control: physical and logical, Physical access control limits access to campuses, buildings, rooms and physical IT assets. Logical access limits connections to computer networks, system files and data.

Access control systems perform authorization identification, authentication, access approval, and accountability of entities through login credentials including passwords, personal identification numbers (PINs), biometric scans, and physical keys.



ASSET TRACKING SYSTEM:

Asset Management refers to a system that records, monitor and maintains things of an organization. An organization may require variety of assets such as vehicles, computer peripherals, furniture, electronic and electrical fixtures, production machineries, maintenance tools, security tools, etc. All these assets have to be managed with proper accountability.

RSPM INFOTECH provides comprehensive system to manage assets of an organization. This system integrated with Barcode and RFID for tagging, auditing and reconciliation. RSPM INFOTECH provides barcode printer, scanner, hand held terminals, RFID tags, Readers, etc.



VEHICLE MANAGEMENT SYSTEM:

Automatic boom barrier offers security at the exit and the entry points of industrial unit, corporate houses, residential areas, parking lots, toll tax plazas etc. Automatic barrier can be used achieve better security.

High performance Boom Barriers Offered by RSPM INFOTECH are suitable for any type of installation atmosphere. The wide range of lengths and accessories available ensures that all installation requirements are met.



VISITOR MANAGEMENT SYSTEM:

Growing number of visitors, suppliers, service providers attract more threats to organizations, factories, hospitals, corporate, etc. Managing visitors have become tedious job front-office executives. Visitors have to be restricted to visit only to the assigned place and people and also have to be available inside the premises only during the prescribed time period. Corporate, factories, hospitals, organization are in need of a system to record, manage, track and report the movement and activity of visitors, suppliers, vehicles, materials, etc.



FILE TRACKING SYSTEM:

File Tracking system is a step in the direction of realizing the concept of paperless office. The solution is a simulation of physical files into the electronic form. This enables fast retrieval and makes file movement & file tracking pain less. Longevity of the electronic form solves the problem of material loss.

It has a built-in dynamic workflow management system that capable of handling any organization's hierarchy. File tracking system deals with 'creation of files to completion of files' through the embedded soft copy of files. The authority can obtain status of any file at any time.



1.5 NEED OF STUDY:

- This project helps the company to find out the impact of inventory on working capital.
- It helps to study the inventory management and its effective control through various techniques.
- It helps to suggest the measures for improving the inventory level.
- To maintain sufficient inventory in the company for the smooth production and self-Operations.
- For running the business operations of the company in smooth and coefficient manner.

1.6 SCOPE OF STUDY:

- Inventory management being a very important concept in all the company's having a void coverage often calls for the managerial attention.
- In the modern times inventory management has become the integral part of the all companies.
- So all the firm gives special importance for inventory management.
- The major objective of the study is to examine the effectiveness of inventory management system adopted by RSPM infotech
- The study mainly focuses on the techniques used by the company to control the inventory.
- The study also covers other areas like the financial ratios for the period of 2017 to 2022.

1.7 OBJECTIVES OF THE STUDY:

PRIMARY OBJECTIVE:

The main objectives of study are to study the inventory management process in RSPM infotech.

SECONDARY OBJECTIVES:

- a. To learn how the company keeps all the data of inventory perfectly.
- b. To study how finance department of the company work.
- c. To find out the composition of inventory.
- d. To study the various inventory ratio.
- e. To analyze the inventory management techniques used in the company.

CHAPTER 2

REVIEW OF LITERATURE

Bern at de William year (2010) This study tells that the main focus of inventory management is on transportation and warehousing. The decision taken by management depends on the traditional method of inventory control models. The traditional method of inventory management is how much useful in these days the author tell about it. He is also saying that the traditional method is not a cost reducing, it is so much expensive. But the managing the inventory is most important work for any manufacturing unit.

Wolf Bag by, Managing inventory (2011) In this study Mr. W.Bag by explains that by managing the inventory it becomes easier for the organization to meet the profit goals, shorter the cash cycle, avoid inventory shortage, avoid excessive carrying costs for unused inventory, and improve profitability by decreasing cash conversion and adopt JIT system. According to this study companies need to get smart about inventory. Boosting financial perfo

rmance is another benefit that comes from better inventory management. Infect large number of manufacturers enjoy savings and better performance by choosing the approach of inventory reduction. For this company needs to maximize the cash flow and profitability and this includes keeping a watchful discerning eye on charge in supply and demand.

Gulsen et al. (2012) has been discovered a multiple parameter ABC (Always Better Control) analysis using fuzzy, c- means (FCM) clustering. It is not cost effective to establish an inventory management strategy for each individual stock keeping unit (SKU). ABC analysis is one of the most often used methods for classifying stock holdings unit (SKUs). The conventional method ranks stock keeping units (SKUs) in

descending order of annual dollar consumption, which is the product of unit price and annual demand. The few stock keeping units (SKUs) with the greatest yearly dollar usage are in group A and should be examined the most; the stock keeping units (SKUs) with the lowest annual dollar usage are in group C and should be considered the least; and the order stock keeping units (SKUs) are in group B. We suggested fuzzy, c-means (FCM) clustering to a multi criteria ABC analysis issue in this work to assist managers in making better decisions under fuzzy conditions. The results suggest that the fuzzy c-means (FCM) approach is a straightforward and adaptive solution for inventory management.

Dr. Kevin Aku Okorochoa (2013) as a research to assess the factors influencing material management, he had selected a case study of chosen building sites in IMO state, Nigeria. The use of the appropriate materials in the right location at the right time is essential for the successful completion of a construction project. The acquired data was statistically analyzed using multiple regressions. This research is aimed at material management practices in the Nigerian construction sector. Questionnaires were applied to extract information from construction workers. Adequate materials requirement planning and handling are crucial for effective materials management on construction sites and the successful completion of construction projects in Nigeria. Although vital on construction sites, storage process systems do not play significant part in successful materials management in Nigeria's Construction sector. Over storage and handling costs on construction sites may be reduced by careful material need planning. The study indicated that material management leads to efficient cost control, improves the quality and timelines of project execution, and lowers project failure.

Madhavi (2013) Conducted althrough case study, surveys, and interviews with professionals working in this field. The biggest issue with materials procurements is connected to project schedule delays and a lack of stipulated quality. Following some study, they implemented in the future several inventory control techniques such as Always Better control analysis and the First in First out Method at various workplaces.

They also stated that utilizing the ABC analysis Lowered the material cost quoting the rate, as well as assisting in appropriate release of the finance and preparation of the budget process.

Srinivas Rao Kasisomayajula (2014) An analytical study was conducted on “inventory in commercial vehicle industry in india”. A sample of five companies was selected for study. The study concluded that all the units in the commercial vehicle industry have significant relationship between inventory and sales. Proper tracking of inventory is important to maintain and improve the health of an organization. Efficient tracking of inventory will improve the profitability of the organization.

Edwin Sitienei and Florence Memba (2015) Conducted a study on effect of inventory management on profitability of cement manufacturing companies in kenya. The study concluded that Gross profit margin is negatively correlated with the inventory conversion period, increase in sales, which denotes the firm size enriches the firm’s inventory levels, Which pushes profits upwards due to optimal inventory levels. It is also noted that firms inventory systems must maintain an appropriate inventory levels to enhance profitability and reduce the inventory costs associated with holding excessive stock in warehouses.

Hemishkumar patel (2015) Conducted a survey of a total number of 80 respondents from the Gujarat region, viz., cities like Ahmedabad Bardoli, Navsari and Surat out of which 25 respondents were contractors, to analysis of factors affecting material management and inventory management. In the survey 49 factors were found and were ranked according to relative importance Index. The respondents were asked to rate the relevance of each of the 76 material management and inventory management elements in the Gujarat area as very high mid, little, very low. As a result, all project engineers, site engineers, and contractors are considered to be primarily concerned with material management and their responsibilities and decisions are critical to improving a successful material management.

Ahmed Zeb (2017) Conducted various field visits in order to collect data regarding a bridge project, and it was gathered from inventory books and physical stock verification. After which the ABC analysis was done using MS excel using following steps (1) collect items details with their unit prices. (2) Find the total value to the item in the project by the product of expected units required and unit price. (3) Arrange the items in descending order of their values.

Vikram Kulkarni et.al. (2017) this research is being conducted to overcome the weaknesses left by poor material management on construction sites. Materials account for more than 70% of project costs and, if not handled appropriately, can have an impact on overall project costs. The study examines nine distinct small, big, and medium-sized construction organizations in Maharashtra. The questionnaire survey approach was used to collect data in this study. The questionnaire survey approach was used to collect data in this study. In the Maharashtra area of india, nine organization (3 small, 3 medium and 3 big) were chosen at random for this study. The data received from the questionnaire survey was carefully organized and evaluated. According to the data acquired, there were a few problems in the material management systems of all three types of construction enterprises that affected material management. According to the results of this poll, only major enterprises employ standard protocols and software for material management, thus they have few issues. Medium and small businesses, on the other hand, lag behind in material management because they do not employ software or are unaware of material management procedures. Material management should receive more attention from top management.

Mr. M. Kalilurrahman (2017) this paper is about the construction sector is quickly expanding over the world, and this growth has resulted in a severe problem in the creation of construction wastes in many developing countries, as well as a great consumption of natural resources. Construction waste is classified as physical and

non-physical waste, and it has a higher influence on the ecology, economic, and social well being of each country. It is critical to identify the fundamental cause of the generation before it can be effectively handled. This article analyses and detects aspects that lead to construction waste creation. For identification purposes, a mapping approach was used, and interviews were done to discover physical and non-physical trash. These elements were classified into seven clusters: design, handling, worker, management, site condition, procurement and external factor.

B. Madhavrao (2018) According to this paper, material management plays an important role in the construction business, When project planning and material identification systems are inadequate, project costs rise and also effects the timeline of the project. Labor productivity also suffer as a result of material shortages and inadequate storage. A well – planned material management program is essential to maintain effective management, to ensure timely delivery of materials and equipment, and to reduce cost of the project. This article discusses material management approaches for construction projects using S-curve and ABC Analysis for a through understandings of the management of four main construction materials.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 RESEARCH METHODOLOGY:

As the nature of the study relates to financial performance the main part used was secondary data. It includes Profit and Loss Account, Balance sheet etc.

Thus the study is based on the published accounts and annual reports of RSPM INFOTECH.

3.2 RESEARCH DESIGN:

Analytical research design is chosen for the study. This research is conducted to find out facts about a given topic and from the answers obtained develop new and useful ways of doing things. The analytical research usually concerns itself with cause-effect relationships.

3.3 DATA COLLECTION

The data calculated for the study is secondary data i.e, the data which have already been collected by someone else and passed through statistical processes. The Secondary data was obtained from past records, annual reports and financial statements of the company.

3.4 TOOLS USED FOR ANALYSIS

Data collected from the secondary sources in the form of annual report was analyzed using the tools. The following tools were used for the financial performance analysis.

Liquidity Ratios

1. Current Ratio
2. Quick Ratio
3. Cash Ratio

Profitability Ratios

1. Gross Profit Ratio
2. Net Profit Ratio
3. Return on investment Ratio

Turnover Ratios

1. Working Capital Turnover Ratio
2. Inventory Turnover Ratio
3. Trade Receivables Turnover Ratio
4. Trade Payables Turnover Ratio

Capital Structure Ratios

1. Debt-Equity Ratio
2. Return on Equity Ratio

Schedule of Changes in Working Capital

1. For the Year 2017- 2018
2. For the year 2018-2019
3. For the year 2019-2020
4. For the year 2020-2021
5. For the year 2021-2022

CHAPTER 4

DATA ANALYSIS AND INTERPRETATIONS

4.1 Liquidity Ratios:

4.1.1 Current Ratio:

Current Ratio 2:1

The current ratio is a liquidity ratio that measures a company's ability to pay short-term obligations or those due within one year. It tells investors and analysts how a company can maximize the current assets on its balance sheet to satisfy its current debt and other payables.

$\text{Current Ratio} = \text{Current Assets} / \text{Current Liabilities}$

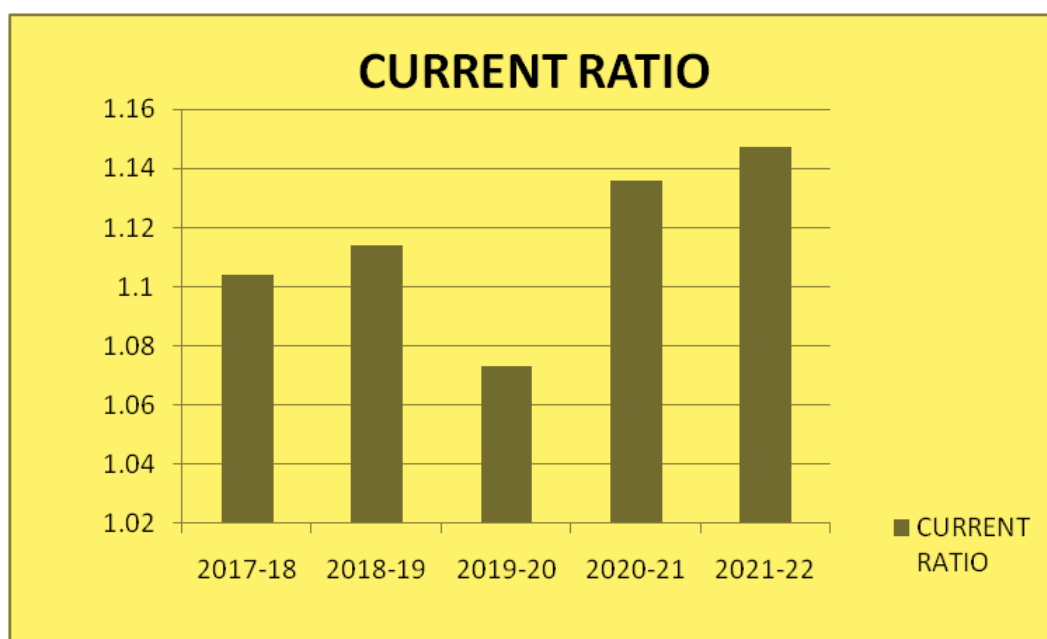
Current assets listed on a company's balance sheet include cash, accounts receivable, inventory, and other current assets (OCA) that are expected to be liquidated or turned into cash in less than one year.

Current liabilities include accounts payable, outstanding wages, taxes payable, short-term debts, and the current portion of long-term debt.

TABLE 4.1.1 TABLE CURRENT RATIO

YEAR	CURRENT ASSETS	CURRENT LIABILITIES	CURRENT RATIO
2017-2018	13,51,87,788	12,24,25,893	1.104
2018-2019	21,59,43,580	19,38,73,009	1.114
2019-2020	20,62,58,485	19,22,61,191	1.073
2020-2021	21,79,14,000	19,18,42,100	1.136
2021-2022	20,81,48,100	18,14,85,900	1.147

CHART 4.1.1
GRAPHICAL CURRENT RATIO



Interpretation

The current ratio for the year 2017-2018 is 1.104, for the year 2018-2019 is 1.114, for the year 2019-2020 is 1.073, for the year 2020-2021 is 1.136 and for the year 2020-2021 is 1.147.

4.1.2 Quick Ratio:

Quick Ratio 1:1

The quick ratio is an indicator of a company's short-term liquidity position and measures a company's ability to meet its short-term obligations with its most liquid assets.

Liquid assets are those current assets that can be quickly converted into cash with minimal impact on the price received in the open market, while current liabilities are a company's debts or obligations that are due to be paid to creditors within one year. It is also called the acid test ratio.

$$\text{Quick Ratio} = \text{Liquid Assets} / \text{Current Liabilities}$$

TABLE 4.1.2 TABLE QUICK RATIO

YEAR	LIQUID ASSETS	CURRENT LIABILITIES	QUICK RATIO
2017-2018		12,24,25,893	
2018-2019		19,38,73,009	
2019-2020		19,22,61,191	
2020-2021		19,18,42,100	
2021-2022		18,14,85,900	

4.1.3 Cash Ratio:

Cash Ratio 0.5:1

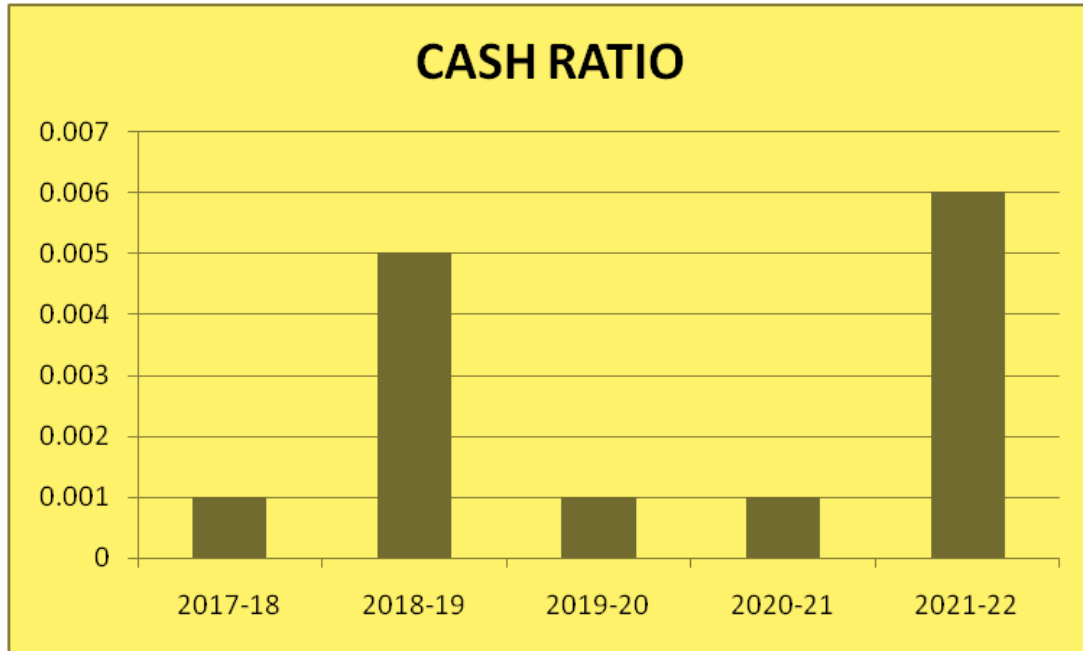
The cash ratio is a measurement of a company's liquidity. It specifically calculates the ratio of a company's total cash and cash equivalents to its current liabilities. The metric evaluates company's ability to repay its short-term debt with cash or near-cash resources, such as easily marketable securities. This information is useful to creditors when they decide how much money, if any, they would be willing to loan a company.

$\text{Cash Ratio} = \text{Cash and Cash Equivalents} / \text{Current Liabilities}$

TABLE 4.1.3 TABLE CASH RATIO

YEAR	CASH AND CASH EQUIVALENTS	CURRENT LIABILITIES	CASH RATIO
2017-2018	1,22,506	12,24,25,893	0.001
2018-2019	9,48,723	19,38,73,009	0.005
2019-2020	2,88,233	19,22,61,191	0.001
2020-2021	1,15,304	19,18,42,100	0.001
2021-2022	10,30,400	18,14,85,900	0.006

CHART 4.1.3 GRAPH CASH RATIO



Interpretation

The Cash Ratio for the year 2017-2018 is 0.001, for the year 2018-2019 is 0.005, for the year 2019-2020 is 0.001, for the year 2020-2021 is 0.001 and for the year 2021-2022 is 0.006.

4.2 PROFITABILITY RATIOS:

4.2.1 Gross Profit Ratio:

Gross Profit Ratio 50% to 70%

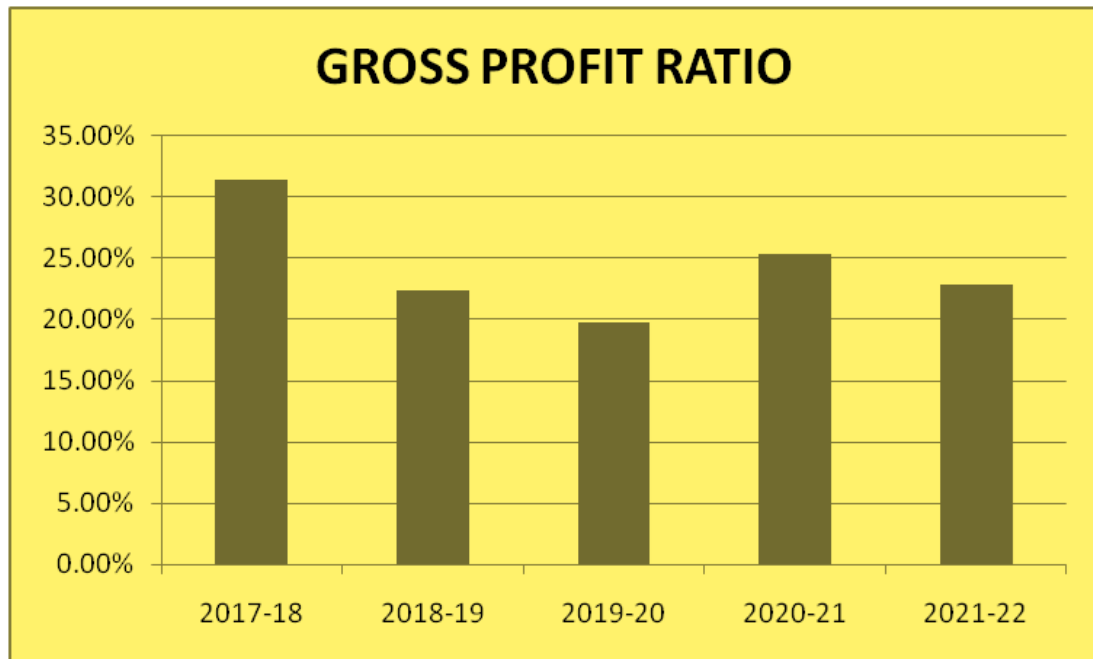
Gross profit ratio is **a ratio or metric that helps in determining the efficiency and performance of a company**. It is computed by dividing the gross profit of a company by its total net sales.

$$\text{Gross Profit Ratio} = \text{Gross Profit} / \text{Sales} * 100$$

TABLE 4.2.1: TABLE GROSS PROFIT RATIO

YEAR	GROSS PROFIT	SALES	GROSS PROFIT RATIO
2017-2018	5,75,11,070	18,27,80,957	31.467%
2018-2019	6,76,64,015	30,17,49,202	22.424%
2019-2020	7,53,43,325	38,05,97,973	19.796%
2020-2021	8,76,61,100	34,53,03,100	25.387%
2021-2022	10,23,90,900	44,90,36,600	22.802%

CHART 4.2.1: GRAPH GROSS PROFIT RATIO



Interpretation

The Gross Profit Ratio for the year 2017-2018 is 31.467%, for the year 2018-2019 22.424%, for the year 2019-2020 19.796%, for the year 2020-2021 25.387% and for the year 2021-2022 22.802%.

4.2.2 Net Profit Ratio:

Net profit Ratio 10% to 20% (or) 0.5% to 3.5%

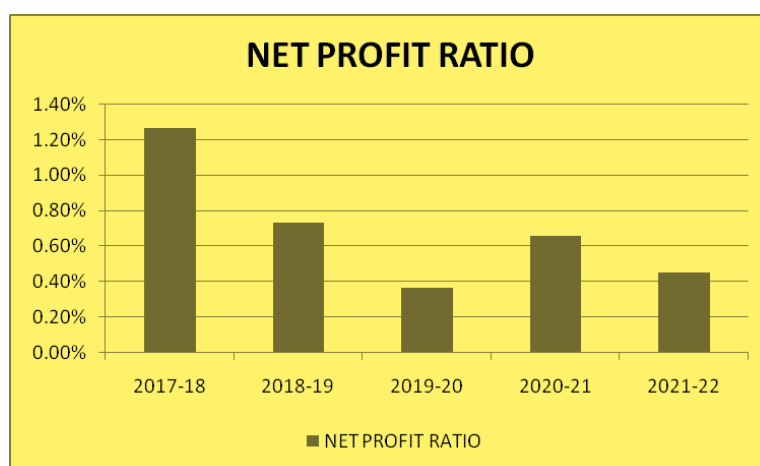
The net profit percentage is the ratio of **after-tax profits to net sales**. It reveals the remaining profit after all costs of production, administration, and financing have been deducted from sales, and income taxes recognized.

$$\text{Net Profit Ratio} = \text{Net Profit} / \text{Sales} * 100$$

TABLE 4.2.2: TABLE NET PROFIT RATIO

YEAR	NET PROFIT	SALES	NET PROFIT RATIO
2017-2018	23,11,900	18,27,80,957	1.265%
2018-2019	22,01,500	30,17,49,202	0.730%
2019-2020	13,83,834	38,05,97,973	0.364%
2020-2021	22,60,255	34,53,03,100	0.655%
2021-2022	20,14,099	44,90,36,600	0.449%

CHART 4.2.2: GRAPH NET PROFIT RATIO



Interpretation

The Net Profit Ratio for the year 2017-2018 is 1.265%, for the year 2018-2019 0.730%, for the year 2019-2020 0.364%, for the year 2020-2021 0.655% and for the year 2021-2022 0.449%.

4.2.3 Return on Investment Ratio:

Return on investment Ratio 7% or more (or) 10% or more

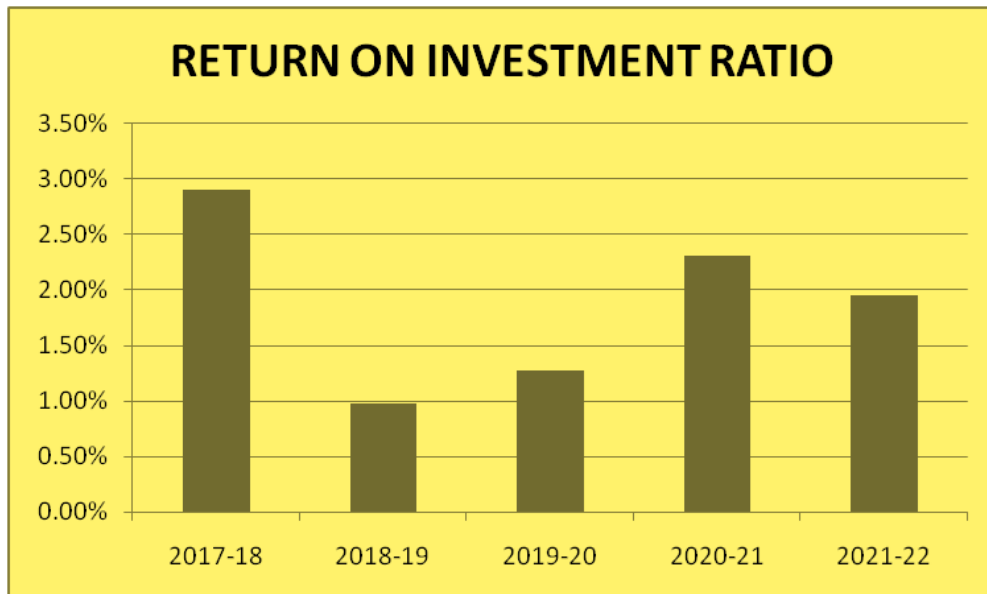
Return on investment (ROI) is a financial ratio **intended to measure the benefit obtained from an investment**. ROI can be calculated simply by dividing its after-tax income by its net worth (the residue after total liabilities are deducted from total assets on the balance sheet) or can use net worth *plus* long-term debt.

$\text{Return on Investment Ratio} = \text{Net profit after taxes} / \text{Shareholders fund} * 100$
--

TABLE 4.2.3: TABLE RETURN ON INVESTMENT RATIO

YEAR	NET PROFIT AFTER TAXES	SHAREHOLDERS FUND	RETURN ON INVESTMENT RATIO
2017-2018	25,20,198	8,66,89,742	2.907%
2018-2019	8,56,431	8,75,46,173	0.978%
2019-2020	11,31,219	8,86,77,392	1.276%
2020-2021	20,93,700	9,07,71,100	2.307%
2021-2022	18,08,600	9,25,79,800	1.954%

CHART 4.2.3: GRAPH RETURN ON INVESTMENT RATIO



Interpretation

The Return on Investment Ratio for the year 2017-2018 is 2.907%, for the year 2018-2019 0.978%, for the year 2019-2020 1.276%, for the year 2020-2021 2.307%, and for the year 2021-2022 1.954%.

4.2.4 RETURN ON EQUITY RATIO:

Return on Equity Ratio 15% to 20%

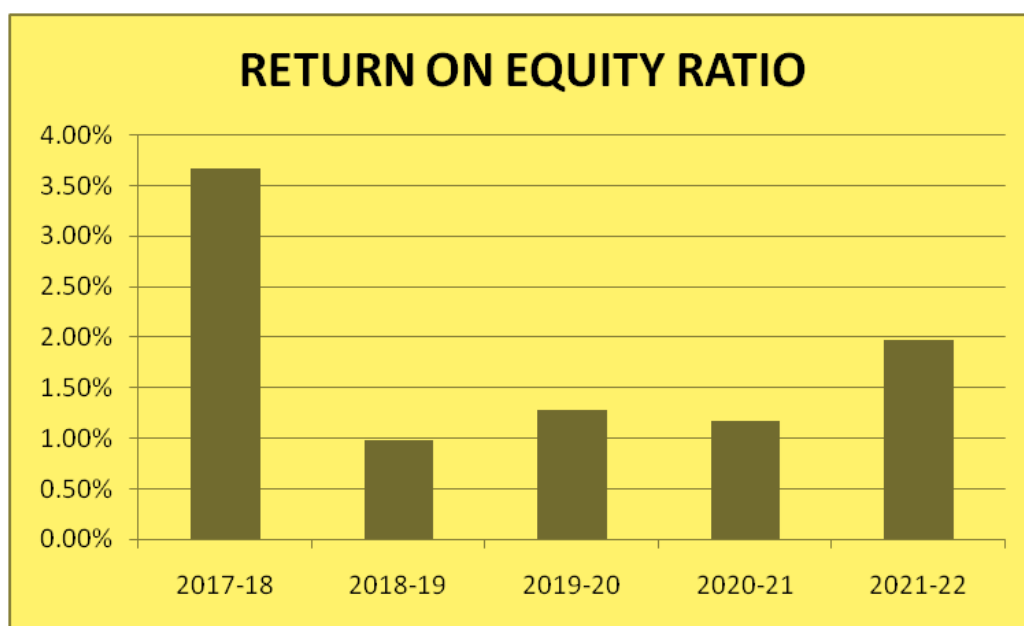
The return on equity ratio can be described as a financial ratio that helps **measure a company's proficiency to generate profits from its shareholders investments**. The ROE ratio is calculated by dividing the net income of the company by total shareholder equity and is expressed as a percentage.

$\text{Return on Equity Ratio} = \text{Net Profit After Taxes} / \text{Average Shareholders Equity}$
--

TABLE 4.2.4: TABLE RETURN ON EQUITY RATIO

YEAR	NET PROFIT AFTER TAXES	AVERAGE SHAREHOLDERS EQUITY	RETURN ON EQUITY RATIO
2017-2018	25,20,198	6,86,11,281.5	3.673%
2018-2019	8,56,431	8,71,17,957.5	0.983%
2019-2020	11,31,219	8,81,11,782.5	1.284%
2020-2021	20,93,700	8,97,24,250	2.334%
2021-2022	18,08,600	9,16,75,400.5	1.973%

CHART 4.2.4: GRAPH RETURN ON EQUITY RATIO



Interpretation

The Return on Equity Ratio for the year 2017-2018 is 3.673%, for the year 2018-2019 0.983%, for the year 2019-2020 1.284%, for the year 2020-2021 1.167% and for the year 2021-2022 1.973%.

4.3 TURNOVER RATIOS:

4.3.1 Inventory Turnover Ratio:

Inventory Turnover Ratio Between 5 and 10

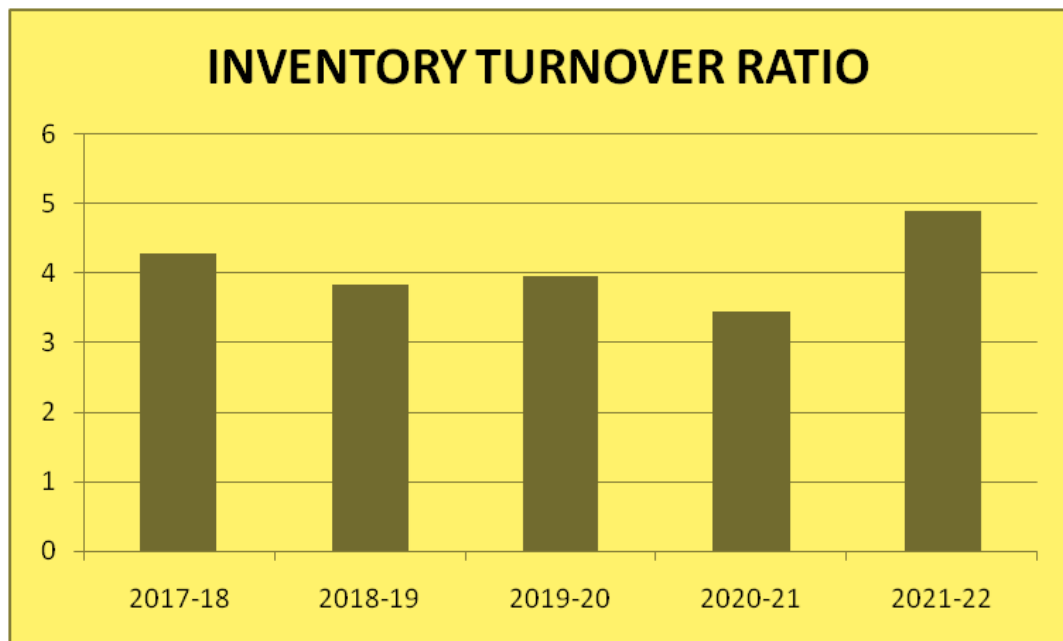
The inventory turnover ratio, also known as the stock turnover ratio, is an efficiency ratio that **measures how efficiently inventory is managed**. The inventory turnover ratio formula is equal to the cost of goods sold divided by total or average inventory to show how many times inventory is “turned” or sold during a period.

$$\text{Inventory Turnover Ratio} = \text{Cost of Goods sold} / \text{Average Inventory}$$

TABLE 4.3.1: TABLE INVENTORY TURNOVER RATIO

YEAR	COST OF GOODS SOLD	AVERAGE INVENTORY	INVENTORY TURNOVER RATIO
2017-2018	12,52,69,887	2,92,91,184.5	4.277
2018-2019	23,40,85,187	6,11,19,854	3.830
2019-2020	30,52,54,648	7,69,60,644	3.966
2020-2021	25,76,42,000	7,49,26,200	3.439
2021-2022	34,66,45,700	7,07,79,100	4.898

CHART 4.3.1: GRAPH INVENTORY TURNOVER RATIO



Interpretation

The Inventory Turnover Ratio for the year 2017-18 is 4.277, for the year 2018-2019 3.830, for the year 2019-2020 3.966, for the year 2020-2021 3.439, and for the year 2021-2022 is 4.898.

4.3.2 Trade Receivables Turnover Ratio:

Trade Receivables Turnover Ratio – Atleast 1.0 (or) 17.62

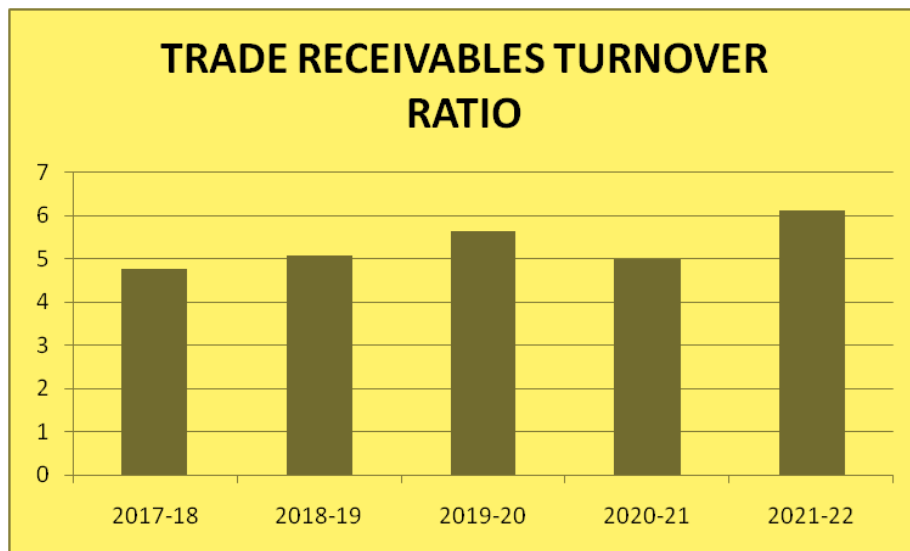
The receivables turnover ratio **measures the efficiency with which a company is able to collect on its receivables or the credit it extends to customers**. The ratio also measures how many times a company's receivables are converted to cash in a certain period of time.

$\text{Trade Receivables Turnover Ratio} = \frac{\text{Net Credit Sales}}{\text{Average Trade Receivables}}$
--

TABLE 4.3.2: TABLE TRADE RECEIVABLES TURNOVER RATIO

YEAR	NET CREDIT SALES	AVERAGE TRADE RECEIVABLES	TRADE RECEIVABLES TURNOVER RATIO
2017-2018	18,27,80,957	3,85,55,633.5	4.741
2018-2019	30,17,49,202	5,95,27,066.5	5.069
2019-2020	38,05,97,973	6,77,28,636.5	5.619
2020-2021	34,53,03,100	6,92,38,200	4.987
2021-2022	44,90,36,600	7,36,42,100	6.098

CHART 4.3.2: GRAPH TRADE RECEIVABLES TURNOVER RATIO



Interpretation

The Trade Receivables Turnover Ratio for the year 2017-18 is 4.741, for the year 2018-2019 is 5.069, for the year 2019-2020 is 5.619, for the year 2020-2021 is 4.987 and for the year 2021-2022 is 6.098.

4.3.3 TRADE PAYABLES TURNOVER RATIO

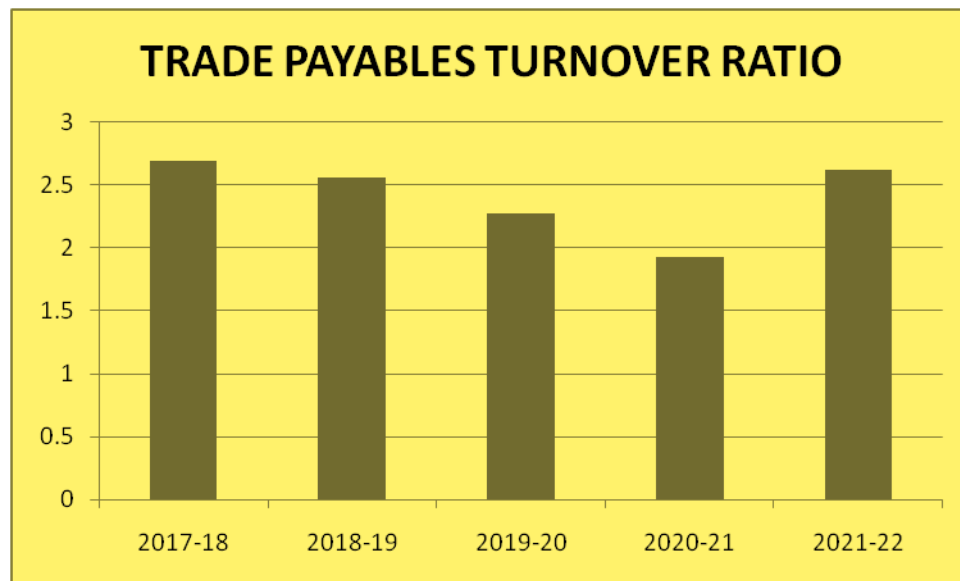
The accounts payable turnover ratio, also known as the payables turnover or the creditor's turnover ratio, is a liquidity ratio that **measures the average number of times a company pays its creditors over an accounting period**. The ratio is a measure of short-term liquidity, with a higher payable turnover ratio being more favorable.

$\text{Trade Payables Turnover Ratio} = \text{Net Credit Purchases} / \text{Average Trade Payables}$
--

TABLE 4.3.3: TABLE TRADE PAYABLES TURNOVER RATIO

YEAR	NET CREDIT PURCHASES	AVERAGE TRADE PAYABLES	TRADE PAYABLES TURNOVER RATIO
2017-2018	13,60,49,243	5,05,83,100.5	2.690
2018-2019	25,24,89,260	9,86,90,983.5	2.558
2019-2020	28,21,52,856	12,38,27,213	2.279
2020-2021	23,56,30,742	12,19,57,039	1.932
2021-2022	30,77,22,300	11,71,38,200	2.627

CHART 4.3.3: GRAPH TRADE PAYABLES TURNOVER RATIO



INTERPRETATION

The Trade Payables Turnover Ratio for the year 2017-2018 is 2.690, for the year 2018-2019 is 2.558, for the year 2019-2020 is 2.279, for the year 2020-2021 is 1.932 and for the year 2021-2022 is 2.627.

4.3.4 WORKING CAPITAL TURNOVER RATIO:

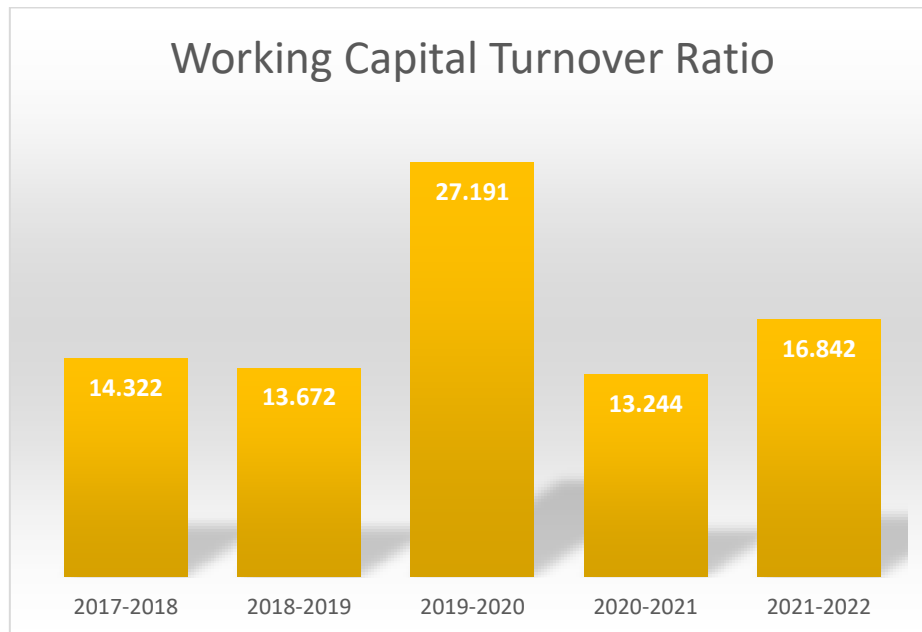
Working capital turnover is a ratio that **measures how efficiently a company is using its working capital to support sales and growth**. Working capital turnover measures the relationship between the funds used to finance a company's operations and the revenues a company generates to continue operations and turn a profit.

$$\text{Working Capital Turnover Ratio} = \text{Sales} / \text{Net Working Capital}$$

TABLE 4.3.4: TABLE WORKING CAPITAL TURNOVER RATIO

YEAR	SALES	NET WORKING CAPITAL	WORKING CAPITAL TURNOVER RATIO
2017-2018	18,27,80,957	1,27,61,895	14.322
2018-2019	30,17,49,202	2,20,70,571	13.672
2019-2020	38,05,97,973	1,39,97,294	27.191
2020-2021	34,53,03,137	2,60,71,900	13.244
2021-2022	44,90,36,600	2,66,62,200	16.842

CHART 4.3.4: GRAPH WORKING CAPITAL TURNOVER RATIO



INTERPRETATION

The Working Capital Turnover Ratio for the year 2017-2018 is 14.322, for the year 2018-2019 is 13.672, for the year 2019-2020 is 27.191, for the year 2020-2021 is 13.244, and for the year 2021-2022 is 16.842.

4.4 CAPITAL STRUCTURE RATIO

4.4.1 DEBT- EQUITY RATIO

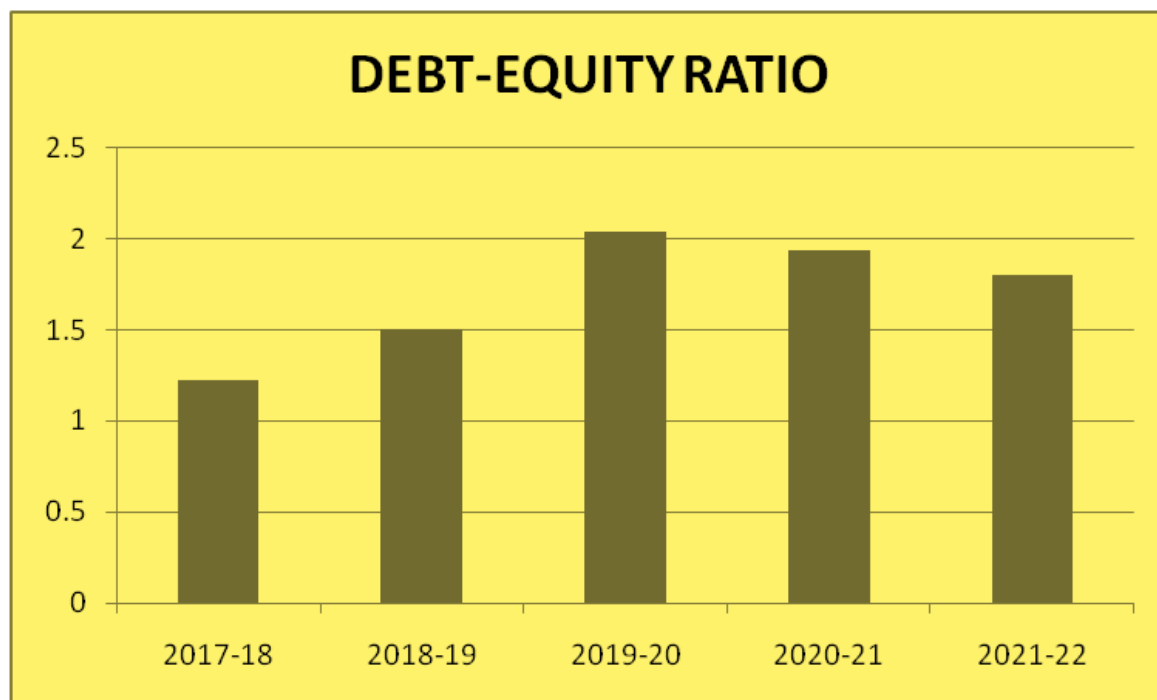
Debt to Equity ratio is a financial and a **liquidity ratio** that indicates **how much debt and equity a company uses**. It shows the capital structure of the company and is calculated by dividing the company's debts by shareholders' equity. It is a metric that indicates the amount of financial leverage it has, in terms of having **funds to cover all the debt the company owes**.

$$\text{Debt-Equity Ratio} = \text{Total Debt} / \text{Shareholders Fund}$$

TABLE 4.4.1: TABLE SHOWING DEBT-EQUITY RATIO

YEAR	TOTAL DEBT	SHAREHOLDERS FUND	DEBT-EQUITY RATIO
2017-2018	10,63,99,111	8,66,89,742	1.227
2018-2019	13,18,66,804	8,75,46,173	1.506
2019-2020	18,09,58,141	8,86,77,392	2.041
2020-2021	17,59,99,700	9,07,71,100	1.939
2021-2022	16,67,00,500	9,25,79,800	1.801

CHART 4.4.1: GRAPH REPRESENTING DEBT-EQUITY RATIO



INTERPRETATION

The Debt-Equity Ratio for the year 2017-2018 is 1.227, for the year 2018-2019 is 1.506, for the year 2019-2020 is 2.041, for the year 2020-2021 is 1.939 and for the year 2021-2022 is 1.801.

4.5 SCHEDULE OF CHANGES IN WORKING CAPITAL

4.5.1. For the Year 2017- 2018

Particulars	2017	2018	Increase in W.C	Decrease in W.C
Current Assets:				
Inventories	1,56,10,678	4,29,71,691	2,73,61,013	-
Trade Receivables	3,12,81,116	4,58,30,151	1,45,49,035	-
Cash and cash equivalents	13,56,324	3,81,155	-	9,75,169
Short term loans & advances	3,01,15,479	4,60,04,791	1,58,89,312	
Total (A)	7,83,63,597	13,51,87,788		
Current Liabilities:				
Short term borrowings	48,85,348	4,63,99,116	-	4,15,13,768
Trade Payables	3,23,29,384	6,88,36,817	-	3,65,07,433
Short term Provisions	1,80,33,691	71,89,960	1,08,43,731	-
Total(B)	5,52,48,423	12,24,25,893	6,86,43,091	7,89,96,370
TOTAL (A) – (B)	2,31,15,174	1,27,61,895		
Decrease in working capital	-	1,03,53,279	1,03,53,279	-
	2,31,15,174	2,31,15,174	7,89,96,370	7,89,96,370

INTERPRETATION:

From the above analysis, it is known that in the year 2017 the working capital is Rs.2,31,15,174 and in the year 2018 the working capital is Rs.1,27,61,895. Hence there is **decrease** in working capital by **Rs.1,03,53,279**.

4.5.2 For the Year 2018-2019

Particulars	2018	2019	Increase in W.C	Decrease in W.C
Current Assets:				
Inventories	4,29,71,691	7,92,68,017	3,62,96,326	-
Trade Receivables	4,58,30,151	7,32,23,982	2,73,93,831	-
Cash and Cash equivalents	3,81,155	9,65,910	5,84,755	-
Short term loans & advances	4,60,04,791	6,24,85,671	1,64,80,880	-
Total (A)	13,51,87,788	21,59,43,580		
Current Liabilities:				
Short term borrowings	4,63,99,116	5,71,83,484	-	1,07,84,368
Trade payables	6,88,36,817	12,85,45,150	-	5,97,08,333
Short term provisions	71,89,960	81,44,375	-	9,54,415
Total (B)	12,24,25,893	19,38,73,009	8,07,55,792	7,14,47,116
TOTAL (A) – (B)	1,27,61,895	2,20,70,571		
Increase in Working Capital	93,08,676	-	-	93,08,676
	2,20,70,571	2,20,70,571	8,07,55,792	8,07,55,792

INTERPRETATION:

From the above analysis, it is known that in the year 2018 the working capital is Rs.1,27,61,895 and in the year 2019 the working capital is Rs.2,20,70,571. Hence there is **increase** in working capital by **Rs.93,08,676**.

4.5.3 For the Year 2019 – 2020

Particulars	2019	2020	Increase in W.C	Decrease in W.C
Current Assets:				
Inventories	7,92,68,017	7,46,53,271	-	46,14,746
Trade Receivables	7,32,23,982	6,22,33,291	-	1,09,90,691
Cash and Cash equivalents	9,65,910	18,59,785	8,93,875	-
Short term loans & advances	6,24,85,671	6,75,12,138	50,26,467	-
Total (A)	21,59,43,580	20,62,58,485		
Current Liabilities:				
Short term borrowings	5,71,83,484	6,55,03,981	-	83,20,497
Trade payables	12,85,45,150	11,91,09,276	94,35,874	-
Short term provisions	81,44,375	76,47,934	4,96,441	-
Total (B)	19,38,73,009	19,22,61,191	1,58,52,657	2,39,25,934
TOTAL (A) – (B)	2,20,70,571	1,39,97,294		
Decrease in Working Capital	-	80,73,277	80,73,277	-
	2,20,70,571	2,20,70,571	2,39,25,934	2,39,25,934

INTERPRETATION:

From the above analysis, it is known that in the year 2019 the working capital is Rs.2,20,70,571 and in the year 2020 the working capital is Rs.1,39,97,294. Hence there is **decrease** in working capital by **Rs.80,73,277**.

4.5.4 For the Year 2020 – 2021

Particulars	2020	2021	Increase in W.C	Decrease in W.C
Current Assets:				
Inventories	7,46,53,271	7,51,99,098	5,45,827	-
Trade Receivables	6,22,33,291	7,62,43,104	1,40,09,813	-
Cash and Cash equivalents	18,59,785	2,26,144	-	16,33,641
Short term loans & advances	6,75,12,138	6,62,45,677	-	12,66,461
Total (A)	20,62,58,485	21,79,14,023		
Current Liabilities:				
Short term borrowings	6,55,03,981	5,70,65,960	84,38,021	-
Trade payables	11,91,09,276	12,48,04,802	-	56,95,526
Short term provisions	76,47,934	99,71,350	-	23,23,416
Total (B)	19,22,61,191	19,18,42,112	2,29,93,661	1,09,19,044
TOTAL (A) – (B)	1,39,97,294	2,60,71,911		
Increase in Working Capital	1,20,74,617	-	-	1,20,74,617
	2,60,71,911	2,60,71,911	2,29,93,661	2,29,93,661

INTERPRETATION:

From the above analysis, it is known that in the year 2020 the working capital is Rs.1,39,97,294 and in the year 2021 the working capital is Rs.2,60,71,911. Hence there is **increase** in working capital by **Rs.1,20,74,617**.

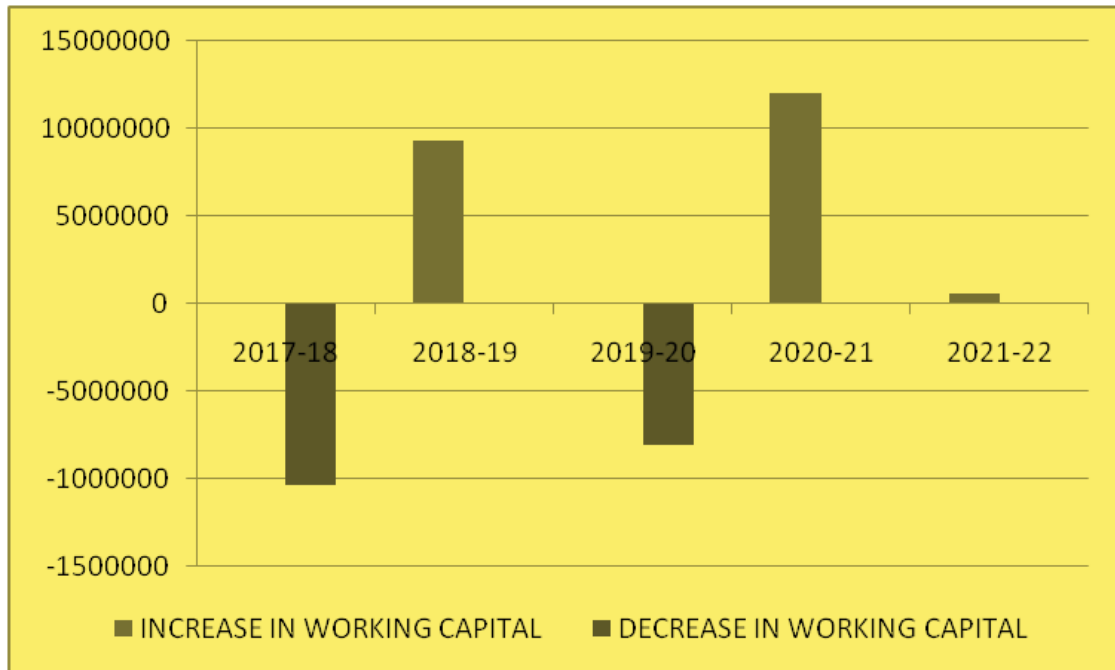
4.5.5 For the Year 2021 – 2022

Particulars	2021	2022	Increase in W.C	Decrease in W.C
Current Assets:				
Inventories	7,51,99,100	6,63,59,100	-	88,40,000
Trade Receivables	7,62,43,100	7,10,41,100	-	52,02,000
Cash and Cash equivalents	2,26,100	11,63,200	9,37,100	-
Short term loans & advances	6,62,45,700	6,95,84,700	33,39,000	-
Total (A)	21,79,14,000	20,81,48,100		
Current Liabilities:				
Short term borrowings	5,70,66,000	6,30,84,500	-	60,18,500
Trade payables	12,48,04,800	10,94,71,600	1,53,33,200	-
Short term provisions	99,71,300	89,29,500	10,41,500	-
Total (B)	19,18,42,100	18,14,85,900	2,06,50,800	2,00,60,500
TOTAL (A) – (B)	2,60,71,900	2,66,62,200		
Increase in Working Capital	5,90,300	-	-	5,90,300
	2,66,62,200	2,66,62,200	2,06,50,800	2,06,50,800

INTERPRETATION:

From the above analysis, it is known that in the year 2021 the working capital is Rs.2,60,71,900 and in the year 2022 the working capital is Rs.2,66,62,200. Hence there is **increase** in working capital by **Rs.5,90,300**.

**CHART 4.5.1: GRAPH REPRESENTING SCHEDULE OF CHANGES
IN WORKING CAPITAL FROM 2017- 2022**



CHAPTER 5

FINDINGS, SUGGESTIONS AND CONCLUSION

5.1 FINDINGS

- The Company has the highest current ratio in the year 2017-2018 i.e,1.778 and lowest current ratio in the year 2018-2019 i.e,1.580.
- The Company has highest Quick Ratio in the year 2021-2022 i.e,0.608 and lowest quick ratio in the year 2019-2020 i.e,0.506.
- The Company has highest Cash ratio in the year 2019-2020 i.e,0.015 and lowest cash ratio in the year 2020-2021 i.e,0.002.
- The Company has highest Gross Profit Ratio in the year 2017-2018 i.e,31.467% and lowest gross profit ratio in the year 2019-2020 i.e,19.796%.
- The Company has highest Net Profit Ratio in the year 2017-2018 i.e,1.102% and lowest net profit ratio in the year 2019-2020 i.e,0.400%.
- The Company has highest Return on Investment Ratio in the year 2017-2018 i.e,2.907% and lowest return on investment ratio in the year 2018-2019 i.e,0.978%.
- The Company has highest Return on Equity Ratio in the year 2017-2018 i.e,3.673% and lowest return on equity ratio in the year 2018-2019 i.e,0.983%,.
- The Company has highest Inventory Turnover Ratio in the year 2021-2022 i.e,6.344 and lowest inventory turnover ratio in the year 2020-2021 i.e,4.609.,
- The Company has highest Trade Receivables Turnover Ratio in the year 2021-2022 i.e,6.098 and lowest trade receivables turnover ratio in the year 2017-2018 i.e,4.741.,
- The Company has highest Trade Payables Turnover Ratio in the year 2017-2018 i.e,2.690 and the lowest trade payable turnover ratio in the year 2020-2021 i.e,1.932.
- The Company has highest Working Capital Turnover Ratio in the year 2019-2020 i.e,27.191 and lowest working capital turnover ratio in the year 2020-2021 i.e,13.244.,
- The company has highest Debt Equity ratio in the year 2019-2020 i.e,2.041 and lowest debt equity ratio in the year 2017-2018 i.e,1.227.

5.2 SUGGESTIONS:

- Though the company has the highest Current Ratio in the year 2022, the Company has to maintain the ideal ratio of 2:1 which means the current assets should be double the current liabilities.
- Though the company has the highest Quick Ratio in the year 2022, the company has to maintain the ideal ratio of 1:1 which means the company should have the same amount of liquid assets as current liabilities.
- There is a decrease in Gross Profit Ratio in the year 2022, hence the company should work on increasing the gross profit ratio.
- In the case of cash ratio the company has not maintained the standard ratio of 0.5:1 in any of the previous years. Hence the company should increase the cash ratio for the future period.
- The company has to work towards maintaining an increase in working capital for the effective functioning of the company.
- The Company has to maintain more of current assets than current liabilities to have a better working capital.

5.3 CONCLUSION:

- There is an increase in Trade Payables Turnover Ratio in the year 2022 which means that the company is making payments to its creditors on time and the company is in good standing with the creditors and suppliers.
- The company has maintained an ideal net profit ratio of 0.5 in the year 2022.
- There is an increase in Trade Receivables Turnover Ratio in the year 2022 which means that the company's collection of accounts receivable is efficient and that it has a high proportion of quality customers who pay their debts quickly.
- There is an increase in Inventory Turnover Ratio in the year 2022 which means that the company has strong sales in that year.
- There is an increase in Working Capital Turnover Ratio in the year 2022 which means that the company is able to generate a larger amount of sales.
- Financial statement analysis is only one of the tool (although a major one) while taking an investment decision.

BIBILOGRAPHY:

- Dr.B. Vijayakumar, “Investors” perception in equity market investment in India with special reference to Chennai”, Madras University Journal of Business and Finance, Vol 3 No2, July 2015 ISSN 220-5587. Pp. 66-78.
- Durga Rao P V, Chalam GV and Murthy T N, “Investment pattern of equity investors in Capital Market. National monthly referred Journal of Research in Commerce and Management. Vol.II, issue 10, ISSN 2277-1166, Jan2014 pp.19-25.
- K. Parimalakanthi and Dr. M. Ashokkumar “A Study on investment preference and behavior of individual investors in Coimbatore city”. Bonfiring International Journal of industrial Engineering and Management Science. Vol 5 No 4 Dec 2015.
- Jegadeesh, N. and S. Titman, 1993, Returns to Buying Winners and Selling Losers: Implications for Stock Market Efficiency, Journal-of-Finance; 48(1), 65-91.
- Suresh, “Discuss Target Market and Opportunity for investment” Southern Economist.
- Lalitha and M. Surekha (2008) “Retail Investor in Indian Capital Market: Profile, Pattern of Investment and Profitability” published in The Indian journal of commerce, (vol. 61, no.3, pg. no: 53)
- Chalam G. V. (Dr) (2003) “Investors Behavioral Pattern of Investment and Their Preferences of Mutual Funds.” Published in SOUTHERN ECONOMIST, (vol.41, no. 19, pg. no: 13).

- G. Prabakaran and G. Jayabal (2009) “Investors Risk Tolerance Towards Mutual Fund Investments” published in SOUTHERN ECONOMIST, (vol.48, no. 4, pg. no: 27).
- S. Saravana Kumar (2010) “An Analysis of Investor Preference Towards Equity and Derivatives” published in The Indian journal of commerce, (Vol. 63, No.3, pp 71).
- R. Kasilingam and G. Jayabal (2009) “Alternative Investment Option to Small Investors” published in SOUTHERN ECONOMIST, (Vol.48, No. 09, pp 18)

Websites:

https://www.mbaknol.com/financial-management/an-overivew____-of-Indian-capital-market/

<https://www.investopedia.com/terms/c.capitalmarkets.asp>

https://www.researchgate.net/publication/351477084_Capital_Market

<https://scholar.google.com/>

BALANCE SHEET:

	2018	2019	2020	2021	2022
1.EQUITY AND LIABILITIES					
(1) Shareholders Fund					
(a) Share captial	52,403,100	52,403,100	52,403,100	52,403,100	52,403,100
(b) Reserves and surplus	34,286,642	35,143,073	36,274,292	38,368,000	40,176,700
© Money received against share warrants					
(2) Share Application money pending Allotment					
(3) Non current Liabilities					
(a) Long term Borrowings	59,999,995	74,683,320	115,454,160	118,933,700	103,616,000
(b) DeferredTax Liabilities(Net)	8,23,032	1,791,983	1,801,887	1,171,400	1,180,300
C) Other Long term liabilities					
d) long term provisions					
(4) Current liabilities					
(a) Short term borrowings	46,399,116	57,183,484	65,503,981	57,066,000	63,084,500
(b) Trade payable	68,836,817	128,545,150	119,109,276	124,804,800	109,471,600
c) other current liabilities				9,971,300	8,929,800
d) Short term provisions	7,189,961	8,144,375	7,647,934		
Total Equity & Liabilities	2,69,938,663	357,894,485	398,194,630	402,718,300	378,862,000
II. ASSETS					
(1) Non current Assets					
(a) Fixed Assets					

TANGIBLE ASSET					
Property,Plant and Equipment	75,443,305	72,833,517	109,154,737	94,724,400	85,834,000
INTANGIBLE ASSET					
Know how Licenses and Trade Rights	32,118,171	29,091,634	25,891,634	31,190,100	27,990,100
(b) Non-current Investments					
c) deferred Tax assets (net)					
d) Longterm loans and advances					
e) other non-current asset	27,189,399	40,025,755	56,889,774	56,889,800	56,889,800
(2) Current Assets					
A) Current investments					
b) inventories	42,971,691	79,268,017	74,653,271	75,199,100	66,359,100
c) Trade receivables	45,830,151	73,223,982	62,233,291	76,243,100	71,041,100
d) cash and cash equivalents	381,155	965,910	1,859,785	226,100	1,163,200
e) Short term loans and advances	46,004,791	62,485,670	67,512,138		
f) other current asset				66,245,700	69,584,700
Total Aseets	269,938,663	357,894,485	398,194,430	402,718,300	378,862,000

PROFIT AND LOSS ACCOUNT:

Profit and loss account					
	2018	2019	2020	2021	2022
Revenues					
Revenue from operators	182,780,957	301,749,202	380,597,973	345,303,100	449,036,600
Other income	76,197	84,428	286,378	42,000	49,000
Total Revenue	182,857,154	301,833,630	380,884,351	345,345,100	449,086,500
Expenses:					
Cost of material consumed	125,269,887	234,085,187	305,254,648	257,642,000	346,645,700
Employee Benefit Expense	28,150,218	33,412,756	38,444,347	35,943,600	51,612,800
Financial cost	7,477,538	6,710,660	10,126,457	16,649,600	13,830,100
Depreciation and Amortization Expense	12,547,424	15,077,023	15,833,342	23,528,200	19,195,300
Other Administrative expenses	7,397,988	10,287,749	9,791,723	9,380,200	15,490,700
Total Expenses	180,843,055	299,573,375	379,500,571	343,143,600	446,774,600
Profit before exceptional and extraordinary items and tax	2,014,099	2,260,255	1,383,834	2,201,500	2,311,900
Exceptional items					

Profit before extraordinary items and tax	2,014,099	2,260,255	1,383,834	2,201,500	2,311,900
Profit before Tax	2,014,099	2,260,255	1,383,834	2,201,500	2,311,900
Tax Expenses:					
1)Current Tax	861,367	434,873	242,711	738,300	494,300
2)Deferred Tax	1,367,467	968,951	9,904	6,30,500	9000
Profit loss after tax for the year	2,520,199	856,431	1,131,219	2,093,700	1,808,600
Profit Loss for the year	2,520,199	856,431	1,131,219	2,093,700	1,808,600
Earnings per equity shares:					
1) Basic	0.48	0.16	0.25	0.4	0.35
2) Diluted	0.48	0.16	0.25	0.4	0.35

ARTICLE

A STUDY ON INVENTORY MANAGEMENT SYSTEM IN RSPM INFOTECH

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ABSTRACT

The main objectives of study are to study the inventory management process in the company. The other objectives are to learn how the company keeps all the data of inventory perfectly, to find out the composition of inventory, to study the various inventory ratio and to analyze the inventory management techniques used in the company. Inventory management being a very important concept in all the company's having a void coverage often calls for the managerial attention. In the modern times inventory management has become the integral part of the all companies

INTRODUCTION

Inventory management is a very important function that determines the health of the supply chain as well as the impacts the financial health of the balance sheet. Any organization which is into production, trading, sale and service of a product will necessarily hold stock of various physical resources to aid in future consumption and sale. While inventory is a necessary evil of any such business, it may be noted that the organizations hold inventories for various reasons, which include speculative purposes, functional purposes, physical necessities etc. Inventory can be classified according to functions Mainly.

- 1) Input- that has raw material, packaging materials, local purchased items for productions, consumables for processing.
- 2) WIP- semi-finished products, scrap, defectives
- 3) Output- finished goods, FG in transit, defectives & rejects, sales returns, repaired stocks etc.

NEED OF STUDY

Inventory is a necessary evil that every organization would have to maintain for various purposes. Optimum inventory management is the goal of every inventory planner. Over inventory or under inventory both cause financial impact and health of the business as well as effect business opportunities. Inventory holding is resorted to by organizations as hedge against various external and internal factors, as precaution, as opportunity, as a need and for speculative purposes.

SCOPE OF STUDY

Manage Inventory: Inventory management helps to manage the stock of the company. it provides proper details of the products what kind of raw material, what are the sizes we require and etc. to the purchasing department.

Less Storage: When the inventory management provides proper information to management, they buy according to them which helps the company to store fewer products.

Improve Productivity: Inventory management helps to improve the productivity of the machines and manpower. Employees are aware of stocks and the quantity that require to produce.

Increase Profits: Inventory management helps to improve the profits of the company. it helps to provide proper information about stocks, that saves the unnecessary expenses on stocks.

OBJECTIVE OF STUDY

- To study how finance department of the company work.
- To find out the composition of inventory.
- To study the various inventory ratio.
- To analyze the inventory management techniques used in the company.

REVIEW OF LITERATURE

Srinivas Rao Kasisomayajula (2014) An analytical study was conducted on “inventory in commercial vehicle industry in india”. A sample of five companies was selected for study. The study concluded that all the units in the commercial vehicle industry have significant relationship between inventory and sales. Proper tracking of inventory is important to maintain and improve the health of an organization. Efficient tracking of inventory will improve the profitability of the organization.

Edwin Sitienei and Florence Memba (2015) Conducted a study on effect of inventory management on profitability of cement manufacturing companies in kenya. The study concluded that Gross profit margin is negatively correlated with the inventory conversion period, increase in sales, which denotes the firm size enriches the firm's inventory levels, Which pushes profits upwards due to optimal inventory levels. It is also noted that firms inventory systems must maintain an appropriate inventory levels to enhance profitability and reduce the inventory costs associated with holding excessive stock in warehouses.

Ahmed Zeb (2017) Conducted various field visits in order to collect data regarding a bridge project, and it was gathered from inventory boks and physical stock verification. After which the ABC analysis was done using MS excel using following steps (1) collect items details with their unit prices. (2) Find the total value to the item in the project by the product of expected units required and unit price. (3) Arrange the items in descending order of their values.

B. Madhavrao (2018) According to this paper, material management plays an important role in the construction business, When project planning and material identification systems are inadequate, project costs rise and also effects the timeline of the project. Labor productivity also suffer as a result of material shortages and inadequate storage. A well – planned material management program is essential to maintain effective management, to ensure timely delivery of materials and equipment, and to reduce cost of the project. This article discusses material management approaches for construction projects using S-curve and ABC Analysis for a through understandings of the management of four main construction materials.

DATA ANALYSIS AND INTERPRETATIONS

LIQUIDITY RATIOS

i. Current Ratio:

The current ratio measures the **ability of an entity to meet its current liabilities** as and when they are due for payment.

$$\text{Current Ratio} = \text{Current assets} / \text{Current Liabilities}$$

ii. Quick Ratio:

The quick ratio is an indicator of a **company's short-term liquidity position** and indicates whether the business concern is in a position to pay its current liabilities out of its quick assets.

$$\text{Quick Ratio} = \text{Quick assets} / \text{Current Liabilities}$$

iii. Cash Ratio:

The cash ratio **shows the company's ability to cover its short-term obligations using cash and cash equivalents.**

$$\text{Cash Ratio} = \text{Cash and cash equivalents} / \text{Current Liabilities}$$

PROFITABILITY RATIOS

i. Gross Profit Ratio:

Gross profit ratio (GP ratio) shows the margin of profit available out of revenue from operations.

$$\text{Gross Profit Ratio} = \text{Gross profit} / \text{Revenue from operations} * 100$$

ii. Net Profit Ratio:

Net profit is the percentage of net profit on revenue from operations. It is an indicator of the overall profitability of the business.

$$\text{Net Profit Ratio} = \text{Net Profit} / \text{Revenue from operations} * 100$$

iii. Return on investment Ratio:

Return on investment (ROI) is an overall measure of profitability of a business concern.

$$\text{Return on Investment Ratio} = \text{Net profit after taxes} / \text{Shareholders fund} * 100$$

TURNOVER RATIOS

i. Working Capital Turnover Ratio:

Working Capital Turnover Ratio is an efficiency ratio that indicates how the company uses its working capital to support sales and help in the growth of the business.

$$\text{Working Capital Turnover Ratio} = \text{Net Revenue from operations} / \text{Net Working Capital}$$

ii. Inventory Turnover Ratio:

The **inventory turnover** indicates the number of times inventory is turned over to make revenue from operations during a particular accounting period. It is a comparison of cost of revenue from operations with average amount of inventory.

$$\text{Inventory Turnover Ratio} = \text{Cost of Revenue from operations} / \text{Average Inventory}$$

iii. Trade Receivables Turnover Ratio:

The accounts receivable turnover ratio, also known as the debtor's turnover ratio, is an efficiency ratio that **gives the velocity of collection of cash from trade receivables.**

$$\text{Trade Receivables Turnover Ratio} = \text{Credit Revenue from operations} / \text{Average Trade Receivables}$$

iv. Trade Payables Turnover Ratio:

The accounts payable turnover ratio, also known as the payables turnover or the creditor's turnover ratio, is a liquidity ratio that **gives the velocity of payment of cash towards trade payables.**

$$\text{Trade Payables Turnover Ratio} = \text{Credit Purchases} / \text{Average Trade Payables}$$

CAPITAL STRUCTURE RATIOS

i. Debt-Equity Ratio:

Debt-to-equity (D/E) ratio is used to **assess the long term solvency position of a business concern.** Debt Equity ratio expresses the relationship between long term debt and shareholders fund.

$$\text{Debt-Equity Ratio} = \text{Long term Debt} / \text{Shareholders equity}$$

ii. Return on Equity Ratio:

Return on equity (ROE) is a measure of financial performance calculated by dividing net income by shareholders' fund.

$$\text{Return on Equity Ratio} = \text{Net Profit After Taxes} / \text{Average Shareholders Equity}$$

SUGGESTIONS

- Though the company has the highest Current Ratio in the year 2022, the Company has to maintain the ideal ratio of 2:1 which means the current assets should be double the current liabilities.
- Though the company has the highest Quick Ratio in the year 2022, the company has to maintain the ideal ratio of 1:1 which means the company should have the equal amount of liquid assets as current liabilities.
- There is a decrease in Gross Profit Ratio in the year 2022, hence the company should work on increasing the gross profit ratio.
- In the case of cash ratio the company has not maintained the standard ratio of 0.5:1 in any of the previous years. Hence the company should increase the cash ratio for the future period.

CONCLUSION

- There is an increase in Trade Payables Turnover Ratio in the year 2022 which means that the company is making payments to its creditors on time and the company is in good standing with the creditors and suppliers.
- The company has maintained an ideal net profit ratio of 0.5 in the year 2022.
- There is an increase in Trade Receivables Turnover Ratio in the year 2022 which means that the company's collection of accounts receivable is efficient and that it has a high proportion of quality customers who pay their debts quickly.
- There is an increase in Inventory Turnover Ratio in the year 2022 which means that the company has strong sales in that year.
- There is an increase in Working Capital Turnover Ratio in the year 2022 which means that the company is able to generate a larger amount of sales.

REFERENCE

- Suresh, "Discuss Target Market and Opportunity for investment" Southern Economist.
- Lalitha and M. Surekha (2008) "Retail Investor in Indian Capital Market: Profile, Pattern of Investment and Profitability" published in The Indian journal of commerce, (vol. 61, no.3, pg. no: 53)
- Chalam G. V. (Dr) (2003) "Investors Behavioral Pattern of Investment and Their Preferences of Mutual Funds." Published in SOUTHERN ECONOMIST, (vol.41, no. 19, pg. no: 13).
- G. Prabakaran and G. Jayabal (2009) "Investors Risk Tolerance Towards Mutual Fund Investments" published in SOUTHERN ECONOMIST, (vol.48, no. 4, pg. no: 27).
- S. Saravana Kumar (2010) "An Analysis of Investor Preference Towards Equity and Derivatives" published in The Indian journal of commerce, (Vol. 63, No.3, pp 71).
- R. Kasilingam and G. Jayabal (2009) "Alternative Investment Option to Small Investors" published in SOUTHERN ECONOMIST, (Vol.48, No. 09, pp 18)

Websites

<https://www.mbaknol.com/financial-management/an-overivew -of-Indian-capital-market/>

<https://www.investopedia.com/terms/c.capitalmarkets.asp>

https://www.researchgate.net/publication/351477084_Capital_Market

<https://scholar.google.com/>