

A STUDY ON WORKING CAPITAL MANAGEMENT IN DIAMOND ENGINEERING CHENNAI PRIVATE LIMITED.

Submitted in partial fulfillment of the requirement for the reward of

BACHELOR OF BUSINESS ADMINISTRATION

By

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SCHOOL OF MANAGEMENT STUDIES**

SATHYABAMA

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

Accredited with Grade “A” by NAAC I 12B Status by UGC I Approved by AICTE

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BONAFIDE CERTIFICATE

This is to certify that this Project Report is the bonafide work of **R.VIVEK CHOUDHARY 39280106** who has done the Project work entitled **A STUDY ON WORKING CAPITAL MANAGEMENT IN DIAMOND ENGINEERING CHENNAI PRIVATE LIMITED**

under my

supervision from December 2021 to March 2022.

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DECLARATION

I am **R.VIVEK CHOUDHARY (39280106)**. Hereby declare that the Project Report entitled **“A STUDY ON WORKING CAPITAL MANAGEMENT IN DIAMOND ENGINEERING CHENNAI PRIVATE LIMITED ”** done by me under the guidance of **DR. GANANATH KHILLA** , School of Business Administration is submitted in partial fulfillment of the requirements for the award of BACHELORS OF BUSINESS ADMINISTRATION degree.

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ABSTRACT

The study was done at DIAMOND ENGINEERING CHENNAI PRIVATE LIMITED. It was an opportunity to gain knowledge and practical exposure in different areas of an organization. It enhanced the knowledge level of the candidate wherein which they can apply practical knowledge in future career through this study. It was an extraordinary opportunity to experience work discipline, team work, time management from the company. From this study it has been observed that the finance department of DIAMOND ENGINEERING CHENNAI PRIVATE LIMITED has maintained a stable in the performance and had a consistent working capital and has delivered a sustainable result.

CHAPTER 1

1.1 INDUSTRY PROFILE

STEEL INDUSTRY

Steel is crucial to the development of any modern economy and is considered to be the backbone of human civilization. The level of per capita consumption of steel is treated as an important index of the level of socio-economic development and living standards of the people in any country. It is a product of a large and technologically complex industry having strong forward and backward linkages in terms of material flows and income generation. All major industrial economies are characterized by the existence of a strong steel industry and the growth of many of these economies has been largely shaped by the strength of their steel industries in their initial stages of development.

India's economic growth is contingent upon the growth of the Indian steel industry. Consumption of steel is taken to be an indicator of economic development. While steel continues to have a stronghold in traditional sectors such as construction, housing and ground transportation, special steels are increasingly being used in engineering industries such as power generation, petrochemicals and fertilizers. India occupies a central position on the global steel map, with the establishment of new state-of-the-art steel mills, acquisition of global scale capacities by players, continuous modernization and up gradation of older plants, improving energy efficiency and backward integration into global raw material sources.

India is currently the world's fourth largest producer of crude steel (knocking to be the third largest by the year end) and is expected to become the second largest producer by 2020. Steel production in India has increased from 81 million tonnes (mt) in 2013-14 to 88 mt in 2014-15 with the capacity being increased from 100 mt in 2013-14 to 110 mt in 2014-15. The steel sector contributes nearly 2% of the country's GDP and employs over 6 lakh people. The per capita consumption of total finished steel in the country has risen from 51 kg in 2009-10 to about 60 kg in 2014-15.

Steel industry derives its demand from other important sectors like infrastructure, aviation, engineering, construction, automobile, pipes and tubes etc. With the Indian economy poised for its next wave of growth under the reforms being unleashed in the last one year, there lies tremendous opportunity for the Indian steel industry to prosper and grow exponentially.

The Indian steel industry is largely iron-based through the blast furnace (BF) or the direct reduced iron (DRI) route. Indian steel industry is highly consolidated. About 50% of the crude steel capacity is resident with integrated steel producers (ISP). But the changing ratio of hot metal to crude steel production indicates toward the increasing presence of secondary steel producers in the eco-system.

India was the world's second-largest steel producer with production standing at 106.5 MT in 2018. The growth in the Indian steel sector has been driven by domestic availability of raw materials such as iron ore and cost-effective labour. Consequently, the steel sector has been a major contributor to India's manufacturing output. India's steel production capacity has expanded to 137.975 million tones in FY19. India surpassed Japan to become the world's second largest steel producer in 2019, with crude steel production of 111.2 million tonnes.

The Indian steel industry is very modern with state-of-the-art steel mills. It has always strived for continuous modernisation and up-gradation of older plants and higher energy efficiency levels. Indian steel industries are classified into three categories such as major producers, main producers and secondary producers.

India's finished steel consumption grew at a CAGR of 7.5 per cent during FY08-FY19 to reach 97.54 MT. India's crude steel and finished steel production increased to 106.56 MT and 131.57 MT in 2018-19, respectively. In FY20 (till February 2020), crude steel and finished steel production stood at 100.78 MT and 94.01 MT respectively. During 2018-19, 6.36 MT of steel was exported from India. Exports and imports of finished steel stood at 7.78 MT and 6.39 MT, respectively, in FY20P (up to February 2020).

The Indian steel industry has entered into a new development stage, post de-regulation, riding high on the resurgent economy and rising demand for steel. Rapid rise in production has resulted in India becoming the 3rd largest producer of crude steel in 2015 as well as in 2016. The country was the largest producer of sponge iron or DRI in the world during the period 2003-2015 and emerged as the 2nd largest global producer of DRI in 2016 (after Iran). India is also the 3rd largest finished steel consumer in the world and maintained this status in 2016. Such rankings are based on provisional data released by the World Steel Association for the above year. In a de-regulated, liberalized economic/market scenario like India the Government's role is that of a facilitator which lays down the policy guidelines and establishes the institutional mechanism/structure for creating conducive environment for improving

efficiency and performance of the steel sector. In this role, the Government has released the National Steel Policy 2017, which has laid down the broad roadmap for encouraging long term growth for the Indian steel industry, both on demand and supply sides, by 2030-31.

The said Policy is an updated version of National Steel Policy 2005 which was released earlier and provided a long-term growth perspective for the domestic iron and steel industry by 2019. The Government has also announced a policy for providing preference to domestically manufactured Iron & Steel products in Government procurement. This policy seeks to accomplish PM's vision of 'Make in India' with objective of nation building and encourage domestic manufacturing and is applicable on all government tenders where price bid is yet to be opened. Further, the Policy provides a minimum value addition of 15% in notified steel products which are covered under preferential procurement. In order to provide flexibility, Ministry of Steel may review specified steel products and the minimum value addition criterion.

1.2 COMPANY PROFILE

DIAMOND ENGINEERING CHENNAI PRIVATE LIMITED

Diamond Group is one of the India's leading and fast-growing steel fabrication units, Providing engineering solutions to a host of competent players across the globe. The group's core competency lies in Heavy steel Fabrication and supply including machining and assembly of steel structures, material handling Equipment and industrial process for domestic and overseas project in close association with major international EPC and OEM companies. Incorporated in 1978, Diamond Engineering (Chennai) Private Limited (DECPL) was acquired by Mr. P. Mohanraj in 1987. Then, the company was a sick unit with just 7 employees. But Mr. P. Mohanraj has a vision to give it a new lease of life, and turn it into one India's leading Steel Fabrication company.

'Anything in Steel' was a maxim coined by him, and has been a guiding principle since 1987. Under his excellent and innovative leadership, Diamond Group is now competing for the World's No.1 Position in the fabrication industry by providing qualitative services to its clients. Presently, the group has state-of-the-art manufacturing facilities spread over 200 acres with 5 workshops, having a monthly Production capacity of 5000 tons and permanent workforce of around 4500 employees. Major expansion is underway with plans to have automated machinery installed for a streamlined production. The production capacity is estimated to ramp up to 10000 tons per month, shortly.

Diamond Group caters to various business segments like Cements, Mining, Power (Thermal and Renewable), Steel, Oil and Gas, Petrochemicals, Ship yards, Automotive Industries, etc. Nearly 50-60% of the annual sales is contributed by exports to countries across the world. Diamond Group's credentials include: ISO 9001:2008 Certification for all its production Units, Two Star Export House Status, Export Excellence Awards at the National and Regional level from EEPC-India for the last 6 consecutive years, BHEL-Trichy's best subcontractor award (2009) from Economic Growth Society of India.

With focus on maintaining a Clean and Green Environment, besides implementing health and safety measures, the Group enjoys the reputation of being the most recommended supplier and the preferred employer steadfastly meeting the objectives and needs of its clients and employees. Diamond Group's commitment towards Product Quality and service has helped gain the trust and confidence of its burgeoning client base.

The Group's strengths include compliance with client's specification, setting new quality standards, surpassing client's expectations, conformance with International Standards, constant up-gradation of manufacturing process and infrastructure, competent production team, efficient project management, competitive pricing, adherence to delivery schedules, innovative guidelines for packaging and assembly, and unwavering support service.

Considering the growing domestic demand as well as the fact that many of its international buyers are turning to India for Steel Fabrication, Diamond Group is gearing up towards increasing its production capacity to take advantage of the lucrative growth opportunities, and is quite confident of being one of the leading contenders for High-value Projects.

CHAPTER-2

REVIEW OF LITERATURE

Working Capital management is the management of assets that are current in nature. Current assets, by accounting definition are the assets normally converted in to cash in a period of one year. Hence working capital management can be considered as the management of cash, market securities receivable, inventories and current liabilities. In fact, the management of current assets is similar to that of fixed assets the sense that in both cases the firm analyses their effect on its profitability and risk factors, hence they differ on three major aspects:

1. In managing fixed assets, time is an important factor discounting and compounding aspects of time play an important role in capital budgeting and a minor part in the management of current assets.

2. The large holdings of current assets, especially cash, may strengthen the firm's liquidity position, but is bound to reduce profitability of the firm as idle cash yield nothing.

3. The level of fixed assets as well as current assets depends upon the expected sales, but it is only current assets that add fluctuation in the short run to a business.

To understand working capital better we should have basic knowledge about the various aspects of working capital. To start with, there are two concepts of working capital:

Gross Working Capital

Net working Capital

Gross Working Capital: Gross working capital, which is also simply known as working capital, refers to the firm's investment in current assets: Another aspect of gross working capital points out the need of arranging funds to finance the current assets. The gross working capital concept focuses attention on two aspects of current assets management, firstly optimum investment in current assets and secondly in financing the current assets. These two aspects will help in remaining away from the two danger points of excessive or inadequate investment in current assets. Whenever a need of working capital funds arises due to increase in level of business activity or for any other reason the arrangement should be made quickly, and similarly if some surpluses are available, they should not be allowed to lie idle but should be put to some effective use.

Net Working Capital: The term net working capital refers to the difference between the current

assets and current liabilities. Net working capital can be positive as well as negative. Positive working capital refers to the situation where current assets exceed current liabilities and negative working capital refers to the situation where current liabilities exceed current assets. The net working capital helps in comparing the liquidity of the same firm over time. For purposes of the working capital management, therefore Working Capital can be said to measure the liquidity of the firm. In other words, the goal of working capital management is to manage the current assets and liabilities in such a way that a acceptable level of net working capital is maintained.

Working capital refers to the investment by the company in short terms assets such as cash, marketable securities. Net current assets or net working capital refers to the current assets less current liabilities.

Symbolically, it means,

Net Current Assets = Current Assets Current Liabilities.

Studies adopting a new approach towards working capital management are reviewed here.

Sagan in his paper (1955),

1 perhaps the first theoretical paper on the theory of working capital management, emphasized the need for management of working capital accounts and warned that it could vitally affect the health of the company. He realized the need to build up a theory of working capital management. He discussed mainly the role and functions of money manager inefficient working capital 48 management. Sagan pointed out the money manager's operations were primarily in the area of cash flows generated in the course of business transactions. However, money manager must be familiar with what is being done with the

control of inventories, receivables and payables because all these accounts affect cash position. Thus, Sagan concentrated mainly on cash component of working capital. Sagan indicated that the task of money manager was to provide funds as and when needed and to invest temporarily surplus funds as profitably as possible in view of his particular requirements of safety and liquidity of funds by examining the risk and return of various investment opportunities. He suggested that money manager should take his decisions on the basis of cash budget and total

current assets position rather than on the basis of traditional working capital ratios. This is important because efficient money manager can avoid borrowing from outside even when his net working capital position is low. The study pointed out that there was a need to improve the collection of funds but it remained silent about the method of doing it. Moreover, this study is descriptive without any empirical support.

Realizing the dearth of pertinent literature on working capital management, Walker in his study (1964) made a pioneering effort to develop a theory of working capital management by empirically testing, though partially, three propositions based on risk-return trade-off of working capital management. Walker studied the effect of the change in the level of working capital on the rate of return in nine industries for the year 1961 and found the relationship between the level of working capital and the rate of return to be negative.

Vanhorne in his study (1969)⁴ ,

Recognizing working capital management as an area largely lacking in theoretical perspective, attempted to develop a framework in terms of probabilistic cash budget for evaluating decisions concerning the level of liquid assets and the maturity composition of debt involving risk-return trade-off. He proposed calculation of different forecasted liquid asset requirements along with their subjective probabilities under different possible assumptions of sales, receivables, payables and other related receipts and disbursements. He suggested preparing a schedule showing, under each alternative of debt maturity, probability distributions of liquid asset balances for future periods, opportunity cost, maximum probability of running out of cash and number of future periods in which there was a chance of cash stock-out. Once the risk and opportunity cost for different alternatives were estimated, the firm could determine the best alternative by balancing the risk of running out of cash against the cost of providing a solution to avoid such a possibility depending on management's risk tolerance limits. Thus, Vanhorne study presented a risk-return trade-off of working capital management in entirely new perspective by considering some of the variables probabilistically. However, the usefulness of the framework suggested by Vanhorne is limited because of the difficulties in obtaining information about the probability distributions of liquid-asset balances, the opportunity cost and the probability of running out of cash for different alternative of debt maturities.

Welter, in his study (1970)

Stated that working capital originated because of the global delay between the moment Expenditure for purchase of raw material was made and the moment when payments were received for the sale of finished 52product. Delay centres are located throughout the production and marketing functions. The study requires specifying the delay centres and working capital tied up in each delay centre with the help of information regarding average delay and added value. He recognized that by more rapid and precise information through computers and improved professional ability of management, saving through reduction of working capital could be possible by reducing the length of global delay by rescuing and/or favorable redistribution of this global delay among the different delay centers. However, better information and improved staff involve cost. Therefore, savings through reduction of working capital should be tried till these saving are greater or equal to the cost of these savings. Thus, this study is concerned only with return aspect of working capital management ignoring risk. Enterprises, following this approach, can adversely affect its short-term liquidity position in an attempt to achieve saving through reduction of working capital. Thus, firms should be conscious of the effect of law current assets on its ability to pay-off current liabilities. Moreover, this approach concentrated only on total amount of current assets ignoring the interactions between current assets and current liabilities.

Lambrix and Singhvi (1979)

Adopting the working capital cycle approach to the working capital management, also suggested that investment in working capital could be optimized and cash flows could be improved by reducing the time frame of the physical flow from receipt of raw material to shipment of 53finished goods, i.e. inventory management, and by improving the terms on which firm sells goods as well as receipt of cash. However, the further suggested that working capital investment could be optimized also (1) by improving the terms on which firms bought goods i.e. creditors and payment of cash, and (2) by eliminating the administrative delays i.e. the deficiencies of paper-work flow which tended to extend the time-frame of the movement of goods and cash.

Warren and Shelton (1971)⁷

Applied financial simulation to simulate future financial statements of a firm, based on a set of simultaneous equations. Financial simulation approach makes it possible to incorporate both the uncertainty of the future and the many interrelationships between current assets, current liabilities and other balance sheet accounts. The strength of simulation as a tool of analysis is that it permits the financial manager to incorporate in his planning both the most likely value of an activity and the margin of error associated with this estimate. Warren and Shelton presented a model in which twenty simultaneous equations were used to forecast future balance sheet of the firm including forecasted current assets and forecasted current liabilities. Current assets and current liabilities were forecasted in aggregate by directly relating to firm sales. However, individual working capital accounts can also be forecasted in a larger simulation system. Moreover, future financial statements can be simulated over a range of different assumptions to portray inherent uncertainty of the future.

Abramowitz (1950)¹⁸ and Modigliani (1957)¹⁹

Highlighted the impact of capacity utilization on inventory investment. Existing stock of inventories is expected to take account of adjustment process to the desired levels. Thus the variable, existing stock of inventories, is postulated to be negatively related with the desired stock. The ratio of inventory to sales may affect inventory investment positively because a high ratio of stocks to sales in the past suggests the maintenance of high levels of inventories in the past and thus also calling for high investment in inventories in the current period.

The studies of Metzler (1941)²⁰ and Hilton (1976)²¹

Have found this variable, inventory-sales ratio, to be statistically significant. Fixed investment is generally expected to affect inventory investment inversely because of competing demand for the limited funds. However, in case of an expanding firm, the two components may be complementary. Besides, availability of funds from retained earnings and external sources, may affect investment decision by providing funds for financing inventory investment. Therefore, retained earnings and flow of debt are postulated to have positive coefficients.

CHAPTER-3

RESEARCH METHODOLOGY

3.1 OBJECTIVES OF THE STUDY

Study of the working capital management is important because unless the working capital is managed effectively, monitored efficiently planned properly and reviewed periodically at regular intervals to remove bottlenecks if any, the company cannot earn profits and increase its turnover. With this primary objective of the study, the following further objectives are framed for a depth analysis.

1. To study the working capital management of Diamond Engineering Chennai Pvt. Ltd
2. To study the optimum level of current assets and current liabilities of the company.
3. To study the liquidity position through various working capital related ratios.
4. To analyse the Liquidity trend.
5. To study the financial performance using trend analysis tool

3.2 SCOPE OF THE STUDY

The scope of the study is identified after and during the study. The study of working capital is based on tools like Trend Analysis, Ratio Analysis, working capital leverage, operating cycle etc. Further the study is based on last 6 years Annual Reports of DIAMOND ENGINEERING CHENNAI PVT. LTD. And even factors like competitor's analysis, industry analysis were not considered while preparing this project.

3.3 LIMITATIONS OF THE STUDY

Following limitations were encountered while preparing this project:

1) Limited data: -

This project has completed with annual reports; it just constitutes one part of data collection i.e. secondary. There were limitations for primary data collection because of confidentiality.

2) Limited period: -

This project is based on Six-year annual reports. Conclusions and recommendations are based on such limited data. The trend of last five year may or may not reflect the real working capital position of the company

3) Limited area: -

Also, it was difficult to collect the data regarding the competitors and their financial information. Industry figures were also difficult to get.

3.4 RESEARCH DESIGN

- The study on working capital management is been carried out at diamond engineering Chennai Pvt ltd.
- In analytical research, the researcher has to use facts or information already available, and analyze these to make a critical evaluation of the material.
- The project is based on secondary information collected through Six years annual report of the company, supported by various books and internet sites.
- The data collection was aimed at study of working capital management of the company

3.5 SOURCES OF DATA COLLECTION

- **Primary Data Collection method**

The primary data collected through personal interview of head of account department, and other concerned staff member of finance department. But primary data collection had limitations such as matter confidential information

- **Secondary data collection method**

Thus, project is based on secondary information collected through six years annual report of the company, supported by various books and internet sites. The data collection was aimed at study of working capital management of the company.

3.6 TOOLS OF ANALYSIS

There are various tools were used in this analysis of working capital management, they are as follows

- Changes in working capital was measured for every accounting year for six years.
- Ratio analysis was performed with given firms' financial statements.
- Trend analysis was recorded for certain components in financial statements.
- Hypothesis was tested using Pearson's coefficient of correlation.

CHAPTER-4

DATA ANALYSIS AND INTERPRETATION

WORKING CAPITAL ANALYSIS

Working capital management is concerned with the problems which arise in attempting to manage the current assets, the current liabilities and the inter relationship that exist between them. The term current assets

refer to those assets which in ordinary course of business can be, or, will be, turned in to cash within one year without undergoing a diminution in value and without disrupting the operation of the firm. The major current assets are cash, marketable securities, account receivable and inventory. Current liabilities were those liabilities which intended at their inception to be paid in ordinary course of business, within a year, out of the current assets or earnings of the concern. The basic current liabilities are account payable, bill payable, bank over-draft, and outstanding expenses.

The goal of working capital management is to manage the firm s current assets and current liabilities in such way that the satisfactory level of working capital is mentioned. The current should be large enough to cover its current liabilities in order to ensure a reasonable margin of the safety.

The consideration of the level investment in current assets should avoid two danger points excessive and inadequate investment in current assets. Investment in current assets should be just adequate, not more or less, to the need of the business firms. Excessive investment in current assets should be avoided because it impairs the firm s profitability, as idle investment earns nothing. On the other hand, inadequate amount of working capital can be threatened for the solvency of the firms because of its inability to meet its current obligation. It should be realized that the working capital need of the firms may be fluctuating with changing business activity. This may cause excess or shortage of working capital frequently. The management should be prompt to initiate an action and correct imbalance.

4.1 CHANGES IN WORKING CAPITAL

4.1.1 SCHEDULE OF CHANGES IN WORKING CAPITAL

TABLE 4.1

PARTICULARS	2013 AMOUNT Rs.	2014 AMOUNT Rs.	INCREASE AMOUNT Rs.	DECREASE AMOUNT Rs.
ASSTES				
CURRENT ASSETS				
Current investments	0	0	0	0
Inventories	3230394235	2980283143	0	250111092
Trade receivables	677061947	332126198	0	344935749
cash and cash equivalents	781877	7055799	6273922	0
Short term loans & advances	377550155	199069581	0	178480574
TOTAL CURRENT ASSETS	4285788214	3518534721	6273922	773527415
CURRENT LIABILITIES				
Short term borrowings	2122284856	2003381597	0	118903259
Trade payables	1444689599	1173966861	0	270722738
Short term provisions	6271873	4737810	0	1534063
Other current liabilities	681383320	701423519	20040199	0
TOTAL CURRENT LIABILITIES	4254629648	3883509787	20040199	391160060
CHANGES IN WORKING CAPITAL	31158566	-364975066	-13766277	382367355

INTERPRETATION:

Working capital is required to finance day to day operations of the firm. There should be an optimum level of working capital. From the above calculations it is clearly found that the company's working capital is not at the best level. The current assets are lesser than the current liabilities.

4.1.2

SCHEDULE OF CHANGES IN WORKING CAPITAL

TABLE 4.2

PARTICULARS	2014 AMOUNT Rs.	2015 AMOUNT Rs.	INCREASE AMOUNT Rs.	DECREASE AMOUNT Rs.
ASSETS				
CURRENT ASSETS				
Current investments	0	0	0	0
Inventories	2980283143	2320393013		659890130
Trade receivables	332126198	361514745	29388547	0
Cash and Cash equivalents	7055799	1339061	0	5716738
Short term loans and advances	199069581	147649098	0	51420483
TOTAL CURRENT ASSETS	3518534721	2830895917	29388547	717027351
CURRENT LIABILITIES				
Short term borrowings	2003381597	501988472	0	1501393125
Trade payables	1074700408	1173966861	99266453	0
Short term provisions	1600094	23456193	21856099	0
Other current liabilities	701423519	965909080	264485561	0
TOTAL CURRENT LIABILITIES	3781105618	2665320606	385608113	1501393125
CHANGES IN WORKING CAPITAL	-262570897	165575311	-356219566	-784365774

INTERPRETATION:

In the above the working capital is negative due to more fluctuations inventory and receivables. The company has borrowed more short-term borrowings from outsiders. The creditors have increased at a medium rate that causes company for many bad debts. More care should be taken to avoid fluctuations in the later years.

4.1.3

SCHEDULE OF CHANGES IN WORKING CAPITAL

TABLE 4.3

PARTICULARS	2015 AMOUNT Rs.	2016 AMOUNT Rs.	INCREASE AMOUNT Rs.	DECREASE AMOUNT Rs
ASSETS				
CURRENT ASSETS				
Current investments	0	0	0	0
Inventories	2320993013	1809936674	0	511056339
Trade receivables	361514745	773160677	411645932	0
Cash and Cash equivalents	1339061	2319889	980828	0
Short term Loans and advances	147649098	232272092	84622994	0
TOTAL CURRENT ASSETS	2831495917	2817689332	497249754	511056339
CURRENT LIABILITIES				
Short term borrowings	501988472	621760559	119772087	0
Trade payables	1074700408	1353996461	279296053	0
Short term provisions	23456193	3411975	0	20044218
Other current liabilities	965909080	794608433	0	171300647
TOTAL CURRENT LIABILITIES	2566054153	2773777428	399068140	191344865
CHANGES IN WORKING CAPITAL	265441764	43911904	98181614	319711474

INTERPRETATION:

The company has an increased level in the year. This is due to the control on debtors. And increase in the inventory. Moreover, there is a major fluctuation in creditors of the company. the company has to take a special attention over this varying working capital.

4.1.4**SCHEDULE OF CHANGES IN WORKING CAPITAL****TABLE 4.4**

PARTICULARS	2016 AMOUNT Rs.	2017 AMOUNT Rs.	INCREASE AMOUNT Rs.	DECREASE AMOUNT Rs.
ASSETS				
CURRENT ASSETS				
Current investments	0	0	0	0
Inventories	1809936674	1909881487	99944813	0
Trade receivables	773160677	446036837	0	327123840
Cash and Cash equivalents	2319889	4698750	2378861	0
Short term Loans and advances	232272092	146629520	0	85642572
TOTAL CURRENT ASSETS	2817689332	2507246594	102323674	412766412
CURRENT LIABILITIES				
Short term borrowings	621760559	727028669	1348789228	0
Trade payables	1353996461	1121655365	0	232341096
Short term provisions	3411975	7382996	3971021	0
Other current liabilities	794608433	554816669	0	239791764
TOTAL CURRENT LIABILITIES	2773777428	2410883699	1352760249	472132860
CHANGES IN WORKING CAPITAL	43911904	96362895	-1250436575	-59366448

INTERPRETATION:

It can be clearly inferred that the company has a fluctuating working capital. This means that the management is not making a good attention to the flow of funds. The company's working capital for the year 2017 is again decreased at a very low rate this is due to more Bad debts. Although the company has improved to an extent by decreasing its liabilities.

4.1.5

SCHEDULE OF CHANGES IN WORKING CAPITAL

TABLE 4.5

PARTICULARS	2017 AMOUNT Rs.	2018 AMOUNT Rs.	INCREASE AMOUNT Rs.	DECREASE AMOUNT Rs.
ASSETS				
CURRENT ASSETS				
Current investments	0	0	0	0
Inventories	1909881487	1794058349	0	115823138
Trade receivables	446036837	340679258	0	105357579
Cash and Cash equivalents	4698750	13700327	9001577	0
Short term Loans and advances	128909835	60064746	0	68845089
TOTAL CURRENT ASSETS	2489526909	2208502680	9001577	290025806
CURRENT LIABILITIES				
Short term borrowings	765390661	1832494235	1067103574	0
Trade payables	1129038360	1233979251	104940891	0
Other current liabilities	1262978331	540838435	0	722139896
TOTAL CURRENT LIABILITIES	3157407352	3607311921	1172044465	722139896
CHANGES IN WORKING CAPITAL	-667880443	-1398809241	-1163042888	-432114090

INTERPRETATION:

from the above table it is clearly inferred that the company has never had optimum balance between current assets and current liabilities. There is constant increase in liabilities and tremendous decrease in current assets. The company should look forward to make a good balance between assets and liabilities

4.1.6

SCHEDULE OF CHANGES IN WORKING CAPITAL

TABLE 4.6

PARTICULARS	2018 AMOUNT Rs.	2019 AMOUNT Rs.	INCREASE AMOUNT Rs.	DECREASE AMOUNT Rs.
ASSETS				
CURRENT ASSETS				
Current investments	0	0		
Inventories	1794058349	1690485743	0	103572606
Trade receivables	340679258	306087258	0	34592000
cash and cash equivalents	13700327	11000327	0	2700000
Short term loans & advances	60064746	195318658	135253912	0
TOTAL CURRENT ASSETS	2208502680	2202891986	135253912	140864606
CURRENT LIABILITIES				
Short term borrowings	1832494235	1902596300	70102065	0
Trade payables	1233979251	1343979251	110000000	0
Other current liabilities	540838435	500838435	0	40000000
TOTAL CURRENT LIABILITIES	3607311921	3747413986	180102065	40000000
CHANGES IN WORKING CAPITAL	-1398809241	-1544522000	44848153	100864606

INTERPRETATION:

The above calculations infer that there is a bit of constant in the decrease of current assets over the current liabilities over the years, there was no increase in current assets compared to current liabilities. The company should more concentrate on developing their assets to have balanced and sustainable figures to meet the good working capital.

4.2 RATIO ANALYSIS

5.2 MEANING OF RATIO:

A ratio is a mathematical relationship between two items expressed in a quantitative form. Ratio can be defined as “Relationship expressed in quantitative terms between figures which have cause and effect relationship which are connected with each other in some manner or the other.

DEFINITION OF RATIO:

According to Accountant's Hand Book by Wixon, Kell and Bedford, a Ratio” Is an expression of the quantitative relationship between two numbers.

LIQUIDITY RATIOS:

It measures the ability of a company to meet its current obligations, and indicate the short-term financial stability of the company. The parties interested in the liquid ratio would be employees, bankers and short-term creditors.

CURRENT RATIO:

Current Ratio may be defined as the ratio of Current Assets to Current Liabilities. It is also known as Working Capital Ratio 2:1 ratio. Current Ratio shows the relationship between total current assets and total current liabilities expressed as a formula.

$$\text{CURRENT RATIO} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

QUICK RATIO:

A measure of company's liquidity and ability to meet its obligations, Quick ratio, often referred to as acid-test ratio, is obtained by subtracting inventories from current assets

and then dividing by current liabilities. Quick ratio is viewed as a sign of company's financial strength or weakness (higher number means stronger, lower number means weaker).

$$\text{QUICK RATIO} = \frac{\text{Liquid/Quick assets}}{\text{Current Liabilities}}$$

ABSOLUTE LIQUIDITY RATIO:

This is also known as super Quick Ratio (or) Cash Ratio. This ratio considers only absolute liquidity available with the firm. Absolute Liquid assets include cash in hand, cash at bank marketable securities. A standard of 0.5: 1 absolute liquidity ratio is considered an acceptable norm. It is calculated as follows:

$$\text{ABSOLUTE LIQUIDITY RATIO} = \frac{\text{Cash \& Bank Balances}}{\text{Current Liabilities}}$$

INVENTORY TURNOVER RATIO:

Inventory Turnover Ratio also known as stock turnover ratio in the traditional language; usually establishes relationship between the cost of goods sold during a given period and the average amount of Inventory outstanding during that period. Inventory Turnover Ratio can be calculated by of the following formula:

$$\text{INVENTORY TURNOVER RATIO} = \frac{\text{Net Sales}}{\text{Average Inventory}}$$

DEBTORS TURNOVER RATIO:

Receivables (or) Debtors normally include both debtors and Bill Receivable and represent the uncollected portion of Credit sales receivables constitute an important

component of Current Assets and therefore the quality of receivables to a great extent determines the liquidity of a firm. This Ratio can be calculated as follows:

$$\text{DEBTORS TURNOVER RATIO} = \frac{\text{Credit Sales}}{\text{Debtor}}$$

FIXED ASSET TURNOVER RATIO:

This ratio indicates the extent to which the investment in fixed assets contributes towards sales. If compared with a previous period, it indicates whether the investment in fixed assets has been judicious or not, the Ratio is calculated as follows:

$$\text{FIXED ASSET TURNOVER RATIO} = \frac{\text{Sales}}{\text{Net Fixed Assets}}$$

WORKING CAPITAL TURNOVER RATIO:

A measurement comparing the depletion of working capital to the generation of sales over a given period, this provides some useful information as to how effectively a company is using its working capital to generate sales.

$$\text{WORKING CAPITAL TURNOVER RATIO} = \frac{\text{Net Sales}}{\text{Net Working Capital}}$$

CASH TO CURRENT ASSET RATIO:

The cash asset ratio is similar to the current ratio, except that the current ratio includes current assets such as inventories in the numerator. Some analysts believe that including current assets makes it difficult to convert them into usable funds for debt obligations. The cash asset ratio is a much more accurate measure of a firm's liquidity

$$\text{Cash}$$

CASH TO CURRENT ASSET RATIO=_____

Current Assets

CURRENT ASSET TURNOVER RATIO:

The ratio is calculated to ascertain the efficiency of use of current assets of the concerns. With an increase in sales, current assets are expected to increase. However, an increase in the ratio shows that current assets turned over faster resulting in higher sales for a given investment in current assets. Higher ratio is generally an index of better efficiency and profitability of the concern. This ratio gives a general impression about the adequacy of working capital in reaction to sales.

Sales

CURRENT ASSET TURNOVER RATIO=_____

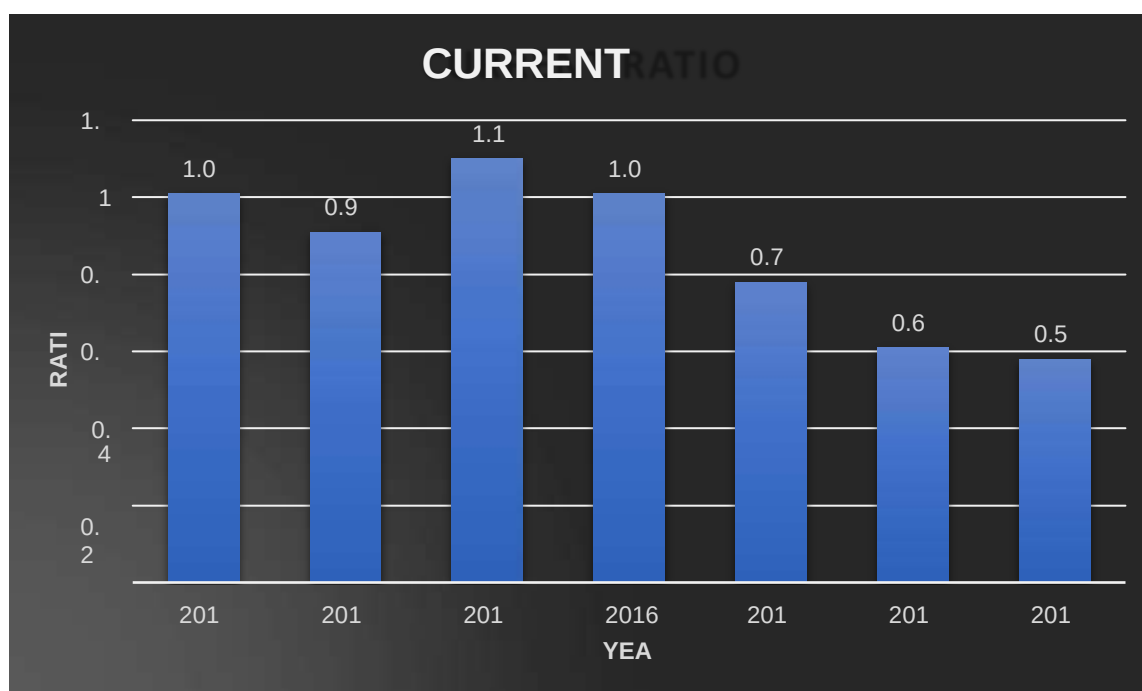
Current Assets

4.2.1 CURRENT RATIO

TABLE 4.7

YEAR	CURRENT ASSET	CURRENT LIABILITIES	CURRENT RATIO
2013	4285788214	4254629648	1.01
2014	3518534721	3883509787	0.91
2015	2831495717	2566054153	1.1
2016	2817689332	2773777428	1.01
2017	2489526909	3157407352	0.78
2018	2208500680	3607311921	0.61
2019	2202892456	3747413986	0.58

CHART 4.1



INTERPRETATION:

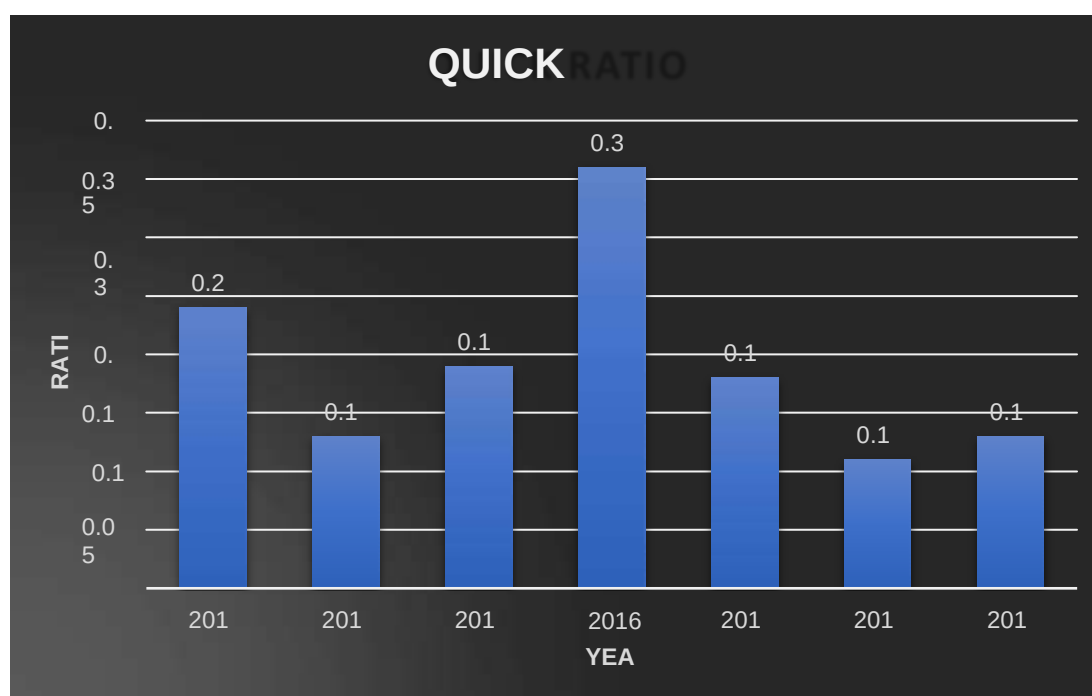
The Current Ratio measures the ability of the firm to meet its Current Liabilities. The standard norms of Current Ratio are 2:1. From the above table it can be inferred that the Current Ratio of the company shows higher in the year 2013 & 2016 (i.e.) 1.01. The company is having a good current ratio as the liabilities of the company has been in declining position and the sundry debtors for the current year has been reduced

4.2.2 QUICK RATIO

TABLE 4.8

YEAR	QUICK RATIO	CURRENT LIABILITIES	QUICK RATIO
2013	1055393979	4254629648	0.24
2014	538251578	3883509787	0.13
2015	510502704	2566054153	0.19
2016	1007752658	2773777428	0.36
2017	579645422	3157407352	0.18
2018	414442331	3607311921	0.11
2019	512406513	3747413986	0.13

CHART 4.2



INTERPRETATION:

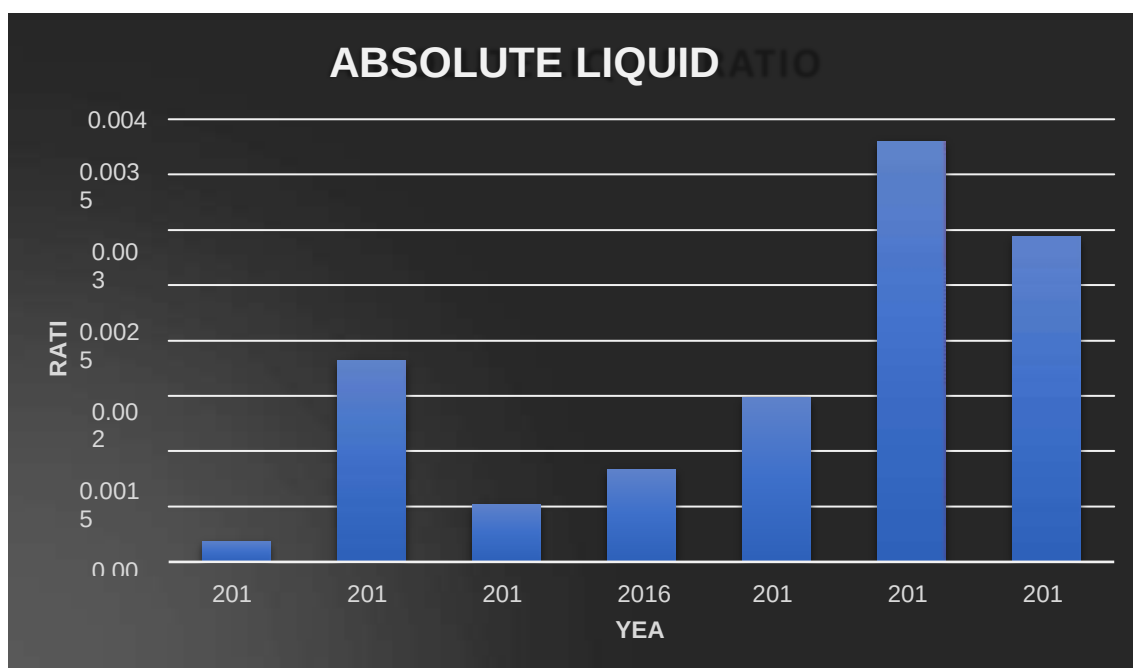
The Quick Ratio (or) Liquidity ratio gives a measure of Liquidity the expected industry standard is 1:1. From the above table it can be inferred that the Quick Ratio of Diamond engineering Chennai private limited is fluctuating in trend from the year 2013 to 2019. The ratio has been decreased in the current year due to higher current liabilities.

4.2.3 ABSOLUTE LIQUID RATIO

TABLE 4.9

YEAR	CASH AND BANK BALANCE	CURRENT LIABILITIES	ABSOLUTE LIQUID RATIO
2013	781877	4254629648	0.000183771
2014	7055799	3883509787	0.001816861
2015	1339061	2566054153	0.000521837
2016	2319889	2773777428	0.000836365
2017	4698750	3157407352	0.001488167
2018	13700327	3607311921	0.003797932
2019	11000327	3741713986	0.002939917

CHART 4.3



INTERPRETATION:

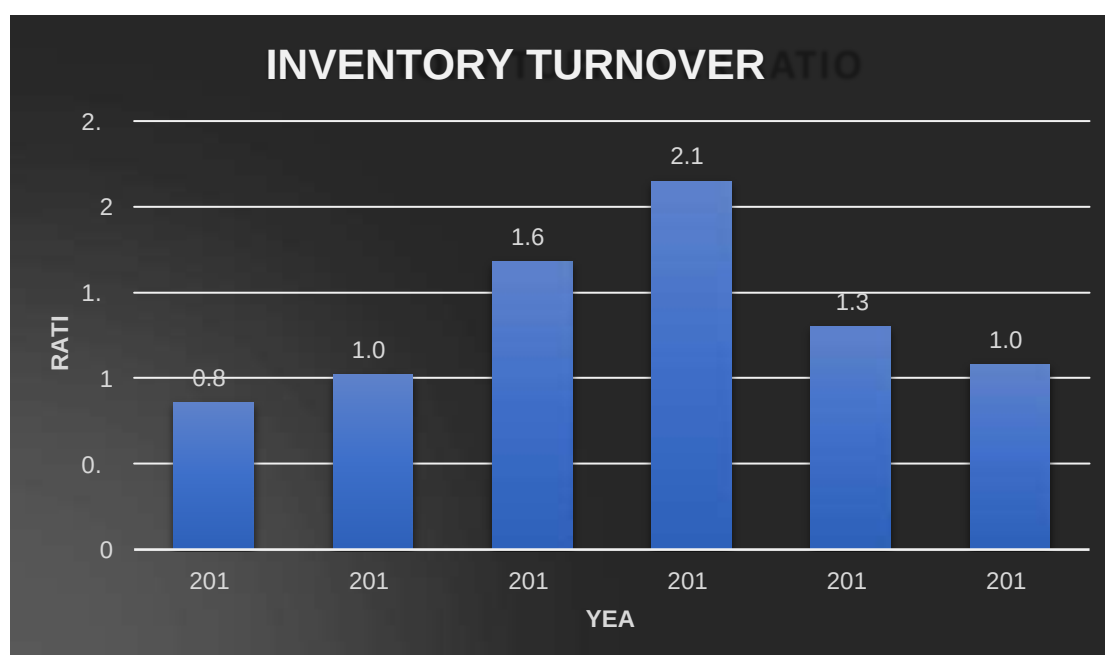
From the above table it can be inferred that the company has a high Absolute Liquidity Ratio in the year 2018 (i.e.) 0.003. The ratios are being in a fluctuating position which means that the company has not good cash utilization. The ideal cash position is 0.5:1. So the company's cash position ratio is satisfactory, because there is a increase in the cash each year.

4.2.4 INVENTORY TURNOVER RATIO

TABLE 4.10

YEAR	NET SALES	AVERAGE INVENTORY	INVENTORY TURNOVER RATIO
2013	2686051972	3105338689	0.86
2014	2708178178	2650338078	1.02
2015	1971583791	1169546194	1.68
2016	4005746666	1859909081	2.15
2017	2555214670	1851969918	1.3
2018	1885320016	1742272146	1.08

CHART 4.4



INTERPRETATION:

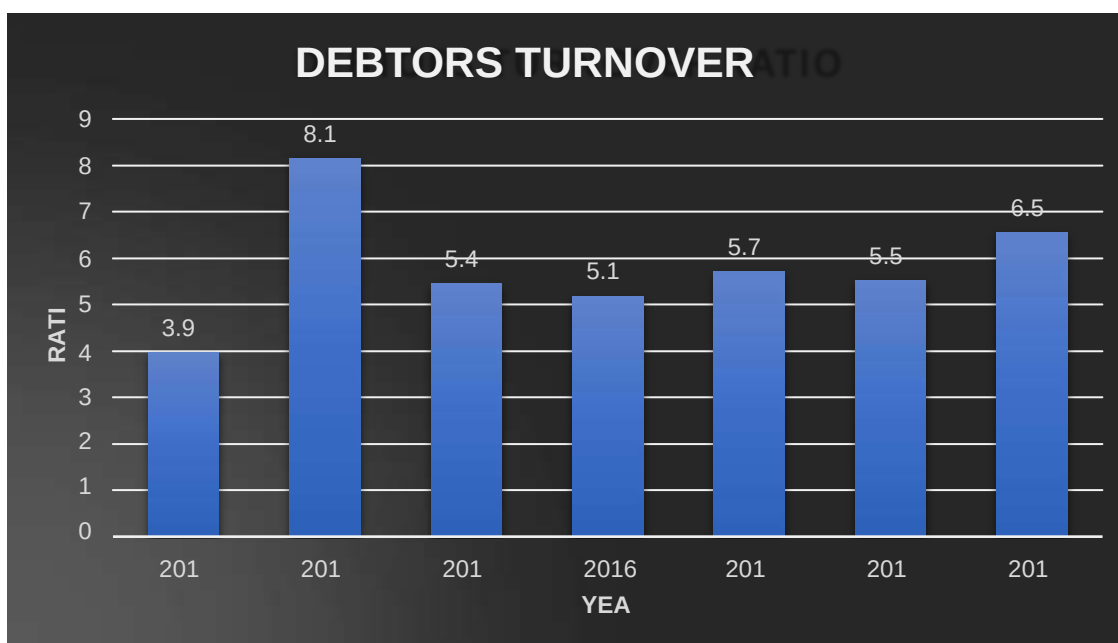
From the above table it can be inferred that the company's Inventory increase in year 2014 and get decreased in the next following years due to more fluctuations in the sales.

4.2.5 DEBTORS TURNOVER RATIO

TABLE 4.11

YEAR	NET SALES	DEBTORS	DEBTORS TURNOVER RATIO
2013	2686051972	677061947	3.96
2014	2708178178	332126198	8.15
2015	1971583791	361514745	5.45
2016	4005746666	773160677	5.18
2017	2555214670	446036837	5.72
2018	1877533201	340679258	5.51
2019	2005320016	306087528	6.55

CHART 4.5



INTERPRETATION:

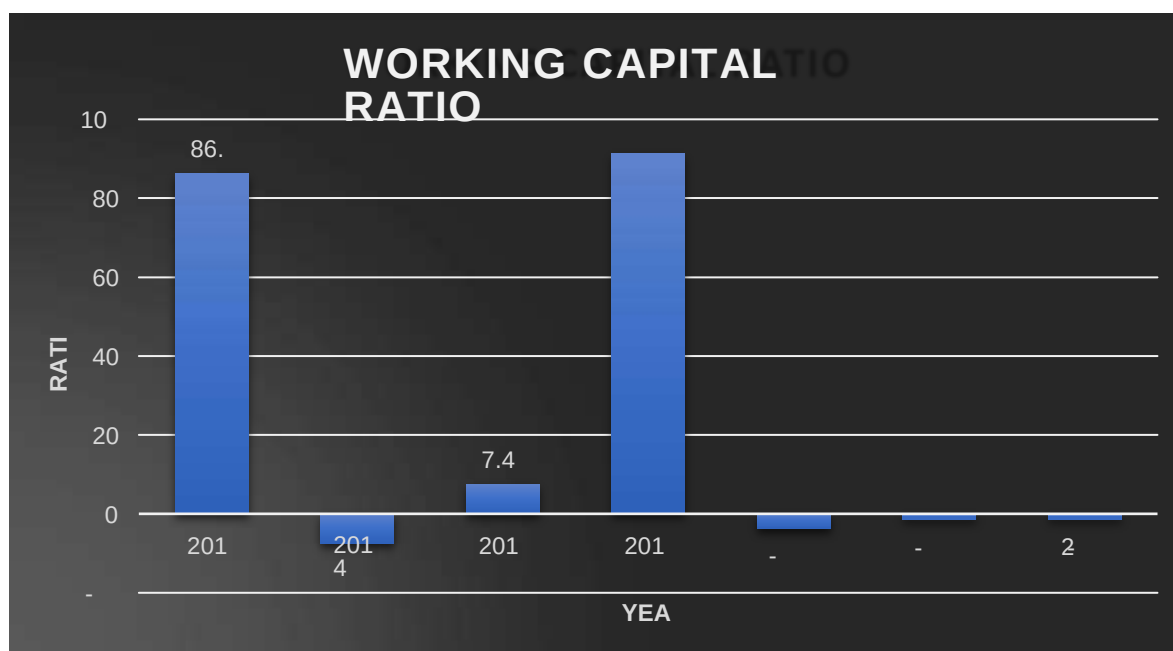
From the above table and chart, it is clearly inferred that the debtor's turnover ratio of the company was high in the year 2014, and was almost nearly constant in the remaining years. There were no massive changes in debtor's turnover ratio.

4.2.6 WORKING CAPITAL TURNOVER RATIO

TABLE 4.12

YEAR	SALES	NET WORKING CAPITAL	WORKING CAPITAL RATIO
2013	2686051972	31158566	86.2
2014	2708178178	-364975066	-7.42
2015	1971583791	265441764	7.42
2016	4005746666	43911904	91.22
2017	2555214670	-667880443	-3.82
2018	1877533201	-1398809241	-1.32
2019	2005320016	-1544521530	-1.3

CHART 4.6



INTERPRETATION:

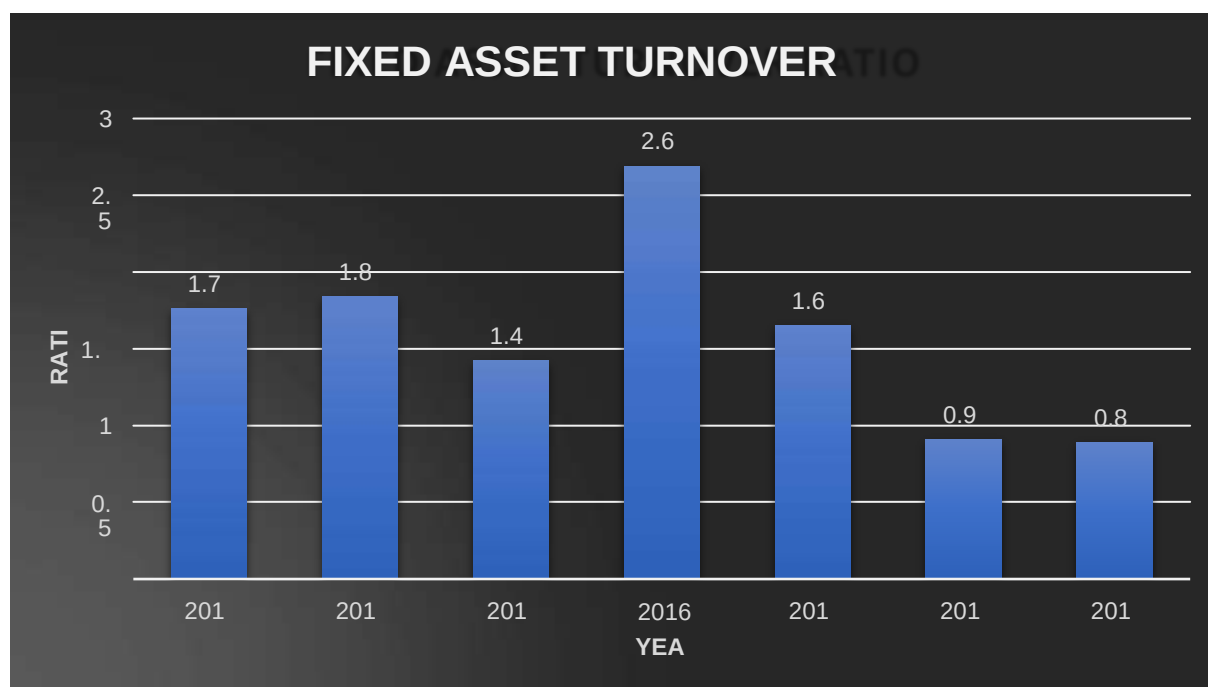
From the above table it can be inferred that the working capital turnover ratio of the respective company. The ratio shows negative figures for four years, but company got a big break in 2016. The chart clearly shows the massive fluctuations in liabilities which affects the company in day to day operations. The company must concentrate to increase their assets to maintain a balance.

4.2.7 FIXED ASSET TURNOVER RATIO

TABLE 4.13

YEAR	SALES	NET FIXED ASSETS	FIXED ASSET TURNOVER RATIO
2013	2686051972	1525885367	1.76
2014	2708178178	1470483423	1.84
2015	1971583791	1380013534	1.42
2016	4005746666	1484944320	2.69
2017	2555214670	1542745961	1.65
2018	1877533201	2067866993	0.91
2019	2005320016	2257911995	0.89

CHART 4.7



INTERPRETATION:

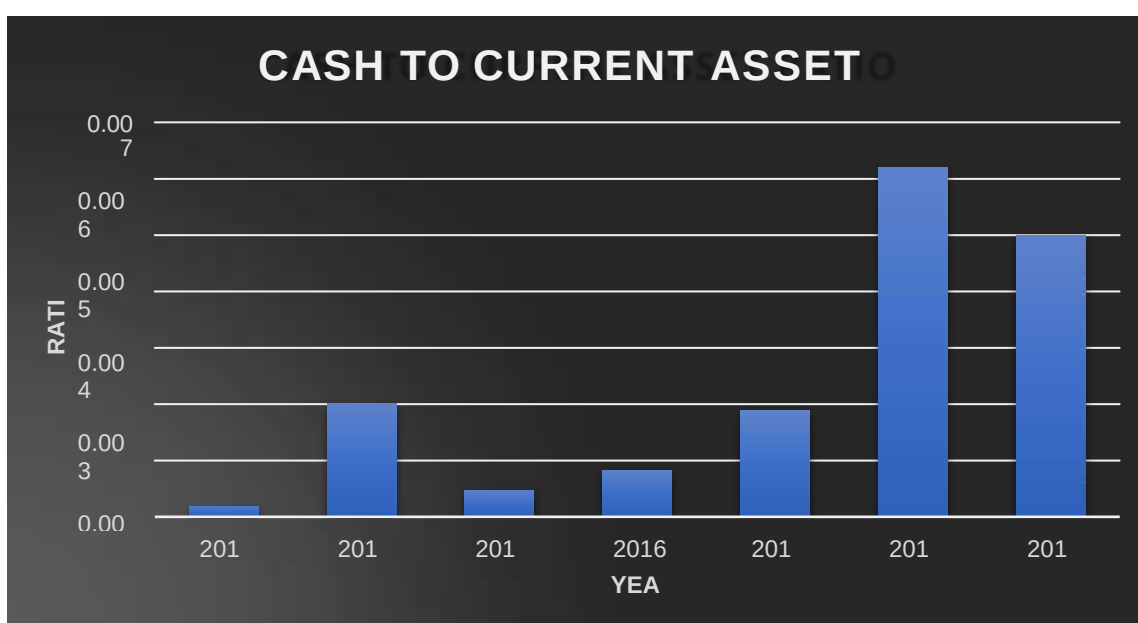
The above table and chart show the company has maintained a satisfactory fixed asset, despite of fluctuations in liabilities, the company had a good turnover in fixed assets in 2016, but from the chart it is inferred that there is a slight decrease in fixed assets over last three years. But still the firm has managed a satisfactory ratio regarding fixed assets.

4.2.8 CASH TO CURRENT ASSET RATIO

TABLE 4.14

YEAR	CASH	CURRENT ASSET	CASH TO CURRENT ASSET RATIO
2013	781877	4285788214	0.000182435
2014	7055799	3518534721	0.002005323
2015	1339061	2831495717	0.000472916
2016	2319889	2817689332	0.00082333
2017	4698750	2489526909	0.001887407
2018	13700327	2208500680	0.006203452
2019	11000327	2202892456	0.004993583

CHART 4.8



INTERPRETATION:

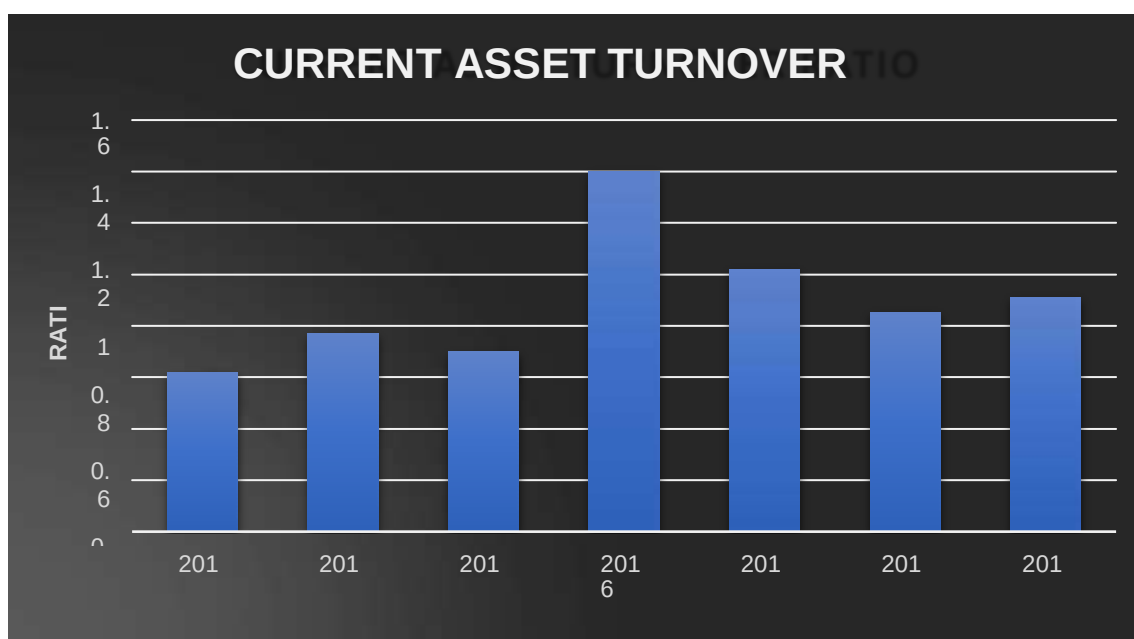
The firm might not have a proper cash to current asset ratio in the first few years, but the company has managed to increase their cash reserves in past two years, as clearly shown in the chart. Although the firm was best in 2018 with higher cash to current asset ratio.

4.2.9 CURRENT ASSET TURNOVER RATIO

TABLE 4.15

YEAR	SALES	CURRENT ASSETS	CURRENT ASSET TURNOVER RATIO
2013	2686051972	4285788214	0.62
2014	2708178178	3518534721	0.77
2015	1971583791	2831495717	0.7
2016	4005746666	2817689332	1.4
2017	2555214670	2489526909	1.02
2018	1877533201	2208500680	0.85
2019	2005320016	2202892456	0.91

CHART 4.9



INTERPRETATION:

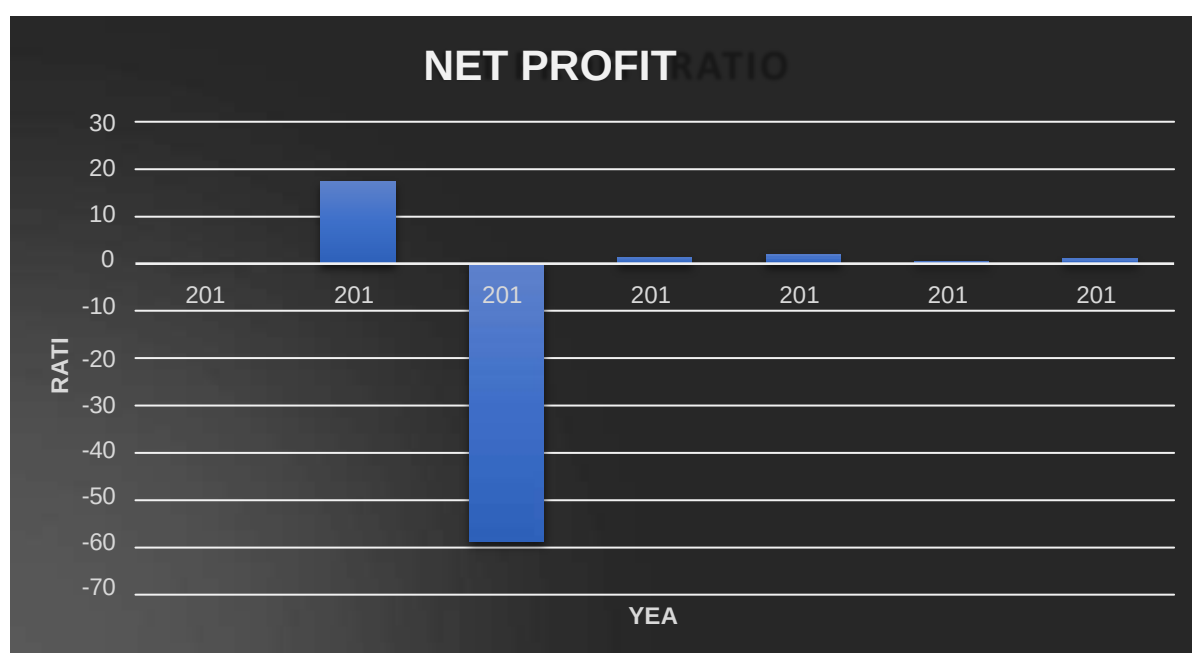
The above chart shows the current asset turnover ratio of the firm. Although it is clearly inferred that firm had a satisfactory level of current assets, the firm was best in current asset during 2016. But when compared to current liabilities the figures of current assets was quite less, which the company has work on in the upcoming years .

4.2.10 NET PROFIT RATIO

TABLE 4.16

YEAR	NET PROFIT	NET SALES	*100	NET PROFIT RATIO
2013	3458418	2686051972	100	0.12875
2014	469206636	2708178178	100	17.3255
2015	-1159788980	1971583791	100	-58.825
2016	50999635	4005746666	100	1.27316
2017	47638369	2555214670	100	1.86436
2018	10086048	1877533201	100	0.5372
2019	20075089	2005320016	100	1.00109

CHART 4.10



INTERPRETATION:

From the above chart and table, we can say the company faced a tremendous loss in the year 2015, the company managed to have profit figures in the very next year of 2016, there have been a slowdown to some extent. The firm should cope up their profits in order to survive the market

TREND ANALYSIS

5.3 MEANING TREND ANALYSIS:

Trend analysis is one of the important tools of analysing the financial data. It computes the percentage changes for different variables over a long period and then makes a comparative study of them. The trend percentage helps the analyst to study the changes that have occurred during the period. Such an analysis indicates the progress by showing ups and downs in its activities

Financial Trend Analysis is the process of analysing financial statements of a company for any continuing relationship. Generally, an analysis is made to find out what direction a concern is going, how rapidly, and whether there are enough resources to complete proposed projects.

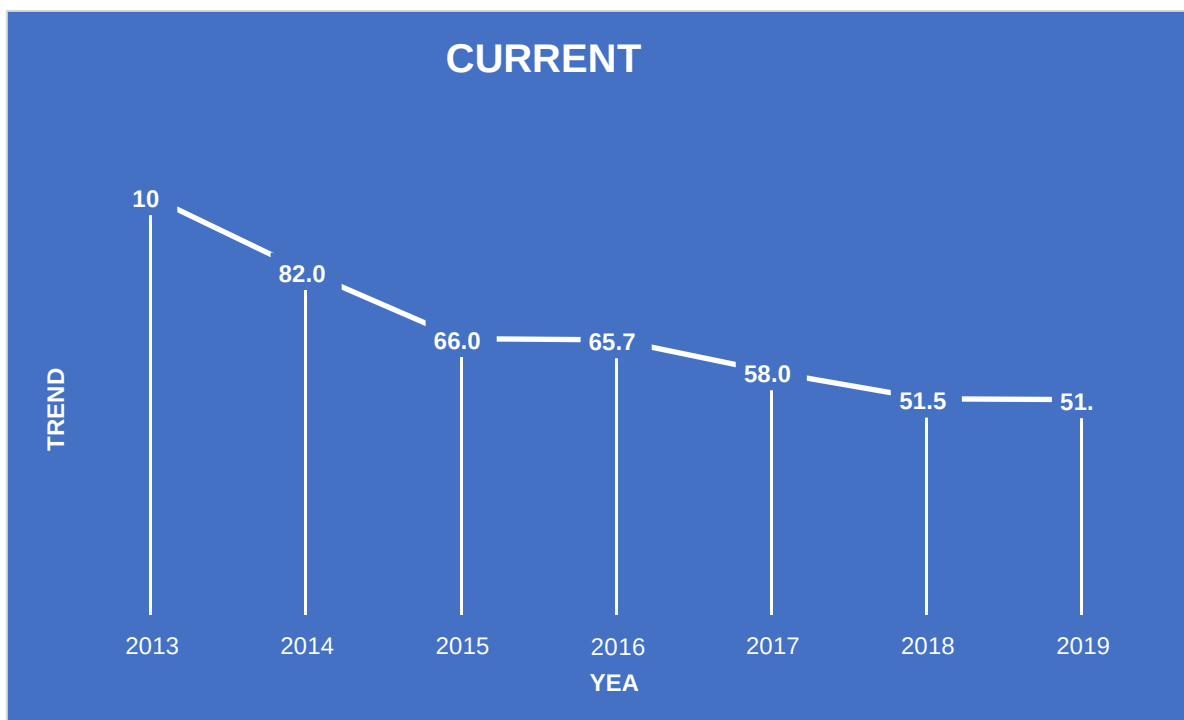
An aspect of technical analysis that tries to predict the future movement of a stock based on past data. Trend analysis is based on the idea that what has happened in the past gives traders an idea of what will happen in the future.

4.3.1 TREND ANALYSIS ON CURRENT ASSETS

TABLE 4.1

YEAR	CURRENT ASSET	BASE YEAR C.A	TREND PERCENT %
2013	4285788214	4285788214	100
2014	3518534721	4285788214	82.09
2015	2831495717	4285788214	66.06
2016	2817689332	4285788214	65.74
2017	2489526909	4285788214	58.08
2018	2208500680	4285788214	51.53
2019	2202892456	4285788214	51.4

CHART 4.11

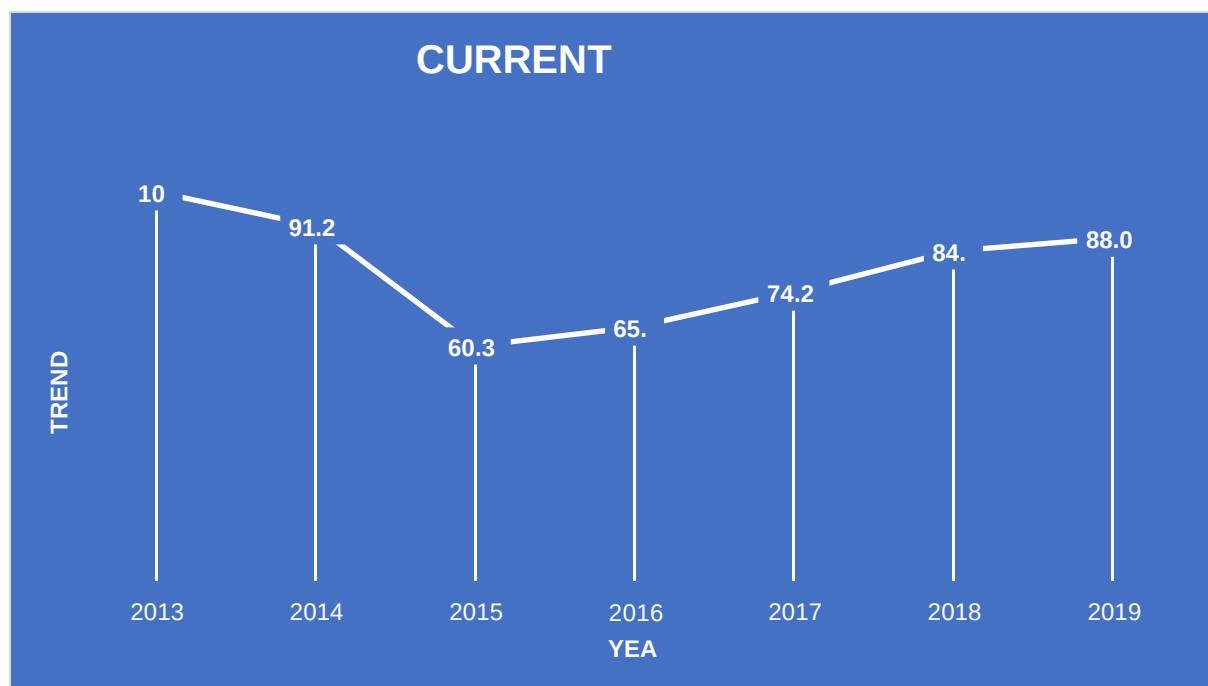


4.3.2 TREND ANALYSIS ON CURRENT LIABILITIES

TABLE 4.18

YEAR	CURRENT LIABILITIES	BASE YEAR C.L	TREND PERCENT %
2013	4254629648	4254629648	100
2014	3883509787	4254629648	91.27
2015	2566054153	4254629648	60.31
2016	2773777428	4254629648	65.2
2017	3157407352	4254629648	74.21
2018	3607311921	4254629648	84.8
2019	3747413986	4254629648	88.08

CHART 4.12

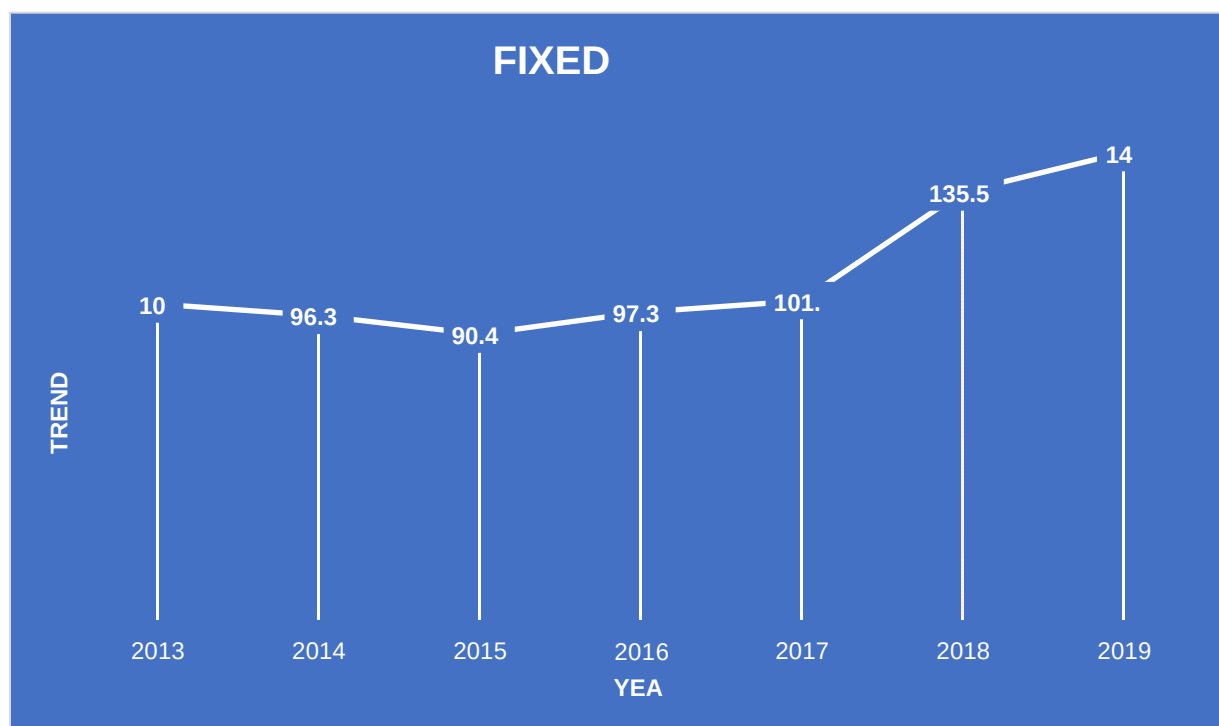


4.3.3 TREND ANALYSIS ON FIXED ASSETS

TABLE 4.19

YEAR	FIXED ASSTES	BASE YEAR F.A	TREND PERCENTAGE
2013	1525885367	1525885367	100
2014	1470483423	1525885367	96.37
2015	1380013534	1525885367	90.44
2016	1484944320	1525885367	97.31
2017	1542745961	1525885367	101.1
2018	2067866993	1525885367	135.52
2019	2257911995	1525885367	148

CHART 4.13

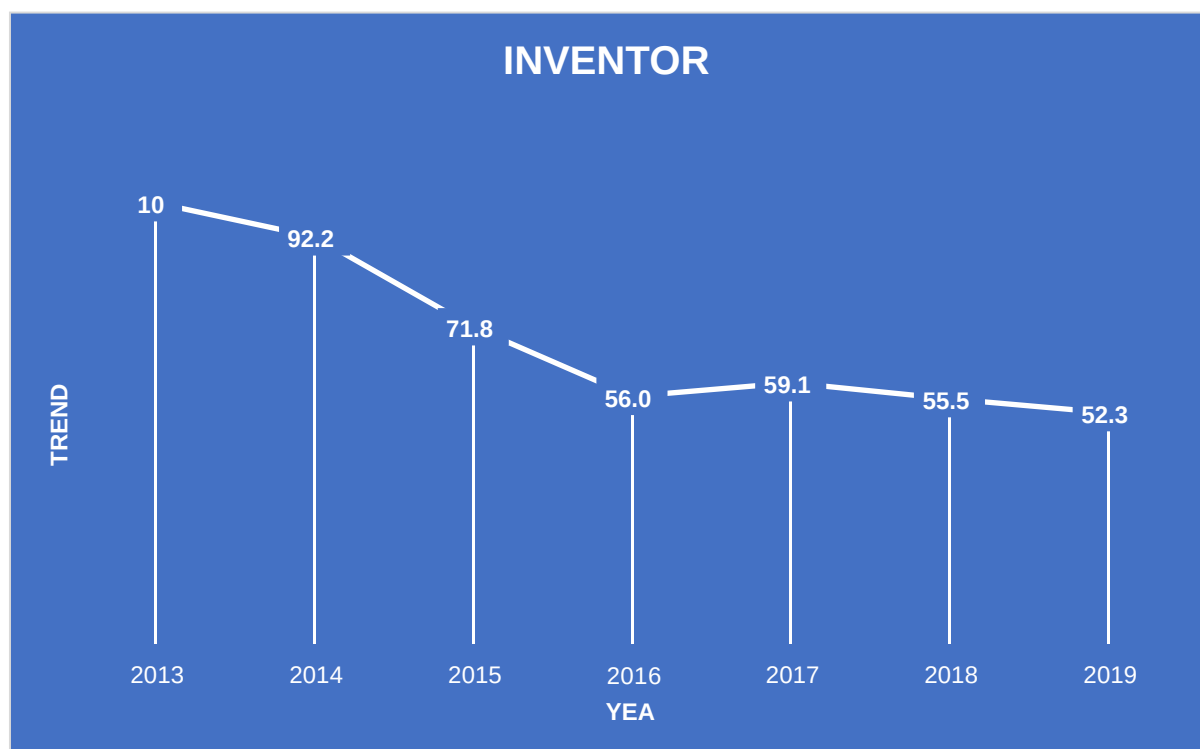


4.3.4 TREND ANALYSIS ON INVENTORY

TABLE 4.20

YEAR	INVENTORY	BASE YEAR INVENTORY	TREND PERCENTAGE
2013	3230394235	3230394235	100
2014	2980283143	3230394235	92.25
2015	2320993013	3230394235	71.84
2016	1809936674	3230394235	56.02
2017	1909881487	3230394235	59.12
2018	1794058349	3230394235	55.53
2019	1690485743	3230394235	52.33

CHART 4.14



4.4 HYPOTHESIS TESTING

HYPOTHESIS 1: THE CURRENT LIABILITIES ARE INCREASING THAN THE CURRENT ASSETS YEAR BY YEAR

The following table contains of the amount of current liabilities and current assets from the period 2013-2014 to 2018-2019

TABLE 4.21

YEAR	CURRENT LIABILITIES	CURRENT ASSETS	XY	X ²	Y ²
2013-2014	388	351	136188	150544	123201
2014-2015	256	283	72448	65536	80089
2015-2016	277	281	77837	76729	78961
2016-2017	315	249	78435	99225	62001
2017-2018	360	220	79200	129600	48400
2018-2019	374	220	82280	139876	48400
	Σx=1970	Σy=1604	Σxy=526388	Σx²=661510	Σy²=441052

PEARSON'S COEFFICIENT CORRELATION

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n\sum x^2 - (\sum x)^2][n\sum y^2 - (\sum y)^2]}}$$

$$r = 0.02$$

As the hypothesis is positive which ensures that the current liabilities of firm are increased at a speed than current assets. So, the firm should have an eye on this one.

**HYPOTHESIS 2: THE FIRM IS NOT PROPERLY MANAGING THE TRADE
RECIEVABLES**

The following tables shows the average collection period of trade receivables.

TABLE 4.22

YEAR	SALES	AVERAGE TRADE RECEIVABLES	RATIO	AVERAGE COLLECTION PERIOD (Days)
2013-2014	2708175178	504594086	5.4	68.1
2014-2015	1971583791	346820471.5	5.7	64.03
2015-2016	4005746666	567337711	7.06	51.7
2016-2017	2555214670	609598757	4.2	87
2017-2018	1877533201	393358047	4.7	76.5
2018-2019	2005320016	323383393	6.2	58.8

Now, the following tables contains the average collection period of trade receivables and average trade receivables for period 2013-2014 to 2018-2019

TABLE 4.23

YEAR	AVERAGE COLLECTION PERIOD (Days)	TRADE RECIEVABLES (in crores)	XY	X²	Y²
2013-2014	68.1	33.2	2261	4683	1102
2014-2015	64.03	36.1	2311.5	4100	1303
2015-2016	51.7	77.3	3996.4	2673	5975
2016-2017	87	44.6	3880.2	7569	1989
2017-2018	76.5	34.1	2608.6	5852	1163
2018-2019	58.8	30.6	1799.3	3457	936
	Σx=406.13	Σy=1604	Σxy=16855	Σx²=28289	Σy²=12468

PEARSON'S COEFFIECIENT CORRELATION

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n\sum x^2 - (\sum x)^2][n\sum y^2 - (\sum y)^2]}}$$

r= -0.42

As the hypothesis is negative. So, the hypothesis is rejected. As the firm is able to manage the trade receivables.

CHAPTER-5

FINDINGS & SUGESSTIONS

5.1 FINDINGS

- In the year of 2013, and 2016 shows increase in working capital. This indicates that the company has a ability of payment of short-term Liability
- The fixed asset ratio indicates that the working capital of this company is funded by long term funds which indicates efficient funds management
- There was a constant decrease of assets over liabilities. Although the firm had ability to have a higher asset over liabilities, but the company seemed struggling to balance the standard current ratio of 2:1. They never met the standard of current ratio.
- The firm had maintained and good cash balances
- The company performed a poor net profit ratio, In the entire period of study company had a good net profit ratio in 2014.
- The quick ratio of the firm had been varied during the study period, the prescribed standard of quick ratio is 1:1, so they company had a satisfactory liquidity level.
- The inventory level was going on decreasing during the study period, as clearly shown in the charts of trend analysis on inventory
- The trend analysis on assets, liabilities, fixed assets, and inventory shows their position of the firm respectively.
- From the hypothesis tested it was clear that there is increase of current liabilities of the company than the current assets year by year.
- And, also from the hypothesis it is clear that the firm has able to manage the trade receivables.

5.2 SUGGESTIONS

- The company is a profit seeking one; it has to commit all of its resources to achieve its goal. To achieve this, profitability, liquidity and solvency position a crucial element to be monitored carefully, thereby the trade-off can be reached
- This company's ability to meet its current obligations is satisfactory though it does not meet the conventional norm. This company maintains current liabilities more than the amount of current assets which has to be viewed seriously and improvement of this ratio is required to achieve the optimum level.
- Stock Turnover Ratio should be maintained at the constant level.
- The Cash & Bank Balances of the company is good.
- Using trend analysis, it can be suggested that the fixed assets curve shows steady upward direction much than the current assets curve, which enable us to understand the company's funds are dumped in fixed asset, it is not a favourable condition to the company

CONCLUSION:

The present study reveals that the liquidity position of this company is not comparatively satisfactory as some of its components doesn't approaches the standard norms throughout the period of study. On the whole, it can be concluded that the company's overall risk evaluation process is not at desired level and the author has made the realistic recommendation for the improvement in operational and managerial efficiency of the company as to maintain and increase further by effective utilization and control of all the assets.

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