CHAPTER – 3
Research Plan
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3.1 Introduction:
The current research tries to find the strength of Working Capital Management of selected textile companies in India. Working capital is a soul of business as a body without soul never live the same way without working capital business activities never run. The management of current assets and current liabilities is essential in creating value for shareholders. If a firm can reduce its investment used in current assets, the outcome funds can be invested in value-creating projects, therefore, increasing the growth opportunities and shareholders’ return of the firm. Though, management can also deal with liquidity problems due to under investment in working capital. As per indication of Filbeck and Krueger (2005), the skill of financial managers to well manage receivables, inventories, and payables has a significant impact on the success of the business. If the capital invested in cash, trade receivables, or inventories is not inappropriate proportion, the firm may have difficulty in carrying out its daily business operations. It could result in declining sales and at the end, resulting reducing profitability. K. Smith – 1980 highlighted the trade-off between liquidity and profitability when he argued that working capital management could play an essential role not only in a firm’s profitability and risk but also in its value. Decisions regarding an increase in profitability are likely to involve increased risk, and risk-reducing decisions are likely to result in a reduction in profitability.

3.2 Industry Overview:
India Textile Industry is one of the leading textile industries in the world. Though it was predominantly unorganized industry even a few years back, the scenario started changing after the economic liberalization of the Indian economy in 1991. The opening up of economy gave the much-needed thrust to the Indian textile industry, which has now successfully become one of the largest in the world. But due to recession in 2008, The Textile Industry of India hit a lot. It said the report of research firm – (Technopak -2009).

The Indian Textile industry is India’s second-largest industry after agriculture sector, employing nearly 38 to 88 million workers and contributing 4 to 8 percent of India’s GDP. Market size of India’s textile industry is $52 billion, in addition, it has been contributing 26 percent of the manufacturing sector, 20 percent of industrial production, and 18 percent of industrial employment. This
industry export around 60% of their products to the US, the EU, and Japan, all hit hard by the financial crisis. A per the study of (Rajan Nagpal & Ronak Agarwal-2012) told the effect of the slowdown on the return on equity percentage and the profit margin percentage of the significant textile firms during the recession period 2008 to 2011. As well another article revelled by (CITI) that Indian Textile Industry had lost about 700000 jobs by the time of second half of 2008.

However, the current scenario Indian Textiles Industry has an overwhelming presence in the economic life of the country. A part from providing one of the basic necessities of life, the textiles industry also plays a vital role through its contribution to industrial output, employment generation, and the export earnings of the country.

The sector contributes about 14 percent to industrial production, 4 percent to the gross domestic product (GDP), and 17 percent to the country’s export earnings. It provides direct employment to over 35 million people. The textiles sector is the second largest provider of employment after agriculture. Thus, the growth and all-round development of this industry has a direct bearing on the improvement of the economy of the nation. India has the potential to increase it’s textile and apparel share in the world trade from the current level of 4.5 percent to 8 percent and reach US$80 billion by 2020, (Cotton Association of India, published 2015).

3.3 Problem of the Study:

India’s Textile industry is mainly stable in the state of Gujarat, Punjab, Haryana, Maharashtra, Karnataka, Tamilnadu, Madhya Pradesh, and Some of the units are established in other states too. Also Vehicle of development, Textile is the primary industrial product in the states that are putting more emphasis on agriculture field. This industry is vital from triple viewpoints. One is its share in industrial development, and national growth other is its direct and indirect share in agriculture-based industries, and the last one is employment generation. Its financial capacity is also crucial from the viewpoint of industrial development. A question arose after considering hard hit by the recession of America initiated 2007 infected Indian textile industry and slowdown by the time of August 2008 (Indian Textile Journal 2012). Furthermore, the slow down effect on the return on equity % and profit margin % as per the report of (Rajan Nagpal &
Ronak Agarwal - 2015). While the textile industry of India considered at the world wide catering highest quality product available at the lowest cost and also results in a variety of the products available with the lowest price. A problem has been considered after getting info from various sources. The industry having different dimensional importance, the main problem under study is to check the financial liquidity position of the sample units. The title of the research study is, “Working Capital Management of Selected Textile companies of India”.

3.4 Objectives of the Study:
The purpose of the research is to discover answers of the following question through the application of scientific procedures. The main objective of the research is to understand the liquidity management of Textile units as well as the problems in liquidity management of these units. This broader objective is classified into:

I. To examine the liquidity ratios as a proxy of working capital management of units understudy of the textile industry of India.

II. To evaluate the activities ratios as a proxy of control variables of units understudy of the textile industry of India.

3.5 Significant of the Study:
Textile industry despite all limitations is significant as Textile industry sector contributes about 14 percent to industrial production, 4 percent to the gross domestic product (GDP), and 17 percent to the country's export earnings. It provides direct employment to over 35 million people (Cotton Association of India, published 2015). Textile is increasing in India. But this industry is facing the problems of liquidity and profitability. Considering the above problems, it is essential to look into the working capital management of these units. For this purpose, various components of liquidity will be analyzed, and the researcher will try to find out the significant problems of liquidity management.

3.6 Hypothesis of the Study:
HYPOTHESIS 1: There is no significant difference in working capital management, among selected textile companies of India.

Sub Hypothesis:
H1:1 : There is no impact of Current Ratio on Gross Operating Profit.
H1:2: There is no impact of the quick ratio on Gross Operating Profit.
H1:3: There is no impact of gross working capital ratio on Gross Operating Profit.
H1:4: There is no impact of Current Assets to Total Assets Ratio on Gross Operating Profit.
H1:5: There is no impact of Current Liabilities to Total Assets Ratio on Gross Operating Profit.
H1:6: There is no impact of the Average Collection Period on Gross Operating Profit.
H1:7: There is no impact of Average Payment Period on Gross Operating Profit.
H1:8: There is no impact of Inventory Turnover Days on Gross Operating Profit.
H1:9: There is no impact of the Cash Conversion Cycle on Gross Operating Profit.

3.7 Review of existing literature:
The topic has been selected for research work by considering many scholars worldwide from time to time. Most of the research has been done in the direction of factors associated with working capital management, its policies and its relationship with profitability, but those researches failed to address the specific sector-wise issues of working capital management. This study aspires at fulfilling such a gap by considering the textile industry of India specific nature of working capital management. This research will guide various techniques used to measure working capital management. Previous studies in this area have used various methods measure the usefulness of working capital. This study has been framed to show how efficiently working capital management impacts the corporate profitability of 20 leading listed textile companies in India.

Further investigation was made that impact of Time and Different Ratios on working capital management. For reference to my research, relevant articles and research papers are be considered in the context of worldwide.
Classification of Reviews of Literatures:

**Working Capital Management study at the World Stage.**

The first study was conducted in India by National Council of Applied Economic Research by NCAER) in (1966). The study covers industries like Fertilizers, Cement and Sugar. The prime objective is to discover what extent industries controlled and used of working capital components. The study found that Working Capital Management Practices were highly impulsive and hence the establishment of suitable accounting procedures, cost systems and stock controlling methods in the above-mentioned industries. The study result was that worth of proper Working Capital Management policies in the success of the business.

Arindam Ghosh (2007) that was the study carried on Cement Industry of India specific area of study was “Working Capital Management and its practices and impact on profitability. The main aim of the study is to evaluate the efficiency of working capital management of selected cement companies in India during the period 1992 to 2001. For the study targeted 20 large cement companies avail in India having a very large portion in cement industry of India.

Batra Gurdeep Singh (1999) gives an overview of working capital and its determinants. According to the author working, capital management involves deciding upon the amount and composition of current assets and how to finance them. He emphasizes on the hedging approach to finance current assets. He also adds that management can use ratio analysis of working capital as a means of checking upon the efficiency with which working capital is being used in the enterprises.

Meszek Wieslaw and Polewski Marcin (2006) the observation of selected construction companies at the area of working capital management and working capital policy formation and strategies implication. The Study was based on developing the controlling methodology for working capital. here, a study that was going on construction company having the specific factors are to be considered like functional factors and market requirements which make working capital area-wide and more focused.
Smith Keith V. (1973) research has been given focused on the short term financial need to be given more attention to the success of the individual firm. For that finance manager has to give more attention to current assets and current liability. Many firms make the investment of current assets in a basket while current liability in many different requests. This paper consists eight distinct approaches to working capital management out of it. First three give standard guide lines next three regarding constraint set and cost balancing and last two about probability models and portfolio theory.

Weinraub and Visscher (1998) Carried up research to analyzed ten different industry groups for ten years of data. The purpose of the study was to recognize the different working capital practices and their universal relation. This research has one unique area to attain to do the relative ranking of the industries on the basis of their working capital management practices and policies. This study used quarterly levels of current assets, current liabilities and total assets of the companies from different industries were considered for a time frame ten years. The computerized data was used for the same. Companies have missed the data for the three years where eliminated, so the misleading was not be there in the calculation. For the study, the industry mean was calculated by averaging individual yearly means. The conclusion could be carried with method ANOVA and Tukey’s HSD test. One of the findings was that strong consumer orientation industry tends to have more aggressive financing policies. Another finding was that relative differences in working capital policy existed and extended over more extended time period.

Ahmed Habib (1998) this study is evaluated that the interest rate of fund reducing money power on the output. For the study, the rational expectation model is used to find out the relation between production decisions and debt finance. As working capital having immense important factors and its cost, the rate of interest affects the supply of goods, this study revealed that this model helps to identify the alarming situation when the interest rate is used. This model also revealed that the effects of monetary policy on the price level and supply side.
Parvathy (2004) observation of study has shown that in increasing in mode, but net profit has in decreasing in trend because operating cost is high. Another finding had thrown light on the importance of cost of production. Other side found that the return on the network and the return to total assets were on the decreasing trend. The researcher has found that the return on investment is stable and the company invested in the profitable way. Company’s payout ratio was very conservative, and that shows the growth of the company. With sum up of the research is that for the long term financial stability and formed the debt-equity ratio. The opposite side of the research interest coverage ratio and the proprietary ratio were not satisfactory.

**Profitability Analysis based On Working Capital Factors:**

Bansal S. P. (1999) Review of this study on working capital management refers to the management of current assets and current liabilities to maintain the various components to increase the profitability of the firm. The author persists on the application of various methods and techniques for the management of working capital and its three leading gears cash, receivables and inventory.

Dr Kaddumi Thair A. and Dr Ramadan Imad Z. (2012) The evaluation was made in 49 Jordanian companies they are listed in Amman Stock Exchange, The carried with a topic like effect of working capital management on the profitability in a targeted company for the period 2005 to 2009. This goal could be achieved with the help of two different measures one is for profitability, and another one is for the performance of working capital management, i.e. proxy and five proxies use full for respective goal. For the estimation, two regression models, fixed effects model and ordinary least model are used.

Jose et al. (1996) had been observed the correlation between profitability measures and management of coexisting liquidity needs during the years for a large sample of industries from annual computerized data. For the study correlation, regression analysis was used to analyze the cross-sectional relationships between profitability measures and CCC. The consequences of the study suggest that numerous companies with higher aggressive liquidity management mean short CCC reflected a statistically significant opposite
relationship between CCC and profitability. The industries include Professional Services, Natural Resources, Retail and Wholesale, Manufacturing and Services; it shows size does not oblige the relations between CCC and profitability. This finding was opposite to the earlier outcomes made on alternative statistical methods. The last line advised upon evidences shows that aggressive working capital management policies tend to improve performance and profitability.

Kaur Harsh V. and Singh Sukhdev (2013) this article focuses on cash conversion efficiency and setting up the operating cycle days. The study tests the relationship between the working capital attain and profitability calculated by income to current assets and income to average total assets. Authors did a study with companies listed in BSE 200 that is spread over 19 industries for the period 2000 to 2010. At the end; the study lay emphasis on that proficient management of working capital notably affects profitability.

Madhavi K. (2014) she has done research based on an empirical study of correlation among liquidity position and profitability of the paper mills in Andhra Pradesh. That has been evaluated ineffective working capital negatively effect on the profitability of the paper mills.

Shin and Soenen (1998) the study has been conducted to know the relationship of net trading cycle and profitability. To fulfil this purpose, the author used correlation and regression statistical method to confirm the findings. Computerized sample data of 58985 firms over a long period about 20 years was taken for the study. The study concluded with the result that the opposite relation between of Net Trading Cycle and profitability. The length of Net Trading Cycle adversely affects the profitability of the firm. The result suggests the person of finance reduce the net trading cycle for the improvement of shareholders value.

Samiloglu F. and Demirgunes K. (2008) the objective of the study is to examine the effect of working capital management on the firm’s prosperity. The study carried with manufacturing companies listed in Istanbul Stock Exchange (ISE) the tenure for the study is 1989 to 2007. For the study multi
regression, statistical method is used. Observed come outs of the study revealed that some factors having a negative impact and some having a positive impact on the profitability of firms. Positive factors like growth of sale on other hand debtors’ payment period, stock conversion period, as well as debt interest negatively affects firms’ profitability.

Soenen, Luc A. (1993) has done research with a topic like CCC- Cash Conversion Cycle and business profitability. There was a hypothesis set by the author is the short CCC the higher profitability of the company. Here, the author covers 20 companies’ data for the 20 years. Profitability was analyzed with the ratio of total return to total assets. The statistical method Chi-square test was used for testing hypothesis and outcome was that short CCC and the net trading cycle is conserved the higher profitability.

Vijayakumar and Venkatachalam (1995) this study was made on observed analysis in working capital and profitability. The study was carried with 13 firms belonging sugar industry for the 10 years period from 1982-1983 to 1991-92. The correlation and statistical regression method have been used to analyze the impact of working capital ratios on profitability. In this study total four ratios have been taken into consideration; Liquidity ratio, inventory turnover ratio, receivable turnover ratio and cash turnover ratio. The discovery of the study said that liquid ratio and cash turnover ratio have a harmful impact on the profitability on the other hand, inventory turnover ratio and receivables Have a positive impact on profitability.

Virani Varsha (2008) it was a comparative study in CADILA COMPANY, this study has been done with particular objectives first is to examine financial performance and the second one is to examine profitability trend and at last to find out assets operational model and evaluate liquidity position of the company. To achieve these goals used two classy analytical tools, i.e. ratio analysis and correlation analysis. The study shows the relationship between different ratios. That is also observed that correlation and coefficient are near about, so there is a high degree of a negative and positive correlation between various ratios.
Ramachandran Azhagaiah and Janakiraman Muralidharan (2009) in this study, examine the relationship between working capital management proficiency and earnings before interest and tax. The study was made on Paper industry in India from 1997 to 2005. For the measurement of working capital management, three indexes are taken into consideration: performance index, utilization index, and efficiency index, and EBIT of the selected companies for the study period are taken. As a conclusion of the study says, paper companies of India performed well during the period. Some having excellent index and some of them need to improve the working capital management give proper attention to that particular area also.

Bhatt V. V. (1972) He has given concentration on the system to appraise working capital management and its finance, especially for the large scale companies. This tool also helps to other sectors like agriculture as well as retail trade etc. As bank provide short term finance to the operation of the business at the same time need to pay attention to repayment of the loan and required finance necessity. If these two areas are to be maintained properly, no need to appraise the working capital management concern.

Rao K.V. and Rao Chinta (1991) this study observed that strong and weak point of conventional techniques of working capital analysis. An outcome of this study shows that some of the conventional techniques which could realize the working capital behaviour well. And some of them fail to do so. And thus, authors suggest proper working capital management with conventional method, i.e. ratio analysis. The study suggests further inclusive factors which are the decisive yardstick in working capital efficiency.

Rao Govinda D. and Rao P. M. (1999) the study said management of working capital is a constant process. So that proper observation on various components is needed. At the end, relationship between different components needed. This provides proper direction.

Siddharth and Das (1994) Siddharth and Das have been done the study on "Working Capital Turnover in Pharmaceutical companies" tried to determine efficient use of working capital in selected pharmaceutical firms in India.
years data has been concluded that overall turnover ratio was 90.3 time. The fine analysis of the data shows that the selected companies have done well in terms of employment of working capital. Furthermore study discovered the working capital turnover ratio carried over the stage from 1981 – 1990.

Chakraborthy S. K. (1974) in this research author try to make a difference among cash working capital v/s balance sheet working capital. And research is based on two dimensions. The fist is the operating cycle concept and second calculation of operating cycle period in all the four cases. The main aim of this research is to exhibit an operating cycle concept based on the published annual report of the firm.

Chawla, Harkawat and Khairnar (2010) this study was done to investigate the relationship between working capital management and profitability of Indian petrochemical Companies. For the study, three huge petrochemical companies like were selected, namely: Reliance Industries Limited (RIL), Hindustan Petroleum Corporation Limited (HPCL) and Gas Authority of India Limited (GAIL). For the study variables were selected, namely: Average Collection Period, Inventory Turnover in Days, Cash Conversion period and Current Ratio as independent variables where Gross Operating Profit was the dependent variable. The statistical method was Person’s correlation coefficient was used, and linear regression was used to arrive upon the result. Conclusion of the study said the efficiency of managing working capital could be measured by reducing the time period of the independent variables. A strong negative relationship was found between business Profitability and the independent variables.

Chowdhury Anup and Amin Md. Muntasir (2007) that was the study carried on pharmaceutical companies listed in Dhaka Stock Exchange. Observation of the study based on financial management, according to this major problem found in the area of working capital management. It is true that working capital effects go on business performance and growth. The main objective of the study is to evaluate working capital practicability and implication of working capital policy and strategies in the targeted industry. To obtain the goal, the
evaluation was made regarding principles, procedures and techniques of stock management, creditors’ management, and debtors’ management.

Fazzari Steven M. and Petersen Bruce C. (1993) research have been put light on financial restraint on investment by giving focus the ignoring role of working capital in both as to use and source of funds. As per the views of author, liquidity can be maintained by maintaining working capital on a smooth manner means to be an investment in a manner which does not create cash flow constraint. Through the research found that working capital investment should be “excessively sensitive” with summing up that controlling on smoothing working capital created a long term impact of financial constraints and reported in many other studies also.

**Improve the Share Holders Value:**

Deloof, M. (2003) for the working capital management policies, the variables used one number of days receivable, inventories and accounts payable. For the study 1009 large Belgium, non-financial firms were selected for the period of 1992-1996. The National Bank of Belgium database was used for the study purpose. Regression analysis with, fixed effects model was used. So that specific intercept of firms, that is particular to each firm and are constant over time, can be captured. One of the findings of account receivable variable showed that a negative and exceedingly significant connection existed. There is a negative relationship between days receivable and gross operating income as days receivable increase opposite reduction is made operating income. Another thing has been found in research that gross operating income increased with firm size along with sales growth and fixed financial assets. However, a reduction in gross operating income was observed growing financial debt. Another finding is that inventory turnover in days had a negative relation between gross operating income. Regression output was that managers should reduce the number of days accounts receivable as well reduction should be essential in inventories to increase corporate profitability. One more finding was that lesser profit waited longer for bill payments. The outputs were consistent in the line of the findings above. However, individual variations in the coefficient of CCC in respect of gross operating income. The
study reflected that regression model explain a much higher portion of variations in profitability within the firms than between firms. Author Deloof advocated that to improve the value of shareholders managers most reduce the day receivables and inventories to a significantly lower level.

**Forecasting Working Capital based on Historical Data:**
Dr Arbab Ahmed and Dr Matarneh Bashar (2011) Research carried with registration technique, which is a very powerful statistical tool to forecast the working capital. The area of working capital management that is possible to make the projection after starting the average relationship in the past. For the different purpose components are used and to be finalized result. And it is presented in a diagrammatic way as a well mathematical way.

Gurumurthy N. and Reddy Jayachandra K. (2014) has conducted serve and observed working capital management position in four pharmaceutical companies APSPDCL, APEPDCL, APNPDCL and APCPDCL and come out with the fact that working capital management was not so good in position and need to do better.

Dutta (2000) has done a study on “Working Capital Management of Horticulture Industry in Himachal Pradesh” that was a case study of Himachal Pradesh Horticulture Produce Marketing and Processing Corporation for the stage 1991 to 1998. The study was thrown the light on the financing pattern of working capital management. The study exposed that the working capital of HRMC was going worse gradually during the study period. Though, massive losses of the firm holding the tremendous amount of inventory and that was the leading cause of failed trade-off among liquidity and profitability. The conclusion of a study like that there was no significant correlation between gross working capital and sales.

**Impact of Macro Factors on Working Capital Management:**
Filbeck Greg and Krueger Thomas M. (2005) as per the article, need to study internal working capital management and working capital performance. That article was published in CFO magazines. As per the findings of this article macroeconomic factors, interest rates, competition, etc. having an impact on
working capital management. Further finding is that the management of working capital goes on stock prices also.

**Uncontrolled Factors of Working Capital Affect the Production Schedule:**
Garg Pawan Kumar (1999) this study was done in selected public sectors firms of Hariyana study relate with working capital and liquidity analysis. The analysis of the study says that forecasting of working capital necessity constrained on different factors. After realizing the facts like the needs of working capital in public sectors. According to that, need to analyze production schedule, labour cost, sales trend etc. furthermore, the suggestion is to manage other components of working capital.

**Size of Company V/S Cash Management:**
Howorth and Westhead (2003) for this study author had been collecting data on a stratified random sample. There was a one database source of 130000 small UK firms as per the Companies Act definition of a small firm. For this structured research questionnaires from which 343 valid questionnaires circulated over 1928 companies. the study covers 11 working capital management factors namely inventory turnover, inventory levels, inventory reorder levels, average collection periods, customer discount policy, bad debts, doubtful debts, customer credit risk, average payment periods finance of working capital and use of cash budgeting. There was used principal components analysis and cluster analysis and identified four kinds of companies in respect of patterns of working capital management. Those were bifurcated CASH, STOCK, CREDIT, and LOW. The output shows organizations which have less classy skills, short production cycle, less cash flow problems, less external finance; higher profitability appeared to do the least working capital management. Another finding was that large but new firms with rare cash sales, more external finance and impact of seasonality tend to focus more on cash management. Next finding was that Small and new firms with less external finance and lower production cycle tended to focus on stock management routines. Most of the firms with lower profitability, infrequent customer make the timelypayment and had lower growth potentiality concentrated on credit management routines.
Cash Management Highly Influence The Working Capital Management:
Mishra (1975) has studied the problem of working capital in a selected six public enterprises for a period of 1960-61 to 1967 – 68. The importance and findings of the study are: 1) Selected enterprises are not able to utilize working capital efficiently. 2) In all enterprises, excess inventory is noticed, which is due to lack of inventory control, poor inventory management and also due to a congenial organization. Inordinate delays in the releases of foreign exchange and the issue of import licenses are also some reasons for overstock of inventory. It is found that the receivable turnover ratio is meager due to the generous credit granting and inadequate collection policy. In all the selected enterprises, the size of cash is found to be very much high on account of improper planning and control of cash.

Credit Management Highly Influence Working Capital Management:
Natarajan Sundar (1980) has been given views on working capital is having immense talented at both, the national as well business level. To keep control of working capital at the national level by controlling credit controls. In practice, efficient working capital includes determining the best suitable level of working capital, financing it and control over it. If we talked about corporate-level investment is essential in both case short term investment and fixed assets. And that can be possible many companies not surviving as well not incurring profit because of not efficiently manage the working capital. Thus, cost management with improved operational efficiency and that aspect of working capital is critical to be managed in a proper way.

Guiding Working Capital Sources:
Hossain Saiyed Zabid and Akon Md. Habibur Rahman (1997) the main objective of this study is to maintain working capital in a proper way. i.e. time of fund requirement, amount of fund and from where to raise fund to be maintained so can be possible to acquire trade-off among liquidity and profitability. The analysis showed that BTMC had followed an aggressive working capital policy by taking the risk of liquidity. The study analyzed that the company continuously rising trend in negative net working capital during the
period of the study. That was suggested to BTMC not to raise the only fund from long term source instead of by understating the requirement of the fund needs to take short term source also.

Examine Working Capital Management of Fertilizer Companies:

Jani, Virendra C., (2007) the purpose of the study is to come with answer liquidity management of fertilizer units as well the problems in liquidity management of these units. Total 4 units have been selected in this study considering their operation and age. They are namely; Gujarat Narmada Valley Fertilizers Co. Ltd., Gujarat State Fertilizer and Chemical Ltd., Liberty Phosphate Ltd., and Indian Farmers Fertilizers Co-operatives Ltd. This study is based on secondary data taken from published annual reports of the sample units for the period from 1996-97 to 2004-05, various reports of fertilizes association of India and relevant publications were taken into consideration. Methods and tools have been used like different liquidity ratios obtain from available data of each sample. With the help of ratios, comparative analysis of financial liquidity of the chemical fertilizer industry in Gujarat can be done. Another tool Index Number is used for the comparison. The index number is a relative measure. Therefore the comparative study of changes in subject’s matters among units becomes possible. The first hypothesis was analyzed based on the Chi square test is to understand interplant working capital direction. The other null hypothesis to be tested is based on Kruskal Wallis one way analysis of variance test. It has been tested to see whether there is any significant difference among working capital ratios of the sample units. The statement of the null hypothesis is, “There is no significant difference between the working capital of the sample units.” study has been come out with findings that there is a significant difference of working capital management inside of units during a specified period. The output of the second hypothesis is that there is a significant difference in working capital among units.

Working Capital Study Measured Considering Liquidity Ratios and Activities Ratios:
Kushwah, Mathur & Ball (2009) the study was undergone to evaluate the working capital management and direction in selected five major cement companies, i.e. ACC, Grasim, Ambuja, Prism and Ultra-Tech. For the research purpose, secondary data are used like authors collected the financial statement of selected cement companies for the years from 2007 to 2009. There are liquidity ratios, and activities ratios are used to analyze the condition of working capital of the companies. The study revealed the truth of study is that most companies not maintain their working capital in a systematic way while overall ACC shows appropriate management of working capital.

**Light on Internal Working Capital management Variation:**

Jain P. K. and Yadav Surendra S. (2001) that was a study of corporate Working capital management related practices in India, Singapore and Thailand. This study tried to understand the relationship between working capital management and current assets and current liabilities. In the other hand, authors have revealed the analysis liquidities ratios like current assets and current liabilities. Every sample of study has pertained these ratios for the management of working capital. In a sum up of the paper, the data of samples of three countries confirm that there were wide inter-industry variations in liquidity ratios. In the end, authors suggest the serious consideration of attention be given by respective nation as well as industry groups of three companies and should develop corrective measures to take care of area concern.

**Research Method:**

Dr Sanjay Kumar Sinha, Dr Vinayak Chand Tiwari, Sunil Kumar,(2012). The study suggests that appropriate management of fixed and current assets in business management play a vital role. This paper attempted to study the working capital components and the impact of working capital management on profitability of Cipla Ltd. However, the paper also makes an attempt to study the correlation between liquidity and profitability a dependent variable is a profit before tax of Cipla Ltd. For the study period, 2002 to 2011 are taken. Key variables used liquidity ratios and activities ratios to measure working capital management. Ratio analysis and percentage method and co-efficient of
correlation have been used to examine the data. Furthermore, Multiple regression was used to check the significant impact on the profitability of Cipla Ltd. The result shows that current assets fluctuation over the past years. And regression outcome said that different working capital ratios have a statistically insignificant impact on the ROCE of Cipla Ltd.

Dr. Navena Nesa Kumari, Dr M. Victor Louis Anthuvan (2006), the liquidity and profitability trade-off can be tackled efficiently by improving and adopting effective working capital management strategies into the manufacturing sector. This study takes into consideration the top S&P CNX 500 manufacturing firms within the geographical area of India. The purpose of the research is to examine whether working capital management can affect the company profitability of the automobile sector in India. There are 10 leading automobile companies in Chennai has been taken into consideration. The key variables are the current ratio, quick ratio, cash conversion cycle, inventory turnover in days, average payment period. In the other hand, the dependent variable is net operating profit for the period of 2006 to 2012. Analysis of the study has been carried with Statistical tool correlation, and multi regression and descriptive tool mean standard deviation. The descriptive tool shows that automobile companies are taking a too long time to pay back to suppliers. While the result of multi regression has been found that the inventory turnover period negatively affects to net operating profit of automobile companies.

Kesseven Padachi. (2006) a primary purpose of this study is to examine working capital management, which contributes positively to the creation of a firm’s value. Trend method has been used to examine working capital management and its impact on firms’ performance. The trend in working capital needs and profitability of firms are examined to identify the reasons for any significant differences between the industries. The dependent variable is used return on assets as a measure of profitability, and the relation between working capital management and firm’s profitability is examined for a sample of 58 small manufacturing firms, using panel data analysis for the period 1998 – 2003. The result of regression shows that negative relation among inventory days, receivables days with profitability. The key variables used for analysis
are account receivables days, account payables days and cash conversion cycle. A strong significant relationship between working capital management and profitability has been found in previous empirical studies. The findings also disclose an increasing trend in the short term component of working capital financing.

Mahum Bukhari and Mohammad Shaukat Malik (2014) found that positive and insignificant relationship as the well negative and significant relationship of various components of working capital with profitability. There is a positive and insignificant relationship with average collection period and profitability. Moreover, the operating cycle has positively insignificant while the cash conversion cycle is a positively significant relationship with profitability. While the negative and insignificant relationship between profitability and the average period of inventory and also found that the relationship between the average payment period and profitability is negative and significant. The author’s view is that need to pay attention to manage the cash conversion cycle of their firms and formulate strategies accordingly. This study caters base and idea regarding working capital management and its components. However, it does not provide a clear cut picture of the relationship between working capital and the firm’s profitability. However, there was a very limited study in reference to India on working capital management and firm profitability. Therefore, this study adds one more practical experience to fill a gap. There are working capital components used (Inventory conversion period, average collection period, average payment period and cash conversion cycle).

Kulkanya Napompch (2012), working capital is needed for the day to day operation of the business. And the primary purpose of the study was to examine the effect of working capital management on profitability. The regression analysis based on a panel data sample of 255 companies listed on the Stock Exchange of Thailand from 2007 to 2009. The key variables of working capital are inventory conversion period, receivables collection period and cash conversion period as well debt to total assets ratio were taken as independent variables. While gross operating profit is taken as the dependent
variable to measure the profitability of companies. The results revealed a negative relationship between the gross operating profits and inventory conversion period and the receivables collection period.

3.8 Research Methodology:
The primary aim of this study is to examine working capital management of selected Textile Companies of India. This is achieved by developing a similar experimental structure first used by Shin and Soenen (1998) and the following work of Deloof (2003). We extend our study by also analyzing the trends in working capital requirement of firms and to evaluate the possible causes for any significant differences between the industries.

Our study focused exclusively on the textile companies listed in BSE and NSE stock exchange moreover, have 100cr and more market capital. This restriction places a limit on the number of firms qualifying for the study. But mostly covers small, medium and large scale companies. As per SEBI-2017 companies are categorized based on market capitalization as 20000cr or above to be a large scale, while 5000cr to 20000cr considered being a medium scale and less than 5000cr taken as small scale.

Thus, the empirical study is based on a sample of 20 selected Textile Companies which have market capital 100cr or more and complied 10 years by the time of 2015/16.
3.8 Sample of the Study:

Our study focused exclusively on the textile companies listed in BSE and NSE stock exchange moreover, have 100cr and more market capital. This restriction places a limit on the number of firms qualifying for the study. But mostly covers small, medium and large scale companies. As per SEBI-2017 companies are categorized based on market capitalization as 20000cr or above to be a large scale, while 5000cr to 20000cr considered being a medium scale and less than 5000cr taken as small scale.

Thus, the empirical study is based on a sample of 20 selected Textile Companies which have market capital 100cr or more and complied 10 years by the time of 2015/16.

1. AMBIKA COTTON
2. ARVIND MILL
3. BOMBAY DYING
4. HIMATSINGKA SEIDE
5. INDO COUNT
6. JBF INDU
7. LAXMI MACHINE
8. LAXMI MILL
9. LOYAL TEXTILE
10. MANDHANA INDUSTRY
11. NANDAN DENIM
12. RAYMOND
13. RUBY MILL
14. SANGAM
15. SARLA PERFORMANCE
16. SITARAM
17. SRF
18. TRIDENT
19. VARDHAMAN
20. WELSPUN
3.9 Periods of study and Data collection:

This study is based on secondary data taken from published annual reports of the sample units for the period of 10 years from 2006/7 to 2015/16. This study has covered the time period 2006 to 2015, and it included recession lag too, from 2008 to 2011 where export of textile industry hit hard. So this study will latter contribute positively to the Indian Economy.

3.10 Data collection and analysis:

Data collection is made from various reports of Textile Association of India, and relevant publications were taken into consideration. Most of the work is based on books, periodicals newspapers and various government reports are taken into consideration specific website of sample units.

Data Analysis:


The Liquidity Management Variables:

in order to current ratio and other variables that may influence Operating Profit, quick ratio a proxy of working capital management, the Gross Working Capital Ratio, the Ratio of Current Assets to Total Assets and Current Liabilities to Total Assets Ratio.

The Control Variables:

The efficiency ratio called activity ratios too, namely Account Receivable Turnover Ratio, Account Payable Turnover Ratio another Ratio is Inventory Turnover Ratio and Cash Conversion Cycle is used as a comprehensive
measure of working capital as it shows the time lag between expenditure for the purchases of raw materials and the collection of sales of finished goods. The longer the cycle, the larger the funds blocked in working capital. The operating profit is a better to measure since it relates the fundamental earning potential measure. There are many ways of managing the profitability of companies but, in principle, key levers are, of course, profit increase and assets reduction. The latter has become more critical to many businesses as the previous becomes more elusive (Kesseven Padachi-2006).

**Accounting Techniques**

**Ratios:**
Interrelation, expressing a comparison between two particulars forms financial report is ratio. Accounting ratios show the significance of relatives among balance sheet, profit and loss account and digits (numbers) of the budgetary control system. “The relationship between the two figures expressed mathematically is called a ratio.”– Hingorani, Ram Nathan and Grecual.

Significance of Ratio: ratios can measure capacity of the business and also suggest ways to improve ability, the significant financial decision can be taken, comparative study of units in the same industry is possible, ratio helps to keep adequate control over debts and credits, investors too can use ratios to take decision pertaining to investment.
<table>
<thead>
<tr>
<th>Variables</th>
<th>How to Measure</th>
<th>Abbreviation</th>
<th>Types of Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Ratio</td>
<td>Currents Assets/ Current Liabilities</td>
<td>CR</td>
<td>Independent</td>
</tr>
<tr>
<td>Quick ratio</td>
<td>Cash + Cash equivalents + Short term investments + Current receivables / Current liabilities</td>
<td>QR</td>
<td>Independent</td>
</tr>
<tr>
<td>Gross Working Capital Turnover Ratio</td>
<td>Net Sales / Current Assets</td>
<td>GTA</td>
<td>Independent</td>
</tr>
<tr>
<td>Current Assets to Total Assets Ratio</td>
<td>Current Assets / Total Assets</td>
<td>CTR</td>
<td>Independent</td>
</tr>
<tr>
<td>Current Liabilities to Total Asset Ratio</td>
<td>Current liabilities / Total Assets</td>
<td>CLT</td>
<td>Independent</td>
</tr>
<tr>
<td>Average Payment Period (in days)</td>
<td>Accounts Payable * 365 / Purchases</td>
<td>APP</td>
<td>Independent</td>
</tr>
<tr>
<td>Average Collection Period</td>
<td>Account Receivable * 365 / Net</td>
<td>ACP</td>
<td>Independent</td>
</tr>
<tr>
<td>Inventory Turnover (in Days)</td>
<td>Inventory * 365 / Cost of Goods Sold</td>
<td>ITD</td>
<td>Independent</td>
</tr>
<tr>
<td>Cash Conversion Cycle</td>
<td>ACP + ITD - APP</td>
<td>CCC</td>
<td>Independent</td>
</tr>
</tbody>
</table>
Statistical Techniques

Descriptive Statistics

Arithmetic Mean:
The arithmetic mean is in simple sense average of all values. In statistic the arithmetic mean is very commonly used in various type of study. It can be calculated by the sum of all values divided by a total number of observations. In this study, it is calculated by ten years the different ratio of working capital divided by ten years. Only mean does not show the accurate measurement for data.

Standard Deviation:
Standard deviation is considered more significant to another method of scattering because of its merits in mathematically representing the inconsistency. This is used for statistical data interpretation. It defines as the root of the mean of squares of the deviations of individual items from the arithmetic mean. The following formula is applied to find out standard deviation. It helps to find the deviation of the mean of data of individual company and among the company. That gives a result which data cross the limit of deviation.

\[ = \sqrt{\frac{\sum d^2}{N}} \]

Where;
\( \sum d^2 \)=square of deviation of items from the arithmetic mean
\( N \)=Number of items.

Multi regression:
To make clearer working capital management efficiency, there should need to identify the impact of independent variables on the dependent variable known as Operating Profit, the regression employed. The independent variables are Current Ratio, Quick Ratio, Grows Working Capital Ratio; Current Assets to Total Assets Ratio and Current Liability to Total Assets Ratio, other ratios are Receivable Turnover Ratio, Payable Turnover Ratio, Inventory Turnover Ratio and Cash Conversion Cycle. In order to identify the critical working capital variables influencing dependent variable Net Operating Profit.
The Model Specified in the Study:
\[ OP = \beta_0 + \sum \beta_i X + \epsilon \]

\( OP \): Operating Profitability of firm \( i \) at time \( t \);
\( \beta_0 \): The intercept of an equation
\( \beta_i \): Coefficients of \( X_i \) variables
\( X_i \): The independent variables for working capital management of firm \( I \) at time \( t \)
\( t \): Time = 12...3.. 10 years
\( \epsilon \): The error term,

The model which the study applied for the Textile Companies is as follows:
Eqn : 1
\[ OP_{it} = \beta_0 + \beta_1(CR_{it}) + \beta_2(QR_{it}) + \beta_3(GWC_{it}) + \beta_4(CATTAlg_{it}) + \beta_5(CLTTA) + \epsilon \]

Eqn : 2
\[ OP_{it} = \beta_0 + \beta_1(BRR_{it}) + \beta_2(BPR_{it}) + \beta_3(ITR_{it}) + \beta_4(CCC_{it}) + \epsilon \]

This study used the model specified by (Dloof 2000),(Raheman and Nasr 2007) and (DrNavenaNesa Kumari, DrM.Victor Louis Anthuvan).

3.11 Scope of the research:
This research study focuses on the Textile Industry of India only. The Study covers twenty selected textile companies which are listed in the Bombay Stock Exchange and National Stock Exchange as well. Their annual report for ten years covering 2006/07 to 2015/16 is used in the investigation of the working capital management efficiency of Indian Textile Industry. Among different textile companies listed on NSE and BSE, twenty companies only are selected on the basis of data availability. Though, the result of the study helps to understand working capital situation of other than selected as sample.
3.12 Chapter Plan:
1. Conceptual analysis of working capital
2. Overview of Textile industry
3. Research Plan
4. Analysis of Working Capital
5. Findings and suggestions
6. Limitations of the study
7. Conclusion
8. Bibliography
References:

- Englewood Cliffs, N. J. p. 34.