CHAPTER – II
LITERATURE REVIEW

Synopsis

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Chapter – II
Literature Review

2.1 Introduction

A review work has been done in order to understand the intricate aspects of present study. A good researcher has to keep up to date with the current knowledge about what and how much work has been carried out in the field related to the current study and where more exploration is required. Such a review has not only provided a sound rationale for the current study but also helped in defining boundaries for this present study. A proper review of related literature helps, to a great extent, in defining problem, developing a research design and determining the size and scope of further study.

2.2 Theoretical and Empirical Review for Working Capital Management and Policy

Different researchers have analysed and interpreted working capital management and its policy in different ways. The review of these analyses is of great importance for formulating an approach that can be employed in the context of the study of selected textile manufacturing companies in the state of Gujarat. The following literature review has been done for the present study:

Janaki Ramudu P. \(^1\) conducted a study on working capital management of Indian commercial vehicles industries. The purpose of the study was to assess the efficiency of working capital management in selected vehicles companies. The period of the study was ten years from 1994-95 to 2003-2004. The data was collected through journal and other database like prowess, EBSCO business premier, blackwel synergy and emerald. The research methodology was mainly based on ratio analysis. The structure of working capital had been analysed through the construction of tables indicating the percentage composition of individual current assets and current liabilities during the years from 1995 to 2004. The study revealed that the all current assets across the industry, inventories formed highest percentage followed by trade receivables and loan and advances whereas cash and bank balances formed very negligible part. The study also revealed that the variation between current assets turnover ratio and working capital turnover ratio was

very high across the industry which in turn implied the sample companies achieved higher sales with less working capital.

Dr. Vivek Sharma\(^2\) made an important study on Liquidity, Risk and Profitability Analysis: A Case Study of Maruti India Limited. The objectives of the study were to examine the association between liquidity and risk; and to test the correlation between profitability and risk. The study was concerned with the ten years data of Maruti Suzuki India Ltd. for a period of (2001 - 2010). The data was of secondary nature and was obtained from the published annual reports of Maruti Suzuki India Ltd. The collected data had been analyzed through various liquidity and profitability ratios and drawing out the risk factor. Further, t test had been applied to test the hypothesis. He reported that the Trade off between risk and profitability could be made by calculating the risk factor. He used the following formula:

\[ R_k = \frac{\{E_j + L_j\} - A_j}{C_j} \]

Where, \( R_k = \text{Risk factor, } E_j = \text{Equity + Retained Earnings, } L_j = \text{Long term Loans,} \)

\( A_j = \text{Fixed Assets, } C_j = \text{Current Assets} \)

Further, the liquidity position of the company was fluctuating but it was acceptable. The risk factor calculated was a needle of the working capital management and the policy adopted. The company was timely changing its policies for better results but at higher risk. The profitability was increasing at good pace showing the efficiency of the company. Thus, it could be concluded that the company was earning good profit with moderate liquidity and at higher risk.

Agrawal\(^3\) in his study of “Working capital policy-Developing an Analytical Model” put in effort to frame a model for the evaluating working capital policy of a firm and to match the model developed with the firm’s working capital policy index. The policy will be aggressive or conservative, both have advantages and disadvantages. Thus, a trade off is requires between the two. The policy is also influenced by current assets structure. This model is framed as under:

\[ \frac{\text{CA/TA (FA) X LTA/ CA X CA/CL OR LTF/TF}}{\text{CA/TA (FA) X LTA/ CA X CA/CL OR LTF/TF}} \]


Where, CA = Current Assets, TA = Total Assets, LTA = Long Term Assets, CL = Current Liabilities, LTF = Long Term Funds, TF = Total Funds

Risk Return Tangle – The cost trade off. The working capital policy index is considered in term of overall liquidity measurers. The divisions are cost of liquidity implies holding of high level of current assets and relatively more focused on long term funds than short term funds. Another division is holding low level of current assets and relatively more focused on short term sources of financing. He concluded that the profitability and working capital policy has positive correlation. The reduction in cost can be attained if aggressive policy is followed and negative correlation if conservative policy is followed and moderate if firm adopts moderate policy.

Dr. N. Pasupathi\(^4\) carried out a study on Operational Adequacy of Working Capital Management of Selected Indian Automobile Industry - A Bivariate Discriminant Analysis. The study in general aimed at making a study of the management performance relating to working capital in the selected units of the automobile industry in India and also at evaluating Working Capital Management policies of selected units during the period from 1992-93 to 2006-07. It covered seventeen major units in the automobile industry. The financial statements used were mainly the Profit and Loss accounts and Balance Sheets published in the annual reports of the respective units. The study used a variety of financial ratios to accomplish the objectives. Necessary data on working capital and other related variables were collected for the period 1992-93 to 2006-07. He reported that the comparison of good and poor risk units as per the current ratio and as per the discriminant score showed that the misclassification of units was noticed in all the years. It could be concluded that in the years 1992-93 to 2006-07 Ashok Leyland Ltd in commercial vehicles sector, Mahindra and Mahindra Ltd in passenger cars and multiutility vehicles sector and Bajaj Auto Ltd in two and three wheelers sector units maintained adequate size of the working capital throughout the period under study.

Aruna Saini and Ram Dhan Saini\(^5\) conducted an important study on analysis of liquidity management and trade off between liquidity, risk and profitability. It was an empirical


study. The period of the study was from 1999-00 to 2008-09. Their purposes of the study were to measure and evaluate the efficiency of liquidity management by using ratio analysis and to assess the trade off between profitability and risk of Infosys Technologies Limited. The study used the secondary data which had been taken from the published annual reports of Infosys Technologies Limited. The research was mainly based on ratio analysis and statistical techniques like measures of central tendency, measures of dispersion, Spearman’s rank correlation etc. The study of the liquidity with the help of net working capital evidenced a sound position of company. The current assets were on average 68.59% of the total assets indicated much investment in current assets. The average collection period indicated a liberal credit policy. The degree of association between liquidity and profitability of the company was negative, therefore, excessive liquidity which might lead to lower profitability, they suggested investment in current assets should be controlled through skillful liquidity management.

Bardia S. C and Sweta Kastiya\(^6\) made an effort to carry out an important study on Liquidity Management and Control: A Comparative study of Torrent Pharma and Cipla. It covered a period of nine years (2000-01 to 2008-09). The objectives of the study were to work out the overall quantum of liquidity maintained by Torrent Pharma and Cipla Limited and to compare the liquidity position of both the companies. The study was broadly devoted to the application of different quantitative techniques in the analysis of liquidity position of both companies.

The technique of ratio analysis was also used to examine the different aspects of liquidity. They reported that the current ratios of Cipla and Torrent Pharma were quite close to the ideal ratio of 2:1. However, it was slightly higher in Cipla than Torrent. They also observed that the performance of Cipla was more stable and consistent than that of Torrent, as was evident from the statistical techniques of CV (coefficient of variance). The study concluded by suggesting that Cipla should review and strengthen its credit and collection policies so as to reduce the blockage of funds with debtors and also to minimize the chances of bad debt losses. Torrent, on other hand, should make efforts to maintain stability in its short-term financial strength.

Azhagaiah and Gejalakshmi⁷, in their study made an attempt to examine the working capital management efficiency of the Indian Textile Companies during 1995-1996 to 2005-2006. He measured the efficiency of working capital management with the help of index values, performances utilizations and efficiency indexes. Using industry norm as target, efficiency level of the individual firms, the study also tested the speed of achieving that target level of efficiency by an individual firm during the period of study. Findings of the study indicated that Indian Textile Industry as a whole performed remarkably well during the period. The liquidity was strong, performance and utilization of current assets were satisfactory and Indian Textile Companies had adopted an impressive working capital policy.

Palani A. and Yasodha P.⁸ conducted an important study on Working Capital Management in Loyal Textile Mills Limited, Chennai. The period of the study was five years from 2006-07 to 2010-11. The objective of the study was to evaluate the extent to which working capital has been effectively utilized by Loyal Textile Mills Ltd. The data for the research was collected from secondary sources i.e. annual reports of the company. The research methodology was mainly based on ratio analysis techniques and statistical tools with Z-Score analysis. The Z-score of the company indicated that the company was credit worthy in the first 3 years. They reported that the current ratio of the company was fluctuating. However, the mean value was 4.70 which implied that the company maintained an ideal ratio every year. That indicated the company had sufficient liquidity. The Company maintained good working capital turnover ratio which revealed efficient utilization of working capital in generating sales. Both Pearson’s correlation coefficient and Spearman’s rank correlation implied that there was very significant positive relationship between capital employed and current ratio.

Solanki Ashvinkumar H.⁹ carried out a research on Working Capital Management in Selected Small Scale Industries of Gujarat State. The objectives of the study were to study the comparison of working capital position and policies adopted by the selected small scale industries of Gujarat state and to study the sources of working capital used by

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the selected units. The period of his study was five years from 2002-03 to 2006-07. The research methodology was mainly based on ratio analysis and analysis of variances. The selected small scale industries subscribed to the gross working capital concept and considered current liabilities as a source of working finance. As far as the profitability of the current asset was concerned in selected small scale industries were found to have improved their performance during the period of study. The percentage of inventory to working capital had been found in excess of normal limit of 75%. Suggested that inventory management should be substantially improved and excess inventories should be slashed down. Size of working finance was found to be positively correlated to the size of the industries and its expansion plans.

Amalendu Bhunia et al\textsuperscript{10} conducted a study on Financial Performance Analysis-A Case Study. The purpose study was to identify the financial strengths and weaknesses of the Indian public sector pharmaceutical enterprises by properly establishing relationships between the items of the balance sheet and profit and loss account. The study had been undertaken for the period of twelve years from 1997-98 to 2008-09 and the necessary data obtained from CMIE database. The study covered two public sector drug and pharmaceutical enterprises listed on BSE. In order to analyze financial performance in terms of liquidity, solvency, profitability and financial efficiency, various accounting ratios had been used. Various statistical measures had been used i.e., A.M., S.D., C.V., linear multiple regression analysis and test of hypothesis t-test. They reported that the financial stability of both the selected companies had showed a downward trend and consequently the financial stability of selected pharmaceutical companies had been decreasing at an intense rate.

Hong Yuh Ching et al\textsuperscript{11} made an important study on relationship between Working Capital Management and Profitability in Brazilian Listed Companies. The objectives of that study were twofold: a) to investigate if there was any difference between corporate profitability and working capital management in two separate groups of companies: working capital intensive and fixed capital intensive; b) to identify the variables that most affect profitability. Two samples were obtained consisting of 16 Brazilian listed


companies in each group for the period 2005-2009. Multiple linear regression identified that, as far as ROS and ROA were concerned, to manage working capital properly was equally relevant for the two groups of companies. However the impact of debt ratio and days of working capital were relevant in the company profitability in the fixed capital group as opposed to the working capital group. Lastly they concluded that the working capital management was equally relevant for both groups. The impact of the variables on return on sales (ROS) and return on assets (ROA) were statistically significant – 21.7% and 18.4% in the working capital group versus 12.5% and 16.5% in the fixed capital group - but zero for return on equity. That indicated, as far as ROS and ROA were concerned, to manage working capital properly was equally important for companies that use working capital intensively as well as for those that use fixed capital intensively. However the way how working capital was managed in those two groups was different.

Mustafa Afeef\(^1\)\(^2\) carried out a valuable study on Analyzing the Impact of Working Capital Management on the Profitability of SME’s in Pakistan. His study aimed to determine the potential effect of working capital management on the profit performance of Small and Medium sized firms in Pakistan. To investigate, effect of working capital management was determined on profitability of a sample of 40 Pakistani small and medium enterprises (SME’s) listed in Karachi Stock Exchange for a period of six years from 2003 to 2008 which led to a total of 240 firm-year observations. The data for research purpose was acquired from an official and legitimate document titled, “Balance Sheet Analysis of Joint Stock Companies Listed on the Karachi Stock Exchange (2003-2008)”, formally published by the Statistics and DWH Department of the State Bank of Pakistan (SBP). the study was mainly based on ratio analysis, statistical tools and regression model. His major findings were as follows:

I. The Correlation matrix of the pooled data of sample firms revealed strong negative relationships of the ‘Inventory Conversion Period’ and the ‘Receivable Collection Period’ with the ‘Operating Profit to Sales’ of small firms. However, no significant associations were found between the profitability measures and the Payable Deferral Period, Cash Conversion Cycle & Current Ratio.

II. Studying the results of the Regression Analysis ‘A’, no significant associations were detected between the Return on Assets and the indicators of working capital management & liquidity.

III. In the Regression Analysis ‘B’, however, a weak but significant relationship was discovered between the Inventory Conversion Period and the Operating Profit to Sales and a highly significant negative association was found between the Receivable Collection Period and the Operating Profit to Sales. The Payable Deferral Period and Cash Conversion Cycle had no significant connection with the profitability variable.

Mauleshkumar N. Joshi\textsuperscript{13} conducted an important study on components of current assets for selected industries in India. The purpose of the study was to evaluate the policies followed by different industries for the various components of current assets. The sample was selected for large companies as defined by RBI, having paid up capital Rs. 1 crore and above. The period of the study was ten years from 1998 to 2008. The data for the research obtained from PROWESS Database, maintained by the Centre for Monitoring Indian Economy (CMIE). The research methodology was mainly based on ratio analysis techniques and one way analysis of variance (ANOVA). He reported that the time period of cash conversion cycle declined significantly over a period for the industries of India. It indicated that the improvement in managing working capital. However, liquidity ratios were not satisfactory. On examining variances between the industries, it was observed that for twenty ratios out of total twenty nine ratios, significant variances were observed.

An important study conducted by Zahir Ahmad\textsuperscript{14} on Inflation Accounting Approach to the Working Capital Management, a case study of Shree Bhawani Paper Mills (SBPM) Limited, Allahabad. The purpose of study was to analyse the impact of price level changes on working capital and its components. The period of the study was nine years from 1990-91 to 1998-99. The study was mainly based on analysis and interpretation of published account of the paper manufacturing units in the country in general and of SBPM in particular. Comparative financial analysis, particularly the ratio analysis, cash


flow analysis and trend analysis had been made in his study. His main findings were as follows:

IV. SBPM was maintaining more inventories in comparison to selected units which would affect the profitability of SBPM.

V. Size of receivable was more in SBPM than in selected units and debtor management was not encouraging.

VI. Average percent of cash to current assets in SBPM was 4.33 and in selected units it was 7.60 percent. The share of cash in net working capital in SBPM was lesser than selected units.

VII. The analysis of turnover of working finance revealed that the average of turnover of working finance in SBPM was 6.45 whereas in selected units it was 4.75. It was clear that the pace of transmutation of working finance in SBPM was better than in selected units.

Lastly he suggested the problem of changing prices would stay more or less permanently, hence, serious efforts should be made to evolve a widely acceptable system of accounting that could take care of inflation and deflation both.

Cohen and Pringle\textsuperscript{15} in their study highlighted the extension of Capital Asset Pricing Model (CAPM) for working capital management decisions. They strived to interrelate long-term investment and financing decisions and working capital management decisions through CAPM. They focused that an active working capital management policy based on CAPM could be put in use to keep the firm’s shares in a given risk class. By risk, he meant unsystematic risk, the only risk deemed relevant by CAPM. Owing to the chunky nature for long-term financial decisions, the firm is continually subject to shifts in the risk of its equity.

The liquid nature of working capital, on the other hand, can be used effectively so as to set-back or moderate such fluctuations. They suggested that a policy using CAPM could be adopted for the management of marketable securities portfolio such that the appropriate risk level at any point in time was that which would maintain the risk of the company’s common stock at a constant level.

Dr. D. Chandra Bose and Dr. K. C. Sankaranarayan\textsuperscript{16} made an important study on the working capital and inventory of an undertaking. The objective of the study was to find out the effect of inventory on both profitability and liquidity of an industrial unit. The main findings of the study were, adequate working capital was required for an efficient and smooth production, fix the optimum level of working capital required to determine the stage of current assets where total cost is minimum, according to study, finance manager was supposed to control working capital position at the optimum level by maximizing the profitability without harming the liquidity of the business, out of various current assets inventory constituted an average 90 percent of working capital and the length of operating cycle was not found satisfactory.

Praveen Kumar Jain\textsuperscript{17} conducted a study among seven papers companies in India to analyze the basic components of working capital. The study revealed that the current ratio in public sector undertakings during the period of study was found to be high erratic while the same in private sector undertakings registered continuous decrease. As far as the inventory was concerned, the study disclosed that it was highly unplanned in public sector undertaking units when compared to private sector units the study contributed much in terms of realizing the importance of effective management of working capital through its components.

Vijaykumar and Venkatachalam\textsuperscript{18} made an important study on the demand for working capital in private sector sugar industries of Tamil Nadu. The study was conducted in order to probe the requirement for cash, inventories, receivables, gross working capital and net working capital. Private sector sugar industries were selected on the basis of which were registered in the Tamil Nadu jurisdiction and availability of data. Models of economic were used to describe the demand for working capital and its various components. The study revealed empirically whether transactions relating to working capital including cash and inventories direct proportionate or not to change in the volume of sales. They found that the transactions for cash proportionately higher than the changes in the volume of the sales. Sales elasticity was more than unity indicating the diseconomies of scale with

\textsuperscript{16} Dr. D. Chandra Bose and Dr. K. C. Sankaranarayan (1997), Working Capital and Inventory, The Management Accountant, December, pp.942-944.
respect to investment of working capital and its components, the sales elasticity of cash and inventories were more than unity showed that fluctuation in cash and inventories levels depended significantly on fluctuation in their financing carrying costs, the capital cost on receivables, gross working capital and net working capital showed that the sign of interest rate of co-efficient was not only negative but also statistically significant in all these cases except receivables, etc. were also their important findings. They suggested that the demand for working capital and its components was a function of sales and its holding cost.

Ghosh\textsuperscript{19} in his study, reviewed that the four different industries: (i) Working Capital Management in Textile Industry (ii) Working Capital Management in Cement Industry, (iii) Working Capital Management in National Fertilizer Limited and (iv) Working capital management in Pharmaceutical industry; it included the following objectives such as to determine source and size of working capital with a survey made in 98 small scale textile firms of Punjab. The study concluded that in addition to the own capital, bank loans is the most prominent source of working capital among most of the selected units.

N.M.Khandelwal\textsuperscript{20} carried on half-complete empirical research initiated by late N.M.Agarwal, among 40 small-scale industries in Jodhpur industrial estate. The study attempted to probe into working capital management process and practices among the selected units between the years 1975-76 and 1979-80. The study revealed that the sample firms held more investments in inventories than required and management of receivable was found to be highly disorderly. It was found that bills receivable constituted as much as 50 percent of total current assets. Highlighting the sickness in Jodhpur Industrial Estate, the study attributed the main reason to inefficient management of working capital. Based on findings the study suggested that the entrepreneurs needed to be educated about the basic concepts and efficient way of working capital management.

M. Subramanya Sarma and Thriruvengala Chary\textsuperscript{21} conducted an important study on working capital management in Vazir Sultan Tobacca & Company Limited. The objective of the study was to understand the trends in current assets investing and financing policy

\textsuperscript{20} Khandelwal N.M. (1985), Working Capital Management in SSIs, \textit{Ashish Publication House}, New Delhi, p.5.
of working capital management with the help of selected accounting ratios in the sample company. The period of study was from 1989 to 1996. The methodology of the study was based on interpretation of the annual reports of the company. There was not proportionate increase in current assets investment in relation to sale resulting a rapid decline in working capital turnover ratio, there was no consistent policy of working capital management, during last two years of the study the quick ratio was much higher than generally accepted norms that was due to the sudden decline of inventory and rapid increase in current assets, credit policy was highly volatile with increasing risk of bad debts, etc. were their main findings of the study. They also suggested that the company needed to improve its management of cash and credit policy in order to have adequate profitability.

Mukhopadhyay\(^{22}\) in his study made an effort to study the effectiveness and adequacy of working capital and short-term solvency in an engineering company for the period of ten years from 1993-94 to 2002-03. The study suggested the working capital management should not be treated as an isolated management function but it was the necessary part of overall corporate management functions and impact of corporate management policy and strategy affects working capital management practice of the firm. It was, therefore, necessary to interpret and analyze cause-effect relationship of every function of the management to assess its impact on the working capital management.

Sidharth G. Das\(^{23}\) carried out a study on working capital turnover in pharmaceutical companies in India. He covered a period of ten years from 1981 to 1990. The objective of the study was to ascertain the uses of working capital with relation to sales. He selected fifteen large pharmaceuticals public limited company. The data of sample companies was collected from Bombay Stock Exchange Official Directory. The methodology adopted was mainly based on evaluating of working capital with the help of ratio analysis. His main two findings were as follows:

i. Most of the companies had maintained the size of working capital sufficient to the requirements of production cycle.

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ii. The overall working capital turnover ratio of all the firms was more than the accepted norms of 5:1. It revealed the efficient use of working capital by the pharmaceutical companies.

Santanu Ghosh and Santi Gopal Maji\textsuperscript{24} in their study measured that the efficiency of working capital management practice and ability to improve their efficiency up to the industrial average in 20 large cement companies operating in India. The period of the study was the ten years from 1992-93 to 2001-02. They reported that the Indian cement industry did not perform remarkably well during this period. Some of the sample firms had successfully improved their efficiency during these years; the existence of a very high degree of inconsistency in this matter clearly points out the requirement of adopting effective working capital management policies by these firms and the forces for inefficiency should be identified and removed.

Sagan\textsuperscript{25} in his study disclosed mainly the role and function of the manager who is directly interested in the management of cash that is generated during the transactions of business. He emphasized that more vehemence was laid on the money manager’s job. He concluded that the preparation and analysis of a cashflow schedule was a basic factor to attain a sound programme of money management. Sagan also found out that the level of operational cash needs depends on the level of sales. His Study stated that the level of working capital is a function of sales.

Walker\textsuperscript{26} study toward a theory of working capital was betterment upon the Sagan (1955) study. His main disceptation was that it was possible to develop a theory of working capital. In this connection, he formulated the following propositions which imply a risk return trade off of working capital. A) If working capital is varied to sales, amount of risk that a concern assumes is also varied and opportunity for gain or loss is increased. B) Capital should be invested in each component of working capital as long as the equity-network position of the concern increases. C) The type of capital used to finance working capital affects the amount of risk that a concern assumes; and, D) The greater the disparity between the maturities of a


company’s short term debt instruments and its flow of internally generated funds, the greater the risk and vice versa.

He revealed that changes in working capital in certain industries cause the rate of return on investment to respond more favourably than in others. It highlighted a kind of negative relation that exists between the level of working capital and the rate of return. Lastly, he went beyond by indicating that the working capital level is also varied directly with attitude toward risk of management.

Sinha et.al 27 conducted a study on analysis of working capital management in Fertiliser Corporation of India and Gujarat State Fertiliser Corporation. The analysis revealed that a huge portion of funds was tied up as working capital especially in inventories and receivables. The study revealed that the sample companies failed to manage working capital efficiently by the usage of latest techniques and hence the funds were locked up at various levels during the course of business operations. The study recommended for necessary need for restructuring working capital management practices failing which the firms would get affected.

A study conducted by R. Sivaram Prasad 28 on working capital management in paper industry to analyse and interpret the working capital management. The study covered the period of ten years 1983-84 to 1992-93. The data was collected from CMIE, Kothari Industrial Directory and other journals. Classification and tabulation of data had been done as per the requirement of the study. Ratio analysis techniques and statistical tools were applied to check the validity trends. He found the efficiency of the working capital clearly revealed under utilisation and the rate of return on current assets was negative or insignificant for many years during the period of the study, the results of correlation analysis indicated a close relationship between profitability and working capital efficiency, paper mills revealed a poor planning of cash balances during the period under study, collection of debts, availability of working funds and uncertain cash flows were some of the major working capital problems encountered; and the debts servicing capacity was also found to be poor and the firms were not able to service their debt

properly, consequently resulting in cash shortage problem. Lastly, he suggested that there was an urgent need for better management of working capital for paper mills.

Kesseven Padachi\textsuperscript{29} made an important study on Trends in Working Capital Management and its Impact on Firms’ Performance: An Analysis of Mauritian Small Manufacturing Firms. The purposes of the study were to analyse the trend in working capital needs of firms and to examine the causes for any significant differences between the industries. The empirical study was based on a sample of 58 small manufacturing companies. The data had been collected from the financial statements of the sample firms having a legal entity and had filed their annual return to the Registrar of Companies. The sample was drawn from the directory of Small Medium Industrial Development Organisation (SMIDO), a database for registered manufacturing firms operating in diverse activities and for which data was available for a 6 years’ period, covering the accounting period 1997-98 to 2002-03. He reported that the working capital needs of an organization changed over time and the small firms should ensure a good synchronization of its assets and liabilities.

Jani, Virendra C.\textsuperscript{30} conducted an important research on Working Capital Management of Fertilizer Industry of Gujarat in order to find out liquidity management of fertilizer units as well the problems in liquidity management of fertilizer units. The study was 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. Most of the work was based on books, periodicals news papers and various government reports were taken into consideration. His study was mainly based on ratio analysis and statistical techniques like index number, analysis of variance, measurement of centre tendency etc, he reported that the combined industrial average of net working capital turnover ratio during the course period was worked out at 4.11 and combined industrial average current ratio during the research period was 2.29 that was a favorable ratio because the standard level of current ratio is 2:1. Finally he concluded that the liquidity


management of fertilizer units were satisfactory, however he suggested some units to increase their current assets and to decrease the creditors. They should also give importance to cash purchase.

Amit K. Mallick and Debasis Sur\(^{31}\) carried out an important study on working capital management. The objective of the study was to examine the operational efficiency in Hindustan Lever Limited. The study covered the period of ten years from 1987 to 1996. The data of the sample company was collected from Bombay Stock Exchange Official Directory. Ratio analysis techniques and statistical tools were applied to measure liquidity of the company.

They found that the current ratio and quick ratio of a sample company was very low as compared to the ideal norms which revealed that industry was not maintaining adequate amount of liquidity to meet the current obligations, industry turnover ratio indicated that there was a substantial improvement in the efficiency of inventory management of the company and debtors turnover ratio confirmed that the performance of credit management of company as a whole was satisfactory, a short term fund had played a dominant role in funding the working capital; and the profitability of the company was deeply influenced by efficient management of its inventory as well as debtors.

Sudarsana Reddy et.al\(^{32}\) they evaluated the performance of the debtors’ management of the paper industry in Andhra Pradesh. For complying this, the analysis of trends in sales and debtors, debtors’ size, turnover, collection period and aging of receivables had been carried out. The forgoing analysis reveals that the sample mills adopted liberal credit policy, which had a favourable effect on sales with the exception of Sirpur.

The size of trade debtors as a percentage of current assets had shown declining trend. But the collection period of debtors slowly increased in all the mills except in Sirpur. The increasing debtors’ collection period was an indication of slackness in collection efforts of the mills. Lastly they suggested to reduce the collection period, the collection and follow up efforts of trade debtors should be rationalized and the slackness should altogether be removed.


Rais Abram and Ali Ghufran\textsuperscript{33} in their analytical study highlighted the impact of working capital on profitability in eight Marketing Cooperative Societies for a period of three years from 1997-98 to 1999-2000. He also examined the components, structure, and financing of working capital of eight Marketing Cooperative Societies. The study concluded that 6 societies for their investment in working capital following aggressive approach, more dependencies on short term funds for their financing of working capital, the liquidity position of all the societies was not satisfactory except one and there was negative impact on working components.

Van Horne\textsuperscript{34} evaluated the level of a firm’s liquid assets and the maturity composition of its debt in order to highlight the respective trade off between risk and profitability separately. His study focused on the fact that the lower the level of liquid assets the greater risk of not being able to meet short term obligations. The risk of technical insolvency can be reduced by maintaining a high proportion of liquid assets. Moreover, this strategy would affect the return on investment. Hence, the decision relating a liquid asset balance is a matter of risk return trade off. Mainly, the longer the maturity schedule of debt, the debt financing of the firm would be the less risky. His study added to it by including that the relationship also exists between the maturity schedule and the cost of debt. The longer the maturity schedule, the more costly is probably to be the financing and vice versa.

Roshan Patel\textsuperscript{35} conducted a study on financial appraisal of selected steel companies in India. The purpose of the study was to analysis the profitability of steel industries in India. He also analysed the liquidity, short term solvency and the efficiency of working capital management of the steel industry in India. He covered the period of ten years starting from 1985-86 to 1994-95. The data of sample industry was collected from Bombay Stock Exchange Directory. The methodology adopted was based on ratio analysis. The major findings of his study were as follows:

I. The current ratio and quick ratio were below the standard norms and liquidity was not satisfactory.

\textsuperscript{35}Roshan Patel, Financial Appraisal of Selected Steel Companies in India, from \textit{Unpublished Thesis}. 47
II. The average cash to current asset ratio was only 3.40%. That indicated the management of steel companies was holding a small portion of in the day to day business.

III. Credit and collection policy of the selected steel companies were liberal.

IV. The working capital turnover was encouraging but the low inventory turnover ratio i.e. 2.33 times indicated high investment in inventory.

Amit K. Chakraborty\textsuperscript{36} in his study made an effort to examine the working capital management of Andrew Yule and Company Limited during the period form 1993-94 to 2002-03. The study revealed that the short-term liquidity position was not properly maintained by the company and it was not satisfactory at all.

But the acid test ratio indicated very good short-term liquidity position of the company. The cause of that result of the ratio analysis was due to exclusion of the inventory from the total current assets. Further the study concluded that the inventory contributed only (average) 17.92 percent in gross working capital, which indicated optimum utilization and maintenance of inventory.

Govind D. Rao\textsuperscript{37} conducted a research on working capital management through fund flow statement analysis. The objective of the study was to examine the causes of change in working capital. The study carried on four cement manufacturing companies. It covered the period from 1990-91 to 1993-94, the data of the sample companies were collected from published annual reports.

Ratio analysis and fund flow statement techniques were adopted to interpret the financial data. As per study the size of working capital showed an increasing trend in all the cement companies except one i.e. Naroda Cement Limited. The increasing trend was highest and fastest in Gujarat Ambuja Cement Limited.

The current ratio in all cement companies was more than standard norm 2:1. Changes in working capital were mainly depending on two variants, first source of funds and second application of funds.


Sharma\textsuperscript{38} in his study analyzed that the various methods and techniques of financial analysis selected by the textile industry of the accounting and control of various constituents of current assets in all aspects of textile units in India for a period from 2002-2006. It may be concluded that the existing management of current assets accounting in all the textile companies selected for this study was not satisfactory and needed improvement in all the directions immediately. Today, manufacturing units of several other industries are using modern techniques of current assets accounting and the textile industry should not lag behind.

Swami H.R\textsuperscript{39} in his study on “Materials Management in Public Sector Undertakings” took five sectors enterprises in the state of Rajasthan. The study unveiled that the inventory alone constituted by 61 percent of total current assets during the period (1978 to 1982). The growth of inventories during period found to be very high indicating no control. The study concluded that the materials management in selected companies was not satisfactory and recommended for improvement through continuous monitoring and necessary action.

Kamta Prasad Singh et.al\textsuperscript{40} made an attempt to examine various aspects of working capital management in fertilizer industry in India during the period 1978-79 to 1982-93. Sample included public sector unit, Fertilizer Corporation of India Ltd. (FCI) and its daughter units namely Hindustan Fertilizers Corporation Ltd., the National Fertilizer Ltd., Rashtriya Chemicals and Fertilizers Ltd. and Fertilizer (Projects and Development) India Ltd. and comparing their working capital management results with Gujarat State Fertilizer Company Limited in joint sector. The research methodology was specially based on ratio analysis, the study disclosed that inefficient management of working capital was to a great extent responsible for the losses incurred by the FCI and its daughter units, as turnover of its current assets had been low. FCI and its daughter units had high proportion of inventory in respect of each of its components particularly stores and spares. Similarly, quantum of account receivables had been excessive and their turnover was very low. However, cash and bank balances held by FCI and its daughter units had been much

\textsuperscript{40}Kamta Prasad Singh, Anil Kumar Sinha and Subas Chandra Singh (1986), Management of Working Capital in India, \textit{Janaki Prakashan}, New Delhi.
lower in relation to operation requirements. So far as financing of working capital was concerned, long-term funds had been financing a low proportion of current assets due to rapid increase of current liabilities. The profitability providing an internal base for financing of working capital had been very low in these units.

Smith\textsuperscript{41} has carried out two studies. His first study elaborated dual goal of profitability and liquidity and proposed that the task of financial managers is to attain a trade off between the two. He highlighted his suggestion by using the rate of return on equity investment as a measure of profitability and net working capital and current ratio as a measure of liquidity. He presented their model in which current assets and current liabilities were directly related to sales of firm. His second study related to profitability versus liquidity trade off in working capital management. The study suggested that the parallel monthly predictions of profitability and liquidity could be useful in evaluating trade off between those two goals. This study also described individual and collective effects of accounts receivables, inventories, accounts payable, and other accruals on profitability and liquidity.

Shah\textsuperscript{42} carried out a research on problems of working capital management in Pharmaceutical Industry in Maharashtra state. The objectives of the study were to analyse and evaluate working capital management policies and to examine the structure and management of inventory, receivables and cash performances of selected Pharmaceutical Companies in state of Maharashtra. He selected 13 Pharmaceutical Companies on the basis of judgment sampling. His period of the study was ten years from 1989-90 to 1998-99. His study was based on secondary data which was collected from annual reports, CMIE and other published Journal and Bulletin of Reserve Bank of India. He used decennial average percentage for analyzing the financial data. His main findings were as follows:

1. Inventory formed the second largest component of working capital. It was on average of 45.80% of total working capital of the selected pharmaceutical units in the state of Maharashtra during the period from 1989-90 to 1998-99.


2. Receivables formed the largest component of working capital and constitute a very substantial portion of the current assets. It varied between 43.03% and 50.08%. The overall average percentage of receivables to current assets was 46.15% during the period under study.

3. Cash occupied the third place in order of importance among the different components of working capital.

4. The overall size of net working capital of sample units had maintained a rising trend throughout the period under study.

Lastly, he suggested the management of the pharmaceutical companies should go for innovative techniques and professionalism of working capital management and need to look for option available, rather than confining to tradition.

John J. Hampton\textsuperscript{43} examined working capital as the functional area of finance that includes all the current accounts of the concern. It is concerned with the level of risk posed by current liabilities as well as the adequacy of current assets. He also suggested that the firm’s policies for managing its working capital should be framed to attain three goals such as adequacy of liquidity, minimization of risk and maximization of firm value.

Agarwal\textsuperscript{44} also examined working capital management on the basis of sample of 34 large manufacturing and trading public limited companies in ten industries in private sector for the period 1966-67 to 1976-77. Ratio analysis technique had been used for the purpose of analysis, the study concluded the although the working capital per rupee of sales exhibited a declining trend over the years but still there appeared an enough scope for reduction in investment in almost all the segments of working capital.

A downward trend in cash turnover and an upward trend in cash to current assets ratio showed the accumulation of idle cash in these industries. Almost all the industries had overstocking of inventories i.e. raw materials shown by increase in the share of raw material to total inventory while share of semi-finished and finished goods came down. It also showed that long-term funds as a percentage of total working capital reported an upward trend, which was mainly due to restricted flow of bank credit to the industries.


Viqar Ali Baig conducted an important study on Working Capital Management: A Comparative Study of Different Ownerships, the main purpose of his study was to report comparative findings of a survey of working capital management practices of selected agribusiness firms from dairy co-operatives, private and MNC dairy firms. His study was also an attempt to know the effect of the ownership, government regulation, managerial empowerment and cultural factor on the working capital decision making. A sample of three state dairy co-operatives, three private dairy and three MNC dairy firms was taken for the study. The finding on working capital level of investment and short-term financing signaled that these firms’ policies of short-term financing are working well. He concluded that the managers are more involved in the control function, which is evidenced by the strict control mechanisms imposed over the levels of cash, receivables and inventory as well as operations of cash collections, cash payments, purchases and sales.

Ali made an attempt to examine the determinants of leverage of Indian textile firms using panel data analysis. He collected the sample of 170 Indian textile companies listed on the Bombay Stock Exchange covering the period from 2006 to 2010. He deployed three alternative methods of penal data regression i.e. pooled-ordinary least squares (OLS) method, fixed effects method, and random effects method to estimate the model of leverage. He concluded that firm size, growth, non-debt tax shields, profitability, and asset tangibility had strong significant influence on firm’s leverage. The positive effect of firm size, tangibility and a negative effect of firm growth, and profitability, on leverage confirmed the predictions of capital structure theories. His study had delivered some insights into the financing behavior of Indian textile firms. Nevertheless, his study covered only the determinants of long term debt-to-assets of sample textile companies.

1.3 Recommendation of Working Capital Committee

In recent years banks have placed several limitations on the flow of bank credit for working capital needs to the industries. For this purpose of controlling working capital loans, the Reserve Bank of India has framed many rules and regulations. Various study groups were appointed to review the procedures and suggest recommendations to regulate the liberal flow of bank credit for working capital needs.

The Dehejia study group\textsuperscript{47} detected that in the absence of any restraint on bank credit, industry used to avail of bank credit much more than specified by production performance. The excessive dependence of industry on bank credit for working capital requirements is not desirable and the industry should find alternative modes, especially internal long term sources for meeting a maximum portion of working capital. The study group also suggested that this would be possible for improving the shortcomings of the present lending system of banks by introducing the much needed discipline in credit utilisation and disbursement.

Tandon Committee\textsuperscript{48} was appointed by the Reserve Bank of India to achieve the objectives recommended by Dehejia study group. Tandon Committee framed the guidelines for follow up bank credit for working capital requirements. It suggested three methods for calculation of permissible bank credit limit for working capital. First method for MPBF is 75% of (CA-\(CL_E\)), second method for MPBF is (75% of CA) – (\(CL_E\)), and third method for MPBF is 75% of (CA-CCA) - (\(CL_E\)).

Where,

MPBF-Maximum Permissible Bank Finance, CA-Current Assets, \(CL_E\) – Current Liabilities Excluding Bank Finance, CCA-Core Current Assets

The methods are based on that the working capital should increasingly be financed by the company out of its own funds (internal long term sources). This would be result in reduction of bank credit.

The Chore Committee\textsuperscript{49} was constituted in 1979 only for keeping in view to study the sanctionable limits of the banker, to re-examine the cash credit system and to check the prevailing style of bank credit and contemplate the effectiveness of the monitoring and follow-up system adopted by banks. This committee has advised that banks should follow the second method of lending recommended by the Tandon Committee in assessing bank credit limits and no frequent sanction of ad hoc limits of borrowing from bank.


The Marathe Committee\textsuperscript{50} was appointed to re-examine the working of cash authorization scheme from its operational aspects point of view. The committee had noticed that the basic purpose of Credit Authorization Scheme (CAS) was to ensure systematic credit management and amend the quality of bank lending so that all borrowings were in commensurate with the policies and priorities framed by the Reserve Bank of India.

Apart from above committee review Chakravarty Committee in 1985, Narashimham Committee in 1991, Vaz Committee in 1993, Jilani Committee in 1993, Kanan Committee in 1995 etc. were constituted, but at present RBI has withdrawn all its instructions relating to MPBF and every bank is volunteer to determine its loan policy in respect of each broad category of industry. Bank can also adopt turnover method, cash budget method, MPBF or any other method for evaluating the credit requirement.

2.4 Approach Chosen for the Study

From the above review, the approaches of Dr. Vivek Sharma\textsuperscript{2}, Agrawal\textsuperscript{3}, John J. Hampton\textsuperscript{43}, Shah\textsuperscript{42}, Aruna Saini and Ram Dhan Saini\textsuperscript{5}, Tandon Committee\textsuperscript{48}, Janaki Ramudu P.\textsuperscript{1}, Bardia S. C and Sweta Kastiya\textsuperscript{6}, Palani A. and Yasodha P.\textsuperscript{8}, Solanki Ashvinkumar H.\textsuperscript{9}, Mustafa Afeef\textsuperscript{42}, Jani, Virendra C.\textsuperscript{30}, Zahir Ahmad\textsuperscript{14}, Sidharth G. Das\textsuperscript{23}, Roshan Patel\textsuperscript{35}, Kamta Prasad Singh et.al\textsuperscript{40}, Amit K. Chakraborty\textsuperscript{36}, and Mauleshkumar N. Joshi\textsuperscript{13} have been considered in the study to evaluate, analyse and interpret working capital management and policy of textile manufacturing companies in Gujarat.

It is crystal clear from the review of the literatures in the field of working capital management and its policy that research studies in this particular field of financial management are quite limited. Current study is undertaken on an in-depth study of working capital management and its policy of selected manufacturing textile companies in Gujarat. No single study has thrown light on working capital policy and management of textile units in Gujarat. Thus, this study will be covering a major aspect of working capital management and its policy in textile industry of Gujarat state.