CHAPTER II

REVIEW OF RELATED LITERATURE AND RESEARCHES

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A good researcher has to keep abreast of the current knowledge about what and how much work has been done in the field related to the current study and where more exploration is needed. For a deeper insight and a clear perspective of a research work, reviewing of related literature is of great importance. A review has been undertaken in order to perceive the problem in its proper perspective. Such a review would not only provide the researcher with a sound rationale for the current study but also help in defining the frontiers of his field, producing a more definitive Statement of the problem. It also helps in establishing the relationship between the completed research in the field and the specific topic undertaken for research. A proper review of related literature helps, to a great extent, in identifying the problem, developing a research design and determining the size and scope of the problem. Therefore, an overview of the past studies is of great importance.

Dr. D. Chandra Bose and Dr. K. C. Sankaranarayanan[1] made an important study on the Working Capital and Inventory of an Undertaking. The object 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 as follows.

i. For an efficient and smooth production and distribution activities of an industrial unit adequate working capital is required.

ii. It is the duty of the finance manager to control working capital position at the optimum level by maximising the profitability without impairing the liquidity of the concern.

iii. Setting the optimum level of working capital requires an exercise to determine the level of current assets where total cost is minimum.

iv. Out of the various current assets, inventories constitute an average 90% of the working capital. Thus managing working capital is synonymous with controlling inventories.

v. The length of operating cycle has a direct bearing on the amount of negotiated working capital. The longer the length of operating cycle, the larger will be the amount of negotiated working capital. Consequently efficiency lies in reducing the length of the operating cycle.

Vijayakumar and Venkatachalam[2] conducted an important study on the Demand for Working Capital in Private Sector Sugar Industries of TamilNadu. The purpose of the study was to investigate the demand for cash, inventories, receivables, gross working capital and net working capital. The analysis of this study determines empirically whether transactions relating to working capital including cash and inventories vary proportionately or not to the changes in the volume of sales. For the purpose of study private sector sugar industries registered in the TamilNadu were selected on the basis of the availability of data. Econometric models are used to describe the demand for working capital and its various components. The main findings of the study were as follows.

i. The transactions for demand for cash vary proportionately higher than the changes in volume of the sales.

ii. Sales elasticity is more than unity indicating the diseconomies of scale with respect to investment in working capital and its components like cash, inventories and receivables.

iii. The sales elasticity of cash and inventories are constantly more than unity, suggesting diseconomies of scale. It shows that fluctuations in cash and inventory levels depend significantly on fluctuations in their financial carrying costs. However, the effect of it on cash balances is not statistically significant.

iv. The effect of capital cost on receivables, gross working capital and net working capital shows that the sign of interest rate of co-efficient is not only negative but also statistically significant in all these cases except receivables.

v. The target level of receivables is least sensitive and inventory is much more sensitive to capital cost fluctuation.

They suggested that the demand for working capital and its components is a function of both sales and its holding costs.

M. Subramanya Sarma and Thiruvengala Chary[3] carried an important study on Working Capital Management in Vazir Sultan Tobacco & Company Ltd. The period of study was from 1989 to 1996. The purpose of the study was to examine the trends in current assets investment and financing patterns of working capital and to appraise the effectiveness "of working capital management with the help of selected accounting ratios in the Sample Company. The methodology adopted was mainly based on the analysis and interpretation of the annual reports of the company. The findings of the study are as follows:

i. There was a disproportionate increase in current asset investment in relation to sales resulting a sharp decline in working capital turnover ratio.

ii. There was no consistent policy of changing investment inventory and inventory turnover ratio also declined in the five out of the eight years of the study.

iii. During the last two years of the study the quick ratio was much higher than the generally accepted norm. This is due to the sudden decline of inventory investment and a sharp increase in current assets.

iv. Credit policy was highly volatile with increasing risk of bad debts.

They suggested that the company needed to consolidate its policies relating to management of cash and credit to improve profitability. Further in the light of profitability they suggested that there is an ample scope to shift its emphasis from a more conservative outlook to a more optimistic one.

Mohd. Aamir Khan[4] conducted an important study on Working Capital Management at Escorts for a period of five years from 1992 to 1996. The purpose of the study was to find out the extent to which working capital has been efficiently managed in different companies of the automobile industry and also the aspects of inefficiency in this regard. The data about the company policies were collected through a detailed questionnaire, annual reports and from CAPITALINE and CMIE of sample companies. The ratio analysis technique is used to analyse and evaluate the performance of working capital. The main findings and suggestions of the study are as follows.

i. The companies are not using real professional assistance and are not using scientific analysis effectively to efficiently manage the working capital. Although they have been emphasising on coordination and joint decisions, in reality they are done independently. Decisions are taken on a short term perspective and its viability and the impact for long term for expansion and replacement are not given due consideration.

ii. Most of the companies study the past trends of different components of working capital and try to take decisions on that basis.

iii. The companies rely more on bank borrowing and do not try to generate funds from internal sources.

iv. Cash planning is not effective and they are finding it difficult to procure from operations leading to overtrading. The companies are not clear in determining cash levels.

v. The companies are becoming strict regarding collections. But the credit terms of the companies were varying. A major portion of current assets is blocked in advances.

Siddharth G. Das[5] made an important study on Working Capital Turnover in pharmaceutical companies in India. He covered a period of ten years from 1981 to 1990. The purpose of the study was to ascertain the use of working capital with relation to sales efficient or otherwise. He selected 15 large Pharmaceuticals public Ltd. Co. The data of sample companies were collected from the Bombay Stock Exchange Official Directory. The methodology adopted was mainly based on the ratio analysis and it evaluated the performance of working capital. The main findings of the study were as follows.

i. The overall working capital turnover ratio of all the firms was 9.03:1.00 which was more than the suggested norm of 5:1 by experts. This reveals the efficient use of working capital by the pharmaceutical firms.

ii. Except a few, all companies were active to assume risk and reduce the size of working capital in relation to sales. This resulted in an increase in the working capital turnover ratio.

iii. Most of the pharmaceutical companies had maintained the size of working capital sufficient to the requirements of production and sales.

Loyd C. Heath[6] made an important study on the presentation of items of Working Capital i.e. current assets & current liabilities. The purpose of the study was to suggest better presentation of current assets and current liabilities for evaluating a company's solvency. Even though the study was not specifically related to the analysis of the working capital position but the suggestions made by him for better presentation of current assets and current liabilities are very useful in evaluating the company's solvency. He suggested that the order of assets have no particular significance. Assets should be arranged in the conventional order. The practice of classifying assets into current & non-current should be discontinued. The two important suggestions made by him for better presentation of current assets and current liabilities are:

i. Disclose the timings and amount of cash receipts and payments from receivables and payables.

ii. Classify liabilities on the basis of sources of credit. Credit available from negotiated sources and spontaneous sources should be shown separately.

Amit Mallick and Debasish Sur's[7] study on Working Capital and Profitability made an empirical study of Assam Frontier Tea Industries Ltd. (AFT Ltd.) for assessing the impact of working capital on its profitability during the period 1986-87 to 1995-96. The data of sample company was collected from The Bombay Stock Exchange Official Directory. Classification and tabulation of the financial data was done as per the requirement of the study. Ratio analysis technique of accounting and Karl Pearson's correlation coefficient technique of statistics are used to analyse and interpret the data. The main findings of the study were as follows.

i. There was a high degree of negative correlation between return on investment and working capital turnover ratio and return on investment and acid test ratio. This indicates that, greater the margin of safety to the short-term creditors, the lower the profitability of the company.

ii. There was a positive correlation between Return on Investment and Current assets to Total assets ratio which indicates that the financing through current liability is less costly than long term financing source.

iii. The relation between Return on Investment and Current assets to Sales ratio showed high degree of negative correlation. It indicates that the lower the current assets to sales, the greater is the efficiency of employment of working capital and larger the scope of profitability.

iv. The correlation coefficient between return on investment and working capital turnover ratio indicated positive correlation. This indicates that the faster the working capital turnover ratio, the lower the investment of working capital and greater the profitability.

v. There was a positive correlation between return on investment and cash turnover and return on investment and miscellaneous current assets turnover ratio. This revealed that larger the turnover higher the profitability.

vi. The working capital leverage of the company recorded a fluctuating trend during the period under study. It ranged between 0.68 in the 1991-92 and 0.20 in the year 1993-94. The working capital leverage was always less than unity. Hence, the increase in the profitability of the company was less in proportion to the decrease in working capital.

Dr. V. Gangadhar[8] conducted an important study on the Financial Analyses of Companies in Eritrea: a profitability and efficiency focus. The purpose of the study was to analyse the profitability, the liquidity and long-term solvency position of the companies between 1992 and 1996. The other purpose was to test the efficiency of assets used of the companies. For the purpose of study, two companies namely Asmara Breweries Ltd. (ABF) and Asmara Wine and Liquor Factory Ltd. (AWL) were selected. The data of sample companies were collected by personal interview, brochures and accounting records and from the audited financial Statements of the companies. The methodology adopted was mainly based on the simple statistical technique and ratio analyses. The main findings of the study were as follows.

i. The sales efficiency was significantly higher in Asmara Breweries Ltd. than Asmara Wine and Liquor Factory Ltd.

Assets efficiency was higher in Asmara Wine and Liquor Factory Ltd. than Asmara Breweries Ltd.

ii. The liquidity position of the companies was quite alarming, since their proportions between current assets and current liabilities were very low. Both companies were not maintaining sound liquidity position.

iii. The ratio of cash to operating expenses indicates that Asmara Breweries Ltd. has been holding excessive cash balance than require, while Asmara Wine and Liquor Factory Ltd. has been holding very low cash balance than required.

iv. The debtor turnover was strikingly higher in Asmara Wine and Liquor Factory Ltd. than in Asmara Breweries Ltd. It had increased significantly and indicated the good symptom of the debtor's management.

Inventory Turnover Ratio was uniform in both the companies.

Dr. V. Gangadhar suggested that:

i. The management of Asmara Breweries Ltd. had to pursue the policy of maximising assets efficiency, by putting to use all the assets to their full capacity to optimise the sales. Whereas, the management of the Asmara Wine and Liquor Factory Ltd. has to strive for maximising the sales efficiency by generating maximum profit by introducing cost minimisation and cost efficiency techniques.

ii. The companies should improve the liquidity position either by reducing excessive burden of current liabilities or increasing the level of current assets depending upon the requirements.

iii. Management of Asmara Breweries Ltd. has to make use of surplus cash by investing in profitability opportunities and adopt modern technique to minimise the cost of such funds.

R. L. Hyderabad[9] made an important study on Working Capital Leverage Management. The purpose of the study was to throw light on the concept of working capital leverage and its significance, measurement and conditions for its operation in an enterprise. For the purpose of study, three Indian private sector firms, namely Essar Steel Ltd., Raymond Ltd. and BPL Ltd. were selected. The data was collected from the annual reports of the companies. The methodology adopted was mainly based on the ratio analyses. The main findings of the study were as follows.

i. The ratio of fixed assets to working capital was 2.43 times, 1.03 times and 0.57 times, while return on capital employed was 5.35%, 8.48% and 10.34% in Essar, Raymond and BPL Ltd. respectively.
ii. When working capital level was reduced by 25%, the industries having a low ratio of fixed assets to working capital gained more due to a high degree of working capital leverage than those having high fixed assets to working capital ratio.
iii. When working capital level was increased by 25%, a company with higher fixed assets to working capital ratio suffered more due to a high degree of working capital leverage than the companies with a lower ratio.

He suggested that any enterprise should reduce / minimise the requirements of working capital level for a given sales or output than to increase the working capital level for the same sales or output.

Maxwell, Charles E., Gitman, Lawrence J., Smith and Stephanie A. M.[10] conducted an important study on Working Capital Management and Financial- Service Consumption. The data was collected through questionnaires. The aim of the study was to determine the significant changes that had occurred in the short-term financial management practices of major US firms and foreign firms and domestic firms between 1979 and 1996. The main findings of the study were as follows.

i. There was a decline in the number of banks used for checking and collection related banking services between 1979 and 1996 due to improved cash management services available from banks and banking networks.

ii. Cash management policies in use had not changed materially but improved technology helped firms to alter the methods used to collect their account receivables and to pay their account payables and now the use of float in both collection and disbursement depends more on mail time than it used to be in the past.

iii. Foreign firms significantly used fewer bank services than US firms.

iv. Foreign firms used fewer inter company wire fund transfers, automated clearing houses transactions, zero-balance accounts, and short-term investment services than their US counterparts.

Vijayakumar & Venkatachalam [11] conducted a major study on Operational Adequacy of Working Capital of the Sugar Industries of Tamil Nadu. The purpose of the study was to determine the operational adequacy of working capital with the use of Bivariate

Discriminant Analysis Approach. The study covered the period from 1982-83 to 1993-94. The data of sample companies were collected from the published annual reports of the companies. The methodology adopted was mainly based on ratio analysis and linear discriminant analysis with only two sets of independent variables. The main findings of the study were as follows.

i. Out of ten selected units, except 2 units, all units had maintained an adequate size of working capital in relation to sales and operational requirements during 1990-91 and 1991-92.
ii. The number of good and poor risk units as per current ratio and as per discriminant score reveals that 3 units appeared to be a "good" risk in all the selected years. No units appeared to be "poor" risk in all the selected years.
iii. The size of net working capital was more than the operational and sales requirements.

They suggested that Discriminant Analysis is a very useful technique to analyse the adequacy of working capital of the business enterprises.

. The purpose of R. A. Yadav's [12] study on Working Capital Management was to determine the key parameters of effective working capital management so that current operational practices in formulating the policies of working capital management may be improved. The two crucial determinants of corporate health which influence the working capital management, are liquidity and profitability. The data of sample companies were collected through annual reports. Ratio analysis technique and statistical techniques were used to analyse working capital management. The sample of the study concerned 78 companies consisting of 39 sick and 39 non-sick companies. The main findings of the study were as follows.

i. Three ratios namely cash flow to tangible assets, net sales to total tangible assets and defensive assets to total operating expenditure were given more weightage in appraising the effectiveness of working capital management.

ii. The ratio of cash flow to total tangible assets was the most significant ratio followed by net sales to total tangible assets in classifying the company into two groups 'Non-effective' and 'effective' companies in working capital management.

iii. The use of discriminant model could enhance the quality of appraisal system in the management of working capital at the corporate level.

He suggested that bank and other credit granting institutions could also use discriminant model more effectively for monitoring the performance of working capital management.

C R Sathyamoorthi[13] conducted a study on the Cash flow of selected medium scale enterprises in Botswana. The study covered the period from 1994 to 1996. The purpose of the study was:

a) To differentiate between profits from trading operations and the operating cash flow.

b) To examine the pattern of cash inflow from various activities and to identify the areas where such funds were utilized.

c) To measure the dependence on external borrowing to finance business activities.

d) To explain the reasons for the favorable and unfavorable cash balances at the end of the accounting period.

The data were collected from the published annual reports. The main findings of the study were as follows.

i. The operating cash flow to fall from year to year. The operating cash flow a showed a growing tendency of the selected medium scale fell by 21 % in 1995 as compared to 1994 and by another 10 % in 1996 as compared to 1995.

ii. The amount of dividend paid declined from 20 percent in 1994 to 15 percent in 1995 and further to 14 percent in 1996. It had declined due to fall in operating cash flow from trading activities.

iii. Companies were initially financed by share capital and later additional finance was raised through long-term borrowings.

iv. Payment of tax had increased from 11 percent in 1994 to 17 percent in 1996. This variation was due to changes in tax rates from year to year.

v. The medium scale enterprises spent invariably the same amount on investing activities in all three years. The percentage stood at 69 percent in 1994, 72 percent in 1995 and 69 percent in 1996. It indicates that selected units were in the process of expansion.

vi. Thé long-term borrowings increased by 60% in 1995 as compared to 1994 and by another 4% in 1996 as compared to 1995. This was not definitely encouraging to medium scale enterprises as the tendency to borrow more led to serious financial problems.

vii. The operating cash flow to borrowing ratio indicates that it had raised almost 13% of the operating cash flow as borrowings to finance its activities. This percentage continued to increase from 26% in 1995 to 29% in 1996.

viii. The sources of cash ratio show that operating cash flow constitutes the major source of cash inflow for these enterprises. The percentage contribution decreased from 79 percent in 1995, 76 percent in 1996. Long-term borrowings on the other hand, stood at 10 percent in 1994 but increased to 20 percent in 1995 and 22 percent in 1996. There was a shift insurance of cash flow from operating cash flow to long-term borrowings.

He suggested that the medium scale enterprises did not encourage borrowing more as it could lead to serious financial problems. Another suggestion was that the growing tendency of operating cash flow to fall, from year to year was not a healthy sign as this is considered to be the major source of cash flow for any business. The results of his study also show that the selected medium scale enterprises were in the process of expansion.

Mousumi Ghosh[14] made an important study on Bad goods control in food processing units. The purpose of the study was to build the control mechanisms at all points of the supply chain after a thorough system study. Precisely these controls should aimed at:

1) Maintaining optimum inventory levels.
2) Ensuring first in first out (FIFO) principles.
3) Preventing generation of bad goods.

The main findings of the study revealed that in a particular year, bad goods were equivalent to almost 25% of the net profits and 1.27% of the turnover.

It was also observed that more than 80% of the bad goods were due to the aging of stocks.

In order to prevent the accumulation of bad goods, the researcher suggested that

i. Stock rotation should be expedited. Prevention of aging of stock should be a part of the company work culture. Systems, controls, rewards and punishment were the ways of preventing aging of stock. Incentives schemes have to be critically examined and their impact on regular packs have to be estimated.

ii. Customer perception about aging of non-expired stocks has to be gradually changed. Successful blending of internal and external strategies can lead to reducing inventory related problems.

iii. Norms must be adhered to and a 'maximum inventory level at CD' should be kept to identify stocks which require action.

iv. Monthly aging reports should be acted upon, the cause of aging should be identified found and effort should be made to counter it.

v. Periodic inspection by branch personnel which checks the control mechanism on a random basis, may prove beneficial. This does not consume much time and it can be carried out once a week.

Dr. D. S. Chundawat and Dr. Shurveer Singh Bhanawat[15] made an important study on Working Capital Management practices in Industrial Development Bank of India assisted Tube and Tyre companies. Industrial Development Bank of India provided financial assistance to six tube and tyre companies in India. The period of study was from 1993-94 to 1997-98. The data of sample companies were collected from the published report on "Financial Performance of Industrial Development Bank of India assisted companies in the private sector 1997-98". The methodology adopted was mainly based on ratio analyses technique and Shrivastava and Yadav model. The main findings of the study were as follows:

i. The short-term liquidity position of the Industrial Development Bank of India assisted companies in terms of current ratios and quick ratios can be considered good as compared to tube and tyre industry as a whole, but both these companies never satisfy the standard norms suggested by experts.

ii. The tube and tyre industry succeeds in the effective use of working capital in terms of sales.

iii. Approximately one-third of the current assets is invested in the form of inventory and two-third is invested in the form of trade receivables in both the companies. Only 7% of the current Assets are in the form of cash and bank balances and other current assets.

iv. The average collection period between 58 days to 84 days revealed liberal credit policy followed by the management of both the companies. Large size of book debts gave rise to increase in average collection period.

They suggested that regular decline in the current ratio may lead to sickness. There is a need to review their credit policies in light of profitability and liquidity.

G. S. Batra and A. K. Sharma[16] study on Working Capital Management in Corporate Sector. The period of study was from 1989-90 to 1993-94. The purpose of the study was to analyse the working capital management practices in Goetze India Limited. The data of sample companies were collected from the annual reports.

The methodology adopted was mainly based on ratio analyses. The main findings of the study were as follows:

i. The operating cycle showed a fluctuating trend through out the period under study.
ii. Systematic cash budgets were prepared by the management on monthly basis to meet unexpected requirement. There was an effective control over cash. A continuous check of all the cash and bank balances was made and reported to the top management frequently.
iii. There was an excess investment in inventories and it was not managed as effectively as it should have been.
iv. The concern was relying too heavily on trade creditors which could prove risky in the long run and
v. The ratio of loans and advances to gross working capital fluctuated with in the range of 0.14 to 0.74. Low ratio indicates better management of loans and advances.
vi. The credit period between 45 days to 60 days indicated the liberal credit policy followed by the management.

They suggested that:

i. Greater attention was required in the inventory control and general stores where raw materials and consumable articles were often found continuously growing, large write downs at the time of physical inventory taking was needed.
ii. The firm should activate sales departments so that more number of dispatch orders are received in time.
iii. The firm should try to find ways and means to improve the collection period. There is a need to review their credit policies in the light of profitability and liquidity.

iv. The firm should try to reduce trade creditors as long as it does not impair the profitability.

The Reserve Bank of India[17] completed an important study on the finances of large and medium public limited companies including pharmaceutical companies for a period of 9 years from 1989-90 to 1997-98. The companies, under study were selected on the basis of the availability of data. Methods of analyses were based on the analysis of the Balance sheets and Income & Expenditure of the pharmaceutical companies for the period under study. The main findings were as follows:

i. The average percentage of inventory to current assets was 39.10%. The average percentage of receivables to current assets was 53.56%and the average percentage of cash & bank to current assets was 7.34%.

ii. The average current ratio of the industry 2.01 times and acid test ratio of 1.01 times were with in the standard norms.

iii. The structure of inventory indicates that raw material to total inventory was 31.07%, work- in- progress to total inventory was 18.50%, finished goods to total inventory was 32.01% and stores and spares to total inventory was 15.04%.

iv. The average of raw material turnover ratio was 7.52 times. There was an increasing trend through out the period under study. In terms of raw material holding period it was on an average of 49 days and showed a downward trend through out the period under study. The raw material holding period was 57 days in 1989-90 and declined to 42 days in 1997-98.

v. The average of semi-finished goods turnover ratio of the industry was 17.02 times and had fluctuating trend through out the period under study. In terms of semi-finished goods holding period it was on an average of 22days. It had a downward trend through out the period under study. It declined from 24 days in 1989-90 to 17 days in 1997-98.

vi. The average of finished goods turnover ratio of the industry was 13.31 times. It had a fluctuating trend through out the period under study. The average finished goods holding period was 28days and had declined from 29 days in 1989-90 to 26 days in 1997-98.

vii. The average of stores and spares turnover ratio was 1.65 times and showed a fluctuating trend through out the period under study. The average holding period of stores and spares was 222 days. There was a fluctuating trend. The stores and spares holding period was 227 days in 1989-90, increased to 238 days in 1992-93 and than declined to 223 days in 1997-98.

viii. The structure of receivables indicates that debtors to total receivable were 56.64 %, loans & an advance to total receivable was 31.79 % and other receivables to total receivable was 11.57%.

ix. The average of debtor turnover ratio of the industry was 6.08 times. It means the average debt collection period was 60 days. There was a fluctuating trend and the average debt collection period was increased from 56 days in 1989-90 to 66 days in 1997-98.

x. The average of loans & advances holding period of the industry was 34days. It showed a rising trend and increased from 30 days in 1989-90 to 41 days in 1997-98.

xi. The average of cash to total cash & bank balances was 14.46%, bank balance to total cash & bank balances was 56.58% and marketable securities was 28.96 %.

xii. There was an excess investment of working capital fund in stores & spares which was to be reduced and controlled.

xiii. The current assets were financed at 42% from short-term funds and 58 % from long-term funds. Borrowing was the main source for financing the current assets.

G.V. Chalam and B. V. Manohar Babu[18] made an important study on Working Capital Trends in large Public Limited Companies in Indian Private Corporate Sector. The study covered the period from 1983-84 to 1992-93 The purpose of the study was to analyse the working capital trend in large public limited companies. For their analysis, the industries were divided into six groups. The study was based on the data published by the Reserve Bank of India in its various monthly bulletins from time to time. The methodology adopted was mainly based on ratio analyses. The main findings of the study were as follows:

i. Current assets covered more than ½ of the total net assets in all the large public limited companies in India.

ii. The current ratio and quick ratio were both very low when compared to the ideal norms which implies that these industries were not maintaining adequate amount of liquidity to meet the current obligations.

iii. The ratio of current assets to sales showed an increasing trend which indicates the generation of revenue per rupee of current assets declined over the period under study.

iv. The increasing trend of debtors to sales ratio indicates liberal credit policy followed by the management of Indian Industries.

v. Inventory to sales ratio indicates a steady performance maintained by the Indian Industries in converting inventory in to sales.

vi. The inventory to volume of production ratio shows a declining trend which indicates that the different groups of industries managed their production activity efficiently.

vii. Inventories and debtors occupied equal place in total current assets and therefore management found it an additional strain to manage funds to run the business operations.

They suggested that:

i. There was a need to manage inventories and debtors skillfully and efficiently and bring down their levels with out affecting production and sales. In order to reduce the levels of inventories and debtors a significant change in the policy of working capital management is required.

ii. To manage the working capital effectively the operating and other required budgets should be prepared by the respective levels of the management on short-term and long-term basis. While preparing these plans, different people concerned with these functions should be involved so that the management can easily get their co-operation in achieving the targets.

D. Govinda Rao[19] made an important study on Working Capital Management through Funds Flow Statement Analysis. The purpose of study was to examine the causes of change in the working capital. The study included 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. The methodology adopted was mainly based on ratio analysis and funds flow Statement. The main findings of the study were as follows:

i. The size of working capital showed an increasing trend in all the cement companies except one i.e. Narmada Cement Limited. The increasing trend was highest and fastest in Gujarat Ambuja Cement Ltd.

ii. The current ratio in all the cement companies was more than the standard norm 2:1. The mean value ranged between 2.30:1.00 to 2.74:1.00. The range of current ratio indicated that the companies adopted a standard working capital policy.

iii. Changes in working capital were mainly bivarate, viz. (a) sources of funds and (b) application of funds. The probable causes of the increasing in fund flow were increase in share capital followed by reserves and surpluses, secured and unsecured loans etc. Wholes the applications of funds are mainly due to purchase that have fixed assets, followed by redemption of loans, redemption of debenture etc.

D. Govinda Rao and P. M. Rao[20] study on Impact of Working Capital on Profitability in Cement Industry. Analysed the impact of profitability on working capital in Associated Cement Companies Ltd. (ACC). It covered a period of nine years commencing from 1985-86 to 1993-94. The data of Sample Company was collected from published annual reports and accounts. The methodology adopted was mainly based on ratio analysis and Karl Pearson's coefficient of co-relation. The main findings of the study were as follows:

i. The average current ratio 1.53:1.00 and quick ratio 0.99:1 indicated that the company had adopted a conservative working capital policy. Both ratios showed a positive correlation with the profitability.

ii. The average cash position ratio 0.11:1 was less than the standard norm of 0.25:1. It showed a negative correlation between cash profitability and less significantly. These two moved in opposite direction.

iii. Working capital turnover ratio on an average of 9.25 times over the period indicates the efficient utilisation of working capital.

iv. Inventory turnover ratio on an average of 6.73 times indicates lesser funds utilised to finance the inventory.

v. Debtor's turnover ratio 13.46 times reveals efficient management of debtors.

vi. Working capital to total assets 24.03 % on an average showed that lesser fund is used to finance the net current assets.

vii. Profit before tax to total assets ratio showed that the company had earned sufficient returns from the business activities.

They suggested that the management of working and its control is not the task of the manager of a firm. It needs continuous review and great care and prudence. Right monitoring is essential. The relationship of all these variables with constant should be studied and inferences should be drawn.

M. S. Narsimhan[21] made an important study on, "Towards Better Receivables". The purpose of study was to examine the system of receivable management and credit policy by evaluating credit models. It covered a period of five years commencing from 1994 to 1998. The data of Sample Company was collected from published annual reports and accounts. The methodology adopted was mainly based on Decision Tree Approach and Multivariate

Statistical Model. He took a detailed look at receivables management and suggested certain steps towards better receivables management system.

The main finding of the study was that investments in receivables have grown up at an average compounding rate of 15% during this period. For many companies, the growth rate is much larger and also greater than the growth rate of investments in fixed and other current assets. Firms are demanding more credit from banks and specialised institutions to deal with receivables. This conclusion was derived after a lot of on going discussion in the Indian industry on how to cut down the investments in inventories through concepts such as Just-in-time (JIT), MRP, etc.

He suggested distinct receivables management system should consist of developing suitable credit policy, credit evaluation models and credit monitoring. The use of credit policy and credit analysis was to restrict the operational managers in dealing with day-to-day activities of the firm. It further concludes that credit policy and analysis provide a lot of strategic inputs. Credit policy of an organisation has to be in line with the desired strategy that the organisation wants to pursue in order to gain certain competitive advantages.

Roshan Patel[22] made an important study on Financial Appraisal of selected Steel Companies in India. The objectives of study were to analyses the profitability of steel industries in India. He also analyses the liquidity, short-term solvency and the efficiency of working capital management of the steel industry in India. He covered a period of ten years commencing from 1985-86 to 1994-95. The data of Sample Industry was collected from Bombay Stock Exchange Official

Directory. The methodology adopted was mainly based on ratio analysis.

The main findings of the study were as follows:

i. The current ratio was below the standard norm 2:1 and liquidity was unsatisfactory.

ii. The quick ratio was also below the standard norm 1:1 and absolute liquidity was also unsatisfactory.

iii. The average cash to current assets ratio was only 3.40%. This indicates that the management of steel companies was holding a small proportion of cash in business.

iv. The working capital turnover was satisfactory.

v. The low inventory turnover ratio i.e. 2.33 times indicates unnecessary high investment in inventory.

vi. The upward trend in debt collection period indicates that the efficiency of receivable management decreased in steel industry. It further reveals that the steel companies have changed their credit and collection policy and have moved towards a liberal credit and collection policy.

The CMIE[23] completed an important study on the finances of pharmaceutical companies for a period of 10 years from 1989-90 to 1998-99. Methods of analyses were based on Balance sheets and Income & Expenditure Statement of the pharmaceutical companies for the period under study. The main findings were as follows:

i. The proportion of inventory, receivables and cash to total current assets was 36.47%, 51.88% and 11.64% respectively.

ii. The average current ratio of the industry 1.46:1.00 and acid test ratio of 0.93:1.00 was below the standard norms. It indicates unsatisfactory liquidity position in industry.

iii. The structure of inventory indicates that proportion of raw materials, work-in-process, finished goods and stores and spares to total inventory was 37.75%, 16.39%, 42.37% and 3.48% respectively.

iv. The holding period of raw material was on an average of 66 days and showed a fluctuating trend through out the period under study. It was 74 days in 1989-90 and it declined to 58 days in 1991-92. After that it rose to 86 days in 1998-99.

v. The holding period of semi-finished goods was on an average for 18days. It declined from 17 days in 1989-90 to 14 days in 1991-92 and after that it increased to 28 days in 1998-99.

vi. The average holding period of finished goods was 40 days and had declined from 49 days in 1989-90 to 34 days in 1994-95 and after that it increased to 54 days in 1998-99.

vii. The average holding period of stores and spares was 210 days. There was a fluctuating trend. The stores and spares holding period was 211 days in 1989-90 increased to 297 days in 1998-99.

viii. The structure of receivables indicates that Debtors, Loans & advances and Other receivables to total receivable was 52.86 %, 5.57 % and 41.57 % respectively.

ix. The average debt collection period was 57 days. There was a fluctuating trend and the average debt collection period increased from 48 days in 1989-90 to 102 days in 1998-99.

x. The working capital was financed through 42% from short-term bank borrowings, 30% from funds from operation and 28 % from long-term funds. Short-term bank borrowing was the main source for financing the current assets.

Hazari and Lakhani[24] conducted an important study on the financial structure and the ownership pattern of pharmaceutical companies in the State of Maharashtra. The object of the study was to make an indepth analysis of the financial position including working capital position and to examine the role of foreign capital in the pharmaceutical companies in the State of Maharashtra. For the purpose of study eighty-eight pharmaceutical private limited companies registered in the State of Maharashtra were selected on the basis of the availability of data. The methodology adopted was mainly based on the analysis and interpretation of the annual reports of the pharmaceutical companies and shareholders' lists and directors' particulars for a period of 8 years from 1958 to 1964. The main findings of the study were as follows.

i. Most of the pharmaceutical manufacturing units in Maharashtra, were private limited companies and under foreign control, viz. American, British and Swiss. Most of the Indian owned companies were small trading enterprises and many of them were operating under losses.

ii. About 73% of the share capital of the companies was owned by the foreign companies and individuals. Indian companies held only 14% of the share capital and Indians owned the rest.

iii. Foreign controlled companies had proportionately larger share of reserves than Indian owned companies.

iv. Retained profits had become more important as a source of finance during the period under study.

v. The Indian companies were largely dependent on loan funds than foreign controlled companies. Moreover they relied mainly on unsecured loans and that too mainly from sources other than banks.

vi. The share of current liabilities in total funds was higher than all other sources of finance.

vii. Only one half of the gross total funds raised from long term sources were used for the purchase of fixed assets and the balance was used for meeting the working capital requirements. The Indian owned companies had a smaller proportion of fixed assets and a larger proportion of receivables.

Johri[25] carried out a research study on the corporate behaviour of multinational drug corporations in India during 1973 to1978. He selected 24 multinational drug companies out of 45, with more than 40% foreign equity as of 1974. The main aim of the study was to examine the patterns of behaviour of the multinational drug companies by analysing the various functional policies adopted by them. He analysed the financial policies with the help of financial ratios. The data about the company policies was collected with the help of a detailed questionnaire, personal interviews with the company executives and by referring to annual reports of the sample companies. His findings showed that a majority of the drug companies had followed a rather cautious policy in managing their current assets and current liabilities. Many companies had reduced the current ratio by reducing the size of inventory and accounts receivables and increasing their account payables. The quick ratio indicated that pharmaceutical companies had enjoyed far more lucrative terms of credit from their suppliers than what they themselves offered to their own stockists and distributors. The trend of inventory turnover ratio indicated that the pharmaceutical companies had adopted a tight inventory control in order to avoid excessive inventory carrying costs. Many companies had reduced their average collection period in order to improve their working capital management. Thus, both by reducing the investment in inventories and improving their debt collection, the pharmaceutical companies were managing their short-term finances more efficiently.

Ramchandra and Rangarao[26] made an important study of the pharmaceutical industry in India. Though their study does not deal specifically with the working capital, the conclusions drawn by them have a definite impact on the working capital of the pharmaceutical industry in India. Their main findings were as follows:

I. There were a large number of units in the Indian Pharmaceutical Industry but the core of the industry was dominated by the multinational drug companies operating as Indian subsidiaries with a foreign financial or technical participation. The pharmaceutical industry was far less productive than the industry of other nations gauged from the investment to production ratio. The other nations were producing goods about 15 to 20 times of the investment, whereas India's share in the total world production in pharmaceuticals in 1967 was about 1.4% only.

II. The high cost of drugs in India was mainly due to the high cost of imported raw materials, less efficient processes of production, high managerial expenditure and high advertisement costs etc.

III. The investment in research and development was very essential for the growth of the industry. It was very low as compared to other nations. The percentage of investments in research and development unit in the turnover of total drugs was only 1.1 in 1967.

They suggested that Government laboratories and Government sponsored research institutions should give the lead to the nation's drug industry. They should support the smaller Indian manufacturers who are unable to substantially invest in the research and development activities.

Agrawal's[27] study on cash management evaluated the cash management performance in different industry groups including medical and pharmaceuticals in India on the basis of the analysis of data of eight years from 1966-67 to 1973-74. The data was taken from the Bombay Stock Exchange Official Directory. The major findings relating to cash management in the pharmaceutical industry were as follows:

i. Both the current ratio and the liquidity ratio of the industry was low during the entire period under study. The average current ratio was 1.35:1.00 and liquidity ratio was 0.66:1.00 during 1966-67 to 1973-74. The current ratio showed a downward trend during the latter period of study. The current ratio had increased from 1.18:1.00 in 1966-67 to 1.39:1.00 in 1973-74 whereas, the liquidity ratio had declined from 0.68:1.00 in 1966-67 to 0.51:1.00 in 1973-74.

ii. The ratio of net cash flows to current liabilities was on an average 0.15:1.00 during 1966-67 to 1973-74. It had increased from 0.11:1.00 in 1966-67 to 0.17:1.00 in 1973-74. The upward trend showed an improvement in actual liquidity position of the industry.

iii. The ratio of cash to current assets was on an average 0.06:1.00 during 1966-67 to 1973-74. It had showed a declining trend during the latter period. A big gap for holding cash in proportion to current assets was not found. It indicated a uniform policy adopted by the management for holding cash in the industry. A downward trend in this ratio over a period indicated tighter control on cash by the management. As regards the ratio cash turnover in sales, it had increased significantly from 30.3 times in 1966-67 to 46.7 times in 1973-74. Greater cash turnover in sales indicated the effective utilisation of cash resources by the management.

He concluded that the liquidity position of the pharmaceutical industry was satisfactory. The industry had a sufficient supply of cash.

R. Sivaram Prasad [28] made an important study on Working Capital Management in Paper Industry in 21 selected paper mills. The sample includes 9 large, 5 medium and 7 small-scale paper mills. The study covered the period of ten years from 1983-84 to 1992-93. The purpose of the study was to analyse the working capital management. The data was collected from Stock Exchange Official Directory, Kothari Industrial Directory, Economic Times, Capital Market, CMIE and other journals. Information on first hand was also obtained from the Chief Executives by administering questionnaire. Classification and tabulation of the financial data had been done as per the requirement of the study. Appropriate statistical tests were applied to check the validity of trends i.e. Ratio analysis techniques of accounting and Karl Pearson's correlation coefficient technique of statistics was used to analyse and interpret the data. The main findings of the study were as follows.

i. A study on the efficiency of the working capital clearly reveals a sub-optimum utilization of working capital. The rate of return on current assets was negative or insignificant for many years during the study period.
ii. The debt servicing capacity was also found to be poor and the firms were not able to service their debts properly, resulting in cash shortage of working capital.
iii. The results of correlation analysis indicates a close relationship between profitability and working efficiency emphasising the need to exercise better control on working capital.
iv. The statistical analysis revealed an irrational ratio being maintained between sales and inventory.
v. The analysis on the basis of annual growth rate, and ratio of receivables to sales revealed the tendency of the firms to adopt liberal and restrictive credit policy during the study period. The turnover of receivables seemed to be less despite lesser credit periods to customers.
vi. Paper mills revealed a poor planning of cash balances during the period under study.
vii. Collection of debts, availability of working funds and uncertain cash flows were some of the major working capital problems encountered by the selected paper mills.

He suggested that there is an urgent need for better control of working capital for paper mills.

Amit K. Mallick and Debasish Sur[29] have carried out an important study on Working Capital Management. The purpose of the study was to examine the working capital management in the pharmaceutical company, viz. Hindustan Lever Ltd. (HLL). The study covered a period of ten years from 1987 to 1996. The data of the sample company was collected from Bombay Stock Exchange Official Directory. The main objects of the study were to measure the liquidity and operational efficiency of the company and to study the financing patterns adopted by the company. Ratio analysis technique of accounting, simple mathematical tools, tests and technique of statistics were used to analyse and interpret the data. The main findings of the study were as follows.

i. The current ratio and quick ratio of a sample company was very low as compared to the ideal norms which revealed that this industry was not maintaining adequate amount of liquidity to meet the current obligations.

ii. Current assets to sales ratio indicate that the company was doing very well in terms of efficient use of working capital funds.

iii. Inventory turnover ratio indicated that there is a substantial improvement in the efficiency of inventory management of the company and debtors' turnover ratio confirmed that the performance of the credit management of a company as a whole was encouraging.

iv. A short-term fund had played a dominant role in financing the working capital. It witnessed a better performance regarding working capital management The correlation coefficient also confirms the same. The working capital was managed so well that a company did not face the risk of over or under utilisation of fund.

v. The profitability of a company was deeply influenced by the efficient management of its inventory as well as debtors.

They suggested that the study showed a negative influence of debtors turnover on the profitability which was actually very insignificant, in fact, the gradual improvement maintained by Hindustan Lever Ltd. In its profitability during the period under study was not possible without the efficient management as well as effective control of both inventory and debtors.

Ghatak and Mookherjee's[30] study was regarding on the inventory financing in ACC Ltd. The object of the study was to make an indepth analysis of policy of financing the inventory followed by the ACC Ltd. The methodology adopted was mainly based on the ratio analysis. The period of study covered by them was from 1986-87 to 1990-91. The main findings of the study were as follows:

i) The short-term liquidity ratio measured through the current ratio and quick ratio depicted an increasing trend during the period under study.
ii) ACC Ltd. had mostly used short-term sources for financing inventory over the span of study. Nevertheless, a switch-over was also noticed in 1990-91, when the company mainly employed long-term sources of financing.
iii) The inventory financing policy was less than optimal, as it did not minimise the short-term financial risk of the company.

They suggested that not only the inventory policy of the ACC Ltd. needs re-orientation but the policy of the management also should be such that, it ensured higher turnover of working capital and fixed assets. They further suggested that the company should take the adjustment of inflation factor into consideration.

CRITIQUE OF PRIOR STUDIES:

The studies reviewed in this chapter have given a good quantitative idea about the problems of working capital management. By and large, the studies reviewed are varied and differ in many ways from the present study, as they are concerned with specific aims and deal with certain specific aspects. The practical delimitation of the studies with respect of time, content and the size of the sample also necessitates further study in this particular area. Thus, it is hoped that the present study will benefit from the shortcoming of the previous studies.

Siddarth G. Das's [31] study focused mainly on working capital turnover in pharmaceutical companies in India. It covers a working capital turnover in general but other indepth ratio analysis of working capital as its components is not analysed. Therefore, his study does not throw light on the real problems of working capital management in pharmaceutical companies in India.

Johri's[32] study was mainly based on the business policy and company management of multinational drug corporations in India. His study included only those drug companies whose share capital consisted of foreign equity. He completely ignored the Indian owned large and medium sized drug companies. In his study, he examined in general the Government policy towards multinational companies, licensing policy, import policy, impact of F.E.R.A. and D.P.C.O. on drug companies, production and distribution policy and financial policies regarding the working capital management of the companies, dividend policy and overall debt financing of the companies. He did not study indepth the working capital management policies like management of inventory, receivables, working finance, and overall working capital management and policies adopted by the management for management policies of Indian companies which was encouraged the present researcher to study the problems of working capital management of the drug companies.

Agrawal's[33] study was based on cash management in Indian industries, including medical and pharmaceutical in India. The main emphasis in this study was given to the management of cash and therefore a detailed study of the working capital management of pharmaceutical industry was not possible.

Amit K. Mallick and Debasish Surs'[34] study covers only one pharmaceutical company i.e. Hindustan Liver Ltd. The size of the sample was too small to bring out a comprehensive result. Generalisation of the result is severely restricted unless a representative sample is taken.

It is clear from the survey of the existing literature in the field of working capital management that research studies in this particular area of financial management are very limited. Though of late research to is undertaken on the problems of working capital management, little attention is paid to the pharmaceutical companies in India. No single study has through light on the problems of working capital management in the pharmaceutical companies of Maharashtra State. Thus, any study covering a major aspect of working capital management of the pharmaceutical companies of Maharashtra State will be able to throw some light on the problem of working capital.

This will not only open new areas for further research will prove valuable to the policy makers to look into the problems in the right perspective.

This led the researcher to select a vital area of financial management of pharmaceutical companies in Maharashtra State i.e. 'Problems of Working Capital Management of Pharmaceutical companies in Maharashtra State'.

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