

CHAPTER II

REVIEW OF RELATED LITERATURE AND RESEARCHES

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A researcher must possess the knowledge about what and how much work has been done in the field related to the present study and those areas, which call for further research. For a deeper insight and an apparent perception of research work, review of related literature is of great significance. A review has been undertaken with an intention to perceive the problem in its proper perspective. This helps to establish the link between the accomplished research in the field and the specific topic undertaken for research. An appropriate review of related literature helps in recognizing the problem, developing a research design and determining the size and scope of the problem. It helps the researcher in defining the frontiers of his field and engender a more perfect statement of the problem. Therefore, an abridgment of the earlier studies is of great importance. Some of the important studies related to the present field of study are discussed below.

Das ¹ conducted an important study on the working capital turnover in the pharmaceutical companies. The purpose of the study was to analyse the short-term financial position of selected pharmaceutical companies. For this purpose, 15 large pharmaceutical public limited companies were selected. The data was collected from Bombay Stock Exchange Directory for a period of 10 years beginning from 1981 to 1990. The main findings of the study are as follows:

- 1 The overall working capital turnover ratio of 9.031 was higher than the ideally accepted norm of 5.1 as suggested by the experts. Thus, all the selected companies had sound short-term financial position during the entire period of study.

2. Most of the sample companies were active to assume risk and reduce the size of working capital in relation to sales, which resulted in an increase in the working capital turnover.
3. The sample companies maintained only that size of working capital sufficient to the requisites of production and sales.

Agrawal and Sharma ² conducted an important study on return on investments in drugs and pharmaceutical companies. The objective of the study was to examine the trends of profit and its effect on the financial performance of the leading drugs and pharmaceutical companies in India. For this purpose five companies belonging to Foreign Exchange Regulation Act (FERA) group were selected. The data was collected from the published annual reports for the financial years 1984 to 1988-89. Ratio analysis technique and statistical tools like chi-square test and regression analysis were used. The main findings of the study are as follows:

1. The return on investment witnessed a fluctuating trend in all the sample companies except two of them, which recorded an overall declining trend.
2. The operating performance measured in terms of operating profit of all sample companies, except one was according to expectations.
3. The return on net capital employed in three of the sample companies recorded fluctuating trend while other two witnessed declining trend.
4. The return on shareholders equity in almost all companies had fluctuated over the years.

He concludes that the use of borrowed funds was not beneficial as the rate of return on shareholders funds was always less than the rate of return on net capital employed

Chandrasekaran³ conducted an important study on the financial performance of Indian sugar industry. The study analyses financial performance based on aggregate industry data from published records for the period 1990-91 to 1995-96. For this purpose the technique of ratio analysis was utilised. The main findings of the study are as follows.

1. The average current ratio of 1.26:1.00 was quite below the standard norm of 2:1. Thus the short-term solvency of sugar industry was critical.
2. The average inventory turnover ratio of 1.96:1 indicated inefficient management of inventories.
3. The low average receivables turnover ratio of 3.38 times and fairly long average collection period of 108 days revealed the tight cash position.
4. The declining trend of fixed assets turnover ratio was due to decrease in growth rate of sales and addition of fixed assets.
5. The total asset turnover ratio registered an overall decreasing trend and was on an average 0.83:100. This indicates that the efficiency of asset was declining owing to lower growth rate of sales and addition to fixed assets.
6. The average debt-equity ratio of 2.26:1.00 was observed to be higher considering volatility of earnings.
7. The debt to total assets ratio was on an average 78% while the interest coverage ratio was just 1.6 times. This indicates high financial risk.
8. The average gross profit margin for sugar industry was 15.98%. It varied between 12.72% and 22.59%. This fluctuating trend was mainly due to free market price and its effect on various elements of costs

9. The return on the total assets and return on equity were highly fluctuating because of the fluctuating open market price realisation of sugar, increasing cost of raw materials and high debt servicing costs.
- 10 The Industry's financial performance except for the year 1993-94 has been moderate and poor.

He suggests that:

1. Firms must focus on reducing the variability in earnings by cost control and cost reduction.
2. Financial structure must be done through equity funding and strengthening equity by building strong reserve base.
3. Sugar Industries must try to work towards market economy as they are exploded by raw material suppliers and buyers namely consumer lobby.
- 4 Being a controlled industry, the principles of efficiency and equity need to be balanced by ingenious policy management skills so that neither producers nor consumers are at a disadvantage compared to operation of market forces

Rao ⁴ conducted an important research study on the Financial Analysis of Small Paper Mills in Andhra Pradesh. The objective of the study was to scan the financial solvency of small paper mills during the period 1986-87 to 1992-93. For this purpose, six out of fourteen mills were selected. The data was obtained from the annual reports and by conducting unstructured interviews with the managements of the sample mills. The techniques of common size analysis, comparative statement analysis, ratio analysis, trend analysis and some of the statistical tests had been utilised. The major findings of the study are as follows:

- 1 External sources of finance were more popular than the internal sources because of poor generation of internal funds from operations.
- 2 External sources constituted only borrowed funds. Preference Share Capital and Debenture financing was not used at all.
- 3 The overall high debt equity ratio caused high financial risk and failed to boost up profitability performance of the sample mills. Debt-equity ratios of some mills were extremely high due to negative net worth, which revealed their heavy reliance on borrowed funds.
4. Interest coverage ratio of these mills signalled the impending solvency crisis.
5. Most of the sample mills had to finance their fixed assets through borrowed funds as their net-worth was completely eroded due to heavy losses over the years. Some of the mills even diverted their short-term funds for financing fixed assets requirement in view of insufficient long-term funds. This led to acute working capital shortage.
6. The sample mills over traded with insufficient working capital more specifically the cash resources. The mills were compelled to under-stock raw materials for want of adequate working capital and quite frequently faced the risk of stock-out situations.
7. None of the sample mills could report the ideal current ratio of 2:1 and liquid ratio of 1:1 for the entire study period. Thus the short-term financial strength of all sample mills was very critical.
8. Sales of the sample mills reported an impressive up trend during the period of study. But the gross profit earned was uneven. This was due to faster increase in the cost of goods sold as compared to the sales realised.

9. The operating expenses absorbed a high portion of operating revenues leaving a very meagre portion of operating profit, which was quite inadequate to cover interest, taxes, dividends and the needs for retained earnings. This indicated high operating inefficiency of the sample mills
10. The overall profit performance in terms of Return On Investment of the small paper industry was totally uncomfortable
 - He suggests that
 1. The imbalanced capital structure of the mills can be improved by repaying the borrowed funds and making the equity base sounder by generating the funds internally.
 2. In financing expansion programmes the sample mills should use only equity capital, instead of resorting to long-term loans from financial institutions as the existing debt had already been out of proportion.
 3. Insufficiency of cash balances should be eliminated by maintaining adequate cash balance through Cash planning, Forecasting and Controlling.
 4. In order to maintain reasonable liquidity and solvency core current assets should be financed through long-term funds
 5. The sample paper mills should improve the profitability performance through price rise, innovative marketing strategies and cost reduction and minimisation
 6. Economy in operations should be identified to control the costs so as to maximise the profits.

Babu and Jain ⁵ made an empirical study on short term and long-term debt financing in private corporate sectors in India including medicine and pharmaceutical companies during 1980 to 1994. The objective of the study was to

analyse short term and long term financial position and to examine the changes if any on the use of composition of debt in the wake of liberalisation policies. For this purpose, 527 companies listed on Bombay Stock Exchange were selected. The required data was collected from the Bombay Stock Exchange official directory. The techniques of ratio analysis and some statistical test like t-test and F-test had been used. Following are some of the major findings of the study:

1. The private corporate sector in India showed a marked preference for both long-term and short-term debt in designing their capital structure.
2. There was a shift towards preference for long-term debt in lieu of short-term debt. The economic and financial reforms had caused significant changes in the use of long-term debt in financing the assets.
3. The interest coverage ratio of the private corporate sector was satisfactory. Corporate earnings during the period were more than adequate to cover 3 to 6 times of interest obligations. However the ratio showed declining trend, which suggests that, any additional use of debt or decline in earnings may put these firms into serious difficulties in meeting even their interest obligations.
4. The majority of sample companies were exposed to a very high degree of risk and were subjected to financial distress. This is in view of their debt increasing capital structure with declining and alarmingly low debt service capacity
5. The corporate sectors are likely to encounter problems in raising funds, due to high degree of risk and low debt capacity, with increased focus on fundamental analysis in India particularly with setting up of credit rating agencies

They suggests that there is need for introspection on part of the corporate finance managers of future organisation to review their debt policy with a view to keep the magnitude of debt within safe and serviceable limits so as to face challenges of corporate restructuring thrown up by the new economic environment.

Misra and Sahu ⁶ carried out an important study on the preferred debt-equity mix among Indian industries including drug and pharmaceutical industry. The objective of the study was to examine empirical evidence on the most preferred levels of debt in capital structure among the Indian industries and to analyse their long-term financial position. The relevant data had been collected from "PROWESS" database of CMIE for the period from 1992 to 1999. The sample consists of the firms comprising the A and B1 group of stocks listed on the Bombay Stock Exchange. For the purpose of the study the sample firms were divided into five classes of debt-equity ratios namely, '0 to 1', '1 to 2', '2 to 3', '3 to 5' and over '5'. The major findings of the study are as follows:

1. Indian Industries in general had played safe on the whole. Maximum number of the sample firms preferred a lower level of debt in its capital structure. Their debt-equity ratio ranged somewhere between 0 and 1.
2. Till the year 1994 the debt-equity class of '1 to 2' dominated the debt –equity class of '0 to 1' but from the year 1995 onwards the debt-equity class of '0 to 1' overtook as the most preferred debt-equity class. This switch in preference for lower levels of debt in capital structure may be attributed to downturn and recessionary effects of the Indian as well as global economy in and around the years 1994-99

They conclude that there was a strong belief among the Indian industries that lower levels of debt in capital structure would maximize the economic welfare of the owners and consequently the value of firm.

Sarkar ⁷ conducted an important research study on Capital Structure and Productivity of Capital in Indian Corporate Sector. The objective of the study was to appraise the factors that help in determining the optimum capital structure and to analyse the impact of capital structure on the productivity of capital and thereby judging the overall financial performance. The sample consisted of fifteen companies from private sector and fourteen enterprises from public sector in textile industry. The data was obtained from the Bombay Stock Exchange Directory, Reports of Bureau of Public Enterprises Survey and Reports of Textile Committees in India for the period 1980 to 1988. The techniques of ratio analysis and statistical tools like measures of central tendencies, dispersion, correlation and regression analysis had been resorted. The following section presents the major findings of the study:

1. A greater debt oriented financing was observed in both the sectors
2. The coverage and structural ratio of private sector companies has been better than public sector which showed better ability of the private sector to meets its fixed obligations while the negative trends of public sector enterprises showed that their earnings were eaten up by huge amount of debt to total capitalisation
3. The productive power of public sector enterprises had been very poor due to unfavourable purchasing, mark up policies and inability of management to develop sales volume

4. The positive and negative correlation between EBIT to total capitalisation and net earnings to total capitalisation and Debt/Equity ratios in private and public sectors were mostly insignificant. This indicates that EBIT and net earnings were likely to remain independent of capital structure so long as earnings and interest rates coincide.

Rajeshwari ⁸ made an important study on Liquidity Management of Tamilnadu Cement Corporation Ltd. The objective of the study was to evaluate the efficiency in the liquidity management of the sample company. The data collected from the Annual Reports was for a period of five years beginning from 1993-94 to 1997-98. The technique of ratio analysis and some statistical tools were utilised for the purpose of analysis. The major findings of the study are as follows:

1. The liquidity position of the sample company was not stable. The management had not followed the uniform policy for Current Assets and Current Liabilities. The co-efficient of variation of current liabilities was 93.91% while that of current assets was 21.68% showing greater variability in current liabilities
2. The current ratio, quick ratio and the absolute liquidity ratio of the company were extremely high during the first two years of study representing higher liquidity. But in subsequent two years these ratios were below the standard norm while in the last year of study they were just above the standard norm. Thus the liquidity position of the sample company was unstable.

The researcher concludes that the liquidity management of the sample company was poor and was not satisfactory.

Jain, Tarde and et al ⁹ made an important study on the Capital Structure Practices of Private Corporate Sectors in India. The objective of the study was to

enumerate the capital structure/financing decision practices followed by private corporate sector enterprises in India. For this purpose, 64 Private Corporate Sectors listed on Bombay Stock Exchange, having their investment in total assets equal to or more than Rs.5 crores were selected. The relevant data was collected directly from the managements through mailed questionnaires. They found that the sample companies showed more preference for debt than equity in designing their capital structure. For raising debt they used more funds from the financial institutions, as there was more flexibility in payments, relatively lesser time involved in getting funds and no floatation costs. They also found that the capital structure decisions of private corporate sectors as represented by the sample companies are by and large consistent with the sound theory of financial management.

Kumar ¹⁰ conducted an important study on Assessment of Corporate Liquidity. The purpose of the study was to determine the short-term financial position of sugar factories of Tamilnadu during the period 1984-85 to 1993-94. For this purpose, five units from co-operative sector and five from private sector were selected. The necessary data was obtained from their annual reports. The technique of ratio analysis along with discriminant analysis approach was used. The major findings of the study are as follows:

1. All the selected sample units had an individual average current ratio of more than 1.5:1.00. The average ratio was found to be higher in private sector units as compared to co-operative sector units.
2. The average liquid ratio in seven out of ten sample units was less than the standard norm of 1:1. This indicated that the ability to pay current debts out of quick assets was much lower.

3. The average cash to current liabilities ratio had been excessively high in two of the co-operative sectors and three of the private sector industries. This indicated that the levels of cash maintained by these units were higher than current liabilities.
4. The discriminant functions indicated that except for the year 1986-87, liquid ratio appeared stronger than the current ratio.

He concludes that, comparatively, private sector sugar industries had maintained sound liquid position than the co-operative sector industries.

Mohnot ¹¹ conducted an important study on Capitalization and Capital Structure in Indian Industries. The objective of the study was to understand the changes in the volume of capitalization and to ascertain its impact on the over-all financial performance of the selected companies for a period of ten years beginning from 1980-81 to 1989-90. For this purpose, five companies from private sector and five from public sector pertaining to Steel, Engineering, Aluminium, Chemical and Fertiliser industries were selected. The major findings of the study are as follows:

1. There was heavy over-capitalisation in the public sector undertaking whereas the private sector showed the position of under-capitalisation
2. The basic cause of overcapitalisation in the public sector undertaking was inefficient use of the assets, which generated either heavy losses or a meagre profit.
3. The capital structure of public sector units had low percentage of debts and high percentage of equity accompanied with low volume of reserves and surplus. The position of reserves and surplus was miserable due to low profitability. The capital structures of private sector units were having very

thin equity accompanied with high reserves. The share of debt capital was relatively higher compared to the public sector undertakings.

4. The over-all position of financial leverage in the public sector was unsatisfactory owing to very heavy interest burden and low profitability whereas in private sector the financial leverage ratios were relatively lower and more stable.

He suggests that:

1. There was an urgent need to correct the over-capitalization in case of public sector undertakings. Their operational efficiency needs to increase so that they can earn competitive rate of return of capital employed.
2. There was a need in some of the private sector undertakings to increase capital by issuing bonus shares so that the earning as per face value of the share may not remain at alarming heights
- 3 Private sector units need to further increase financial leverage ratios in the interest of the company and investors.

Paul and Ghosh ¹² conducted an important study on Capital Structure and its Effect on Profitability of Large Private Sector Companies in Selected Industries including drug and pharmaceutical industry. The objective of the study was to ascertain the effect of change in capital structure on the profitability and the overall performance of 10 large private companies. For this purpose, the data collected from the Bombay Stock Exchange Directory was for the period 1976 to 1990. The technique of simple correlation was used and the 't' test was used to judge the significance of the correlation. The main findings are as follows:

- 1 Out of 10 sample companies, six had negative correlation between debt-equity ratio and profitability and other four companies had positive

correlation. Thus in general it appeared that there was a negative association between debt-equity ratio and profitability.

- 2 Low debt-equity ratio does not always indicate low profitability, similarly high debt-equity ratio was also not the only factor to improve profitability. Thus there had been no direct and positive relationship between debt-equity ratio and profitability.
- 3 Apart from debt-equity ratio, age of the company, past track records, growth rate, risk perception, availability of debt, etc. also had a greater impact on the profitability of the sample companies.

They conclude that the belief of positive association between debt-equity ratio and profitability as propounded by capital structure theories was not substantiated by the results of their present study.

Mallick and Sur ¹³ conducted an important study on Working Capital and Profitability of Assam Frontier Tea Industries Ltd. The objective of the study was to assess the impact of working capital on profitability during 1986-87 to 1995-96. The data was collected from the Bombay Stock Exchange Official Directory. The ratio analysis and the statistical techniques like Karl Pearson's simple correlation analysis; multiple correlation analysis and multiple regression analysis had been used. The major findings of the study are as follows:

1. A high degree of negative correlation was found between ROI and Working Capital Ratio as well as between ROI and Acid Test Ratio. This indicated that greater the company's margin of safety to the short-term creditors, lower was the profitability of the company.
2. There was a high degree of negative correlation between Current Assets to Sales Ratio and ROI. This relationship confirms that lower the current assets

to sales ratio, greater the efficiency in employment of working capital and larger the scope of profitability.

3. A moderate degree of positive correlation was observed between ROI and Working Capital Turnover Ratio. The computed value of correlation confirms the accepted principle that faster the working capital turnover, lower the investment and greater the profitability.
4. The relation between ROI and Debtors Turnover Ratio & between ROI and Inventory Turnover ratio showed a negative correlation. This relationship was not significant when statistically tested at 5% & 10% level of significance.
5. A low degree of positive association was observed between ROI and Cash Turnover Ratio and between ROI and Miscellaneous Current Assets Turnover Ratio. These two ratios confirm the generally accepted rule that larger the turnover larger the profitability of company.
6. The Working Capital leverage of the company recorded a fluctuating trend. It was always less than unity, which indicates that the increase in the profitability of the sample company was less than the proportion to decrease in working capital investment

Gangadhar and Yadagiri ¹⁴ conducted an important study on Sources and Application of Funds in Indian Corporate Sectors including drugs and pharmaceutical companies. The main objectives of their study are as follows:

- 1 To analyse the trends and structure of sources of financing,
- 2 To examine the pattern of the components of internal / external sources of funds,
- 3 To highlight inter-plan diversities in the components of sources of funds.

The data was obtained from the "Finances of Large Public Limited Companies" published in the RBI Bulletins for a period of 20 years from 1971-72 to 1990-91. The mathematical tools like percentage; annual rate of change and geometric mean were used. The major findings of the study are given below:

1. The sample companies to a major extent relied on external sources of funds in 14 out of the 20 years of study.
2. The excessive dependence on internal sources was prominent up to 1978-79, but from 1980-81 onwards the companies shifted to depend largely on external sources of funds. The higher dependence on external sources of funds in 1990-91 may be due to the liberalised economic and industrial policies of the government, booming capital marketing conditions and easy availability of borrowing capital.
3. Analysis of the components of internal sources of funds depicted that provisions accounted for more than 63% of internal sources of funds, followed by reserves and surpluses at 27.7% and paid up capital at 8.8%
4. Analysis of the external sources of funds revealed that the borrowings consisting of banks, financial institutions, Government and Semi Government agencies were the major component of external sources of funds followed by trade dues and current liabilities and equity capital
5. The study of application of funds indicated that more than 51 % of funds were employed in fixed assets, of which plant and machinery accounted for nearly 32% The investment in each of the inventories, debtors and loans & advance was on an average less than 25%
6. The increasing trend in the proportion of funds invested in debtors and inventories indicated that the sample companies faced the problem of

accumulated inventories and heavy debtor's balances in later plan periods as compared to the earlier plan periods of study

7. The investment of funds in financial assets such as investments, cash and bank balances was very negligible.

Macwan ¹⁵ conducted an important research study on Debt-Equity ratio of ICICI Assisted Industries including drug and pharmaceutical companies. The objective of the study was to analyse the long term financial position of 580 ICICI assisted industries of the private corporate sectors for A period of five years from 1990-91 to 1994-95. The data was collected from the published report of ICICI on financial performance of the companies. The techniques of ratio analysis and trend analysis had been used. The major findings in relation to pharmaceutical companies are as follows.

1. The average debt-equity ratio of the selected pharmaceutical companies was 0.91 1.00, which was quite below the standard norm 2:1. This indicated that the sample companies were low geared and that they were very conservative in using debt for financing their assets
2. Management's policy to retain more of profits and to rely more on internal funds was one of the reason for the low debt-equity ratio.
3. The rising share of share premium in the total accumulated reserves of the sample companies resulted into thick equity proportion and consequently in to low debt-equity ratio.
4. The increasing reliance of the sample companies on short-term borrowings than on long-term borrowings were also responsible for the low debt-equity ratio



5. The reluctance of the managements of the companies to borrow more from the financial institutions that would attract the convertibility clause and to meet part of their long-term financial requirements from banks for short term and get it rolled over a number of years were the two important reasons for their increasing reliance on short-term borrowings.
6. The increasing trend of interest coverage ratio and the higher percentage of return on net worth indicated that there was much scope to increase the proportion of debt in the capital structure of the sample companies.

He suggests that the managements should make use of more debt particularly institutional borrowings and debentures to enjoy the fruits of trading on equity

Roy¹⁶ made an important study on the financial performance of Indian tea industry. The main objective of the study was to evaluate the profitability, liquidity and leverage position of the sample industry and compare its performance with that of the other industries like of jute, cotton, sugar, coffee and tobacco etc. The relevant data was compiled from volumes of Tea Statistics and RBI Bulletins for the period beginning from 1970-71 to 1994-95. The technique of ratio analysis had been applied. The major findings are presented below:

1. The average gross profit margin of the tea industry was higher than that of the other industries. This indicated effective and efficient utilisation of the available resources.
2. The gross profit to net asset ratio of tea industry was also higher than that of the other industries except in 1994-95. This indicated better and effective asset utilisation of the sample industry.

3. The profit after tax to net worth ratio registered a fluctuating trend. It was much better than that of the other industries up to 1990-91 but thereafter it declined and remained lower than the average ratio of other industries.
4. Except for the year 1980-81, EPS of the tea industry remained higher than that of the other industries.
5. Excepting for the year 1994-95, the current ratio remained below the standard norm of 2:1. As compared to the other industries the short-term financial position of tea industry was better.
6. The debt-equity ratio of the tea industry was quite below the standard norm of 2:1. It was also lower as compared to the other industries. This indicated that the opportunity of utilising low cost debt funds and thereby magnifying the returns of the owners was neglected.

He concludes that the profitability position of the industry seems to be satisfactory but when viewed in the context of job and finances involved it was quite contrary in preparing estates for production and keeping it in working condition year after year. This was primarily due to lack of awareness of complexities of this industry

Mallick and Sur¹⁷ carried out an imperative research on the Working Capital Management of Hindustan Lever Ltd. The main objective of the study was to measure the overall short-term financial position of the company and to examine the impact of working capital management on its profitability through working capital leverage analysis. The data was collected from the Bombay Stock Exchange Official Directory for the period 1987 to 1996. Ratio analysis technique, simple mathematical tools, tests and statistical techniques had been used. The major findings of the study are as follows

- 1 The gross working capital registered an increasing trend. It increased by 407.90% in 1996 as compared to 1987.
2. The average current ratio of 1.22:1.00 was below the standard norm of 2:1. As compared to the mean current ratio of Indian manufacturing non-government public limited companies, which varied between 1 and 1.5, the liquidity position of the sample company seemed to be satisfactory.
3. Quick ratio on an average was 0.45:1.00, which was below the accepted standard norm of 1:1 This indicated that the current assets were not liquid enough to meet the immediate short-term obligations.
4. On an average 74% of the total assets of the sample company was in form of current assets, which revealed that the management adopted conservative approach towards current assets investments.
5. The current assets to sales ratio varied between 0.28:1 to 0.42:1 This indicated efficient turnover of working capital funds.
6. The average inventory turnover ratio was 3.91. This indicated efficient inventory management of the company.
7. The average debtors turnover ratio of 12.52 times showed that the credit management of the company on the whole was encouraging.
8. The short-term funds played a dominant role in financing the working capital of the company. The overall increasing trend of short-term funds and high proportion of current assets in total assets indicated an average or moderate policy of working capital management adopted by the company.
- 9 The negligible deviation between the actual and estimated working capital showed that the sample company had not faced the risk of maximum over or

under utilisation of working capital funds. This was an indicator of better management and planning in managing working capital.

10. Inventory constituted 56.1% of the total gross working capital, followed by debtors at 23.9%, miscellaneous current assets at 14.4% and cash and bank at 5.6%. The declining trend in the share of inventory and the increasing trend in the share of debtors and miscellaneous current assets witnessed an improvement in profitability of the company.
11. A high degree of positive association between liquidity and profitability signified a favourable impact of liquidity on the profitability. This was due to fact that working capital structure of the company was so managed to ensure higher profitability without impairing its liquidity.
12. The working capital leverage indicated that change in ROI was less than proportionate to the change in GWC investment. The working capital leverage values were less than unity throughout the period studied.

Sathyamoorthi ¹⁸ made a pragmatic study on Cash Flow of Selected Medium Scale Enterprises in Botswana. The study was conducted to analyse the cash inflows and outflows of the sample enterprises and to measure their dependence on external borrowings. The data collected from the published annual reports was for a period from 1994 to 1996. The major findings of the study are as follows:

1. The operating cash flows were the major source of cash inflows. However, there was a shift in source of cash flows from operating cash flows to long-term borrowings. The increasing trend of long-term borrowings was not favourable for the sample enterprises, as the tendency to borrow would lead to serious financial problems.

2. There was bank overdraft in first two years but it was positive in the last year of study. This was probably due to increased borrowings that brought more funds into the business.
3. The dividend paid by the sample enterprises declined from 20% in 1994 to 14% in 1996. This was due to the decreasing trend in the operating cash flows.
4. The percentages of taxes paid increased from 11% in 1994 to 17% in 1996. The variation was due to changed tax rates from year to year.
5. Invariably 70% of the total inflows were spent on investing activities on a continuous basis. This showed a general expansion of sample enterprises.

Desai ¹⁹ made an important study on Assessment of Capital Structure and Business Failure. The objective of the study was to evaluate capital structure and its impact on the financial performance of Gujarat Steel Tubes Ltd. during 1980-81 to 1990-91 and from 1994-95 to 1996-97. The data was collected from the annual reports. The study highlights the following observations:

1. The real value of equity shares of the sample company was lower in comparison to its book value. In the last three years it was negative due to heavy losses suffered by the company.
2. The greater gaps between real values and book values indicated that the company's capital structure was imbalanced and the over capitalised financial plan had created stress and strain for the management.
3. On an average the creditor funds and owners' funds constituted 73% & 27% of the total funds respectively. This revealed that the sample company had

relied heavily on creditors funds for financing its business activities.

4. The return on total assets ratio of the sample company registered an overall declining trend. The increasing proportion of debt in the capital structure could not magnify the returns. This indicated that the sample company failed to take the advantage of financial leverage.

He concludes that low profitability with low rate of return on total assets, imbalanced financial plans and inefficient employment of funds and company's inefficiency to take the advantage of financial leverage were important financing and accounting factors causing sickness and failure of the business.

Prasad ²⁰ conducted an important study on the Working Capital Management in Paper Industry. The objective of the study was to analyse the short-term financial position of the 21 selected paper mills. The data was collected from the Stock Exchange Directory, Kothari Industrial Directory, Economic Times, Capital Market, CMIE and other journals for a period from 1983-84 to 1992-93. The technique of ratio analysis and statistical test were applied for the purpose of analysis. The major findings of the study are as follows:

1. The gross working capital formed 47 % of the total net assets.
2. The inventory contributed about 46% of the total current assets. However some of the large, medium and small-scale paper mills carried excess inventory to the tune of 64%, 55% and 70% respectively. The statistical analysis indicated an irrational ratio between sales and inventory
3. The receivables on an average accounted for 34% of the total current assets. The turnover of receivables was low which shows that the sample mills adopted liberal credit policy.
4. There was very poor planning of cash in all the paper mills

5. Studies on efficiency of working capital reveal a sub-optimum utilisation of working capital.
6. A close relationship between profitability and working efficiency emphasized the need to exercise better control on working capital.

He concludes that 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

Sahu, Panigrahy, et.al.²¹ carried out an important study on Debt Financing in Corporate Sector in India. The main objective of the study was to analyse the trends of debt finance and its various components of sample companies over a time frame from 1979-80 to 1990-91. For this purpose 170 public limited companies in the private corporate sector were selected. The data was obtained from various reports, journals, periodicals and various volumes of Stock Exchange Official Directory. The techniques of funds flow analysis, co-efficient of variation, correlation analysis and regression analysis were used. The study presents the following major findings:

1. The annual average flow of debt was as high as 71.50% of the total funds sources. This indicated preponderance of debt in the aggregate fund structure. The corporate sectors preferred more of debt owing to its cost advantage and easy availability. Avoiding the risk of dilution of ownership was also one of the reasons for employing more of debt.
2. The short-term debt occupied a dominant position in the debt structure. The annual average flow of short-term debt was 67.41% of total debt funds. This indicated exclusive dependence of the sample companies over short-term debts for meeting their financial needs. Thus long-term debt remained at low ebb and was of secondary importance.

3. Analysis of short-term debt components revealed that sundry creditors were the highest contributors followed by short-term loans and advances, provisions and current liabilities. The coefficient of variation indicated that sundry creditors, current liabilities, loans & advances and provisions in that order had been a stable source of short-term debt funds for the total sample.
4. Analysis of long-term debt components depicted that long-term loans and debentures, on an average constituted 66% and 34% respectively. Debentures were comparatively a more stable source than long-term loans.
5. On an average the long-term debt comprised only 56.20% of the incremental fixed assets. A low degree of positive correlation between long-term debt and incremental fixed assets at +0.42 indicated that fixed asset formation of the sample companies depended less on availability of long-term debt and more on short-term debt and equity funds.
6. The investment volumes of current assets of the sample companies depended to a considerable extent on the availability of short-term debt. The annual average proportion of short term debt in incremental current assets was 82.33%. A high degree of coefficient of correlation at +0.74 indicated that current assets investment decisions were significantly influenced by the availability of short-term debt funds.

Hazari and Lakhani ²² made an imperative study on the financial structure and ownership pattern of pharmaceutical companies in Maharashtra. The objective of the study was to make an in-depth analysis of long-term financial position and to explore the overall performance of 88 pharmaceutical private limited companies registered in Maharashtra State for the period 1958-1964. The main findings of the study are as follows

- 1 Majority of the pharmaceutical-manufacturing units carried on by private limited companies in Maharashtra were under foreign control, mainly American, British and Swiss. Majority of the Indian owned pharma companies were small trading enterprises and many of them operated with losses.
2. The financial structure of the pharmaceutical companies on an average constituted 22% of their total funds from share capital, 16% from reserves, 21% from loans and the remaining 41% from current liabilities and provisions. Foreign controlled companies had, in proportionate terms, much larger reserves than Indian owned companies, which depended upon loans to a greater extent.
- 3 The sample companies raised 45% of their gross total funds from internal sources. The ploughing back of retained profits had been more significant in foreign controlled companies than in Indian owned companies. Share capital was of relatively minor importance. Loans were of considerable importance, especially in Indian owned companies.
4. During the entire period of study the shareholders funds was in excess of the net fixed assets. About one-half of the total gross funds raised were utilised for fixed investments. Working capital absorbed the balance, indicating that either they turned over their fixed capital with unusual speed or that their operations were more in the nature of trading than manufacturing
5. The profitability ratios of foreign controlled companies were much higher as compared to the Indian owned companies. The wholly owned foreign companies were earning cash profit, which fetched back their investment within two years while foreign majority companies were taking a little more than four years to do so whereas Indian owned companies took about seven years

6. The profitability position of the private limited companies under study was almost double compared to the profitability of RBI public limited companies.
7. The growth measured in terms of increase in gross fixed assets of sample companies was about five times, thus being highest in majority of the foreign companies.

Johri ²³ conducted a significant study on Business Strategies of Multinational Pharmaceutical and Drug Corporations in India during 1973 to 1978. The objective of the study was to arrive at the patterns of behaviour of multinational drug companies by analysing the various functional policies adopted by them. For this purpose 24 multinational drugs and pharmaceutical companies were selected. The data was collected through detailed questionnaires, personal interviews and from the annual reports. The technique of ratio analysis was applied. The major findings of the study are as follows:

1. The average current ratio of 80% of the sample company ranged between 1.10:1 and 1.75:1. The decline in the trend of this ratio was mainly due to decrease in the size of inventory & accounts receivables and increasing accounts payable. Thus majority of sample companies in India followed a cautious policy in managing their current assets and liabilities.
2. The quick ratio of the companies indicated that the majority of sample companies enjoyed far more lucrative terms of credit from their supplier compared to what they offered to their stockists and distributors for distributing their products
3. The inventory turnover ratio registered an increasing trend. This indicated that the sample companies followed a tight inventory control policy with the objective of avoiding excessive inventory carrying cost

4. Analysis of the average collection period revealed the differences in the credit policies pursued by sample companies. Majority of them had reduced their average collection period in order to improve their working capital management. Thus by reducing the investment in inventories and improving their credit collection, the sample companies were efficiently managing their short-term finances.
5. The value of debt to net worth in majority of the sample companies was less than 0.80:1 which indicated that the extent of debt financing was rather low. This indicated that the growth had been primarily financed through internally generated funds rather than external debt.
6. The sample companies, which distributed comparatively smaller percentage of profits as dividends and also restricted their remissions to their parent companies, seem to have registered higher growth as compared to those, which distributed a larger percentage of profits as dividends.
7. The profitability trends revealed that for majority of sample companies, the operating profits in terms of sales had declined. The decline in the profitability was due to the government's policy of controlling prices of several drugs and the increased cost of materials.

Rao ²⁴ carried out an important study on Return On Capital Employed of Cement Companies in India. The objective of the study was to analyse the trends of profits and to ascertain the reasons responsible for the low profitability. For this purpose, six large-scale cement companies were selected. The data was collected from the published annual reports for a period from 1984-85 to 1992-93. The ratio analysis technique and some statistical tools were used. The major findings of the study are as follows:

1. The profitability measured in terms of return on investment, return on capital employed and return on net worth registered a fluctuating trend. They witnessed a declining trend in the first half and an increasing trend during the second half of the study period. The decreasing tendency indicated deterioration in the operational efficiency while increasing trend showed improvement in the profitability position of the cement companies.
- 2.- The low profits and lower profitability was due to high cost in factors like production, poor quality coal, unsuited government policy, non-purchase of cement by the Government Organisations due to budgetary problems, poor power and coal supply by the Government Organisations and increase in excise duty.
3. Return on proprietor's funds was higher than return on net capital employed. This indicated that cement companies tried to take the advantage of trading on equity.

Sarma and Chary ²⁵ conducted a major study on Working Capital Management in Vazir Sultan Tobacco & Company Ltd. The objective of the study was to examine the trends in current assets investment, analyse the financing patterns and to appraise the effectiveness of working capital management with the help of accounting ratios. The study covered the period beginning from 1989 to 1996. Some of the significant findings of the study are as follows

1. The turnover of working capital varied between 3.32 times to 12.58 times. This wide fluctuation indicated lack of consistent policy on working capital management and an unscientific approach in deciding the working capital requirements

2. The average current ratio of 2.48:1 indicated that the liquidity of the company was high but quick ratio showed that it was not satisfactory.
3. The inventory turnover ratio registered a fluctuating trend indicating lack of consistent and sound policy of inventory management. It also indicated changing inventory holding risk, accumulation of slow inventory and the increasing probability of stock out.
4. The debtors' turnover ratio varied between 9.98 times and 136.36 times recording an average of 57.51 times. This wide fluctuation in the ratio showed lack of sound credit policy and increasing overdues with increasing risk of bad debts.
5. The sample companies mainly depended on three short-term sources for financing current assets viz. creditors, provision and other current liabilities. However the dependence on trade credits declined significantly from 37% to 19%. This indicated that the company relied on the cost bearing long-term loans or internal sources for financing the increased current assets and thereby adversely affecting profitability to some extent.
6. The fund flow analysis revealed that fixed assets were financed fully by shareholders funds. The dependence on the borrowings had increased marginally in the later years. The capital structure was equity intensive with accumulating reserves in six out of the eight years of observation. Thus the company had not taken optimal advantages of financial leverage optimally.

They suggests that the increasing proportion of book debts and longer average collection period requires reviewing of credit policy in the light of liquidity and profitability. The increasing trend of inventory turnover ratio necessitates an exhaustive study of inventory management policies and practices. They also

suggests that there is ample scope for reengineering company's financing mission in the light of profitability by shifting its emphasis from a mere conservative outlook to a more optimistic view.

Goel and Singh ²⁶ carried out a significant study on Cost of Capital in Selected Pharmaceutical Companies. The purpose of the study was illustrates the importance of the concept of cost of capital in raising funds and financing the assets. Two companies namely Glaxo India Ltd. and Novartis India Ltd. were selected for this purpose. The data was collected from the annual reports for the year 1999. The study came out with following findings:

1. The cost of debt capital in case of Novartis India ltd. and Glaxo India ltd. was found to be 9.23% and 8.61% respectively based on effective tax rate of 38.5%.
2. None of the sample companies resorted to preference share capital as sources of long-term funds. It may be due to the fact that the cost of preference share capital amounts to more than the cost of debt capital.
3. The cost of equity capital and retained earnings were 23.48% in the case of Novartis India Ltd., and 18.65% in the case of Glaxo India ltd.
4. The weighted average cost of capital based on book value weights for Novartis India ltd. and Glaxo India ltd. was 22.20% and 18.05% respectively. Accordingly using market value weights, it worked out to be 22.05% and 14.03% respectively. The significant difference between the weighted average cost of capital was due to the fact that the proportions of debt financing in the total capital was 46% in Glaxo and merely 10% in Novartis India ltd. Thus Glaxo was reaping the benefit of financial leverage.

They conclude that a highly levered capital structure leads to tax saving, flexibility in capital structure, control of more funds with lesser equity and magnification of the rate of return of equity (ROE) but on the other hand, it increases the firms fixed financial obligations and also the risk to the proprietors.

They further suggest that a company should not aim at high EPS but a high stock price. The EPS may be high due to leverage effect but the stock price may not be because of risk element due to debt financing. Thus financial leverage is a fair weather friend.

Garg and Shekhar ²⁷ carried out an imperative study on Determinants of Capital Structure in India. The objective was to analyse the debt structure and to underline the determinants of capital structure in selected large scale manufacturing units in corporate sector including chemical and pharmaceutical industries over a period ranging from 1988-89 to 1997-98. The study focussed on analysing the assets composition effect, collateral value of assets effect, debt service capacity effect, earning rate effect, life effect, business risk effect and corporate size effect on the debt equity ratio. The data was obtained from BSE Official Directory, CMIE reports, and annual reports. Statistical techniques like multiple regression analysis, 'F' test, 't' test, correlation matrix and SPSS software package were used. The main findings of the study in relation to chemical and pharmaceutical industry are presented below:

1. The total debt to equity ratio of sample units was negatively correlated with assets composition and life
2. The negatively significant association between earning rate and total debt to equity ratio suggests that the total debt to equity ratio was likely to be low for companies with high profitability

3. The effect of corporate size on total debt to equity ratio moved in opposite direction, which shows the tendency of the companies to use less debt.
4. There was no auto-correlation between the total debt to equity ratio and other variables like debt service capacity, business risk and collateral value of assets.
5. Correlation matrix indicates that the relationship among the variables was not very substantial except for the relationship of assets composition with collateral value of assets, life and sales, collateral value of assets and life, debt service capacity and earning rate, earning rate and business risk and life and corporate size.

They conclude that the asset composition, collateral value of assets, life of the company and the corporate size were found to be the most significant factors determining the capital structure. Business risk was found to be of no significance in deciding the leverage of the firm.

Sahu ²⁸ carried out an empirical study on Accounting Profitability vs. Shareholder's Value Creation of Pharmaceutical Industry in India. The objective of the study was to measure the shareholders value creation, through discounted return on shareholders equity (DROSHE) and to gauge the degree of association between selected measures of accounting profitability and DROSHE. For this purpose, the financial data and market price of shares of 13 pharmaceutical companies was obtained from the Mumbai Stock Exchange Official Directory covering the time period from 1988-89 to 1997-98. The technique of ratio analysis and statistical tools like correlation and regression were used. The main findings are as follows.

- 1 The average of gross surplus ratio, return on capital employed ratio, return on

total tangible assets and return on shareholders equity was positive with each sample company. The DROSHE of all sample companies except one was also positive.

2. There was no strong positive correlation between DROSHE and selected accounting profitability ratios as rank correlation coefficients varied between – 0.022 and 0.28.
3. It was found that shareholders value creation was not strongly linked with the accounting profitability while measuring the effect of gross surplus ratio, return on total tangible assets and return on Shareholders equity on DROSHE through simple regression analysis. Therefore while evaluating the worth of their investment shareholders should adopt DROSHE as a measure of shareholder value creation.
4. The accounting measure of profitability, return on total tangible assets explained the maximum variability in DROSHE, i.e. to the extent of 21%. This indicated that the DROSHE was influenced to maximum extent by the return on total tangible assets

He suggests that the financial performance of a firm should not be judged by accounting profitability only; rather it should be supplemented by the DROSHE. The companies should also state the DROSHE as additional information in their annual reports considering a period of five years so that the shareholders can know whether the company creates any value for them or not and the public in general can assess the overall performance of the company

Rej and Sur ²⁹ carried out an important study on Profitability Analysis of Indian Food Products Industry. The main objective was to measure the profitability of Cadbury's India Ltd , and to analyse the degree of relationship between the

selected profitability ratios and some important parameters of the company's position and performance. The data for the period 1987-88 to 1996-97 was collected from Mumbai Stock Exchange Official Directory. The technique of ratio analysis and some statistical tools like correlation, regression analysis, and 't' test were applied. Some of the important findings of the study are as follows:

1. The gross profit ratio, net profit ratio and return on investment ratio of the sample company showed an average of 10.9%, 5.1% and 16.81% respectively. The study revealed that profitability of the company was not stable.
2. The inter-relationship between the company's position and performance and profitability revealed that current ratio, quick ratio (Q.R) and current assets to total assets ratio were negatively correlated with return on Investment (ROIR). This relationship confirmed the principle that "greater the company's margin of safety to the short term creditors the lower is the profitability of the concern."
3. The assets turnover ratio (ATR) and capital employed turnover ratio (CETR) witnessed positive association with ROI but were found to have no such significant association with the profitability.
4. The multiple correlation co-efficient between the dependent variable ROIR and the independent variables QR, ATR and CETR taken together were 0.849 This indicates that the profitability of the company was moderately influenced by its QR, ATR, and CETR The coefficient of multiple determination makes it very clear that 72.1% of the total variation in the profitability of the company was explained by the three independent variables QR, ATR and CETR

Sahu ³⁰ conducted an empirical study on the analysis of corporate profitability based on secondary data of 100 non-financial, non-government public limited companies in Eastern India covering the period from 1984-85 to 1993-94. The data was collected from various volumes of Mumbai Stock Exchange Official Directory. The main objective was to measure the composite profitability of a firm by a single index and to study the degree of relationship between the ratios included under each of the main category in order to identify the ratios, which overlap in the information they provide about profitability. The techniques of ratio analysis and statistical measure like rank correlation were used. He found that the profitability ratios in relation to total assets and sales highly correlated with each other due to common elements observed in both these categories and that they were influenced by the common economy wide and industry wide factors. He also found that the gross surplus ratio i.e. EBDIT / GTA highly correlated with all ratios falling under the main group of "Return on total assets". Thus, gross surplus ratio can be treated as a true representative ratio of overall profitability.

He further states that the benefit of composite scoring system is quantification of the overall profitability of a firm. It acts as a potent tool for corporate planning and control

Hyderabad ³¹ conducted an important study on evaluation of working capital investment and financing policies of large public limited companies in India including medicine and pharmaceutical companies covering a period of three years beginning from 1994-95 to 1996-97. For this purpose 756 non-government and non-financial large public limited companies in India were selected. The data was collected from the RBI bulletin. The main findings in relation to medicine and pharmaceutical companies are as follows

1. The current assets to total assets ratio hovered in the range of 56% to 59% indicating that the sample companies had higher investment in current assets than in fixed assets. In other words they adopted a conservative approach towards current asset investment.
2. In spite of having adopted a conservative investment policy, the average current ratio of the sample companies was below the standard norm of 2.00:1.00. The reciprocal current ratio was also quite high and showed an increasing trend. This shows that companies have resorted to the practice of excessive use of short-term debt funds / current liabilities to finance the current assets.

He suggests that the sample companies should employ more of long-term funds to improve their overall working capital position. He also suggests that current assets investment should be need based and a continuous monitoring on its level would help avoid the risk of excessive investment in it.

Shah ³² conducted significant research study on the Problems of Working Capital Management of Selected Pharmaceutical Companies of Maharashtra State. The objective of the study was to examine the short-term financial position and financing policies of working capital for a period from 1989-90 to 1998-99. For this purpose, 10 multinational and 3 domestic large size public limited pharmaceutical companies were selected. The data was collected from the annual reports, Bombay Stock Exchange Official Directory, Kothari's Industrial Directory, RBI bulletins, and CMIE reports. The techniques of ratio analysis and statistical techniques of correlation, regression etc. were applied. The important findings of the study are as follows

1. The structural analysis revealed that receivables constituted largest share in the total current assets constituting 46.15%, followed by inventory at 45.80% and cash at 8.05%.
2. The average current ratio and quick ratio was 1.85:1.00 and 1.04:1.00 respectively. This indicated that the liquidity position of the sample companies was satisfactory.
3. The inventory turnover ratio registered an increasing trend and it varied between 3.47 times to 4.95 times. This shows efficient and sound policy adopted by the management for inventory control.
4. The high average receivables turnover ratio of 12.06 times indicates that the management had adopted stringent credit policy. Thus the receivables management on the whole was encouraging.
5. The average payment period of 141 days compared to the average collection period of 39 days showed that the management had received more credit facility than they allowed to their customers. This showed better credit worthiness and sound credit and collection policy of the managements.
6. The overall percentage of long term funds in total working capital finance was 49.60%, short-term bank borrowings was 27.87% and funds from operation was 22.53%. This indicated that management relied heavily on long-term sources of funds for financing their working capital requirements.
7. The overall average percentage of gross profit to total capital employed of 17.12% and profit after tax to net worth of 18.99% revealed that the profitability position of the sample companies was satisfactory. The sound profitability strengthened the internal base for financing the working capital requirements

8. The net working capital turnover ratio registered a fluctuating trend and was on an average 6.96 times. The high turnover ratio revealed high degree of efficiency with which the short-term funds were deployed in the business.
9. The overall average percentage of net profit to gross working capital of 11.88% indicated that the sample companies had earned sufficient return on their gross working capital.

He concludes that the overall working capital management of the pharmaceutical companies was very sound, effective and efficient.

Patel ³³ carried out an important study on Financial Appraisal of Steel Industry in India. The study analysed and evaluated the overall financial performance of ten selected steel companies for the time span between 1985-86 to 1994-95. The financial data was obtained from Bombay Stock Exchange Official Directory. The ratio analysis technique and statistical tools like measures of central tendency, dispersion; co-efficient of correlation and co-efficient of variation were used. The major findings of the study are presented below:

1. The gross profit ratio, net profit ratio and return on capital employed on an average was 14.36%, 5% and 8.40% respectively. The study revealed that the profitability position was not satisfactory. This was mainly due to high operating cost. The operating ratio on an average was 91.15%. This indicated that there was no effective control over the operating expenses and that the operating cost per rupee of sales was very high.
2. The assets turnover ratio of 0.61 times revealed inefficient utilisation of assets. The sales of the sample company did not justify the size of investment in total assets.

- 3 The return on equity ratio was lower than the return on capital employed throughout the study period. Thus steel companies could not take the advantage of trading on equity due to low profit margin.
4. The debt equity ratio registered an increasing trend and varied between 1.37:1.00 and 2.57:1.00. The capital structure of the sample company was highly geared.
5. The proprietary ratio registered a declining trend. The average contribution of shareholders funds in financing the assets was only 32.83%. The sample companies relied heavily on borrowed funds.
6. The interest coverage ratio was very low and showed an average of 1.65 times. The financial risk was very high due to low profitability and signalled an impending solvency crisis.
7. The current ratio and quick ratio on an average was 1.13:1.00 and 0.56:1.00. The liquidity position of steel industry was highly unsatisfactory. The creditors of the sample companies were not having sufficient cushion against their current claims.
8. The average inventory turnover ratio of 2.33 times was quite low. There was over investment in inventory.
- 9 The declining trend of debtor's turnover ratio and increasing collection period indicated that the management moved towards liberal credit and collection policy
- 10 The working capital turnover ratio registered a fluctuating trend. It was on an average 3.40 times. The low turnover was the result of unfavourable turnover of inventories and receivables. There was inefficient utilisation of the working capital funds

11. The funds flow analysis revealed that funds from operation was the main source of raising funds followed by long-term borrowings, non-operating funds and share capital. However the proportion of funds from operation declined while that from long-term borrowings increased. The funds raised were mainly used for acquisition of fixed assets and for financing the working capital needs.

He concludes that the profitability position of the steel industry on the whole was unsatisfactory. The liquidity position was not sound. The capital structure was highly geared and due to low interest coverage ratio there was high financial risk.

He suggests that there was need for cost control and cost reduction to improve profitability. In order to increase ROI, a judicious use of debt and equity funds is suggested.

Das and Panda ³⁴ carried out a major study on 'A Statistical Analysis of Equity Financing In Joint Stock Companies Of India' including drugs and pharmaceutical companies. The main purpose of the study was to analyse the overall trend of equity finance and its individual components and to ascertain the manner in which these funds were utilised. For this purpose, 246 non-financial public limited companies were selected. The data obtained from the Bombay Stock Exchange Official Directory covered a period from 1981-82 to 1989-90. The technique of ratio analysis and statistical techniques of correlation, regression etc. were applied. The main findings of the study are as follows:

1. Equity constituted on an average 42.10% of the total sources of funds. Lesser reliance on the equity funds was due to tax advantage available with regards to debt funds.

2. The overall increasing trend of equity funds was ascribed to the rising trend manifested in all the components of equity finance except preference capital.
3. Depreciation and amortisation constituted the largest share in the total equity funds at 51% followed by retained earnings at 39% and incremental equity capital at 10%.
4. The trend analysis of individual components of equity funds revealed that depreciation & amortisation manifested an increasing trend. This was attributed to the increase in additional investment in fixed assets. Retained earnings registered an overall declining trend owing to low profitability and low retention ratio especially during the last six years of study. This indicated a declining reliance on the equity resources of funds during the same period. The declining trend of incremental preference share capital was due to redemption of preference shares, low public response and non-existence of primary as well as secondary market for this class of shares. The rising trend of incremental equity share capital can be attributed to the demand for additional finances in the expansion, modernisation, renewal, replacement and up gradation of fixed assets on one hand and non-availability of debt finance as well as funds from depreciation and retained earnings on the other.
5. The equity finance was a primary source for financing the fixed assets and there was a high degree of positive correlation between equity funds and fixed assets investments which was found to be + 0.92 and was significant at 5% level of significance
6. The sample companies resorted to non-equity finance for their current assets investments as a major portion of equity funds were used for financing

incremental fixed assets. On an average 77.55% of its current assets were financed by the outsider funds.

7. The debt equity ratio of 2.14:1.00 was fairly high than the generally accepted norm of 2:1, indicating that the management was in favour of raising more debt to finance the assets
8. The fixed assets to net worth ratio was on an average 1.39 which indicated the owners funds were not sufficient to finance the fixed assets and the sample companies were dependent upon outsiders to the extent of 39% on an average.

Abdussalam ³⁵ carried out an important study on Working Capital Management Of the Selected Large Scale Public Limited Industrial Companies of Jordan including pharmaceutical companies. The study analysed the structural health of working capital and evaluated the efficiency of working capital management. He selected 21 industrial companies of Jordan from 1987 to 1996. The data was obtained from the published annual reports, Jordanian bulletins, detailed questionnaire and personal interviews. The techniques of ratio analysis and funds flow analysis were applied. The major findings with regards to pharmaceutical companies are presented below:

1. The inventory turnover ratio on an average was 2.58 times. The ratio was low due to high level of inventories especially raw materials and spares parts and stores. Both these components were imported from foreign market and therefore the management followed a policy to purchase it in bulk so as to avoid stock out
2. The receivables turnover ratio on an average was 1.55 times. The low turnover led to higher collection period of 246 days. It also increased the

percentage of bad debts with regards to gross accounts receivables. This indicated liberal credit policy followed by the management in order to increase the sales.

3. The average payment period of 316 days compared with the average collection period of 246 days showed that the management had followed a policy of slow payment and fast recovery in order to improve the liquidity position.
4. The increasing trend of current ratio and the quick ratio indicated that the liquidity position of the sample companies improved constantly.
5. About 50.90% of the working capital requirements were financed by long-term loans, followed by cash credit at 31.02% and funds from operation at 12.28% and .The main reason of long term loans being a major source was due to reduction in cash-credits availed by the sample companies.

He concludes that the pharmaceutical companies were the only sector, which improved the efficiency in all the aspects of working capital management during the period under study.

He further suggests that management should use scientific techniques to control inventory, account receivables and cash in order to improve the working capital of the sample companies. This would ultimately improve overall efficiency of the working capital management and in turn increase profitability.

Sultana ³⁶ carried out a significant study on Financial Structure of Pharmaceutical Companies in India. The main purpose of the study was to make an in-depth analysis of the financial structure of multinational pharmaceutical companies and to evaluate the role of each source of finance in total financing. For this purpose, 5 large and medium size multinational public limited pharmaceutical

companies were selected. The data was collected from the published annual reports for the period 1990-91 to 1998-99. The techniques of ratio analysis and statistical technique like co-efficient of correlation and co-efficient of variation were used. The study came out with the following major findings:

1. The average debt equity ratio was below the standard norm of 2:1. The capital structure of the sample companies was low geared. They relied more on their own capital rather than on debt capital and stayed away from the benefits of financial leverage.
2. Among the equity funds the share of reserves was higher than the equity share capital. The growth of equity capital was mainly due to the issue of bonus shares while higher retention of profits helped to increase the share of reserves
3. Among the creditors funds, the share of current liabilities and provisions was highest as it was relatively easy, flexible and a convenient source of raising finance
4. The share of secured bank loans in total finance was very meagre. Borrowings from financial institutions were negligible. Delay in sanctioning, disbursement of loans and inclusion of convertibility clause in the loan agreements seemed to have come in the way of using of this source of finance. As regards to borrowings from the public, debentures were more favoured as compared to public deposits

The study suggests that the management should use the debt to their fullest capacity and take advantage of financial leverage.

Panda and Behera ³⁷ conducted an important study on Management of Assets of Large Scale Electrical Goods Companies in India. The objective of the study was to evaluate the management of assets and their earning capacity and to measure the association of the size of gross fixed asset with debt-equity ratio. For this purpose, 40 large-scale electrical goods company were selected. The data was obtained from Mumbai Stock Exchange Official Directory for the period 1984 to 1993. The technique of ratio analysis and statistical tools such as chi-square test were applied. The major findings of the study are presented in following section:

1. The assets turnover ratio of 1.25 times reflected moderate degree of efficiency in utilisation of assets to generate sales.
2. The sales to capital employed ratio were 3.60 times. Trend analysis indicated high degree of efficiency of total capital employed in respect to sales with minimal rate of change. So far as the post liberalisation period was concerned, the liberalised policy of the Government of India had a good impact on the average turnover of sales to the total capital employed by the sample companies
3. The net sales to gross fixed assets ratio on an average was 4.21 times The entire period of study revealed efficient management of the gross fixed assets

They suggest that the sample companies should strive hard to manage their total assets properly for higher generation of sales volume Latest technology be used to enhance sales and economise the cost of production

The I.C.I.C.I 's ³⁸ reports on financial performance of 675 companies of private corporate sector including 30 medicines and pharmaceuticals companies for the period of five years from 1991-92 to 1995-96 were significant to study the overall performance of pharmaceutical companies. The ratio analysis technique was used. The major findings with regards to the pharmaceutical companies were as follows:

1. The averages return on capital employed ratio of 15.54% reflected the profitability position, which was quite satisfactory.
2. The average percentage of total dividends to paid up capital ratio was below 20%. Thus a major proportion of the profits were retained by the companies and ploughed back in the business
3. The average debt-equity ratio of 0.53: 1.00 was quite below the standard norm of 2:1. The capital structure of the sample companies was low geared and the managements were conservative in utilising debt for financing their assets.
4. The average current ratio was 1.33:1.00. As compared to the mean current ratio of the Indian manufacturing industry, which varied between 1 and 1.5 the liquidity position of the sample companies, seemed quite satisfactory.
5. The inventory turnover ratio registered an increasing trend and was on an average 4.13 times. The increasing trend indicated efficient and sound management of inventory
6. On an average 53.6% of the total inventories were financed by bank borrowings

Thakker ³⁹ carried out an important study on Financial Appraisal of Larsen and Toubro Ltd. The study analysed profitability, long-term financial strength and the working capital position of the sample company for a period ranging from 1989-90 to 1998-99. The data was collected from the published annual reports. The techniques of ratio analysis, fund flow analysis, trend analysis and statistical tools like mean, standard deviation co-efficient of correlation and co-efficient of variation were applied. The major findings of the study are as follows:

1. The overall profitability position measured in terms of return on capital employed and return on net worth was quite satisfactory.
2. The low asset turnover ratio revealed inefficiency on the part of management to utilise the assets effectively for generating higher sales.
3. The average debt-equity ratio of 0.34:1.00 showed that the capital structure of the company was low geared. Management of the company was conservative in utilising debt for financing their fixed assets.
4. The increasing trend of interest coverage ratio suggested that the company had ample scope to employ more of debt in its capital structure and thereby magnify the returns of the owners.
5. The liquidity position measured in terms of current ratio and quick ratio show satisfactory results
6. The average inventory turnover ratio was 2.84 times which was quite low. The investment in inventory was excessively high.
7. The low working capital turnover ratio was the result of slow turnover of inventories
8. Funds from operation constituted the largest share in the total funds raised, followed by long-term borrowings, issue of shares and sale of investments

The funds raised were mainly used for acquisition of fixed assets and for financing working capital requirements.

A study by Reserve Bank of India's ⁴⁰ study on the Finance of Public Limited Companies including drugs and pharmaceutical companies was very significant to understand the overall financial performance of the non-government, non-financial public limited companies during the period 1990-91 to 1999-00. The data was obtained from the audited annual accounts. The major findings of the study are as follows:

1. The average gross profit margin and the net profit margin was 23.67% and 6.22% respectively while operating ratio was on an average was 81.13%.
2. The return on capital employed and return on equity was on an average 17.18% and 15.66% respectively showing quite a satisfactory overall profitability position.
3. The assets turnover ratio on an average was 0.92 times. This showed ineffective utilisation of the assets.
4. The return on capital employed remained below the return on equity. Thus the management could not take the benefit of financial leverage
5. The debt equity ratio showed an average of 1.23:1.00. The capital structure was low geared. The management of the sample companies was conservative in utilising debt and relied more on the internally generated funds for financing assets.

6. The average interest coverage ratio of 2.34 times provides a sufficient margin of safety to creditors of external funds with respect to interest burden. It also indicated ample scope of employing more of debt in the capital structure and thereby magnifying the returns of the owners.
7. The current ratio and quick ratio showed an overall increasing trend and was on an average 1.99:1.00 and 1.23:1.00 respectively. The cash to current ratio was 8% while the debtor's turnover ratio was 6.37 times. Thus indicating a sound liquidity position of the sample companies.
8. The inventory turnover ratio of the sample companies registered an increasing trend, which showed an average of 5.13 times. The higher turnover ratio was the result of efficient inventory management.
9. The fixed assets turnover ratio on an average was 2.06 times. The low turnover ratio revealed that the fixed assets were not efficiently utilised to generate higher volume sales. In other words the volume of sales did not justify the size of investment in fixed assets.

Jain ⁴¹ carried out an important study on Working Capital Management of Pharmaceutical Industry in India. The main objective of the study was to analyse the short-term financial position during 1978 to 1987. For this purpose five multinational pharmaceutical companies were selected. The data was obtained from the published annual reports and Bombay Stock Exchange Official Directory. The technique of ratio analysis and statistical techniques like correlation, regression, chi-square test etc., were applied. The major findings of the study are as follows.

1. The current assets registered an increasing trend. The difference between the actual and trend values was significant at 5% level of significance.
2. The size of inventory in absolute values marked an increasing tendency. All the sample companies except one satisfied the norm of having inventory equal to 65% of the total current assets.
3. The inventory turnover ratio showed a rising tendency and varied between 3.58 times and 5.31 times indicating that the management had adopted an efficient and sound policy for inventory control.
4. The size of cash balance in absolute rupee value and its proportion to current asset marked a fluctuating trend in all the sample companies except one.
5. The average of current ratio and quick ratio was 1.66 and 0.65 respectively showing an unsatisfactory liquidity position.
6. The size of receivables registered an increasing trend while its proportion in the total current assets showed a mixed trend.
7. The declining trend of receivables turnover ratio and increasing collection period showed that the management had followed a liberal credit and collection policy which had an adverse effect on the liquidity position.
8. The analysis of funds flow showed an increasing trend of working capital depicting increased activities of industry. Nearly 80% to 90% of funds were raised from funds from operation barring few years in which equity shares were issued. Major portion of funds were used to pay income tax and dividend and in acquiring fixed assets during the entire period of study.

CRITIQUES OF PRIOR STUDIES:

The studies and research reviewed in this chapter provides a good quantitative thought about the profitability, liquidity, working capital and leverage positions of different industrial sectors. By and large, the studies reviewed show discrepancies in many ways as they dealt with some specific aims and certain aspects of financial management. The practical shortcomings of the earlier studies with regards to the time period covered, content and the size of the sample necessitates further study in this area. Thus the present study is a modest attempt to overcome the delimitations of the aforementioned studies.

Study conducted by Shah's ⁴² was mainly based on the problems of working capital management of pharmaceutical companies in Maharashtra state. The study analysed the short-term financial position and financial policies in relation to inventories, receivables and cash. The companies studied as sample units were Indian controlled as well as foreign controlled pharmaceutical units and thus were not homogenous in nature. Therefore an in-depth analysis of each ownership group separately is essential for a precise understanding of the problems of working capital of Indian and foreign controlled companies. Moreover, appraisal of other facets like financial policies with regards to capital structure, profitability, and fixed assets also become essential to judge the overall financial performance of the companies, which were not considered in the earlier research.

Jain's ⁴³ study was mainly based on working capital management of five multinational pharmaceutical companies operating in India during 1978 and 1987. His study covered in-depth analysis of current assets and its components but the financing aspect of working capital was completely overlooked. The other aspects of financial management in relation to profitability, long term solvency and fixed assets

investment were also not analysed. Moreover the size of sample was too small to bring out a wide-ranging result. Generalisation of result gets severely restricted unless representative sample is taken

Agrawal and Sharma's ⁴⁴ study focussed mainly on return on investment on drugs and pharmaceutical companies. The study included an extensive analysis of profitability position of the pharmaceutical units. One of the major limitations of the study was that the average operating performance of the sample units was not compared with the overall industrial average as well as with the average of the manufacturing industry as a whole. The study also did not attempt to analyse the other aspects of financial management such as short-term financial position, long-term financial strength and funds flows. Thus, their findings do not throw light on all the facets of financial performance. Moreover, the time span of five years is not adequate to bring out a comprehensive result for a pragmatic study. For better and precise findings the study should cover a longer duration.

Patel's ⁴⁵ study was mainly based on financial appraisal of the steel industry in India. His study analysed profitability, liquidity, leverage and fund flows positions of selected steel companies in India. Such a comprehensive study has not been done on the multinational drugs and pharmaceutical companies in India.

Hazari and Lakhani's ⁴⁶ study was based on financial structure and ownership pattern of private pharmaceutical companies in the state of Maharashtra. The study laid more emphasis on examining the role of foreign capital and ownership pattern. They made a comparative analysis between foreign controlled and Indian owned pharmaceutical companies in terms of financial structure, profitability and growth. The financial structure was analysed without making an in-depth analysis of different sources of funds and debt equity proportion in the capital

structure. The profitability position and growth was examined with an intention to know whether foreign controlled companies did better or the Indian owned companies but factors causing higher or lower profitability and growth were not analysed. The analysis of liquidity and the working capital position was completely ignored. Moreover, the study was chiefly based on private limited companies and not on public limited companies. Thus the study does not focus on all the aspects required to scan the overall financial health of the pharmaceutical companies.

Johri's ⁴⁷ study on Business Strategies of Multinational Drug and Pharmaceutical Companies in India mainly concentrated on analysing in general the Government policy towards multinational corporations, licensing policies, import policy, impact of FERA and DPCO on drug companies, production and distribution policy and some aspects of financial management. The profitability performance of the multinational companies has not been examined. While analysing the financial policy regarding the working capital, analysis of effect of working capital on profitability was completely ignored. Detailed study of the capital structure and its association with the profitability position of the multinational corporation was also overlooked. The inflow and outflow of funds have also been not analysed. Thus, the study does not throw light on all the segments of financial performance of the multinational companies.

Except for the above-mentioned studies described in detail, no extensive research study has been carried out covering all the features of financial management of multinational drugs and pharmaceutical companies operating in India. In spite of their significant contribution in the development of the Indian pharmaceutical industry, no systematic study has been carried out on the financial appraisal of multinational drugs and pharmaceutical companies. The studies related

to some aspects of financial management of pharmaceutical companies have been done but they relate to the pre-liberalisation period and the sample size is also not representative. Thus, study on the over all financial appraisal of a representative sample of multinational drugs and pharmaceutical companies covering the post liberalisation period would enable to throw some light on issues related to profitability, liquidity, leverage, working capital and funds flow position. This would not only open up new areas for further research but could also be of great significance to the financial managers by giving an insight into the diverse problems in a proper perspective.

Thus the present work attempts a comprehensive study on the overall performance of the multinational drugs and pharmaceutical companies in Mumbai, i.e., **Financial Appraisal of Selected Medium and Large Size Multinational Drugs and Pharmaceutical Companies in Mumbai.**

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