CHAPTER III
THEORETICAL FRAME WORK, CONCEPTS
AND THE REVIEW OF EARLIER STUDIES

Cement Industry in Tamil Nadu
- An Analysis of Financial Statements of Selected Companies
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The ratio analysis is used to find out the financial soundness of the company. The ratios worked out in the present study are liquidity ratios, solvency ratios, profitability ratios and turnover ratios.

A. Liquidity Ratios

Liquidity ratios measure the ability of a firm to meet its current obligations. A firm should ensure that it does not suffer from lack of liquidity and also that it is not too much high liquid. Current ratio and quick ratio indicate the liquidity position of a firm.

Current Ratio

This is a basic measure to judge the ability of the company to pay off its current obligations out of its short-term resources. The higher the current ratio, the larger is the amount available per rupee of short term obligations and accordingly, the greater is the feeling of security. Keeping in view of the possibility of 50 per cent shrinking in the value of Current assets, the rule of thumb about the current ratio has been at 2:1. A good current ratio means a good umbrella for creditors against rainy day but to the management it reflects bad financial planning or presence of idle assets or over-capitalization.¹

Quick Ratio

This ratio is a refinement of current ratio and it indicates the quality of current assets. This ratio excludes inventory from current assets since it may be slow-moving. The ratio can refer more effectively to the short-term debt repaying ability of the concern. Rule of the thumb is 1:1 for the quick ratio. This is also called the acid test ratio. However, it is a fact that many well-managed large enterprises in India are successfully operating with a quick ratio of just 0.45.²

Current Assets to Total Assets Ratio

This ratio expresses the relationship between the amount of current assets and the amount of investment in total assets. It helps to assess the importance of current assets in the total assets of a concern.

B. Solvency Ratios

Solvency of a business refers to the ability of the organisation to meet its obligations as and when they fall due and thus it reveals a measure of financial strength of the organisation. The solvency ratios are debt-equity ratio, ratio of total liabilities to owned funds and fixed assets to owned funds.

Debt-Equity Ratio

It shows the proportions of debt and equity in financing the firm’s assets. They indicate the state of creditors and owner in business. Debt-equity ratio indicates share of funds provided by lenders and owners. This ratio can be expressed in terms of time or percentage.

Total Liabilities to Owned Funds Ratio

This ratio explains the relationship between total liabilities and owned funds. It tells how much money was borrowed from the external sources for the establishment and functioning of the firm.

Fixed Assets to Owned Funds Ratio

The ratio of fixed assets to owned funds was estimated to understand whether or to what extent the fixed assets of the company is financed through the owned funds and how much of fixed assets is financed by the outsider’s fund.

Capital Gearing Ratio

The relationship of equity capital to preference share capital and loan capital is described as capital gearing. The main objective to calculate this ratio is to compare the composition of the capital employed by classifying the components into two groups namely funds bearing fixed charges or fixed interest and other funds which constitute equity shareholders funds and do not bear fixed charges. The ratio of capital gearing is calculated by dividing the total of long-term borrowed funds and paid-up preference share capital by the amount of paid-up equity share capital.

C. Profitability Ratios

Profitability ratios measure the overall performance and effectiveness of the firm. The profitability of the firm can be measured in terms of various aspects like sales, capital employed, fixed assets, equity capital, working capital and total assets.
Net Profit to Total Assets Ratio

Net profit to total assets ratio was used to examine the extent of net profit for each rupee of investment in the organisation.

Net Profit to Working Capital Ratio

Net profit to total working capital ratio was used to examine the extent of net profit generated for each rupee of investment on working capital.

Net Profit to Fixed Assets Ratio

The ratio of net profit to fixed assets was used to examine the extent of net profit generated for each rupee of investment on fixed assets.

Profit Margin Ratio

This ratio is calculated by dividing the amount of operating profit by the amount of sales. This ratio reveals the profit margin on sales in which management and shareholders are very interested.

Return on Capital Employed Ratio

It is the profitability as related to capital employed. To measure the overall efficiency of the organisation, the modern financial analyst suggested this ratio. This ratio is calculated by the amount of operating profit by the amount of capital employed.

D. Turnover Ratios

Turnover ratios reflect the firm's efficiency in utilizing its assets. These ratios are applied to evaluate the efficiency with which the firm manages and utilises its assets. They indicate the speed with which assets are being converted or turned over into sales. These ratios are also called the activity ratios which reflect the efficiency in which the organization maintains its resources. The
activity ratios are rate of turnover, working capital turnover, fixed asset turnover, total asset turnover, and debtors turnover ratios.

**Rate of Turnover Ratio**

The rate of turnover ratio indicates how much of capital is tied off in the inventory of the organization. The higher the ratio shows the lower will be the investment of capital in inventory and vice-versa. This ratio throws light on the inventory policy pursued by any company with reasonableness of the same. The higher this ratio, the more is the efficiency with which the inventory is said to be managed.³

**Working Capital Turnover Ratio**

The relationship between the sales and working capital tests the efficiency with which the working capital is used. This ratio indicates the efficiency of the employment of working capital. The higher the ratio, the greater is the efficiency and larger, the rate of profits.

**Fixed Assets Turnover Ratio**

Fixed assets turnover ratio was used to study the utilization of fixed assets to generate sales.

**Total Assets Turnover Ratio**

The ratio of total assets to turnover indicates the velocity of sales to total assets of the company.

**Debtors Turnover Ratio**

It is a tool to aid in the analysis of efficiency of liquidity and activity management. It measures the quality of debtors, i.e., the rapidity or slowness of

their collectibility. The higher the debtors turnover ratio, the better is the quality of debtors as a high debtors turnover ratio implies the prompt payments by debtors. This also shows the efficiency of the credit and collection policies of the firm.

Financial Strength

The word financial strength is composed of two words financial and strength. The term financial refers to various sources of finance. These are classified as owned sources and borrowed sources. The term strength refers to the ability to meet claims when they become due. There are two views of the financial strength of every organisation, the short term and long term. The short term financial strength relates to the technical solvency of an organisation in the near future, while the long-term financial strength depends on the structure that has been imposed in financing more permanent assets requirements.

The bankers and creditors are mainly interested in the current debt paying ability of an organization, i.e. the short-term financial strength. Debenture-holders and long term creditors are mostly concerned with the long term financial strength of the organisation.

Short-Term Financial Strength

The short-term financial strength is defined as the liquidity condition of the business organisation. Liquidity refers to an organization’s ability to meet its maturing obligations. Liquidity is the case with which assets may be converted
into cash without loss. To measure the short term financial strength various ratios are calculated. They are current and quick ratios.

**Long-Term Financial Strength**

The long term financial strength of the company is measured by debt equity ratio, fixed assets to net worth ratio and fixed assets to total debt ratio.

**Fixed Assets to Net Worth Ratio**

This ratio shows the percentage of fixed assets financed by the owners of the organisation. This ratio is an important tool for judging the margin of safety for long-term creditors. The lesser the ratio the greater is the margin of safety, for long-term creditors. This ratio is able to judge the owners of the long-term borrowed funds and the sources of financing working capital.

**Fixed Assets to Total Debt Ratio**

This ratio is also an important ratio for judging long term financial strength of an organisation, because at the time of liquidation or in long term lending one sees only towards fixed assets of that organisation. This ratio shows how much the claims of the outsiders are covered by the fixed assets of the business.

**Review of Literature**

The review of literature guides the researchers for getting better understanding of methodology used, limitations of various available estimation procedures, data base, lucid interpretation and reconciliation of the conflicting results. Besides this, the review of empirical studies explores the avenues for

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future and present research efforts related to the subject matter. A number of research studies have been carried out on different aspects of performance appraisal by the researchers, economists and academicians in India and abroad. A review of these analysis is important in order to develop an approach that can be employed in context of the study of cement industry. Therefore, in this part, reviews of empirical studies related with the study has been made.

Goel V.K and Navi.N.K (1976)\(^5\) in their study on productivity trends in cement industry in India revealed that there was a healthy picture of the cement industry during the period of 1951-52 to 1974-75. The profit margin in the cement industry was to the tune of 20 per cent during the period. There had been a sharp decline in both the ratios of net worth to total liabilities and the acid test ratio. After 1974-75, the industry incurred losses due to its inherent techno-economic non-viability.

Ramamohan, T.V.S. and Arun K. Dua (1977)\(^6\) in their study entitled working capital and the operating cycle: The micro level norms found that the operating cycle in Ashok Leyland, Britania Biscuits and Voltas were higher when their products were sold to the government. An excess of raw material inventory was identified in Escorts and Philips India. Most of the firms appeared to hold raw materials inventory for two production runs.

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Smith (1977) argued that the cost of issuing debt and equity securities is related to firm’s size. In particular, small firms pay much more than the large firms to issue new equity and somewhat more to issue long-term debt. This shows that small firms may be more leveraged than large firms and may prefer to borrow on short term rather than issue long term debt because of lower fixed costs associated with this alternative. Thus an inverse relationship is expected between size and total debt; and between size and long term debt. No prediction is made regarding the effect of size on short term debt.

Agarwal, N.K (1978) in his study on cash management in Indian industries found the average current and quick ratio in cement industries were 1.06 and 0.45 compared to the all industry ratio of 1.23 and 0.54 respectively. The ratio of cash to total current assets and cash turnover ratios in cement industries were 3.1 and 56 respectively. The correlation coefficient of sales and average cash balances in cement industries were 0.68. The study revealed a great need for constant watch on cash flows to control effectively and productive use of idle funds to effect economies in cash holding to increase the profitability of a firm.

Srinivasan.V. et.al (1978) in their study on the application of multiple regression analysis to financial ratios of public enterprises inferred that gross

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profit margin affects the return on capital to the largest extent. The other two in
decreasing importance are turnover of capital employed and turnover of working
capital. The regression coefficient for working capital turnover implies that as the
turnover of working capital increases the contribution to return on capital
employed decreases. It does not automatically follow that the turnover must be
decreased by decreasing the output. It only implies that the working capital must
be more than what it is now. The effective control of expenses incurred in
production will substantially improve the returns.

Porwal, L.S and Vinod Kumar (1980)\textsuperscript{10} in their study on financial
statements, Analysis and prediction of future rate of return - A case study of
engineering industry concluded that the financial ratios may not be said to be
useful to rank the firms in terms of future rates of return and hence it may be
observed that financial ratios computed do not help in forming an opinion about
the capability of the concern whose data are analysed. A basic reason for
contributing to this result may be the influence of extraneous factors on the rate
of return. Rate of return, encompassing the dividend payments and price
appreciation / depreciation in the holding period of the study is susceptible to
number of impulses, a great many of which are non-quantifiable.

Pandey, I.M (1981)\textsuperscript{11} in his study on working capital trend in India
highlighted certain important trends in working capital. The current assets to total

\textsuperscript{10} Porwal, L.S and Vinod Kumar, “Financial Statements, Analysis and Prediction of Future Rate
of Return - A Case Study of Engineering Industry,” Chartered Accountant, 28(11) May 1980,
pp.987-995.

\textsuperscript{11} Pandey, I.M. “Working Capital Trends in India” - Chartered Accountant. 30(6), December,
1981, pp.376-381.
assets ratio in cement industries had been increased from 42.3 in 1970-71 to 53.1 in 1975-76. It also revealed that inventories constitute the major part of current assets and sales. It was however, noticeable that inventory as a percentage of sales had not varied much during 1971-76. It was observed from the business executives to manage inventories and debtors skillfully in order to bring down their levels without adversely affecting production and sales.

The Birla Institute of Scientific Research (1981)\(^\text{12}\) in their study on cement industry found that the performance of the public sector units had been poorer on the whole compared to that of the private sector. The reason for the poor performance could not be due to any objective factors but was perhaps to be traced to the differing errors of the two sectors. The poor profitability and consequent low rate of dividend declaration right through the decade of seventies, in turn, placed serious limitations on the ability of private units to raise funds.

Weston and Brigham (1981)\(^\text{13}\) have suggested that management of large firms may choose to use equity financing, since sale of additional stock had little influence on the control of the large firm.

Lalwani, J. (1984)\(^\text{14}\) in his study entitled Inter-relationship between productivity and profitability in cement industry” concluded that there was a negative correlation between profitability and productivity. The causes for negative correlation identified in the present study is Government control over


\(^{13}\) Weston and Brigham, “Managerial Finance, 7/e, Dryden Press, Hensdale, IC, 1981.

the price of cement. The negative correlation is -0.78 which was high and significant. Even though the heavy loss incurred units were eliminated from the study the negative correlation came down to -0.31 which indicates the trend that remains the same in the cement industry.

Nargolkar, J.M and Pandit, S.B. (1984)\textsuperscript{15} in their study on relationship between profitability, growth and working capital revealed that the working capital position or liquidity can not be taken as the single index of the health of the company. The companies with growing sales need substantial additional working capital, all of which may not be found by internal cash generation, thus calling for fresh outside long term funds. It is possible for a company to determine the level of increased sales. It can support out of retained earnings available for working capital.

Bansal, L.K and Gupta, R.K. (1985)\textsuperscript{16} in their study entitled financial ratio analysis and statistics enlightened that the coefficient of variation in the study period had a wide gap varying between 7.1 per cent and 51.3 per cent for current ratio and ratio of fixed assets to sales. The correlation of components of short term liquidity ratio generally possesses low correlation as against long term solvency ratio components but the components of both ratios independently possess quite satisfactory correlation in cotton textile industry. The profitability ratio elements in the industry also have quite high correlation in cotton industry as compared to synthetic industry.


Jahirul Hoque, Md. (1985) in his study on impact of poor working capital management on performance of Jute industry in Bangladesh found that the poor working capital investment had produced adverse impact on the performance of the industry, measured in terms of sales, output, productivity and profitability. The major reason for such performance had been inaccurate estimation of working capital, shortage of current assets over current liabilities, unsound inventory planning and control policies, inaccurate planning on credit terms, credit risks and actual payments higher than the budget estimates, etc.

Sinha. A.K. and Singh. K.P. (1985) in their study on cash planning and management (A case study of selected public sector fertilizer undertakings) revealed that a lack of proper planning and control of cash in the Fertilizer Corporation of India (FCI) and its sister units was, to a great extent, responsible for the inefficiency in the management of cash. None of these undertakings could make sincere efforts to regularize its cash flows, determine optimum cash balances, maximise the availability of cash and invest short-term excess funds in short term securities and deposits. It is also observed that cash budget occupies a less important position in the public undertakings because they are financed by the Government and do not operate under those limitations. The cash budget in a

public enterprise is a mere reflection rather than a determinant of the revenue and capital expenditure budget.

Srivastav, S.S. and Yadav, R.A. (1986)\textsuperscript{19} found that only from ratios namely earning before interest and profit to total tangible assets, current ratio, ratio of net sales to total tangible assets and ratio of defensive assets to total operating expenses to discriminate the profit and loss making industries out of 35 variables. The cut off value was determined at 1.425.

Chandra Mall.P, and Balashanmugam (1987)\textsuperscript{20} in their study on profitability and capital structure – A case study of SAIL highlighted the relationship between debt-equity ratio and profitability. The correlation coefficient between the two variables depicted a perfectly negative association \((r = -1)\). It is therefore deduced that inadequacy in equity has a favourable income effect. The SAIL seek to improve its profit margins so that the reserve and the surplus would become an important component of the capital structure. The units ought to design its own financial structure and make it certain that it is designed to be flexible enough to fit present and future needs. The capital mix decision should be with the management, and there had to be an in-built flexibility to allow for changes, so as to take advantage of the changes in the cost of funds.


\textsuperscript{20} Chandra Mall, P. and Balashanmugam, “Profitability and Capital Structure – A Case Study of SAIL,” IPE Journal, 10(4), October-December 1987, pp.31-42.
Sarker J.B and Saha, S.N. (1987)\textsuperscript{21} in their study entitled profitability crisis and working capital management in the public sector in India: A case study revealed the pattern of working capital financing in public sector units as low percentage of cash credit to working capital finance. The company enjoyed long credit period from its suppliers which, instead of being a sign of strength, may very well be constructed as a sign of weakness of the company. The funds from long term source like equity/long term loans which were liberally available to finance, besides fixed assets investment, current assets investment of the company. Therefore the management of working capital in the company had been risk free.

Randolph A. Pohlman, et.al (1988)\textsuperscript{22} in their study on cash flow estimation practices of large firms generated insights regarding the influence of the firm's business and financial risks on large companies cash flow forecasting process. The overall accuracy of cash flow estimates seem to be influenced by two independent factors. First, companies which follow a systematic approach in generating cash flow information achieved a higher level of accuracy. Second, firms which require cash flow forecasts for most, if not all, of their capital expenditures experienced smaller estimation errors. These factors indicate that having an information system which can generate the necessary cash flow data enables a firm to obtain more accurate forecasts, which, in turn could enhance the firms overall capital investment-decision-making process.


Hunter and Srinivasan (1990)\textsuperscript{23} used a logit regression methodology to investigate the determinants of De Nova Bank performance. This is a class of Binary choice model that assumes that an individual firm is faced with no alternatives, in this case, "good" performance and "poor" performance and that the outcome is dependent on a number of factors exogeneous as well as endogeneous.

Debasish Sur (1994)\textsuperscript{24} in his study on working capital management – An overview of Balmer Lawrie & Co.Ltd. found that the company has not wanted to take the risk of maintaining a lower level of current assets. The regression result shows major variation between actual and anticipated working capital in all the years under the study. The trend analysis of turnover and working capital of the company shows that the changes in the investment of working capital has not any impact on the trading activity of the concern. Such mismatch also makes clear the inefficiency in the working capital management of the company.

Benchamin.K.V., et.al (1995)\textsuperscript{25} in their study on financial performance analysis of Government and private sector grainages in Karnataka indicated that the private grainage was financially more sound compared to the Government grainages. The current ratio in private and public sector grainages was 1.81 and 1.37 respectively whereas the net profit to sales ratio was 0.45 and 0.23

respectively. The ratio of fixed assets to turnover was 10.32 and 46.16 respectively. The solvency ratio of fixed assets to earned funds in two units were the same as 1 each.

Chitna Rao, N. and Rao, K.V. (1995)\textsuperscript{26} in their study entitled management of working capital – perceptions of chief executives revealed that the view of executives regarding the working capital as a problem area. Around 50 per cent viewed the working capital problems as great and the remaining viewed them as high. The specific area of problem revealed by the executives are the collection of debts, accumulation of finished goods, availability of working funds and uncertain cash flows.

Jain, P.K, et.al (1995)\textsuperscript{27} in their study entitled on capital structure practices of private corporate sector in India brought to that corporate firms had marked preference for debt to equity in designing their capital structure. The sample companies prefer raising funds from financial institutions than to approach capital. Flexibility in payments relatively lesser time involved in getting funds and no flotation costs were some of the major reasons for such a preference. The corporate firms were finding their experience of interacting and dealing with financial institutions as the most satisfying.


Rengarajan, M.R. (1995)\textsuperscript{28} in his study on working capital for sick industries revealed that even profit-making industries were no exception, because often their symptom of sickness was hidden by their profits. A close watch of the financial parameters would check the sickness at the gross-root level facilitating remedial measures. The interest burden of the industry and the percentage of operating expenses to turnover were going up, depleting the profits. A detailed evaluation of operating expenses and shifting for soft loans or conversion of higher interest loans to equities can sort out sickness and paved the way for revival measures.

Srinivasa Rao.G and Indrasena Reddy.P (1995)\textsuperscript{29} in their study entitled financial performance in paper industry – a case study stated that the financial position of the company had been improving from year to year. The company’s performance in relation to generating internal funds in the form of reserves and surplus was excellent and also was doing well in mobilizing outside funds. The liquidity position of the company was sound as it was revealed by current and quick ratios which were above the standard. The solvency ratios showed that the company had been following the policy of low capital gearing from 1990-91 as these ratios had been decreasing from this year. The performance of the company in relation to its profitability was not up to the expected level. The company’s ability to utilise assets for generation of sales had not been improved much during the study period as it was revealed by its turnover ratios.


Sukamal Datta (1995)\textsuperscript{30} in his study entitled working capital management through financial statements: analysis of paper industry in West Bengal found that most of the firms were suffering from shortage of working capital. One of the primary causes of such shortage of working capital was that most of the firms under study were not capable of earning adequate profit and were also suffering from losses. The expansion of fixed assets also caused the working capital crisis. The utilization of fund had not been covered by sufficient amount of fund by way of long-term investment.

Gangadhar (1996)\textsuperscript{31} in his study on performance of the commercial bank of Eritrea revealed that on an average 79.4 per cent of funds were kept idle in the bank without investing them in income generating opportunities. The rate of return on the investment of the bank was strikingly lower than its rate of interest offered both on deposits and loans and advances. The return on equity of the bank was quite appreciable and improved year after the year. The average rate of growth of net income was more proportionate than that of the growth rate of the equity.

Indrasena Reddy.P. and Someshwar Rao.K. (1996)\textsuperscript{32} in their study on working capital management in public sector undertakings - a case study revealed

that the liquidity position of HCL was satisfactory as its current ratio and quick ratio remained above the standard norms throughout the period of study. The turnover ratios of HCL showed that the company's ability in managing current assets for generation of sales had not been improved much during the study period. Since 1991-92, a sign of improvement was noticed in respect of inventory management and ineffective control over debtors which indicates that the advantages accruing to working capital management from declining share of inventory had been off-set by the increasing share of debtors to the total current assets.

Reddy.V.N. and Ram Kumar Kakani (1996)\textsuperscript{33} in their study on econometric analysis of the capital structure determinants revealed that the profitability was found to be negatively related to the capital structure of the firm. Capital intensity of the firm was also negatively related to the short term debt and total debt ratio of the firm. The regulated firms and growth-oriented firms had more long term debt in their capital structure. The earnings volatility and non-debt tax shields were significantly negatively related to short-term and total debt of the firm. The uniqueness of the firm had become a significant factor in the determination of the short term and total leverage of the firm.

Venkatachalam.A and Vijaya Kumar.A (1996)\textsuperscript{34} in their study entitled responsiveness of working capital management. A case study of Tamilnadu sugar


corporation" indicated that the impact of liquid ratio, working capital turnover ratio, inventory turnover ratio and working capital to total assets ratio were statistically significant. For a unit increase in liquid ratio, profitability decreased by 0.556 unit and one unit increase in working capital turnover ratio would decrease the profitability by 0.163 units. The regression coefficient between profitability and inventory turnover ratio was 0.215 units. One unit increase in working capital to total assets ratio would decrease the profitability by 0.857 units. The four independent variables contribute 96 per cent of the variations in the profitability of the TASCO.

Syed Zabid Hossain and Halibur Rahman Akon Md (1997)\textsuperscript{35} in their study on financing of working capital: case study of Bangaladesh Textile Mills corporation (BTMC) showed that an aggressive working capital financing policy followed by the BTMC. There was an uninterrupted increasing trend in negative working capital throughout the period of study which suggested that, BTMC had exploited the entire short-term sources available to it without considering the actual needs. The higher (1.2 to 2.7 times) current liabilities than current assets show that a large amount of short term finance was used in financing fixed assets in addition to financing current assets to the extent of 100 per cent. Such an approach had aggravated the problem of poor profitability of the corporation, besides increasing the risk of financial insolvency.

Joy Joseph Puthussery (1998) revealed that the borrowing power, owned fund position and lending ability of the Primary Agricultural and Rural Development Banks in Kerala were declining. The interest, expense and total expense increase at higher rate than the interest income and total income. The gross profit ratio and net profit ratio reveal the deterioration and erosion of profit in recent years owing to high cost of management and heavy overdues which in turn, results in lesser volume of business.

Reddy, R.V.S. (1998) in his study on financial performance of public transport corporations – a study of APSRTC revealed that the improvement in the physical and operational performance should be considered as more important than the financial performance in view of the peculiar circumstances faced by the corporation. Decline in profitability by itself need not be considered as reflecting in the efficiency of the organisation, as it is due to more than proportionate rise in the cost of operation compared to the usually delayed and inadequate increase in fares. Capital turnover ratios indicate a general improvement in the rate of utilization of funds employed in live with improvement observed in the physical and operational indicators suggesting that for such an improvement, the operating costs would had been still higher.

Iyoha. M.A. and Ralph I Udeghunam (1998-99)\textsuperscript{38} found that the determinants of bank failure in Nigeria were liquidity ratio, profitability ratio, credit risk and asset-quality of the banks. The factors namely capital adequacy, credit policy and management quality were found to be less important predictors of bank failure in Nigeria. The differences in profitability, liquidity and credit risk were found to be the major distinguishing characteristics between the healthy and the failing bank. The lower the net income to total assets ratio, the more likely was a bank to fail.

Saveeta Bhatia and Satish Verma (1998-99)\textsuperscript{39} in their study on factors determining profitability of public sector banks in India: An application of multiple regression model concluded that the profitability of the banks depends both on exogeneous namely policy determined variables such as reserve requirements, directed credit programs and an endogeneous variables such as composition of deposits, establishment expenses, spread burden, etc.

Dash, D.K. (1999)\textsuperscript{40} in his study on financial performance evaluation through ratio analysis: A case study Nawanagar cooperative Bank, Jamnagar (Gujarat) concluded that the liquidity position of the bank had been maintained at high level. The high level of liquidity affects the profitability and a low level of liquidity hampers the banks' image. These banks could ill-afford to ensure


financial stability and operational efficiency in order to survive in the ever-changing business environment. The financial performance of the banks was satisfactory. The cost for operating and managing the bank was more than 3 per cent to the working capital which was just above the ideal level of 2.5 per cent. The bank was gradually consolidating its position of net worth as compared to fixed assets.

Sakthivel Murugan.M (1999) \textsuperscript{41} in his study on working capital management revealed that the organization maintains the Z score above 3 points for all the years taken for study. This shows that the company was maintaining adequate working capital by investing sufficient funds in its current assets. With the help of adequate current assets, it was also able to meet the current obligations without inviting the risk of bankruptcy.

Siddhanti, S.A. (1999) \textsuperscript{42} in his study of financial performance of IFFCO used the multiple discriminant analysis of Edward Altman who had indicated the financial health of an organisation through ‘Z’ scoring. The financial health was good during 1992-93 (Z=2.72) while in the rest of the period, it had not been satisfactory. Since 1992-93, Z scoring had been declining from 2.72 to 2.36 to 2.22 to 2.13 to 1.74. It slightly improved in 1997-98 when Z scoring stood at 1.99.


Desai, B.H. (2000) found out the financial performance of Gujarat Steel Tubes Ltd. by using Altman’s equation. The accounting data of GST revealed that right from the year 1980-81, till today (1996-97) does not had a single accounting year where the Z score had been equal to or more than the suggested cut off value. This means that GST as a unit had been sick and the warning from the accounting point of view had not been properly needed or taken seriously by the management. The low profitability was linked to low rate of return on total assets.

Mishra, R.N, and Chinmoy Sahu (2000) in their study on the preferred debt-equity mix among the Indian industries indicated that the Indian industries had been playing safe on the whole by lower debt-equity classes. The Indian industries believe that lower levels of debt in capital structure would help to maximize the value of the firm, if indeed that was their ultimate objective. The debt-equity class of 1 to 2 dominated the debt-equity classes of 0 to 1 as the most preferred debt-equity class of 0 to 1. Clearly overlook and dominated the debt-equity class of 1 to 2 as the most preferred debt equity class. This switch in preference for lower levels of debt in capital structure might be attributed to the downturn and recession and any effects of the Indian as well as global economy.

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Muhammad Rafiqul Islam (2000)\(^4\) concluded that all the units of the paper industry had failed to manage their working capital requirements properly. The reasons for working capital crisis were improper use of short-term funds, operating losses, over stocking to stores and spares; and non-availability of raw-materials.

Rajeswari, N (2000)\(^6\) in her study on liquidity management of Tamil Nadu Cements Corporation Ltd. Alangulam – a case study identified that the liquidity position of the Tamil Nadu Cements Corporation Ltd. (TANCEM) was not stable. Regarding liquidity ratios, there were too much of liquidity in the year 1993-94 and 1994-95. A very high degree of liquidity was also bad as idle assets earn nothing and affected profitability. During 1995-96 and 1996-97, liquidity ratios were below the standard ratio and TANCEM suffered from lack of liquidity. In the year 1997-98, liquidity ratio was just above the standard ratio. It was found that there was an unstable position in maintaining liquidity.

Shergill, G.S. and Maninder S. Sarkaria (2000)\(^7\) in his study on market structure and financial performance – an Indian evidence with enhanced controls revealed a significantly negative relationship between concentration and profitability. High concentration or monopoly users inefficiency and poor performance turn to depress profitability. There was an inverse relationship


between profitability and capital intensity. If a firm had built up plant of excess capacity right from the beginning the idle capacity might cause lower profitability resulting in negative relationship between capital intensity and profitability. There was a strong negative relationship between risk and profitability. This might be due to good management. Good managers seek to achieve both higher profitability and low variation in earnings.

Debasish Sur, (2001)\textsuperscript{48} attempted to measure the degree of association between liquidity and profitability with the help of Spearman's correlation co-efficient. There was a positive and significant association between liquidity and profitability. The degree of influence of the liquidity on profitability was comparatively lesser. Even the elasticity of liquidity ratio was positive. It confirmed the inefficiency of the companies in liquidity management.

Navdeep Aggarwal and Singla S.K (2001)\textsuperscript{49} in their study on how to develop a single index for financial performance used the multi discriminant analysis (MDA) as a predicator of future profitability / sickness. The MDA brings to light the most important indicators of financial performance namely inventory turnover ratio, interest coverage ratio, net profits to total assets and earning per share. These factors were inter-related, as inventory turnover would drive interest coverage and net profit, and ultimately the earning per share. The discriminant score of the net profit to total assets, interest coverage ratio, earning per share and inventory turnover ratios were 13.1146, 0.2323, 0.0156 and 0.2183 respectively.


Ralph I. Vegbunam (2001)\textsuperscript{50} in his study on the financial distress and performance differences among commercial banks in Nigeria. A multivariate ratio analysis revealed that the performance differences among commercial banks in Nigeria in the early 1990's when there was widespread financial stress and banks failures, were primarily determined by bank-specific factors. Of the 10 financial ratios used in this study, five appear to be the most critical in determining bank performance or the differences in return on assets among banks and only four appear to be the major determinants of the bank performance indicated by total expenses / total assets ratio; asset utilization ability of the management, indicated by total revenue / total assets ratio; capital adequacy measured by equity capital / total assets ratio; credit risk measured by loans / total deposits ratio bank financial distress indicator represented by zero-one dummy variable.

Shanmugam R and Poornima S (2001)\textsuperscript{51} in their study entitled on working capital is still most crucial concluded that the working capital management plays a crucial role in the success of a business firm. The chief executive officer was directly responsible for control of working capital. In most of the firms, the market for raw-material as well as finished product was a key factor determining the working capital requirements. Budgetary control was widely used to control working capital.


Surendra Yadav. S. et al (2001)\textsuperscript{52} in their study on working capital management in oil industry in India concluded the current ratio in BPCL was less than 1.5 in all the ten years of the study period. The average current and acid test ratio were 1.11 and 0.55 respectively whereas in HPCL, the liquidity ratios were not satisfactory. In IOCL, the liquidity position had satisfactory. The highest average working capital turnover of 139.40 followed by the HPCL at 20.65 and IOCL at 11.52 during the study period. The average current assets turnover was 5.29 for BPCL, 5.41 for HPCL and 3.49 for IOCL. The average debtors were low at 9.08 for the industry, however they had shown a sharp increase from 6.79 during the period 1988-92 to 11.45 during the period 1993-97. BPCL's performance in the area of working capital management was not good.

Amita S. Kantawala (2001-02)\textsuperscript{53} in his study on financial performance of non-banking finance companies (NBFCs) in India concluded that there exists a significant difference in the profitability ratios, leverage ratios and liquidity ratios of various categories of NBFCs. The more number of ratios do not statistically differed from one another in majority of the cases except the trading in shares and investment holdings were compared with leasing. The analysis of variance along with the details the average ratios may become a useful guide to companies to decide the dissatisfaction or continuation in the same line of business considering overall profitability within the regulatory frame work.


Mahesh Chand Garg and Chander Shekhar (2002)\textsuperscript{54} found that the asset composition is to be significantly negatively related with total Debt equity and long term debt equity in cement industries. Value of the assets and life of the company were significantly positively related to total debt equity. Life of the company was significantly positively related with long term debt equity in cement industries. The regression coefficient of collateral value of assets was significant at 10 per cent level and was positively associated with total debt equity.

Mansur Mulia. A (2002)\textsuperscript{55} in his study on use of ‘Z’ score analysis for evaluation of financial health of textile mills found that the textile mill under study was just on the verge of financial collapse. The financial health of the mill was never in the too healthy zone during the study period. The position of its performance front was very unviable and apprehensions of the total failure of the mill were inevitable and certain. The mill faced the problem of overtrading owing to the inadequate level of working capital. The textile mill, on the volume front, had failed to achieve the sales target set for different years mainly due to the low achievement of production performance owing to the under utilization of the available capacity which contributed to the deterioration of the financial health of the mill.


Nand Kishore Sharma (2002)\textsuperscript{56} in his study on financial appraisal of cement industry in India found that the current and quick ratio showed a decreasing trend and also it varied from time to time. On comparing the current and quick ratio of cement industry, six companies were higher than average and four recorded lower than average of industry. The average debt equity ratio was 51:34 per cent. This ratio showed a decreasing trend in the first 4 years of study after that it registered an increasing trend. The ratio of fixed assets to total debt always showed more than 100 per cent, which indicated that the claims of outsiders were covered by the fixed assets of that organisations. The return on capital employed recorded on an average of 15.46 per cent. This ratio varied from 2.76 per cent to 21.80 per cent during the period of study.

The above review of literature on the subject has enabled the researcher to decide a study on the present subject would throw more light and will be an addition to initiate theory of knowledge.