Chapter – II

Concepts and Review of Literature
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CONCEPTS AND REVIEW OF LITERATURE

Ratio Analysis

Ratios analysis is the process of determining and presenting in arithmetical terms the relationships figures and groups of figures drawn from these statements. A ratio expresses the results on the basis of comparison of two figures in numerical terms. A ratio is a statistical yardstick that provides a measure of relationship between two accounting figures.

The ratio is customarily expressed in following ways:

1. It may be obtained by dividing one value by the other. This expression is known as Times.

2. If hundred then the unit of multiply the above expression becomes percentage.

3. It may be expressed in the form of proportion between the two figures and is known as pure ratio.

4. It may also be depicted in the form of graphs like ratio graph.

Importance

A ratio is known as symptom like blood pressure. Like the pulse rate of an individual, ratio analysis is used as a device to diagnose the financial position of an enterprise. It shall point out if the financial condition is very
strong, good, partly good, and poor. As such the ratio analysis is a powerful tool of financial analysis through it economic and financial position of a business unit can be fully x-rayed. Ratio analysis becomes meaningful to judge the financial condition and profitability. Performance of firms can be analysed by using two methods of comparison. First a comparison of present ratio with past and expected future ratios for the same firm, the second method of comparison involves comparing the ratio of the firm with those of similar firms of with industry average at the same point of time. Further Ratio analysis presents the figures in which the net result of the financial position and problems are concentrated. They provide a co-ordinate frame of reference for the financial manage. They tell the entire story of the financial adventures of the enterprise as heap of financial date are buried them. They simplify the comprehensive of financial statistics. On the basis of above it may be concluded that ratios are very important for interpretation as they give valuable and very useful information about business.

**Benefits of Ratio Analysis**

(i) **Simplifies Financial statements** - Ratio Analysis simplifies the comprehension of financial statements. Ratios give the complete information of changes in the financial condition of the business.

(ii) **Facilitates inter firm comparison** - Ratio Analysis provides data for inter firm comparison. Ratios highlight the factors associated successful and unsuccessful firms. They also reveal strong firms and weak firms, overvalued and undervalued firms.
(iii) **Makes intra firm comparison** - Ratio Analysis also makes possible comparison of the performance of the different divisions of the firm. The ratios helpful in deciding about their efficiency or otherwise in the past and likely performance in the future.

(iv) **Helps in Planning** - Ratio Analysis helps in planning and forecasting. Over a period of time a firm or industry develops certain norms that may indicate future success or failure. If relationship changes in firm’s data over different time periods, the ratios may provide clues on trend and future problems. Thus ratios can assist management in its basic function of forecasting, planning, coordination, control and communication

**Limitations**

Every flower of rose has its own beauty in spite of numberless thorns in the same way ratio analysis has a variety of advantages, though it is not free from limitations, some of which are as below:

1. The formula for calculating each ratio is not well standardized.
2. No standard ratios are available for evaluating the significance of each ratio.
3. Ratio ignores non-monetary factors like general economic climate, government and management policies, which vitally affect the financial health of the enterprise.
4. If too many ratios are calculated, they are likely to confuse, Instead of revealing meaningful conclusions.
5. The ratios are generally calculated from the past financial statement and thus, there are no indicators of future.

6. Ratios are not exact measure of financial situation as the balance sheet and profit and loss account are based on accounting conventions, personal judgments and recorded facts.

As ratios are simple to calculate, there is a tendency to over employ them, which lead to accumulation of mass data. However significant the ratio may they cannot replace business efficiency and decision-making. They do not provide mechanical solution to business problems.

**Classification of Ratio**

Some writes have described that there are as many business ratios. First of all it is necessary to ascertain the ratios for a particular study. The financial ratios may be classified in the various ways. If the nature and objective of calculating each ratio is given then the customary and convenient classification from the point of view of management and investors will be:

[A] **Liquidity Ratio**

These ratios throw light upon the liquidity position of a concern the main ratios are:

Current Ratio, Quick Ratio, Absolute Liquidity Ratio, Current assets to Total assets Ratio, Debtors to Sales Ratio, Working Capital Turnover Ratio, Debt - Equity Ratio and Propriety Ratio.
[B] Profitability Ratio

These ratios are known as X-ray of the profit making ability of the enterprise. They may calculate either on the basis of operating profit or net profit.

These ratios are of two types first related to sales and second profitability.

The main **efficiency ratios** are:

1. Gross profit ratio
2. Net profit ratio
3. Return on gross capital employed
4. Return on net capital employed
5. Return on net worth
6. Return on Shareholder's Equity
7. Return on Equity Capital
8. Earnings per Share
9. Dividend Percentage
10. Dividend Pay-out Ratio
11. Dividend Yield Ratio
12. Total Assets Turnover
13. Fixed Assets Turnover
14. Current Assets Turnover

(C) Management of receivable

Management of trade credit is commonly known as Management of Receivables. Receivables are one of the three primary components of working capital, the other being inventory and cash, the other being inventory and cash.
Receivables occupy second important place after inventories and thereby constitute a substantial portion of current assets in several firms. The capital invested in receivables is almost of the same amount as that invested in cash and inventories. The important and commonly used Receivable Management ratios are as under:

1. Size of Receivables
2. Growth in Annual Sales and Receivables
3. Size of Debtors
4. Size of Receivables
5. Size of Loan and Advances
6. Average Receivables Turnover Ratio
7. Receivables of Sales Ratio
8. Average Collection Period

(D) Management of cash

The term cash management refers to the management of cash resource in such a way that generally accepted business objectives could be achieved. In this context the objectives of a firm can be unified as bringing about consistency between maximum possible profitability and liquidity of a firm. Cash management may be defined as the ability of a management in recognizing the problems related with cash which may come across in future course of action, finding appropriate solution to curb such problems if they arise, and finally delegating these solutions to the competent authority for carrying them out. The important and commonly used cash management ratios are as under
1. Cash to Current Assets Ratio
2. Cash to Sales Ratio
3. Cash Turnover Ratio
4. Cash Position Ratio
5. Net Cash Flows to Current Liabilities Ratio
6. Coverage of Current Liabilities Ratio

(E) Other Techniques of Analysis

Several other techniques like fund flow analysis and break-even analysis are also sometimes useful for analysis. The use of various statistical techniques is also used frequently for financial analysis, providing a more scientific analysis. The tools generally applied are moving average, index number, range, Standard deviation, correlation, regression and analysis of time series. Diagrammatic and graph orientations are often used in financial analysis. Graphs provide a simplified way of presenting the data and often give much more vivid understandable of trends and relationships. Pie graphs bar diagrams and other simple graphs are often used for financial analysis.

We tested the hypotheses by using linear multiple regression technique that models firm performance as a function of profit appropriation, operating efficiency, fixed assets age, current assets efficiency and liquidity position. We examine the composite impact of financial indicators on profitability, capital structure and operating efficiency. Accordingly, multiple regression technique
has been applied to study the joint influence of selected ratios indicating companies’ financial performance on profitability, capital structure, operating efficiency etc. SPSS version 17.0 software package was used for all the above purposes.

In order to understand the financial health, financial analysis of organization has relied on financial accounting information and the use of financial ratios. Financial ratios provide a better performance of organizations as they are based on relative performance and adjust for the differences in size of organization. Using time series data, we can compare these financial ratios across time and observe changes. Using financial and accounting information provided in the profit and loss account and Balance Sheet, one can compute a large number of financial ratios. Often the problem one may face is which financial ratio to use, as each one may reflect the same or different financial performance dimensions. Accounting and financial analysis literature is replete with suggestion to use the information contained in a large number of financial ratios, to derive empirically smaller number of dimensions necessary to evaluate the performance of an organizations.

Seven financial dimensions which emerged consistently for the ten year period of study are as follows:

1. **Financial Profitability** - This factor is composed of four ratios which are return on net worth, return on capital employed, return on equity and return on total assets. This ratio suggests whether a particular firm is profitable or not. All these ratios together indicate how the sector is meeting the expectation of its shareholders.
2. **Financial structure** - This factor is composed of different ratios namely, debt-equity ratio, total debt to capital employed and total debt to net fixed assets. All these ratios show the importance of debt in the capital structure of paper sector which in turn indicates whether firms within paper sector use debt in their capital structure.

3. **Operating efficiency** - This factor is composed of three ratios namely, capital employed turnover, net fixed assets turnover and total assets turnover. Higher efficiency implies higher financial performance as return on capital employed is product of PBIT margin and efficiency (PBIT / Revenue × Revenue / capital employed).

4. **Profit Appropriation** - After fixed interest payments are met, profit is available for distribution. In this factor, two ratios, namely, dividend payout and dividend rate tells us how profit is distributed by sectors after meeting all obligations.

5. **Fixed assets age** - This factor is composed of two ratios namely accumulated depreciation to gross fixed assets and gross fixed assets to net fixed assets. With the advent of new technologies, paper sector has become more capital intensive. The age of this machines and capacity utilization will determine the revenue generating ability of the sector.

6. **Current assets efficiency** - This is measured by computing two ratios. Current assets turnover and net current assets turn over. Use of current assets becomes very important since how the sector manages resources for its day to day operations, depend on current assets.
7. **Liquidity position** - Liquidity is the ability of a company to meet its short
    term obligations. One can understand the liquidity position by analyzing the
    financial statements of a company. We measure liquidity by two ratios
    namely, current ratio and liquid ratio where financial items like current
    assets and current liabilities are required.

**Financial Profitability**

In order to remain sustainable, the profit that organization generates is
the key determinant of financial performance. A manufacturing sector earns
profits either for its survival or for its diversification and expansion. Moreover,
profitability measure of an organization is an important factor to attract private
capital and it acts as a useful measure to test the overall efficiency of a
manufacturing concern. The profit to the management is the test of efficiency
and a measurement of control to the owner, the measure of worth of their
investment to the creditors, margin of safety to employees as a source of
benefits, to government a measure of tax paying capacity and the basis of
legislative action to demand better quality and price cut and to an enterprise
less cumbersome source of finance. Therefore, to measure overall efficiency by
profitability indicators, researcher use return on net worth, return on capital
employed and return on total assets.

1. **Return on equity (ROE)**

This measure the returns the shareholders get on the capital invested in
the industry. More precisely, ROE reveals how much profit a company earned
in comparison to the total amount of shareholders’ equity found on the Balance
Sheet. The return on equity figure takes into account the retained earnings from previous years and tells investors how effectively their capital is being reinvested.

2. **Return on capital employed (ROCE)**

   This measure gives us the return on capital employed and is computed by dividing the PBIT by the capital employed. Return on capital employed (ROCE) is a ratio that indicates the efficiency and profitability of a company’s capital investment. In other words, the ROCE ratio is an indicator of how well a company is utilizing capital to generate revenue. ROCE should normally be higher than the rate that the companies borrow at; otherwise any increase in borrowings will reduce shareholders’ earnings.

3. **Return on total asset (ROTA)**

   It is a ratio that measures a company's earnings before interest and taxes (EBIT) against its total net assets which is an indicator of how profitable a company is relative to its total assets. The ratio is considered an indicator of how effectively a company is using its assets to generate earnings before contractual obligations must be paid. The assets of the company are comprised of both debt and equity. Both of these types of financing are used to fund the operations of the company. The ROTA figure gives investors an idea of how well the company is converting the money it has to invest into net income.
4. Profit Appropriation

Two financial ratios, namely dividend pay-out and dividend rate indicates the measure of profit appropriation parameter.

1. Dividend pay-out ratio (DIVPAYOUT)

The dividend payout ratio is the percentage of a company’s net earnings that the company pays to investors as a dividend. Dividend payout is defined as total dividends paid as percent of profit after tax. If investors like immediate income, a higher ratio is preferable; growth investors prefer companies with lower ratios, including those that pay no dividend at all.

2. Dividend Rate

The dividend rate is another measure of dividend decision of the Indian paper industry. It is calculated by dividing dividend paid by paid up value of share capital. Study of financial statement analysis always is made objectively. Generally, external analysts use information as per their requirement. Financier would like to know profitability. Management would be interested in the operational efficiency, liquidity position and profitability.

LIQUIDITY MANAGEMENT

The importance of liquidity management is reflected in the fact that financial managers spend a great deal of time in managing current assets and current liabilities. The key issues in liquidity management are as to how much must be invested in each component of liquidity management and how to
manage these components effectively and efficiently. Each current asset has unique characteristics and its investment level may vary from time to time. Thus both the investment decision and the management of liquidity become complicated. The financial manager has to monitor these assets continuously to maintain their optimal levels. Proper management of liquidity is very important for the success of an enterprise. There are many aspects of liquidity which make it an important function of the financial manager, on the one hand it maintain proper while on the other it help in increasing the profitability of the concern.

**STRUCTURE OF FIXED ASSETS AND CURRENT ASSETS**

The structure of liquid capital fairly comprises components of liquid assets and current liabilities. A financial manager of enterprises is expected to keep in mind the condition of five R's of money management before taking any decision with regard to capital structure. The five R's are; the right quality of money for liquidity, the right quantity of money whether owned :r borrowed, the right time of investment of money, the right source of acquisition or money and the right cost of capital a company can manage to pay. The structure of liquid capital in the right of above points is discussed below

1. **Cash in Hand**

Cash is not only the means but also the end for a business it is in a way all for a firm. If a firm has sufficient cash, it can easily fulfill its ether needs. It is the most liquid assets of all that an enterprise owns, “Cash is the prime
necessity of an undertaking in the form of capital invested and ultimate goal in the form of cash realized from sale of final product cash balance of a company is a safety value or shock absorber protecting the company short run fluctuations in funds requirement”.

2. Cash at Bank

Cash at bank is the amount of cash deposited in the bank by the concern for the purpose of exploiting this resource in the times of need and emergency. In practice, it is assumed that a big volume of bank deposit indicates a sound liquid position of the business. But from the financial management's point of view, this assumption is considered unwise because such balance is devoid of generating any earning so proves expensive if retained.

3. Bills Receivables

Receivables are assets created on account of sale of goods and rendering of services on credit in the ordinary course of business. Receivables represent short-term debts, which enterprises owned. They mainly include book accounts, notes and bills, accrued receivables, prepayment on purchases, advances to employees or subsidiaries etc. The receivables are favored on the grounds that they help in

(a) Reducing collection cost over cash collection

(b) Reducing sales variability

(c) Increasing the levels of near-term sales.

The size of receivables mainly depends upon the credit policy of the business concern.
4. Marketable Security

Marketable securities refer to the amount of cash in excess invested by the enterprise in assets, which can be easily converted into cash within an accounting period. Such investment is temporary in nature and is regarded as near money.

5. Other Currents Assets

The balance sheet of a company comprises many other terms on assets side, which constitutes a part of liquid capital. To name a few, they are loans and advances, interest accrued, and payment of tax, prepaid expenses, deposits with financial institutions etc.

6. Bank Overdraft

Many times the amount withdrawn by a company over and above the amount deposited by firm with the bank. Such withdrawals are termed as bank overdraft. This facility is provided upon a limited sum of money by the bank for which a nominal amount of interest is charged.

7. Short-term Loan

At times, company avails itself the banking facilities of short-terms loan through cash credit mainly for the purpose of acquisition of assets. These loans are to be paid bank within a fixed period of time along with a fixed rate of interest.
8. Account Payable

This liability is also called trade creditors. Trade creditors are the parties to the business transactions that oblige a company with credit facilities regarding purchase of raw materials, stores, and goods for resale on credit terms etc.


Tax and dividends due for payment within a period of a year are included under this head. As a rule, the final dividend of a company cannot be declared officially until the annual general meeting is held.

10. Other Current Liabilities

Other current liabilities like unclaimed dividends, outstanding expenses and salaries, unexpired discounts, interest accrued but not due on loans, super-annnotations funds etc. are a few of the items that too fall under the head current liabilities in construction of liquid capital structure.

LIQUIDITY ANALYSIS OF PAPER INDUSTRY

The current assets of enterprises are generally financed by short-term funds and hence the test of liquidity should compare the availability of short-term funds. Hence liquidity is being tested by the ratio related to current assets and current liabilities. These ratios are current ratio, quick ratio, absolute liquidity ratio, etc.
1. Current Ratio

It is the most widely used measure of testing liquid position of a concern. It is applied to test solvency and short-term financial strength of a concern. It indicates the relationship between firm's current assets to current liabilities. In the form of equation the current ratio may be expressed as:

\[
\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}
\]

This ratio is also known as current assets and current liabilities ratio, solvency ratio, "working capital ratio or 2 to 1 ratio. Current ratio is a tool for measuring the short-term stability or ability of a company to carry on day-to-day work and meet the short-term commitments earlier.

QUICK RATIO

Quick Ratio is also known as liquid ratio or acid test ratio or near money ratio. It is the ratio between quick or liquid assets and quick liabilities. As pointed out, the current ratio in the study of solvency may be sometimes misleading due to high ratio of stock to current assets. This ratio a calculated by dividing the quick assets by the current liabilities.

\[
\text{Liquid Ratio} = \frac{\text{Quick or Liquid Assets}}{\text{Liquid or Current Liabilities}} = \frac{\text{Current Assets} - (\text{Stock and Prepaid Expenses})}{\text{Current Liabilities} - \text{Bank Overdraft}}
\]

It indicates the relation between strictly liquid assets whose value is almost certain on the one hand, and strictly liquid liabilities on the other. The term quick assets refers to current assets which can be converted into cash
immediately or at a short price without diminution of value. Liquid assets comprise all current assets minus stock and prepaid expenses. Liquid liabilities comprise all current liabilities minus bank overdraft.

**NET WORKING CAPTIAL RATIO**

Net working capital is not a ratio. The difference between current assets and current liabilities is called net working capital. The term current assets refers to assets which in the normal course of business get converted into cash over a short period, usually not exceeding one year. Current liabilities are those liabilities which are required to be paid in short period, normally a year. It is a measure of company's liquidity position.

With a view to appraising the performance in utilization of working capital by the select paper industry under this study, the analysis of working capital has been made from the point of view of

1. Short term creditors
2. Efficiency in the use of working capital
3. Investment in working capital
4. The collection policy of debts

Short term creditors are primarily concerned with the analysis of short term financial position or test of liquidity, which is valuable to management in checking the efficiency with which working capital is being employed in the business excluded from liquid assets on the ground that it is not converted into
cash in the immediate future; prepaid expenses by their very nature are not available to pay off current debts: and at the same time bank overdraft is excluded on the ground that it is not required to be paid off in the immediate future.

\[
\text{Net Working Capital Ratio} = \frac{\text{Net Working Capital}}{\text{Net Assets}}
\]

**PROPRIETARY RATIO**

Proprietary Ratio relates the shareholders funds to total assets. It is variant of the debt equity ratio. This ratio shows the long term or future solvency of the business. It is calculated by dividing shareholders funds by the total assets.

\[
\text{Proprietary Ratio} = \frac{\text{Shareholders' Fund}}{\text{Total Assets or Total Resources}}
\]

Preference share capital and equity share capital plus all reserves and surplus items are called shareholders' fund. Total assets include all assets including goodwill. The acceptable norm of the ratio is 1:3.

**FIXED ASSETS TO PROPRIETORS' FUND RATIO**

This shows the relationship between fixed assets and shareholders' funds. The purpose of this ration is to calculate the percentage of the owners funds invested in fixed assets.

\[
\text{Fixed Assets to Shareholders Fund} = \frac{\text{Fixed Assets}}{\text{Proprietor's Funds}}
\]
CURRENT ASSETS TO PROPRIETORS FUND RATIO

It shows the relationship between current assets and shareholders' funds. The purpose of this ratio is to calculate the percentage of shareholders' funds invested in Current assets

\[
\text{Current Assets to Proprietors Fund} = \frac{\text{Current Assets}}{\text{Proprietors' Funds}}
\]

DEBT EQUITY RATIO

The financing of total assets of a business concern is done by owner's equity (also known as internal equity) as well as outside debts (known as external equity). In other words, the relationship between borrowed funds and owners' capital is a popular measure of the long-term financial solvency of a firm. This relationship is shown by the debt-equity ratio. This ratio indicates the relative proportions of debt and equity in financing the assets of firm. As acceptable norm for this ratio is considered to be 2: 1.

\[
\text{Debt-Equity Ratio} = \frac{\text{External Equities}}{\text{Internal Equities}}
\]

SOLVENCY RATIO

It is also known as Debt ratio. This ratio is found out between total assets and external liabilities of the company. External liabilities mean all long period and short period liabilities.

\[
\text{Solvency Ratio} = \frac{\text{Total Liabilities}}{\text{Total Assets}}
\]
It measures the proportion of total assets provided by the firm's creditors. If total assets are far more than external liabilities, the company is treated as solvent. A company is solvent if it can meet its outside liabilities out of its total assets. Higher the ratio, the greater amount of firm's creditors' money that is being used to generate profits for the firm’s owners.

**REVENUE STATEMENT RATIOS (PROFIT & LOSS ACCOUNT RATIOS)**

Profit earning is the main objective of each business concern. A company should earn profits to survive and to grow over a long period. A measure of profitability is the overall measure of efficiency. Profitability should be distinguished from profits. Profits refer to the absolute quantum of profit whereas profitability refers to the ability to earn profits. Profitability is a measure of efficiency and control.

Many ratios are being used in such type of analysis which are as under

**GROSS PROFIT RATIO**

The Gross Profit Ratio is also known as Gross Margin Ratio, Trading Margin Ratio etc. It is expressed as a “Per Cent Ratio”. The difference between Net Sales and Cost of Goods Sold is known as Gross Profit. Gross profit is highly significant. The earning capacity of the business can be ascertained by taking the margin between cost of goods sold and sales. It is very useful as a test of profitability and management efficiency. It is generally contended that the margin of gross profit should be sufficient enough to recover all operating
expenses and other expenses and also leave adequate amount as Net Profit in relation to sales an owners' equity. Thus, in a trading business, gross profit is net sales minus trading cost of sales.

\[
\text{Cost of Goods Sold} = \text{[Opening Stock]} + \text{[Purchases]} - \text{[Closing Stock]} + \text{All direct expenses}
\]

(All direct expenses means the expense relating to purchases i.e., all expenses charges to Trading Account)

Cost of Goods Sold in the case of manufacturing concern, is the sum of the cost of raw materials used, wages, direct expenses and all manufacturing expenses. A net sale means total sales minus sales return.

\[
\text{Gross Profit Ratio} = \frac{\text{Gross Profit}}{\text{Net Sales}} \times 100
\]

**NET PROFIT RATIO**

It is also called Net Profit to Sales Ratio (Profit margin). The profit margin is indicative of management's ability to operate the business with sufficient success not only to recover from revenues of the period, the cost of merchandise or services, the expenses of operating the business and the cost of borrowed funds, but also to leave a margin of reasonable compensation to the owners for providing their capital at risk. Higher the ratio of net operating profit to sales better is the operational efficiency of the concern.

\[
\text{Net Profit Ratio} = \frac{\text{Net Profit}}{\text{Net Sales}} \times 100
\]
This ratio is used to measure the overall profitability and hence it is very useful to proprietors. It is an index of efficiency and profitability when used with gross profit ratio and operating ratio.

**PROFITABILITY RATIOS RELATED TO INVESTMENTS**

The profitability of the firm is also measured in relation to investments. The term investments may refer to total assets, capital employed or the owners’ equity. The efficiency of an enterprise is judged by the amount of profits. But sometimes the conclusion drawn on the basis of profit-to-sales ratios may be misleading. Because it is possible that profit in terms of sales is sufficient but sales with regard to capital may be inadequate. Therefore, the state of efficiency cannot be judged, by the volume of profits alone we have to consider the size of investment along with profit. The important categories of such ratios are discussed below:

(i) **Return on Assets**

Profitability can be measured in terms of relationship between net profit and assets. This ratio is also known as profit-to-assets ratio. It measures the profitability of investments. The overall profitability can be known.

\[
\text{Return on Assets} = \frac{\text{Net Profit}}{\text{Total Assets}} \times 100
\]

There are various approaches possible to define net profits and assets, according to the purpose and intent of the calculation of the ratios.
(ii) **Return on Capital Employed**

This is the second type ROI (Return on Investment). This is also known as Return on Investment or Rate of Return. The prime objective of making investments in any business is to obtain satisfactory return on capital invested. It indicates the percentage of return on the capital employed in the business and can be used to show the efficiency of the business as a whole.

\[
\text{Return on Capital Employed} = \frac{\text{Operating Profit}}{\text{Capital Employed}} \times 100
\]

The term capital employed refers to long-term funds supplied by their creditors and owners of the firm. It can be computed in two ways. First, it is equal to non-current liabilities (Long-term liabilities) plus owners' equity.

(iii) **Return on Shareholders’ Equity**

This ratio establishes the profitability from the shareholders point of view.

\[
\text{Return on Shareholders’ Equity} = \frac{\text{Net Profit}}{\text{Shareholders' Fund}} \times 100
\]

The term Net Profit as used here, means net income after payment of interest and tax including net non-operating income (i.e. Non-operating income minus non-operating expenses). It is the final income that is available for distribution as dividends to shareholders. Shareholders’ funds include both preference and equity share capital and all reserves and surplus belonging to shareholders.
ACTIVITY RATIOS OR TURNOVER RATIOS

This category of ratios includes those ratios, which highlight upon the activity and operational efficiency of the business concern. The funds of creditors and owners are invested in various kinds of assets to generate sales and profits. The efficiency with which the assets are used would be reflected in the speed and rapidity with which assets are converted into sales. Activity ratios, thus, involve a relationship between sales and various assets.

The efficiency of a firm depends, to a large extent, on the efficiency with which its assets are managed and utilised. Activity ratios are concerned with measuring the efficiency in asset management. These ratios are also called efficiency ratios.

The following are the important and widely used ratios

INVENTORY (STOCK) TURNOVER

This is also known as Stock Velocity. A firm must have reasonable stock in comparison to sales. It is the ratio of cost of sales and average inventory. This ratio helps the financial manager to evaluate inventory policy. This ratio reveals the number of times finished stock is turned over during a given accounting period. This ratio is used for measuring the profitability.

\[ \text{Stock Turnover Ratio} = \frac{\text{Cost of Goods Sold}}{\text{Average Inventory at Cost}} \]
WORKING CAPITAL TURNOVER RATIO

This ratio is a measure of the efficiency of the employment of the working capital. It indicates the number of times the working capital is turned over in the course of a year.

\[
\text{Working Capital Turnover Ratio} = \frac{\text{Cost of Sales}}{\text{Net Working Capital}}
\]

(Net Working Capital = Current Assets – Current Liabilities)

A higher sale in comparison to working capital means overtrading and lower sales in comparison to working capital means under trading. A Higher Working Capital Turnover Ratio shows that there is low investment in working capital and there is more profit.

FIXED ASSETS TURNOVER RATIO

It is also known as Sales to Fixed Asset Ratio. This ratio measures the efficiency and profit earning capacity of the firm. Higher the ratio, greater is the intensive utilisation of fixed assets. Lower ratio means under-utilisation of fixed assets.

\[
\text{Fixed Asset Turnover Ratio} = \frac{\text{Cost of Sales}}{\text{Net Fixed Assets}}
\]

(Net Fixed assets = Value of assets – Depreciation)
CAPITAL TURNOVER RATIO

Sometimes the efficiency and effectiveness of the operations are judged by comparing the cost of sales or sales with amount of capital invested in the business and not with assets held in the business, though in both cases the same result is expected.

\[
\text{Capital Turnover} = \frac{\text{Cost of Shares}}{\text{Total Capital Employed}}
\]

PROFIT COVER RATIOS

The coverage ratios measure the relationship between what is normally available from operations of the firms and the claims of the outsiders. We illustrate below the important coverage ratios.

INTEREST COVERAGE RATIO

This is also known as Interest Cover Ratio or Debt Service Ratio. This ratio measures the debt servicing capacity of a firm in so far as fixed interest on long term loan is concerned. That is, the relationship between Earnings before Interest and Tax (EBIT) and fixed interest charges. It is expressed in percentage or number of times.

\[
\text{Interest Coverage} = \frac{\text{EBIT}}{\text{Fixed Interest Charges}}
\]

This ratio shows how many times the interest charges are covered by EBIT out of which they will be paid. The coverage ratio may be interpreted with reference to its degree. Higher the ratio better is the position of long-term creditors. It also highlights the ability of the firm to raise additional funds in future.
DIVIDEND COVERAGE

It measures the ability of a firm to pay dividend on preference shares which carry a stated rate of return. The ratio, like the Interest Coverage Ratio, reveals the safety margin available to preference shareholders. Higher the coverage, better is the position. This ratio is the ratio, expressed in number of times, of net profits after taxes. Thus

\[
\text{Dividend Coverage} = \frac{\text{Net Profit after Tax and Interest}}{\text{Preference Dividend}}
\]

REVIEW OF LITERATURE

The review of literature guides the researcher 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 reviews of earlier studies explore the avenues for present and future research 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 the area of finance in India and abroad. A review of this analysis is important in order to develop an approach that can be employed in the context of the present study. Therefore, in this part, a review of earlier studies related to financial performance has been made and rationale for the present study is given.

There is a wide range of literature available on financial performance analysis of different companies in conforming to its dynamic value and significance of distinctive nature. A good dealing in analytical part of literature
exists at broad levels like size and technology, problem Associated with productivity, financial performance, and capacity utilization. Relevant existing literature and studied have been clipped below. The researcher has studied of this literature for gaining insight into the problem.

Miss Nandini Jaimini\textsuperscript{1} published an article Evaluation of cash management performance of the selected Paper Mills in Rajasthan in Indian Journal of Public enterprise in 1988-89. She made an analysis of selected Paper units by using various liquidity ratios and concluded that the inadequate cash balance to meet their currently maturing obligations. She suggested various measures to overcome this deficit of working capital.

R.S Tiwari\textsuperscript{2} published an article Cost reduction in paper industry in the Management accountant in Nov 1998. The article includes suggestion for reduction and control of cost factors.

In the year 1988 one book published on working capital structure of private enterprises by J. Panda and A.K. Satapathy\textsuperscript{3}. It covers a study of 10 private sectors Company engaged in production of paper. The study covers the various aspects of working capital period from 1965 to 1985. He had analyzed working capital position of selected Paper mills as a whole and as well as individual analysis. Finally he had made suggestions for the better utilization of various components of working capital.

Dr. Pramod Kumar\textsuperscript{4} published a Book in 1991, analysis of financial statements of Indian paper industries. The study covered the 17 private, 5 state owned and 1 central public sector companies. He studied analysis of activities,
assessment of profitability, return on capital investment, analysis of financial structure, analysis of fixed assets and working capital. In this research he revealed various problems of paper industries and suggested remedies for the problems. He also suggested for the improvement of profitability and techniques of cost control.

**Dr. Sanjay Bhayani** published a book in 2003, *Practical financial statement analysis*. The study covered 6 public limited paper companies in private sector. He made study of analysis of profitability, working capital, capital structure and activity of Indian paper industry. In his research he revealed various problems of paper industries and suggested remedies for the problems. He also suggested for the improvement of liquidity, profitability and techniques of cost control.

**Chakravarty** made a study on ratio analysis as major tool for financial performance by studying 22 ratios of productivity, profitability proprietary, liquidity and turnover groups of the paper industries for the period from 1961 to 1971.

**Poddar** presented two important books in 1962 and 1966 in which he elaborated all the facts regarding various aspects of the industry. Institutions as C.M.A., Association of trade and industry, commerce research bureau, Economic times, Tariff commission, National productivity council etc. have made efforts to study the general problems in historical perspective.
Some institutes like DGCI&S, IEEMA, Commerce research bureau ELCINA. The economic times, CETMA etc have attempted to study the general problem related to industry.

Prof. Amit Malik and Debasish\textsuperscript{8} presented an article on paper industry Working capital and profitability a case study in interrelation which was published in the management accountant, November 1998. It explores the correlation between ROI and several ratios to working capital management. They made analysis of the impact of working capital on profitability by using simple correlation between ROI and each of some important ratios of working capital.

Most of the studies on receivable management in Indian context highlight inefficiency: Khandelwal\textsuperscript{9} (1985) investigated the working capital management process and practices among 40 small-scale Paper industries in India, between 1975-76 and 1979-80. The study revealed that the management of receivables was highly ineffective and disorderly. It was found that bills of receivable constituted as much as 50\% of total current assets. Highlighting the sickness of few industries, the study attributed the main reason to the inefficient management of working capital. The study also revealed that entrepreneurs had to be educated on the concept of working capital management.

In the year 1988, one book published on - working capital structure of private enterprises by J. Panda and A.K. Satapathy\textsuperscript{10}. It covers a study of 10 private sectors Companies engaged in production of paper. The study covers
the various aspects of working capital period from 1965 to 1985. He had analyzed working capital position of selected units as a whole and as well as individual analysis. Finally He had made suggestions for the better utilization of various components of working capital.

**Dr. Bhayani**11 (2004) has conducted study on working capital and profitability of paper industry and found that profitability is highly influenced by working capital and Linkage between asset management and profitability of Indian paper Industry. In their survey among 12 small firms in Canada, 15 largest firms in the US and 20 largest firms in Australia, Khouryetal (1999) attempted to compare the working capital practice among three nations. The major aspects of the study were working capital policy, cash and equivalents, account recoverable, inventory, accounts and note payable and managing working capital itself. The study revealed that 7% of the Canadian firms had formal working capital polices and 28.5% had a cautious working capital policy. Further Canadian firm were learning more on the effect on sales whereas the Australian and the US companies were found to focus more on the impact on the firm’s profit while evaluating the credit worthiness of the customers.

While many studies have noted that receivable management was a neglected area, **Oppedahl** and **Richard**12 (1990) examined the causes for such neglect. They found that managements were pre-occupied with capital budgeting projects, which affected the quality of working capital decision. The
essay revealed that receivable constituted the most important element of working capital and hence, recommended that the managers need to be very cautious in the management of the same, in order to minimize default risk. It is thus possible to note that management of receivable is found inefficient not only in the Indian context but also in other parts of the world. Considering the fact that the paper industry is poised for unprecedented growth, it is pertinent to examine the trends in various measures of receivable management in the light of various developments taking place in the place in the economy.

Nair N.K. (1991)\(^{13}\) has studied the productivity aspect of Indian Cement Industry. This study emphasised that cement, being a construction material, occupied a strategic place in the Indian economy. This study has revealed that, in 1990-91, the industry had an installed capacity of 60 million tonnes with a production of 48 million tonnes. In this study, the cement industry was forecasted to have a capacity growth of about 100 million tonnes by the year 2000. This study has also analysed the productivity and integrating minimum liquidity performance ratios of the cement industry with a view to identifying the major problem areas and the prospects for solving them.

Anup Agarwal and Nandu J. Nagarajan (1992)\(^{14}\) have identified that the influence of family relationship amongst the senior managers of all equity firms in decision-making process and came out with the following findings.

\(^{13}\) Nair N.K. (1991), Productivity in Indian Cement Industry, Productivity, Vol. 32 No. 1, April-June, p.141.

i) Managers of all-equity firms have significantly larger stock holdings rather than managers of similar-sized levered firms in the industry

ii) There is significantly more family involvement in the corporate operations of all equity firms rather than the levered firms,

iii) Managerial ownership in all equity firms is positively related to the extent of family involvement and

iv) All equity firms are characterized by greater liquidity positions than the levered firms.

**Subir Cokavn and Rejendra Vaidha (1993)**\(^{15}\) have made an attempt to evaluate the performance of cement industry after decontrol. He found that the performance of the cement industry after decontrol was characterized by outcomes that were generally competitive and welfare enhancing. This study has revealed that the structure of the industry changed significantly with large magnitude of relative technologically and superior capacity being created by many new entrants into the industry. It was noticed in this study that there were significant real price increase and an associated increase in profitability. The performance of firms across the strategic group was different with firms operating relatively new and large plants appeared to have an advantage. Further, the study has dealt with the nature and effect of inter-firm heterogeneities in the cement industry.

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Chandrasekaran N (1993)\textsuperscript{16} has made an attempt to examine determinants of profitability in cement industry. He identified that profitability was determined by structural, as well as, behavioural variables.

He also identified that the other variables which influenced profitability were growth of the firm, capital turnover ratio, management of working capital, inventory turnover ratio etc. Some of the main changes in the cement industry environment during 1980’s identified in this study were: from complete control to decontrol, number of new entrants and substantial additions of capacity, changing technology from inefficient wet process to efficient dry process and from conditions of scarcity of cement to near gloat in the market.

Debasish Sur (1994)\textsuperscript{17} in his study, related to working capital management on Balmer Lawrie & Co Ltd., found that the company was averse to risk of maintaining lower level of current assets. The regression result showed major variation between actual and anticipated working capital in all the years in the study. The trend analysis of turnover and working capital of the company showed that the changes in the investment of working capital did not have any impact on the trading activity of the concern. Such a mismatch revealed the inefficiency of working capital management of the company in this study.


Chandrasekaran N (1994)\textsuperscript{18} has studied about the market structure of the Indian Cement industry. It was found out in this study that the demand and supply gap has been considerably reduced and supply of cement during the period of study has increased due to creation of additional capacity and capacity utilization.

Industrial Researcher, (1994)\textsuperscript{19} identified that the consumption pattern of cement has shown a drastic change in upwards trend. The industry catered to two types of buyers, namely, individual and the government. The demand for cement as such was aimed at satisfying the basic requirement of people at large and economy in general.

Chaim Rao N. and Rao. I.C.V. (1995)\textsuperscript{20}, in their study, revealed that the working capital problems faced by executives were huge in the areas of collection of debts, accumulation of finished goods, availability of working funds and uncertain cash flows.

Rengarajan Nl.R (1995)\textsuperscript{21}, in his study on working capital for sick industry, revealed that even profit-making companies were no exception of the industry and percentage of operating expenses on turnover were going up which resulted in depleting the profits. A detailed evaluation of operating expenses and shifting for soft loans or conversion of higher interest loans to equities could sort out the sickness and pave the way for revival measures.

Srinivasa Rao. G and Indrasena Reddy. P (1995), in their study, stated that the financial position of paper industry 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 the company was doing well in mobilizing outsiders funds. The liquidity position of the company was sound as revealed by current ratio and quick ratio which were above the standard. The solvency ratio showed that the company had been following the policy of low capital gearing from the 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 utilize assets for generation of sales had not been improved much during the period of study period as revealed by its turnover ratios.

Bhanu, (1995) has made an attempt to bridge the gap by empirically evaluating the performance of the cement industry in India during various phases of control and decontrol. This study has also revealed that the effect of liberalization in the cement industry was diluted due to the lack of investment in coal and power which resulted in shortage, which in turn, led to poor performance and depletion in additional investment in the industry.

Reddy. V.N. and Ramkumar Kakani (1996), in their study on econometric analysis of the capital structure determinants, have revealed that the profitability was found to be negatively correlated to the capital structure of

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the firm. Capital intensity of the firm was also negatively correlated 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 the short-term and total debt of the firm.

Dev Prasad, Garry D. Broton and Andreas G. Merikas (1997)\textsuperscript{25} have analyzed to confirm the linkage between the capital structure and strategic posture of the firm. Specifically, managers were found to structure the selection of debt and capital intensity in a mean consistent with the strategic goal of long run control of systematic risk. This study has identified that the efficacy of a strategic perspective of capital structure will be examined by investigating the control of systematic risk in firms over the long-term through adjustment of the firm's capital structure.

Reddy R.V.S. (1998)\textsuperscript{26} has revealed that decline in profitability alone need not be considered as a factor that resulted in the inefficiency of the organization. It was also due to proportionate rise in the cost of operation coupled with the usually delayed and inadequate increase in fares.

Tiwari R.S (1998)\textsuperscript{27} has identified the following outcomes. He revealed that the industry must earn reasonable profits to survive and this will mostly depend on the cost of production. He also suggested that proper

management, effective control and cost reduction strategies are the most important methods that need to be adopted to improve the profitability in cement companies.

Dash, D.K. (1999)\(^28\), in his study, found that the liquidity position of the bank had been maintained at high level. He also identified that the high level of liquidity affected the profitability and a low level of liquidity hampered the banks' image. He suggested that the banks could ill-afford to ensure financial stability and operational efficiency in order to survive in the ever-changing business environment. The study has also found that the financial performance of the banks was satisfactory. He identified that the cost for operating and managing the bank was more than 3 percent to the working capital which was just above an ideal level of 2 percent. The bank was gradually consolidating its position of net worth as compared to fixed assets.

Ajay Acharya (1999)\(^29\) has studied the various factors responsible for rapid changes in the cement industry. The study also pointed out the reasons for more number of mergers, acquisitions and the fallout of smaller plants. The factors responsible for excellent performance of cement companies were: good quality with international standards, ability to keep up with competition, integration of information technology and finally nurture the people within the industry.


\(^29\) Ajay Acharya (1999), Indian Cement Industry-Present and the past, Indian Cement Review, Annual, p.63-64.
Desai B.H (2000), in his study of financial performance, had used Altman's equation. He identified that low profitability was attributed to low rate of return on total assets. By using Z score analysis, he concluded that Gujarat Steel Tubes Ltd., was sick and felt that financial restructuring was the need of the hour.

Rajeswari. N (2000), in her study on liquidity management of Tamil Nadu Cement Corporation Ltd., Alangulam, identified that the liquidity position of the Tamil Nadu Cements Corporation Ltd. (TANCEM) was not satisfactory. She concluded that necessary steps ought to be taken to improve the liquidity position of the company.

Ralph I. Vegbunam (2001), in his study related to the financial distress and performance differences among commercial banks in Nigeria, has used multivariate ratio analysis to reveal the performance differences existed among commercial banks in Nigeria in the early 1990 where there was a widespread financial stress. The bank's failure was primarily determined by bank-specific factors in Nigeria.

Anitha S. Kantawala (2002), in his study on financial performance of non-banking finance companies (NBFCs) in India, concluded that there existed a significant variation in the profitability ratios, leverage ratios and

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liquidity ratios of various categories of NBFCs. She concluded that the analysis of variance along with the details the average ratio may become a useful guide to companies so as to decide for continuation or otherwise in same line of business considering the overall profitability within the regulatory frame work.

**Mansur Mulia. A (2002)**, in his study on financial health of textile mills, found that the textile mill under the study was just on the verge of financial collapse. The financial health of the mill was never in the too healthy zone during the period of study. The position on its performance front was very unviable and apprehensions of the total failure of the mill were inevitable and certain. The mill has faced the problem of overtrading owing to the inadequate level of working capital.

**Nand Kishore Sharma (2002)**, in his Study on financial appraisal of cement industry in India, has found that the current ratio and quick ratio showed a decreasing trend and also these ratios varied from time to time. On comparing the current ratio and quick ratio of cement industry, six companies were found higher than the average and four recorded lower than the average of industry.

The debt-equity ratio has 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 percent which indicated that the claims of outsiders were covered by the fixed assets of the cement companies.

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**Prasad Sangameshivarman (2002)**<sup>36</sup> has studied the importance of branding the cement. Industry analysts felt that branding efforts have been initiated due to the cluster. The large media spends has influenced the increased visibility for the brand. Cement has always been loyal to the door media, walls and hoardings. He spelled out measures as to why branding becomes important for cement players today. Being bulky in nature, cement manufactures sell their products close to the area of manufacturing. Finally, he pointed out that, to stand out in the cluster, branding would naturally help.

**Sanwar N. Mishra (2003)**<sup>37</sup>, in his paper, stressed the factors responsible for competitive gain. Under the process of globalization of industry, achievement of the competitive advantage over the rival calls for an urgent management attention. The factors responsible for sustaining competitive advantage were production function Characteristics, the process technologies, update of an efficient process, plant maintenance, the productive machine availability, efficient man-power utilisation, customer relationship management and supply chain management.

**Ghosh S.K., and Maji S.G (2004)**<sup>38</sup>, in their paper, made an attempt to examine the efficiency of Working capital management of the Indian cement companies from the year 1992-1993 to 2001-2002. Findings of the study indicated that the Indian cement industry, as a whole, did not perform remarkably well during the period of the study.

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37 Sanwar N. Mishra (2003), Improving performance for a competitive gain in a cement plant, Indian Cement Review, April, p.15.
Hanasalakshmi and Manickam (2004)\textsuperscript{39} have made a study on the financial performance of software companies with special focus on examining the structure of liquidity position, leverage and profitability. The study has revealed a favorable position of liquidity and working capital in software companies. The study has also pointed out that the companies relied more on internal financing and the overall profitability had been increasing at a moderate rate.

Alovsat Muslumov (2005)\textsuperscript{40} has studied the financial and operating performance of Turkish cement industry. He examined the post-privatization performance of privatized companies. The findings indicated that when the performance criteria for both the state and private enterprises were considered, privatization in the cement industry have resulted in significant performance deterioration. Total value added and the return on investment have declined significantly after privatization. This decrease mainly stems from deterioration in asset productivity. The decline in asset productivity, however, was not caused by an increase in capital investment, since post-privatization, capital investment did not change significantly. Significant contraction in total employment and an increase in financial leverage after privatization were among the key research findings. Privatization through public offering, gradual privatization and domestic ownership were found to stimulate the financial and operating performance of firms.

\textsuperscript{40} AlovsatMuslumov (2005), The Financial and Operating Performance of Privatisation Companies in Turkish Cement Industry, METU Studies in Development, DogusUniversity, Vol.32(1)pp.59-100.
Rajendran P. and Ramesh D. (2006)\textsuperscript{41}, in their study on liquidity management of Tamil Nadu Tourism Development Corporation (TTDC), stated that the short-term liquidity was not at all satisfactory. The cash management of company was in poor position. Hence, the liquidity management of TTDC was very poor and not satisfactory.

Parasuram N.R. (2006)\textsuperscript{42} has made an attempt to identify and study the movement of key financial parameters and their relationship with the profitability of automobile industry and he also made an attempt to study whether the key identified parameters move in a synchronous way of going up and coming down with basic profitability parameters.

On the basis of the analysis, the broad conclusion was that the parameters were consistent within a wide horizon and the parameters have also responded in a synchronous manner with the growth of companies over the period of time.

Debasis Mukherjee and Mallika U.K. (2006)\textsuperscript{43}, in their study of performance analysis of leasing industry in West Bengal, have suggested that around thirty years of active business, many lease financing companies have either diversified their leasing business into other forms of activities or decided

to quit the market. It was concluded that the vast growth potential and the performance of the existing leasing companies may be considered as an indicator for the prospects of the industry in the state of West Bengal.

**Bardia (2006)**

Bardia (2006), in his study on Liquidity Management of Steel Authority of India Limited, has analysed the overall quantum of liquidity maintained by steel sector and the amount tied-up in various components of working capital. This study has found that there was a positive association between liquidity and profitability.

**Durga Rao S. and Janaki Ramudu (2006)**

Durga Rao S. and Janaki Ramudu (2006), in their study on inventory management, concluded that the total inventory and raw material constituted the highest part followed by finished goods and work-in-progress across Indian commercial vehicles industry.

**Misra and Mishra (2006)**

Misra and Mishra (2006), in his study on profitability, analysed the factors influencing the profitability of Sugar Industry. The factors that have assumed a direct bearing on profitability are: Growth in size, growth in volume of business, operating cost ratio, leverage, liquidity, receivables turnover, fixed assets turnover and age. Their conclusion revealed that the variations in profitability was caused by the factors, namely, operating cost ratio, liquidity ratio and fixed assets turnover ratio.

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Amalendu Bhunia (2007), in his study on liquidity management analysed the efficiency of the management of short-term liquidity in selected public sector iron and steel enterprises in India. The study revealed that actual values of working capital have been found to be lower than the estimated values of working capital for the companies, such as Steel Authority of India Limited (SAIL) and Indian Iron and Steel Corporation (IISCO). There was a poor liquidity position existed in case of both SAIL and IISCO, inefficient inventory management in case of SAIL and inefficient receivable management in case of both the enterprises. It suggested that an increase in additional investment in raw materials, reduction in the burden of current liabilities were necessary in order to improve the inventory management and liquidity position of these steel companies.

Rathore G.S. and Pinki Roi (2007), in their study on financial performance of Air India, have analyzed the capital structure, working capital, profitability position, operating performance and overall financial performance. It was concluded that Air India showed the better performance of capital structure and has improved the capital structure during the study period. The working capital of the company has showed a negative trend. The profitability position of the company has showed a fluctuating trend. The operating

performance of the company has revealed that there was an increase in operating expenses. Hence, the operating profits did result the decreasing trend. The overall financial position of Air India Limited revealed the fact that the company's financial performance was good, as well as, the efficiency of the organization has increased.

Debasis Sur et al. (2007)\textsuperscript{49}, a study on measuring the efficiency of asset management of private sector enterprises in India during the pre and post liberalization periods, It was concluded in this study that the efficiency of the inventory management was achieved in the post-liberalization period as compared to the pre-liberalization era. The average turnover of fixed assets and the average efficiency of the cash management have declined considerably during the post-liberalization period as compared to the pre-liberalization era. It reflected on various assets during the post-liberalization period

It also signified that the selected company failed to adapt itself to the challenging and competitive environment resulting from liberalization.

Siddharth Mahajan and Mainak Sarkar (2007)\textsuperscript{50}, in their study, has made an attempt to compare the financial performance of three Indian companies, namely, Tata motors, Maruti and Mahindra and Mahindra motors,


Honda and Hyundai. The study indicated that the MNCs are more efficient in utilizing their assets to generate profits. However, the return on equity of the Indian companies was about ten times than that of the MNCs. Regarding the solvency ratios, the debt-equity ratio of the Indian companies were about one-and-half times than that of the MNCs. This was because the Indian Companies used much less equity capital than that of MNCs.

**Sudipta Ghosh (2008)** has conducted a case study in Liquidity Management of Tata Iron and Steel Company (TISCO). During the period of the study, it was found that the liquidity position on the basis of current ratio as well as quick ratio was not satisfactory. It indicated that the share of current assets in total assets of the company, on an average, was 29.1 percent during the period of study. The fluctuation in the liquidity position over different years of the study period might be a point for investigation into the financial efforts of the company. It was suggested that to maintain overall control of liquidity position, the company should give special attention to the management of current assets. He found that the degree of influence of liquidity on its profitability was low and insignificant.

**Rajamohan S. and Vijayaragavan T. (2008)** have conducted a study on production performance of Madras Cement Limited. In order to analyze the comparative production performance of Madras Cements Limited

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and all cement units in India, Mann-Whitney U-test was applied. The results of analysis indicated that the production performance of selected unit was equal to production performance of all other cement units in India.

Adolphus J. Toby (2008)\(^{53}\) has conducted a study on liquidity performance relationship of Nigerian manufacturing companies. The results of the study have revealed a significant relationship between liquidity, profitability, efficiency and leverage measures. The study has also made an attempt to suggest that in order to target money supply, monetary policy could be used to facilitate monetary transmission mechanism by integrating minimum liquidity requirement for the manufacturing industry.

Chudson (1945)\(^{54}\) has published a research paper on the performance of the corporate financial structure, in which he provides direct evidence to show that companies with huge amounts of Fixed Assets use more long term debts. He also indicates that there is no simple linear relationship between corporate size and the debt ratio.

Barges, Alexander (1946)\(^{55}\) in his research paper on The Effect of Capital structure on the Cost of Capital adopt the most comprehensive test for the M.M. Hypothesis. He analyzes the relationship between the average cost of capital and leverages, and between the stock yield and debt - equity ratio. For the purpose of his study, he utilizes a cross section of data from three different

industries namely Rail, Road, Departmental stores and Cement industries. His observations are distributed over the entire range of capital structure. Each sample has a significant number of cases with little or no debt. He makes special efforts to introduce homogeneity among the sample firms. Barges criticizes M.M for using market value as it introduces a bias in the estimate of leverage co-efficient. He therefore has used book value as a measure of leverage.

**Wippern (1966)**\(^{56}\) in his research paper on “Financial Structure and The value of the Firm”, concentrates on the cost of equity instead of the overall cost of capital. By doing this, he shows that the cost of equity is significantly linear and increases at an appropriate rate to exactly offset the injection of debt into the capital structure and keep the overall cost of capital constant.

**Comanor and Wilson (1967)**\(^{57}\) in their article on “Advertising, Market Structure and Performance”, examines the relevance of advertising intensity as a factor in industrial profitability. They point to advertising intensity as a major determinant of profitability in 35 U S Consumer goods industries.

**Jain (1967)**\(^{58}\) analyzes the financial statements of cement companies in India. The study reveals that by and large their financial performance is satisfactory on the basis of the ratio analyses made.

There are a number of works on determinants of profitability in India. **Subramanian and Papoia (1971)**\(^{59}\) have studied the relationship between profitability and the growth of firms in the Indian Chemical Industry during the
period from 1960 to 1969 with data of 27 companies quoted in the Stock Exchange. They report that most of firms want to grow in an expanding market with differing intensities and that those who have ability aided by profit continue to grow faster.

Gale (1972)\(^6\) has examined the effect of market share on the rate of return of selected firms operating in different market environments using data from 106 firms. He records that high market share is associated with high rates of return and that the effect of share on profitability depends on other firms and industry characteristics such as degree of concentration and rate of growth in the industry and the environment in which the firm competes and on the absolute size of the firm. He also finds that the relation between rate of return on equity and capital ratio (a measure of risk in an inter-industry sample of firms) was positive and significant.

Hurdle (1974)\(^6\) has developed a theoretical model relating to leverage, market structure, risk and profitability and tested the model using cross-sectional data from 28 United States manufacturing firms and 85 industries with data covering the 1960’s. Hurdle used three simultaneous equations to test the hypotheses of his study and found that the firms earned profits because of market structure and not through capital structure.

Gosh and Roy (1977)\(^6\) have tried to see how far the liquidity of the firm is influenced by the conditions in the industry. Liquidity characteristics have been chosen for replication of the model elsewhere to judge the industry’s and economy’s influence on firms. Liquidity characteristics are judged in terms of current ratio, since it is a widely accepted tool for measuring liquidity.
**Ghosh (1978)**\(^{63}\) has studied the financial position of 18 private sector companies, all with a paid-up capital of ₹ 50 lakhs and above, whose principal item of manufacture was cement. He has analyzed the Balance Sheet and the Combined Income and Expenditure Statements and found that they were financially sound.

**Pramod Kumar (1980)**\(^{64}\) has made a comparative study of private, state government owned and central government owned firms. It reveals that the utilization of investment in augmenting sales is better in the private sector than in state owned or central public sector firms. The income generated by the industry has shown an upward trend. This study also reveals that long term funds are the major source of capital structure in the private sector. The main suggestions of this study are that 1. Higher priority should be given to reduce the operating cost, and capacity utilization, 2. Much importance should be given to improve the liquidity and solvency position and 3. Attention should be given to better packaging and distribution.

**Khanna and Subramanian (1981)**\(^{65}\) have studied 10 units in the cement industry to analyze their liquidity, profitability, financial structure and overall performance. They have used ratio analyzes and merit rating to arrive at valid conclusions. They found the financial structure of the industry had declined over the years. Non availability of funds had affected modernization of plants and periodic rehabilitation of kilns.
Swamy (1984) has examined the various aspects of capital, employment, productivity, profitability, rate of return on capital and cost structure of the cement industry for the period 1965-1978. The study reveals that fixed capital of the industry has shown a negative growth rate during the period. Capital Intensity had declined drastically over the period indicating deterioration of the financial position of the industry. The ratio of working capital to productive capital also declined over the period, whereas the input-output ratio showed a favourable increase. Finally, the material consumed cost had increased over the period.

Sethuraman and others (1985) have reviewed the concept of social limits to growth that has been with us for some time. Now that the Indian economy has been opened up, it has interesting implications for the industry, which is poised for growth. This study was prompted by the cement industry, which found itself in difficult conditions within months of delicensing. Using simple criteria, it has been found that the Indian economy is easily prone to market saturation. Relatively small increases in output have succeeded in a turnaround from scarcity and attractive margins to falling unit realization and capacity utilization. Since this behaviour is a characteristic of the economy, it is feared that the story could easily be repeated in other cases like fertilizers and two wheelers closely on the heels of cement and light commercial vehicles. It is suggested that corporate managements should pay due attention to this characteristic in the course of the planning and implementation of expansion projects.
Chamoli (1985)\textsuperscript{68} has attempted to assess the capital structure pattern of the Cement Industry in the private and public sectors. He also makes a comparison of the observed ratio by debt-equity with established norms and tries to identify the factors responsible for the difference between them. It is suggested that if the financial function of the industry is to be made self-propelling, the gear as well as they payout ratios are to be pushed up by financing future expansion with the help of long term debt and not with help of addition to equity.

Arun Khandekar (1986)\textsuperscript{69} has observed in his paper that the Seventh plan target for installed capacity of cement has been fixed at 60 million tonnes as against the Sixth plan end level of 42.5 million tonnes. The production target has been fixed as against the actual production of 30 million tonnes in 1984-85. This means the cement industry will have to grow one and a half times more within a span of five years. By all standards, this is a challenging task.

Alexander P. Prezas (1987)\textsuperscript{70} has made an attempt to study the effects of debt on the degree of operating and financial leverages. He has found that the degree of operating and financial leverages was affected by the changes in the firm’s capital structure. The degree of financial leverage was changed due to changes in interest payments. Financial & operating leverages were highly influenced by the relative size at the debt, elasticity of real capital & contribution margin.
Thomos, Brientand Others (1987)\textsuperscript{71} in their study “Empirical Measurement of Operating Leverage for Growing Units “ have discussed the relationship between the degree of operating leverage & the ratio between total asset & net sales, depreciation & total assets.

Mohammed Talha and Faheem Usman Siddique (1990)\textsuperscript{72} have opined that for the cement industry coal quality is very important as it affects both the quality of cement and the operation of the plant. The Indian cement industry uses coal because of its abundant availability and shortage of oil and natural gas. Today the Indian cement industry has to use coal of high ash content with varying characteristics. To sort out this problem the role of coal in cement making has to be reassessed and possible improvements in coal quality and consistency have to be explored. Under the formula suggested by the Bureau of Industrial Costs and Prices, old cement plants up to 75 percent capacity utilization and new ones with 60 percent utilization will be acquired by the government at the levy price. The rest will be sold at the market price. The author says that this proposal, if implemented will give a shot in the arm to the industry.

Nair (1991)\textsuperscript{73} has studied the productivity aspect of the Indian cement industry. In 1990-91, the industry had an installed capacity of 60 million tonnes. The industry was poised for a capacity growth to about 100 million tonnes by 2000 A.D. The study attempted to analyze the productivity and performance ratio of the industry with a view to identifying the major problem areas and the prospects of solving them.
Anup Agarwal and Others (1992) have published a research paper on, “Corporate Capital Structure, Agency Costs and Ownership Control: The Case of all Equity Firms”. In this study, they have attempted to prove that all equity firms (firms which use no long-term debt over a continuous five year period) exhibit greater levels of managerial stock holdings, more extensive family relationships among top management and higher liquidity positions than a matching sample of levered firms. Further, they record that the managerial control of voting rights and family relationships among senior managers are important factors in eliminating leverage. Their main findings are i) managers of all-equity firms have significantly levered the firms in their industry, ii) there is significantly greater family involvement in the corporate operations of all-equity firms than in levered firms, iii) Managerial ownership in all equity firms is positively related to the extent of family involvement and iv) all-equity firms are characterized by greater liquidity positions than levered firms.

Subir Cokavn, Rajendra Vaidya (1993) have made a serious attempt to evaluate the performance of the cement industry after decontrol. It is found that the performance of the cement industry after decontrol is characterized by outcomes that are generally competitive and welfare enhancing. The structure of the industry changed significantly with technologically superior capacity being built up by many new entrants into the industry. It is noticed that there is a significant real price increase and an associated increase in profitability. The
performance of firms across strategic groups is different, with firms operating relatively new and large plants appearing to have an advantage. An important point which is highlighted in this paper is the nature and effect of inter-firm heterogeneities in the cement industry.

Chandrasekaran (1993)\textsuperscript{76} has made an attempt to examine, the determinants of profitability in the cement industry. Profitability is determined by structured as well as behavioural variables. The other variables, which influence profitability are growth of the firm, capital turnover ratio, management of working capital, inventory turnover ratio etc., Some of the main changes in the cement industry environment during the 1980’s are the perform from complete control to decontrol, their number of new entrants and the substantial addition of capacity, the changing technology from inefficient wet process to efficient dry process and from conditions of scarcity of cement to near glut in the market. The companies were involved in aggressive marketing strategies.

Kumar (1994)\textsuperscript{77} has stressed the importance of coal in the cement industry. It is vital to adopt measures for the improvement in mining techniques as well as resorting to coal enrichment so as to minimize extraneous material and ensure consistency in the quality of coal. Finally the cement industry has to go for technological improvements in different unit operations such as drying and grinding, matching raw mix and coal burning technique etc., which can lead to successful kiln operation.
Chandrasekaran (1994)\textsuperscript{78} has studied the market structure of the Indian cement industry. The concepts of firm, industry, market structure, conduct and performance are defined as conventionally used in the literature of industrial organizations. It is concluded that the demand and supply gap has been reduced considerably and supply of cement during the study period increased due to creation of additional capacity and capacity utilization. The Private sector has about 84 percent of the installed capacity. It is also found that the size of plants has increased over the years. Mini cement plants came into existence in the 1980’s. Consumption of Portland cement increased during the period. Structural analysis shows changes in structural features and competitive conditions in the industry. This is mainly due to government initiative and corporate response.

Jethra and Others (1994)\textsuperscript{79} list out the problems and prospects faced by the Indian cement industry. The Cement industry in the country dates back to the early part of this century. The first cement plant was set up in Porbandur in 1914. Since then the capacity and production of cement have grown steadily. The geographical spread of the industry is mainly determined by the occurrence of limestone deposits. The eighties witnessed major developments in the cement scenario. A welcome feature in the industry in the recent past is a very healthy growth in exports. Further it is stated that the basic problems of the cement industry are coal, power and transport. There is need for conversion from wet process to dry process to improve the techno economics of this industry.
In Industrial Researcher (1994) an attempt was made to discuss various facts relating to cement industry and assess the future scope for development. Among the five varieties of cement manufactured in India, Portland cement is the most popular one. It is extensively used in construction of buildings. Production is spread over all parts of the country and limestone and other materials are available at many places. India’s dependence on imports has declined over the years and reached the nil print. The consumption pattern of cement has shown an upward trend. The industry caters to two types of buyers namely individuals and the government. The demand for cement is as such perennially satisfied.

The problem of industrial concentration is very old. It gives rise to widespread consequences. The intensity of concentration is very insignificant in the cement industry as a whole and in two of its sectors. A few large houses are in a position to dictate and control a large proportion of production and investment activity in the industry. In this industry extreme inequality persists in the shares of the large firms, average firms and small firms. It manifests itself in the noncompetitive market structure, merger and collusion, unduly high prices, restriction of output, low capacity utilization and monopolistic and restrictive trade practices. The largest firm and the second largest four firms produce about 30 to 37 percent and 48 to 56 percent of the entire industry’s production. It leads to least desirable combinations of high concentration and least competition. The public sector firms have a very passive role in
improving the situation. The larger firms in the public sector have to develop capacity to provide a competitive threat to their counterparts in the private sector. The structure of the industry has not changed and the pattern of competition and concentration has remained basically unaltered through the period from 1971 to 1980.

**Bhanu (1995)** has made an attempt at empirically evaluating the performance of the cement industry during various phases of control and decontrol. Capacity utilization is taken in this study to be most important factor to explain the decentralization in investment in the cement industry after the mid 1980s. This study argues that both supply and demand factors, besides policy change, influence the performance of the industry and shortage in supply hamper higher utilization of capacity. The availability of coal as well as power is important for higher capacity utilization in the cement industry, while price of cement has a positive effect on capacity utilization and levy has a negative effect. This study also reveals that the effect of liberalization on the cement industry was diluted by the lack of investment in coal and power which resulted in shortage, which in turn, led to poorer performance and deceleration of additional investments in the industry.

**Dev Prasad and others (1997)** have presented a research paper on “Long run Strategic Capital Structure”, in which they analyze the link between the capital structure and the strategic posture of the firm. Specifically, managers were found to structure the selection of debt and capital intensity in a mean
consistent with the strategic goal of long run control of systematic risk. Therefore, the efficacy of a strategic perspective on capital structure was examined by investigating the long term control of systematic risk through the adjustment of capital structure.

Tiwari (1998)\textsuperscript{83} finds that the cement industry is passing through a highly discouraging period due to high cost of production and low prices. Many units are suffering due to the above factors and the unexpected fall in demand particularly in the government sector. There is no doubt that the demand will improve and the prices will go up but cut-throat competition in the market has come to stay in spite of the various strategies adopted by the Cement Manufacturer’s Association (CMA) (1999)\textsuperscript{84} The industry must earn reasonable profits to survive and this will mostly depend on the cost of production. Proper Management, effective controls and cost reduction strategies are the most important methods to improve the profitability in cement factories.

Ajay Acharya (1999)\textsuperscript{85} has studied in detail the various resources vital for rapid changes in the cement industry. The study also points out reasons for the large number of mergers, acquisitions and their fall - out on smaller plants. The factors that are essential for cement companies to excel in their business are good quality and the ability to keep up with standard Competition Companies. A combination of the technology and scientific attitude towards management, benchmarking of information technologies and human resources development will accrue into a volume, which will give the cement industry a pride of place.
Longman (2000)\textsuperscript{86} in his paper analyzes the key performance indicators such as clinker output per employee, kiln running time, kiln fuel consumption, maintenance cost, etc. Although Blue circle industries (BCI) have been recording key performance Indicators (KPI) for many years, it was only in the last few years that these have been systematically analyzed and the results of individual plants are compared through international benchmarking exercises. The results of these exercises have allowed the BCI to identify areas that can be improved to initiate a process of continuous improvement by setting targets and ensuring that best practices are implemented. This paper outlines the range of parameters monitored, describes the process of assessment and comparison and gives examples of some of the benefits reaped.

Tangri (2000)\textsuperscript{87} has stressed the need and importance of transportation of cement in bulk without bagging in loose. In almost all the developed countries, cement is transported in bulk either by rail (or) road in Small bags of 5 kg. (or) 10 kg and sold through departmental stores. In India the normal mode of transportation of cement is in 50 kg bags. This quantity should be reduced as much as possible, by doing so the industry can achieve a substantial reduction in the cost incurred in boarding and distribution at the unloading end. Railways carry cement in bulk transportation and the gains of bulk transportation should go to the consumer. Keeping in view the overall advantages to the industry, the consumer, the economy, the transporter and the environment, transportation of cement in bulk needs to be encouraged and pushed.
Khiria (2000)\textsuperscript{88} wants importance to be given to mini cement plants so that certain basic problems of our economy like unemployment can be reduced. In a large country like India such mini cement plants not only help in dispersal of industries to rural areas, but also have employment potential many times more than the bigger plants. They also provide for substantial savings in power consumption and cost of installation per unit. Durga Prasad Sahoos is the first manufacturer of cement in the tiny sector in India. At present there are more than 300 mini cement plants. This has also spread to the Middle East and African countries, Bangladesh and Oman.

Sharma (2001)\textsuperscript{89} has studied the pains and problems of shortage and surplus of cement in the past decades. The transformation of the cement scenario from acute scarcity to huge surplus has depressed prices to uneconomic levels.

Amit K. Malik and others (2005)\textsuperscript{90} studied the relationship between working capital and profitability in the context of the Indian pharmaceutical industry and concluded that no definite relationship can be established between liquidity and profitability.

Das (2006)\textsuperscript{91} examined the dividend practices followed by the Associated Cement Companies from 1985-86 to 2004-05. He found that the company followed a conservative dividend policy during the study period there was a significant increase in profitability due to earnings per share and capital employed current ratio was on a declining trend.
Ramachandra Reddy and Others (2007)\(^{92}\) have examined the effect of selected variables on Market Value Added. This study was conducted with 10 cement companies in India and the objective was to examine the effect of select variables on Market Value Added. For this purpose a Multiple Regression Technique has been used to test the effect of select variables on the Market Value Added. The study found that none of the factors are found to have an impact on Market Value Added and BPS is found to have a negative and significant impact on Market Value Added. The study concluded that the performance of the selected cement companies in terms of profitability cannot be increased unless problems like technological lag, high cost, taxes etc, are solved.

Deepa and others (2007)\(^{93}\) presented an empirical study on liquidity management of a leading automobile company from 1995 to 2006 the researchers observed that the liquidity position was not good during the study period. In order to improve the liquidity position of the Company, it was suggested that do its assets should be utilized in an effective manner, cash balances should be increased and current liabilities reduced.

Jeelan Basha (2007) there has been a sea change in the functioning of Banking Scenario since the implementation of liberalization policy in 1991. The rapid growth and Development of information technology and communication systems have made banking services accessible to customers at the click of mouse/ his finger tips. The organization of these things has resulted in acute competition not only among domestic banks but also between domestic banks and foreign banks. The Indian banking system has undergone a major rapid structural transformation over the last four decades from social banking to commercial banking, traditional class banking, brick and mortar banking to electronic banking and local banking to universal banking.

CABI (2008) The World Sugar Journal will in future present its individual country supply and distribution tables on a new format in an attempt to present its readers with more accurate and meaningful information. It will now show commercial stocks and surplus / deficit calculations for each country in order to further presentation of sugar statistics.

Jayapal (2008) in his study analyzed the financial performance of Gomuki - Co-operative Sugar Mills Limited and concluded that the performance of sugar co-operatives, was not satisfactory and in spite of the tremendous role played by sugar cooperatives in national as well as state development and growth, they stood at the cross roads Evaluating the financial performance has stated that stress should not only be an profitability but also on liquidity and cash flow aspects.
Prasanh (2008)\textsuperscript{98} the unraveling of the global financial crisis sends a clear signal that India has to make fundamental changes in its management of the banking and financial Sector. The First Pre-requisite is a return to relationship banking. The immediate Indian Response to the global crisis should be to work towards lowering interest rates which at their high level have hurt manufacturing investment in both the large and small scale sectors. The economy also needs the pursuit of an expansionary policy by waiving fiscal rules and procedures.

Chandrasekhar (2009)\textsuperscript{99} regards that liberalization and financial integration may not have resulted in excess exposure of the Indian Banking system to the Toxic effects that originated in the US and Europe. It has altered banking behavior. One Consequence is increased Exposure to risk, which is a matter of concern in itself and not just because, the Indian regulatory System is not yet geared to deal with such risk, if it can at all.

Jyotimoy Bhattacharya (2009)\textsuperscript{100} says there is no reason why larger borrowing by the government need raise interest rates in the economy. It is a case of prejudice in favour of “Small” Government. That is the Reason for the continued currency of the view. Even if the expressed view is due to desire to keep foreign institutional investors happy, should it not be better to control speculative capital directly instead of recommending deflationary fiscal policies in the midst of recession.
**Amaresh Samantaraya (2009)** Monetary policy is a key constituent of overall economic policy across the industrial and emerging economy for the purpose of stabilization of output and prices. In a standard textbook sequence, monetary expansion reduces interest rates and augments aggregate demand through increase in investment and consumption spending. This increase in aggregate demand exerts a temporary influence on real output, while the upward pressure on price is presumed to be of a permanent nature. In a similar fashion, monetary retightening leads to reduction of prices and a temporary output loss. In practice, the conduct of monetary policies involves setting bank reserves or the short policy rate to obtain financialization and monetary conditions consistent with achieving the objectives of monetary policy.

**Rajagopal (2009)** records of the Government departments and financial institutions have their own audit sections/departments. However, corporate entities, excepting a few have not given importance to such internal audit systems. In the changed global environment an internal audit report should be processed honestly and remedial action on the irregularities should be indicated. Internal audit must be looked upon as a tool for the top management to manage their activities and to know how their administration and operational departments are functioning.

**Janaki Ramudu (2010)** has made a study “Working Capital Structure and Liquidity of Assets an Empirical Research on the Indian commercial vehicles industry”. He has found that of all the current assets across the
industry, inventories formed the highest percentage followed by trade receivables and loans and advances whereas cash and bank balances formed a very negligible part.

Arunasaini and Others (2010)\textsuperscript{104} in their study analyze of liquidity management and trade-off between liquidity, risk and profitability. They found that the efficient management of liquidity could be ascertained by a firm’s ability to meet maturing debts or obligations.

**Conclusion**

Previous studies reviewed in this chapter are all related to financial performance of various industries seen relating to the financial performance of some specific industries. The present study systematically analyses the financial performance of the two selected cement units. First in depth analysis is done with reference to the Tamil Nadu Cements Corporation. Then the financial performance of Ramco Cements (Madras Cement Limited), is analyzed in detail. Then the financial aspects of both the cement units are compared and ratios are calculated. Statistical tools like t-test, and multiple Regression tests etc., are used for understanding the financial performance. This study is unique in this aspect and a pioneer in analyze to the financial performance of two prominent cement units in Tamil Nadu.
Rationale for the present study

The researcher has thoroughly reviewed the above mentioned earlier studies conducted in the area of financial performance. These studies were related to various industries such as automobiles, banking, cement, information technology, paper, steel and sugar in India and abroad. Of these reviews, studies were conducted in Paper industry in the areas of capital structure, consumption pattern, financial health, liquidity position, marketing, productivity, profitability, technological development and working capital management. But no comprehensive study was carried out to analyze the financial performance of Paper industry in Tamilnadu especially with respect to comparing public sector with private sector Paper Mills. Bearing this in mind, the researcher has selected a comprehensive study analysing the financial performance of Select paper mills in Tamilnadu.