CHAPTER-I

INTRODUCTION
CHAPTER-I
INTRODUCTION

1.1 INTRODUCTION

The cement industry, a highly capital intensive, is a basic key industry and plays a vital role in the economic development of a country like India. India is the second largest producer of cement in the world behind China but ahead of the United States and Japan. The Indian cement industry has both in installed capacity as well as in actual production, grown significantly over the past three decades. It significantly contributes revenue to the central and state exchequers in the form of excise duties and sales tax. It accounts for nearly 1.3 percent of GDP and employs over 14 million people in India. Its investment in fixed and current assets is ever increasing to meet the demand for cement.

1.2. IMPORTANCE OF THE STUDY

Working capital management is a very important component of corporate finance, because it directly affects the liquidity and profitability of the company. It deals with current assets and current liabilities. Working capital management is important due to many reasons. For one thing, the current assets of a typical manufacturing firm accounts for over half of its total assets. A firm with excessive level of current assets may result in low rate of return on its investment. However, firms with too low currents assets may incur
shortages and difficulties in maintaining smooth operation. "Efficient working capital management involves planning and controlling current assets and current liabilities in a manner that eliminates the risk of inability to meet the short term obligations on the one hand and avoid excessive investment in these assets on the other hand" (Eljelly). Many surveys have indicated that managers spend considerable time on day-to-day problems that involve working capital decisions. One reason for this is that current assets are short-lived investments that are continually being converted into other asset types. With regard to current liabilities, the firm is responsible for paying these obligations on a timely basis.

It involves the decision on the amount and composition of current assets and the financing of these assets. Current assets include all those assets that in the normal course of business return back in the form of cash within a short period of time. The management of working capital, therefore, influences the profitability of the firm. Firms may have an optimal level of working capital that maximizes the profit. "Large inventory and a generous trade credit policy may lead to high sales. Larger inventory reduces the risk of a stock-out, whereas liberal trade credit may stimulate sales" (Deloof). The importance of working capital management, its different components and its effects on profitability may lead us to formulate the problem statement under this study.
1.3. CONCEPT OF WORKING CAPITAL

A study of working capital is of major importance to internal and external analysis because of its close relationship to the day-to-day operations of a business. Inadequacy or mismanagement of working capital is one of the leading causes of business failures.

The requirement of finance in business arises mainly due to two factors, viz. acquisition of fixed assets and provision of working capital. Fixed assets such as land, buildings, plant and machinery equipments etc. are essential for carrying on production and sales. Physical assets may not affect any production or generate any sales unless these are adequately and regularly bed-up with materials and services.

The finance required to buy such materials and pay for such services is termed as 'working capital'. Working capital is necessary to meet the day to day revenue expenses like purchase of materials, wage payment, meeting overhead expenses, etc. Working capital keeps the business going on. From the accounting point of view, working capital is the money locked-up in inventory, debtors and other current assets minus the money payable on account in the form of sundry creditors and bills payable.

Moreover, “Working capital refers to a firm's investment in short-term assets such as cash, short-term securities, accounts receivables, and inventories. Gross working capital is defined as the firm's total current assets. Net working capital is defined as current
assets minus current liabilities. If the term 'working capital' is used without further qualification, it generally refers to gross working capital." (Weston & Brigham)

The term 'working capital' is a particularly appropriate expression for denoting the wealth of an enterprise which is continuously revolving through the stages most desired by the customers and by the firm. "A statement of working capital is tabulation of current assets and current liabilities designed to emphasize current financial condition. Statements of working capital are most useful when prepared in comparative form and arranged so as to make possible a ready comparison of liquid assets with current liabilities."

1.3.1. QUALITATIVE CONCEPT

The concept of working capital may be viewed in terms of its qualitative and quantitative nature. The qualitative concept of working capital is supported by Lincoln, Kennedy and McMullen. Hoagland and J. Baetty. According to this concept, working Capital should mean the total current assets minus total current-liabilities. "Some liquid assets are required for the operations of the firm. These assets which include operating cash, accounts receivables and inventory, should meet the rate of return or present value hurdle applied to non liquid assets such as plant and equipment, land and building etc." (Fried land)

"Current assets may be defined as cash or other assets which are expected to be converted into cash in ordinary course of business
within one year or within such longer period as constitutes the normal operation circle of a business." (Fitzgerald)

It is a fact that creditors depend more upon current assets as a source of their repayment. The reason is that fixed assets because of specialization diminish in value while the current assets usually do not. "Working capital is defined as the difference between a company's current assets and current liabilities. The accounts which belong to this group are usually the most active in the company. Unlike fixed assets they reflect the company's daily activities (Norgard).

The qualitative concept explains working capital as "excess of current assets over current liabilities. "The excess of current assets over current liabilities is the, net working capital. Net working capital represents the amount of current assets which would remain if all the current liabilities were paid". (Kennedy)

"working capital, sometimes called net working capital, is represented by the excess of current assets over current liabilities and identified as the relatively liquid portion of total enterprise's capital which constitutes a margin or buffer for maturing obligations within the ordinary operation cycle of the business (Board)."

M. Mohasin observes "Net working capital is the difference between current assets and current liabilities, whereas gross working capital is the sum of current assets. The first concept is qualitative while the other one is primarily quantitative in nature. That is to say,
the net working capital position indicates current credit soundness and, is of major concern to investors and creditors. The net working capital enables a firm to determine how much amount is left for operational requirements.

1.3.2. QUANTITATIVE CONCEPT

The Quantitative concept of working capital is supported by Field Mallot, Baker and Adam Smith. The quantitative concept of working capital refers to the total of all current assets. "The goods of a merchant yield him no revenue or profit till he sells them for money and the money yields him a little till it is again exchanged for goods. His capital is continuously going from him in one shape and returning to him in another and it is only by means of such circumstances or successive exchanges that it can yield him any profit. Such capital therefore may very properly be called circulating capital." (Adam Smith)

Supporters of gross working capital concept feel that current assets should be considered as working capital, as the whole of it helps to earn profits, and the management is more concerned with total current assets as they constitute the total funds available for operational purpose. According to this concept, every increase (temporary or permanent) in funds will increase the working capital.

"The gross working capital concept focuses attention on two aspects of current assets management viz optimum investment in current assets and financing of current assets." (Pander)
Investment in current assets should be adequate. Excess investment in current assets will result in a fall in profits of the firm. Less investment in current assets can threaten the solvency of the firm since it fails to meet its current obligations. "Current assets represent more than one-half the total assets of a business firm, because they represent a large investment and because this investment tends to be relatively volatile, current assets are worthy of the financial manager's careful attention." (Western of Brigham)

Working capital is essentially circulating working capital. Working capital moves from one process to another, from cash to inventories and back to cash. According to Howard and Brown, "Working capital had been admirably summed up by comparing it with a river which is there, but the water in it is constantly changing."

Gesternberg also has suggested that working capital be treated as circulating capital. According to him, "it means all assets of a company that are changed from one form to another in the ordinary course of business."

Working capital is short term capital by nature. "These are assets which are not normally retained for longer than one year. Indeed they will usually change their form time and again, during the course of a year." (Batty) "Normally this capital is hardly retained longer than a year. As opposed to fixed capital the amount invested in it is not permanently blocked but the investment changes in form and substance, during the normal business operations, so money in it is
In this study, both gross as well as net concept of working capital has been used to analyze the trends and determinants of working capital of the selected cement companies in Tamil Nadu.

1.4. CONCEPT OF PROFITABILITY:

Profit is a very important aspect of business. Most business enterprises exist with the object of earning profits. "Profit is the engine that drives the business enterprise. It is indeed a magic eye that mirrors all aspects of entire business operations including the quality of output." The task of management is, therefore, maximization of profits.

The efficiency of a business is measured by the amount of profit earned. The greater the profit, the more efficient the business is considered to be. "The principal motivating force behind conducting business is profit. Perhaps the most important reason for keeping accounts, so far as the management of the business is concerned is that the information contained in them provides the means of measuring the progress of the business, of testing its pulse and indicating when and where remedial action, if necessary, shall be taken." (Duck o Jerve) Profit is a signal for the allocation of resources and a yardstick for judging managerial efficiency. No company can survive long without profit.
"Profit is the surplus which arises when the total revenues exceed the total costs and due allowances have been made for difference in opening and closing stocks, for expenses paid in advance, or payable but not paid with due allowances for the loss in value of capital equipment used in achieving the total revenues and for any sums owing to the business which will remain unpaid because of the fault of debtors." (Ogely)

The profitability may be defined as the ability of a given investment to earn a return from its use. Profitability is one of the main criteria to judge the extent to which management has been successful in maximizing its profits or minimizing its losses, if any.

The concept of profit is related to absolute value. It does not tell about the reason, scatteredness and how it takes place or the relationship of this figure with another one. These questions can be answered by a peep into the profitability of an entity.

Economists and accountants have been using the term profit in different ways. In the words of Hensy and Haryen, "The amount called profit in a firm's profit and loss statement (or net income or income and expenditure statement) is usually much larger than the economic profit of the firm. To determine economic profit a competitive or normal rate of payment for service of capital supplied by the firm must be subtracted from the profit for the period as determined by conventional accounting methods."
The capital supplied by the firm is the market value of land, plant, equipment, the working capital, net amounts of borrowed against the physical assets."

Several different types of accounting profit may be recognized, e.g. gross profit, net profit, profit before income tax, retained profit, distributable profit, departmental profit, etc.

Proprietors invest money in a business to earn a satisfactory return from it. According to Erich Korlin, "Further growth, the financing of investment for expansion and job security for employees, all depends upon company's profits. The phrase we make profit but we do not talk about them ought to be relegated to the past." The nature of earning will be influenced by factors such as the type of the industry, the risk involved, the risk of inflation, etc.

From the accounting point of view, profit reflects the excess of earnings over expenses or costs. In the words of F.P. Langley, "Profit is not the surplus of receipts over payments, but the surplus of revenue over expenses. If total expenses are greater than the revenue there will be loss. By revenue is meant what the business earns in the period under review, usually from the goods or services it has sold."

Profits are derived from two sources. Firstly, from operation, and, secondly, from various non-operating activities usually related to financing or disposal of assets. Although in some companies non-operating income may play a significant role, but substantial non-operating incomes are usually non-recurrent and do not represent
themselves with sufficient frequency and consistency over a number of years.

Profitability is a relative term and its measurement can be achieved by profit and its relation with other objects by which the profit is affected. According to Bayer and Donald, "Segment profitability implies segment revenue less segment cost; this cost however may range from variable cost to what is traditionally referred to as full cost". As observed by Goodman, "The accounting concept of profit measures what have been accumulated, the analytical concept of profitability is concerned with future accumulation of wealth."

More over profitability is a profit rate expressing profit as a percentage of investment or sales or any other variable to represent investment or sales. One may use total assets or capital employed or equity instead of investments to compute the profit rate. One may take value added instead of sales. Again one may consider net profit (NP) or earning before interest and tax (EBIT) or earning before depreciation, interest and tax (EBDIT) as profit to calculate profit rate. What should be used in numerator and denominator to compute profit rate depends upon the objective from which it is being measured.

The profitability, in this study, has been measured in terms of return on sales as well as return on investment. Profitability in relation to sales is the best short term indication of successful growth.
But in the long run, it may prove wrong if there is not a proper return on the capital necessary to support the sales. On the other hand, profitability in relation to investment is a measurement of soundness and strength of a company's long run growth. Comparatively, it is important that the long run profitability is the foremost measurement of company's performance.

Against this background, the measurement of profitability considered under this study is a) rate of return on sales (net profit margin) b) rate of return on investment (ROI). The investment base used in this study is either total assets or capital employed. Consequently, three types of profitability ratios under investment base have been considered under this study. They are: i) rate of return on total assets (ROTA), ii) rate of return on capital employed (ROCE) and iii) rate of return on equity (ROE).

In this study, the term profit has been used interchangeably as earnings after tax (EAT), earning before interest and tax (EBIT) and earnings before interest, depreciation and tax (EBDIT) at appropriate circumstances.

1.5. IMPORTANCE OF INTER – FIRM COMPARISON

Inter-firm comparison is the technique by which the performance, efficiency, costs and profits of various concerns in an industry are studied and a relative comparison is made. It is a tool for control by comparing own performance with those of other competitors in the field, for increasing efficiency and thereby
maximising profits. For inter-firm comparison, the firms should be sufficiently comparable. Firms in the same industry provide ideal comparable data though differences in size, methods and area of operation, present some difficulty. Obviously, no two firms will be identical in all respects. However, if they are operating in the same industry, catering to the same type of customers and selling the same kind of goods and services, their performance can be attempted. Inter-firm comparison can also be made in respect of firms engaged in different industries though the scope and areas of comparison in such circumstances are evidently narrowed down.

Inter-firm comparison solves many problems of a firm by indicating the efficiency of production and selling, adequacy of profits, weak spots in the organisation etc. The ultimate necessity to survive in a competitive environment demands the comparison of a firm's performance with its competitors. Business is a corporate game of survival of the fittest, where there is no room for complacency. There is no guarantee that a firm must always compare its performance with other firms in the same business. This is essential both for survival and growth. Inter-firm comparison using financial ratio, is therefore an important management tool to assess the relative strength and weaknesses of firm in an industry.

1.6 STATEMENT OF THE PROBLEM

Efficient management of working capital is one of the preconditions for the success of an enterprise. Efficient management of working capital denotes management of various
components of working capital in such a way that an adequate amount of working capital is maintained for smooth running of a firm and for fulfillment of twin objectives of liquidity and profitability. While the inadequate amount of working capital impairs the firm's liquidity, the holding of excess working capital results in reduction of the profitability. But the proper estimation of working capital is a difficult task for the management because the amount of working capital varies across firms over the periods depending upon the nature of business, scale of operation, production cycle, credit policy, availability of raw materials, etc. For this significant amount of funds, it is necessary to invest permanently in the form of various current assets. Working capital is always required to be made available for maintaining the desired level of sales. Empirical results revealed that the ineffective management of working capital is one of the important factors causing industrial sickness (1986).

According to Bhattacharya Modern financial management aims at reducing the level of current assets without ignoring the risk of stock outs (1997). Efficient management of working capital is, thus, an important indicator of sound health of an organization which requires reduction of unnecessary blocking of capital in order to bring down the cost of financing. It is therefore felt that there is a need to study the role of working capital in profit generating process. If a company desires to take a greater risk for bigger profits, it reduces the size of its working capital in relation to its sales. If it is interested in improving its
liquidity, it increases the level of its working capital. However, this policy is likely to result in a reduction of the sale volume and therefore of profitability. Hence, a company should choose between liquidity and profitability and decide about its working capital requirements.

The profitability of the cement companies in India is in a fluctuating state due to the change in price of cement products as well as in cost of cement production. To be specific, the increase in input cost due to inflation factors, high level of taxation, high proportion of assets to sales, high proportion of various costs components to sales are responsible for low profitability. Besides, a high proportion of working capital to sales also affects the profitability of the firm.

The various problems faced by the management of the cement companies lead the researcher to solve the following research questions

a) Does the working capital turnover decease with profit margin?
b) How does liquidity affect working capital turnover?
c) How do turnover ratios such as total assets turnover, inventory turnover and debtors’ turnover influence working capital turnover?
d) How does size of firm affects profitability?
e) How do costs of production and sale affect profitability?
f) How does working capital turnover ratio affect profitability?
g) How do the liquidity ratios influence profitability?
h) How do the inventory turnover ratio and debtors turnover ratio affect profitability?

1.7. HYPOTHESIS

Based on the questions cited earlier, the following hypotheses are framed

a) Working capital turnover is a decreasing function of profit margin.
b) Working capital turnover is an increasing function of liquidity.
c) Working capital increases with increase in total assets turnover, inventory turnover and debtors’ turnover.
d) Profitability is an increasing function of size of firm.
e) Profitability is a decreasing function of costs of production and sale.
f) Profitability is an increasing function of working capital turnover ratio.
g) Profitability is a decreasing function of liquidity ratios such as current ratio and liquid ratio.
h) Profitability increase with increase in inventory turnover ratio and debtors turnover ratio.

1.8. OBJECTIVES OF THE STUDY

The main objective of the study is to analyse the trends in working and determinants of capital and profitability of the selected cement companies in Tamil Nadu under Indian private. More specifically the objectives of the present study are:
To present the review of literature on working capital and profitability

To present a profile of selected cement companies in Tamil Nadu.

To measure and analyse the trends in working capital of selected cement companies.

To examine the determinants of working capital of selected cement companies.

To measure and analyse the trends in profitability of selected cement companies.

To examine the determinants of profitability of selected cement companies.

To examine the impact of working capital on profitability of selected cement companies

1.9 SCOPE OF THE STUDY

Keeping the importance of cement Industry in India, the researcher thought it fit to carry out a study in respect of a few well-known cement companies in Tamil Nadu. The scope of the present study confines to the working capital and profitability of the two selected cement companies in Tamil Nadu under Indian private corporate sector viz., The India Cements Ltd. (ICL) and Madras Cements Ltd. (MCL). The working capital is confined to the study of gross working capital and net working capital. The profitability is focussed on profit in relation to sales as well as profit in relation to investment which in turn related to return on investment (ROI), return on capital employed (ROCE) and return on total assets (ROTA). The profit is taken to be either gross margin (EBDIT) or net margin
(EAT) or operating profit (EBIT). It further examines the factors that determine the variations in working capital as well as profitability. This study intends to analyse the working capital and profitability of a few leading Indian private cement companies in Tamil Nadu. Obviously, the first two leading private cement companies in Tamil Nadu viz., ICL and MCL have been taken in the sample unit for this research study.

1.10 METHODOLOGY

The methodology adopted in the present study regarding selection of sample, period of study, data sources, analysis and interpretation of data has been presented below.

a) Selection of samples

There are 33 major cement companies in India. Of these 22 cement companies have their plants in South India and among them two leading cement companies have their origin in Tamil Nadu. They are India Cements Ltd. and Madras Cements Ltd. The data related to these two companies have been collected for the study on working capital and profitability

b) Period of study

The present study covers a period of 15 years from 1993/94 to 2007/08 in order to draw the trends in profitability and working capital keeping 1993/94 as the base. There is no significance in selecting period except the availability of data consistently.
c) **Data source**

The study is mainly based on secondary data. The data related to the working capital and profitability of the selected cement companies have been obtained from CMIE (Centre for Monitoring Indian Economy), Mumbai, India for the period from 1993/94 to 2007/08.

d) **Data analysis**

While analysing the data, the statistical techniques like index, number, percentage, mean, co-efficient of variation, compound growth rate and regression have been used at appropriate places. The trends in working capital and profitability have been analysed by using index number, and percentage, mean, co-efficient of variation and annual growth rate. Further, the determinants of working capital and profitability as well as the impact of working capital on profitability have been analysed by using regression. The statistical tools used in this study are explained below:

e) **Index numbers:**

It is a statistical device used for estimation of the relative movement of a variable from time to time. The trends in of profitability and working capital have been analysed by using index numbers.
F) Compound growth rate:
The growth rate of the variables related to working capital and profitability have been by using simple regression equation in semi-log form as under.

\[ \log y = a + bt \]

Where \( y \) represents the variable concerned and ‘t’ the year.

g) Linear Regression:
In order to estimate the degree and extent of inter-relationship between a dependent variable and the number of independent variables, the multiple linear regression equation has been used as under

\[ Y = a + b_1 x_1 + b_2 x_2 + \ldots + b_n x_n \]

where \( y \) = dependent variable
\( x \) = independent variable
\( a \) = regression constant
\( b \) = regression coefficient value

The regression coefficient and the overall variances are tested respectively by computing ‘t’ values and F-ratios. The goodness of the fit of the estimated equation is worked out with the help of R square. The regression functions for the determinants of working capital as well as profitability are estimated for both ICL and MCL individually. The regression coefficient has been tested for their significance at 1 percent, 5 percent and 10 percent levels respectively.
Method of Presentation:

While presenting data, charts are used at relevant places apart from the tables. Abbreviations are used for the terms which are repeated in a number of times and the index of abbreviation is given at the beginning for ready reference.

1.11. LIMITATIONS OF THE STUDY

The limitations of the present study are the following:
* The study does not consider the trade off between liquidity and profitability while evaluating the working capital.
* It does not consider cash conversion cycle and average payment period while determining working capital.
* It does not consider the profit concept like cash flow and earning before tax (EBT).
* It does not consider sales in term of units sold.
* It does not consider whole sale price index of cement in determining profitability.
* It does not consider working capital in terms of fixed or variable working capital.

1.12. CHAPTERISATION SCHEME

Keeping in view of the objectives, the study is organized into nine chapters including introduction and conclusion.
The first chapter 'Introduction' is introductory in nature. It introduces the conceptual aspects of working capital and profitability. It also deals with importance of the study, statement of the problem, hypothesis, objectives, methodology, and limitations of the study and chaptersation scheme.

The second chapter entitled 'Review of Literature' is devoted to present the review of literature on working capital and profitability in cement industry as well as in other industry.

The third chapter, 'Profile of Selected Cement Companies' presents the origin, growth and general performance of selected cement companies viz., India Cements Ltd. and Madres Cements Ltd.

The fourth chapter 'Trends in Working Capital' examines the trends in variables used in the measurement of working capital as well as the trends in working capital using statistical tools like index number, mean, co-efficient of variation and compound growth rate.

The fifth chapter "Determinants of Working Capital" examines the factors influencing the working capital using regression technique.

The sixth chapter, "Trends in Profitability" analyses the trends in variables used in the measurement of profitability as well as the trends in profitability using statistical tools like index
number, mean, co-efficient of variation and annual growth of rate.

The seventh chapter "Determinants of Profitability" examines the factors that influence profitability using regression technique.

The eighth chapter entitled "Impact of Working Capital on Profitability" examines the working capital variables that influence profitability using regression technique.

The ninth and last chapter "Findings and conclusion" brings together the conclusion that emerged from the entire study and offers suitable suggestions measures for the efficient management of working capital and profitability in selected cement companies under this study.
REFERENCE


Batty J. Management Accounting, p. 107


Howard L. K. and Brown S. R. *Principles and Practice of Management Accounting.* Richard Clay Ltd.


