CHAPTER I
INTRODUCTION

Cost of capital is an important decision making parameter in financial management of an enterprise. It is generally defined as the average rate of return required by investors on the company's securities. This expected rate of return is a consideration for which they provide funds. The cost of capital is thus known as the overall minimum rate of return acceptable to the company.

The cost of capital is employed many a time for framing or modifying the capital structure of a company. While formulating the capital budgetary plans of a company, the management cannot ignore its weighted average cost of capital. In addition, it is considered in making decisions regarding dividends and working capital. It may further be employed to measure the rationale of financial policy of the management.

Generally speaking, a firm collects funds from different sources in order to invest them in profitable business propositions. The various long term sources of finance represent the capital structure of an enterprise. The capital structure includes equity share capital, preference share capital, debentures, long term loans and retained earnings. Each component has its own cost. Hence, it has to earn that much rate
of return on investment which would be equal to or more than the cost of funds.

The cost of capital, which is expressed in terms of percentage is a measuring scale for accepting or rejecting any investment proposal. It is subject to variations according to the changes in the components of the capital structure of the company. The computation of cost of capital would appear to be a strenuous exercise when alternative capital expenditure proposals are evaluated. Whenever a firm borrows money, it limits the amount it can raise in the future. This in turn affects the future cost of capital. Such long range considerations play a part in determining the cost of capital.

The cost of debt is the rate of interest payable adjusted for the firm's tax rate and floatation costs. Under normal circumstances, the debt fund has low cost. Investors providing funds on debt basis obtain adequate security to protect their interests. As a result, their return remains by and large low. Interest on debt is an admissible item of expenditure under the income tax law, which results in tax saving to the company. The savings on tax reduces the effective cost of debt for the company. On the contrary, the expenses on floatation of debts, cause an addition to the cost of funds raised.
The cost of preference share capital is calculated on the basis of stipulated dividend rate. The dividend on preference shares are not tax deductible to a company. The cost of this source is generally higher than that of the cost of debt.

The cost of equity capital is calculated on the basis of either the expected dividend or expected earnings. The retained earnings are the part and parcel of the equity base. Since retained earnings comprise the equity, its cost is deemed to be the cost of equity share capital. As a matter of fact, the cost of retained earnings cannot be calculated directly because, the way they are utilised, the time for which they are utilised, as well as, the expected return from their utilisation cannot be easily estimated. The retained earnings is the fund belonging to the shareholders. It should have been ordinarily paid out to them. The company retains and thereby restrains the shareholder from enjoying the benefit. Hence their opportunity cost is deemed to be that equal to the cost of equity share capital.

A company seeks funds from various sources, in varying proportions, and at different costs. In order that the cost of funds reflect and represent the cost of total capital, weights should be given on the basis of their respective proportion. If due weights are not given, the cost of capital would be a misnomer. The weights may be based on either book value or market value.
The formation of capital structure is a matter of managerial decision. However, the management cannot afford to overlook the interest of shareholders on one hand and the cost of capital to the company on the other. The management has to seek a balance between the interests of the company and the shareholders at the same time. Thus, if looked from another angle it leads to conclude that the management has to trade-off between risk and return.

I.1. Statement of the Problem:

The cost of capital is a critical parameter for determining the capital structure of a company. The parameter is not only affected by the environmental factors but also by the organisational factors such as capacity to earn and capacity to pay. The cost of capital may not be applied in day-to-day operations in precise terms. But it provides a signal to the management for procuring the funds from different sources. Interestingly, this signal never remains stationary. How far it is affected by the price earnings ratio and debt-equity ratio is to be investigated.
The traditional concept\(^1\) is that the capital structure influences the cost of capital. On the contrary, Modigliani and Miller\(^2\) have viewed that the cost of capital is independent of the capital structure of a company. These conflicting propositions exist because of their different approaches. The former is based on Net Income approach, while, the latter is based on Net Operating Income approach\(^3\). Thus, conflicting views are expressed on the relationship between cost of capital and capital structure changes. Here a serious thought is given to study the extent of relationship between capital structure and cost of capital in Indian conditions.

Pandey (1981) tested the validity of traditional approach to capital structure and cost of capital in Indian companies. Goyal's (1990) study of Indian industries focussed on measurement of cost of capital for a period of two years. In both these


studies, time-series approach was not adopted. In this context, the present study covers a larger time period of 10 years and time series analysis is used for different firms in different industries.

1.2. Objectives of the study:

The objectives of this study are

1. to analyse the components of capital structure of selected industries

2. to compute and make a comparative analysis of the weighted average cost of capital

3. to study the relationship between the capital structure and cost of capital and

4. to ascertain the influence of select ratios on cost of capital.

1.3. Time Period Covered:

The study covers a ten year period from 1980-81 to 1989-90.

1.4. Data and Source of Data:

The present study is based on secondary data collected from the Bombay Stock Exchange Directory published by the Bombay Stock Exchange.
I.5. Sample Size:

In order to carry out the study, ten industries which have different characteristics are taken up. The sample contains eighty seven companies as indicated below:

1. General Engineering - 9
2. Cement - 7
3. Paper - 7
5. Cotton textiles - 10
6. Synthetic textiles - 6
7. Tea plantations - 11
8. Electrical - 14
9. Chemicals - 9
10. Automobiles - 9

Stratified purposive proportionate sampling method is adopted for choosing the companies.

I.6. Analysis of Data:

Analysis of data relate to the following three stages:

1. Analysis of input data.
2. Generation of output data.
3. Analysis of output data.
1.6.1 Analysis of Input Data:

The specific cost of each source of finance is calculated and then by assigning due weights, the weighted average cost of capital is computed. Further, mean, standard deviation and coefficient of variation are calculated and analysed.

1.6.2 Generation of output data:

Debt-equity ratio, price earning ratio, return on investment, book value to market price, dividend payout ratio, earnings variability and dividend yield are calculated to test their influence on cost of capital.

1.6.3 Analysis of Output data:

In order to study the trend and inter industry differences, correlation, multiple regression and analysis of variance techniques are used.

1.7 Importance of the study:

Capital market in India has witnessed impressive growth in recent years. A large number of companies have entered into the capital market for obtaining funds either on equity basis by issuing equity shares or by borrowing by issuing debentures. In order to arrive at a judicial mix of various sources of finance, a company has to consider the implications of the cost of capital.
A large number of empirical studies [Barges (1963), Wippern (1966), Davenport (1971), Weston (1978)] were made to test the validity of the Modigliani and Miller hypothesis. Many of these studies were based on the data of the regulated public utilities. Again, most of these studies were undertaken mainly for the purpose of analysing the impact of the capital structure on the cost of capital. In this study an attempt is made to analyse the capital structure, to measure the cost of capital of selected Indian industries and to analyse the relationship between capital structure and cost of capital.

The study may be useful in understanding the relationship between the capital structure and cost of capital in Indian corporate sector. It also gives a basic idea regarding the pattern of capital structure and the average cost of capital in Indian industries. The investors, the government and finance executives may find this study useful in understanding the cost of capital measurement and other related issues.

1.8. Limitations of the study:
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The present study is based on secondary data collected from the Bombay Stock Exchange Directory. Secondly, due to the constraints of time, cost and non availability of data, the study is restricted to eighty seven companies only over a ten year period.
The study is organised into eight chapters. In the first chapter, the design of the study, objectives, data, sources of data, period covered, statistical tools used and the importance of the study are presented.

The second chapter discusses theoretical aspects of cost of capital and capital structure. A review of the relevant empirical studies is also presented.

Research methodology forms the third chapter. The fourth chapter gives a detailed analysis of the capital structure of selected industries.

The fifth chapter deals with the computation of cost of capital and a comparative analysis of cost of capital as a whole industry-wise and unit-wise. The relationship between the capital structure and the cost of capital is also discussed.

The sixth chapter deals with the study of changes in the cost of capital and capital structure.

The seventh chapter examines the influence of select ratios on cost of capital.

A summary of the findings and conclusion are presented in the eighth chapter.