**Capital structure**

**INTRODUCTION**

In order to run and manage a company, funds are needed. Right from the promotional stage up to end, finance plays an important role in a company's life. If funds are inadequate, the business suffers and if the funds are not properly managed, the entire organization suffers. It is, therefore, necessary that correct estimate of the current and future need of capital be made to have an optimum capital structure which shall help the organization to run its work smoothly and without any stress. Estimation of capital requirements is necessary, but the formation of a capital structure is important.

According to Gerstenberg, "Capital structure of a company refers to the composition or make-up of its capitalisation and it includes all long-term capital resources viz: loans, reserves, shares and bonds".

The capital structure is made up of debt and equity securities and refers to permanent financing of a firm. It is composed of long-term debt, preference share capital and shareholder's funds. Capitalisation, Capital Structure and Financial Structure The terms, capitalisation, capital structure and financial structure, do not mean the same. While capitalisation is a quantitative aspect of the financial planning of an enterprise, capital structure is concerned with the qualitative aspect. Capitalisation refers to the total amount of securities issued by a company while capital structure refers to the kinds of securities and the proportionate amounts that make up capitalisation.

For raising long-term finances, a company can issue three types of securities viz. Equity shares, Preference Shares and Debentures. A decision about the proportion among these type of securities refers to the capital structure of an enterprise. Some authors on financial management define capital structure in a broad sense so as to include even the proportion of short-term debt. In fact, they refer to capital structure as financial structure. Financial structure means the entire liabilities side of the balance sheet.

**Forms/Patterns of Capital Structure**

The capital structure of a new company may consist of any of the following forms:

1. Equity Shares only b) Equity and Preferences Shares c) Equity Shares and Debentures d) Equity Shares, Preferences Shares and debentures

**Importance of Capital Structure**

The term 'Capital structure' refers to the relationship between the various long-term forms of financing such as debenture, preference share capital and equity share capital. Financing the firm's assets is a very crucial problem in every business and as a general rule there should be a proper mix of debt and equity capital in financing the firm's assets. The use of long-term fixed interest bearing debt and preference share capital along with equity shares is called financial leverage or trading on equity. The long-term fixed interest bearing debt is employed by a firm to earn more from the use of these sources than their cost so as to increase the return on owner's equity.

**Theories of capital structure**

Different kinds of theories have been propounded by different authors to explain the relationship between capital structure, cost of capital and value of the firm. The main contributors to the theories are Durand, Ezra, Solomon, Modigliani and Miller. The important theories are discussed below:

1. Net Income Approach

2. Net Operating Income Approach

3. The Traditional Approach

4. Modigliani and Miller Approach.

**1. Net Income Approach**:

According to this approach, a firm can minimise the weighted average cost of capital and increase the value of the firm as well as market price of equity shares by using debt financing to the maximum possible extent. The theory propounds that a company can increase its value and decrease the overall cost of capital by increasing the proportion of debt in its capital structure.

This approach is based upon the following assumptions

1. The cost of debt is less than the cost of equity
2. ii. There are no taxes.
3. iii. The risk perception of investors is not changed by the use of debt.

The total market value of a firm on the basis of Net Income Approach can be ascertained as below:

V = S+D

Where,

V = Total market value of a firm

S = Market value of equity shares = Equity Capitalisation Rate Earnings Available to Equity Shareholders (NI)

D = Market value of debt. and,

Overall Cost of Capital or Weighted Average Cost of Capital can be calculated as: Ko = V/ EBIT

**Problem 1:**

X Ltd. is expecting an annual EBIT of Rs. 1 lakh. The company has Rs. 4 lakhs in 10% debentures. The cost of equity capital or capitalisation rate is 12.5%. You are required to calculate the total value of the firm according to the Net Income Approach.

**Solution:**

Calculation of the Value of the Firm Rs. Net Income (EBIT) 1,00,000

Less: Interest on 10% Debentures of 4lakhs 40,000

Earnings available to equity shareholders 60,000

Market Capitalisation Rate 12.5%

Market Value of Equity (S) =60,000x 12.5 \*100= 4,80,000

Market Value of Debenture (D) 4,00,000

Value of the Firm (S+D) 8,80,000

**Net Operating Income Approach:**

According to this approach, change in the capital structure of a company does not affect the market value of the firm and the overall cost of capital remains constant irrespective of the method of financing. There is nothing as an optimal capital structure and every capital structure is the optimum capital structure. This theory presumes that:

1. the market capitalises the value of the firm as a whole;
2. ii. the business risk remains constant at every level of debt equity mix;
3. iii. there are no corporate taxes.

The value of a firm on the basis of Net Operating Income Approach can be determined as below:

V = K0/ EBIT

Where,

V = Value of a firm

EBIT = Net operating income or Earnings before interest and tax

K0 = Overall cost of capital

The market value of equity, according to this approach is the residual value which is determined by deducting the market value of debentures from the total market value of the firm.

S = V-D

Where,

S = Market value of equity shares

V = Total market value of firm

D = Market value of debt

The cost of equity or equity capitalisation rate can be calculated as below:

Cost of Equity or Equity Capitalisation Rate (Ke) = Market Valueof Firm- Market ValueDebt

EarningsAfter Interest and BeforeTax or = V/ EBIT

**Modigliani – Miller (MM) Hypothesis**

The Modigliani – Miller hypothesis is identical with the Net Operating Income approach. Modigliani and Miller argued that, in the absence of taxes the cost of capital and the value of the firm are not affected by the changes in capital structure. In other words, capital structure decisions are irrelevant and value of the firm is independent of debt – equity mix. Basic Propositions M - M Hypothesis can be explained in terms of two propositions of Modigliani and Miller. They are :

1. The overall cost of capital (KO) and the value of the firm are independent of the capital structure. The total market value of the firm is given by capitalising the expected net operating income by the rate appropriate for that risk class.
2. ii. The financial risk increases with more debt content in the capital structure. As a result cost of equity (Ke) increases in a manner to offset exactly the low – cost advantage of debt. Hence, overall cost of capital remains the same.

**Assumptions of the MM Approach**

1. There is a perfect capital market. Capital markets are perfect when

i) investors are free to buy and sell securities,

ii) they can borrow funds without restriction at the same terms as the firms do,

iii) they behave rationally,

iv) they are well informed, and

v) there are no transaction costs.

2. Firms can be classified into homogeneous risk classes. All the firms in the same risk class will have the same degree of financial risk.

3. All investors have the same expectation of a firm’s net operating income (EBIT).

4. The dividend payout ratio is 100%, which means there are no retained earnings.