

UNIT - 3.

CAPITAL STRUCTURE

Meaning: Capital structure refers to the mix of sources from where the long term funds required in a firm may be raised, which means the proportion of equity capital, preference capital, internal sources, debentures and other sources of funds in the ~~the~~ total amount of capital in a firm.

Definition:

"Capital structure refers to the combination of long term sources of funds such as debentures, long term debt, preference share capital and ordinary share capital including reserves and surpluses."

— I. M. Pandey.

Optimum Capital Structure:

The capital structure is said to be optimum capital structure when the firm has selected such a combination of equity and debt so that the wealth of the firm is maximum. In this capital structure the cost of capital is minimum and market price per share is maximum.

Factors determining Capital Structure:

1. Trading on equity: It is an arrangement under which the finance manager raises funds by issuing securities which carry fixed rate of interest or dividend which is less than the average earnings of the firm to increase the return on equity.
2. Stability on sales:
If sales are on high, interest payments, can be met and therefore, a firm is able to employ more debt in its capital structure.
3. Exercise control:
If the board of directors and shareholders of a firm wish to retain control over the firm in their hands, they should not allow further issue on equity shares to the public. In this case more funds can be raised by preference shares.
4. Cost of capital:
The cost of debt is a major factor to determine ~~the~~ capital structure. As the interest payable to debentures is lower and tax deductible. Therefore a firm may prefer as much as debt as it possibly can subject to its earnings.

5. Statutory requirements:

The structure of capital of a firm is ~~prohibited~~ influenced by statutory rules & regulations, like as the banking companies cannot issue equity shares as per the Bankings Regulations Act.

6. Capital Market conditions:

market conditions like depression and boom periods may influence the capital structure.

7) Corporate taxation,

8) Government policies

9) Flexibility

10) Timing

11) Size of the firm

12) Purpose of financing

13) Period of finance,

14) Floatation cost

15) Requirements of investors

16) Provision for future growth

EBIT- EPS Analysis

This analysis is applied to determine an appropriate capital structure of a firm. This technique involves the combination of alternative methods of financing under various assumptions of EBIT. To find the better choice of alternatives we should find out the Earnings Per Share for each alternatives, and choose the alternatives which is having higher EPS. for the given level of EBIT.

Example:

Dubin Ltd. has equity share capital of Rs. 12,00,000 divided into shares of Rs 100 each. It ~~is~~ wishes to raise further Rs. 600000 for expansion - expansion - modernization scheme. The company plans the following financing activities;

Plan A - By issuing equity shares only

Plan B - Rs 200000 by issuing equity shares and Rs 400000 through debentures @ 10% p.a

Plan C - Rs 200000 by issuing equity shares and Rs 400000 by issuing 9% preference shares

Plan D - By raising term loans at 10% p.a

You are required to suggest the best alternative and give your comment if the EBIT after expansion is Rs. 2,25,000 and corporate tax is 40%.

Answer:

	Plan A	Plan B	Plan C	Plan D
EBIT	225000	225000	225000	225000
less: Interest	—	40000	—	60000
EBT	225000	185000	225000	165000
less: Tax @ 40%	90000	74000	90000	66000
EAT	135000	1,11,000	1,35,000	99000
less: Pref. Dividend	—	—	36000	—
	1,35,000	1,11,000	99,000	99,000
Earnings per share				
$\frac{EAT}{\text{No. of Equity shares}}$	$\frac{1,35,000}{18,000} = 7.50$	$\frac{1,11,000}{14,000} = 7.93$	$\frac{99,000}{14,000} = 7.07$	$\frac{99,000}{12,000} = 8.25$
EPS				

∴ Plan D is having higher earnings per share among the four alternatives. Therefore plan 'D' is best alternative.

Theories of Capital Structure:

The capital structure decision should be examined from the point of view of its impact on the value of the firm. If the value of the firm can be affected by capital structure or financing decisions, a firm would like to have a capital structure which maximizes the market value of the firm.

There are four approaches regarding these concept, which are.

1. Net Income Approach (NI)

This theory has been suggested by Durand. According to this approach a firm can increase its value or lower the overall cost of capital by increasing the proportion of debt in its capital structure.

Assumptions:

1. There are no corporate taxes.
2. The cost of debt is less than the cost of equity.
3. The use of debt constant does not change the risk perception of the investors.

formula for calculating the value of the firm (V).

$$V = S + D.$$

V = value of the firm; S = Market value of equity shares.

D = market value of debentures.

$$\text{Market value of equity} = \frac{\text{Net income}}{\text{Equity capitalization rate.}}$$

$$= \frac{\text{Earnings available to equity shareholders}}{\text{Cost of equity.}}$$

$$\text{Overall cost of capital } (K_0) = \frac{\text{EBIT}}{\text{Value of firm } (V)}$$

2. Net operating Income Approach: (NOI)

It is also suggested by Durand. Here, the market value of the firm is not affected by the capital structure changes. The market value of the firm is ascertained by capitalizing the net operating income at the overall cost of capital which is constant.

$$V = \frac{\text{EBIT}}{K_0}$$

$$\text{Value of equity} = (S) = \text{Market value of firm} - \text{Market value of debt}$$

$$\text{Cost of equity} = \frac{EBT}{\text{Value of equity}}$$

Assumptions:

1. The overall cost of capital remains constant at all degree of debt equity mix.
2. The market capitalizes the value of firm as a whole.
3. The use of less costly debt funds increases the risk of share holders.
4. There is no corporate taxes.
5. The cost of debt is constant.

3. Traditional Approach:

This approach is also known as intermediate approach as it takes a midway between NI approach and NOI approach. According to this approach the use of debt upto a limit is advantageous to the firm. It can help to reduce the overall cost of capital, and increase the value of the firm.

Beyond the limit, the use of debt will adversely affect the value of the firm and the overall cost of the capital.

4. Modigliani and Miller Approach:

MM have explained the relationship between cost of capital, capital structure and total value of the firm under two conditions;

- (i) when there are no corporate tax,
- (ii) when there are corporate taxes.

Assumptions:

- i) The capital markets are perfect.
- ii) The firms can be classified into homogeneous ^{low} risk class.
- iii) All investors have the same expectations from a firm's net operating income (EBIT).
- iv) 100% payout-ratio, all earnings are distributed to shareholders as dividends.
- v) There are no corporate taxes.

$$\text{Value of unlevered firm } (V_u) = \frac{\text{EBIT} (1-T)}{k_e}$$

EBIT = Earnings before interest & tax.

k_e = Cost of equity

T = Tax rate.

$$\text{(or)} \quad \frac{\text{EAT}}{k_0} = \frac{\text{Earnings available to Shareholders}}{\text{Cost of equity}}$$

Value of levered firm = [Value of unlevered firm

$$\therefore V_L = V_u \times (T \times \text{Debt}) \quad \times (\text{Tax rate} \times \text{Debt})$$