

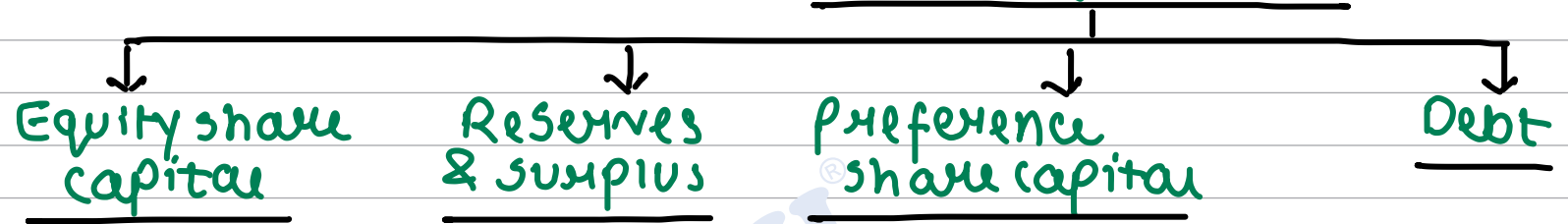
## CHAPTER NO. 6 : CAPITAL STRUCTURE

### Points to be discussed :

- Introduction
- capital structure v/s Financial structure
- concept of optimum capital structure
- Types of capital structures
- concept of indifference point
- concept of Financial Break even point
- Capital structure Theories
  - Net Income Approach
  - Net operating income Approach
  - Traditional Approach
  - Modigliani Miller Approach

→ Introduction

- Combination of capitals from various sources of finance



→ Capital structure v/s Financial structure

Capital structure



Long term sources of finance EXCLUDING current liabilities

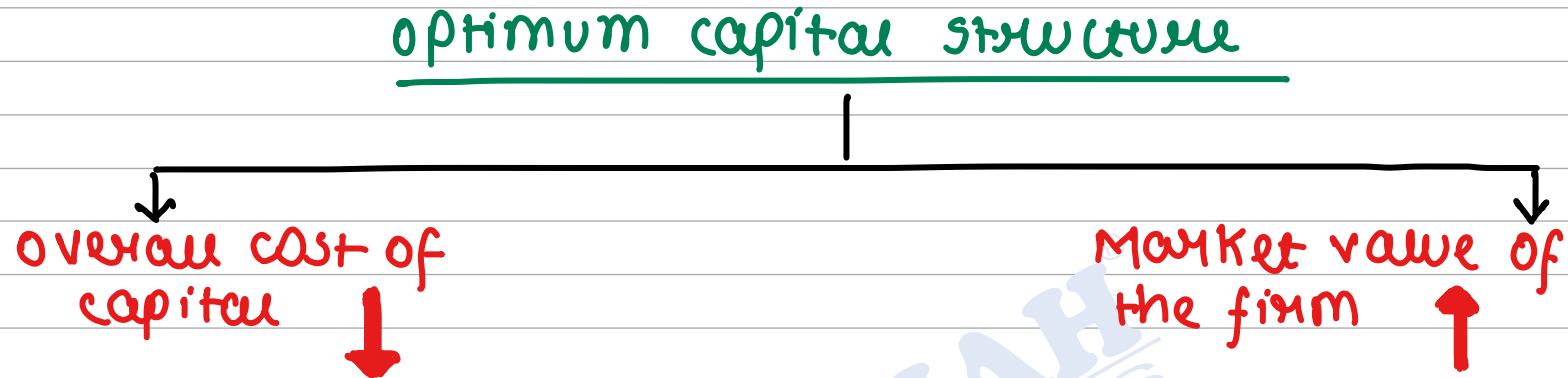
Financial structure



Long term sources of finance AND current liabilities

Capital structure forms a part of financial structure.

→ concept of optimum capital structure



→ Types of capital structures

Types of capital structures	Equity	Reserves	Debt
1. Horizontal capital structure	↑	↑	X
2. Vertical capital structure	↓	↓	↑
3. Pyramid shaped capital structure	↑	↑	↓
4. Inverted pyramid shaped capital structure	↓	↔	↑

→ concept of Indifference point

- A point at which **EPS** under two Financial plans is the **SAME**.
- It is that level of EBIT at which a firm is indifferent in selecting the two financial plans, since the EPS is same.



- Formula to calculate indifference point:

$$\frac{(\text{EBIT} - \text{Interest})(1 - \text{tax}) - \text{P.D.}}{\text{No. of Equity shares (Plan 1)}} = \frac{(\text{EBIT} - \text{Interest})(1 - \text{tax}) - \text{P.D.}}{\text{No. of Equity shares (Plan 2)}}$$

→ Concept of Financial Break even point

- That level of EBIT at which the EPS of the firm is zero.
- Point at which the company recovers its fixed financial cost.
- Formula

$$\text{F-BEP} = \text{Interest} + \frac{\text{Preference Dividend}}{(1 - \text{tax})}$$

→ Capital Structure Theories

Show relationship between capital structure & overall cost of capital of the firm. Capital structure theories

Relevance Theories

Capital structure is RELEVANT in determining overall COC.

Net Income Approach

Traditional Approach.

Irrelevance Theories

Capital structure is IRRELEVANT in determining overall COC.

Net operating income Approach

Modigliani Miller Approach.

General Assumptions

- only 2 sources of finance — Debt and Equity
- 100% payout Ratio i.e. No Retained earnings
- Total capital remains the same

- cost of Debt < cost of Equity
- There are no Taxes

### Calculations under capital structure theories

#### 1. Income statement

EBIT	xxx	←	Firm's income
- Interest	- xx	←	Debt's income
Dividends	xxx	←	Equity shareholder's income

$$2. MV_E = \frac{\text{Dividends}}{K_e}$$

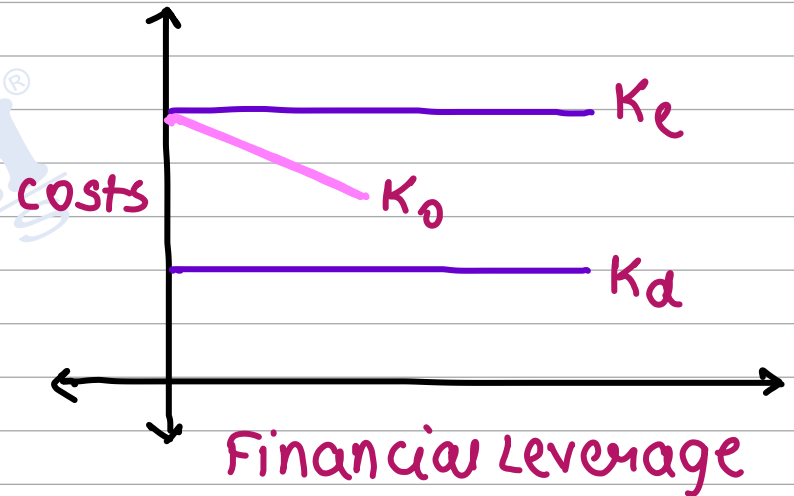
$$3. MV_D = \frac{\text{Interest}}{K_d}$$

$$4. MV_F = \frac{EBIT}{K_0}$$

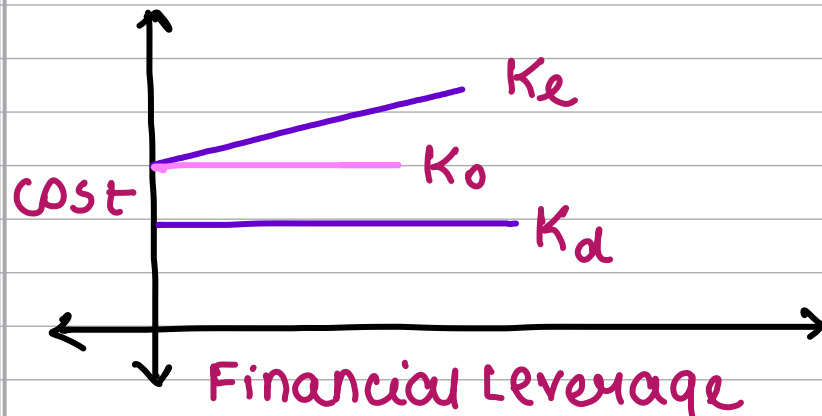
$$\text{OR } MV_F = MV_E + MV_D.$$

### A. Net Income Approach

As and when more debt is employed in the capital structure, the overall cost of capital of the firm decreases.



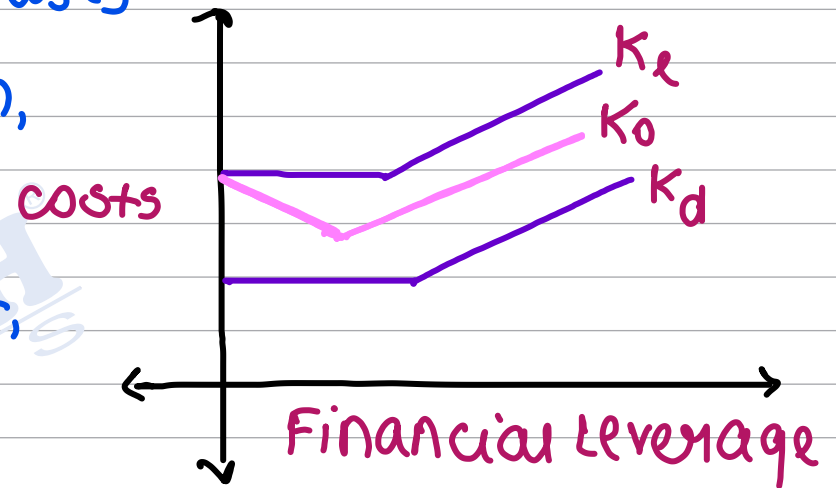
### B. Net operating Income Approach



As and when more debt is employed in the capital structure, overall cost remains the same because  $K_e$  goes on increasing proportionately.

### C. Traditional Approach

As and when Debt proportion increases in the capital structure, in short run, overall cost of capital decreases. If more debt is employed beyond a point, cost of equity and cost of debt start increasing and hence, overall WACC also starts increasing



### D. Modigliani Miller Approach

There are two types of firms, one having debt in their capital structure and the others not having any debt in their capital structure.

Debt ✓ : Levered Firms

Debt ✗ : Unlevered Firms

As per M-M, the  $MV_L = MV_{UL}$  firms through the process of Arbitrage

The shareholders perform Arbitrage process and eventually values of both the firms become equal signifying capital structure is irrelevant in determining the market value of firm.

