

CHAPTER No. 7 : COST OF CAPITAL

Points to be discussed :

- Introduction
- Calculation of specific cost of capital
 - Cost of Debt
 - Cost of Preference Capital
 - Cost of Equity Capital
 - Cost of Retained Earnings
- Calculation of overall cost of capital
- Book value weights v/s Market value weights
- Marginal cost of capital

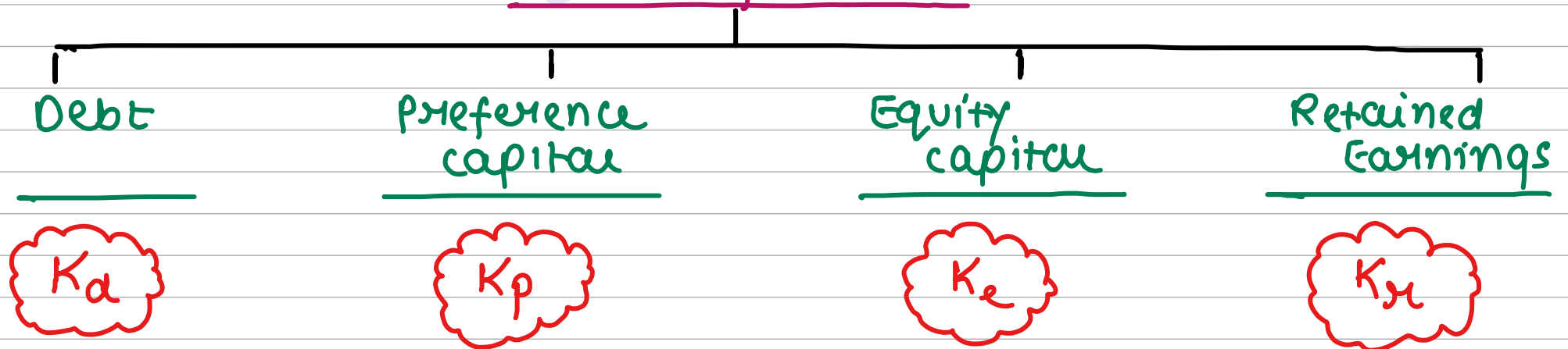
→ Introduction

Cost of capital is the minimum required rate of return.

It is also called as —

- Hurdle rate
- Capitalisation rate
- Overall cost of capital
- Weighted average cost of capital.

Sources of Finance



→ calculation of specific cost of capital

Cost of Debt

Irredeemable Debt

$$K_d = \frac{\text{Interest}(1 - \text{tax})}{\text{Price}} \times 100$$

Redeemable Debt

$$K_d = \frac{\text{INT} \cdot (1 - \text{tax}) + \frac{\text{RV} - \text{Price}}{n}}{\frac{\text{RV} + \text{Price}}{2}} \times 100$$

where, RV = Redeemable Value
n = Life of Debentures



* Net proceeds = Issue price - Floatation costs

↳ If not specified then IP = MPS

If no information is given w.r.t MPS or Net proceeds, then price = Face value

cost of preference capital

Irredeemable P. cap.

$$K_p = \frac{PD(1 + DDT)}{\text{price}} \times 100$$

Redeemable P. cap

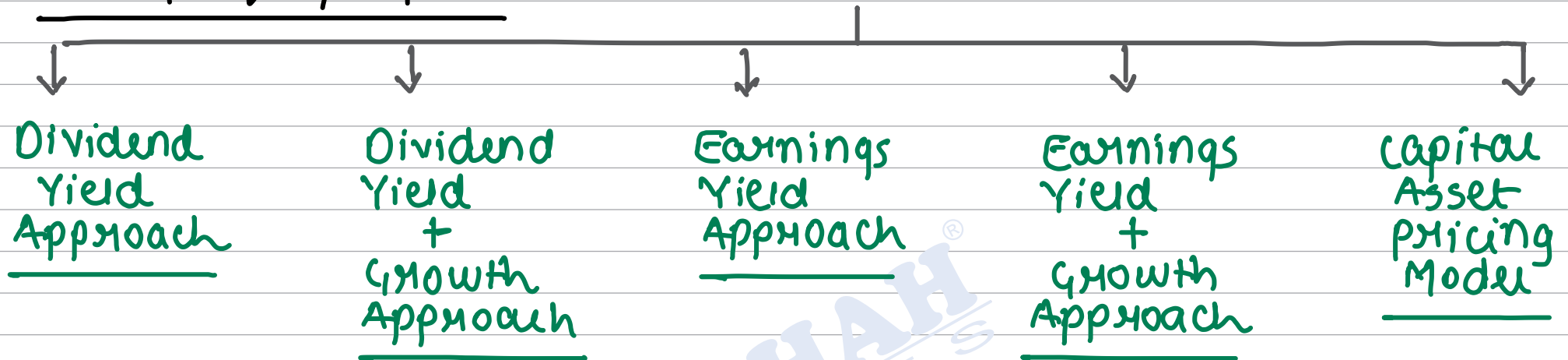
$$K_p = \frac{P.D(1 + DDT) + \frac{RV - \text{price}}{n}}{\frac{RV + \text{price}}{2}} \times 100$$

where,

DDT = Dividend Distribution Tax.

where PD = Preference Dividend
RV = Redeemable value
n = Life of preference shares

Cost of Equity Capital



1. Dividend Yield Approach

$$K_e = \frac{\text{DPS}}{\text{Price}} \times 100$$

2. Dividend Yield + Growth Approach

$$K_e = \left[\frac{\text{DPS}}{\text{Price}} \times 100 \right] + g$$

Also called as —
Dividend Growth Model
Gordon's formula

3. Earnings Yield Approach

$$K_e = \frac{\text{EPS}}{\text{Price}} \times 100$$

4. Earnings yield + Growth Approach

$$K_e = \left[\frac{\text{EPS}}{\text{Price}} \times 100 \right] + g$$

5. Capital Asset Pricing Model

$$K_e = R_f + (R_m - R_f) \beta \quad \text{where -}$$

R_f = Risk free Rate

R_m = Market Rate of Return

β = Measure of systematic Risk

$R_m - R_f$ = Market Risk premium

Cost of Retained Earnings

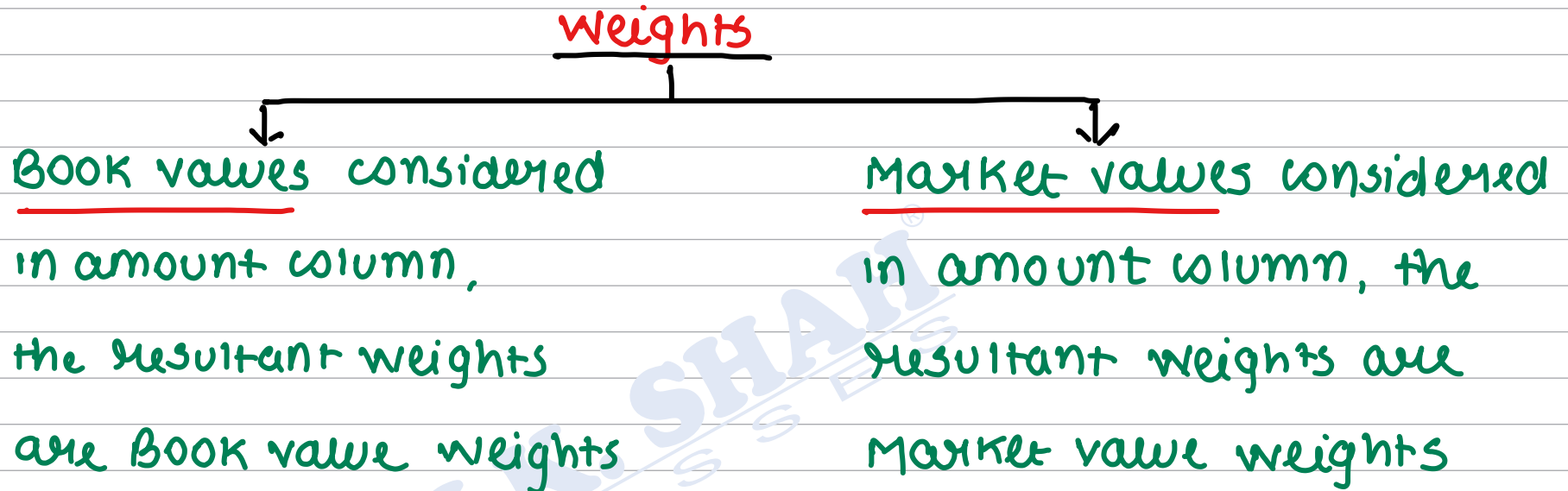
$$K_e = K_{re}$$

Exception: If K_e is calculated using floatation cost, then $K_{re} \neq K_e$
i.e. it will be calculated without floatation costs

→ calculation of overall cost of capital

Sources	Amounts	Weights	Cost	W. Cost
Equity capital	xxx	xx	K_e	xxx
Reserves	xxx	xx	K_{re}	xxx
Preference capital	xxx	xx	K_p	xxx
Debt	xxx	xx	K_d	xxx
		<u>1.00</u>	WACC →	<u>xxx</u>

→ BOOK value weights v/s Market value weights



Note: MV of Retained

Earnings is NIL

→ Marginal cost of capital

weighted average cost of ONLY ADDITIONAL capital.

