

## Chapter: Cost of Capital

1. Calculate the weighted average cost of capital from the following data.

Particular	Rs
7 % Debentures	1,30,000
8% Preference Shares	70,000
Equity Shares (of Rs. 100 Face Value)	6,00,000
	8,00,000

(There are no retained profits or securities premium)

A Dividend of 10% a year has been paid on the equity shares in recent years. All of the company's securities are quoted on the local stock exchange. Assume corporate tax @40%, The Prices of these securities have recently been at par (i.e. market and issue price same).

2. The Arc Company has the following capital structure:

Particulars	Rs
Common Shares (4,00,000 shares)	80,00,000
6% Preference Shares	20,00,000
8% Debentures	60,00,000
	1,60,00,000

The share of the company sells for Rs. 20. It is expected that company will pay next year a dividend of Rs. 2 per share which will grow at 7 % for ever. Assume a 35 per cent tax rate.

- (a) Compute a weighted average cost of capital based on existing capital structure.
- (b) Compute the new weighted average cost of capital if the company raises an additional Rs. 40,00,000 debt by issuing 10 per cent debentures. This would result in increasing the expected dividend to Rs. 3 and leave

growth rate unchanged, but the price of share will fall to Rs. 15 per share.

(c) Compute the cost of capital if in (b) above growth rate increases to 12 per cent.

3. EKKA Ltd. Has total capital employed of Rs. 75,00,000. The break-up is as under:

15% Debt – 30%

12% Preference capital – 10%

Equity capital and retained earnings are in proportion of 3:1

All shares and debt are in units of Rs. 100 each. The tax rate applicable is 40%.

Equity Shareholders expect dividend @15%. Cost of retained earnings is to be considered @10% You are required to ascertain:

(a) Composite cost of capital

(b) If Earnings before interest and tax is Rs. 15,00,000. Calculate:

- i. EPS
- ii. Market price of equity shares.

4. P.G. Ltd. Has the following capital structure as on 31<sup>st</sup> March 2002.

Particulars	Rs.
Ordinary Shares (4,00,000 shares)	80,00,000
10% Preference Shares	20,00,000
14% Debentures	60,00,000

The shares of the company are presently selling at Rs. 20 per share. It is expected that the company will pay next year dividend of Rs. 2 per share which will grow @ 7% forever. Assume tax rate of 40%. You are required to

- i. Compute the weighted average cost of capital based on existing capital structure.
- ii. If the company raises an additional Rs. 40 lakhs debt by issuing 15% debentures, the expected dividend at year end will be Rs. 3, the market

price per share will fall to Rs. 15 per share, the growth ate remaining unchanged. Calculate the new weighted average cost of capital.

5. AXE Ltd. Has the following capital structure as an 31<sup>st</sup> March, 2000:

Particulars	Rs.
10% Debentures	3,00,000
9% Preference Shares	2,00,000
Equity Shares of Rs. 100 each	5,00,000
Total	10,00,000

The equity shares of the company the quoted at Rs. 102 and the company is expected to declare a dividend of Rs. 9 per share for the year.

**Required:**

- Assuring the tax rate applicable to the company to be 50%, calculate the cost of capital State clearly the assumptions you make.
- Assuming that the company can raise additional term loan at 12% for Rs. 5,00,000 to finance an expansion, calculate the revised weighted cost of capital. The company's assessment is that it will be in a position to increase the dividend from Rs. 9 per share to Rs. 10 per share, but the business risk associated with new financing may bring down the market price Rs. 102 to Rs. 96 per share.

6. From the following Capital Structure of Perfect Ltd. Calculate overall cost of capital, using (a) book value weights and (b) market value weights.

Source	Book Value	Market Value
Equity shares of Rs. 10 each	4,50,000	9,00,000
Retained Earnings	1,50,000	----
Preference Share Capital	1,00,000	1,00,000
Debentures	3,00,000	3,00,000

The after-tax cost of different sources of finance are Equity share Capital 14%, Retained Earnings 13%, Preference Shares 10% and debentures 5%.

7. Following are the details regarding the capital structure of a company:

Types of Capital	Book value	Market Value	Specific Cost
Debentures	40,000	38,000	5%
Preference Capital	10,000	11,000	8%
Equity Capital	60,000	1,20,000	13%
Retained Earnings	20,000	--	9%
	1,30,000	1,69,000	

You are requested to determine the weighted average cost of capital, using:

- i. Book Value as weights.
- ii. Market value as weights.