Semester Name: M.Com. PG-III
Name of the Sub: Strategic Financial Management and Business Valuation (Module-I)
Subject Code: CC-301
Name of the teacher: SKG ; Lecture NO: 03
Chapter: Cost of Capital and Dividend Decisions (Unit:3)

Prob: 02.

A Company wants to expand it's total assets by 75% by the end of the current year. Given below are the Company's capital structure which it considers to be optimal:

Sources	Book Value (Rs)
Equity Shares	1000,000
10% Pref. Shares	200,000
9% Debentures	800,000
	2000,000

Additional information:

(i) Equity Shares currently selling at Rs. 100 per share in the market can be sold to net the Company Rs. 95. The Shareholders' required rate of return is to be 15% consisting of a dividend yield of 10% and an expected growth rate of 5%. Retained earnings for the year are expected to be Rs. 100,000 (ignore depreciation).

(ii) Preference Shares will have 13% rate of dividend and will be sold at par.

(iii) New debentures would be sold at 12% rate of interest and would be issued at par. The Corporate tax rate is 30%.

You are required to Calculate the following values:

(a) Assuming all asset expansion (gross expenditure for fixed assets plus related working capital) is included in the capital budget, what is the required amount of Capital budget?

(b) How much of capital budget must be financed by external equity (ie; issue of new equity shares) to maintain the optimal Capital Structure?

(c) Calculate the cost of new equity and preference shares, debentures and retained earnings.

(d) Calculate the weighted average Cost of Capital using marginal weights.

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Solution:

We know; WACC (K_0) = $K_e w_1 + K_r w_2 + K_p w_3 + K_d w_4$.

(a) Required amount of Capital budget:

(20 lacs + 75%) − 20 lacs; or, 35 lacs − 20 lacs; or, Rs. 15 lacs.

(b) The optimal Capital Structure of the company requires financing of capital budget in the following proportions:

Equity Fund − 50%, Preference Fund − 10% and Debt Fund − 40%.

In order to maintain the proportion of equity fund at the level of 75%, Rs. 7.5 lacs (50% of additional capital budget) should be financed by equity fund. Internal equity fund (retained earnings) of the Company is estimated at Rs. 100000. Therefore, Rs. 6.5 lacs is required to be financed through external equity by issuing new shares.

(c) We know, $K_e = \frac{D_1}{P_0} + g$; So, $K_e = \frac{10}{95} + 0.05 = 0.1052 + 0.05 = 0.1552$ or, 15.52%

We know, K_r = K_e (excluding flotation Cost);

So, $K_r = \frac{10}{100} + 0.05 = 0.10 + 0.05 = 0.15$ or, 15%.

We know, $K_p = \frac{D}{P}$, $K_p = \frac{13}{100} = 0.13$ or, 13%

We know, $K_d = \frac{I}{SV}(1-t)$ or, $\frac{12}{100}(1-0.3)$ or, $0.12 \times 0.7 = 0.084$ or, 8.4%

(d) Statement showing WACC using marginal weights

Sources	Marginal Value (Rs)	weight	Specific Cost (%)	Total Cost (%)
Equity Shares	6,50,000	0.43	15.52	6.67
Retained Earnings	1,00,000	0.07	15	1.05
13% Pref. Shares	1,50,000	0.10	13	1.30
12% Debentures	6,00,000	0.40	8.4	3.36
	15,00,000	1.00		12.38

WACC = 12.38%

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