COST OF CAPITAL

It is the minimum rate of return which must be earned by a firm in order to fulfil the expectation of the investors.

Formulas for computing the cost of Preference share capital

Types of Preference Share Capital

1. Irredeemable Preference Share Capital

- When dividend tax is not considered

$$K_P = D/P$$

- When dividend tax is considered

$$K_P = D/P\ (1+D_t)$$

2. Redeemable Preference Share Capital

- When dividend tax is not considered

$$K_P = \left[\frac{D + \frac{(R-P)}{n}}{\frac{(R+P)}{2}} \right]$$

- When dividend tax is considered

$$K_P = \left[\frac{D\ (1+D_t) + \frac{(R-P)}{n}}{\frac{(R+P)}{2}} \right]$$

Where,

K_P= Cost of Preference Share Capital

D= Annual Dividend

P= Net Selling Price of Share

Face Value + premium / (-discount) – flotation cost / underwriting commission / brokerage

R = Redeemable price

n = Redeemable period in terms of year

D_t = Dividend Tax

Tax on Dividend + surcharge + edu. Cess + SHEC

SUM 1:

A Ltd co. issues 20000 12% Preference Shares of Rs. 100 each at a premium of 10% but redeemable at a premium of 20% after 5 years. The company pays underwriting commission @ 5%. If tax on dividend is 12.5%, surcharge is 2.5% and education cess is 3%, calculate the cost of Preference Share Capital .

SOLUTION:

$$K_P = \left[\frac{D\ (1+D_t) + \frac{(R-P)}{n}}{\frac{(R+P)}{2}} \right]$$

Where,

K_P= Cost of Preference Share Capital

D= Annual Dividend = Rs. 12 (100*12%)

P= Net Selling Price of Share

Face Value + premium / (-discount) – flotation cost / underwriting commission / brokerage

Rs (100 + 10 -5.50) = Rs. 104.5

R = Redeemable price = Rs. 120

n = Redeemable period in terms of year = 5 yrs

D_t = Dividend Tax

Tax on Dividend + surcharge + edu. Cess + SHEC

12.5 +0.3125 (2.5%*12.50) +0.3844 (3%*12.815) = 13.1969

By, putting the values in the above formula the value of K_P is 14.86%

SUM2:

S Ltd issued 20000 12% preference shares of Rs. 100 each at a premium of 10%. The flotation cost was Rs. 5% on issue price. The preference share will be redeemed at a

premium of 20% after 5 years. The tax rate applicable to the co. is 30%. The corporate dividend tax is 10%

Answer = 14.52%

In case of any query mail to sabame18@gmail.com

Formulas for computing the cost of Debt capital

Types of Debt Capital

1. Irredeemable Debt Capital

- Before tax cost

$$K_i = I/P$$

- After tax cost

$$K_d = I/P\ (1-t)$$

2. Redeemable Debt Capital

- Before tax cost

$$K_i = \left[\frac{I + \frac{(R-P)}{n}}{\frac{(R+P)}{2}} \right]$$

- After tax cost

$$K_d = \left[\frac{I + \frac{(R-P)}{n}}{\frac{(R+P)}{2}} \right] (1-t)$$

Where,

I = Amount of Annual Interest

P= Net amount realised from debt

R = Redeemable price

n = Time period of redemption of debt

t = Rate of Tax

SUM 1:

A Ltd co. issued 20000 12% Debentures of Rs. 100 each for Rs. 10 lakh. The debenture is expected to be sold at 5% discount. It will also involve flotation costs of Rs. 5 per debenture. The debentures are redeemable at a premium of 5% after 10 years. Calculate the cost Of debenture if tax rate is 50% .

SOLUTION

- Before tax cost

$$K_i = \left[\frac{I + \frac{(R-P)}{n}}{\frac{(R+P)}{2}} \right]$$

- After tax cost

$$K_d = \left[\frac{I + \frac{(R-P)}{n}}{\frac{(R+P)}{2}} \right] (1-t)$$

Where,

Where,

K_i= Cost of Debentures

I= Annual Interest = Rs. 12 (100*12%)

P= Net Selling Price of Share

Face Value – discount – flotation cost

Rs (100 - 5 -5) = Rs. 90

R = Redeemable price = Rs. 105

n = Time period of redemption of debt = 10 yrs

Tax rate (t) = 50%

By, putting the values in the above formula the value of K_i is 13.85% (before tax) and

By, putting the values in the above formula the value of K_d is 6.92%(after tax)

SUM2:

ABC ltd. issues 12% debentures of face value of Rs. 100 each at a discount of 3% and the floatation cost is estimated to be 2%. The debentures are redeemable after 10 years at a premium of 10%. Corporate tax rate is 40%. Calculate the cost Of debt.

Answer is 7.90%