COST OF CAPITAL – CONTINUED

A. Cost of Irredeemable Preference Share Capital : Irredeemable preference shares are those preference shares which are not redeemed before the winding up of the company. This type of preference share is also known as perpetual preference share. If K_p be the cost of such type of share capital, then—

$$K_p = \frac{D}{P} \text{ [when dividend tax is not considered]}$$

or, $$K_p = \frac{D}{P}(1 + D_t) \text{ [when dividend tax is considered]}$$

where, —

K_p = *Cost of Preference Share Capital ;*
D = *Annual Dividend ;*
P = *Net Sale Proceeds of the Shares ; and*
D_t = *Dividend tax.*

The dividend tax is determined in the following way :

	Tax on Dividend	...
Add :	Surcharge (*to be calculated on the Tax on Dividend*)	...
		...
Add :	Education cess (*to be calculated on the sum total of tax on Dividend and Surcharge*)	...
Add :	Secundary and Higher Education cess (*to be calculated on the sum total of tax on Dividend and Surcharge*)	...
	Dividend tax (D_t)	...

❑ **Example 1 :** (a) A Ltd. issues 12% Irredeemable Preference Shares of ₹ 4,00,000 at a Discount @ 10%. The company pays Underwriting Commission @ 5%. Calculate cost of Preference Share Capital. Ignore Dividend tax.

(b) B Ltd. issues 10 per cent Perpetual Preference Shares of ₹ 100 each at a premium @ 20%. The company incurs brokerage cost @ 4%. If tax on Dividend is 15%, Surcharge is 10%, Education cess is 2% and Secondary and Higher Education cess is 1%. Calculate the cost of Preference Share Capital.

• **Solution ⇒** **(a)** ***Computation of Net Proceeds of the Shares***

Face value of the shares	= ₹ 4,00,000
Less : Discount on issue of shares $\left[4,00,000 \times \frac{10}{100}\right]$	= ₹ 40,000
Issue Price	= ₹ 3,60,000
Less : Underwriting Commission $\left[3,60,000 \times \frac{5}{100}\right]$	= ₹ 18,000
Net Proceeds (P)	= ₹ 3,42,000

Annual Dividend (D) = ₹ 4,00,000 × $\frac{12}{100}$ = ₹ 48,000.

Now, we know that, if K_p be the Cost of Preference Share Capital, then—

$$K_p = \frac{D}{P}$$

By putting P = 3,42,000 and D = 48,000, we get—

$$K_p = \frac{48,000}{3,42,000} = 0.14035 \text{ or, } 14.03\%.$$

Hence, the required cost of Preference Share Capital is 14.03%.

(b) *Computation of Net Sale Proceeds of each share*

	Face value of each share	= ₹ 100.00
Add :	Premium on issue of share [Rs. 100 × 20/100]	= ₹ 20.00
	Issue Price	= ₹ 120.00
Less :	Brokerage [Rs. 120 × 4/100]	= ₹ 4.80
	Net Sale Proceeds of each share (P)	= ₹ 115.20

Computation of Effective Rate of Dividend Tax

		(%)
	Tax on Dividend	15.000
Add :	Surcharge @ 10% of 15	1.500
		16.500
Add :	Education cess @ 2% of 16.5	0.330
Add :	Secondary and Higher Education cess @ 1% of 16.5	0.165
	Effective rate of Dividend tax (D_t)	16.995

Annual Dividend per share (D) = ₹ 100 × 10/100 = ₹ 10.

Now, we know that, if K_p be the Cost of Preference Share Capital, then—

$$K_p = \frac{D}{P}(1 + D_t)$$

By putting the value of D, P and D_t, we get—

$$K_p = \frac{10}{115.20} \times \left(1 + \frac{16.995}{100}\right)$$

$$= \frac{10}{115.20} \times (1 + 0.16995)$$

$$= \frac{10}{115.20} \times (1.16995)$$

$$= \frac{11.6995}{115.20} = 0.1016 \text{ or, } 10.16\%.$$

Hence, required Cost of Preference Share Capital is 10.16%.

Note : According to section 76 of the Companies Act, underwriting Commission is to be paid on issue price of the shares and debentures. So, in this case, the Underwriting Commission is calculated on the issue price.

COST OF REDEEMABKE PREFERENCE SHARES

Concept is same as that of redeemable debentures. Understand the logic.

The numerator in the formula =income for the year (income to the investor, cost to the company)

So annual income to the investor in case of redeemable pref shares is equal to the annual dividend plus the extra amount approximately receivable due to a higher redemption value.

For example if redemption value(R) is rs. 15000 and principal value (P) is Rs 10000 and the redemption period is 5 years, that means

In 5 years extra money that the investor will get is Rs 15000- 10000 or R-P that is rs 5000

So, in 1 year , extra money that the investor will get is rs 5000/5 i.e. R-P/n

So we add R-P/n along with the annual dividend D in the numerator

The **denominator** in the formula is the value of the preference share. But in case of redeemable shares, there are two value, one is the principal or beginning value P, other is the redemption or the end value i.e R. so instead of taking either of the two value , we take a simple average of the two values i.e R+P/2

B. Cost of Redeemable Preference Share Capital : The preference shares which are redeemed after the expiry of a certain date in accordance with the terms of issue, are known as **Redeemable Preference shares**. If K_p be the cost of this type of share capital, then —

$$K_p = \frac{D + \frac{(R - P)}{n}}{\frac{(R + P)}{2}} \quad [\textit{where dividend tax is not considered}] \text{ ; and}$$

$$K_p = \frac{D(1 + D_t) + \frac{(R - P)}{n}}{\frac{(R + P)}{2}} \quad [\textit{when dividend tax is considered}] \text{ ;}$$

where, —

K_p = *Cost of Preference Share Capital ;*
D = *Annual Dividend ;*
P = *Net Sale Proceeds of the Share ;*
R = *Redeemable Price ;*
D_t = *Dividend tax ; and*
n = *Time period of redemption of shares.*

❑ **Example 2 :** X. Co. Ltd. issues 6,000 12% Preference Shares of ₹ 100 each at a premium @ 10% but redeemable at a premium @ 20% after 8 years. The cost of issue is ₹ 5 per share. You are required to determine the cost of Preference Share Capital if (i) Dividend tax is ignored and (ii) Dividend tax is considered.

• **Solution ⇒** ***Computation of Net Sale Proceeds of the Shares***

	₹
Face value of the shares [₹ 100 × 6,000]	6,00,000
Add : Premium of issue of shares $\left[\text{Rs. } 6,00,000 \times \frac{10}{100}\right]$	60,000
Issue Price	6,60,000
Less : Cost of issue [₹ 5 × 6,000]	30,000
Net sale proceeds of the shares (P)	6,30,000

Computation of Effective Rate of Dividend Tax [Note—1]

	(%)
Tax on Dividend [u/s 115–O]	15.000
Add : Surcharge @ 10% of 15 [u/s 115–O]	1.500
	16.500
Add : Education cess @ 2% of 16.51250 [u/s 115–O]	0.330
Add : Secondary and Higher Education cess @ 1% of 16.500	0.165
Effective Rate of Dividend Tax (D_t)	16.995

Annual Dividend (D) = ₹ 6,00,000 (face value) × $\frac{12}{100}$
= ₹ 72,000.

Redeemable Price (R) = ₹ 6,00,000 (face value) + ₹ 6,00,000 × $\frac{20}{100}$ (Premium on redemption)

= ₹ 6,00,000 + 1,20,000
= ₹ 7,20,000.

Time period of redemption of shares (*in terms of year*) (n) = 8 years.

(i) If K_p be the cost of Preference Share Capital, then—

$$K_p = \frac{D + \frac{(R - P)}{n}}{\frac{(R + P)}{2}}$$

$$= \frac{72,000 + \frac{(7,20,000 - 6,30,000)}{8}}{\frac{(7,20,000 + 6,30,000)}{2}}$$

$$= \frac{72,000 + \frac{90,000}{8}}{6,75,000}$$

$$= \frac{72,000 + 11,250}{6,75,000}$$

$$= \frac{83,250}{6,75,000} = 0.1233 \text{ or, } 12.33\%.$$

(ii) If K_p be the Cost of Preference Share Capital, then—

$$K_p = \frac{D(1 + D_t) + \frac{(R - P)}{n}}{\frac{(R + P)}{2}}$$

$$= \frac{72,000\left(1 + \frac{16.995}{100}\right) + \frac{(7,20,000 - 6,30,000)}{8}}{\frac{(7,20,000 + 6,30,000)}{2}}$$

$$= \frac{(72,000 \times 1.16995) + \frac{90,000}{8}}{6,75,000}$$

$$= \frac{84236.4 + 11250}{6,75,000}$$

$$= \frac{95486.4}{6,75,000}$$

= 0.1415 or, 14.15%.

Note : The rate of dividend tax is not given in this problem. So, the current year's tax rate is taken according to section 115-O. The rate of Dividend tax u/s 115-O : tax on Dividend = 15%, Surcharge = 10%, Education cess = 2% and Secondary and Higher Education cess = 1%.
Surcharge will be added if total income of the company exceeds ₹ 1 crore.