

COST OF EQUITY SHARE CAPITAL

Since equity share holders are the owners of the company, commitment towards them is not pre specified. They get part of profits if there are sufficient profits and even may not get any dividend in case there isn't any profit. There are several methods to estimate the probable cost of capital for equity shares and the method followed is as per the choice, decision and understanding of the top management. The various methods are mentioned below.

1. DIVIDEND CAPITALISATION METHOD
 - a. When expectation is that uniform rate of dividend will be received every year
 - b. When it is expected that dividend will grow but at a fixed rate every year
 - c. When it is expected that dividend will not increase at uniform rate every year
2. EARNINGS PRICE RATIO METHOD
 - a. when it is expected that earnings per share (EPS) will remain constant every year
 - b. when it is expected that earnings per share (EPS) will rise in future
3. EARNINGS PRICE RATIO AND DIVIDEND GROWTH MODEL
4. CAPITAL ASSET PRICING MODEL

G Cost of Equity Share Capital

Equity shares are those shares which are not preference shares. The capital which is procured by issuing such type of shares is called **Equity Share Capital**. As the rate of interest on debentures and the rate of dividend on preference share capital remain fixed, the cost of debentures and preference share capital can easily be determined. But the rate of dividend on equity shares is not fixed. So, it is quite complex to determine the cost of equity share capital. The rate of dividend on equity shares depends on the amount of profit earned by the company. As for instance, if there is no profit in any year, the equity shareholders get no dividend. So, apparently it seems that the equity share capital has no cost. But this assumption is not correct, because every shareholder expects a minimum rate of return on his/her investment. The market price of the shares depends on the expected rate of dividend as well as the actual rate of dividend. Thus, if the actual rate of dividend is more than the expected rate, then the market price of the shares will rise. On the other hand, if the actual rate of dividend is less than the expected rate, then the market price of the shares will fall. So, every company should pay dividend on its equity share capital at a minimum rate which is expected by the shareholders in order to keep the market price of the shares unchanged. Such minimum rate is known as the cost of equity share capital. Such minimum rate of dividend or the cost of equity share capital can be determined in different ways. The techniques of determining the cost of equity share capital are discussed below :

1. Dividend Capitalisation Method : According to this method, the cost of equity share capital is the discount rate which equates the present value of expected future earning per share with the present market price of each share. Now, we can make three assumptions regarding the future dividend per share. As for instance, **firstly**, it can be assumed that a uniform rate of dividend is to be obtained in future ; **secondly**, the rate of dividend will increase in future at a fixed rate ; and **thirdly**, the dividend will not grow at same rate in future. How the cost of equity share capital can be determined on the basis of such three assumptions are discussed below :

A. When it is expected that dividend is to be received every year at a uniform rate : Suppose 'D' be the expected dividend in each year and 'P' be the Net Present Value of the share. Now, according to the dividend capitalisation method, the cost of equity capital will be that value of K which will satisfy the following equation —

$$P = \frac{D}{(1 + K_e)^1} + \frac{D}{(1 + K_e)^2} + \frac{D}{(1 + K_e)^3} + \dots$$

$$\text{or, } P = \frac{D}{(1 + K_e)} \left[1 + \frac{1}{(1 + K_e)} + \frac{1}{(1 + K_e)^2} + \dots \right]$$

Students are advised to note that $\left[1 + \frac{1}{(1 + K_e)} + \frac{1}{(1 + K_e)^2} + \dots \right]$ is a sumtotal of an infinite G.P series ; where 1 is the first term and $\frac{1}{(1 + K_e)}$ is the common ratio.

The sumtotal of an infinite G.P series is $= \frac{\text{1st term}}{1 - \text{Common ratio}}$.

$$\text{Thus, } \left[1 + \frac{1}{(1 + K_e)} + \frac{1}{(1 + K_e)^2} + \dots \right] = \frac{1}{1 - \frac{1}{(1 + K_e)}}$$

$$\therefore P = \frac{D}{(1 + K_e)} \cdot \frac{1}{1 - \frac{1}{1 + K_e}}$$

$$\text{or, } P = \frac{D}{(1 + K_e)} \cdot \frac{1}{\frac{1 + K_e - 1}{1 + K_e}}$$

$$\text{or, } P = \frac{D}{(1 + K_e)} \cdot \frac{1}{\frac{K_e}{1 + K_e}}$$

$$\text{or, } P = \frac{D}{(1 + K_e)} \cdot \frac{(1 + K_e)}{K_e}$$

$$\text{or, } P = \frac{D}{K_e}$$

$$\text{or, } K_e = \frac{D}{P}$$

Thus, the cost of equity shares capital (K_e) = $\frac{D}{P}$ (1)

where, —

D = Annual Expected Dividend, and

P = Net Selling Price of the share. If the shares were issued previously, then

P = Current Market Price of the share.

□ **Example 1 :** (a) A Ltd. offers for Public Subscription Equity Shares of ₹ 50 each at a premium @ 20%. The company pays 5% as Underwriting Commission. The rate of dividend expected by the equity shareholders is 15%. You are required to determine the cost of Equity Capital.

• **Solution** ⇒

(a) Let ' K_e ' be the cost of Equity Capital.

$$\therefore K_e = \frac{D}{P} \text{ (i)}$$

where,—

D = Annual expected Dividend,

and P = Net Selling Price of each share.

$$\therefore D = ₹ 50 \times \frac{15}{100} = ₹ 7.50.$$

$$\text{Issue price of each share} = ₹ 50 + \left(50 \times \frac{20}{100}\right)$$

$$= ₹ (50 + 10) = ₹ 60.$$

$$\therefore \text{Net Selling Price of each share (p)} = \text{Issue price} - \text{Underwriting Commission}$$

$$= ₹ 60 - ₹ 60 \times \frac{5}{100}$$

$$= ₹ (60 - 3) = ₹ 57.$$

732

Financial Management

Now, by putting D = 7.50 and p = 57 in (i), we get—

$$K_e = \frac{7.50}{57} = 0.1316 \text{ or, } 13.16\%.$$

Hence, required cost of Equity Capital is 13.16%.

B. When it is expected that dividend will grow at a fixed rate in each year : Suppose 'G' be the growth rate of dividend and 'D' be the amount of dividend for the first year. Thus, the dividend per share for the second year = $D + Dg$
 $= D (1 + g)$

∴ The dividend per share for the third year = $(D + Dg) + (D + Dg)g$
 $= D (1 + g) + Dg(1 + g)$
 $= (1 + g) (D + Dg)$
 $= D (1 + g) (1 + g)$
 $= D (1 + g)^2$

Similarly, the dividend per share for the fourth, fifth years etc. can be ascertained.

Again suppose, the present value of each share is 'P'. Now, according to the dividend capitalisation method, the cost of equity share capital will be that value of K which will satisfy the following equation :

$$P = \frac{D}{(1+K_e)^1} + \frac{D(1+g)}{(1+K_e)^2} + \frac{D(1+g)^2}{(1+K_e)^3} + \dots$$

$$\text{or, } P = \frac{D}{(1+K_e)} \left[1 + \frac{(1+g)}{(1+K_e)} + \frac{(1+g)^2}{(1+K_e)^2} + \dots \right]$$

Students are adviced to note that $\left[1 + \frac{(1+g)}{(1+K_e)} + \frac{(1+g)^2}{(1+K_e)^2} + \dots \right]$ is a sumtotal of an infinite

G.P. series ; where 1 is the first term and $\frac{(1+g)}{(1+K_e)}$ is the common ratio. The sumtotal of an infinite G.P. series is $\frac{\text{1st term}}{1 - \text{Common ratio}}$.

$$\text{Thus, } \left[1 + \frac{(1+g)}{(1+K_e)} + \frac{(1+g)^2}{(1+K_e)^2} + \dots \right] = \frac{1}{1 - \frac{(1+g)}{(1+K_e)}}$$

$$\therefore P = \frac{D}{(1 + K_e)} \left\{ \frac{1}{1 - \frac{1+g}{1+K_e}} \right\}$$

$$\text{or, } P = \frac{D}{(1 + K_e)} \left\{ \frac{1}{\frac{1+K_e-1-g}{1+K_e}} \right\}$$

$$\text{or, } P = \frac{D}{(1 + K_e)} \cdot \frac{1}{\frac{(K_e - g)}{(1 + K_e)}}$$

$$\text{or, } P = \frac{D}{(1 + K_e)} \cdot \frac{(1 + K_e)}{(K_e - g)}$$

$$\text{or, } P = \frac{D}{(K_e - g)}$$

$$\text{or, } K_e - g = \frac{D}{P}$$

$$\text{or, } K_e = \frac{D}{P} + g$$

$$\therefore \text{Cost of Equity Share Capital } (K_e) = \frac{D}{P} + g \dots\dots\dots (2)$$

where, —

D = Expected Dividend per share ;

P = Net Selling Price of each share or, P = Current Market Price ;

g = Growth rate of Dividend.

□ **Example 1 : (a)** A Ltd. plans to issue 10,000 new Equity Shares of ₹ 100 each at a premium @ 20%. The flotation costs are expected to be 5%. The company will pay a dividend of ₹ 12 per share initially and the growth in dividend is expected to 4%, compute the cost of the new issue of Equity Share.

• **Solution** ⇒

(a) Let ' K_p ' be the cost of Equity Share.

$$\therefore K_p = \frac{D}{P} + g$$

where,—

D = Annual expected Dividend,

P = Net Selling Price of each share,

and g = Growth rate of Dividend.

$$\begin{aligned}\therefore D &= ₹ 12. \text{ Issue price of each share} &= ₹ \{100 + (100 \times \frac{20}{100})\} \\ & &= ₹ (100 + 20) = ₹ 120.\end{aligned}$$

$$\therefore P = \{120 - (120 \times \frac{5}{100})\} = ₹ (120 - 6) = ₹ 114$$

and $g = 4\%$ or, 0.04 .

$$\begin{aligned}\therefore K_p &= \frac{12}{114} + 0.04 \\ &= 0.1053 + 0.04 = 0.1453 \text{ or, } 14.53\%\end{aligned}$$

Hence, required cost of Equity Share is 14.53%.