

Lesson on Financial Management

Paper Code: COMCC-7

Unit II

① Price Earning Method :

This method takes into consideration the Earnings Per Share (EPS) and the market Price of the share. It is based on the assumption that the Investors Capitalize the stream of future earnings of the share and the earnings of a share need not be in the form of dividend and also it need not be disbursed to the Shareholders. It is based on the argument that even if the earnings are not disbursed as dividends, it is kept in the retained earnings and it causes future growth in the earnings of the company as well as the increase in market price of the share. In calculation of Cost of equity Share Capital, the earnings per share is divided by the current market price.

Formula:
$$K_E = \frac{E}{M}$$

Where,

E = Current earnings per share

M = Market Price per share

Practical Problem:

Prabhat Ltd. has 50,000 equity shares of Rs. 10 each and its current market value is Rs. 45 each. The after-tax Profit of the company for the year ended 31st March, 2019 is Rs. 9,60,000.

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Calculate the cost of Capital based on Price/Earning method.

$$\text{Calculation of EPS} = \frac{\text{Rs. } 9,60,000}{50,000 \text{ Equity Shares}} = \text{Rs. } 19.20$$

$$K_E = \frac{E}{M} = \frac{\text{Rs. } 19.20}{\text{Rs. } 45} = 0.4267 \text{ or } 42.67\%$$

(2) Capital Asset Pricing Model (CAPM) →

The CAPM divides the cost of equity into two components, the near risk-free return available on investing in government bonds and an additional risk premium for investing in a particular share or investment. This risk premium in turn comprises the average return on the overall market portfolio and the beta factor (or risk) of the particular investment. Putting this all together the CAPM assesses the cost of equity for an investment as the following:

$$K_E = R_f + \beta_i [R_m - R_f]$$

Where,

K_E = Cost of equity

R_f = Risk-free rate of return

R_m = Average market return

β_i = Beta of investment

Note: For detail knowledge students are advised to go read "Modern Portfolio Theory" which shall be taught to them in Semester IV.

Practical Problem:

Modern Ltd's share beta factor is 1.40. The risk-free rate of interest on government securities is 9%. The expected rate of return on company

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equity shares is 16%. Calculate the cost of equity capital based on Capital asset Pricing model.

Solution to Problem:

$$\begin{aligned} K_E &= 9\% + 1.40 (16\% - 9\%) \\ &= 9\% + 1.40 (7\%) \\ &= 9\% + 9.8\% \\ &= 18.8\% \end{aligned}$$

The appropriate discount rate to apply to the forecasted cashflows in an investment appraisal is the opportunity cost of capital for that investment. The opportunity cost of capital is the expected rate of return offered in the capital markets for investments of a similar risk profile. Thus it depends on the risk attached to the investment's cashflows.

③

Cost of Retained Earnings (K_R)

The retained earnings is one of the major sources of finance available for the established companies to finance its expansion and diversification programmes. These are the funds accumulated over the years of the company by keeping part of the funds generated without distribution. The equity shareholders of the company by keeping part of the funds generated are entitled to these funds and sometimes, these funds are also taken into account while calculating the cost of equity. But so long as the retained profits are not distributed to the shareholders, the company can use the funds within the company for further profitable investment opportunities.

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Hence cost of equity includes retained earnings. But, however, in practice, retained earnings are a slightly cheaper source of capital as compared to the cost of equity capital. Therefore, the cost of retained earnings is treated separately from the cost of equity capital.

The cost of retained earnings to the shareholders is basically an opportunity cost of such funds so that it is equal to the income that they would otherwise obtain by placing these funds in an alternative investment. The cost of retained earnings is determined based on the opportunity rate of earnings of equity shareholders which is being forgone continuously. If the retained earnings are distributed to the equity shareholders attract personal taxation of the individual shareholders and therefore, the cost of earnings retained earnings is calculated as below:

$$K_R = K_E(1-T)$$

Where,

K_R = Cost of retained earnings

K_E = Cost of equity capital

T = Tax rate of individuals

Practical Problem:

The cost of equity capital of Spectrum Ltd. is 24%. The Personal taxation of individual shareholders is 35%. Calculate the cost of retained earnings.

Solution

~~$$K_R = K_E(1-T)$$~~

Where,

K_R = Cost of retained earnings

K_E = Cost of equity capital

T = Personal taxation rate of individual shareholders

$$\therefore K_R = 24\% (1 - 0.35) = 15.6\%$$

∴ → P(5)

④ Cost of Preference shares / Capital

The cost of preference share capital is the rate of return that must be earned on preference capital financed investments, to keep unchanged the earnings available to the equity shareholders.

→ Cost of Irredeemable Preference Shares:

The cost of irredeemable preference share capital is the preference dividend, also called the coupon rate divided by the net issue proceeds.

$$K_p = \frac{D_p}{NP}$$

Where,

K_p = Cost of irredeemable preference shares

D_p = Preference Dividend

NP = Net proceeds received from issue of preference shares after meeting the issue expenses.

Problem:

Green Fields Ltd. has issued 10,00,000 irredeemable preference shares of Rs.150 each at a coupon rate of 14% p.a. The issue expenses are Rs.15 per share. Calculate the cost of preference share capital.

$$K_p = \frac{D_p}{NP}$$

Where,

K_p = Cost of preference share capital

D_p = Preference Dividend per share

NP = Net Proceeds received after floating expenses

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$$D_p = 14\% \text{ of Rs. } 150 = \text{Rs. } 21$$

$$NP = \text{Net proceeds after floating expenses} \\ \text{i.e. Rs. } 150 - \text{Rs. } 15 = \text{Rs. } 135$$

$$\therefore k_p = \frac{\text{Rs. } 21}{\text{Rs. } 135} = 0.1555 \text{ or } 15.55\%$$

→ Cost of Redeemable Preference Shares:

- The Cost of Redeemable Preference Shares is calculated as below:

$$k_p = \frac{D + \left(\frac{RV - SV}{N} \right)}{\left(\frac{RV + SV}{2} \right)}$$

Where,

k_p = cost of Preference shares

D = Constant annual dividend payment

N = No. of years to redemption

RV = Redeemable value of Preference shares at the time of redemption

SV = Sale out value of Preference shares less discount and flotation expenses.

Problem:

Dell Ltd. has Rs. 100 Preference shares redeemable at a premium of 10% with 15 years maturity. The coupon rate is 12%. Flotation cost is 5%. Sale price is Rs. 95. Calculate the cost of Preference shares.

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P07

Solution

$$K_p = \frac{D + \left(\frac{RV - SV}{N} \right)}{\left(\frac{RV + SV}{2} \right)}$$

where,

D = Coupon rate i.e., Rs. 12

N = Years to redemption i.e., 15 years

RV = Redeemable value with 10% Premium
i.e., Rs. 110

SV = Sale value (Nominal value - Discount)
- Flotation cost
i.e., Rs. 100 - 5 - 5 = Rs. 90

Hence,

$$K_p = \frac{12 + \left(\frac{110 - 90}{15} \right)}{\left(\frac{110 + 90}{2} \right)} = \frac{12 + 1.33}{100} = \frac{13.33}{100}$$

= 0.1333 or 13.33%

Books recommended for reading:

1. Taxmann's Financial Management - Ravi M. Kishore, New Delhi
2. Taxmann's Financial Management, Theory, Concepts and Problems - R. P. Rustagi - New Delhi.
3. Financial Management - I M Pandey - Vikas Publishing House Private Ltd. - New Delhi

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