

Cost of Capital

The cost of capital is an extremely important financial concept. It acts as a major link between the firm's long-term investment decisions and the wealth of the firm's owners as determined by the market value of their shares. Thus, Cost of capital is the minimum rate of return expected by the investors below which they (investors) are not agreeable to invest their fund.

According to J. C Van Horne, "Cost of capital is the required rate of return on the various types of financing."

According to L. J. Gitman, "Cost of capital is the rate of return that a firm must earn on the projects in which it invests to maintain its market value and attract funds."

Therefore, the cost of capital or required rate of return for a firm can be defined as the composite cost of the firm's financing components. The total capital of a firm typically consists of several components, and each component has its own cost. The idea of a cost of capital is to bring these component costs together in one number the firm can use for decision-making purposes.

Importance of Cost of Capital in Decision Making

The concept of cost of capital is a very important concept in financial management decision making. The concept is however, a recent development and has relevance in almost every financial decision making but prior to that development, the problem was ignored or by-passed.

The progressive management always takes notice of the cost of capital while taking a financial decision. The concept is quite relevant in the following managerial decisions.

Evaluating Investment Decision: Cost of capital may be used as the measuring rod for adopting an investment proposal. The firm, naturally, will choose the project which gives a satisfactory return on investment which would in no case be less than the cost of capital incurred for its financing. In various methods of capital budgeting, cost of capital is the key factor in deciding the project out of various proposals pending before the management. It measures the financial performance and determines the acceptability of all investment opportunities.

Designing the Corporate Financial Structure: The cost of capital is significant in designing the firm's capital structure. The cost of capital is influenced by the chances in capital structure. A capable financial executive always keeps an eye on capital market fluctuations and tries to achieve the sound and economical capital structure for the firm. He may try to substitute the various methods of finance in an attempt to minimize the cost of capital so as to increase the market price and the earning per share.

Deciding about the Method of Financing: A capable financial executive must have knowledge of the fluctuations in the capital market and should analyze the rate of interest on loans and normal dividend rates in the market from time to time. Whenever company requires additional finance, he may a better choice of the source of finance which bears the minimum cost of capital. Although cost of capital is an important factor in such decisions, but equally important are the considerations of relating control and of avoiding risk.

Performance of Top Management: The cost of capital can be used to evaluate the financial performance of the top executives. Evaluation of the financial performance will involve a comparison of actual profit abilities of the projects and taken with the projected overall cost of capital and an appraisal of the actual cost incurred in raising the required funds.

Other Areas: The concept of cost of capital is also important in many others areas of decision making, such as dividend decisions, working capital policy etc.

Components / Sources of cost of capital or long-term capital

1. Common stock capital.
2. Retained earnings.
3. Preferred stock capital.
4. Debt capital.

Significance of cost of capital

1. In evaluating investment project.
2. In determining optimum capital structure.
3. In choosing the best source of fund.
4. In determining the value of the firm.

Cost of Common Stock Capital

- a. *Capital Asset Pricing Model (CAPM),*

$$Ke = Rf + (Rm - Rf)\beta$$

- b. *Dividend Model,*

$$Ke = \frac{D}{P_0} \times 100$$

- c. *Dividend Growth Model*

$$Ke = \left(\frac{D_1}{P_0 - F} + g \right) \times 100$$

Cost of Retained Earnings

- a. Cost of Retained Earnings,

$$K_r = K_e (1 - T_p) \times 100$$

$$= \left(\frac{D_1}{P_0 - F} + g \right) (1 - T_p) \times 100$$

Cost of Debt Capital

- a. Cost of perpetual/Irredeemable Debt Capital,

$$K_d = \frac{\text{Interest}}{P_0 - F} (1 - T) \times 100$$

- b. Cost of Redeemable Debt Capital,

$$K_d = \frac{I + \left(\frac{FV - NSV}{N} \right)}{\left(\frac{FV + NSV}{2} \right)} \times (1 - T) \times 100$$

Cost of Preferred Stock

- a. Cost of perpetual/Irredeemable Preferred Capital,

$$K_p = \frac{D_0}{P_0 - F} \times 100$$

- b. Cost of Redeemable Preferred Capital,

$$K_p = \frac{D + \left(\frac{FV - NSV}{N} \right)}{\left(\frac{FV + NSV}{2} \right)} \times 100$$

Question: What is Weighted Average Cost of Capital? How is the calculated?

The term cost of capital means the overall composite cost of capital defined as “weighted average of the cost of each specific type of fund. The use of weighted average and not the simple average is reasonable by the fact that proportions of various sources of funds in the capital structure of a firm are different. Therefore the overall cost of capital should take into account the weighted average. The weighted cost of capital based on historical weights takes into account a long-term view.

Weighted average cost of capital (WACC) refers to the cost of capital which is calculated by multiplying the cost of specific sources and the weight or contribution of those sources in the total capital of the company.

WACC is calculated by applying the following steps:

1. Identification of capital sources
2. Calculating specific cost of capital
3. Calculating weight of specific source of capital

$$\text{Weight} = \text{Amount of specific capital} / \text{Total capital}$$

4. Calculation of weighted average cost of capital

$$\text{WACC} = (K_d * W_d) + (K_p * W_p) + (K_e * W_e) + (K_r * W_r)$$

Question: What is meant by opportunity cost?

Answer: Opportunity cost is the rate of return forgone on the next best alternative investment opportunity of comparable risk. Thus, the required rate of return on an investing project is an opportunity cost.

According to Benton, “Opportunity cost is the rate return a firm must forgo when it select one use of funds over another.”

According to Prasanna Chandra, “Opportunity cost is the rate of return that can be earned on the best alternative investment.”

Question: What is meant by flotation cost?

Answer: When business firms sell new securities, they generally engage an investment banking firm. Investment bankers may underwrite a large amount of issues; they buy issues from the company and sell them to investors. The fee they receive for their services is the flotation cost. Flotation cost include are –

Underwriting cost – publicity, commission, selling expenses

Administrative cost – issuing, legal, printing, accounting, others

According to L. J. Gitman, “The flotation costs are the costs of issuing and selling a security.”

According to Khan and Jain, “The flotation cost is the cost involved in raising capital from the market.”