DSE 6.2 A

Financial Management

Unit- 2

Sources of Finance and Cost of Capital

- *Different sources of finance; long term and short term sources*
- *Cost of capital: concept, relevance of cost of capital, Implicit and Explicit cost, specific costs (its computation) and weighted average cost (its computation), rationale of after tax weighted average cost of capital, marginal cost of capital (its computation).*
- Different sources of finance; long term and short term sources

INTRODUCTION

Finance is the lifeblood of business concern, because it is interlinked with all activities performed by the business concern. In a human body, if blood circulation is not proper, body function will stop. Similarly, if the finance not being properly arranged, the business system will stop. Arrangement of the required finance to each department of business concern is highly a complex one and it needs careful decision. Quantum of finance may be depending upon the nature and situation of the business concern. But, the requirement of the finance may be broadly classified into two parts:

I. Long-term Financial Requirements or Fixed Capital Requirement Financial requirement of the business differs from firm to firm and the nature of the requirements on the basis of terms or period of financial requirement, it may be long term and short-term financial requirements. Long-term financial requirement means the finance needed to acquire land and building for business concern, purchase of plant and machinery and other fixed expenditure. Long-term financial requirement is also called as fixed capital requirements. Fixed capital is the capital, which is used to purchase the fixed assets of the firms such as land and building, furniture and fittings, plant and machinery, etc. Hence, it is also called a capital expenditure.

II. Short-term Financial Requirements or Working Capital Requirement Apart from the capital expenditure of the firms, the firms should need certain expenditure like procurement of raw materials, payment of wages, day-to-day expenditures, etc. This kind of expenditure is to meet with the help of short-term financial requirements which will meet the operational expenditure of the firms. Short-term financial requirements are popularly known as working capital.

SOURCES OF FINANCE

Sources of finance mean the ways for mobilizing various terms of finance to the industrial concern. Sources of finance state that, how the companies are mobilizing finance for their requirements. The companies belong to the existing or the new which need sum amount of finance to meet the long-term and short-term requirements such as purchasing of fixed assets, construction of office building, purchase of raw materials and day-to-day expenses. Sources of finance may be classified under various categories according to the following important heads:

1. Based on the Period Sources of Finance may be classified under various categories based on the period.

Long-term sources: Finance may be mobilized by long-term or short-term. When the finance mobilized with large amount and the repayable over the period will be more than five years, it may be considered as long-term sources. Share capital, issue of debenture, long-term loans from financial institutions and commercial banks come under this kind of source of finance. Long-term source of finance needs to meet the capital expenditure of the firms such as purchase of fixed assets, land and buildings, etc. Long-term sources of finance include:

- Equity Shares
- Preference Shares
- Debenture
- Long-term Loans
- Fixed Deposits

Short-term sources: Apart from the long-term source of finance, firms can generate finance with the help of short-term sources like loans and advances from commercial banks, moneylenders, etc. Short-term source of finance needs to meet the operational expenditure of the business concern. Short-term source of finance include:

- Bank Credit
- Customer Advances
- Trade Credit
- Factoring
- Public Deposits
- Money Market Instruments

2. Based on Ownership Sources of Finance may be classified under various categories based on the period:

An ownership source of finance include

- Shares capital, earnings
- Retained earnings
- Surplus and Profits

Borrowed capital include

- Debenture
- Bonds
- Public deposits
- Loans from Bank and Financial Institutions.

3. Based on Sources of Generation Sources of Finance may be classified into various categories based on the period.

Internal source of finance includes

- Retained earnings
- Depreciation funds
- Surplus

External sources of finance may be include
● Share capital
● Debenture
● Public deposits
● Loans from Banks and Financial institutions

4. Based in Mode of Finance
Security finance may be include
● Shares capital
● Debenture
Retained earnings may include
● Retained earnings
● Depreciation funds
Loan finance may include
● Long-term loans from Financial Institutions
● Short-term loans from Commercial banks.

EQUITY SHARES
Equity Shares also known as ordinary shares, which means, other than preference shares. Equity shareholders are the real owners of the company. They have a control over the management of the company. Equity shareholders are eligible to get dividend if the company earns profit. Equity share capital cannot be redeemed during the lifetime of the company. The liability of the equity shareholders is the value of unpaid value of shares.
Features of Equity Shares Equity shares consist of the following important features:

1. Maturity of the shares: Equity shares have permanent nature of capital, which has no maturity period. It cannot be redeemed during the lifetime of the company.
2. Residual claim on income: Equity shareholders have the right to get income left after paying fixed rate of dividend to preference shareholder. The earnings or the income available to the shareholders is equal to the profit after tax minus preference dividend.
3. Residual claims on assets: If the company wound up, the ordinary or equity shareholders have the right to get the claims on assets. These rights are only available to the equity shareholders.
4. Right to control: Equity shareholders are the real owners of the company. Hence, they have power to control the management of the company and they have power to take any decision regarding the business operation.
5. Voting rights: Equity shareholders have voting rights in the meeting of the company with the help of voting right power; they can change or remove any decision of the business concern. Equity shareholders only have voting rights in the company meeting and also they can nominate proxy to participate and vote in the meeting instead of the shareholder.
6. Pre-emptive right: Equity shareholder pre-emptive rights. The pre-emptive right is the legal right of the existing shareholders. It is attested by the company in the first opportunity to purchase additional equity shares in proportion to their current holding capacity.

7. Limited liability: Equity shareholders are having only limited liability to the value of shares they have purchased. If the shareholders are having fully paid up shares, they have no liability.

   For example: If the shareholder purchased 100 shares with the face value of Rs. 10 each. He paid only Rs. 900. His liability is only Rs. 100.

   Total number of shares 100

   Face value of shares Rs. 10

Total value of shares	100 × 10 = 1,000
Paid up value of shares	900
Unpaid value/liability	100

   Liability of the shareholders is only unpaid value of the share (that is Rs. 100).

Advantages of Equity Shares

Equity shares are the most common and universally used shares to mobilize finance for the company. It consists of the following advantages.

1. Permanent sources of finance: Equity share capital is belonging to long-term permanent nature of sources of finance, hence, it can be used for long-term or fixed capital requirement of the business concern.
2. Voting rights: Equity shareholders are the real owners of the company who have voting rights. This type of advantage is available only to the equity shareholders.
3. No fixed dividend: Equity shares do not create any obligation to pay a fixed rate of dividend. If the company earns profit, equity shareholders are eligible for profit, they are eligible to get dividend otherwise, and they cannot claim any dividend from the company.
4. Less cost of capital: Cost of capital is the major factor, which affects the value of the company. If the company wants to increase the value of the company, they have to use more share capital because, it consists of less cost of capital (Ke) while compared to other sources of finance.
5. Retained earnings: When the company have more share capital, it will be suitable for retained earnings which is the less cost sources of finance while compared to other sources of finance.

Disadvantages of Equity Shares

1. Irredeemable: Equity shares cannot be redeemed during the lifetime of the business concern. It is the most dangerous thing of over capitalization.
2. Obstacles in management: Equity shareholder can put obstacles in management by manipulation and organizing themselves. Because, they have power to contrast any decision which are against the wealth of the shareholders.
3. Leads to speculation: Equity shares dealings in share market lead to secularism during prosperous periods.
4. Limited income to investor: The Investors who desire to invest in safe securities with a fixed income have no attraction for equity shares.
5. No trading on equity: When the company raises capital only with the help of equity, the company cannot take the advantage of trading on equity.

PREFERENCE SHARES

The parts of corporate securities are called as preference shares. It is the shares, which have preferential right to get dividend and get back the initial investment at the time of winding up of the company. Preference shareholders are eligible to get fixed rate of dividend and they do not have voting rights. Preference shares may be classified into the following major types:

1. Cumulative preference shares: Cumulative preference shares have right to claim dividends for those years which have no profits. If the company is unable to earn profit in any one or more years, C.P. Shares are unable to get any dividend but they have right to get the comparative dividend for the previous years if the company earned profit.
2. Non-cumulative preference shares: Non-cumulative preference shares have no right to enjoy the above benefits. They are eligible to get only dividend if the company earns profit during the years. Otherwise, they cannot claim any dividend.
3. Redeemable preference shares: When, the preference shares have a fixed maturity period it becomes redeemable preference shares. It can be redeemable during the lifetime of the company. The Company Act has provided certain restrictions on the return of the redeemable preference shares.

Irredeemable Preference Shares

Irredeemable preference shares can be redeemed only when the company goes for liquidator. There is no fixed maturity period for such kind of preference shares.

Participating Preference Shares

Participating preference sharesholders have right to participate extra profits after distributing the equity shareholders.

Non-Participating Preference Shares

Non-participating preference sharesholders are not having any right to participate extra profits after distributing to the equity shareholders. Fixed rate of dividend is payable to the type of shareholders.

Convertible Preference Shares

Convertible preference sharesholders have right to convert their holding into equity shares after a specific period. The articles of association must authorize the right of conversion.
Non-convertible Preference Shares There shares, cannot be converted into equity shares from preference shares.

Features of Preference Shares

The following are the important features of the preference shares:
1. Maturity period: Normally preference shares have no fixed maturity period except in the case of redeemable preference shares. Preference shares can be redeemable only at the time of the company liquidation.
2. Residual claims on income: Preferential sharesholders have a residual claim on income. Fixed rate of dividend is payable to the preference shareholders.

3. Residual claims on assets: The first preference is given to the preference shareholders at the time of liquidation. If any extra Assets are available that should be distributed to equity shareholder.
4. Control of Management: Preference shareholder does not have any voting rights. Hence, they cannot have control over the management of the company.

Advantages of Preference Shares

Preference shares have the following important advantages.
1. Fixed dividend: The dividend rate is fixed in the case of preference shares. It is called as fixed income security because it provides a constant rate of income to the investors.
2. Cumulative dividends: Preference shares have another advantage which is called cumulative dividends. If the company does not earn any profit in any previous years, it can be cumulative with future period dividend.
3. Redemption: Preference Shares can be redeemable after a specific period except in the case of irredeemable preference shares. There is a fixed maturity period for repayment of the initial investment.
4. Participation: Participative preference sharesholders can participate in the surplus profit after distribution to the equity shareholders.
5. Convertibility: Convertibility preference shares can be converted into equity shares when the articles of association provide such conversion.

Disadvantages of Preference Shares

1. Expensive sources of finance: Preference shares have high expensive source of finance while compared to equity shares.
2. No voting right: Generally preference sharesholders do not have any voting rights. Hence they cannot have the control over the management of the company.
3. Fixed dividend only: Preference shares can get only fixed rate of dividend. They may not enjoy more profits of the company.
4. Permanent burden: Cumulative preference shares become a permanent burden so far as the payment of dividend is concerned. Because the company must pay the dividend for the unprofitable periods also.
5. Taxation: In the taxation point of view, preference shares dividend is not a deductible expense while calculating tax. But, interest is a deductible expense. Hence, it has disadvantage on the tax deduction point of view.

Debentures

A Debenture is a document issued by the company. It is a certificate issued by the company under its seal acknowledging a debt. Debenture includes debenture stock, bonds and any other securities of a company whether constituting a charge of the assets of the company or not.

Types of Debentures

Debentures may be divided into the following major types:

1. Unsecured debentures: Unsecured debentures are not given any security on assets of the company. It is also called simple or naked debentures. This type of debentures is traded as unsecured creditors at the time of winding up of the company.
2. Secured debentures: Secured debentures are given security on assets of the company. It is also called as mortgaged debentures because these debentures are given against any mortgage of the assets of the company.
3. Redeemable debentures: These debentures are to be redeemed on the expiry of a certain period. The interest is paid periodically and the initial investment is returned after the fixed maturity period.
4. Irredeemable debentures: These kinds of debentures cannot be redeemable during the life time of the business concern.
5. Convertible debentures: Convertible debentures are the debentures whose holders have the option to get them converted wholly or partly into shares. These debentures are usually converted into equity shares. Conversion of the debentures may be: Non-convertible debentures Fully convertible debentures Partly convertible debentures
6. Other types: Debentures can also be classified into the following types. Some of the common types of the debentures are as follows:
1. Collateral Debenture
2. Guaranteed Debenture
3. First Debenture
4. Zero Coupon Bond
5. Zero Interest Bond/Debenture

Features of Debentures

1. Maturity period: Debentures consist of long-term fixed maturity period. Normally, debentures consist of 10–20 years maturity period and are repayable with the principle investment at the end of the maturity period.
2. Residual claims in income: Debenture holders are eligible to get fixed rate of interest at every end of the accounting period. Debenture holders have priority of claim in income of the company over equity and preference shareholders.
3. Residual claims on asset: Debenture holders have priority of claims on Assets of the company over equity and preference shareholders. The Debenture holders may have either specific change on the Assets or floating change of the assets of the company. Specific change of Debenture holders are treated as secured creditors and floating change of Debenture holders are treated as unsecured creditors.
4. No voting rights: Debenture holders are considered as creditors of the company. Hence they have no voting rights. Debenture holders cannot have the control over the performance of the business concern.
5. Fixed rate of interest: Debentures yield fixed rate of interest till the maturity period. Hence the business will not affect the yield of the debenture.

Advantages of Debenture

Debenture is one of the major parts of the long-term sources of finance which of consists the following important advantages:

1. Long-term sources: Debenture is one of the long-term sources of finance to the company. Normally the maturity period is longer than the other sources of finance.
2. Fixed rate of interest: Fixed rate of interest is payable to debenture holders, hence it is most suitable of the companies earn higher profit. Generally, the rate of interest is lower than the other sources of long-term finance.
3. Trade on equity: A company can trade on equity by mixing debentures in its capital structure and thereby increase its earning per share. When the company apply the trade on equity concept, cost of capital will reduce and value of the company will increase.
4. Income tax deduction: Interest payable to debentures can be deducted from the total profit of the company. So it helps to reduce the tax burden of the company.
5. Protection: Various provisions of the debenture trust deed and the guidelines issued by the SEB1 protect the interest of debenture holders.

Disadvantages of Debenture

Debenture finance consists of the following major disadvantages:
1. Fixed rate of interest: Debenture consists of fixed rate of interest payable to securities. Even though the company is unable to earn profit, they have to pay the fixed rate of interest to debenture holders, hence, it is not suitable to those company earnings which fluctuate considerably.
2. No voting rights: Debenture holders do not have any voting rights. Hence, they cannot have the control over the management of the company.
3. Creditors of the company: Debenture holders are merely creditors and not the owners of the company. They do not have any claim in the surplus profits of the company.
4. High risk: Every additional issue of debentures becomes more risky and costly on account of higher expectation of debenture holders. This enhanced financial risk increases the cost of equity capital and the cost of raising finance through debentures which is also high because of high stamp duty.
5. Restrictions of further issues: The company cannot raise further finance through debentures as the debentures are under the part of security of the assets already mortgaged to debenture holders.

Loans from Financial Institutions

In India, specialized institutions provide long-term financial assistance to industry. Thus, the Industrial Finance Corporation of India, the State Financial Corporations, the Life Insurance Corporation of India, the National Small Industries Corporation Limited, the Industrial Credit and Investment Corporation, the Industrial Development Bank of India and the Industrial Reconstruction Corporation of India provide term loans to companies. Before a term loan is sanctioned, a company has to satisfy the concerned financial institution regarding the technical, commercial, economic, financial and managerial viability of the project for which the loan is required. Such loans are available at different rates of interest under different schemes of financial institutions and are to be repaid according to a stipulated repayment schedule. Term loans represent secured borrowings and at present it is the most important source of finance for new projects. They generally carry a rate of interest inclusive of interest tax, depending on the credit rating of the borrower, the perceived risk of lending and the cost of funds. These loans are generally repayable over a period of 6 to 10 years in annual, semi-annual or quarterly instalments. Term loans are also provided by banks. State financial/development institutions and all-India term lending financial institutions. Banks and State Financial Corporations normally provide term loans to projects in the small scale sector, while for the medium and large industries, term loans are provided by state developmental institutions alone or in consortium with banks and State-Financial Corporations. For large scale projects all-India financial institutions provide the bulk of term finance either singly or in consortium with other all-India financial institutions, state level institutions and/or banks. After Independence, the institutional setup in India for the provision of medium and long-term credit for industry has been broadened. The assistance sanctioned and disbursed by these specialized institutions has increased impressively over the years. A number of specialized institutions have been established all over the country.

Sources of Short-term Finance

Trade Credit

Trade credit refers to the credit extended by the supplier of goods or services to his/her customer in the normal course of business. Trade credit occupies very important position in short-term financing due to the competition. Almost all the traders and manufacturers are required to extend credit facility (a portion), without which there is no possibility of staying back in the business. Trade credit is a spontaneous source of finance that arises in the normal business transactions of the firm without specific negotiations (automatic source of finance). In order to get this source of finance, the buyer should have acceptable and dependable credit worthiness and reputation in the market. Trade credit generally extended in the format open account or bills of exchange. Open account is the form of trade credit, where supplier sends goods to the buyer for the payment to be received in future as per terms of the sales invoice. As such trade credit constitutes a very important source of finance; it represents 25 per cent to 50 per cent of the total short-term sources for financing working capital requirements. Getting trade credit may be easy to the well-established or well-reputed firm, but for a new or the firm with financial problems will generally face problem in getting trade credit. Generally suppliers look for earning record, liquidity position and payment record which is extending credit. Building confidence in suppliers is possible only when the buyer discussing his/her financial condition future plans and payment record. Trade credit involves some benefits and costs.

Advantages of Trade Credit

The main advantages are:

1. Easy availability when compared to other sources of finance (except financially weak companies).
2. Flexibility is another benefit, as the credit increases with the growth of the firm’s sales.
3. Informality as we have already seen that it is an automatic finance.

Loans from Commercial Banks

The primary role of the commercial bank is to short-term requirements of industry. Of late, however, banks have started taking an interest in term financing of industries in several ways, though the formal term lending is so far small and is confined to major banks only. Term lending by banks has become a controversial issue these days. It has been argued that term loans do not satisfy the canon of liquidity, which is a major consideration in all bank operations. According to the traditional values, banks should provide loans only for short periods and for operations, which result in the automatic liquidation of such credits over short periods. On the other hand, it is contended that the traditional concept of liquidity requires to be modified. The proceeds of the term loan are generally used for what are broadly known as fixed assets or for expansion in plant capacity. Their repayment is usually scheduled over a long period of time. The liquidity of such loans is said to depend on the anticipated income of the borrowers. As a matter of fact, a working capital loan is more permanent and long-term than a term loan. The reason for making this statement is that a term loan is always repayable on a fixed date and ultimately, a day will come when the account will be totally adjusted. However, in the case of working capital finance, though it is payable on demand, yet in actual practice it is noticed that the account is never adjusted as such, and, if at all the payment is asked back, it is with a clear purpose and intention of refinance being provided at the beginning of the next year or half year.

Commercial Papers (CPs)

Commercial paper represents a short-term unsecured promissory note issued by firms that have a fairly high credit (standing) rating. It was first introduced in USA and it was an important money market instruments. In India, Reserve Bank of India introduced CP on the recommendations of the Vaghul Working Group on money market. CP is a source of short-term finance to only large firms with sound financial position.

Features of CP

1. The maturity period of CP ranges from 15 to 365 day (but in India it ranges between 91 to 180 days).
2. It is sold at a discount from its face value and redeemed at its face value.
3. Return on CP is the difference between par value and redeemable value.
4. It may be sold directly to investors or indirectly (through) dealers.
5. There is no developed secondary market for CP.

Eligibility Criteria for Issuing CP

CP is unsecured promissory note, the issue of CP is being regulated by the Reserve Bank of India. RBI has laid down the following conditions to determine the eligibility of a company that wishes to raise funds through the issue of CPs.

1. The Tangible Net worth (TNW) of the company, as per latest audited balance sheet should not be less than 4 crore.
2. The company should have been sanctioned as a fund based limit for bank(s) finance and/ or the All India Financial Institutions.
3. Company can issue CPs amounting to 75% of the permitted bank (working capital limit) credit.

4. Company's CPs receives a minimum rating of (P2 from CRISIL, A-2 form ICRA, etc.).
5. The minimum size of each CP is 5 lakhs or multiples thereof.
6. The size of any single issue should not be less than 1 crore.
7. The CP is in the form of usance promissory note negotiable by endorsement and delivery.

Advantages of CP

1. It is an alternative source of finance and proves to be helpful during the period of tight bank credit.
2. It is a cheaper source of short-term finance when compared to the bank credit

Disadvantages of CP

It is available only for large and financially sound companies.

COST OF CAPITAL

The cost of capital is the required rate of return that a firm must achieve in order to cover the cost of generating funds in the marketplace. It is used to evaluate new projects of a company as it is the minimum return that investors expect for providing capital to the company, thus setting a benchmark that a new project has to meet.

Meaning of Cost of Capital

Cost of capital is the rate of return that a firm must earn on its project investments to maintain its market value and attract funds. Cost of capital is the required rate of return on its investments which belongs to equity, debt and retained earnings. If a firm fails to earn return at the expected rate, the market value of the shares will fall and it will result in the reduction of overall wealth of the shareholders.

Definitions of the Term Cost of Capital

The following important definitions are commonly used to understand the meaning and concept of the cost of capital.

According to the definition of John J. Hampton "Cost of capital is the rate of return the firm required from investment in order to increase the value of the firm in the market place"

According to the definition of Solomon Ezra, "Cost of capital is the minimum required rate of earnings or the cutoff rate of capital expenditure".

According to the definition of James C. Van Horne, Cost of capital is "A cut-off rate for the allocation of capital to investment of projects. It is the rate of return on a project that will leave unchanged the market price of the stock".

According to the definition of William and Donaldson, "Cost of capital may be defined as the rate that must be earned on the net proceeds to provide the cost elements of the burden at the time they are due".

Assumption of Cost of Capital

Cost of capital is based on certain assumptions which are closely associated while calculating and measuring the cost of capital. It is to be considered that there are three basic concepts:

A. It is not a cost as such. It is merely a hurdle rate.
B. It is the minimum rate of return.
C. It consists of three important risks such as zero risk level, business risk and financial risk.
Cost of capital can be measured with the help of the following equation.
K = rj + b + f.
Where, K = Cost of capital.
rj = The riskless cost of the particular type of finance,
b = The business risk premium.
f = The financial risk premium.

CLASSIFICATION OF COST OF CAPITAL

Cost of capital may be classified into the following types on the basis of nature and usage:
• Explicit and Implicit Cost.
• Average and Marginal Cost.
• Historical and Future Cost.
• Specific and Combined Cost.

- Explicit and Implicit Cost

The cost of capital may be explicit or implicit cost on the basis of the computation of cost of capital. Explicit cost is the rate that the firm pays to procure financing.
Implicit cost is the rate of return associated with the best investment opportunity for the firm and its shareholders that will be forgone if the projects presently under consideration by the firm were accepted.

- Average and Marginal Cost

Average cost of capital is the weighted average cost of each component of capital employed by the company. It considers weighted average cost of all kinds of financing such as equity, debt, retained earnings etc. Marginal cost is the weighted average cost of new finance raised by the company. It is the additional cost of capital when the company goes for further raising of finance.

- Historical and Future Cost

Historical cost is the cost which as already been incurred for financing a particular project. It is based on the actual cost incurred in the previous project. Future cost is the expected cost of financing in the proposed project. Expected cost is calculated on the basis of previous experience.

- Specific and Combine Cost

The cost of each sources of capital such as equity, debt, retained earnings and loans is called as specific cost of capital. It is very useful to determine the each and every specific source of capital. The composite or combined cost of capital is the combination of all sources of capital. It is also called as overall cost of capital. It is used to understand the total cost associated with the total finance of the firm.

IMPORTANCE OF COST OF CAPITAL

Computation of cost of capital is a very important part of the financial management to decide the capital structure of the business concern.

1.Importance to Capital Budgeting Decision; Capital budgeting decision largely depends on the cost of capital of each source. According to net present value method, present value of cash inflow must be more than the present value of cash outflow. Hence, cost of capital is used to make capital budgeting decision.

2.Importance to Capital Structure Decision: Capital structure is the mix or proportion of the different kinds of long term securities. A firm uses particular type of sources if the cost of capital is suitable. Hence, cost of capital helps to take decision regarding structure.

3.Importance to Evolution of Financial Performance: Cost of capital is one of the important factor in determining claim which affects the capital budgeting, capital structure and value of the firm. Hence, it helps to evaluate the financial performance of the firm.

4.Importance to Other Financial Decisions: Apart from the above points, cost of capital is also used in some other areas such as, market value of share, earning capacity of securities etc. hence; it plays a major part in the financial management.

MEASUREMENT OF COST OF CAPITAL

Cost of Debt

Cost of debt is the after tax cost of long-term funds through borrowing. Debt may be issued at par, at premium or at discount and also it may be perpetual or redeemable.

Debt Issued at Par

Debt issued at par means, debt is issued at the face value of the debt. It may be calculated with the help of the following formula. Kd = (1 – t) R

Where, Kd = Cost of debt capital

t = Tax rate

R = Debenture interest rate

Debt Issued at Premium or Discount

If the debt is issued at premium or discount, the cost of debt is calculated with the help of the following formula.

$Kd = \frac{I}{Np}(1 - t)$

Where, Kd = Cost of debt capital

I = Annual interest payable

Np = Net proceeds of debenture

t = Tax rate

Cost of Perpetual Debt and Redeemable Debt

It is the rate of return which the lenders expect. The debt carries a certain rate of interest.

Kdb = $\frac{I+1/n(P-Np)n}{1/n(p+Np)/2}$

Where, I = Annual interest payable

P = Par value of debt

Np = Net proceeds of the debenture

n = Number of years to maturity

Kdb = Cost of debt before tax.

Cost of debt after tax can be calculated with the help of the following formula:

Kda =Kdb ×(1–t)

Where, Kda = Cost of debt after tax

Kdb = Cost of debt before tax

t = Tax rate

Cost of Preference Share Capital

Cost of preference share capital is the annual preference share dividend by the net proceeds from the sale of preference share. There are two types of preference shares irredeemable and redeemable. Cost of redeemable preference share capital is calculated with the help of the following formula:

Kp=$\frac{Dp}{Np}$

Where, Kp = Cost of preference share

Dp = Fixed preference dividend

Np = Net proceeds of an equity share

Cost of irredeemable preference share is calculated with the help of the following formula:

Kp=$\frac{Dp+(P-Np)n}{(P+Np)/2}$

Where, Kp = Cost of preference share

Dp= Fixed preference share

P = Par value of debt

Np = Net proceeds of the preference share

n = Number of maturity period.

Cost of Equity

Cost of equity capital is the rate at which investors discount the expected dividends of the firm to determine its share value. Conceptually the cost of equity capital (Ke) defined as the "Minimum rate of return that a firm must earn on the equity financed portion of an investment project in order to leave unchanged the market price of the shares".

Cost of equity can be calculated from the following approach:

• Dividend price (D/P) approach

• Dividend price plus growth (D/P + g) approach

• Earning price (E/P) approach
• Realized yield approach.

- Dividend Price Plus Growth Approach

The cost of equity is calculated on the basis of the expected dividend rate per share plus growth in dividend. It can be measured with the help of the following formula:

$Ke= \frac{D}{Np}+g$

Where, Ke = Cost of equity capital
D = Dividend per equity share
g = Growth in expected dividend
Np = Net proceeds of an equity share

- Earning Price Approach

Cost of equity determines the market price of the shares. It is based on the future earning prospects of the equity. The formula for calculating the cost of equity according to this approach is as follows.

$Ke= \frac{E}{Np}$

Where, Ke = Cost of equity capital
E = Earning per share
Np = Net proceeds of an equity share

Realized Yield Approach

It is the easy method for calculating cost of equity capital. Under this method, cost of equity is calculated on the basis of return actually realized by the investor in a company on their equity capital.

$Ke=PVf \times D$

Where, Ke = Cost of equity capital.
PVf = Present value of discount factor.
D = Dividend per share.

Cost of Retained Earnings

Retained earnings is one of the sources of finance for investment proposal; it is different from other sources like debt, equity and preference shares. Cost of retained earnings is the same as the cost of an equivalent fully subscripted issue of additional shares, which is measured by the cost of equity capital. Cost of retained earnings can be calculated with the help of the following formula:

$Kr =Ke (1 – t) (1 – b)$

Where, Kr =Cost of retained earnings
Ke=Cost of equity
t=Tax rate
b=Brokerage cost

Measurement of Overall Cost of Capital

It is also called as weighted average cost of capital and composite cost of capital. Weighted average cost of capital is the expected average future cost of funds over the long run found by weighting the cost of each specific type of capital by its proportion in the firms capital structure.

The computation of the overall cost of capital (Ko) involves the following steps.

(a) Assigning weights to specific costs. (b) Multiplying the cost of each of the sources by the appropriate weights. (c) Dividing the total weighted cost by the total weights. The overall cost of capital can be calculated with the help of the following formula;

Ko =Kd Wd + Kp Wp + Ke We + Kr Wr

Where, Ko = Overall cost of capital

Kd = Cost of debt

Kp = Cost of preference share

Ke = Cost of equity

Kr = Cost of retained earnings

Wd= Percentage of debt of total capital

Wp = Percentage of preference share to total capital

We = Percentage of equity to total capital

Wr = Percentage of retained earnings

Weighted average cost of capital is calculated in the following formula also:

$$Kw=\frac{\sum xw}{\sum w}$$

Where, Kw = Weighted average cost of capital

X = Cost of specific sources of finance

W = Weight, proportion of specific sources of finance.

MODEL QUESTIONS

1. What is cost of capital?
2. Define cost of capital.
3. Cost of capital computation based on certain assumptions. Discuss.
4. Explain the classification of cost.
5. Mention the importance of cost of capital.
6. Explain the computation of specific sources of cost of capital.
7. How over all cost of capital is calculated?