Importance and Impact of the Capital Structure
Chapter -3
IMPORTANCE AND IMPACT OF THE CAPITAL STRUCTURE

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Chapter -3
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3.1 Introduction

The term structure is used in business in several different ways. The terms "governance," "business," and "legal," are all associated with their own "structures" for instance, referring to aspects of company set up and operation.

Two other similar terms are frequently used to describe the nature of the company's financial position: Financial structure and capital structure. These structures concern the "Liabilities + Equities" side of balance sheet equation:

**Assets = Liabilities + Equities**

Financial structure refers to the balance between all of the company's liabilities and its equities. It thus concerns the entire "Liabilities + Equities" side of the balance sheet.

Capital structure, by contrast, includes equities and only the long term liabilities. It refers to the makeup of the company's underlying value, in particular the relative balance between funding from equities and funding from long term debt. The presumption is that funds from both sources are used for acquiring income-producing assets. Capital structure is also known as capitalization.
A capital structure is a mix of a company's long-term debt, specific short-term debt, common equity and preferred equity. The capital structure is how a firm finances its overall operations and growth by using different sources of funds.

Debt comes in the form of bond issues or long-term notes payable, while equity is classified as common stock, preferred stock or retained earnings. Short-term debt such as working capital requirements is also considered to be part of the capital structure.

A company’s capital structure points out how its assets are financed. When a company finances its operations by opening up or increasing capital to an investor (preferred shares, common shares, or retained earnings), it avoids debt risk, thus reducing the potential that it will go bankrupt. Moreover, the owner may choose debt funding and maintain control over the company, increasing returns on the operations.

Debt takes the form of a corporate bond issue, long-term loan, or short-term debt. The latter directly impacts the working capital. Having said that, a company that is 70% debt-financed and 30% equity-financed has a debt-to-equity ratio of 70%; this is the leverage. It is very important for a company to manage its debt and equity financing because a favorable ratio will be attractive to potential investors in the business.

The relative proportion of various sources of funds used in a business is termed as financial structure. Capital structure is a part of the financial structure and refers to the proportion of the various long-term sources of financing. It is concerned with making the array of the sources
of the funds in a proper manner, which is in relative magnitude and proportion.

The capital structure of a company is made up of debt and equity securities that comprise a firm’s financing of its assets. It is the permanent financing of a firm represented by long-term debt, preferred stock and net worth. So it relates to the arrangement of capital and excludes short-term borrowings. It denotes some degree of permanency as it excludes short-term sources of financing.

Again, each component of capital structure has a different cost to the firm. In case of companies, it is financed from various sources. In proprietary concerns, usually, the capital employed, is wholly contributed by its owners. In this context, capital refers to the total of funds supplied by both—owners and long-term creditors.

The question arises: What should be the appropriate proportion between owned and debt capital? It depends on the financial policy of individual firms. In one company debt capital may be nil while in another such capital may even be greater than the owned capital. The proportion between the two, usually expressed in terms of a ratio, denotes the capital structure of a company.

Capital structure is a term that describes the proportion of a company's capital, or operating money, that is obtained through debt versus the proportion obtained through equity. Debt includes loans and other types of credit that must be repaid in the future, usually with interest. Equity involves selling a partial interest in the company to investors, usually in the form of stock. In contrast to debt financing,
equity financing does not involve a direct obligation to repay the funds. Instead, equity investors become part-owners and partners in the business, and thus earn a return on their investment as well as exercising some degree of control over how the business is run.

Since capital is expensive for small businesses, it is particularly important for small business owners to determine a target capital structure for their firms. Capital structure decisions are complex ones that involve weighing a variety of factors. In general, companies that tend to have stable sales levels, assets that make good collateral for loans, and a high growth rate can use debt more heavily than other companies. On the other hand, companies that have conservative management, high profitability, or poor credit ratings may wish to rely on equity capital instead.

3.2 Meaning of capital structure

The financial objective of any business organization is to employ funds in the proportion necessary to increase the productivity of the remaining factors of the production over the long run. Given the objective of the firm to maximize the value of the firm, the firm should select a capital structure which will help in achieving this objective of financial management.

Capital structure refers to the long term source of funds such as equity share capital (including reserves & surplus). Preference share capital, debentures and long term debts. Capital decision refers to the way
in which its long term obligations are distributed between different classes of owners and creditors.

So capital structure decision is to decide the right mixture of debt and equity in such a manner that, equity share holders of a company get the maximum return on their investments in the company in form of dividend and capital appreciation.

Selecting the proper financing instrument is a two-step process. The first step is to decide how much funds are required frequently and this is the straight forward outcome of the forecasting and budgeting process. Once this decision is made second step is to determine the appropriate amount of different sources of finance for satisfying investment needs of the firm. The decision made in this respect is known as capital structure decision. This is the heart of the financing decision. The proper choice will provide the company with required cash on attractive terms and improper choice may result in excessive cost, under risk or an inability to sell the securities.

Financial experts, however, differs in respect of composition of funds in capital structure. Guthman and Doughall state that “Phrase capital structure may be used to cover the total investment of bond holders including any long term debts such as mortgages and long term loans as well as total stock holder’s investments including retained earnings as well as original investment. This view is also held by walker. In contrast, Osburn “ capital structure as financial plan according to which all assets of a company are furnished” this capital is supplied by long term and short term borrowings, the sale of common and preferred
stock and reinvestment of earnings. Nevertheless both these concepts of capital structure are correct; however, the former concept is widely accepted. A financial manager has to assemble funds from numerous sources to satisfy varied financial needs of the firm. A firm requires long term funds to acquire fixed assets and to carry a portion of current as permanent investment in fixed assets to ensure uninterrupted and smooth flow of business activity. It requires short terms funds also to cover day to day business needs.

Frequently, the firm may need medium term capital for a period of three to five years for financing aggressive advertising campaign and for complete over hauling of its machines and equipment. Among these different kinds of capital requirement, needs for acquiring fixed assets are of considerable significance because an amount of funds has to be arranged for a long period of time.

When a firm wants to invest in long term assets, it must find the means to finance them. The firm can rely to some extent on funds generated internally.

However, in most cases internal sources are not enough to support investment plan. When that happens the firm may have to curtail its investment plans or seek external funding. Most firms choose the latter course of action. The firms supplement internal funding with external funding raised from a variety of sources. For this purpose, the general investing public, government and financial institution are approached frequently. The most popular media of acquiring funds from these sources are share and debenture. Considering varied notions and desires
of investors the company floats different kinds of securities to garner savings of the investors. These securities, therefore, constitute capital structure of a company. Thus, capital structure represents owned as well as borrowed funds.

3.2.1 OWNER'S FUNDS COMPRISE
a. Equity share capital
b. Preference share capital
c. Free reserve and surplus

3.2.2 BORROWED FUNDS COMPRISE
a. Debenture
b. Long term loans
c. Other debts

The decision regarding mix of capitalization is called capital structure decision. This decision should be taken after considering pros and cons of each source.

3.2.3 OWNER’S FUNDS:
a. EQUITY CAPITAL

Equity shares represent the ownership position in a company. It is considered as a cornerstone of the financial structure of a company without which the company cannot be founded. Equity share holders are the legal owners of the company. Ordinary shares are the source of permanent capital since they do not have a maturity date so it can be invested in building long-term investments like fixed assets. Management procures debt and preference share capital against of these shares. It does
not involve any fixed obligation for payment of divided. It is an appropriation of profit unlike interest on debt which is charge on profits.

On the other hand, the cost of equity capital is high: the rate of return required by equity shareholders is generally higher than the rate of return required by other investors. Secondly equity dividends are payable from post-tax earnings. They are not tax-deductible payments, issuing such as underwriting commission: brokerage and other issue expenses are higher in case of equity shares compared to other securities. Sale of equity stock to outsiders may result in dilution of control of the existing shareholders.

b. PREFERNCE CAPITAL

Preference capital represents that part of share capital of a company which carries preference rights and privileges with respect to income and assets over equity stock. Preference capital represents a hybrid form of financing. It has some characteristics of equity and some attributes of debentures. It resembles equity in the following ways: (i) preference dividend is payable only out of distributable profits (ii) preference dividend is not an obligatory payment. (iii) preference dividend is not a tax-deductible payment. On the other hand, it is similar to debentures in several ways: (i) the dividend rate on preference capital is usually fixed (ii) the claim of preference shareholders is prior to the claim of equity shareholders. (iii) preference shareholders do not normally enjoy the right to vote and (iv) preference shareholders do not share in the residual earnings.
In recent years preferred shares are becoming popular instrument for corporate India to raise funds. It is flogged by fast-rising interest rates and hungry for short-term cash. Corporate India is exhuming a money mopping device long buried under the first ground laid by free pricing of equity and the preference shares.

A large number of business organizations such as Reliance Industries, MAC Industries, Mysore cement, DCM, Bajaj Auto, Lloyds’ steel, SRF, Bombay dyeing, Mahindra and Mahindra etc. have issued preference shares.

One of the prominent factors responsible for increasing popularity of preference shares is cheaper cost against the backdrop of debts having spiraled from 18% in the 1995 to 22% in 1998 and cost of loan from inter deposit market cost having gone up to almost 28% today whereas preference shares involve the paying of dividends of only about 13% resulting in to fat savings. Secondly, there is no legal obligation to pay dividend. A company does not face bankruptcy if it skips preference dividends.

There is no redemption liability in the case of perpetual preference shares even in the case of redeemable preference shares, financial distress may not be much because periodic sinking funds payments are not required and redemption can be delayed without significant penalties. Preference capital is generally regards as part of net worth. Hence, it enhances the creditworthiness of the firm. Preference shares do not under normal circumstances carry voting right.
Hence, there is no dilution of control. No collateral is pledged in favour of preference share holders. Hence, the mortgage able assets of the firm are conserved.

Preference capital, however suffers from serious short comings. Dividend to be paid on preference shares is not tax-deductible. Though there is no legal obligation to pay preference dividends, skipping them can adversely affect the image of the firm in the capital.

c. RETAINED EARNINGS

Depreciation charges and retained earnings are also a part of the internal sources of finance available to the company. Retained earnings are viewed very favourably by most corporate managements because retained earnings are readily available internally. Retained earnings effectively represent infusion of additional equity in the firm. Use of retained earnings in lieu of external equity eliminates issue costs and losses on account of under pricing.

There is no dilution of control when firm relies on retained earnings. On the other hand, the amount that can be raised by way of retained earnings may be limited. Further, the quantum of retained earnings tends to be highly variable. The opportunity cost of retained earnings is quite high. Retained earnings in essence represent dividends foregone by equity share holders.
3.2.4 BORROWED FUNDS

a. DEBENTURES/BONDS

Akin to promissory notes, debentures are instruments for raising long term debt capital. The firm promises to pay interest and principal as stipulated.

Debenture holders are creditors of the company. An alternative form of debentures is bonds are issued mostly by public sector companies in India. In USA, the term debenture is generally understood to mean unsecured bond.

Debentures are favourable to issuing company in several ways. The specific cost of debt, represented by debentures, is lower than the cost of equity capital. This is because the interest on debentures is tax deductible and hence the effective post tax cost of debenture is lower. Debenture financing does not result in dilution of control since debenture holders are not entitled to vote. The fixed monetary burden associated with debenture financing, irrespective of changes in price level, has appealed to many companies.

On the other hand, the debenture interest and capital repayments are obligatory payments. Failure to meet these payments can cause a great deal of embarrassment. The protective covenants attached to a debenture issue may be restrictive. Debenture financing enhances the financial risk associated with the firm. This may increase the cost of equity capital.
b. TERM LOANS

Term loans represent a source of debt finance which is generally repayable in more than one year but less than 10 years which are obtained from the banks and financial institutions. In India, they are generally obtained for financing large expansion, modernization or diversification projects. Therefore, it is also known as project financing.

In post-tax terms, the cost of term loans is lower than the cost of equity capital or preference capital. Term loans do not result in dilution of control, as lenders do not have right to vote.

On the other hand, the principal and interest payments on term loans are obligatory payments. Failure to meet these payments may threaten the existence of the firm as term loans increase the financial risk of the firm. This, in turn tends to raise the cost of equity capital. Term loan contracts also carry restrictive covenants which may reduce managerial freedom. Further, they entitle the lenders to put their nominees on the board of the borrowing company.

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3.3 TRADING ON EQUITY

The use of fixed - charge sources of funds, such as debt and preference capital along with owner’s equity in capital structure is known as financial leverage or trading on equity. Trading on equity is the financial process of using debt to produce gain for the residual owners. It acts as a lever to magnify the influence of fluctuation in earnings. Larger the magnitude of debt in capital structure, the higher is the variation in EPS given any variation in EBIT. So increased use of debt is useful as long as borrowed capital can be made to pay more than what it costs. It will lead to decrease in profitability rate when it costs more than what it cams. So the firm’s financing decision is whether to raise all funds by equity issues, or to use fixed charge sources or to use combination of the two in proper proportion. The EPS also increases when the preference share capital is used to acquire assets. But the leverage impact is more pronounced in case of debt because (i) the cost of debt is usually lower than the cost of preference share capital and (ii) the interest paid on debt is tax deductible.

3.4 TYPES OF LEVERAGE

Leverage is very scientific tool in the hand of finance manager. Finance manager uses this tool for making effective financial structure of company. Financial structure is just mix of debt and equity and with help of leverage, finance manager gets fund with effective ratio of debt and equity.
In simple word leverage is power and relationship between two interrelated variables. These variables may be output, sale, cost and profit. Finance manager calculates these leverage by apply formula and then uses them for taking decision in favour of company's shareholder. Main aim of leverage testing is maximize the earning of shareholder and reduce the risk of company.

**Types of leverage:-**

Company's finance manager tests three type leverages:-

1. Operating leverage is % change in earnings before interest and tax divided by % change in sale. If company is charging fixed cost, the operating leverage tells the EBIT will greater than sale because due to increasing sale of fixed cost per unit will decrease and it will increase EBIT higher than sale.

   **Formula**

   Operating Leverage = % change in EBIT / % change in Sale

   This leverage is very helpful for finance manager because, if operating leverage is more than or suppose it is two then it means if sale will increase 100% then earning will increase 200%. At this time, finance manager can get more loans for increasing the earning of shareholders.

2. Financial leverage

   It is second type of leverage. Financial leverage is known as trading on equity. If any company's finance manager knows that company's return on investment is more than interest on loan or borrowing obligation. At this time, if company needs more money, then finance manager gets its loan and bought the asset from same loan. So,
any technique in which any asset is purchased with loan and trying to increase EPS, then this is called financial leverage.

Formula for calculating financial leverage

\[ \text{Financial leverage} = \frac{\% \text{ change in Earning per share}}{\% \text{ change in earnings before interest and tax}} \]

\[ = \frac{\% \text{ change in EPS}}{\% \text{ change in EBIT}} \]

This formula explains the relationship between % change in EPS and % change in EBIT and after deep study of this financial leverage, finance manager decides to get appropriate loan for buying assets.

3. Combined leverage

It is the product of operating leverage and financial leverage.

Combined leverage = Operating leverage X financial leverage

\[ = \frac{\% \text{ change in EBIT}}{\% \text{ change in sale}} \times \frac{\% \text{ change in EPS}}{\% \text{ change in EBIT}} \]

3.5 FINANCIAL LEVERAGE

In finance, leverage (sometimes referred to as gearing in the United Kingdom and Australia) is any technique to multiply gains and losses. Most often it involves buying more of an asset by using borrowed funds, with the belief that the income from the asset or asset price appreciation will be more than the cost of borrowing. Almost always this involves the risk that borrowing costs will be larger than the income from the asset, or that the value of the asset will fall, leading to incurred losses.

While leverage magnifies profits when the returns from the asset more than offset the costs of borrowing, losses are magnified when the
opposite is true. A corporation that borrows too much money might face bankruptcy or default during a business downturn, while a less-leveraged corporation might survive. An investor who buys a stock on 50% margin will lose 40% of the money invested if the stock declines 20%.

Risk may be attributed to a loss in value of collateral assets. Brokers may require the addition of funds when the value of securities holds declines. Banks may fail to renew mortgages when the value of real estate declines below the debt's principal. Even if cash flows and profits are sufficient to maintain the ongoing borrowing costs, loans may be called.

This may happen exactly when there is little market liquidity and sales by others are depressing prices. It means that as things get bad, leverage goes up, multiplying losses as things continue to go down. This can lead to rapid ruin, even if the underlying asset value decline is mild or temporary. The risk can be mitigated by negotiating the terms of leverage, by maintaining unused room for additional borrowing, and by leveraging only liquid assets.

On the other hand, the extreme level of leverage afforded in forex trading presents relatively low risk per unit due to its relative stability when compared with other markets. Compared with other trading markets, forex traders must trade a much higher volume of units in order to make any considerable profit. For example, many brokers offer 100:1 leverage for investors, meaning that someone bringing $1,000 can control $100,000 while taking responsibility for any losses or gains their
investments incur. This intense level of leverage presents equal parts risk and reward.

There is an implicit assumption in that account, however, which is that the underlying levered asset is the same as the unlevered one. If a company borrows money to modernize, or add to its product line, or expand internationally, the additional diversification might more than offset the additional risk from leverage. Or if an investor uses a fraction of his or her portfolio to margin stock index futures and puts the rest in a money market fund, he or she might have the same volatility and expected return as an investor in an unlevered equity index fund, with a limited downside. Or if both long and short positions are held by a pairs-trading stock strategy the matching and off-setting economic leverage may lower overall risk levels.

So while adding leverage to a given asset always adds risk, it is not the case that a levered company or investment is always riskier than an unlevered one. In fact, many highly levered hedge funds have less return volatility than unlevered bond funds, and public utilities with lots of debt are usually less risky stocks than unlevered technology companies.

After the 1980s, quantitative limits on bank leverage were rare. Banks in most countries had a reserve requirement, a fraction of deposits that was required to be held in liquid form, generally precious metals or government notes or deposits. This does not limit leverage. A capital requirement is a fraction of assets that is required to be funded in the form of equity or equity-like securities. Although these two are often confused, they are in fact opposite. A reserve requirement is a fraction of
certain liabilities (from the right hand side of the balance sheet) that must be held as a certain kind of asset (from the left hand side of the balance sheet). A capital requirement is a fraction of assets (from the left hand side of the balance sheet) that must be held as a certain kind of liability or equity (from the right hand side of the balance sheet). Before the 1980s, regulators typically imposed judgmental capital requirements a bank was supposed to be "adequately capitalized," but not objective rules.

National regulators began imposing formal capital requirements in the 1980 and by 1988 most large multinational banks were held to the Basel I standard. Basel I categorized assets into five risk buckets, and mandated minimum capital requirements for each. This limits accounting leverage. If a bank is required to hold 8% capital against an asset, that is the same as an accounting leverage limit of 1/0.08 or 12.5 to 1.

While Basel I is generally credited with improving bank risk management it suffered from two main defects. It did not require capital for all off-balance sheet risks (there was a clumsy provisions for derivatives, but not for certain other off-balance sheet exposures) and it encouraged banks to pick the riskiest assets in each bucket (for example, the capital requirement was the same for all corporate loans, whether to solid companies or ones near bankruptcy, and the requirement for government loans was zero).

Work on Basel II began in the early 1990s and it was implemented in stages beginning in 2005. Basel II attempted to limit economic leverage rather than accounting leverage. It required advanced banks to estimate the risk of their positions and allocate capital accordingly. While
this is much more rational in theory, it is more subject to estimation error, both honest and opportunitistic. The poor performance of many banks during the financial crisis of 2007–2009 led to calls to ramose leverage limits, by which most people meant accounting leverage limits, if they understood the distinction at all. However, in view of the problems with Basel I, it seems likely that some hybrid of accounting and notional leverage will be used, and the leverage limits will be imposed in addition to, not instead of, Basel II economic leverage limits.

3.6 CAPITAL STRUCTURE THEORIES

Capital Structure Theories The debate on optimal capital structure that leads to maximum market valuation and minimum cost of capital is perennial. There are two extreme views on this. The traditional school, at one extreme, argues that there is an optimum capital structure at which the value of the firm is highest and the cost of capital is at its lowest. In extreme contrast to this, however, Modigliani and Miller offer convincing arguments in support of their opinion that there does not exist an optimal capital structure at any stage and the market value of the firm is not influenced in any way by leverage factor. In between these two extreme views, there is an intermediate version known as net operating income approach which argues that risk content of the firm is in no way affected by changes in composition of capitalization. As a matter of fact they redistribute this risk among shareholders. Hence there will be no leverage effect on value of the firm. However, owing to tax benefit of debt financing and market imperfections, the management employs a judicious
mix of financial claims and chooses an optimum capital structure which would minimize the cost of capital and maximize the market value of the firm. The Net Income and the Net Operating Income Approaches: Net Income and the Net Operating Income Approaches were developed by David Durand.

Consequently the interest rate on debt (Ki) and the equity capitalization rate (Ke) remain constant. Therefore, with the increased use of leverage overall cost of capital declines and the total value of firm rises. The overall cost of capital (Ko) under this approach is measured by Net Operating Income. Total value of the firm. The NI approach recognizes that there exists an optimum capital structure which is reached when the cost of capital is at the lowest. However, a critical point may be reached beyond which the cost of capital may start rising because of the increase in the costs of debt and equity. The net operating income approach, on the other hand, contends that the capital structure does not matter, and that the firm cannot affect its overall cost of capital through leverage. Thus overall cost of capital remains constant. This results from the fact that as more debt is incurred, equity investors, in order to compensate for the increased financial risk, increase their capitalization rate of earnings in such a way as to cancel out the benefit derived from the use of debt, and the average cost remains unchanged. But it is possible that beyond a high level of leverage the cost of debt may increase. In such a case, the cost of equity will have to fall to keep the cost of capital function horizontal. Thus, there is no single point or range where the capital structure is optimum.
The NOI approach does not provide operational justification for the irrelevance of capital structure. M.M. Thesis does support the NOI approach relating to the independence of the cost of capital of the degree of leverage at any level of debt equity ratio. It provides behavioural justification for constant overall cost of capital and therefore total value of the firm. In other words, the M.M. approach maintains that the weighted average cost of capital does not change with changes in the degree of leverage. The M.M. theory is based on three basic propositions. They are: 1. Market value of any firm is independent of its capital structure and is given by capitalizing its expected return at the rate appropriate to its class. The average cost of capital to any firm is completely independent of its capital structure and is equal to the capitalization rate of a pure equity stream of its class. 2. The expected yield of a share stock is equal to the appropriate capitalization rate for a pure equity stream in the class, plus a premium related to financial risk equal to the debt equity ratio times \( r \) the spread between capitalization rate and yield on debt. The cut off point for investment in the firm in all the cases will be the capitalization rate and will be unaffected by the type of security used to finance the investment. These propositions are based on a simple switching mechanism called arbitrage. Arbitrage refers to an act of buying asset-security in one market (at lower prices) and selling it in another (at a higher price). M.M. contend that market value of those firms which are identical except for the difference in the pattern of financing will not vary because arbitrage process will drive the total values of the two firms together, Rational investors, according to them,
will employ arbitrage in the market to prevent the existence of two assets in the same risk class and with same expected returns from selling at different prices. The theoretical validity of the M.M. proposition (as many authors agreed) is difficult to counter. However, they have been criticized bitterly by numerous experts questioning the very assumptions on which the edifice of the theory is founded. The basic assumption of M.M. is that individuals through use of leverage can alter corporate leverage. This argument cannot be supported in a practical context for it is extremely doubtful whether personal investor would substitute personal leverage for corporate leverage c since they do not have the same risk characteristics. Nowhere in the world has corporate income remained untaxed. Further, taxation laws have provided for deduct ability of interest payments on debt for calculating taxable income. If this is so, debt becomes relatively a much cheaper means of financing and the firm is naturally encouraged to employ leverage. In view of this controversy, Modigliani and Miller in their subsequent article in 1963 admitted that, given the tax factor, the overall cost of capital can be lowered as more debt is inducted in the capital structure of the firm. In spite of these limitations, M.M. Thesis serves as an aid in understanding the capital structure theories.

Traditional Approach:- The traditional approach is midway between the NI and NOI approaches. It part-takes some features of both these approaches. One of the foremost advocates of the traditional view is Ezra Solomon. The crux of the traditional view relating to leverage and valuation is that through judicious use of "debt to equity proportions", a
firm can increase its total value and thereby reduce its overall cost of capital. The rationale is that debt is a relatively cheaper source of fund as compared to ordinary shares. With a change in leverage that is by using more debt in the place of equity, a cheaper source of fund replaces a source of fund which involves, by comparison, a higher cost. This obviously causes a decline in the overall cost of capital and a rise in the market value of the firm.

Solomon, in his interpretation of the traditional view, says that the impact of leverage on cost of capital and value of the firm can be studied in three distinct stages as leverage is increased from zero. In the first stage, cost of equity rises as debt is added but does not increase fast enough to offset the advantage of low cost debt; cost of debt remains constant or rises modestly. As a result, the value of the firm increases or the overall cost of capital falls with increasing leverage. In the second phase, the addition of debt, after a certain degree of leverage has been reached, provides only a moderate increase in market value. As a consequence cost of capital remains relatively constant. Finally, beyond the acceptable limit of leverage, the value of the firm decreases or the cost of capital increases with the leverage. This happens because investors perceive a high degree of financial risk and this increases equity and debt capitalization rates. The overall effect of these three stages suggests that the cost of capital is a function of leverage.

Other Approaches: In addition to the approaches examined regarding the effect of leverage on cost of capital and market value of the
firm, two additional concepts are useful in the formulation of an optimum capital structure.

The first, of these deals with a firm's ability to maintain adequate cash to meet future fixed charges such as interest payments, lease charges, repayment of principal on debt, and preferred stock dividends. This concept is advocated by Donaldson. He establishes a refinement of the concept by suggesting that cash flows should be examined under the most adverse conditions. To determine debt capacity, management should compare these flows with the cash required to meet the firm's fixed charges at each level of debt. If there is no probability of being out of cash, the firm is said to have unused debt capacity. If, however, there is a probability that future cash flows will not meet the fixed charges during adverse periods, management must decide, whether it wants to accept the risk involved; if not, debt must be reduced. Childs has suggested another method in determining the proper capital structure. He states that there are six determinants namely borrowing, reserve, financial insurance, tax, savings and pools of capital which would serve as a guide in determining the level of debt that a firm can afford. Although each determinant must be considered, Childs thinks that the first three are the most important, that is, debt should not be used in an amount that will (i) destroy the firm's reserve to borrow (ii) eliminate financial insurance or (iii) cause cost of capital to increase. Childs believes that the nature of the business and its inherent risks affect the firm's ability to carry debt; as a consequence, management must measure the risk associated with the firm and relate it to the amount of debt that will be employed. Thus far, the
discussion has touched on the theories of capital structure as related to private enterprises. Now we make an attempt to find out the relationship between capital structure and the cost of capital in the selected larger cooperatives.

The concept of optimal capital structure has drawn a great deal of attention in accounting and finance literature. Capital structure means the proportion of debt and equity in the total capital of a firm. The objective of a firm is to maximize the value of its business.

This is done by maximizing market value of the shares and minimizing the cost of capital of a firm. An optimal capital structure is that proportion of debt and equity, which fulfils this objective of a firm. Thus an optimal capital structure tries to optimize two variables at the same time: cost of capital and market value of shares.

3.7 CONCEPT OF OPTIMAL CAPITAL STRUCTURE:

Every firm should aim at achieving the optimal capital structure and try to maintain it. Optimal capital structure refers to the combination of debt and equity in total capital that maximizes the value of the company. An optimal capital structure is designated as one at which the average cost of capital is the lowest which produces an income that leads to maximization of the market value of the securities at that income.

Optimal capital structure may be defined as that relationship of debt and equity which maximizes the value of company’s share in the stock exchange.
Kulkarni and Satyaprasad defined optimum capital structure as ‘the one in which the marginal real cost of each available method of financing is the same’. They included both the explicit and implicit cost under the term real cost.

According to Prof Ezra Solomon, ‘Optimal capital structure is that mix of debt and equity which will maximize the market value of a company’. Hence there should be a judicious combination of the various sources of long-term funds which provides a lower overall cost of capital and so a higher total market value for the capital structure. Optimal capital structure may thus be defined as, the mixing of the permanent sources of funds used by the firm in a manner that will maximize the company’s common stock price by minimizing the firm’s composite cost of capital.

3.8 FEATURES OF OPTIMAL CAPITAL STRUCTURE:

The salient features of an optimal capital structure are described below:

a) The relationship of debt and equity in an optimal capital structure is made in such a manner that the market value per equity share becomes maximum.

b) Optimal capital structure maintains the financial stability of the firm.

c) Under optimal capital structure the finance manager determines the proportion of debt and equity in such a manner that the financial risk remains low.
d) The advantage of the leverage offered by corporate taxes is taken into account in achieving the optimal capital structure.

e) Borrowings help in increasing the value of company leading towards optimal capital structure.

f) The cost of capital reaches at its minimum and market price of share becomes maxi-mum at optimal capital structure.

3.9 CONSTRAINTS IN DESIGNING OPTIMAL CAPITAL STRUCTURE:

The capital structure of a firm is designed in such a manner that the cost of capital is kept at its lowest and the value of the firm reaches its maximum. The firm manoeuvres its debt-equity proportion to reach the optimum level. However in practice, reaching the level of optimum capital structure is a difficult task due to several constraints that appear on the way of implementing that structure.

The main constraints in designing the optimum capital structure are:

1. The optimum debt-equity mix is difficult to ascertain in true sense.

2. The concept of appropriate capital structure is more realistic than the concept of optimum capital structure.

3. It is difficult to find an optimum capital structure as the extent to which the market value of an equity share will fall due to increase in risk of high debt content in capital structure, is very difficult to measure.
4. The market price of equity share rarely changes due to changes in
debt-equity mix, so there cannot be any optimum capital structure.

5. It is impossible to predict exactly the amount of decrease in the
market value of an equity share because market factors that
influence market value of equity share are highly complex.

3.10 IMPORTANCE OF CAPITAL STRUCTURE:

Decisions relating to financing the assets of a firm are very crucial
in every business and the finance manager is often caught in the dilemma
of what the optimum proportion of debt and equity should be. As a
general rule there should be a proper mix of debt and equity capital in
financing the firm’s assets. Capital structure is usually designed to serve
the interest of the equity shareholders.

Therefore instead of collecting the entire fund from shareholders a
portion of long term fund may be raised as loan in the form of debenture
or bond by paying a fixed annual charge. Though these payments are
considered as expenses to an entity, such method of financing is adopted
to serve the interest of the ordinary shareholders in a better way.

The importance of designing a proper capital structure is explained
below:

Value Maximization:

Capital structure maximizes the market value of a firm, i.e. in a
firm having a properly designed capital structure the aggregate value of
the claims and ownership interests of the shareholders are maximized.
Cost Minimization:

Capital structure minimizes the firm’s cost of capital or cost of financing. By determining a proper mix of fund sources, a firm can keep the overall cost of capital to the lowest.

Increase in Share Price:

Capital structure maximizes the company’s market price of share by increasing earnings per share of the ordinary shareholders. It also increases dividend receipt of the shareholders.

Investment Opportunity:

Capital structure increases the ability of the company to find new wealth-creating investment opportunities. With proper capital gearing it also increases the confidence of suppliers of debt.

Growth of the Country:

Capital structure increases the country’s rate of investment and growth by increasing the firm’s opportunity to engage in future wealth-creating investments.

Patterns of Capital Structure:

There are usually two sources of funds used by a firm: Debt and equity. A new company cannot collect sufficient funds as per their requirements as it has yet to establish its creditworthiness in the market; consequently, they have to depend only on equity shares, which is the simple type of capital structure. After establishing its creditworthiness in the market, its capital structure gradually becomes complex.

A complex capital structure pattern may be of following forms:
i. Equity Shares and Debentures (i.e. long term debt including Bonds etc.),

ii. Equity Shares and Preference Shares,

iii. Equity Shares, Preference Shares and Debentures (i.e. long term debt including Bonds etc.).

However, irrespective of the pattern of the capital structure, a firm must try to maximize the earnings per share for the equity shareholders and also the value of the firm.