LESSON – 9

CAPITALIZATION

9.0 Objective :
After reading this lesson, you should be able to:

- Explain the concept of capitalization
- Know the causes and effects of over-capitalization
- Understand the causes and effects of under-capitalization
- Achieve the optimal capitalization

Structure

9.1 Introduction
9.2 Basis of Capitalization
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9. 1. INTRODUCTION

The financing decision in a firm involves two basic issues. The first is concerned with the amount of capital employed in a firm which is often referred to as capitalization. The other is related to the proportion in which different forms of capital make up the firm's capital structure. The present chapter deals with former issue.

The term, capitalization refers to the magnitude of capital employed in a firm. This includes both long-term and short-term capital. Any financing decision in respect of the capitalization is of much significance to the firm. This because any deviation from optimum capitalization may lead to unhealthy environment; and come in the way of maximization of the value of the firm. If the size of the capital is more than optimal, a part of it will remain idle, this

will entail on the profitability of operations. If it is less than optimal, this will affect liquidity. This is why an estimate of the firm's capital requirements must be made very carefully, after a through study of the cost of the assets and the earning capacity of the firm.

Definition of Capitalization:

Guthmann and Dougall defines the capitalization as the sum of the par value of the outstanding stocks and the bonds.

According to **A.S.Dewing** the term, capitalization includes capital stock and debt.

According to **Husband and Dockeray**, the ordinary meaning of capitalization is the computation, appraisal or estimation of the present values.

Bonneville and Deway defines the capitalization as the balance sheet values of stocks and bonds outstanding.

In the words of **Walker and Baughn**, "Capitalization refers only the long-term debt and capital stock, and short-term creditors do not constitute. In reality total capital is furnished by short-term creditors and long-term creditors".

The capital structure or the capitalization of an undertaking refers to the way in which the long-term obligations of an enterprise depend on its expected average net income. From the viewpoint of investors, the yield on the securities, which have been issued, should be comparable to the yields of other securities, which are subject to the same kinds of risk. The rate at which prospective earnings are capitalized will vary, for it is a subjective measure of risk and would, therefore, be different for firms in different fields of business activity. If the income is expected to be regular, the rate would be lower than that for a highly speculative venture. It would be higher for a new venture than for one, which is well established. It would be low then business conditions are brisk, and high when they are slack, for then a greater risk is involved in capitalization.

The need for capitalization arises in all the phases business cycle. Estimation of total funds or capital arises in the initial stages to start the business unit. The requirement of capital arises to make investments on capital assets viz., plant, machinery, land and building etc. Funds are also needed to meet the working capital through which raw materials, cash, components and stocks are provided. At the time of growth stage, finance is needed for expansion, introducing technology, modernization programmes. Hence, arrangement of capital in made through proper planning. Though the firm enjoys highest reputation, goodwill and credit worthiness at the saturation stage, it has to diversify its products to stay on in the market. Product diversification, improvement in the existing products requires huge sums of money. This can be arranged through reorganizing the capital structure.

Comparison of Capital and Capitalization

Capital	Capitalization
The term capital refers to the total investment of a company in money.	Capitalization refers to the par value of securities.
Capital is also known as the total paid up values of shares (except debentures, bonds and other types of loans).	The term 'Capitalization' is used only in private and public limited companies.
The term capital is a Universal concept, which is used by all types of business, organization. (Private, public, partnership or proprietary concerns)	The term capitalization is not applicable to entrepreneurship and proprietary concerns.

9.2 BASIS OF CAPITALIZATION

After estimating the financial requirements of the business, the promoters of the company have to determine the value at which the company has to be capitalized. This will help them in determining the quantum of securities to be issued for raising the necessary funds. There are two recognized theories of capitalization for new companies; (i) Cost Theory, and (ii) Earnings Theory.

9.2.1 Cost Theory

According to this theory, the total amount of capitalization of a new company is arrived at by adding up the cost of fixed assets (such as plant, machinery, building, etc.), the amount of working capital and the cost of establishing the business (e.g., preliminary expenses, underwriting commission, expenses on issue of shares etc.). For example, if the fixed assets for a company would cost Rs.2,00,000, working capital required amounts to Rs.1,00,000, and the cost of establishing the business would amount to Rs.40,000, the amount of capitalization for the company would be 3,40,000. The company would sell securities (i.e., shares and debentures) of this amount.

Cost theory is useful in so far as it enables the promoters to know the amount of capital to be raised. However, it is unsatisfactory on account of several reasons. It fails to provide basis for ascertaining net-worth of the business in real terms since net-worth depends not on the cost of the assets but on its earning capacity. Moreover, assets might have been purchased at inflated prices or they might have become obsolete but all these aspects are ignored if capitalization of the company is determined on the basis of the original cost of the assets. The cost-based capitalization is not fair in case of companies having irregular earnings.

Example: 9.1 A company estimates that the

Fixed assets would cost Rs.100, 0000,
Preliminary expenses Rs.120, 000,
Working capital requirements would be Rs.480, 000.
The amount of capitalization for

Fixed assets	100,00,000
Preliminary expenses	1,20,000
Working capital	4,80,000
Total	106,00,000

The amount of Capitalization for the company would be Rs.106, 00,000. The company issue shares and debentures to raise the amount of Rs.106, 00,000. The cost theory helps the promoters to find the total amount of capital needed for establishing the business. According to Husband and Doceray, cost principle may appear to give an assurance that capitalization would, at the best be representative of the value of the enterprise.

However, the cost theory has not been considered efficient base on the following grounds:

i) It takes into consideration only the cost of assets and not the early capacity of the investments.
ii) Earnings of the company fluctuate when the asset becomes obsolete or idle. This will not be detected, if capitalization is made on the basis of cost.
iii) It is not suitable for such companies where its earnings are varying.

9.2.2 Earnings Theory:

According to this theory, the true value (capitalization) of an enterprise depends upon its earning capacity. In other words, the worth of a company is not measured by the capital raised but by the earnings made out of the productive harnessing of the capital. For this purpose a new company will have to estimate the average annual future earnings and the normal earning rate (also termed as capitalization rate) prevalent in the same industry. For example, if a new company estimates that its annual average earnings will amount to a sum of Rs.50,000, while the companies in the same industry are earning a return of 10% on their capital employed , the amount of capitalization for the company would be a sum of Rs.5,00,000 (i.e., 50,000 x 100/10).

This method has the advantage of correlating the value (capitalization) of a company directly with its earning capacity. However, it has a limitation. In case of new companies it may be difficult to estimate correctly the amount of future earnings. In case earnings are not correctly estimated, the capitalization based on earnings might prove to be risky for the company.

On account of the above risk, it is advisable to adopt the cost theory of capitalization in case of new companies.

Illustration 9.1

If a new company estimates that its annual average earnings will amount to a sum of the Rs.2,00,000, while the companies in the same industry are earning a return of 20% on their capital employed, the amount of capitalization for the company would be:

$$\text{Capitalization} = \frac{\text{Average annual future earnings}}{\text{Capitalization rate}} \times 100$$

$$= \frac{2,00,000 \times 100}{20} = \text{Rs.}10,00,000$$

Advantages:

This method correlates the value of a company directly with its earning capacity. Earnings theory acts a check on the costs of establishing new companies.

Disadvantages:

The process of estimating earnings for a new company is very difficult. A mistake committed at the time of estimating the earnings will be directly influencing the amount of capitalization.

9.3 Measurement of Capitalization:

Actual capitalization of a company is arrived at by adding the paid-up value of company's shares and debentures reserves and other surpluses, while proper capitalization of a company is arrived at according to any of the two theories, which have been explained in the preceding pages. In case a company's actual capitalization is more than its proper capitalization, the company is said to be 'over-capitalized'. In case the actual capitalization of the company is less than its proper capitalization, the company is said to be 'under-capitalized'. These terms are being explained in detail in the following pages.

9.4 Book Value Vs. Real Value

The existence or otherwise of over-capitalization can be conveniently ascertained by comparing the book value and real value of the equity shares of the company. Book value of equity shares is computed on the basis of net assets available for the equity shareholders as per books, while real value is ascertained on the basis of capitalized value of earnings for the equity shareholders. In case the book value exceeds the real value, the company is said to be over-capitalized. In a reverse case the company is under-capitalized.

Illustration 9.2

Following is the Balance Sheet of A Limited:

Liabilities	Rs.	Assets	Rs.
Share Capital:			
1,000 Equity Shares of		Sundry Debtors	40,000
Rs.10 each	10,000		
1,000, 10% Preference			
Shares of Rs.10 each	10,000		
Reserves and Surplus	10,000		
Sundry Creditors	10,000		
	40,000		40,000

The normal earning rate in case of similar companies is 15%. Ascertain whether the company is properly capitalized when earnings available for equity shareholders are:

1) Rs.1,000 ; 2) Rs.5,000 ; 3) Rs.3,000

Solution

Book Value of Equity Shares of the A Limited

		Rs.
Sundry Assets		40,000
Less: Sundry Creditors	10,000	
Preference Share Capital	10,000	20,000
		20,000
Net Assets available for equity shareholders		

$$\text{Book value of an equity share} = \frac{20,000}{1,000} = \text{Rs.}20$$

Real Value of equity shares of the Company

i) When earnings available are Rs.1,000
Capitalized value of earnings is: Rs.1,000 X 100/15 = Rs.6,667
Real value of an equity share = 6,667/1,000 = Rs.6.67
Since the book value of the company's equity share is more than the real value, the company is over-capitalized.

ii) When earnings available are Rs.5,000

Capitalized value of earnings is: Rs.5,000 X 100/15 = Rs.33,333
Real value of an equity share = 33,333/1,000 = Rs.33.33
Since the book value of the company's equity share is less than the real value, the company is under-capitalized.

iii) When earnings available are Rs.3,000
Capitalized value of earnings is Rs.3,000 X 100/15 = Rs.20,000
Real value of an equity share = 20,000/1,000 = Rs.20
Since the book value and real value of an equity share of the company are the same, the company is properly capitalized.

9.5. OVER-CAPITALIZATION

Despite careful study of different variables in order to determine capitalization, there is always a possibility of deviation from the optimum capitalization point. This may result either in over-capitalization or in under-capitalization, both of which are harmful to a firm.

Over-capitalization is a state of affairs when firm's capital is too large to be justified by its earnings. In other words, the amount of capital in the firm is too large to earn, on average, a rate of return that is common among similar firms. Suppose the average annual earning in a firm is Rs.40,000. When the rate of return in similar firms is 10%, the amount of capital that is justified by its earnings should be Rs.40,000 x 100/10 or 4,00,000. If the amount of capital raised is Rs.5,00,000, the rate of return would fall to (40,000/5,00,000) X 100 or 8%. Since this rate is less than the going rate, the firm is said to be over-capitalized.

9.5.1 Causes of Over-capitalization:

The following are the causes of Over-capitalization:

(i) Difference between Book Value and Real Worth of Assets:

It is possible that a company may have purchased its assets at a value, which is higher than their real worth. This gap between the book value and the real worth of assets may account for over-capitalization.

(ii). Promotional Expenses:

There is a possibility that promoters may have charged exorbitant promotional expenses for their services in creating the corporation. This excessive charge may be a cause of over-capitalization.

(iii) Inflation:

Due to inflationary conditions a corporation might have acquired assets high prices. Inflationary conditions precipitate over-capitalization, which affects new as well as established corporations.

(iv) Shortage of Capital:

When faced with a shortage of funds, a company may borrow at unremunerative rates of interest, which is bound to result in excessive or unjustified fixed charges.

(v) Depreciation Policy:

Inadequate provision for depreciation, obsolescence or maintenance of assets may lead to over-capitalization, and this is bound to adversely affect the profit-earning capacity of a corporation.

(vi) Taxation Policy:

High corporate tax may discourage corporations from implementing programmes of replenishment, renewals and renovations, as a result of which their profitability may suffer.

(vii) Dividend Policy:

Some corporations adopt a latent dividend policy in order to gain popularity with their stockholders. However, such cash-down payments in the form of dividends weakness their liquidity position. Their valuable resources are likely to be frittered away and, as result, they may find themselves in a state of over-capitalization.

(viii) Under-estimation of Capital Rate:

If the actual rate at which capital is available is higher than the rate at which a company's earnings are capitalized, the capitalization rate is under-estimated, and this results into over-capitalization.

Advantages:

1. The management is assured of adequate capital for present operations.
2. Ample capital has a beneficial effect on an organization's morale.
3. Ample capitalization gives added flexibility and latitude to the corporation's operation.
4. Allegedly, losses can be more easily absorbed without endangering the future of the corporations.
5. The rate of profits tends to discourage possible competitors.

Disadvantages:

1. There may be a possible difficulty of raising new capital funds. This may be obviated, however, by the use of "no-par" stock.
2. Over-Capitalization may include a failure, and the failure of a corporation may bring about an unhealthy economic situation.
3. The ethical atmosphere of a business is not improved by over-capitalization.
4. There may be an inability to pay interest on bonds.
5. Injury to creditworthiness.

9.5.2 Effects of Over-capitalization:

Since earning per share in cases of over-capitalization remains low, the market price of the shares fall. Sometimes, the market price of the shares is less than their par value; this may also cause a slump in the real value of shares, sometimes below their book value. It may be stated here that while the book value represents the value arrived at after dividing the sum of capital stock and the surpluses by the number of outstanding shares, the real value of shares is the value arrived at after dividing the capitalized value of the firm's assets by the number of outstanding shares. Because of decline in the real value of shares, the creditworthiness of the firm is affected. Lenders hesitate to lend funds to the firm that of jeopardizes liquidity and whose operational efficiency falls. The firm often declares high dividend in order to regain lost confidence and pays dividend out of surpluses. This further worsens its financial position.

Over-capitalization affects not only the financial position of the firm but also the interest of its shareholders. The price of their shares on the stock exchange ebbs, which in turn adversely affects their capital gains. The value of their shares as a collateral security diminishes. Moreover, they have to be satisfied with a lower amount of dividend.

Last but not least, society in general bears the brunt of an over-capitalized firm. Consumers get inferior products or products at higher prices. Liquidation may result if situation does not improve and this may lead to the retrenchment of the firm's labour force. The process of capital formation is hampered, and, as a chain reaction, development activity in the economy in general slows down.

9.5.3 Remedial measures:

Over-capitalization is not easily rectified, chiefly because the factors, which lead to it in the first place, do not entirely disappear. In many cases, over-capitalization and excessive debts co-exist and an attack on one often involves the other. Indeed, a correction of the former usually involves the latter. With this co-relationship in min, it may be said that correction of over-capitalization may involve one or more of the following procedures:

(i) Reduction in Funded Debt:

This is generally impossible unless the company goes through a thorough re-organization. Funds have to be raised for the redemption of bonds; and the sale of large quantities of stock, presumably at low prices, would probably do more damage than good. Moreover, the creation of as much stock as the bonds retired would not reduce the total capitalization. A true reduction in capitalization can be effected only if the debts are retired from earnings.

(ii) Reduction in Interest Rate on Bonds:

Here again, without a thorough re-organization, it would probably not be practicable to effect a reduction in the interest rate on bonds. A refunding operation, however, might be performed; but the saving in interest payments on the lower-rate refunding bonds would hardly offset the premium the company would be forced to allow the bondholders in order to induce them to accept the refunding bonds; and, moreover, this procedure would not really reduce capitalization. However, it would alleviate the situation.

(iii) Redemption of Preferred Stock, if it carries a High Dividend Rate:

Funds for redemption would probably have to come from the sale of common stock at low prices. The saving from the retirement of the preferred stock, even if this common stock is increased substantially. If, however, the preferred stock is cumulative, and if dividends on such stock are in arrears this avenue of escape would appear to be a “dead-end street”.

(iv) Reduction in Par Value of Stock:

This is a good method but is sometimes impossible because of the stockholders’ tenacious belief in the importance of par value. If the stockholders are convinced of the desirability of the move, it might be somewhat effective, though not nearly as much as the reduction in high fixed charges.

(v) Reduction in Number of Shares of Common Stock:

This likewise is a good method but, again, is difficult of implementation because of the average stockholder’ unwillingness to turn in several shares in order to receive one, though it does happen occasionally. Since this procedure does not decrease the stockholder’s proportionate interest in the equity, it is sometimes used.

In some cases, several of these methods may be used, but unless a company goes through a thorough re-organization (a rather complicated an legally involved affair), the consent of the security-holders should be obtained.

9.6 UNDER - CAPITALIZATION

Under-capitalization is the exact opposite of over-capitalization, meaning that the value of assets is small in relation to the firm's earnings. Naturally, the real value of the firm's shares is higher than their book value and the market price of shares is higher than their par value.

Causes of under-capitalization:

The following are the causes of under-capitalization:

(i)Under-estimation of earnings:

It is possible that earnings may be under-estimated, as a result of which the actual earnings may be much higher than those expected.

(ii)Efficiency:

A corporation may have optimally utilized its assets and enhanced it efficiency by exploiting every possibility of modernization and by taking the maximum advantage of market opportunities.

(iii) Under-estimation of Funds:

It may take place when the total funds required have been under-estimated.

(iv) Retained Earnings:

Because of its conservative dividend policy a corporation may retain the earnings, which might have accumulated into a mass of savings. This is bound to improve its financial health.

(v) Windfall Gains:

Companies, which can afford to continue to operate during the period of depreciation, may find their earnings are unusually high when they enter the boom period. This shift from an adverse business cycle to a prosperous one may under-capitalize the corporation.

(vi) Taxation:

Because of excessive earnings, corporations are exposed to a heavy burden of taxation.

9.6.1 Disadvantages of under-capitalization:

(i) The stock would enjoy a high market value, but would limit its marketability and may cause wide fluctuations in market prices. In many cases, this may not be considered a disadvantage.

(ii) Owing to its limited marketability, the stock may not enjoy as high a market price as its earnings justify.

(iii) A high rate of earnings per share may encourage potential competitors to enter the market.

(iv) In view of the high rate of earnings, employees may become dissatisfied. Dissatisfaction would probably reduce their efficiency and have other undesirable effects.
(v) In view of high rate of earnings, customers may feel they have been overcharged. Except possibly in public utility undertakings, this is not an entirely justifiable point, for competitors might easily enter the field and force reductions in prices.

(vi) If a company is an extremely large one and virtually controls the industry, its enormous earnings per share may encourage competitors or the Government to bring suit against it under the anti-trust laws.

(vii) Depending on the nature of excess profit taxes, if any, the company may lose by under-capitalization.

9.6.2 Impact of Under-capitalization:

Since the rate of return increases in a situation of under-capitalization, this is not an economic problem. To the contrary, rather, it enhances the firm's creditworthiness in the capital market. However, high earnings may attract competitors who may give the under-capitalized firm a tough fight.

This is not all in an under-capitalized situation, the firm's share prices register wide oscillations and speculators may take undue advantage of such a situation. Greater speculation in respect of the firm's shares on the stock exchange is not regarded a healthy sign for the under-capitalized firm. Again, higher profits may lead to demands for higher wages and this may push up the cost of the product. The production process would become uneconomical, and the firm may lose its competitiveness in the market.

Unlike a situation of over-capitalization, under-capitalization is advantageous to the shareholder, because they get a higher rate of dividend. They also get higher capital gains from their shares on the stock exchange, and they are in a position to get higher loans against shares, as the value of shares as collateral security rises.

Apart from the shareholders, society as a whole benefit from an under-capitalized firm, as consumers gets cheaper and better quality products. Moreover, a higher rate of returns acts as booster to the economic activity in the country.

Remedial measures:

The situation of under-capitalization may be corrected by taking the following measures:

(i) Splitting up of the Shares.

This will result in reducing the dividend per share, though the average earning rate of the company will remain the same.

(ii) Issue of bonus shares.

This is the most appropriate remedy for correcting under-capitalization. This will reduce both the dividend per share and the average rate of earning.

(iii) Increase in par value of shares.

The value of the assets may be revised upwards and the shareholders may be given shares of higher par value in exchange for the existing shares held by them.

The above discussion about over-capitalization and under-capitalization shows that both are bad and there is little to choose between them. However, over-capitalization can prove dangerous to the company, than the shareholders and the society. The situation of under-capitalization can be corrected relatively more easily than the situation of over-capitalization. Moreover, under-capitalization is indicative of sound financial position and good management of the company. It has been rightly said that, “under-capitalization is not an economic problem but a problem of adjusting the capital structure”. Thus, under capitalization should be called the lesser evil, though both are bad. The object of every company should be to have a proper or fair capitalization.

9.7 SUMMARY

Capitalization, which denotes the amount of long-term and short-term capital employed in a firm, is an important issue involved in the financing decision. It is true that the amount of capital is determined on the basis of the cost of various assets, but at the same time, the amount of capital must justify the earnings of the firm. In case the magnitude of capital exceeds this limit so that a part of capital remains unemployed, the return on investment falls below the normal rate in the industry and the firm is said to be over-capitalized. This is often caused by factors that cause inflation of the book value of assets on the one hand, and shrinkage in the earnings, on the other. However, this lowers the value of the corporate wealth, and at the same time, adversely affects the interests of all parties related to the firm.

If, on the contrary, a firm is under-capitalized, the rate of return on investment rises. However, the firm’s operation may be marred by the lack of the funds, and, at the same time, demand for higher wages in view of a higher rate of return, may create difficulties for the firm.

Thus, over-capitalization and under-capitalization are both undesirable, although, the latter is the lesser evil. A firm should not prefer either of the situations and should try to remedy these situations if and when they arise. The remedies may be either re-organization of surpluses. At the same time, it should try to maintain the rate of return by increasing the profit margin and asset turnover. The ultimate motive is to attain a state of optimum capitalization.

9.8. SELF-ASSESSMENT QUESTIONS

1. What is meaning of Capitalization? How can you differential capital from capitalization?
2. What is the basis of Capitalization?
3. What do you mean by over-capitalization? What are its causes?
4. Explain under-capitalization and the factors behind its emergence.
5. "Over-capitalization and Under-capitalization are both unhealthy signs for a firm". Discuss can they be remedied?

6. The following is the Balance Sheet of A Limited:

Liabilities	Rs.	Assets	Rs.
Share Capital:			
2,000 Equity Shares of Rs.10 each	20,000	Sundry Debtors	1,00,000
2,000, 10% Preference Shares of Rs.10 each	20,000		
Reserves and Surplus	30,000		
Sundry Creditors	30,000		
	1,00,000		**1,00,000**

The normal earning rate in case of similar companies is 15%.
Ascertain whether the company is properly capitalized when earnings available for equity shareholders are:

2) Rs.2,500
3) Rs.12,500
4) Rs.7,500

6. The balance sheet of A Limited., as on 31st December, 2005 was as under:

Liabilities	Rs.	Assets	Rs.
Share Capital:			
5,000 Equity Shares of		Fixed Assets	50,000
Rs.10 each	50,000	Current Assets	40,000
Reserves and Surplus	25,000		
Sundry Liabilities	15,000		
	90,000		90,000

The normal earning rate in case of similar companies is 15%. You are required to ascertain whether the company is properly capitalized when earnings available for equity shareholders are: Rs.6,000; Rs.7,500 and; Rs.10,000.

9.9 FURTHER READINGS

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- Weston. J. Fred & Brigham Eugne F., Managerial Finance, Dryden press, Chicago
- Soloman, Ezra & Pringle John.J., An Introduction to Financial Management, Dryden press, Chicago

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