

CAPITAL STRUCTURE

The capital structure decision of the firm can be characterised as a choice of that combination of debt & equity which maximises the market value of the firm. Capital structure represents the relationship among different kinds of long term capital.

"Capital structure of a co. refers to the composition or make up of its capitalizations & it includes all long term debt, preference share capital & shareholders funds."

Optimum capital structure is "that capital structure or combination of debt & equity that leads to the maximum value of the firm"

THEORIES OF CAPITAL STRUCTURE

I NET INCOME APPROACH

The firm can ↑ its value or ↓ the overall cost of capital by changing the proportion of debt in the capital structure.

ASSUMPTIONS:

- i) $k_d < k_e$
- ii) The corporate income taxes do not exist.
- iii) The use of debt does not change the risk perception of investors.

$$MV \text{ of equity} = \frac{PAT}{k_e}$$

k_e → cost of equity capitalisation rate.

$$WACC = \frac{EBIT}{\text{Total Value of firm}}$$

$$T.V \text{ of firm} = M.V \text{ of equity} + M.V \text{ of debts}$$

WACC → weighted average cost of capital.

II

NET OPERATING INCOME APPROACH

change in the capital structure of a co. does not affect the market value of the firm & the overall cost of capital remains constant irrespective of the method of financing.

ASSUMPTIONS:

- i) The market capitalises the value of the firm as a whole.
- ii) The market uses the overall capitalisation rate (k_0) to capitalise the net operating income.
- iii) k_d is constant.
- iv) The corporate income taxes does not exist.

$$\text{Value of firm} = \frac{\text{EBIT}}{k_0}$$

III

TRADITIONAL APPROACH

It is a compromise between the two extremes of NOI & NI approach. Acc. to this theory, the value of the firm can be increased initially or the cost of capital can be decreased by using more debt as the debt is cheaper source of funds than equity. Thus, optimum capital structure can be reached by a proper debt-equity mix. Beyond a particular point, the k_e rises because of the financial risk of the equity shareholders. After this there comes a stage when the rise in cost of equity cannot be offset by the advantage of low cost debt. Thus, overall COC, according to this theory, decreases upto a certain point, remains more or less unchanged for moderate increase in debt thereafter, & increases beyond a certain point.

MODIGLIANI MILLER APPROACH (M-M APPROACH)

This theory is an extension of NOI approach. They have mentioned that under a given set of assumptions the capital structure has no effect on the value of the firm. Acc. to this theory there is no optimal capital structure. M & M have just restated the NOI approach & have added a behavioural aspect to the theory.

ASSUMPTIONS:

- i) The capital markets are perfect & complete information is available to all investors free of cost. The investors can borrow & lend funds at the same rate & can move from one security to another without incurring any transaction cost.
- ii) The securities are infinitely divisible.
- iii) Investors are rational & well informed about risk & return of all the securities.
- iv) All investors have same probability about the expected future earnings.
- v) Firms distribute all net earnings to the shareholders.

MODIGILIANI - MILLER APPROACH

According to them market price of the share is affected by the earning of the firm and it is not influenced by the pattern of income distribution. The dividend policy is immaterial & it has no consensus to the value of the firm. If a co. retains earnings instead of paying it out as dividends, shareholders enjoy capital appreciation equal to the amount of earnings retained. If it distributes earnings by way of dividends instead of retaining it, the shareholders, enjoy dividends equal in value to the amount by which his capital would have appreciated. Hence, the division of earnings between dividends & retained earnings is irrelevant from the point of view of the shareholders.

ASSUMPTIONS

- 1) The capital market are perfect.
- 2) Information is freely available.
- 3) No transaction cost, no flotation cost & no time cost.
- 4) They have to show that in the given investment opportunity, a firm will finance by re-investing the profit as if it pay the dividend new issue will be there in the market.

$$P_0 = \frac{1}{1+K} \times (D_1 + P_1)$$

P_0 → Market price of the share.

K → Cost of capital.

D_1 → Expected dividend at the end of 1st year.

P_1 → Expected market price at the end of 1st year.

Suppose the firm has 1,00,000 shares & declares Rs 5 as dividend at the end of current financial year. The present market price of share is Rs 100. $k_c = 10\%$. Calculate the expected mkt. price of share at the end of 1st year when:

- 1) Co. pays the dividend.
- 2) Co. does not pay the dividend.

$$1) \quad 100 = \frac{1}{1+0.1} (5 + P_1)$$

$$P_1 = 105$$

$$2) \quad 100 = \frac{1}{1+0.1} P_1$$

$$P_1 = 110$$

Suppose the firm has a total profit of Rs 10,00,000 in the first year & planning to make an investment of Rs 20,00,000 at the end of 1st year. What will be the value of the firm when:

- 1) Co. pays the dividend.
- 2) Co. does not pay the dividend.

$$np_0 = \frac{1}{(1+k_c)} \times [(n+m)P_1 - I + E]$$

np_0 → value of the firm

n → shares previously issued

m → No. of shares to be issued on new generated funds

I → Investment

E → Profit / Earnings

$E = 10,00,000$
 $I = 20,00,000$
 $n = 1,00,000 \text{ shares}$
 $k_c = 10\% = 0.1$

1) WHEN DIV IS PAID

Total earnings	10,00,000	
(-) Dividend	5,00,000	(100000 x 5)
Retained earnings	5,00,000*	
Investment	20,00,000	
Funds available	5,00,000*	

Funds to be generated 15,00,000

$\text{No. of shares} = \frac{15,00,000}{10.5} = 14,286$

$m = 14,286$

$n_{p0} = \frac{1}{1.1} \times [(1,00,000 + 14,286) 10.5 - 20,00,000 + 10,00,000]$
 $= 1,09,00,027$

2)

WHEN DIV IS NOT PAID

Earnings	10,00,000
R. E	10,00,000
Investment →	20,00,000
Funds Available	10,00,000

Funds to be generated 10,00,000

$\text{No. of shares} = \frac{10,00,000}{110} = 9090$

$n_{p0} = \frac{1}{1.1} [(1,00,000 + 9090) 110 - 20,00,000 + 10,00,000]$

$= 1,00,00,000 \text{ (app.)}$

What is 'stock Exchange'?

"Stock exchange means any body or individuals whether incorporated or not, constituted for the purpose of assisting, regulating or controlling the business of buying, selling or dealing in securities."

- It is an association of members brokers for the purpose of self-regulation and protecting the interests of its members.
- It can operate only if it is recognised by the Govt. under the securities contracts (Regulation) Act, 1956.

→ NATURE :-

Stock exchanges are most perfect type of market for securities & also for shares & debentures i.e. issued by the joint stock companies.

→ REGULATION OF STOCK EXCHANGES :-

The securities contracts (Regulation) act is the basis for operations of the stock exchanges in India.

- The act empowered the Govt. to make enquiries into the affairs of a recognised stock exchange or to withdraw the recognition in interest of trade and in public interest.

→ FUNCTIONS :-

- 1- Stock exchanges provide liquidity to the listed companies.
- 2- By giving quotations to the listed companies, they help trading and raise funds from the market.
- 3- The quoted companies with wide public interest have enjoyed some benefits and asset valuation has become easier for tax and other purposes.

RECOGNISED STOCK Exchange: Permanent

The recognised stock exchange of India are given below:-

- 1- Mumbai
- 2- Calcutta
- 3- Delhi
- 4- Chennai
- 5- Ahmedabad
- 6- Hyderabad
- 7- Bangalore
- 8- Indore

Mumbai: The Premier Exchange: - *known as [BSE] also*

- This was first to be recognised on a permanent basis in 1957.
- The capital listed in Mumbai accounted for about 40% of the overall capital listed on all the stock exchanges
- In terms of total no. of companies and total no. of stock issues listed also, Mumbai stand first.
- Roughly estimated that the turnover of all the stock exchanges in the country is overall 30% where Mumbai stock exchange constitutes 70%.

Stock Exchange is an important Institution
Dealing in Capital Market which in-
cludes :-

1. Term lending institutions
2. Banks
3. Investors
4. Listed Companies
5. Any body who is engaged in providing long term capital whether share capital or debt capital to the industrial sector

Basically stock Exchange is an association of individuals technically members brokers

The main function of mem-broker is to regulate & facilitate the buying and selling of securities i.e. shares, bonds, mutual funds by public & financial institutions.

OVERVIEW OF CAPITAL MARKET

NEW ISSUE MARKET :- *Definition + Nature* :- The new issue market (N-I-M) deals with the raising of fresh capital either for cash or for consideration other than cash by Co's, Govt. and semi Govt. bodies, PSU's etc. and encompasses all institutions dealing in the issue of fresh claims.

The forms in which these claims are incurred are equity shares, preference shares, debentures, rights, bonus, deposits, miscellaneous loans etc.

FEATURES OF NIM :

- (A) All the financial institutions in the capital market which contribute, underwrite or directly subscribe are part of the New Issue Market.
- (B) The whole amount of public issue is underwritten by one institution or by a group of institutions jointly.
- (C) Underwriting is now optimal for smaller issues, as per the latest SEBI guidelines.
- (D) The underwriting commission is about $2\frac{1}{2}\%$ and brokerage 1 to $1\frac{1}{2}\%$ for the issue of shares and debentures.

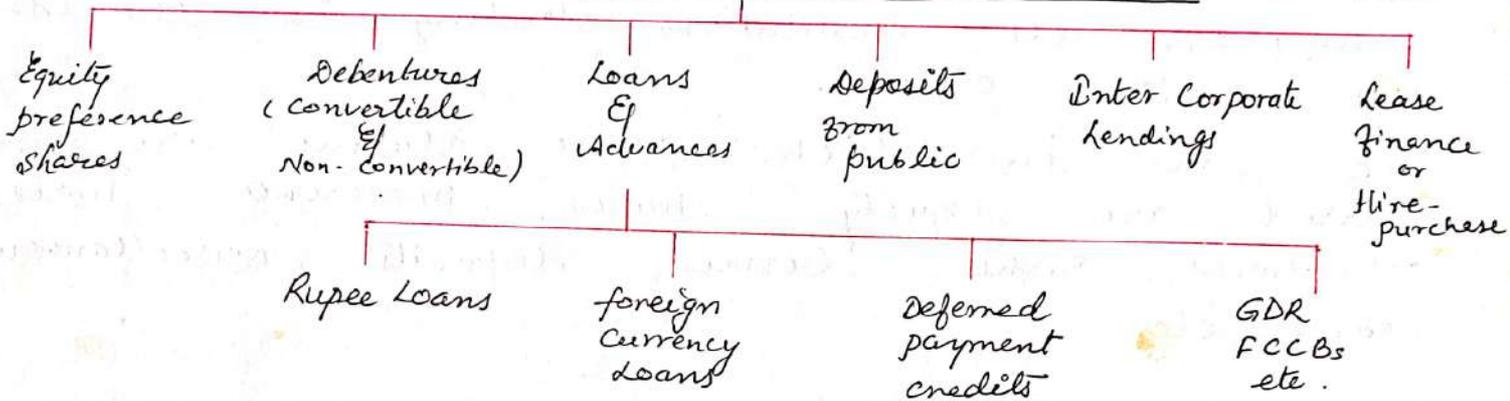
FUNCTIONS :

- (A) The new issue facilitates the raising of capital for setting up new projects.
- (B) New Issue also facilitates expansion of established organisation.
- (C) The capital raised by New issue is also used for modernisation of existing projects, Mergers and takeovers etc.

(D) New issue also indicates the capital structure, the proportion in which funds are raised in various forms i.e. equity and debt capital (borrowings + Debentures).

(E) It measures the leverage in the form of ratio of borrowed funds to owned capital and applicability of borrowed funds.

FORMS OF BORROWING CAPITAL



STRUCTURE : →

Initial issues are those floated by new Co's for the first time, while further issues are subsequent issues floated by the existing companies.

Issues can be further 4 sub forms of New Issues :-

- (A) OFFER THROUGH PROSPECTUS
- (B) OFFER OF SALE
- (C) PRIVATE PLACEMENT
- (D) RIGHTS ISSUE

(A) OFFER THROUGH PROSPECTUS :- This involves inviting subscription from the public through issue of prospectus. This method of raising funds accounts for the bulk of capital as is necessary for listing of shares on the exchanges.

— The price at which securities are offered for sale is at face value of the share in case of new companies.

— This is most popular method of raising funds.

(B) OFFER OF SALE :-> The method of "offer of sale" consists of outright (enlarge) sale by the company instead of offering shares to the public or through intermediaries such as issuing houses or sharebrokers.

- offer of sale of shares takes place in the case of existing shareholders purchasing and then reselling them to the public.

(C) PRIVATE PLACEMENT :-> This method facilitates sale by the issuing house or broker to his own clients of securities previously purchased by him.

- Under this method the issuing houses or financial intermediaries buy them outright (at large) with the intention of placing them with their clients afterwards.
- In this, brokers act as wholesalers selling them in retail to the public.
- These brokers would make their profit in the process of reselling to the public.

(D) RIGHTS ISSUE :-> The right issue is an offer with a pre-emption right to the shareholders of existing companies to contribute to the share capital or its debt capital in the form of debentures.

- These are offered to the existing shareholders in a particular proportion to their existing share ownership.
- No New Company can issue rights shares.

LIMITATIONS :

- The New issue market could not mobilise adequate savings from the public as less than 10% financial savings of the household sector are mobilised for investment in shares & debentures.

(2) — The new issues market suffers from functional and institutional gaps, particularly in terms of the New instruments to appeal to the investing public.

(3) — A wholesale market for new issues is yet to develop in India and merchant banking is in its growing stage.

(4) — The New experiment in free pricing in India has created over-pricing initially. The no. of investors are reduced to invest in new issues with hefty premiums due to unreasonably high premiums.

(5) — Unrestricted entries of various companies confuses the investors as to what to contribute with their limited funds.

Expenses to meet the day-to-day transaction is known as working capital. Surplus & deficit in working capital are harmful for the company. The ideal ratio is 2:1 of working capital.

CONCEPT OF W.C.

- 1) GROSS WORKING CAPITAL : It shows optimum investment & financing to current assets.

$$\boxed{\text{Gross W.C} = \text{Total of current assets}}$$

Current assets → Assets which can be converted into cash within an accounting year. Eg → Cash, debtors, B/R, stock

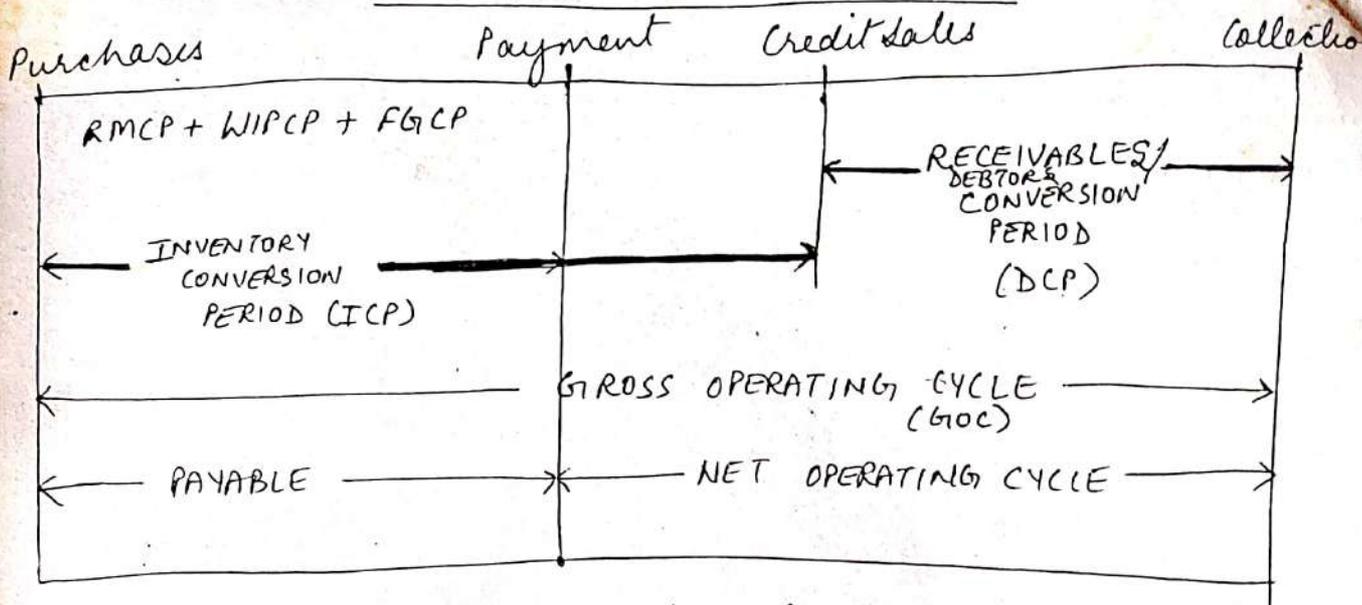
- 2) NET WORKING CAPITAL : It refers to the difference between current assets & current liabilities. It indicates the liquidity position of the firm & suggest extent to which W.C. need may be financed by permanent sources of fund.

OPERATING CYCLE

Operating cycle is the time duration required to convert sales, after the conversion of resources into inventories, into cash. The operating cycle of a manufacturing co. involves 3 phases :

- i) Acquisition of resources.
- ii) Manufacture of the product.
- iii) Sale of the product.

OPERATING CYCLE



RMCP → Raw Material Conversion Period.

WIPCP → Work-in-Progress Conversion Period.

FGCP → Finished goods Conversion Period.

ICP → It is the total time needed for producing & selling the product.

$$ICP = RMCP + WIPCP + FGCP$$

DCP → It is the time required to collect the outstanding amount from the customers.

$$GOC = ICP + DCP$$

$$RMCP = \frac{\text{Raw material inventory}}{\text{Raw material Consumption}} \div 360 \text{ days}$$

$$WIPCP = \frac{\text{WIP inventory}}{\text{Cost of Production}} \div 360 \text{ days}$$

$$FGCP = \frac{\text{FG inventory}}{\text{Cost of sales}} \div 360 \text{ days}$$

$$DCP = \frac{\text{Debtors}}{\text{Credit Sales}} \div 360 \text{ days}$$

$$\text{Payable} = \frac{\text{Creditors}}{\text{Credit Purchase}} \div 360 \text{ days}$$

FACTORS AFFECTING W.C.

- Nature of business.
- Manufacturing cycle.
- Market & demand conditions.
- Credit policy
- Availability of credit from suppliers.
- Operating efficiency & performance.
- Price level changes.
- Sales growth
- Production policy

INVENTORY MANAGEMENT

Inventories are stock of the product a company is manufacturing for sale & components that make up the product.

The various forms are:

- 1) Raw material - These are those basic inputs that are converted into finished product through the manufacturing process.
- 2) Work-in-process - These inventories are semi-manufactured products.
- 3) Finished goods - These inventories are those completely manufactured products which are ready for sale.

$$\text{Total Ordering Cost} = \frac{\text{Annual requirement} \times \text{Per Order Cost}}{\text{Order size}}$$

$$\text{Total Carrying Cost} = \text{Average inventory} \times \text{Per unit carrying cost}$$

$$\text{Avg. inventory} = \frac{\text{Order size}}{2}$$

$$\text{Total Cost} = \text{Total Ordering Cost} + \text{Total Carrying Cost}$$

$$\text{EOQ} = \sqrt{\frac{2 \times \text{qty. required} \times \text{ordering cost}}{\text{Carrying cost}}}$$

REORDER POINT

The reorder point is that inventory level at which an order should be placed to replenish the inventory.

$$\text{Reorder Point} = \text{Lead} \times \text{Avg. usage}$$

Lead Time → It is the time normally taken in replenishing inventory after the order has been placed.

Safety Stock

It is the ^{minimum} inventory maintained against expected increased ~~and~~ usage & / or delay in delivery time.

$$\therefore \text{Reorder Point} = \text{Lead} \times \text{Avg. Usage} + \text{Safety Stock}$$