

MAA OMWATI DEGREE
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FINANCIAL MANAGEMENT
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UNIT-I

1-10 Evolution, scope, objectives and functions of financial management. Profit vs. wealth maximization, time value of money.

UNIT-II

19-26 Investment Decisions; brief introduction of cost of capital; 11-17 methods of capital budgeting; ARR, PBP, NPV and IRR, capital rationing (simple problems on capital budgeting methods).

UNIT-III

34-40 Financing decisions: operational and financial leverage; 24-33 capital structure theories - NI, NOI and traditional approach (EPS-EBIT Analysis). 38-39

UNIT-IV

41 Dividend decision and Management of working capital; 42-43 determinants of dividend policy; 44 Walter's Dividend Model; Operating Cycle, brief discussion on management of cash, receivable and inventory (simple problem on operating cycle and inventory management).

SUGGESTED READINGS:

1. Pandey, I.M., Financial Management, Vikas Publishing House, New Delhi
2. Khan and Jain, Financial Management, Tata McGraw Hill, New Delhi
3. Kishore, R., Financial Management, Taxman's Publishing House, New Delhi

Introduction :-

Finance is the life of every organisation and manage to finance is very essential for all organisation. In financial management manager deals with all the activities regarding planning and controlling of finance. It is concerned with acquiring and using of funds by a business.

Definition :-

"The finance function is the process of acquiring and utilising funds by a business." — R. C. Osborn

"Financial management is an activity concerned with the planning, raising, controlling and administering the funds used in the business."

— Guthmann and Dougall

Thus financial management is concerned with efficient acquisition and allocation of funds.

Characteristics of financial Management

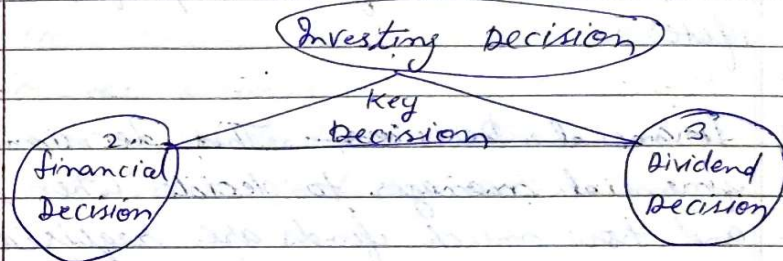
- 1) Integral part of Business Management:-
Each activity of business is linked

with finance. This financial Management is an essential part of Business management.

- 2) Regular activity :- This is because it begins from financial plan and ends with distribution of profits.
- 3) Analytical - In modern financial Mgt. statistical, mathematical tools are used for financial analysis and evaluation of difficult alternatives.
- 4) Focal Point :- Just like heart coordinate and control all parts of body, similarly financial management also coordinates and controls all the activities of business.
- 5) Universally applicable :- financial Mgt. is applicable to all types of organisation whether manufacturing or service.
- 6) Extended Scope :- The scope of financial management is very wide and complex. The financial Mgt. starts with raising of capital and ends with dividend decision.
- 7) Distinct from accounting

Key decision

Role of financial Management



1) Investment Decision :-

Investment decisions are the long term capital budgeting decisions. It includes the decision of allocating capital to long term assets that would yield maximum benefits in the future. Key decisions under this head are:

- 1) Investment / Capital budgeting decisions.
- 2) Measurement of required rate of return.

2) Investment / Capital budgeting decision :-

This is the allocation of procured funds with a view to acquire assets, including fixed as well as current assets. Capital budgeting decision includes purchase of long term assets based on the costs and benefits arising from these assets.

2) Measurement of required rate of return :-
Rate of Return is required so that

It can be ensured that the long term investment will generate profits in near future.

2) Financial Decisions: This decision involves financial managers to decide when, where and how much funds are required to meet the firm's investment needs. This decision also involves deciding the means to acquire these funds. Key functions under this head are:

- 1) Assessing the financial requirement
- 2) Financial planning
- 3) Determination of Capital Structure
- 4) Procurement of funds
- 5) Other functions e.g. legal aspects, loan formalities etc.

3) Dividend Decisions: Manager has to decide how much profit should be retained in business to be used as retained earning and how much profit should be distributed among the shareholders as dividend.

The financial Manager must determine the 'Optimum dividend policy' at which the market value of the firm is maximum.

Key Factors of dividend decision are:

- a) How much profits should be distributed?
- b) How much profits should be retained in the business?
- c) Way of dividend declaration
- d) Optimum dividend pay out ratio

Role of financial Manager / Scope of financial Management

- 1) Estimate of funds requirement
- 2) Financial Planning
- 3) Procurement of funds
4. Capital Budgeting Decisions
- 5) Working Capital Decisions
6. Dividend Policy Decisions
7. Management of Cash
8. Financial Control.
- 9) Day to day functions:

Objectives of the firm:

The main point regarding objective is to increase the profits, which is the sole objective of any concern, but in corporate finance we will say the objective of financial management is to serve the interest of the owners of the business to the maximum extent. So

there are two objectives of financial Mgt

- 1) Profit Maximization Approach
- 2) Wealth Maximization Approach

Profit Maximization approach:-

Profit is the main concern of the business. According to this approach owners can be best served by the maximization of profits of the business, as profit is a test of economic efficiency. Profit enable a business to face risks like fall in price, competition from other units to pay dividend, for expansion and so many other reasons.

The following arguments are advanced in favour of profit maximisation as the objectives of business:-

- 1) Profit provide motivation to work harder and more efficiently,
- 2) Profit maximisation shows efficient use of available resources.
- 3) Profits are the main sources of finance for the growth of a business.
- 4) Last but not least business is done to achieve profits. The primary objective of a business to earn profit. So profit maximization is an obvious objective.

Criticism:- It has been rejected on following grounds:

- 1) Ambiguity of the term profit:- There are many meaning of profit as long term or short term profit and profit after tax or before tax, total profit or profit per share, operation or net profit.
- 2) No Consideration for Dividend - A firm will not pay dividend if its objective is maximize because dividend declaration will reduce the profits.
- 3) It ignore time value of money:- It ignores the fact that cash received today is more important than the same received after some time.
- 4) It ignores Risk factor:- Profit maximization approach considers the absolute profits only and ignores factors associated with profits.

Wealth Maximization :-

SWM means wealth maximization of shareholders by maximising the net present value of a course of action to shareholders. Here wealth of shareholders refers to maximum current value of shareholders share in the market. It can be calculated as under

Shareholders wealth in a firm = No. of shares
X Current Share Price

Superiority of wealth Maximization objective

- 1) It takes into consideration long-run survival and growth of the firm.
- 2) It considers the risk and time value of money.
- 3) It considers all future cash flows, dividends and earning per share.
- 4) Profit maximisation partly enables the firm to wealth maximisation.
- 5) The shareholders always prefer wealth maximisation rather than maximisation of inflow of profits.

Evaluation of financial Management → Its evolution may be divided into three broad phases - Tradition Phase, Transitional Phase and Modern Phase.

Traditional Phase — (1900-1940) The scope of financial Management was restricted only to raising and allocating the funds used in the business to meet financial requirements. As it focused on procurement of funds, therefore till forties only the instrument, institutions and practices of obtaining funds were covered under this Subject.

Transitional Approach — In transitional phase greater emphasis was placed on day to day problems faced by financial managers in the areas of fund analysis, planning and controlling but the problems were discussed within a limited analytical framework.

Modern Phase — This phase developed due to accelerated pace of development, innovations technological changes, changing business circumstances. It provides the conceptual and analytical framework of viewing the financial

Problems of an enterprise. This approach includes three decisions - Investment Decision, Financing Decision, Dividend Decision.

Feature of Modern phase.

- 1) Broader Concept
- 2) Scientific and Analytical
- 3) Continuous function
- 4) Indispensable Aid to business
- 5) Centralised nature
- 6) Different from Accounting function
- 7) Universal Nature
- 8) Performance Appraisal

(Explanation same as characteristics of financial mgt.)

Unit II

Capital Budgeting

Meaning :- It includes finding out a new and more profitable investment projects, finding out the results after accepting the investment proposals and analysis of these proposals.

Capital budgeting involves the planning of expenditures for assets, the return from which will be realised in future time periods." — Milton H. Spencer.

Importance of Capital Budgeting:

- 1) Huge funds
- 2) Change of Decision
- 3) Long term effects on profitability.
- 4) Difficulties in long term investment decisions.
- 5) Proper Utilisation of funds of Shareholders.
- 6) National importance
- 7) Revenue expenditure
- 8) Wealth - Maximisation of Shareholders.

Steps in Capital Budgeting - In Capital Budgeting process a financial manager must keep three 'Ps' in Mind - Policy, Plan and Programme. The main points to be borne in mind are how much money will be needed for implementing immediate plans, how much money is available for its completion and how are the available funds going to be assigned to various capital projects under consideration. In short, the important steps involved in the process of capital budgeting are:

- 1) Identification of Investment proposals -
- 2) Screening of proposals
- 3) Evaluation of proposals
- 4) Fixation of priorities
- 5) Final Consent
- 6) Review of performance

Methods of Evaluating investment Proposals:

- 1) Pay Back Period Method - Pay back is a period within which the return from the project will be assumed to be sufficient to cover initial investment. Shorter payback period is preferred first and longer pay back is preferred last.

It can be calculated as:

- 1) In case of even Cash inflows:

$$\text{Pay Back Period} = \frac{I}{C}$$

- 2) In case of uneven Cash inflows:

$$\text{Pay Back Period} = \text{Completed year} + \frac{\text{Difference of Initial Investment and cumulative inflows upto completed year}}{\text{Cash inflow of year after completed year inflow}}$$

Improvement in Traditional Methods of Pay back Method:

- 1) Pay back ^{Reciprocal} Method - Traditional methods ignores two factors like rate of return on investment and time factors. These deficiencies are removed in this method.

$$\text{Pay back Reciprocal} = \frac{I}{C} \times 100$$

- 2) Post Pay back Period - According to this method first preference goes to that project where post pay back period profits are highest.

- 3) Post Pay back Profitability = Annual Cash inflow (Estimated life - Payback Period)

- 4) Post Pay back Profitability Index:

$$\text{Post Pay back Profitability Index} = \frac{\text{Post Pay back Profits} \times 100}{\text{Investments}}$$

c) Discounting pay back period :- The main drawback of this method is that it ignores the time value of money. If the recovery of investment outlay is based on net present value for the whole period, then it is called discounting pay back period. The present value of all inflows are cumulated in order of time. The project which gives the shorter discounted pay back period is accepted.

2. Accounting Rate of Return Method:

This method is based on P & L A/c and no separate calculation are needed for calculation of cash inflows. Ranks are to be given according to their earning or rate of return. Different methods for the calculating rate of returns are as follow:

1) Average rate of return on Total Investment.

$$ARR = \frac{\text{Average Profits after Depreciation \& Tax} \times 100}{\text{Total Outlay of the Project}}$$

2) Return Per Unit of Investment Method:

$$\text{Return Per Unit of Investment} = \frac{\text{Total Profits} \times 100}{\text{Net Investment}}$$

3) Return on Average Investment Method.

$$= \frac{\text{Total Profit after depreciation and taxes} \times 100}{\text{Average investment}}$$

2) Average Return on Average Investment

$$\text{Average Rate of Return} = \frac{\text{Average Profit after Tax} \times 100}{\text{Average Investment}}$$

3. Net Present Value Method :- It is very commonly that a rupee received today is worth more than a rupee received after one year as more years difference between the total of present value of estimated yearly cash flows and initial investment of the project is called the net Present Value. If the net present value is negative, investment is not profitable.

Calculation of Present Value :- If the annual inflows are same in different years, the cumulative present value factors should be used. If these inflows are unequal the simple present value factor should be used.

$$P.V = \frac{F}{(1+r)^n}$$

$$P.V = \frac{C_1}{(1+r)^1} + \frac{C_2}{(1+r)^2} + \frac{C_3}{(1+r)^3}$$

$$NPV = P.V. - I$$

Procedure for calculation of present Value:

- 1) Calculate the cash out flows and cash inflows for different period.
- 2) Find out the cut off rate. It is generally taken to be equal to Cost of Capital.
- 3) Calculate the present values of cash inflows at different periods.

$$PVE = \frac{1}{(1+r)^n}$$

- 4) Present value for different periods are added together.

$$PV = \text{Cash inflow} \times PVE$$

5 Internal Rate of Return Method (IRR)

It takes into account the time value of money. In this method the net present value is to be calculated by discounting the future cash flow at a predetermined rate called cut-off-rate.

- 1) When Cash inflows are same:-

$$PV = \frac{I}{C}$$

I = Original Investment C = Cash inflows per year

After the factor is calculated; It is located in the relevant annuity table. The relative discount rate can be calculated which shall represent internal rate of return. In case factor lies between two rates, the rates can be interpolated.

- 2) When Cash inflows are uneven -

$$PV = \frac{\text{Initial Investment}}{\text{Average Annual Cash inflows}}$$

Formula for Actual IRR

$$r = LR + \frac{P_1 - I}{P_2 - P_1} \times (HR - LR)$$

r = Internal rate of return

LR = Lower Discount Rate

HR = Higher Discount Rate

P₁ = Present Value at lower rate of Discount

P₂ = Present Value at higher rate of Discount

I = Investment

Capital rationing: It is the situation in which a firm has more acceptable investment proposals, requiring greater amount of finance than is available with the firm.

Cost of Capital

The Cost of Capital is the minimum return expected from a project. Cost of Capital is the average cost of various sources of finance used by a company. In short, Cost of Capital is the borrowing rate, which is just consideration paid for obtaining and using the Capital.

"The Cost of Capital is the minimum required rate of earning or the cut off rate for Capital expenditure."

— Solomon Ezra

Importance of Cost of Capital

- 1) Capital Structure Decision: → After comparing various ~~steps~~ sources of Cost of Capital, we can select the best Capital Structure.
- 2) Helpful in evaluating of expansion of projects: → If marginal return on investment should exceed the Cost of Capital.

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We can accept the expansion programme otherwise not.

3) Basic of financial decision $\rightarrow$ It is useful in various decisions such as dividend policy, capitalisation of profit, merges and acquisition decision etc.

4) Helpful in evaluation of financial performance of top management.

5) Helpful in comparative analysis of various sources $\rightarrow$ Among the various sources which one is to be selected depends upon the evaluation of cost of capital.

6) Capital budgeting decisions: It is used for discounting cash flows to determine the profitability of a project.

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Computation of Cost of each sources of finance $\rightarrow$

1) Cost of Debt Capital — It is the rate of return which must be earned on borrowed capital. Debt may be in the form of debenture, bonds, term loans from financial institutions etc. It can be calculated before tax and after tax.

Computation in each case can be explained as follows:—

1) If debt issued at par:—

Net Proceeds = Par Value — Floating charges

2) If debt issued at discount

Net Proceeds = Par Value — Dis. on Debt — Floating charges

3) If debt issued at premium

Net Proceeds = Par Value + Debt Premium — Floating charges

$$\text{Cost of Capital (Kd)} = \frac{P}{C} \times 100$$

P = Interest payable

C = Capital received

Tax treatment — Tax is deducted out of the interest payable. After tax cost of debt may be calculated with formula

$$K_{da} = K_{db} (1 - t)$$

1) Cost of Perpetual Debt or Irredeemable debts:-

$$(i) K_{db} = \frac{P}{C} \times 100$$

$$(ii) K_{db} = \frac{P}{C} \times 100 (1 - t)$$

(ii) Cost of Redeemable Debts:- Generally, issued debts are redeemable after a certain period.

$$K_{db} = \frac{1 + \frac{MV - NP}{n}}{\frac{MV + NP}{2}} \times 100$$

(ii) Cost of Deep Discount or Zero Coupon Bonds:- Sometimes bonds are issued at higher discount and interest is payable only at the time of maturity.

The cost of debts can be calculated by finding the present value of cash flows as follows:

1) Calculate the cash flow with the help of assumed discount rate.

2) Calculate the net present value by deducting the present value of cash outflows from the present value of inflows.

3) Apply higher rate of discount if present value is positive.

4) Increase the discount rate until the net

present value becomes negative.

2) If NPV is negative at this higher rate, the cost of debt must be between these two rates.

(iv) Cost of Convertible Debentures:- In case debentures or debts are redeemable by conversion into share, are known as convertible debentures.

Cost of Preference Share:-

Second main source of capital structure is preference share. It is fixed dividend bearing finance. Like debenture interest on debt is the before tax cost of debt capital but the preference share dividend is after tax. There is no legal obligation to pay the dividend. Preference Shares are two type.

1) Redeemable Preference Share:- These preference shares can be redeemed on maturity. The cost of these share is calculated as follows:

$$K_P = \frac{D + \frac{MV - NP}{n}}{\frac{MV + NP}{2}}$$

MV = Amount Payable on maturity

(i) Irredeemable Preference Share

$$K_p = \frac{D}{P}$$

Cost of Equity Share Capital :-

Equity shares are treated as variable payment return securities. Payment of dividend is not a legal binding but it is not a free capital. The cost of equity share capital can be calculated in the following ways:

- 1) Dividend Price Ratio Method :- This can be defined as discount rate that equates the present values of all expected future dividends per share with the net proceeds of sale or the current market price of a share.

$$K_e = \frac{D}{NP} \times 100$$

- 2) Dividend price plus growth method or approach :- In this method, the cost of equity capital is determined on the basis of expected dividend plus the rate of growth in dividend.

$$K_e = \left(\frac{D}{NP} + G \right) \times 100$$

- (ii) Earning Price Method :- In this method the cost of equity share capital is based upon the expected rate of earning of the company instead of simple dividend rate.

$$K_e = \frac{EPS}{NP}$$

EPS = Earning per share

Cost of existing capital is to be calculated on the basis of following formula.

$$K_e = \frac{EPS}{MP}$$

MP = Market price per share

- (iv) Realised yield Approach or Method :-

The cost of equity share capital is to be calculated on the basis of actual return realised by the investors in the equity shares. Past dividends given and capital appreciation in equity shares are to be taken for calculation of cost of equity capital.

4. Cost of Retained Earnings:-

A company sometimes does not distribute the full (100%) profit. A part of the profit earned is retained in the business for future expansion programmes. This type of earning are called retained earnings.

These earnings involve opportunity cost. It means company is required to earn the profit on these at least equal to the rate which would have been earned by the shareholders. If they invest the earnings outside and get the profit.

$$K_{RE} = \left(\frac{D}{NP} + G \right) (1 - t) \times (1 - b)$$

D = Expected Dividends

NP = Net Proceeds of Equity Issue.

G = Growth rate

t = Tax rate

b = floating costs

Unit III

Capital Structure

Finance is an important aspect for any type of business. Total fund used in the business are obtained from various sources such as long term and short term sources. Financial structure implies the proportion of debt and equity in the total capital of a company.

"Capital structure is long term sources of funds employed in a business enterprise."
— R.H. Wessel.

Optimum Capital Structure

The optimum capital structure is a point where the market value of the share is the maximum. This is the point where the average composite (overall) cost of capital is the minimum. A sound capital structure should have the following features:

- 1) ^{Profitable} Maximum Return — The most profitable capital structure is that which maximises the use of leverage and minimises the cost.

2) Less Risky - The Capital structure should represent a balance between different type of ownership and debt securities.

3) Safety - It should be so determined that fluctuations in the earning of the company do not have heavy strain on its financial structure.

4) Capacity - The company should have capacity to pay the fixed periodic charge.

5) Flexibility - The Capital structure should be flexible to meet the changing conditions.

6) Control - The Capital structure of a company should not involve loss of control of the shareholders.

7) Economy - The Capital structure should ensure the minimum cost of capital.

8) Easy and Simple - Capital structure should be in an easy form : 1) Equity share
2) Preference share etc.

Factors affecting capital structure.

There are many factors which are to be considered while determining an appropriate capital structure of a company like as:

- 1) Nature of Business.
- 2) Expected Cash flows.
- 3) Attitude of investors.
- 4) Profitability of the company.
- 5) Control of Business.
- 6) Legal provision.
- 7) Period of finance.
- 8) Tax advantage of debts.
- 9) Cost of issue.
- 10) Financial leverage or trading on Equity.

Capital Structure Theories

There are four major theories explaining the relationship between capital structure, cost of capital and value of firm:

1) Net Income Approach

This approach is propounded by Durand David. According to this approach, the capital structure decision is relevant to the valuation of

the firm. The degree of financial leverage as measured by the ratio of debt to equity is increased. Where the value of firm and market price of equity share will increase, the weighted average cost of capital will decline. This approach is based on following three assumptions.

- 1) There are no taxes.
- 2) Cost of debt is less than cost of equity.
- 3) The use of debt does not change the risk perception of investors.

According to this approach the value of the firm and value of equity can be calculated as follows:

$$V = ME + MD$$

V = Value of firm

ME = Market Value of Equity

MD = Market Value of Debt

$$ME = \frac{NI}{K_e}$$

NI = Net Income available for equity Shareholders

K_e = Equity Capitalisation Rate

Overall Cost of Capital

$$K_o = \frac{EBIT}{V} \times 100$$

2. Net Operating Income Approach:-

This theory is also suggested by Durand. This is opposite to Net Income Approach. According to this approach any leverage change will not lead to any change in the total value of the firm and the market price of shares, as the overall degree cost of capital is independent of the degree of leverage. This approach is based on the following assumption:

- 1) Overall Cost of Capitalisation rate is constant.
- 2) There are no taxes.
- 3) The use of less costly debt fund increases the risk of shareholders.

$$V = \frac{EBIT}{K_o}$$

$$ME = VF - VD$$

VF = Value of firm

VD = Value of Debt

3. Modigliani - Miller Approach:

This approach is introduced by Modigliani and Miller in 1958. According to this approach cost of capital is independent of capital structure and there is no optional value. The choice between equity financing and borrowing does not affect a firm's market value in competitive conditions and perfect markets. Investors can change the investment to any mix of debt and equity as investor desires. This theory is based on the following assumptions:-

- 1) There is no taxes and transaction cost.
- 2) The stock market is perfectly competitive.
- 3) The firm has 100% pay out ratio.
- 4) Firm's investment are constant and perpetual.

$$V = \frac{EBIT}{K_0}$$

Traditional Approach:

It is the mid way of two approaches i.e. net income approach and net operating approach. Value of firm

can be increased or the cost of capital can be reduced by an appropriate mix of debt and equity capital. According to this cost of capital decrease within the reasonable limit of debt. The debt funds are cheaper than equity funds because of the flotation cost on debt and equity. In brief it can be said by the combination of debt capital and equity capital a firm can reduce its total cost of capital and can increase its total value.

Leverage

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The routine use of leverage is in lifting heavy objects which may not be otherwise possible. In financial mgt. 'leverage' has a special meaning. It is used to describe the firm's ability to use fixed cost assets or funds to magnify the return to its owners.

Types of Leverage

There are three types of leverage given as under:

- 1) Operating leverage $\rightarrow$ Operating leverage is the result of using fixed cost. It is said to exist when a firm has to pay fixed cost regardless to the volume of output or sale. Operating leverage arises only when fixed cost exists in the firm because fixed cost does not change with the change in sales volume. So any increase in sales will increase the operating profit. In short, % change in operating profit will be more than the % change in sales which is known as operating leverage.

Characteristics of Operating leverage

1. Associated with fixed cost
2. Associated with Break even Point
3. Related to price and variable cost
4. No fixed cost $\rightarrow$ no operating leverage
5. No Profit $\rightarrow$ no operating leverage
6. Variability of returns and Risks simultaneously

$$\text{Operating leverage} = \frac{\text{Contribution}}{\text{Operating Profit (EBIT)}}$$

$$\text{Contribution} = \text{Sales} - \text{Variable Cost} \quad \text{or} \quad \text{Fixed Cost} + \text{Operating Profit}$$

Degree of Operating leverage

It is impact of change in sales on operating income. If a firm has a high degree of operating leverage small changes in sales will have a large effect on operating income.

$$DOL = \frac{\Delta EBIT}{\Delta \text{Sales}} \times \frac{\text{Sales}}{EBIT}$$

Financial leverage:

Financial leverage is the existence of debts ~~capital~~ in total capital structure of the company. When the proportion of debt capital is greater as compared to equity the leverage is said to be larger. On the contrary the leverage will be said to be smaller.

Trading on Equity or Gearing $\Rightarrow$

favourable financial leverage is called 'Trading on Equity'. favourable financial leverage is that situation where earning made from debt fund investment is more than the cost of debt fund used in the firm. Unfavourable leverage occurs when the firm does not earn as much as the funds cost will be born by the firm.

Characteristics of financial leverage:-

- 1) Concerned with liabilities
- 2) Essence of Capital Mix.
- 3) EPS Analysis
- 4) No Profit no financial leverage
- 5) No debt no financial leverage

- 6) It arises only when fixed cost capital cost is cheaper source of finance.
- 7) Risk and Return Simultaneous.

$$\text{Financial leverage} = \frac{\text{EBIT}}{\text{EBIT} - \text{Interest}}$$

financial leverage will increase the EPS of the company because using of Debt is a cheaper source of finance as well as it provides tax shield. ~~It can't~~

Degree of financial leverage:

It can be expressed as the % change in earning after tax as a result of % change in operating profit, we can put it symbolically:

Degree of financial leverage (DFL)

$$= \frac{\% \text{ Changes in EPS}}{\% \text{ Change in EBIT}}$$

$$= \frac{\Delta \text{EPS}}{\Delta \text{EBIT}} \times \frac{\text{EBIT}}{\text{EPS}}$$

In financial leverage in that Equity can make more profit or can relish leverage

in case of Profits only. If a firm suffers loss then highly leveraged scheme will suffer the maximum loss per share as loss generating firm has to pay interest on debt is priority and it will increase the loss. Increased EBIT will increase the EPS and decreased EBIT will decrease the EPS.

EBIT - EPS Analysis

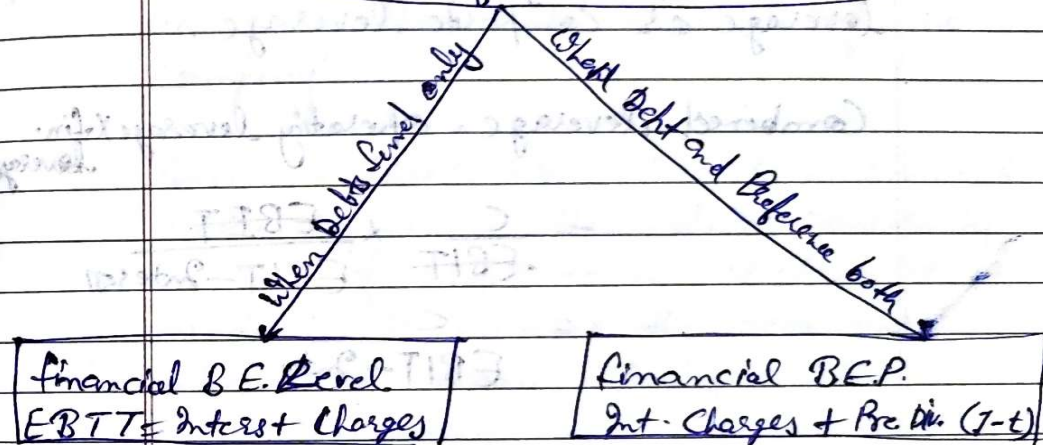
EBIT-EPS analysis is a method to study the effects of leverage. It involves the comparison of alternative methods of financing under various capital mix or various assumptions of EBIT. Firm has the choice to raise funds for financing its investment proposal from different sources in different proportions. Different designs for capital mix are as follows

- 1) Exclusively Equity Capital
 - 2) Equity and Debt as Combination
 - 1) Combination of Equity and Debt
 - 2) " " Equity and Pre. Capital
 - 3) Combination of Equity, Preference and Debt.
- EBIT-EPS analysis provides the information regarding the different

Compositions of Capital mix to choose that mix where EPS is maximum.

Concept of Financial Break even level

Calculation of Financial BEP



If the EBIT level of a firm is just equal to the fixed financial charges then such level of EBIT is known as financial BEP. At this level, there is no earning available to the shareholders as here BEPS stands Zero. If EBIT reduces below this financial break even level, the EPS will be negative.

Combined leverage — It is a combination of operating and financial leverage. When the firm is using fixed cost as well as fixed interest bearing finance i.e. debt. then total impact of fixed cost and fixed finance is called combined leverage or composite leverage.

$$\begin{aligned}\text{Combined leverage} &= \text{Operating leverage} \times \text{Fin. leverage} \\ &= \frac{C}{EBIT} \times \frac{EBIT}{EBIT - \text{Interest}} \\ &= \frac{C}{EBIT - \text{Int.}}\end{aligned}$$

Degree of Combined leverage (DCL)

$$\begin{aligned}&= DOL \times DFL \\ &= \frac{\Delta EBIT}{\Delta \text{Sales}} \times \frac{\text{Sales}}{EBIT} \times \frac{\Delta EPS}{\Delta EBIT} \times \frac{EBIT}{EPS}\end{aligned}$$

$$= \frac{\text{Sales}}{\Delta \text{Sales}} \times \frac{\Delta EPS}{EPS}$$

Combined leverage shows the total leverage and risk related to total leverage is called total risk. It expresses the relationship between revenue on account of sales and EPS and also shows the effect of changes in sales over change in EPS.

Dividend Policy →

Dividend

The term dividend refers to that part of the profits of a company which is distributed by the company among its shareholders as a reward for investment made by them in the share of the company.

Dividend Policy → The term dividend policy refers to the policy concerning amount of profits to be distributed as dividend. It involves the decisions whether to retain earning in the firm for capital investment and other purposes or to payout the earnings in the form of cash dividend to shareholders.

Forms of Dividend →

- 1) Cash Dividend → Dividend paid in cash
- 2) scrip Dividend → During the shortage of cash for short time company may give a scrip or promissory note to shareholders promising to pay them dividend at a certain date in near future.

3) Bond dividend - In such a cash company may issue the bonds to its shareholders for the longer periods.

4) Property dividend - In such a form company may give its own products in lieu of cash dividend.

5) Composite dividend $\rightarrow$ means a part of dividend is paid in cash and another part is paid in form of property.

6) Interim dividend - Some directors of company declares dividend between two annual general meetings of company. It is called interim dividend.

7) Extra dividend - some extra dividend along with regular dividend.

8) Stock Dividend $\rightarrow$ company issues shares to its existing shareholders.

Factors Determining Dividend Policy -

- 1) legal Restriction
- 2) Stability of Dividend
- 3) Restriction in loan agreement
- 4) Liquid Resources

- 5) Degree of Liquid
- 6) financial needs in future
- 7) Rate of return
- 8) effects on earning per share
9. Taxation Policy
- 10) Nature of Industry
- 11) Inflation
- 12) General state of Economy
- 13) Age of Company
- 14) Stability of Earning

Dividend Decision and Valuation of firm

The value of firm can be maximised if the shareholders wealth is maximised, which includes not only the market price of the shares but also current dividend. A careful examination of theories helps the management in arriving at a sound decision. There are two groups of conflicting theories which are discussed below:

- 1) Theory of irrelevance ~~or~~
- 2) Theory of relevance

Theory of irrelevance - This concept is given by Modigliani, Modigliani and Miller. As per their views dividend policy has no effect on share prices of a company.

Modigliani & Miller approach - According to them dividend decision does not affect the wealth of the shareholders or the market price of the shares. The value of the firm is determined by the earning potentiality of the firm or its investment policy.

Assumptions of MM Hypothesis: The following are the assumption on which MM Hypothesis is based on:

- Perfect Capital Market exists.
- Investors behave rationally.
- There are no flotation and transaction costs.
- There are no personal or corporate income tax.
- The firm has rigid investment policy.
- Risk or uncertainty does not exist in regard to future investment and the future of the firm.

MM Theory Approach - Arbitrage Concept

The process of buying an asset at a security in one market and selling the same in another market to derive benefit from the price differential is

referred as "arbitrage". MM argue that the process of arbitrage will prevent the different market values for equivalent firms simply because of capital structure differences.

Criticism of MM Hypothesis:-

- Existence of Perfect Capital Market
- Lack of information.
- Flotation costs.
- Tax Differential.
- Transaction Cost
- Current dividend preference.
- Diversification.

Relevance Concept of Dividend:-

According to the thought, dividends are an indicator of the profitability of the firm. A firm must declare sufficient dividends to meet the expectations of investors and shareholders in order to maximise the net worth of the business. In support of the above discussion we have examined below two categories.

- Walter's approach
- Gordon's Approach

Walter's Approach $\rightarrow$

Prof. James E.

Walter strongly supports that the choice of dividend policy affects the value of a firm. The finance managers can use this policy to maximise the wealth of the equity shareholders. This model is based on the relationship between the firm's return on investment

- (i) Cost of capital or required rate of return. According to him firms can be classified into three categories - growth firm, normal firm and declining firm.

Assumptions of Walter's Model:

- 1) The investments of the firms are financed by retained earnings only.
- 2) The internal rate of return and cost of capital of the firm are constant.
- 3) In the beginning, earnings per share and dividend per share remain constant.
- 4) The firm will continue for an indefinite period.

Walter's Mathematical formula:

$$P = \frac{D + r \frac{E - D}{K_e}}{K_e}$$

P = Market Price of an equity share

D = Dividend per share

r = Internal rate of return

E = Earnings per share

K_e = Cost of Capital

Criticism of Walter's Model

- 1) No External financing
- 2) Constant internal rate of return
- 3) Constant Cost of Capital

B) Gordon's Model $\rightarrow$

The Model suggests that dividends are relevant and dividend decision of the firm affects its value. According to Gordon, the market value of a share is equal to the present value of future stream of dividends.

Mathematically

$$P = \frac{E(1-b)}{K_e - b r}$$

$$Q_2 \quad P = \frac{D}{K_e - g}$$

P = Price of shares

E = Earning per share

b = Retention Ratio

K_e = Cost of equity Capital

g = growth rate in rate of return on investment of an all equity firm

D = Dividend per share

$(1-b)$ = Dividend Pay out Ratio

Assumptions of Gordon's Model:

- 1) The firm has no debt capital and is only financed with equity capital
- 2) No external financing is available
- 3) The internal rate of return is constant
- 4) Cost of Capital remains constant
- 5) The firm and its streams of earnings are perpetual
- 6) There are no taxes
- 7) The growth rate remains constant