

### **FINANCIAL MANAGEMENT**

In the modern world every organization, private and public runs on money. Money touches everything we do. Finance is the life blood of every business.

**Meaning-** simply financial management is the process of managing financial activities. financial management is the planning, organizing, directing and controlling of financial activities in a business enterprise. FM is concerned with the management of finance for the smooth running and successful achievement of the objectives.

**Definition** – PG Hastings defines “ financial management is the art of raising and spending money”

Archer and Ambrossio defines “ FM is the application of the planning and control functions to the finance function”

#### **Features or nature**

- **Management of money** –

FM is essentially an art and science of management of money.

- **Financial planning and control**

FM is concerned with planning and control of finance.

- **Determination of business success**

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FM plays an important role in the success of organization

- **Focus on decision making** –

it gives analysis of data which facilitate decision making

- **Centralized in nature** –

in finance function decentralization is not possible.

- **Continuous function** –

it is a continuous administrative function.

#### **Importance of FM**

- **Base for expansion** –

sound financial plan is very necessary for the success of a business enterprise. In the absence of a sound FM, it is not possible to prepare a sound financial plan.

- **Smooth running of business** – for the smooth running of the business,

proper administration of finance is necessary. This is facilitated only if there is an efficient FM.

- **Co-ordination of functional activities** –

FM controls and co-ordinate all other functions in the enterprise like marketing, production etc.

- **Decision making**

various financial tools are available for evaluating alternatives and for choosing the best alternatives.

- **Determination of business success**

FM plays an important role in the success of organization

- **Solution to financial problems** –

efficient FM helps the top management by providing solutions to the various financial problems faced by it.

#### **Objectives or goals of FM**

- **Maintain liquidity of the firm**

liquidity is the ability of firm to convert the resources into cash quickly. An important objective of FM is to keep the liquidity of the firm to such that the firm shall be able to easily meet its financial obligations without any delay and difficult.

- **Maximization of profit;**

maximization of profit is generally regarded as main aim of business. The main objective of the FM is to safeguard the economic interest of the persons who are directly or indirectly connected with the company. All these must get maximum profit for their contributions. This is possible only when the firm earns maximum profit. Thus, the claim of the FM is to earn maximum rate of profit on capital employed.

- **Maximization of wealth**

the ultimate goal of the FM is maximization of owners' wealth or firms' value. According to this view, the proper goal of FM is maximization of wealth of equity shareholders. Wealth maximization here means maximization of market price per share in the long run.

**Responsibility of FM or financial manager**

• **Financial planning –**

the main responsibility of FM is to forecast the need and source of finance then to plan for them.

• **Raising necessary fund**

before deciding to raise funds from a particular source, a cost-benefit analysis of various alternatives sources must be made.

• **Controlling the use of fund –**

optimum and proper use or utilization of fund

• **Appropriation of profit-**

Finance manager is to advice the top management as to how much is to be retained in the business and how much is to be distributed among the shareholders.

• **Responsibility to owners**

maximization of profit and wealth of shareholders by maximizing the market price of shares in the long run.

• **Responsibility to employees**

provide up to date and regular payment to them.

• **Responsibility to customers**

provide good quality of products and honestly deals with customers regarding the payments.

• **Responsibility to suppliers**

• **Legal obligation – tax matters**

**Scope of FM**

The approach to the scope of FM is divided into three broad categories.

• **Traditional approach –**

Earlier the term FM is known as corporation finance. In the initial stages of its evolution the scope of FM was treated in the narrow sense of procurement of funds by companies to meets their financial needs.

• **Transitional approach -**

in this approach, greater emphasis was being placed on the day to day problems faced by financial managers in the areas of funds analysis, planning and control.

• **Modern approach –**

the modern approach views the term FM in a broad sense. According to modern approach , the finance function covers both acquisition of funds as well as their allocations. According modern approach, FM covers three broad areas, namely investment decision, financial decision and dividend decision.

• **Investment decision**

the investment decision relates to the selection of assets in which funds will be invested by the firm. That means how much is to spend for acquiring long term or fixed assets and how much is to be allocated for current assets. The financial decision making with regard to long term asset is called capital budgeting and financial decision making with reference to short term asset is called working capital management.

• **Financial decision –**

this decision is concerned with financing mix or capital structure or leverage. The finance decision of a firm relates to the choice of the proportion of different sources to finance the investment requirements. There must be proper balance between equity and debt. This is necessary to have a trade off between risk and return to shareholders.

• **Dividend decision –**

this decision is related with the appropriation of profit. That means what proportion of profit is to be retained and how much is to be distributed among the shareholders.

**Function of FM or finance manager**

**Executive or managerial functions**

• **Financial forecasting and planning**

it is necessary to forecast the both short term and long term financial requirements. The financial planning should be done in such a way as to ensure the availability of adequate finance and avoid excess funds

- **Procurement of funds –**

after making financial planning the next step is to identify the funds. There are a number of sources of funds such as shares, debentures, loan etc. the finance manager has to select the best sources.

- **Investment decision**

the investment decision relates to the selection of assets in which funds will be invested by the firm. That means how much is to spend for acquiring long term or fixed assets and how much is to be allocated for current assets.

- **Management of income –**

finance manager has to decide what proportion of profit is to be retained and how much is to be distributed among the shareholders.

- **Management of cash –**

cash must be managed for the benefit of owners. The finance manager should see that an adequate supply of cash is available at proper time for the smooth running of business.

- **Deciding upon borrowing policy –**

it is the duty of finance manager is to decide the limit or extend of funds borrowed from the outside parties through issuing debentures and taking loans.

- **Analysis and interpretation of financial performance –**

the finance manager is required to analyze, check and evaluate the financial performance. For this various financial statements are prepared, analyzed and then necessary guidelines are set for future.

- **Advising the top management**

advise the top management on all financial matters and to suggest various alternative solutions for any financial difficulty.

- **Co-ordination and control –**

finance co- ordination and control

- **Helping in valuation decision**

a finance manager is supposed to assist management in making valuation.

- **Tax administration –** legal matters

### Routine functions

- Record keeping and reporting
- Preparation of financial statements
- Management of cash balances
- Cash planning and credit management
- Safe keeping of valuable papers and documents

### Basic principles of FM

- **Risk and return –**

every financial decision has two aspects – these are return and risk. every decision involved a risk. Financial decisions are taken to maximize returns through the calculations of risk and return.

- **Time value of money –**

every financial manager has to take in mind the time value money while taking financial decision.

- **Cash flow concept –**

FM focuses on inflows and outflows of cash. It does not deal with non cash items like depreciation.

- **Incremental cash flow analysis –**

the investment decision are taken on the basis of incremental cash flow analysis. This concept helps in judging whether the new project is good for the firm or not.

- **Wealth maximization –**

the ultimate goal or aim of FM is to maximize the wealth of shareholders by maximizing the market value of shares. So every finance manager should take all decision on the light of this concept.

### Capital budgeting

Capital budgeting or capital investment decision means a decision about capital expenditure. Capital expenditure simply refers to investment in fixed assets and other development projects.

The term capital budgeting is a combination of two terms namely, capital and budgeting. Capital refers to the amount allocated for investment in fixed assets or

projects. Budgeting is the process of planning projected inflows and outflows of cash during a specific future period.

Thus capital budgeting refers to the decision to invest the current funds of a business concern most effectively in fixed assets and projects in anticipation of an expected flow of future benefits of over a series of years.

#### **Features or nature**

- There is an investment of funds in long term activities
- It involves large outlays
- Current funds are exchanged for future benefits
- The future benefits are expected over a number of years in future.
- High risk
- It is irreversible
- Gestation period is long.

#### **Role and importance of capital budgeting**

• **Huge investment** – capital budgeting decision involve huge investment in permanent asset. So it requires careful planning and appraisal.

• **Long term implications** – capital budgeting decisions have long term effects on the future profitability and cost structure of the firm.

• **Irreversible decision** – capital budgeting decision once made cannot be reversed easily.so careful dealings should be made.

• **Risk** – capital budgeting involve greater risk and uncertainty. The longer is the period of project, the greater may be the risk.

• **Growth** – the capital budgeting decisions affect the rate and direction of growth of a firm.

• **Impact on firms' competitive strength** – the capital budgeting decisions affect the capacity and strength of a firm to face competition.

• **Most difficult decision-** these decisions involve forecasting of future conditions for estimating the future cash flows. And cost of different projects. So it involve greater difficult.

• **Cost control** – in capital budgeting there is a regular comparison of budgeted and actual expenditures. Therefore cost control is facilitated through capital budgeting.

• **Wealth maximization** – the basic objective of FM is to maximize the wealth of the shareholders. Capital budgeting helps to achieve this basic objective.

#### **Steps in capital budgeting**

• **Project generation** – the capital budgeting process begins with generation or identification of investment proposals. This involves a continuous search for investment opportunities which are compatible with the firm's objectives.

• **Project screening** - each proposal is then subject to a preliminary screening process in order to assess whether it is technically feasible, resources are available and the expected return are adequate to compensate for the risks involved.

• **Project evaluation** – after screening the project ideas or investment proposals the next step is to evaluate the profitability of each proposal.

• **Project selection** – after evaluation the next step is the selection and approval of best proposal.

• **Project execution and implementation** – after selection, funds are allocated for them and a capital budget is prepared.

• **Performance review** – follow up

#### **Factors affecting capital budgeting decision**

- Availability of fund
- Utilization of fund

- Urgency of the project
- Expectation of future earnings
- Intangible factors
- Risk and uncertainty
- Minimum rate of return on investment

**Approaches to capital budgeting decisions -**

- **Disaster approach -**

in many cases, the capital expenditure decisions are taken by management only when a disaster occurs. eg - a plant break's down. Thus this approach is a situation of management by crisis.

- **Passive approach -**

under this approach, the emphasis is only on present needs, it is a situation of "manage as we go".

- **Dynamic approach -**

this is the most modern and effective approach to capital budgeting. In this approach, the emphasis is on long range planning. In this case the capital budgeting decisions are taken on the basis of market research, technological changes etc.

**Limitations of capital budgeting**

- The benefits from investment are received in future which is uncertain.
- Some factors affecting investment proposals cannot be expressed in money value.
- It is difficult to estimate the period for which investment is to be made and income will generate.
- It is difficult to estimate the rate of return, because future is uncertain.
- It is difficult to estimate the cost of capital.

**Information required for capital budgeting**

1. **Cash flows -**

in capital budgeting decision, the cost and benefit of a project are measured in terms of cash flows. Cash flow may be cash inflow or outflow. cost are referred to as cash

outflows and benefits are denoted as cash inflows.

**Types of cash flows**

- a) **Initial cash flows (initial investment) -**

investment required for beginning a new project. Eg - cost of new assets, initial working capital etc

- b) **Operating cash flows -**

regular cash outflow and inflows ( profits)

- c) **Terminal cash flows-**

it is the cash inflows for the last or terminal year of the project.

2. **Required rate of return -**

the expected rate of return from a proposal is required in order to A) adjust the future cash flows of a project B) determining the profitability of the proposal or project. An investment proposal is accepted when the return from it is more the required rate of return.

3. **Other information -**

a) economic life of project b) available funds c) risk

**METHODS OF PROFITABILITY**

**APPRAISAL (PROJECT APPRAISAL)**

**Traditional or non-discounting techniques**

- Urgency method
- Pay back method
- Post pay back method
- Average rate of return method

**Modern methods or discounting criteria**

- Discounted pay back method
- Net present value method
- Benefit cost ratio
- Internal rate of return method
- Net terminal value method

**TRADITIONAL METHODS-** traditional methods do not take into consideration the time value of money. Important traditional methods may be discussed below.

❖ **URGENCY METHOD**

Urgency is a method used to justify the acceptance of projects on the basis of emergency requirements. In short most

urgent project is taken up first.

**ADVANTAGES**

- Simple technique
- It useful in case of short term projects

**DISADVANTAGES**

- It is not based on scientific analysis
- Does not consider time value
- A project even though it is profitable, will not be accepted for the very simple reason that it can be postponed.

❖ **PAY BACK METHOD**

Payback period is the length of time required to recover the initial cost or investment of the project. It is the period required to recover the cost of investment. It is also called pay off method, pay out method etc., the payback period is computed by dividing the initial investment by net annual cash inflows.

**DECISION RULE (SELECTION CRITERIA)**

According to pay back criterion, the shorter the pay back, the better the project. This means project having shorter payback period is chosen.

**ADVANTAGES**

- Simple to understand
- Easy to apply
- Important for cash forecasting, budgeting
- Can be used profitably for short term project
- It take into consider liquidity.

**DISADVANTAGES**

- Ignore time value of money
- Completely ignore cash inflows after pay back
- Does not measure profitability
- Does not measure rate of return

❖ **POST PAY BACK METHOD**

As pointed out earlier, under payback method the profitability after payback is ignored. The post pay back method has evolved to overcome this limitation. Under post payback method, the entire cash

inflows generated from a project during its working life are taken into account. The post payback profitability is calculated as under.

Post payback profitability = total cash inflows in life – initial cost

❖ **AVERAGE RATE OF RETURN METHOD (ARR)**

This method is also known as accounting rate of return method or return on investment method or unadjusted rate of return method. Under this method average annual profit is expressed as percentage of investment. ARR is found by dividing average income by the average investment.

**DECISION RULE**

The higher the ARR, the better the project. The project with the highest ARR is selected.

**ADVANTAGES**

- Simple to understand
- Easy to apply
- Take in account the earnings over the entire life
- Consider profitability
- Project of different character can be compared

**DISADVANTAGES**

- Does not consider time value of money
- It is based on profit, not cash flow
- It consider only rate of return & not the life of the project
- It ignore the fact that profit can be reinvested
- It does not differentiate between the size of the investment required for each project.

**DISCOUNTED CASH FLOW TECHNIQUES**

Unlike traditional methods it consider & take it account the time value of money. The important discounted cash flow techniques are as follows

❖ **DISCOUNTED PAYBACK PERIOD**

A major shortcoming of the conventional payback period is that it does not consider

time value money. To overcome this limitation the discounted payback period method is suggested. In this modified method, cash flows are first converted into their present values and then added to ascertain the period of time require to recover the initial cost of investment.

❖ **NET PRESENT VALUE METHOD (NPV)**

This method is used only when the rate of return on investment is predetermined by the management. Under the NPV method, all cash outflows & inflows are converted in to present values (values of future cash flows at the present time). The NPV is obtained by deducting the present value of cash outflow from the present value cash inflows.

**Computation procedure of NPV**

- A. Determination of minimum rate of return
- B. Computation of PV of cash inflows & outflows
- C. Computation of NPV

**DECISION RULE**

Accept the project which have highest NPV. If the project's NPV is zero or positive ,accept it and if the NPV is negative reject it.

**ADVANTAGES**

- Consider time value of money
- It consider the cash flow over entire life of project.
- It focus attention on objective of wealth maximization
- Suitable when cash flows are not uniform
- This method is generally preferred by economists

**DISADVANTAGES**

- may not provide satisfactory in case of two projects of different useful life.
- This method is not suitable in case of projects involving different amount of investment.
- Different discount rate give different present value

- It involve complicated calculations

❖ **BENEFIT COST RATIO**

Two projects having different investment cannot be compared by net present value method. In such a situation, benefit cost ratio should be applied. It is also called profitability index or present value index. Benefit cost ratio is computed by dividing present value of cash inflow with present value of cash outflow.

**DECISION RULE**

Accept the project if its benefit cost ratio is more than one and reject the project if index is less than one. Higher the profitability index better is the project.

**ADVANTAGES**

- Scientific and logical
- Consider fair rate of return
- Consider profitability
- Useful to compare projects having different investments
- It consider all cash flows during the life of project.

**DISADVANTAGES**

- Not based on accounting methods & principles
- Comparatively difficult to understand Follow
- Difficult to estimate the effective life of project
- Cannot be used for comparing those projects having unequal lives

❖ **INTERNAL RATE OF RETURN (IRR)**

Net present value method indicates the net present value of the cash flows of a project at a pre-determined interest rate. But it does not indicate the rate of return. In order to find the rate of return, estimated net cash inflows of each year discounted at various rates till a rate obtained at which the present value of cash inflow is equal to the initial investment.

Thus internal rate of return is the rate of return at which total present value of future cash inflow is equal to initial investment.

**DECISION RULE**

The calculated IRR is compared with the desired minimize rate of return. If IRR is equal to or greater than the desired minimize rate of return, then the project is accepted. If it is less than minimum rate of return then the project is rejected.

**ADVANTAGES**

- This method consider all the cash flows over the entire life of the project.
- Consider time value of money
- Cost of capital need not be calculated
- IRR gives a true picture of the profitability of the project.
- Projects having different degrees of risk can easily compared.

**DISADVANTAGES**

- Difficult to understand
- Complicated calculations
- It is applicable mainly in large projects

**Difference between NPV and IRR**

NPV	IRR
The minimum desired rate of return is assumed to be known.	The minimum desired rate of return is to be determined
It gives absolute return	It gives percentage return
The NPV of different projects can be added	The IRRs of different projects cannot be added

**NET TERMINAL VALUE METHOD (NTV METHOD)**

This method is based on the assumption that each annual cash inflow is received at the end of year and is reinvested in another asset at a certain rate of return from the moment it is received till the termination of the project.

**ADVANTAGES**

- Simple technique
- Simple to understand
- It avoids influence of cost of capital

- More suitable for cash budgeting

**DISADVANTAGES**

- It is difficult to project the future rate of interest
- Comparative evaluation is not considered

**Capital rationing**

When funds are limited, it cannot undertake all profitable projects. The need of capital rationing arises here. Due to limited funds the firms limit their capital budget with in limit. In this situation, the firm will have to ration the available funds among the most profitable projects.

The situation in which the firm is not able to finance all the profitable investment opportunities due to limits on available funds is called capital rationing. It is the process of allocating or rationing the limited capital to various projects ranked according to profitability.

**Selection process under capital rationing**

- Rank projects according to profitability
- Select projects in the descending order of profitability until the available funds are exhausted.

**Types of capital rationing**

- Soft capital rationing – this refers to situations where the firm internally imposes a budget ceiling on the amount of capital expenditure.
- Hard capital rationing – this refers to situations where the amount of capital investment is restricted because of external constraints.

**Projects with unequal lives**

**ANNUAL NPV METHOD -**

To make the economic life comparable, the annualized NPV is calculated. This is calculated by dividing the NPV by the present value annuity factor for the given discount factor and time period. Select the project which have highest ANPV.



**REPLACEMENT CHAIN METHOD –**

Under this method the project with shorter life is made to have a similar cash flow sequence in the extended period.

**Project appraisal under risk and uncertainty**

If an investment proposal has high profitability, the risk associated with it will also be high. If the risk is high then investors' money is unsafe. Therefore it becomes very essential to make risk analysis of investment proposals before the management goes ahead with the project.

**Meaning of risk** – risk is the variation that is likely to occur in future between estimated and actual returns. If the variation is high we say that the risk involved in the investment proposal is high and vice versa. In short, risk is the degree of uncertainty about an income.

**Risk analysis –**

A firm should consider while estimating the required rate of return on a project. There is positive correlation between risk and return. If the return is high, the risk is also high and vice versa. Before accepting the projects, their risk and return should be analyzed. The best project is one which has highest return and lowest risk.

**Methods or techniques of risk analysis**

**General or traditional methods**

**RISK ADJUSTED DISCOUNT RATE –**

Under risk adjusted discount rate techniques some adjustment will be made in the discount rate. This is done according to the degree of risk associated with the project. If the risk is high the discount rate is raised (adding risk premium to discount rate). In short, project which are more risky should be discounted at a higher rate than those which are less risky.

**Merits**

- It is simple to understand
- Easy to operate
- Provide compensation for the risk factor

- Can be used along both with NPV and IRR
- It takes the risk averse attitude of investors.

**Demerits –**

- No scientific way of determining risk premium
- Personal judgment and bias
- It does not adjust the future cash flows.

**Decision rule-** the risk adjusted rate discount can be used both NPV and IRR. If NPV is used, the project with higher NPV should be selected. In case of IRR, the project with IRR greater than the risk adjusted rate of return are selected.

**CERTAINTY EQUIVALENT METHOD**

Under this method the risk involved in the project is taken into consideration by adjusting the expected cash flows and not the discount rate. First the cash flows are conservatively estimated under the assumption of normal risk for various years during the life of the project. Then risk free cash flows are reduced to a certain level by using the correlation factor or risk adjustment factor. This correction factor is called “certainty equivalent coefficient”. Thus certainty equivalent co-efficient is the ratio of riskless cash flow to risky cash flow. The risk free cash flow is always lesser than the risky cash flow. Therefore certainty equivalent coefficient will be less than 1.

**Steps in Certainty equivalent coefficient method**

- Calculate the Certainty equivalent coefficient for each year
- Calculate the risk adjusted cash flow of a project for each year
- Find the present value of risk adjusted cash flow for each year.
- Obtain the total present value of all years. This give total PV of the project.
- Find the NPV of the project.
- Select the project

**Merits**

- Simple and easy to apply
- Reduce uncertainty
- It takes risk into consideration
- Superior to risk adjusted discount rate.

**Demerits**

- Difficult to calculate
- It does not directly use the probability distribution

**Decision rule** – the Certainty equivalent coefficient lies 0 to 1. The higher the risk, the lower is the coefficient. After converting the uncertain cash flows to certain cash flows by using certainty coefficient, these are multiplied with the discount factor. Now we get PV. Then NPV is found. Project with highest NPV is selected.

**Modern or statistical techniques**

**SENSITIVITY ANALYSIS**

Sensitivity analysis examines how sensitive the NPV is to changes in key variables such as capital cost, sales volume etc. if a small change in one factor result in major change in the profitability of an investment proposal, the project is considered sensitive to that factor and more risky. Generally, less sensitive is better than more sensitive ones. The sensitivity analysis can be used through NPV and IRR. Sensitivity analysis is also called “what if” analysis.

Cash flow estimates are made under three different situations. A) pessimistic B) most likely C) optimistic. Pessimistic cash flows are estimate under negative conditions of the future. Most likely cash inflows are projected under normal circumstances. Optimistic cash flow are estimated under positive conditions of the future. These cash flows are discounted by discount rate and NPV is calculated. If the NPVs under these situations differ widely, it indices that the risk is high and vice versa.

**PROBABILITY ASSIGNMENT METHOD.**

Under probability assignment method

the probabilities are assigned to cash flows and expected values are found. The expected values are ascertained by multiplying cash inflows, with the probability assigned. The probabilities to be assigned depend upon the expectation of realization of cash flows. Then the expected values are discounted to compute the PV. From the total PV, cost is deducted to get NPV. The project which gives highest NPV may be accepted.

**STANDARD DEVIATION METHOD**

In order to determine the precise value of risk involved in budgeting , we use methods like standard deviation and coefficient of variation. It measures deviation of possible cash flows of different projects from their respective mean or expected values.

S.D method measures the degree of risk involved in the capital expenditure decision. A project having a larger standard deviation will be more risky when compared to a project having lower standard deviation.

**Steps in S.D method**

- Compute the mean values of the possible cash flows
- Calculate deviations
- Square the deviations and obtain the total
- Apply the formula

**COEFFICIENT VARIATION METHOD**

S.D method is not suitable for comparison particularly when cost of projects are different. In such a case it is better to calculate the relative measure of dispersion. Co-efficient of variation is one of such measures.

The higher the coefficient of variation, higher is the risk involved in the project.

**SIMULATION TECHNIQUES**

In this process, random values for each variables such as number of units to sold, selling price etc are identified. These values

are processed to compute the NPV. This process of identifying the random values and calculating NPV is repeated many times. In the end, a mean and S.D of the calculated NPVs is ascertained. The mean shows returns and the S.D shows the risk.

### **DECISION TREE ANALYSIS**

It is a mathematical tool that enables a decision maker to consider various alternative courses of action and select the best alternative. It is a graphical representation of alternative courses of action and the possible outcomes and risks associated with each action. It is the branching diagram, which represents the relationships of the present decision with future events and decisions. The final shape of the inter relationship of all possible outcomes resembles to a tree with branches. That is why it is called decision tree method.

### **Definition**

According to Mc Farland “ a decision tree is graphic method by which a decision maker can more readily visualize the courses of action open to him together with the risks, possible outcomes, information needs involved in a problem”.

### **Construction of a decision tree in capital budgeting**

- Identify the investment proposals
- Ascertain the different alternative courses of action.
- Drawing the decision tree showing the decision points, decision branches and other data. Entering on the branches relevant data
- Evaluating the results

### **GAME THEORY**

Game theory is used to determine the optimum strategy in a competitive situation. It provides a basis for determining, under certain specific conditions, the particular strategy that will result in maximum gain or minimum loss no matter what opponents do or do not do.

it is the systematic investigation rational decision making in the context of uncertainty concerning the move of competitors. The game theory can be applied in making investment decision under the conditions of uncertainty for maximizing the returns from investments.

### **WORKING CAPITAL**

Working capital is the capital required for the day to day working of an enterprise. It is required for the purchase of raw materials and for meeting the day to day expenditure on salaries, wages, rents, advertisement etc. it is needed for holding some convertible assets such as stock, book debts, bills receivables and cash. It is the capital required for the operation of working of an enterprise. It consists of funds invested in current assets.

### **Definition**

According to Shubin “working capital is the amount of funds necessary to cover the cost of operating the enterprise”.

### **Concepts of working capital**

- **Gross concept –**  
according to gross concept working capital refers to the amount of funds invested in current assets. Thus working capital is equal to total current assets. The working capital as per gross concept is called gross working capital
- **Net concept –**  
according to net concept, working capital refers to excess of current assets over current liabilities. To be more clearly, working capital is equal to total current assets minus total current liabilities. The working capital as per net concept is called net working capital.
- **Operating cycle concept –**  
according to this concept, the working capital is required because of time gap between the sale and their actual realization in cash. This time gap is technically termed as “operating cycle” of the business.

**Operating cycle concept consist**

- Conversion of cash in to raw materials
- Conversion of raw materials in to work in progress
- Conversion of work in progress in to finished goods and accounts receivables.
- Conversion of accounts receivables in to cash.

**Components of working capital**

- Current assets- such as cash, bank, debtors etc
- Current liabilities – such as creditors, bills payable etc.

**TYPES OF WORKING CAPITAL**

**Permanent working capital:** Permanent working capital is the minimum working capital which is continuously required by the business enterprise to carry out its normal business operations. It is also called fixed working capital.

**Initial working capital** :The working capital which is needed in the initial stage of business is called initial working capital.

**Regular working capital** : It is the amount needed for continuous operations of the business. It is the amount of working capital required after the project has been established

**Variable working capital**

Any amount over and above the fixed or permanent working capital is called variable or temporary working capital. It is the working capital which varies with volume of business. This is the additional capital needed to meet seasonal and special needs.

**Seasonal working capital** :It is the working capital which is needed to meet the seasonal needs of the firm. It refers to the additional working capital required during busy seasons.

**Special working capital** : This refers to the extra working capital to be

maintained to meet unforeseen contingencies or to finance special operations.

**Dangers of deficiency of working capital**

- It may leads to business failure
- The firm cannot take the advantage of new opportunities
- Trade discount will be lost
- Cash discount will be lost
- Financial reputation is lost
- Creditors may apply to court for winding up
- Rate of return on investment falls
- It affects dividend policy adversely
- The company cannot utilize its fixed assets properly.

**Dangers of excess working capital**

- Idle fund, means no profit
- Value of shares may fall due to lower rate of return
- Efficiency of management is ineffective
- Adversely affect dividend policy

**Advantages of adequate working capital**

- Can avail cash discount
- Enhance liquidity
- Enhance solvency and creditworthiness
- Possible to meet unforeseen contingencies
- Improve morale of the executives
- Good relation with bank
- Possible to utilize fixed assets properly
- Increase profitability

**factors affecting working capital requirement**

- **Nature of business:**

Manufacturing or trading firms may require more working capital than service firms.

- **Production cycle :**

The longer the production cycle, the larger will be the requirement of working capital

- **Size of business :**

Large size business requires more working capital than small.

- **Turnover :**

Turnover means the speed with which the resources are converted into sales. If the turnover is high, working capital requirement will be lesser.

- **Terms of purchase & sales :**

If the most of sales are for cash, working capital requirement will be lesser and if the most of the sales are for credit, working capital requirement will be higher. In case of purchase it is just opposite of sales terms.

- **Nature and value of product :**

If the cost of raw material is a larger proportion of the total cost of the finished product, working capital required will be larger.

- **Seasonal variations :**

More working capital is required in busy seasons

- **Importance of labour:**

If the firm is more labour intensive, then the working capital required will be larger due to payment of remuneration to them. If the firm is capital intensive, working capital required will be lesser.

- **Expansion of business –**

need more working capital at the time of expanding business

- **Cyclical fluctuations**

- **Company policies**

### Principles of working capital management.

- **Principles of risk variation –**

if the level of working capital increases, the amount of risk decreases. The size of working capital is depends upon the attitude of management. A conservative management prefers to minimum risk by holding a higher level of working capital. But liberal management assumes greater risk by reducing this level.

- **Principle of cost of capital**

Different sources of finance have different costs. It can be seen that the cost of capital moves inversely with risk. If the risk is higher, the cost is lower and vice

versa. Thus additional capital results in the decline in the cost of capital.

- **Principle of equity position:**

According to this principle, the amount of working capital invested in each component should be adequately justified by a firm's equity position. Every rupee invested in the working capital should contribute to the worth or value of the firm.

- **Principles of maturity of payment:**

There should be the least disparity between the maturities of a firm's short term debt instruments and its flow of internally generated funds.

### Financing or approaches of working capital mix

It is crucial what should be the mix of short term funds and long term funds for the purpose of financing the working capital. the use of short term funds will have Favourable impact on profitability. On the other hand the use of long term funds is favoured on the grounds that they provide a liquidity for a long period of time. There are three basic approaches to determine working capital mix.

- **Hedging approach –**

when the firm follows matching or hedging concept, the permanent working capital requirements should be financed by long term funds, while the temporary or seasonal working capital requirements should be financed out of short term funds.

- **Conservative approach –**

this approach emphasis upon safety. According to this approach, all requirements of working capital fund should be met from long term sources. The short term sources should be used only during emergency times.

- **Aggressive approach –**

Under this approach, the firm relies more on short term sources than on long term sources to finance its current assets. In other words, the entire amount of current asset is financed from short term sources.

## **SOURCES OF working capital**

### **Long term sources**

- **Share capital-**

this is long term source of finance. There are two types of shares

- **Equity shares-**

this represents contribution made by equity share holders. Their dividend is not fixed.

- **Preference shares-**

represents the contribution made by preference shareholders. They enjoy preferential right in the payment of dividend & repayment of capital.

- **Debenture capital-**

this is borrowings of the company. Debentures are instruments for raising debt capital

- **Term loans-**

in addition to the raising of funds through shares, debentures firms may also raise term loans for meeting their working capital requirements.

- **Retained earnings**

This is an internal source of finance. It represent the undistributed profit and retained for meeting financial requirements.

### **Short term sources**

- **Commercial banks -**

short term loans from commercial banks

- **Public deposits -**

these are the fixed deposits accepted by a business enterprise directly form public.

- **Indigenous bankers -**

private money lenders

- **Factoring -**

factors are the agents who collect money from the customers for the business on commission. Besides, they also lend advance amount to the firms. So it becomes a source of fund.

### **Transactional sources -**

- **Trade creditors -**

purchase the goods on credit and then we can use that amount for other purpose.

- **Depreciation -**

depreciation charged on fixed assets, and the real sense is that the amount charged as depreciation does not going to outside of the business. So it can be used as a source of finance.

### **Working capital management**

Simply working capital management is managing working capital of business enterprise. Widely working capital management is the efficient planning and controlling of working capital for smooth running of day to day operations of the enterprise.

### **Working capital management consist-**

- Management of inventory
- Management of cash
- Management of receivables
- Factoring management

### **Management of inventory**

**Meaning of inventory-** inventory means stock of goods. In accounting language inventory means stock of raw materials, stock of work in progress and stock of finished goods.

### **Types of inventory**

- **Raw material inventory -** inputs
- **Work in progress -** semi finished
- **Finished goods -** final products

### **Inventory management**

Simply inventory management means managing inventory or stocks of business enterprise. Widely it means efficient planning and controlling of inventories.

### **Objectives of inventory management**

- To ensure that adequate inventories are available
- To minimis the investment of funds in inventories
- Minimize cost ordering and carrying inventories
- Maximize wealth of shareholders
- Avoid cash crisis
- Avoid over stocking and under stocking

- Minimize wastage and pilferage
- Ensure quality of products

**Motives of holding inventories**

- **Transaction motive** –

every firm has to maintain some level of inventory to meet day to day requirement of sales.

- **Production motive** –

a firm should keep some inventory for unforeseen circumstances.

- **Speculative transaction** –

the firm may keep some inventory in order to capitalize an opportunity of making profit.

**Benefits of inventories** –

- **Uninterrupted production** – continuous flow of production
- **Efficient purchase** – bulk purchase may lead to trade and cash discounts
- **Independent sales** – maintain minimum level of stock of finished goods to avoid flow sales.
- **Goodwill with customers** – in order to provide goods on demand.

**Costs of inventory**

- **Ordering cost** –

these are cost of placing an orders. This cost depends on number of orders. It includes preparation of purchase order, cost of receiving order, transport costs, etc.

- **Carrying cost** –

these are the cost incurred in keeping inventory. These includes storage costs(rent, lighting), handling costs, insurance, security cost, damage etc.

- **Stock out cost** –

a stock out is a situation when the firm is not having items in store but there is a demand for the same.

**Techniques of inventory management**

- Economic order quantity (EOQ)
- Classification and codification
- Stock levels
- Safety of stocks
- Inventory turnover ratio ABC analysis

- VED analysis
- Aging schedule of inventories
- Perpetual inventory system
- JIT inventory system

**Economic Order Quantity (EOQ)**

The EOQ enables the firm to determine the optimum level of inventory. EOQ can be defined as the quantity which is most economical to order at a time. It is the ordering quantity which minimizes the total cost of inventory. The total inventory comprises ordering cost and carrying costs.

If the ordering quantity is less, then the ordering cost will be high and the carrying cost will be lesser and vice versa. It is because of more number of order to be placed. Therefore, the ordering quantity should be fixed at that level where the total cost of inventory is lowest. This is possible when the ordering cost is equal to carrying cost. Thus EOQ is that quantity at which the total inventory cost is minimum.

**Assumptions of EOQ**

- The demand for material is known
- Consumption rate is constant
- Purchase price of material is fixed
- Carrying or storage cost per unit is fixed
- Ordering cost per unit is fixed.
- The quantity of material ordered is received immediately. The lead time is zero

**Classification and codification of materials**

For efficient storage, proper classification and codification of material is necessary . classification of materials refers to grouping of materials according to their nature in suitable categories. Codification of material is the process of giving distinct numbers or letters or symbols to each time of material to facilitate easy identification.

**Advantages of classification and codification**

- Easy identification of materials
- Maintain secrecy of materials
- Accounting purpose

- Ensure clarity
- Reduce clerical work
- Speedy movement of materials
- Material control

### **Stock levels**

In order to avoid overstocking and under stocking inventory management should fix the levels of stocks such as maximum level, minimum levels, etc

- **Maximum level –**

maximum stock is the upper level of inventory. It is the maximum quantity of items of material that can be held in stock at any time. This is the level above which stock should not be maintained.

- **Minimum level –**

minimum stock level is the minimum quantity of stocks that should be held at all times. It is that level below which stock should not normally be allowed to fall.

- **Reorder level (ordering level):**

This is the level at which order is placed for further supply of materials. When stock of material reaches this level, the storekeeper should initiate action for the purchase of material.

- **Average stock level –**

this is the average stock held by a business enterprise.

- **Danger level –**

this is the level of stock below which the stock should never be allowed to fall. If the stock level falls below the minimum level is called the danger level.

- **Reorder period.-**

the term reorder period refers to the time required to obtain new materials.

### **Safety of stocks**

A safety of stock is an addition supply of inventory that is carried all the time to be used when normal stocks run out. It is the minimum additional inventory to serve as a safety margin or buffer or cushion to meet an unanticipated increase in usage.

### **Inventory turnover ratio –**

It is the ratio of cost of material

consumed during a given period to the average stock during that period. It indicates the speed with which the raw material have been consumed in production. It gives the number of times in a year stock is used up and replenished. In short, it shows the rate of consumption of materials.

### **ABC analysis**

In the case of large concerns large number of items are kept in the stores. Therefore, it is practically impossible to concentrate on each and every item. In such situations, ABC analysis is used with view to exercise better control over materials. Under ABC analysis all materials are classified into three categories. A, B and C according to value. Category A include high value of materials, category B includes medium value of materials and category C consist lower value materials. According to this technique a greater or strict control is exercised over category A, moderate control is exercised over category B and relatively lesser degree of control over category C materials.

### **Advantages of ABC analysis –**

- Ensure strict control over costly materials
- Can use working capital bitterly
- Reduction in costs
- Reduce clerical costs
- Maintain high stock turnover ratio

### **VED analysis**

According to this parts are classified in to Vital, Essential and Desirable. Vital spares are those which are very critical production. If these are out of stock, it will lead to immediately production stoppage. Essential spares are those which are very important. Without these, production can be done only for few hours or day. If they are out of stock for a long period, production will stop. Desirable parts are those which are required for production, but factory can manage without them for some time, say a week or even more. While exercising control, greater attention should be paid on vital spares.



### **Aging schedule of inventories**

A schedule in which inventories are classified according to the period of their holding in the store is called aging schedule of inventory. It shows the age of inventories or the period for which inventories are lying on stock together with the percentage of each inventory of total inventory. It helps to identify the rate at which various inventories are consumed. This will help in identifying slow moving inventories.

### **Perpetual inventory system**

The system of material control on continuous basis while the material is in storage is called perpetual inventory system. Under this system the actual stock is taken continuously and is compared with the stock as shown by the material records. It is a method of recording stores balance after every receipt and issue, to facilitate regular checking to avoid closing down of factory for stock taking.

### **JIT(Just In Time) inventory technique**

The system aims at minimizing inventories of raw material and work in progress. It also aims at eliminating waste from every aspect of manufacturing and its related activities. The term JIT refers to producing only what is needed, when it is needed, in just the quantity needed.

### **Management of cash**

Cash is a critical asset. If finance department of a firm is heart, cash is its lifeblood.

**Meaning of cash** – cash is the most liquid asset that a business owns. It is defined as demand deposits plus currency. The term cash in narrow sense means currency and equivalents of cash such as cheques, drafts etc. in a broad sense cash include cash assets such as marketable securities and demand deposit in banks.

### **Nature of cash**

- Cash is essential for the smooth running of business
- Liquid asset
- Not available in abundance
- Cash is in itself unproductive

### **Motives for holding cash**

- **Transaction motive** – cash is necessary for business operation. It is required for financing transactions.

- **Precautionary motive** – cash inflows and outflows are unpredictable. Therefore, firms need to hold some cash to meet unforeseen needs

- **Speculative motive** – a firm sometimes hold cash to take advantage of unexpected opportunities. It is called speculative motive of holding cash.

- **Compensation motive** – to obtain a loan or other banking services the firm will be required to hold a minimum balance of cash in the bank.

### **Factors affecting cash level or cash needs**

- **Credit policy** – if the credit policy liberal the cash level will be higher and vice versa.

- **Distribution channel** – if the distribution channel is long, the level cash may be higher.

- **Nature of product** – the level of cash holding in case of necessities and comforts will differ from the level of cash in case of luxury items.

- **Size of the firm** – larger the firm, higher will be the cash level.

- **Working capital cycle** – if working capital cycle is long, cash level will be greater.

- **Policy of disbursement of salary** – if salaries are paid fortnightly or below, then the cash need will be higher and vice versa.

### **Cash management**

It is the efficient managing of cash and cash related items of business enterprise. It means efficient planning, organizing and controlling cash and cash equivalents items. It is the process of forecasting, collecting, disbursing, investing planning for the cash for the smooth running of enterprise.

**Scope of cash management.**

- **Cash planning** – planning cash inflows and outflows
- **Managing the cash outflows** – outflows of cash should be made as late as possible.
- **Managing optimum cash balance** – the firm should determine the optimum level of cash balance.
- **Investing cash** – surplus cash if any, should be properly invested in short term investment to earn additional profit

**Functions of cash management**

- Planning cash inflows and outflows
- Controlling cash inflows and outflows
- Investing surplus funds
- Improving investment image
- Maintaining relationship with banks.

**Advantages of cash management**

- Smooth running of business
- Maintain optimum working capital
- Ensures liquidity and solvency
- Helps to frame sound debt policy
- Regularize cash flows

**Techniques of cash management**

- Synchronize cash flows
- Accelerate cash collections
- Delay cash disbursement
- Balance surplus and deficit of cash

**Synchronizing cash flows**

If a firm pays its bill on a weekly basis but collects its payments biweekly, we say the firm has a lack of cash flow synchronization. The firm can reduce the needed cash balance if it can move the cash disbursements and cash collections into the same cash flow cycle. Sometimes such synchronization is not possible. At that times it is accompanied by additional costs. The management should consider the benefits and the cost of synchronization before deciding whether it is worthwhile to achieve.

**Accelerate cash receipts**

The financial manager should take steps for speedy recovery from debtors. For this purpose, proper internal control system should be installed in the firm. Periodic statements should be prepared to show the outstanding bills. Incentives offered to the customers for early payment should be well communicated to them. Once the cheque / DD received from customers, no delay should be there in depositing these receipts with the banks. There are certain techniques to reduce the time lag in collection of receivables.

• **Lock box system** –

Under this system the firm establishes a post office box near customers' area. The firm then orders its debtors to send their cheques to the post office rather than to the firm's headquarters. The payments are collected by local banks, which are authorized to do so. The banks open the box several times a day and collect the cheques from the lock box. Then the bank deposits these cheques in the firm's account.

• **Concentration banking** –

firms that have many branches and at different places can collect their account receivables quickly by applying a concentration banking system. This system works on a decentralized manner. Under this system, multiple collection points are made to collect the funds. This reduces mailing time. Collection centres are set up in different geographical centres. The company has a central account called concentration banking. When the customer deposit his payment to the local collection center. It gets transferred to the central office.

• **Automated clearing houses** –

this is an electronic network. It sends data from one bank to another. No paper cheques are sent. Hence this avoids mail time delay. ACH guarantees one-day clearing regardless of the bank's location.

- **Zero balance accounts –**

under this system a firm does not keep any cash balance in the bank account. Cash is transferred only when the cheque is presented for the payment to the bank. Only an amount sufficient to cover day's cheques is deposited. Idle cash balance is thus minimized.

- **Wholly owned collection centre –**

under this method, a firm sets up its own collection centres in the cities where there are majority of its customers. The customers mail their payments, processes them and record the transactions in the books of accounts. If then deposits the cheques with the authorized banks and transmits payment to the central office.

- **Pre authorized cheques –**

customers deposit with the pre signed cheques. The date of the cheque corresponds to the date when payment is due. The supplier deposits the cheques on the appointed date and the amount is credited to his account.

**Managing outflows or disbursements**

Finance manager should try to slow down the payments as much as possible. However, care must be taken that goodwill and credit rating of the firm is not affected. For managing outflows the following techniques are used.

- **Centralized cash payments –**

in this technique all receipts are transferred from subsidiaries to central office. The central office in turn accepts and pays the creditors' bill direct to the parties.

- **Avoidance of early payments –**

the debt should not be paid before due date because it has no special advantage except earnings cash discount.

- **Float management –**

when a firm receives or make cheques there is usually a time gap between the time the cheque is written and when it is cleared. This time gap is called float. These can be used by a prompt and careful float management. The goal of

float management are to increase the payment float as much as possible and decrease the receipt float.

**Optimum cash balance**

The optimum level of cash is that level of cash at which there is a trade off between cost of maintaining the cash surplus and cost of deficit financing. The optimum cash level should be adequate enough to manage the contingencies and basic cash requirements of the firm.

**Management of receivables**

**Meaning of receivables** – receivables are assets created out of credit sales. These are the assets created as a result of sale of goods and services in the ordinary course of business. Receivables are also known as accounts receivables, book debts etc.

**Definition** – according to O.M Joy “the term receivables is defined as debt owed to the firm by customers arising from sale of goods or services in the ordinary course of business”.

**Receivables = debtors + bills receivables**

**Meaning of receivables management**

Receivables management simply refers to management of receivables. It refers to planning and controlling of receivables of a firm. It is the process of making decisions relating to investment in trade debtors.

**Objectives of receivables management**

- To increase sales
- To increase profit
- To increase market value of shares
- To increase customer base
- Evaluate and control receivables

**Scope of receivables management**

**1) Determining credit policy**

A suitable credit policy is essential for the proper management of debtors. If there is no proper credit policy, outstanding balances in the debtors account and risk bad debt will increase. The term credit policy is that decides how much credit be extended to a customer and on what terms. The credit policy may be liberal or aggressive (loose or tight). when a firm

adopt liberal credit policy, sales and profit will increase, but there is an chance of increase in bad debt and decrease in liquidity. On the other hand aggressive credit policy will create benefit of decrease in bad debt and increase in liquidity, but there will be a problem of decrease in sales and profit. So FM should implement an optimum credit policy to manage its receivables.

## 2) Determining credit terms

The credit terms refers to the set of stipulation under which the credit is granted to the customers. The credit terms include:

- **Credit period-**

it is the length of time for which the firm grants credit. A firm should determine the credit period to ensure better receivables management.

- **Discounts –**

discounts are given for early or prompt payment. It is an effective tool to manage accounts receivables.

- **Credit standards –**

credit standards refers to the required financial strength of acceptable customers to whom credit is to be granted. These are the criteria of extension of credit to customers. It is the process of checking paying capacity of customers.

## 3) Evaluating the credit applicants

A firm cannot follow the policy of treating all the customers equal for the purpose of granting credit. Each case is to be decided in its own merits. It includes:

- Collecting credit information of customers
- Evaluating the credit capacity of customers
- Credit analysis(credit limit)
- Collection procedures determination

## 4) Evaluating collection policies and methods -

The firm should formulate an effective collection policy. The collection policy should aim at accelerating collections

from slow payers and reducing losses on account of bad debts. Collection policy refers to the collection procedures such as letters, phone calls, and other follow up mechanism to recover the amount due from debtors.

The following techniques can be adopted by a company for the collection.

- Polite requesting collection letters
- Telephone calls, fax etc
- Computer contacts
- Personal visits
- Using collection agencies
- Warning letters
- Legal action

## 5) Control and analysis of receivables

The next important aspect of receivables management is to analyze the size of investment in receivables from time to time. For this purpose, the following ratios may be helpful

- **Debtors turnover ratio –**

this ratio indicates the speed with which cash is collected from debtors or receivables.

- **Average collection period –**

this ratio indicates the period for which debtors or receivables are outstanding.

- **Ageing schedule of debtors –**

to keep track of its receivables situation, the firm prepares an ageing schedule. An aging schedule shows ages of unpaid accounts and what percentage of total value of receivables those accounts represent. The older the receivables, the lower quality and greater the probability of a default(bad debt).

## Cost and benefits of receivables

### Cost of receivables

- **Administration cost –** collection cost, staff cost etc.
- **Capital cost –** interest paid on outsiders fund (outside fund needed when there will be credit sales)
- **Delinquency cost –** opportunity cost for the delayed period.
- **Default cost –** bad debts

**Benefits of receivables**

- **Increase in sales**
- **Increase in profit**
- **Extra profit** – sell price which is higher than cash sales
- **Increase in market share-** attract new customers

**Decision regarding tightening credit policy -**

In receivables management, the management has to decide whether adopt a liberal credit policy or a tightened credit policy. In arriving at a decision, the following steps are required.

- **Find out reduction or saving in cost of sales**
  - Calculate the total cost under present policy and proposed policy
  - Calculate the average investment in debtors under both situation.
  - Calculate reduction in investment in debtors
  - Find out reduction or saving in cost on the basis of firm's rate of return.
- **Find out the reduction in profit**
  - Find out profit of present and proposed policy
  - Find out reduction in profit
- **Compare reduction in cost with reduction in profit**
- **Take decision -**

if reduction cost more than reduction in profit, the proposal shall be accepted and rejected the proposal if reduction cost is less than reduction in profit.

**Decision regarding liberalizing credit policy**

When a firm adopt liberal credit policy, sales and profit will increase, but there is an chance of increase in bad debt and decrease in liquidity. In arriving at a decision whether the credit policy is liberalized or not, the following steps are required.

• **Find out additional or incremental cost of sales**

- Calculate the total cost under present policy and proposed policy
- Calculate the average investment in debtors under both situation.
- Calculate increase in investment in debtors
- Find out additional or incremental cost on the basis of firm's rate of return.

- **Find out the increase in profit**
  - Find out profit of present and proposed policy
  - Find out increase in profit
- **Compare incremental cost with increase in profit**
- **Take decision -**

if incremental cost less than increase in profit, the proposal shall be accepted and rejected the proposal if incremental cost is more than increase in profit.

**Factoring service**

**Meaning** – factoring simply refers to selling the receivables by a firm to another party. The buyer of the receivables is called the factor. The factor can be commercial bank or a financial company. When receivables are factored, the factor takes possession of the receivables and generally becomes responsible for its collection. It also undertake administration of credit. Factors work for commission.

**Procedures of factoring**

The firm having receivables enters into an agreement with a factoring agency. The client delivers all orders and invoices and send the invoice copy to the factor. The factor pays around 80 % of the invoice value as advance(determined as per agreement). The balance amount is paid when factor collects complete amount of money due from customers. Against all these services, the factor charges some amount as service charges. In certain cases the client sells its receivables at discount

say, 10 %. This means the factor collects the full amount of receivables and pays 90 % of the receivables to the client. From the discount, the factor meets its expenses and losses. The balance is the profit.

### **Types of factoring**

- **Recourse factoring** –

in this type of factoring, the factor manages the receivables without taking any risk like bad debt etc. full risk is borne by the firm itself.

- **Non recourse factoring** –

here the firm gets total credit protection because complete risk of total receivables is borne by the factor.

- **Maturity factoring** –

in this type, the factor does not pay any cash in advance. The factor pays clients only when he receives funds.

- **Advance factoring** –

here the factor makes advance payment about 80 % of the value to the client

- **Invoice discounting** –

under this arrangement the factor advances against receivables, collects interest for the period extending from the date of advance to the date of collection.

- **Undisclosed factoring** –

in this case the firm does not disclose the identity of the factor to the customers. They act as part of the firm and will do all the activities.

### **Features of factoring**

- Financial service
- Purchase credit from clients and collects from customers
- Risk
- Act as an intermediary
- Other services like advance payment, bad debt protection etc
- Helps to solve financial problems

### **Functions of factor**

- **Provision of finance** – advance about 80% of invoices.
- **Administration of sales ledger** – maintain sales ledger of every customer.

- **Collection of receivables** – factor collects all the book debts for the clients
- **Protection against risk** – factor protects the firm from bad debt risks.
- **Credit management** – helps to fix credit limit, credit period etc
- **Advisory services** –

### **Advantages of factoring**

- **Improves efficiency** – improve overall efficiency of management
- **Higher credit standing** – it helps to increase credit standing by providing advance. The firm can utilize that advance amount for other purposes.
- **Reduces cost** – reduce cost of handling receivables
- **Additional source** – advance amount becomes an additional source of fund.
- **Advisory services** – factors advise the clients regarding credit matters.
- **Accelerate of production cycle** – a firm can maintain liquidity. Hence it can accelerate its production cycle.
- **Adequate credit period for customers** – customers get adequate credit period for payment of assigned debts.
- **Competitive terms to offer** – able to improve competitive terms to its buyer (discount). It will increase profit.

### **Limitations of factoring**

- It creates over confidence in the minds of firms.
- Lack of professionalism
- Not suitable for small business

### **Committees on working capital management (committees on bank finance)**

Banks provide finance to business concerns to meet the requirements (working capital). To regulate and control bank finance, RBI constitutes committees. These committees submit reports with findings and recommendations to formulate the

finance policy of the banks. Important committees are as follows:

- Dehejia Committee
- Tandon Committee
- Chore Committee
- Marathe Committee

#### **Dehejia Committee**

National Credit Council (NCC) appointed a committee under the chairmanship of Sri V.T Dehajia in 1968. The purpose of constituting the committee was to determine the extent to which credit needs of industry and to establish some norms for lending by commercial banks. The **recommendations** of the committee are as follows:

- Banks should finance industry on the basis of a study of borrowers' total operation rather than security basis.
- The total credit requirements of the borrower should be segregated into "hard core" (minimum level of working capital) and "short term" components.
- Loans can be provided for meeting hard core working capital.
- A customer should be required to confine his dealings to one bank only.

#### **Findings of Dehajia Committee**

The committee found that there was a tendency to take short term credit from banks and use it for purposes other than production. The committee pointed out in its report that in the financing practice of banks, there was no relationship between the optimum requirements for production and the bank loan. The committee also found that do not give proper attention to the financing pattern of their clients.

#### **Tandon committee**

In 1974 a study group under the chairmanship of Sri P.L Tandon was formed to examine the existing method of bank lending and suggest changes. They submitted a report which popularly known as Tandon Committee report. The following are the **recommendations**:

- Assess the need based credit of the borrower on the basis of their business plans.
- Bank credit would only supplementary to the borrower's resources. So bank should not finance 100 % of working capital requirements
- Bank should ensure proper end-use of bank credit.
- Working capital finance would be available on the basis of industry wise norms for holding different current assets
- Credit would be available in the form of cash credit, bill purchased and discounted, working capital term loan etc.
- Bank would require to them to submit regular report of their financial operations.

#### **Norms**

The following norms are recommended by the Tandon committee.

- **Norms for inventory and receivables –**

the committee has suggested norms for 15 major industries regarding inventory, receivables and bills purchases. The committee has suggested that the banks should follow these norms while granting loans.

- **Lending norms –**

the committee introduced the concept of "maximum permissible bank finance". The committee suggested that part of current assets should be financed by trade credit and current liabilities. The remaining part (working capital gap- difference between current assets and current liabilities) should partly financed by owners fund long term borrowings and partly by the short term credit. The committee has suggested three alternative methods for working maximum permissible bank finance.

**First method** – the borrower will contribute 25 % of the working capital gap from the owned fund and long term borrowings and the remaining can be financed from bank borrowings.

**Second method** - the borrower will contribute 25 % of the current assets from the owned fund and long term borrowings and the remaining can be financed from bank borrowings.

**Third method-** in this method, the borrowers' contribution fund will be 100 % of the core current assets and a minimum of 25 % of the balance of current assets. The remaining can be met from the borrowings. Core current assets means minimum level of investment in current assets.

#### **Chore Committee**

The RBI appointed another committee under the chairmanship of K.B chore in April 1979 to review the working of cash credit system.

#### **Recommendations**

- The bank should obtain quarterly statements from all borrowers having working capital credit limit of Rs. 50 lakhs and above.
- If borrower does not submit such statements in time, banks may charge penalty interest(1 %)
- Bank should undertake a periodic review of limit of Rs. 10 lakhs and above.
- Bank should not bifurcate cash credit accounts into demand loans.
- While assessing the credit requirements, the bank should appraise and fix separate limits for normal non-peak level and peak level credit requirements.
- Bank should take steps to convert cash credit limit into bill limits for financing sales.
- Use of different types of advances, namely, cash credit, bill purchases and discounted.

#### **Marathe Committee**

In 1982, the RBI appointed a committee under the chairmanship of Sri Marathe to review the working of credit authorization scheme and suggest measures for giving meaningful directions to the credit management function of RBI.

#### **Recommendations**

- Committee has declared the third method of lending as suggested by the Tandon Committee to be dropped. Banks would provide credit for working capital according to second method.
- The committee has suggested the introduction of the "Fast Track Scheme" to improve the quality of credit appraisal in banks. It recommended that commercial banks can release without prior approval of the RBI 50 % of the additional credit required by the borrower, subject to the following requirements;
  - Estimates in regards to production, sales, chargeable current assets, other current assets, current liabilities, and net working capital are reasonable.
  - The classification of assets and liabilities as current and non current is in conformity with the guidelines issued by the RBI.
  - The projected current ratio is not below 1.33 : 1.
  - The borrower has to be submitted quarterly statement.

#### **Dimensions of working capital management:**

- **Formulation of policies regarding profitability, risk and liquidity:**

the greater the firm's investment in current assets, the greater the firm's liquidity and lowers the firm's risk and profitability and vice versa. Therefore, what is needed is a



trade off between profitability, risk and liquidity. Such a moderate policy should be formulated for working capital by the financial management.

- **Decision about the composition and level of current assets ;-**

It may be noted that the liquidity of a firm does not depend upon the volume of current assets, but on the composition level of current assets. Even if the firm maintain large volume of current assets, sometimes its liquidity is weak (eg inventory). Therefore, there should be a balance among the various components of current assets.

- **Decision about the composition and level of current liabilities –**

the FM has to decide the type of current liabilities, their composition and the amount of each type of current liability. The management must determine the period up to which the payment of current liabilities can be delayed. However, while doing this, it should be seen that the creditors are not dissatisfied and it will not affect the reputation of the firm.

**Zero working capital concept:**

This is one of the latest trends in working capital management. Zero working capital concept was advocated by Kampouris (CEO of American Standard). Under this policy the working capital tends to be zero i.e. at all the time the current assets shall equal to the current liabilities. Excess investment in current assets is avoided and firm meets its current liabilities out of the matching current assets. As current ratio is 1 and quick ration is below 1, there is a fear about the liquidity. But if all current assets are performing and recorded at their realizable value, there is no place for these fears. The firm saves opportunity cost on excess investment in current assets.

**Capital structure**

Capital structure simply refers to the make up of the capitalization of a firm. It is the mix of debt and equity which a company uses to finance its long term

operations. Debt capital is the company's long term borrowings. Equity capital is the long term funds provided by the shareholders or owners of the company.

**Definition :** In the words of C.W Gerstenberg "Capital structure refers to the kind of securities that make up capitalization".

**Difference between capital structure and financial structure**

Capital structure is the proportion of different sources of long term capital. It excludes short term fund. Financial structure refers to the way the company's assets are financed. It is the entire left hand side of the balance sheet. This represents all the long term sources of capital and short term sources of capital. In short, financial structure shows the pattern of total financing. Thus capital structure only a part of financial structure.

**Importance of capital structure**

- Capital structure affects the financial risk
- It affects the firm's cost of capital
- It affects the value of the firm
- It represent management attitude towards risk and return

**Capital structure planning**

Planning about capital structure is essential for the smooth running of business. It is the process of determining or designing capital structure. That means how much is to be raised form equity and how much is to be raised through debt capital.

The key factors which governs the capital structure planning are

- Profitability
- Liquidity
- Flexibility
- Nature of industry
- Control
- Legal requirements
- Nature of firm
- Market conditions etc

**Factors determining capital structure**

**Internal factors**

• **Size of business –**

it is very difficult for small companies to raise long term debt. Hence they depend on share capital and retained earnings. Large company cannot be raised from single source of capital.

• **Nature of business –**

manufacturing firms have more risk. So these forms prefer equity capital and debt. On the other hand, trading firms can raise more fund through debt capital. They have less risk compared to manufacturing.

• **Regularity and certainty –**

debt capital should be issued only when the company expects a high and regular income.

• **Period and purpose of financing –**

equity shares are the best choice for funds required for permanent investment.

• **Trading on equity –**

the use of debentures, loans, preference share capital along with equity share capital is known as trading on equity. When a firm want to enjoy the benefit of trading on equity they can raise funds through equity as well as debt funds.

• **Desire to retain control –**

if the management desires to retain control over the company, it may raise additional capital through debt capital.

• **Asset structure –**

if the company has more fixed than current assets, it will use more debentures and preference shares and less equity shares.

**External factors**

• **Conditions in the capital market -**

rate of interest on debentures, rate of dividend on preference shares should kept in mind while determining capital structure.

• **Attitude of investors –**

attitude of investors are also affects the determination of capital structure of a company.

• **Cost of financing –**

generally cost of financing by debenture is cheaper than the financing by issue of equity shares.

• **Legal requirements –**

it should also take care of norms set by financial institutions, SEBI, stock exchanges etc.

• **Taxation policy –**

high tax discourages the issue of equity shares and encourages the issue of debentures.

• **Attitude of management**

**optimum capital structure**  
The capital structure which maximizes the value of the firm is called optimum capital structure. Optimum capital structure simply refers to the best or most economical capital structure. It is the mix of debt and equity that maximizes the value of the company and minimizes the cost of capital.

When a company uses more debt, the overall cost of capital will be less. This will turn higher return and market value of shares. But the equity holders will have to bear higher risk. On the other hand When a company uses less debt, the overall cost of capital will be high. This will turn lower return and market value of shares. But the equity holders will have to bear only lower risk. Therefore, there should be a trade off between risk and return.

**Essentials of optimal capital structure**

• **Clarity of objectives –**

the capital structure of a company should be guided by clear cut objectives.

• **Balance –**

there should be a balance between different types of ownership and creditor ship securities.

• **Economy –**

the capital structure should ensure the minimum cost of issue.

• **Liquidity and solvency –**

a sound capital structure should ensure adequate liquidity and solvency.

- **Flexibility** –

should be possible to repay when they are not required.

- **Simplicity** –

should be easy to understand and simple to operate.

- **Safety** –

an ideal capital structure should ensure safety of investment.

- **Maximum return** –

an optimum capital structure should ensure maximum return

**Patterns or forms of capital structure**

- Equity shares only
- Equity shares and preference shares
- Equity shares and debentures
- Equity shares, preference shares and debentures.

In a going company, reserves and surplus can also constitute an important part of capital structure.

**Theories of capital structure**

The basic purpose of capital structure decision is to maximize the value of firm. However, there is a difference of opinion regarding whether or not capital structure decision affects the value of firm. Number of theories have been developed on capital structure to determine optimal capital structure. The following are the important theories.

- Traditional theory
- Modigliani Miller theory

**TRADITIONAL THEORY(APPROACH)**

Traditional approach was suggested by Soloman Ezra. According to this approach, a firm can reduce the overall cost of capital ( $K_o$ ) or increase the total value of the firm ( $V$ ) by increasing the proportion of debt in the capital structure to a certain limit. Beyond this limit the additional doses of debts may result in a decrease in the total value of the firm. The optimum capital structure is one at which the  $V$  is maximum and  $K_o$  is minimum.

According to the traditional approach, the effects of changes in the

degree of leverage on the overall cost of capital ( $K_o$ ) and the value of the firm ( $V$ ) can be explained in the following three stages.

**First stage:** in the first stage, the use of debt in capital structure increases the value of the firm and decreases the overall cost of capital. It happens because the cost of equity ( $K_e$ ) remains constant or rises slightly with debt, but it does not rise fast enough to offset the advantages of low cost of debt. On the other hand, the cost of debt ( $K_d$ ) remains constant or rises very negligibly because market views the use of debt within reasonable limits. In short, in the first stage the value increases.

**Second stage:** in the second stage, the increase in debt beyond a particular limit has no effect on the value of the firm and the overall cost of capital. This happens because the increase in the cost of equity ( $K_e$ ) due to the increase in financial risk completely offsets the advantage of using the cheaper debt.

**Third stage:** in the third stage, the further increases in debt in the capital structure will increase overall cost of capital ( $K_o$ ) and reduces the value of the firm ( $V$ ). this happens due to (a) owing to increased financial risk the cost of equity ( $K_e$ ) rises substantially, (b) the creditors will also raise the interest rate on account of higher risk.

**MODIGLIANI MILLER THEORY (MM THEORY)**

Franco Modigliani and Merton Miller developed a capital structure theory in 1958. They formulate theory under two situation (a) in the absence of corporate taxes(Irrelevance theory) (b) when corporate taxes are assumed to exist.

**In the absence of corporate taxes(Irrelevance theory)**

According to this theory, a firm's total value ( $V$ ) and its overall cost of capital will be same at all degrees of financial leverage. Modigliani and Miller have proved under a given set of assumptions, the capital structure and its composition have no effect

on the value of the firm. In other words capital structure is irrelevant.

**Assumptions of MM theory**

- There is a perfect capital market
- The business risk of all the firms are homogenous
- There are no taxes (later withdrawn)
- Investors are rational
- There is no transactional cost
- All the investors anticipate the same percentage of firm's EBIT.
- All the earnings are distributed to the shareholders
- Investors are free to buy and sell securities

In the opinion of Modigliani and Miller, two identical firms in all respects, except their capital structure, cannot have different market value and cost of capital. This happens because of arbitrage process.

**Arbitrage process**

Arbitrage process refers to buying a security which has low risk and selling it in a high risk market. The investors will develop a tendency to sell the shares of the overvalued firm and to buy the shares of the undervalued firm. This buying and selling will continue till the two firms have same market values. It happens so because the increased demand for undervalued securities raises their prices and the increased supply of overvalued securities reduces their prices. Thus arbitrage process restores equilibrium. MM theory is also known as arbitrary theory.

**Limitations of MM theory**

- **Discrepancy in lending and borrowing rate of firm and individuals :**

MM approach assumes that individuals and firms can borrow and lend at the same rate. This assumption is wrong

- **Difference in personal and corporate leverage:**

MM approach assumes same risk with both personal and corporate leverage. But actually the personal leverage is more

riskier than corporate leverage.

- **Transaction cost:**

MM approach assumes no transaction cost. In real life costs like brokerage etc have to be incurred.

- **Institutional restrictions :**

certain institutional investors like LIC, UTI etc are not allowed to create personal leverage.

- **Corporate taxes :**

MM model is based on the assumption that there is no corporate tax. This assumption is unrealistic.

- **Influence of share price :**

share price cannot be influenced by a single individual.

- **Information access :**

MM hypothesis expects every investors to have complete information of all the companies.

**MM theory when corporate taxes assumed to exist**

MM published a follow up paper in 1963 in which they had withdrawn the assumption that there are no corporate taxes. Interest on debt is a deductible expense for a tax purpose. But dividend is not deductible. This encourages companies to use debt in their capital structure. Thus due to the existence of tax, the overall cost of capital of the levered firm will be lower than that of an unlevered firm. Therefore the value of the levered firm will be more than that of an unlevered firm even both are identical in respect. The optimal capital structure can be achieved by maximizing the debt mix in the equity of a firm.

**COST OF CAPITAL**

**Meaning –** cost of capital simply refers to cost of obtaining funds. Cost of capital is the rate a firm pays to its investors for the use of their money.

**Definition:** According to John J. Hampton “the cost of capital is the rate of return, the firm requires from investment in order to increase the value of the firm in the market place”.

To conclude, cost of capital is the minimum

rate of return that must be earned to maintain the market value per share.

### Classification of cost of capital

- **Historical cost and future cost :**

Historical cost refers to the cost which already been incurred. While future cost refers to the expected cost of funds to be raised for financing a project.

- **Specific cost and composite cost :**

specific cost refers to the cost of a specific source of capital such as equity, debentures etc. composite cost of capital refers to the combined cost of various sources of capital.

- **Average cost and marginal cost :**

average cost refers to the weighted average cost of capital calculated on the basis of cost of each source of capital. Marginal cost of capital refers to the additional cost incurred due to additional source.

- **Explicit cost and implicit cost :**

explicit cost refers to the discount rate which equates the present value of cash inflows with the present value of cash outflows. Implicit cost refers to the rate of return which can be earned by investing the funds in alternative investment. It is the opportunity cost of capital.

### Importance of the concept of cost of capital

- Useful in investment decision
- Useful in designing capital structure
- Useful in deciding method of financing
- Useful in evaluation of performance of management
- Useful in evaluation of expansion projects
- Optimum mobilization of resources

### Factors determining cost of capital

- **General economic condition –**

cost capital will change according to the inflation condition prevailing in the economy

- **Risk**

higher the risk, higher the cost of capital and vice versa.

Amount of finance required –for additional fund investors may ask for higher required rate of return.

- **Floatation cost –**

it refers to the cost of marketing new securities. When cost of floatation is incurred, the cost of capital will be increased.

- **Taxes –**

it also a factor of determination on cost of capital.

### Determination of cost of capital

Before calculating overall cost of capital, an attempt may be made to calculate the cost of each of the components such as:

- Cost of debt
- Cost of preference capital
- Cost of equity capital
- Cost of retained earnings
- Cost of weighted average cost of capital

### Cost of debt

Debt capital comprises of debentures and long term loans. Cost of debt capital means the payment of interest on debentures or loans from financial institutions. For calculating cost of debt we need data regarding

- Net cash proceeds (the issue price)
- Net cash out flows (interest paid and repayment of principal amount)

**Cost of irredeemable debt :** irredeemable debt is known as perpetual debt. In this case the time of maturity is not specified. In case the debt is raised at premium or discount, NP is the net proceeds received from the issue. It means premium should added to face value and discount should be deducted.

**Cost of redeemable debt:** usually the debt is issues to be redeemed after a certain period during the life time of a firm.

### Cost of preference share capital

Preference shares carry a fixed rate of dividend. It is paid before equity dividend is paid. The rate of dividend is determined at the time of issue. The cost of preference

capital is the dividend expected by the preference shareholders. It is found by dividing annual preference dividend by the net proceeds from the issue of preference shares.

### **Cost of equity share capital**

The cost of equity capital is the most difficult to measure. It is so because the rate of dividend is not fixed. It depends upon the profitability. However it does not mean that equity share capital is cost free. It also has certain cost. The cost of equity capital is the minimum rate of return that the company must earn on its equity share capital. It is the return which the shareholder expects on his investment.

The cost of equity capital can be calculated under six **methods**.

- Dividend yield method
- Dividend yield plus growth method
- Earning yield method
- Realized yield method
- CAPM
- Gordon dividend growth model

**Dividend yield method:** this method is based on the assumption that each shareholder, while investing his savings in the company, expects to receive dividend at the current rate of return. Therefore, dividend received is capitalized by the market value of shares to ascertain the cost of shares. This method is also known as dividend price ratio method. To ascertain the cost of capital, dividend is divided by net proceeds.

**Dividend yield plus growth method :** when the dividend expected to grow at a constant rate and dividend payout ratio is constant, this method may be used. Under this method the cost of equity is based on the present rate of dividend and expected growth rate of dividend.

**Earning yield method :** according to this method, the cost of equity capital is the discount rate that equates the present value of expected future earnings per share with the current market price or net proceeds per share.

This method is **used** in the following cases:

- When the EPS is expected to remain constant
- When the dividend payout ratio is 100 %
- The share price is influenced by the EPS

**Realized yield method :**when future dividend and market price are uncertain, it is very difficult to estimate the rate of return on investment. In order to overcome this difficulty, the average rate of return actually realized in the past few years by the investor is used to determine the cost of capital. Under this method, the realized yield is discounted at the present value factor and then compared with the value of investment.

**Capital asset pricing model (CAPM):** under this method the cost of equity is divided into two components- (i) the near risk free return available on investing in government bonds and (ii) an additional risk premium for investing in a particular share or investment. This risk premium in turn comprises the average return on the overall market portfolio and the beta factor (or risk) of the particular investment.

**Gordon dividend growth model :** this is yet another technique to determine cost of equity. This approach takes into account annual growth in dividend in perpetuity. The dividend and its growth is shown as the ratio of expected rate of return plus growth rate.

### **Cost of Retained Earnings**

Generally, it is thought that retained earnings do not involve any cost and it is a cost free source of finance. It is true that there is no explicit cost of retained earnings. If a company does not retain any part of its profit and distributes the whole amount as dividend, the income of the equity holders would have been increased and they could earn a certain income by investing this amount. Thus the retained earnings involve opportunity cost. So cost of retained earnings is the rate of return

which the shareholder is not receiving the dividend. It refers to the rate of return which shareholder can obtain by investing the after tax dividend in other securities.

**Weighted average cost of capital (WACC)**

WACC simply refers to the average cost of the various sources of finance. It is an average of the cost of all sources of funds in the capital structure, properly weighted by the proportion of each source in the capital structure. It is also known as composite cost of capital or overall cost of capital. We use no simple average but weighted average.

**Steps involved in calculating WACC**

- **Assigning of weights** : first of all weights have to be assigned to each source. It can be either book value weights or market value weights.

**Book value weights** : these are the relative proportion of various sources of capital to the total capital.

**Market value of weights**: it may calculated on the basis of the market value of the different sources of capital.

- **Computation of specific cost of each source** : after assigning weights, the next step is to calculate the specific cost of each source.
- **Computation of WACC**: after ascertaining specific cost of each source, the WACC is calculated. This is calculated by multiplying the cost of each source by its respective weights.

**Merits of WACC**

- Straight forward and logical approach
- Takes into consideration all changes in the capital structure
- More accurate when profit are normal
- Useful in budgeting decision.

**Demerits of WACC**

- Not suitable in case of excessive low cost debt
- Not suitable in case of low profits

- Difficult to assign weights

**LEVERAGE ANALYSIS**

**Leverage** : generally the term leverage means the relationship between two inter-related variables. In FM the term leverage means, by use of certain fixed costs, the firm increases its profitability.

**Types of leverages**

- Financial leverage
- Operating leverage
- Combined leverage

**Financial leverage:** (FL)

The use of borrowed money(debt) by the firm to make more money is called financial leverage. If a firm uses debt or preference capital or both, it has financial leverage and the firm is a leveraged firm.

The impact of fixed charge securities on EPS(earning per share) is the result of FL. The FL analyze the effects of changes in EBIT(earnings before interest and tax) on firm's EPS due to the use of fixed cost bearing sources.

FL may favourable or unfavourable. If the earnings by the use of fixed cost bearing securities is more than their fixed cost, it is known as favourable FL. It is also known as trading on equity. If the earnings is less than their fixed cost, it is known as unfavourable FL.

**Definition of FL:** According to Gitmar "FL is the ability of a firm to use fixed financial leverage to magnify the effect of change in EBIT and EPS"

**Impact or effect of FL**

- **Effect on shareholders' earnings:** if a company's rate of earnings is higher than the rate of fixed charges, the financial leverage has positive impact on EPS and vice versa.

- **Effect on financial risk:** with the use of FL, financial risk increases. Financial risk means the firm's ability to cover the fixed financial cost. When the firm fails to pay interest and other obligations year after year, its creditors may demand compulsory winding up of the company.

**Degree of financial leverage:**

The degree of FL measures the impact of a change in EBIT on change in EPS.

**Characteristics of FL**

- Related with liability side of balance sheet
- Determines the mix of various methods of financing necessary assets.
- It shows the effect of changes in EBIT on EPS
- Involve financial risk

**Importance of FL**

- **Planning of capital structure:**

FL is concerned with judicious balance between debt and equity. For this, an optimum capital structure is determined.

- **Profit planning :**

FL affects EBIT or EPS. Therefore, the concept of FL is important for profit planning.

- **Increase in shareholders' income:**

higher dividends can be declared in case of favourable FL. This will increase the goodwill of the firm. This leads to increase in the market value of its shares.

**Limitations of FL**

- **Double edged sword:**

it can successfully be used to increase the EPS. If the rate of earning is less than fixed interest and dividend, it will work adversely.

- **Increase risk:**

the increase in debt increase in financial risk also.

- **Beneficial to companies having stable earnings**

- **Restriction from financial institutions :**

the financial institutions may impose restrictions on companies which have high degree of FL due to risk factor.

**Operating leverage (OL)**

A main reason for change in EBIT is changes in the cost structure. All costs can be classified into two- fixed and variable.

Operating leverage refers to the

amount of fixed cost in the cost structure. In simple words, presence of fixed cost is known as operating leverage. If the fixed costs are more as compared to variable cost, the operating leverage will be high.

OL measures the changes in operating profit (EBIT) to changes in sales. Operating leverage may be defined as a firm's ability to use fixed operating costs to magnify the effect of changes in sales on operating profit.

In case the contribution exceeds the fixed cost, the OL is favourable and vice versa.

**Degree of OL:** Degree of OL measures how much is the effect of change in sales on change in operating profit. Degree of OL at any level of output is expressed as the ratio of the percentage change in profit (EBIT) to percentage change in sales.

**Relationship between OL and BEP**

There is a relationship between the operating leverage and the BEP. As the OL becomes higher, the BEP also becomes higher because of presence of high fixed costs. Hence greater is the impact on profits of a given change in the sales.

**Characteristics of OL**

- OL is related to the asset side of the balance sheet
- There is a direct relationship between BEP and degree of OL
- Related to contribution
- OL magnifies profit as well as risk

**Importance of OL**

- **Profit planning –**

OL is relevant for capital budgeting decision. Capital budgeting is essential for long term profit planning.

- **Capital structure-**

Operating income is the basis for decision about the capacity of the firm to bear the burden of payment of interest on debts. Thus OL influences the debt equity mix or capital structure planning.

- **Risk analysis –**

a firm should try to operate at a level sufficiently higher than break-even level



so that the chances of loss due to fluctuations in sales are minimized.

**Difference between OL and FL**

OL	FL
It magnifies effect of changes in sales on profit	It magnifies the effect of changes in operating profit on EPS
It establishes relationship between operating profit and sales	Establishes relationship between operating profit and return on equity
Relates to the asset side of the balance sheet	Relates to the liability side of the balance sheet
It influences EBIT	It influences EAT (earning after tax)
Concerned with investment decision	Concerned with financial decision
It deals with business risk	It deals with financial risk

**Impact of OL on profit**

If a firm has a high degree of OL, the % change in EBIT will be more than change in sales. This means a small % of increase in sales results in a larger % of increase in EBIT. As operating income is affected, net income will also be affected. Similarly, when the sales of a firm decrease, a smaller % fall in sales results in a larger % of fall in operating income.

**Combined or total leverage**

Combined leverage refers to the combination of OL and FL. It is the relationship between contribution and the taxable income. It is also known as composite or overall leverage.

**Importance of combined leverage**

A proper combination of OL and FL is a blessing for the company's growth. A company should try to have a balance of OL and FL. Combined leverage enables to know the overall risk assumed by a firm. It reflects a combined effect of operating risk and financial risk on EPS. If sales increases EPS will also increases. This is a favourable

situation. If sales decreases, EPS also will decrease. This is an unfavourable situation.

**DIVIDEND POLICY**

**Meaning of dividend:** the term dividend refers to that portion of after-tax profits which is distributed among the shareholders of the company. Dividend is the reward paid to the shareholders.

**Definition:** according to institute of chartered accountants of India “ dividend is a distribution to shareholders out of profits or reserves available for this purpose”.

**Types or forms of dividend**

**Cash dividend:** dividend paid in cash. It may two types

- **Regular or final dividend:** it is the dividend declared and paid at the end of the financial year.
- **Interim dividend:** dividend declared before the declaration of final dividend. The means between two financial year.

**Stock dividend:** dividend paid in the form shares by capitalizing its past profits or reserves.

**Scrip dividend:** dividend paid in the form of promissory note for a shorter maturity period.

**Bond dividend :** dividend paid in the form of debentures or bonds for a long period bearing interest at fixed rate.

**Property dividend :** dividend paid in the form of assets.

**MEANING OF DIVIDEND POLICY :**

Dividend policy refers to the policy which determines the allocation of earning into retained earnings and dividend. Dividend policy represents the plan action to be followed whenever the dividend decision must be made. What amount is to be retained and how much is to be distributed is the essence of the dividend policy.

**Definition :**Weston and Brigham defines “ Dividend policy determines the division of earnings between payments to shareholders and retained earnings”.

**Importance of dividend policy/ optimum dividend policy**

An optimal dividend policy which maximizes the value of firm or its shares. Determination of how much is to be distributed among shareholders and how much is to be retained in the business is very important for a company. Because it certainly affects the overall market price of the shares. So dividend policy should be optimum. Liberal dividend policy may affect the liquidity of the business and aggressive dividend may affect the market value of shares.

**Factors which affect dividend policy**

**Internal factors**

- **Stability and size of earnings:** if earnings are stable and large size, the company can distribute more among shareholders.
- **Liquidity fund:** while deciding dividend policy liquidity of the firm should be kept in mind.
- **Investment opportunities and shareholders' preference:** retained if there is a plan of new investment and also consider the preference of shareholders.
- **Attitude of management towards control :** if the management wants to retain the control in existing shareholders, should retain adequate fund for further necessary.
- **Past dividend rate :** new dividend rate should not be below the past rate for a new company.
- **Ability to borrow:** if the company has high borrowing capacity, they can distribute more among its shareholders.
- **Need to repay debt:** if the firm has more debt, they should retain adequate fund to repay it.

**External factors**

- **Trade cycle :** during inflation, companies can not declare more dividend.

- **Legal requirements :** legal formalities also consider while deciding dividend policy
- **Corporate dividend tax rate :** CDT should be paid on dividend distributed among its shareholders.
- **General state of economy:** uncertain economy may lead to aggressive dividend policy.
- **Conditions in the capital market:** liberal dividend policy can follow when there is a comfortable capital market.
- **Government policy:**

**Types of dividend policy**

**1) Stable dividend policy :** Stable dividend policy is one that maintains regularity in paying some dividend even though the earnings fluctuate year after year. In short stable dividend means payment of certain minimum amount of dividend regularly. It may be in three types:

- **Constant dividend per share:** paying a fixed amount of dividend per share every year.
- **Constant percentage of earnings:** paying a fixed percentage of net profit as dividend every year.
- **Constant dividend per share plus extra dividend :** a fixed amount of dividend per share plus extra dividend in the year of good profits.

**Advantages of stable dividend policy**

- Increase confidence of the shareholders.
- It meets expectation of investors
- Attract new investors
- Stabilizes market value of shares
- Increase goodwill of the firm
- Helps in preparing financial planning
- Sign of continued normal operations of the company

**Dangers of stable dividend policy**

- It is not easy to change
- If the company pays stable dividend in its incapacity, it will be suicidal in the long run

**2) Regular and extra dividend policy:**

Under this policy shareholders are paid a constant rupee dividend as a fixed percentage along with extra dividends.

**3) Regular stock dividend policy:** this is the policy of distributing shares instead of cash dividend.

**4) Regular dividend plus stock dividend policy:** giving regular dividend in cash and extra dividend in shares.

**5) Irregular dividend policy:** paying irregular dividend among the shareholders.

**Dividend policy and value of firms**

There are two opinion about the dividend policy and value of firms. Some are argued that dividend policy is irrelevant and some others are argued that dividend policy id relevant.

**Irrelevance concept of dividend :** according to this concept dividend policy has no effect on the market price of the shares and value of firm and hence dividend policy is irrelevant. In their opinion investors do not differentiate between dividend and the capital gains. Solomon Ezra, Modigliani and miller believes this concept.

**Relevance concept :** according to this concept dividend policy has reasonable effect on the market value of the shares and value of firm. Hence dividend policy is relevant. Those firms which pay higher dividends, will have greater value and vice versa. M. Gordon, John Linter and James Walter follow this concept.

**Dividend payout ratio**

Dividend payout ratio is the percentage of ratio of dividend to the earnings. In other words, it is the percentage share of net earnings

distributed to the shareholders as dividends. In short, it is the ratio between dividend and earnings.

**Theories on dividend policy**

**Modigliani and Miller theory (irrelevancy theory)(MM theory)**

According to this theory, dividend policy has no effect on the market price of the shares and value of firm. It states that when a firm pays dividend, the market price of its shares increases. Hence increases the value of firm. But due to payment of dividend, the cash balance decreases. So companies want to found out necessary funds. Company can raise through equity capital and debt capital. Issue of new equity shares leads to supply of equity, then it leads to decrease in value of share and hence decreases the value of firm. Thus increase in value of shares gets nullified due to increase in supply of shares. On the other hand, if the firm raised fund through debt capital, firm's financial risk will increase. So cost of equity will also increase. This will bring down the market value. Finally total value of firm would reach its previous level.

**Assumptions of MM theory**

- There are perfect capital market
- Investors behave rationally
- No tax
- No floatation and transaction costs.
- Firm has a fixed investment policy
- No investors is large enough to affect the market price.

**Criticism of MM theory**

- Perfect capital market does not exist in reality
- While Issuing of shares the company will have to incur floatation and transaction costs.
- Taxes do exist
- Most of the shareholders prefer current income rather than future capital gains.
- Firms need not follow a fixed investment policy.

### **Walter's Dividend theory**

In this theory Walter argues dividend decision of a firm is relevant. This means dividend policy has an impact on market price of shares. Thus dividend policy affects the value of the firm. According to Walter, if the company has investment opportunities to invest its earnings, it does not pay dividend. That is it will invest earnings. On the other hand, if the company has no investment opportunities, it will pay dividend. So the dividend decision affects the market price of the shares and value of the firm.

According to this theory a firm can maximize the market price of its shares and value of the firm by adopting a dividend policy as follows

- If  $r$  (rate of return) is greater than  $k$  (cost of equity), the payout ratio should be zero (100 % retention ratio)
- If  $r$  is less than  $k$ , the payout ratio should be 100 % (0 % retention ratio)
- If  $r = k$ , the dividend is irrelevant and the company can follow any dividend payout ratio.

### **Assumptions of Walter's model**

- The firm does not use external source of funds.
- The IRR (rate of earnings) and cost of capital (expected rate) are constant.
- Earnings and dividend are constant
- The firm has a very long life.
- All earnings are distributed or invested internally immediately.

### **Criticism of Walter's Model**

- External sources are used for additional funds
- The IRR and cost of capital do not remain constant
- We cannot predict that the firm has a very long life.

### **Gordon's Model**

M. Gordon has also given a model on the line of Walter. He suggested that

dividends are relevant and it will affect the market value shares and value of firm.

### **Assumptions of Gordon model**

- The firm is an all equity firm
- Retained earnings are the only source of funds.
- Rate of return ( $r$ ) is constant
- The growth rate ' $g$ ' is the product of its retention ' $b$ ' and its rate of return ' $r$ '. i.e.  $g = b \times r$
- Cost of capital ( $k$ ) is constant and more than growth rate
- The firm has a long life
- Corporate taxes do not exist

### **Implications of Gordon's Model**

- When  $r$  is greater than  $k$ , the market price of shares increases as the dividend payout ratio decreases. Thus growth firms should distribute lower dividends (payout ratio 0 %)
- When  $r$  is less than  $k$ , the market price of shares increases as the dividend payout ratio increases. Thus declining firms should distribute higher dividends (payout ratio 100 %)
- When  $r = k$ , the market price of shares remain unchanged.

### **Residual theory :**

The residual theory focuses on the firm's internal need for capital. This theory states that if there are viable projects, earnings should be retained for funding the projects. This means if there are investment opportunities, company should pay less dividend or on dividend and vice versa.

### **Smoothed residual theory:**

The smoothed dividend policy is the modified version of residual theory. Under this theory, the dividends are varied gradually over a period of time. The level of dividend is so fixed that over the planning period, the amount of dividend payment is equal to the total earnings less the forecasted investments.

**Bird in hand theory:**

Graham, Dodd and Cottle states that one rupee of dividend is worth opportunity three rupees of retained cash flows. According to this, dividend are worth more to investors than retained earnings because the purchaser of shares buys with the expectation of future dividends.

**Tax differential theory:**

According to this theory, investors would not prefer higher dividend because of the higher tax. They prefer a low dividend payout and a huge rate of earning retention on the expectation of an appreciation in the capital value. Thus according to this theory, a firm should pay a low dividend.

**Dividend preference theory :**

This theory was developed by Solomon Ezra. According to this theory, investors prefer dividend payment rather than retention, it is because of the following three **reasons**

- Dividend payment provides first-hand information to investors about the firms profitability
- There is always a group of low income shareholders that need stable and cash dividend.
- Current dividend payment resolve uncertainty in the minds of investors.

**Principles of dividend policy**

- **Increase in value** : what-ever may be the dividend policy, it should be capable of increasing value of shares and value of firms
- **Balance between shareholders' need and company's need:** there should be balance between shareholders' need and company's need while deciding dividend policy.
- **Long term perspective** : dividend policy should not aim at making short term residual decision.
- **Reduce speculative trading** : the dividend policy of a firm should aim at reducing speculative trading in its shares.

- **Avoid frequent changes** : negative change in dividend should bring a negative approach in the mind of investors. So keep regular or positive change in dividend policy.
- **Avoiding skipping dividend** : dividend payment should be regular.
- **Communication** : should communicate the dividend policy to the shareholders of the company

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