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SCHOOL OF MANAGEMENT STUDIES

UNIT – I - Strategic Financial Management – SBAA7003

I. Introduction

In a world of economic uncertainty, the investors want to maximize their wealth by selecting optimum investment and financial opportunities that will give them maximum expected returns at minimum risk. Since management is ultimately responsible to the investors, the objective of corporate financial management should implement investment and financing decisions which should satisfy the shareholders by maximizing their wealth. Since capital is the limiting factor, the problem that the management will face is the strategic allocation of limited funds between alternative uses in such a manner, that the companies have the ability to sustain or increase investor returns through a continual search for investment opportunities that generate funds for their business and are more favourable for the investors. Therefore, all businesses need to have the following three fundamental essential elements:

• A clear and realistic strategy

• The financial resources, controls and systems to see it through and

• The right management team and processes to make it happen.

Strategy + Finance + Management = Fundamentals of Business

STRATEGY

Strategy is a course of action that specifies the monetary and physical resources required to achieve a predetermined objective, or series of objectives.

Corporate Strategy

It is an overall, long-term plan of action that comprises a portfolio of functional business strategies (finance, marketing etc.) designed to meet the specified objective(s)

Financial Strategy

It is the portfolio constituent of the corporate strategic plan that embraces the optimum investment and financing decisions required to attain an overall specified objective(s).

Management is ultimately responsible to the investors. Investors maximize their wealth by selecting optimum investment and financing opportunities, using financial models that maximize expected returns at minimum risk. We call this approach strategic financial management and define it as being the application to strategic decisions of financial techniques in order to help achieve the decision maker's objectives.

- It is basically about the *identification of the possible strategies* capable of maximizing an organization's market value.
- It involves the *allocation of scarce capital resources* among competing opportunities.

- It also encompasses the *implementation and monitoring of the chosen strategy* so as to achieve agreed objectives.

It is necessary to distinguish between strategic, tactical and operational financial planning

- Strategy is a long term course of action.
- Tactics are an intermediate plan designed to satisfy the objectives of the agreed strategy.
- Operational activities are short-term (even daily) functions (such as inventory control) required to satisfy the specified corporate objective(s) in accordance with tactical and strategic plans.

Needless to say, senior management decide strategy, middle management decide tactics and line management exercise operational control

1.1 STRATEGIC FINANCIAL MANAGEMENT

All organisations require financial management for its successful operations. It contains components for the acquisition, management, allocation and financing of resources for successful growth of an organisation. Every organisation should manage its finances effectively in order to attain its mission and goals. Recently, the fields of strategic management and financial management combined together to evolve a new discipline namely Strategic Financial Management.

Strategic Financial Management refers to the study of finance with a long term perspective which takes into account the strategic goals of the enterprise. Strategic Financial management is a management approach which makes use of various financial tools and techniques in order to come up with a strategic decision plan.

The Chartered Institute of Management Accountants of UK (CIMA) defines strategic financial management as "the identification of the possible strategies capable of maximizing an organization's net present value, the allocation of scarce capital resources between competing opportunities and the implementation and monitoring of the chosen strategy so as to achieve stated objectives

1.2 NATURE OF STRATEGIC FINANCIAL MANAGEMENT

The important characteristics of Strategic financial Management are the following:-

1. It is concerned with the long term management of fund with a strategic perspective

2. It aims at maximisation of profit and wealth of the concern
3. It is both structured as well as flexible
4. It promotes growth, profitability and existence of the firm in the long run and maximises shareholder value
5. It is an evolving and continuous process that constantly tries to adopt and revise strategies in order to achieve strategic financial objectives of the firm.
6. It involves innovative, creative and multidimensional approach for finding solutions to the problems.
7. It helps to formulate appropriate strategies and facilitates constant monitoring of action plans to match with the long term objectives.
8. It makes use of analytical financial techniques with qualitative and quantitative judgment on factual information
9. It is result oriented combining of resources, especially of financial and economic resources
10. Strategic financial management offers a number of solutions while analysing the problems in the organisational context

FUNCTIONS OF STRATEGIC FINANCIAL MANAGEMENT:

1. Continual search for best investment opportunities
2. Selection of the best profitable opportunities
3. Determination of optimal mix of funds for the opportunities
4. Establishment of systems for internal controls
5. Analysis of results for future decision-making.

Since capital is the limiting factor, the strategic problem for financial management is how limited funds are allocated between alternative uses. This dilemma of corporate management is resolved by the pioneering work of Jenson and Meckling (1976) , which is popularly known as ‘agency theory’ . According to this theory, strategic financial management is the function of four major components based on the mathematical concept of expected NPV (net present value) maximization,- Financing decisions; Investment decisions; Dividend decisions; and Portfolio decisions. The key decisions falling within the scope of financial strategy include the following:

1. Financing decisions: These decisions deal with the mode of financing or mix of equity capital and debt capital.
2. Investment decisions: These decisions involve the profitable utilization of firm's funds especially in long-term projects (capital projects). Since the future benefits associated with such projects are not known with certainty, investment decisions necessarily involve risk. The projects are therefore evaluated in relation to their expected return and risk.
3. Dividend decisions: These decisions determine the division of earnings between payments to shareholders and reinvestment in the company.
4. Portfolio decisions: These decisions involve evaluation of investments based on their contribution to the aggregate performance of the entire corporation rather than on the isolated characteristics of the investments themselves.

1.3 IMPORTANCE OF STRATEGIC FINANCIAL MANAGEMENT

a) Helps in detecting the requirements of capital in the business

The first and foremost function of financial management is that it initially estimates the finance needed for the smooth running and functioning of the business. This is one of the primary duties of financial managers. The finance requirements of every business will vary due to the size of the operation, their profit target, and various other objectives and mission.

b) Helps in deciding the composition of the capital structure

Once the capital requirements of the business are calculated, now the next function that needs to completed by the financial manager is deciding what type of capital structure should be there. This basically involves the choices between the short-term and long-term sources of funds and also takes into consideration the cost involved in the raising of this finance.

c) Helps in choosing right source of funds

As there is a different source of raising funds are available in the market. This step simply aims at choosing the most appropriate and accurate one. The common types of fundraising methods are raising funds through issuing shares & debentures, loans from the financial institution, or through the issuance of securities like bonds.

d) Allocating and investing in finance raised

After raising of the funds, they are invested in various means that are revenue-generating and are also in line with the objectives and goals of the business.

e) Utilization of the surplus amount

It is concerned with a decision regarding the profit generated by the business and how it should be utilized and there are basically two options available for this profit utilization that are either excess profit should be used for distribution as a dividend or for the retained earnings depending on the future plans of the company.

f) Managing cash expenses

This simply means management of the cash so that neither of the expense goes out of the budget. It consists of various expenses where cash payments are to be made like salaries and wages payments, and expenses of water and electricity bills, and also the amount required for the purchase of the raw materials, etc.

g) **Controlling**

It is one of the important function as it is the one which plays a very effective role in the accomplishment of the goals and objectives of the business. It makes sure that whether all the activities are going in accordance with the pre-decided plans and if not accurate control measures are taken.

1.4 ELEMENTS OF STRATEGIC FINANCIAL MANAGEMENT

A company will select to apply strategic financial management throughout the company. It often involves designing the elements which will increase the financial resources of the company and using them efficiently. The organization needs to be creative since there is no standard approach for strategic management. Every company will have to be creative and devise their strategy. It also devices its elements that reflect their needs and their vision and mission. However, the following are a few of the common elements of financial management:

1. Planning

Define your financial objectives clearly and precisely. Identify the available as well as potential resources which will be helpful in your financial management. Write a specific business plan.

2. Budgeting

The company should form a budget that will function with proper financial efficiency and should have minimum waste. Point Out the areas which have the most expenditure and

exceed the budget. Ensure that enough liquidity is present to cover the operating payments without using any external sources. Uncover the specific areas in the company which should invest to achieve the goal more efficiently.

3. Management and assessment of risk

The financial manager should identify, properly analyze, and take steps to mitigate the uncertainty in the decisions related to investment. You have to revisit all the potential for financial exposure and examine the capital expenditures as well as the workplace policies. Also, the risk metrics, such as standard deviation and value at risk strategies, should be assessed.

4. Establishment of ongoing procedures

Collect and analyze the data and make the financial decisions that are consistent with your vision and mission. Variants if any should be tracked and analyzed, which is the difference between actual and budgeted results. Identify the problems and take appropriate actions to rectify them.

Finance function happens in the deep recesses of the "backroom'' but it is the oxygen to an organization's short and long term health. In today's changing world there should be minute details and projections regarding investments made, costs incurred, potential cash flows and profits to implement a strategy to its fullest potential. Hence, Finance as a function is required at every stage to execute a strategy

1.5 FINANCIAL POLICY AND STRATEGIC PLANNING

A **Strategy** is a special plan made to achieve organizational goals and objectives, but **Policy** refers to a set of rules made by the organization for rational decision making. Many people have confusion regarding the two terms, but they are not alike. You should know that policies are subordinate to strategy.

Definition of Strategy

Strategy is a game plan, chosen to achieve the organizational objectives, gain customer's trust, attain competitive advantage and to acquire a market position. It is a combination of well thought intent and actions which lead to the organization towards its desired position or destination

The following are the features of the Strategy:

- It should be formulated from the top level management, however, sub-strategies can be made by middle level management.
- It should have a long range perspective.
- It should be dynamic in nature.
- The main purpose is to overcome from uncertain situations.
- It should be made in such a way, to make the best possible use of scarce resources.

POLICY

The policy is a set of principles and rules which directs the decisions of the organization. Policies are framed by the top level management of the organization to serve as a guideline for operational decision making. It is helpful in highlighting the rules, value and beliefs of the organization. Policies helps the management of an organization to determine what is to be done, in a particular situation.

Key Differences between Strategy and Policy

The following are the major differences between strategy and policy

1. Strategy is the best plan opted from a number of plans, in order to achieve the organizational goals and objectives. Policy is a set of common rules and regulations, which forms as a base to take day to day decisions.
2. Strategy is a plan of action while the policy is a principle of action.
3. Strategies can be modified as per the situation, so they are dynamic in nature. Conversely, Policies are uniform in nature, however relaxations can be made for unexpected situations.
4. Strategies are concentrated toward actions, whereas Policies are decision oriented.
5. Strategies are always framed by the top management but sub strategies are formulated at the middle level. In contrast to Policy, they are, in general made by the top management.
6. Strategies deals with external environmental factors. On the other hand, Policies are made for internal environment of business.

The difference between Strategy and Policy is, a little complicated because Policies come under the Strategies. Apart from that the policies are made to support strategies in several

ways like accomplishing organizational goals and securing an advantageous position in the market. Both of them are made by the top management as well as made after a deep analysis.

1.5.1 INTERFACE OF FINANCIAL POLICY AND STRATEGIC MANAGEMENT

The interface of strategic management and financial policy will be clearly understood if we appreciate the fact that the starting point of an organization is money and the end point of that organization is also money. No organization can run an existing business and promote a new expansion project without a suitable internally mobilized financial base or both i.e. internally and externally mobilized financial base. Mobilization of fund is explained below:

(1) SOURCES OF FUND

Sources of finance is the most important dimensions of a strategic plan. The generation of funds may arise out of ownership capital and or borrowed capital. A company may issue equity shares and/or preference shares for mobilizing ownership capital and debentures to raise borrowed capital. The overdraft, cash credits, bill discounting, bank loan and trade credit are the other sources of short term finance

(2) CAPITAL STRUCTURE

Policy makers should decide on the capital structure to indicate the desired mix of equity capital and debt capital. There are some norms for debt equity ratio which need to be followed for minimizing the risks of excessive loans. For instance, - public sector organizations=1:1 ratio and - Private sector firms = 2:1 ratio. It may vary from industry to industry

(3) INVESTMENT AND FUND ALLOCATION DECISION

Another important dimension of strategic management and financial policy interface is the investment and fund allocation decisions. A planner has to frame policies for regulating investments in fixed assets and for current assets. Project evaluation and project selection are two most important jobs under fund allocation. Planner has to make best possible allocation under resource constraints.

(4) DIVIDEND POLICY

Dividend policy is yet another area for making financial policy decisions affecting the strategy performance of the company. Dividend policy decision deals with the extent of earnings to be distributed as dividend and the extent of earnings to be retained for future expansion scheme of the firm. From the point of view of long term funding of business

growth, dividend can be considered as that part of total earnings, which cannot be profitably utilized by the company. Stability of the dividend payment is a desirable consideration that can have a positive impact on share prices

Financial policy of a company cannot be worked out in isolation of other functional policies. It has a wider appeal and closer link with the overall organizational performance and direction of growth.

1.7 FINANCIAL PLANNING:

Financial planning is the backbone of the business planning and corporate planning. It helps in defining the feasible area of operation for all types of activities and thereby defines the overall planning framework. Financial planning is a systematic approach whereby the financial planner helps the customer to maximize his existing financial resources by utilizing financial tools to achieve his financial goals.

There are 3 major components of Financial planning:

• Financial Resources (FR)

• Financial Tools (FT)

• Financial Goals (FG)

Financial Planning: FR + FT = FG

Outcomes of the financial planning are the financial objectives, financial decision-making and financial measures for the evaluation of the corporate performance. Financial objectives are to be decided at the very outset so that rest of the decisions can be taken accordingly. The objectives need to be consistent with the corporate mission and corporate objectives. Financial decision making helps in analyzing the financial problems that are being faced by the corporate and accordingly deciding the course of action to be taken by it. The financial measures like ratio analysis, analysis of cash flow statement are used to evaluate the performance of the Company. The selection of these measures again depends upon the Corporate objective

Financial planning is one of the most important aspects of the financial manager's job. The success of an organization often depends upon the information contained in a plan for future performance. Not only should one plan the future with proper forecast and budgets, but one should continually evaluate the performance of the firm in comparison with past forecasts. Financial planning should achieve a total integration and co-ordination of all the plans of the other functions of the firm. It should estimate the resources that will be required to carry out the operations and determine how far these resources can be generated by the

firm itself and how far they will have to be obtained externally. A system of control, on the other hand, involves obtaining, processing and recording information in such a way that it can be easily analyzed and thus highlights the areas in which improvement may be effected in the operations of the firm. The financial plan of a corporation should be formulated in the light not only of present but of future developments as well. It should take into consideration the present capital needs for fixed assets, working capital, probable earnings, and requirements of investors; and it should anticipate possibilities of later expansion, combination with other corporations, higher or lower future interest rates, etc., All of these consideration resolve themselves into a determination of:

1. The amount of capital to be raised;
2. The form and proportionate amount of securities to be issued
3. Policies bearing on the administration of capital

1.7.1 CHARACTERISTICS OF FINANCIAL PLANNING

A Financial manager should consider the following factors while finalising a financial plan:

1. Simplicity:

A financial plan should be so simple that it may be easily understood even by a layman. A complicated financial structure creates complications and confusion.

2. Based on Clear-cut Objectives: Financial planning should be done by keeping in view the overall objectives of the company. It should aim to procure funds at the lowest cost so that profitability of the business is improved.

3. Less Dependence on Outside Sources:

A long-term financial planning should aim to reduce dependence on outside sources. This can be possible by retaining a part of profits for ploughing back. The generation of own funds is the way of financial operations. In the beginning, outside funds may be a necessity but financial planning should be such that dependence on such funds may be reduced in due course of time.

4. Flexibility:

The financial plan should not be rigid. It should allow a scope for adjustments as and when new situations emerge. There may be a scope for raising additional funds if fresh

opportunities occur. Similarly, idle funds, if any, may be invested in short-term and low-risk bearing securities. Flexibility in a plan will be helpful in coping with the demands of the future.

5. Solvency and Liquidity:

Financial planning should ensure solvency and liquidity of the enterprise. Solvency requires that short-term and long-term payments should be made on dates when these are due. This will ensure credit worthiness and goodwill to the concern.

Solvency will be possible when liquidity of assets is maintained. There should be sufficient funds whenever payments are to be made. Proper forecasting of future payments will be helpful in planning liquidity.

6. Cost:

The cost of raising capital is an important consideration in selecting a financial plan. The selection of various sources should be such that the cost burden should be mimimum. As and when possible interest bearing securities should be returned so that this burden is reduced.

7. Profitability:

A financial plan should adjust various securities in such a way that profitability of the enterprise is not adversely affected. The interest bearing securities and other liabilities should be so adjusted that business is able to improve its profitability.

8.Varying Risks

A financial plan should provide for ventures with varying degrees of risks so that it might enable a corporation to achieve substantial earnings from risky adventures.

9. Planning Foresight

Foresight is essential for any plan of business operations so that capital requirements may be assessed as accurately as possible.

10. Practical

A plan should be such that it should serve a practical purpose. It should be realistic and capable of being put to intensive use. But a proper balance between fixed and working capital should be maintained

11. Implementation

A firm should see to it that plans are actually carried out. The data should be available with the plans at any level in detail and in a certain frequency. This would enable a firm to take a timely and corrective action, whenever necessary.

1.7.3 CONSIDERATIONS IN FORMULATING FINANCIAL PLAN:

A financial plan should be carefully determined. It has long-term impact on the working of the enterprise**.** The following variables should be kept in mind while selecting a financial plan:

1. Nature of the Industry:

The needs for funds are different for various industries. The asset structure, element of seasonality, stability of earnings is not common factors for all industries. These variables will influence determining the size and structure of financial requirements.

2. Standing of the Concern:

The standing of a concern will influence a decision about financial plan. The goodwill of the concern, credit rating in the market, past performance, attitude of the management is some of the factors which will be considered in formulating a financial plan.

3. Future Plans:

The future plan of a concern should be considered while formulating a financial plan. The plans for expansion and diversification in near future will require a flexible financial plan. The sources of funds should be such which will facilitate required funds without any difficulty.

4. Availability of Sources:

There are a number of sources from which funds can be raised. The pros and cons of all available sources should be properly discussed for taking a final decision on the sources. The sources should be able to provide sufficient and regular funds to meet needs at various periods. A financial plan should be selected by keeping in view the reliability of various sources.

5. General Economic Conditions:

The prevailing economic conditions at the national level and international level will influence a decision about financial plan. These conditions should be considered before taking any

decision about sources of funds. A favourable economic environment will help in raising funds without any difficulty. On the other hand, uncertain economic conditions may make it difficult for even a good concern to raise sufficient funds.

6. Government Control:

The government policies regarding issue of shares and debentures, payment of dividend and interest rate, entering into foreign collaborations, etc. will influence a financial plan. The legislative restrictions on using certain sources, limiting dividend and interest rates, etc.; will make it difficult to raise funds. So, government controls should be properly considered while selecting a financial plan

1.7.4 STEP IN FINANCIAL PLANNING

1. Establishing Objectives
2. Policy Formulation
3. Forecasting
4. Formulation of Procedures

According to Ernest W. Walker and William H. Baughn, there are four steps in financial planning:

Establishing Objectives

The financial objectives of any business enterprise is to employ capital in whatever proportion necessary to increase the productivity of the remaining factors of production over the long run. Although the extent to which capital is employed varies from firm to firm, the objective is identical in all firms. Business enterprises operate in a dynamic society, and in order to take advantages of changing economic conditions, financial planners should establish both short-term and long-run objectives. The long-run goal of any firm is to use capital in the correct proportion.

Policy Formulation

Financial policies are guides to all actions which deal with procuring, administering and disbursing the funds of business firms. These policies may be classified into several broad categories.

i. Policies; governing the amount of capital required for firms to achieve their financial objectives.

ii. Policies which determine the control by the parties who furnish the capital

iii. Policies which act as a guide in the use of debt or equity capital

iv. Policies which guide management in the selection of sources of funds.

v. Policies which govern credit and collection activities of the enterprise.

Forecasting

A fundamental requisite of financial planning is the collection of 'facts' however, where financial plans concern the future, "facts" are not available. Therefore, financial management is required to forecast the future in order to predict variability of factors influencing the type of policies the enterprise formulates.

Formulation of Procedures Financial policies are broad guides which, to be executed property, must be translated into detailed procedures. This helps the financial manger to put planned activities into practice.

1.7.5 OBJECTIVES OF FINANCIAL PLANNING

Determining capital requirements- This will depend upon factors like cost of current and fixed assets, promotional expenses and long- range planning. Capital requirements have to be looked with both aspects: short- term and long- term requirements.

Determining capital structure- The capital structure is the composition of capital, i.e., the relative kind and proportion of capital required in the business. This includes decisions of debt- equity ratio- both short-term and long- term.

Framing financial policies with regards to cash control, lending, borrowings, etc. Finance manager ensures that the scarce financial resources are maximally utilized in the best possible manner at least cost in order to get maximum returns on investment.

1.7.6 NEED FOR FINANCIAL PLANNING:

- Determine the financial resources required to meet the company's operating programme.
- Forecast the extent to which these requirements will be met by internal generation of funds and the extent to which they will be met from external sources.
- Develop the best plans to obtain the required external funds.

- Establish and maintain a system of financial control governing the allocation and use of funds.
- Formulate programmes to provide the most effective profit-volume-cost relationships.
- Analyze the financial results of operations, and.
- Report facts to the top management and make recommendations on future operations of the firm.

1.7.7 IMPORTANCE OF FINANCIAL PLANNING:

Sound financial planning is essential for the success of any business enterprise. It will provide policies and procedures to achieve close coordination between the various functional areas of business. This will lead to the minimization of wastage of resources. Management can follow an integrated approach to the formulation of financial policies, procedures, and programmes only if there is a sound financial plan.

The important benefits of financial planning to a business are discussed below:

- Financial planning provides policies and procedures for the sound administration of the finance function.
- Financial planning results in the preparation of plans for the future. Thus, new projects could be undertaken smoothly.
- Adequate funds have to be ensured.
- Financial Planning helps in ensuring a reasonable balance between outflow and inflow of funds so that stability is maintained.
- Financial Planning ensures that the suppliers of funds are easily investing in companies which exercise financial planning.
- Financial Planning helps in making growth and expansion programs which help in long-run survival of the company.
- Financial planning ensures required funds from various sources for the smooth conduct of business.
- Uncertainty about the availability of funds is reduced. It ensures the stability of business operations.

- Financial planning attempts to achieve a balance between the inflow and outflow of funds. Adequate liquidity is ensured throughout the year. This will increase the reputation of the company.
- Cost of financing is kept to the minimum possible and scarce financial resources are used judiciously.
- Financial planning serves as the basis of financial control. The management attempts to ensure utilization of funds in tune with the financial plans.
- Financial Planning reduces uncertainties with regards to changing market trends which can be faced easily through enough funds, and.
- Financial Planning helps in reducing the uncertainties which can be a hindrance to the growth of the company. This helps in ensuring stability and profitability in concern.

1.7.8 LIMITATIONS OF FINANCIAL PLANNING

1. Difficulties in forecasting : Plans are decisions and decisions require facts about the future. Financial plans are prepared by taking into account the expected situations in the future, which is always uncertain. Since future conditions cannot be forecasted accurately, the adaptability of planning is seriously limited. One way to offset the limitation is to improve forecasting techniques. Another way to overcome this limitation is to revise plans periodically. The development of variable plans, which take changing conditions into consideration, will go a long way in eliminating this limitation.

2. Difficulty in change : Another serious difficulty in planning is the reluctance or inability of the management to change a plan once it has been made, for several reasons. Assets may have to be purchased again, raw materials and cost may have to be incurred.

3. Rapid change : The growing mechanism of industry is bringing rapid changes in industrial processes. The methods of production, marketing devices, consumer preferences, create new demand every time. The incorporation of new changes require a change in financial plan every time. Once investments are made in fixed assets, then these decisions cannot be reversed. It becomes very difficult to adjust the financial plan for incorporating fast changing solutions. Unless a financial plan helps the adoption of new techniques, its utility becomes limited

. 4. Problem of coordination : Financial functions is the most important of all functions. Other functions also influence a decision about financial plan. While estimating financial

means, production policy, personnel requirements, marketing possibilities are all taken into account. Unless there is proper coordination among all the functions, preparing of financial plan becomes difficult. Often there is a lack of coordination among different functions. Even indecision among personnel disturbs the process of financial planning.

1.8 FINANCIAL MODELING

The process of building an abstract representation or model that is in line with a real world financial situation is called financial modelling. It is designed to represent a financial asset's performance to aid and inform business decisions. Financial modelling includes spreadsheet models, applications for investment analysis, company valuation, forecasting and modelling techniques. Financial modeling is a representation in numbers of some or all aspects of a company's operations. Such models are intended to be used as decision-making tools. Company executives might use them to estimate the costs and project the profits of a proposed new project. Financial analysts use them to anticipate the impact of an economic policy change or any other event on a company's stock or to estimate the valuation of a business or to compare businesses to their peers in the industry.Various models exist that may produce different results. A model is also only as good as the inputs and assumptions that go into it.

1.8.1 PURPOSE OF FINANCIAL MODELING

The output of a financial model is used for decision making and performing financial analysis, whether inside or outside of the company. Inside a company, executives will use financial models to make decisions about:

- Raising capital (debt and/or equity)
- Making acquisitions (businesses and/or assets)
- Growing the business organically (e.g.,opening new stores, entering new markets, etc)
- Selling or divesting assets and business units
- Budgeting and forecasting (planning for the years ahead)
- Capital allocation (priority of which projects to invest in)
- Valuing a business

1.8.2 TYPES OF FINANCIAL MODELS

There are various types of financial models that are employed to support the financial decision-making of a firm.

Three Statement Model

This finance model uses three basic statements to determine a company's financial performance. They are:

- Income Statement
- Balance Sheet
- Cash-flow statement

These type of financial models are typically used by banks and other financial institutions to examine the past financial performance of their corporate borrower.

Comparable Company Analysis (CCA) or Ratio Analysis

If you need to determine where an organisation stands in comparison to its contemporaries, the CCA model is used. In this model, an analyst determines a set of comparable companies based on their business and financial profile. This profile is evaluated by taking into account the size of the company, top and bottom line and other factors. For the comparison part of this model, financial ratios such as PE Multiple, EV/EBITDA and P/B ratios are used.

Credit Rating Model

The concept of Credit Rating Model is derived from the Three Statement Model and is designed to project data predictions for three to five years. This financial model also inculcates many other parameters such as strength and quality management, collaterals' quality, future demand growth and conduct of exiting loan accounts. It is generally used by banks when a firm applies for loans in order to evaluate the firm's credibility in terms of borrowing potential and the applicable interest rate.

Discounted Cash Flow (DCF) Model

The DCF model involves financial analysis based on predictions and evaluations about future cash flow. It is employed to determine an organisation's worth or value. These type of financial models are generally used by investors, in order to comprehend the actual value of a start-up before they invest capital into it. Stock market investors also use the DCF model to see if a company is trading higher or lower as compared to its true value.

Leveraged Buyout (LBO) Model

This is similar to the DFC model in terms of valuation analysis methods. However, what separates the two is that the LBO model takes debt financing into consideration while rolling out the financial model. The purpose of the LBO model has three layers, which are:

- Balance sheet adjustment or debt-heavy capital structure,
- Coming up with an acceptable IRR (Internal Rate of Return)
- Exit value based on EV/EBITDA multiple

The LBO model is typically used when an acquirer company uses a considerable amount of debt financing to cover the cost of acquisition.

1.8.3 PROCESS OF FINANCIAL MODELLING

Financial modeling is an iterative process and follows these standard steps:

1. Gather Requirements

This is a very critical stage and the analyst should obtain the answers to following critical questions before moving on to the actually developing the model.

a) What is the purpose of this financial model? – e.g. Is it for credit rating assessment or for project performance forecast OR acquisition of business etc.

b) Who is the target audience that would consume this model? e.g. Is it for the clients or the regulatory bodies or for financial institutions etc.

c) What kind of decisions would be taken based on this model? E.g. Go/ No-go decision for projects OR deciding upon budget allocation OR setting targets etc.

d) How much time is available for developing the model? While at times, there are no exigencies, in some cases time is an extremely important factor. Knowledge of this factor would enable the analyst to decide upon the trade-off between accuracy and speed with which the financial model is developed.

2. Apply the industry knowledge

Applying the knowledge of the industry and the business model is extremely important as it will have a certain impact on the logic used for deriving various output numbers. For instance, projecting the prices of a commodity (say potato) which is used as a raw material for manufacturing the end product (say potato chips) by a company, would need a good understanding of the demand-supply dynamics for that commodity and an in depth analysis of the emerging trends and the underlying factors which can affect the demand and supply and in turn the prices of that commodity.

3. Define the scope and execution plan

a) It's important to work backwards from the final delivery deadline to ensure smooth development process. Clarifications such as those listed below would be helpful in defining the structure of the financial model

b) How many different P&L statements would be a part of the model?

c) For how many years do we need to project the financial statements?

d) Should the statements be projected on a yearly basis or on a quarterly half yearly basis?

4. Develop the structure of the model

Similar to any software, every financial model has three important elements:

a) Input
b) Processing/ Logic
c) Output

The structure of the model should be such that it clearly segregates the inputs, processing (calculations) and the output. The financial model should also be broken down into various re-usable logic modules which would save the developer from unnecessary re-work and save a lot of time. However, one should be careful in re-using modules because in such cases, errors or bugs also tend to percolate along with the logic.

5. Develop and Test the modules

The first element of any financial model should be the output template, typically with time periods on the horizontal axis and various outputs as rows. This would make it easier for the analyst to keep targeting the row elements and keep working on them till all of the row elements are estimated by the financial model.

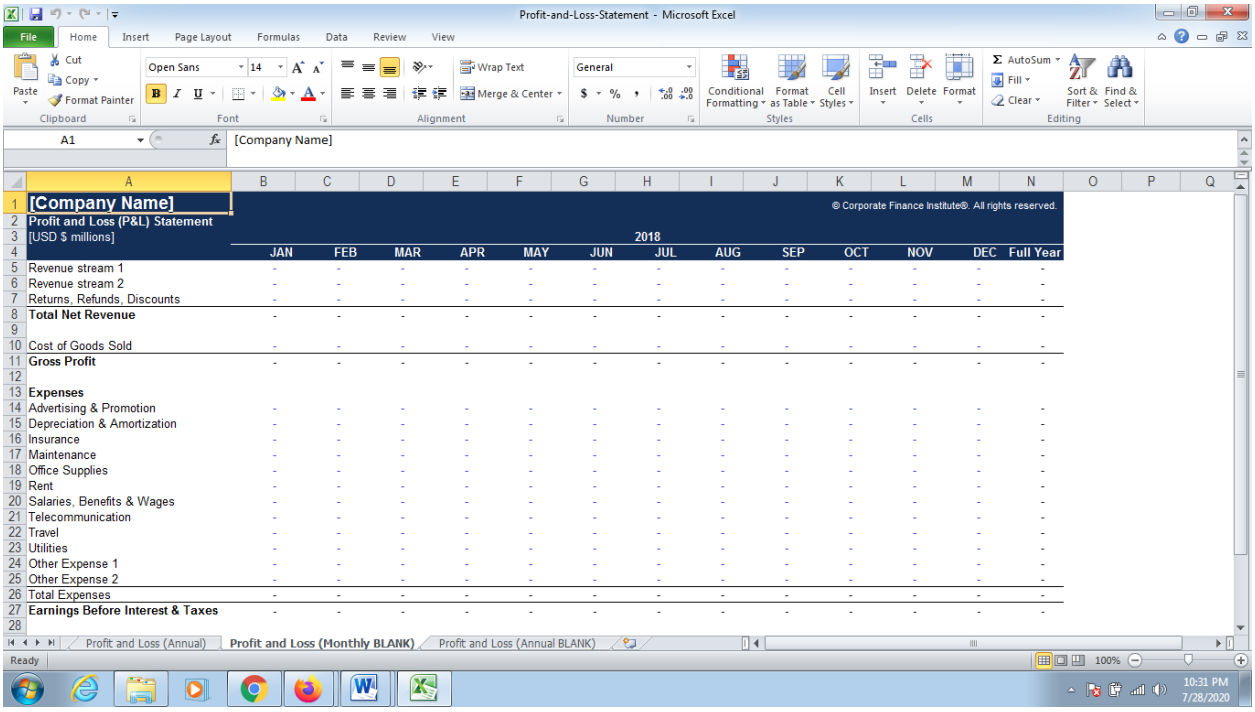
Defining the logic of deriving the outputs and the corresponding required inputs (assumptions) should be the next step. There can be various iterations at this stage and gathering the suitable inputs and development of appropriate logic for estimating the outputs may be a time taking and complex activity. Testing is an extremely critical element of the financial model as even a small error can create havoc in the final stages and may lead to incorrect output, which if gone un-noticed may lead to incorrect decision making.

6. Final Testing

After all the outputs have been estimated, the financial model should be stress tested with variety of inputs. At this stage, the financial analyst must be completely well versed with the financial model and be aware of how the model should behave in various scenarios. This would enable the analyst to test out the model thoroughly.

7. Sensitivity Analysis

Sensitivity analysis is widely used for understanding the key risks and dependence of key output parameters on various input parameters or assumptions. E.g. Variation in Net Present Value (NPV) of a project due to changes in raw material costs. Conducting and presenting the sensitivity analysis on key output parameters is an essential step towards completion of the financial model.



Sample template for profit and loss financial model

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2. RISK ANALYSIS IN INVESTMENT DECISIONS

We cannot anticipate the occurrence of possible future events with certainty hence we cannot make any correct (certain) predictions about cash flow. There is an opportunity cost involved while investing in a project for the level of risk. Adjustment of risk is necessary to help make the decision as to whether the returns out of the project are proportionate with the risks borne and whether it is worth investing in the project over the other investment options available. Risk adjustment is required to know the real value of the Cash Inflows\

2.1 Decision Situations:

1. Decision making under certainty: When cash flows are certain

2. Decision making involving risk: When cash flows involve risk and probability can be assigned.

3. Decision making under uncertainty: When the cash flows are uncertain and probability cannot be assigned.

Certainty:

It may be defined as a situation in which outcome for a given event are 100% certain. In this type of decision making environment, there is only one type of event that can take place. It is very difficult to find complete certainty in most of the business decisions.

Risk:

It may be defined as a situation in which outcome for a given event can be assigned probabilities. Under the condition of risk, there is more than one possible event that can take place. However, the decision maker has adequate information to assign probability to the happening or non- happening of each possible event. Such information is generally based on the past experience. Modern information systems help in using these techniques for decision making under conditions of uncertainty and risk.

Uncertainty:

It may be defined as a situation in which outcome are too unsure to be assigned probabilities. In the environment of uncertainty, more than one type of event can take place and the decision maker is completely in dark regarding the event that is likely to take place. The decision maker is not in a position, even to assign the probabilities of hap-pening of the events. Such situations generally arise in cases where happening of the event is determined

by external factors. For example, demand for the product, moves of competitors, etc. are the factors that involve uncertainty.

2. 2. RISK ANALYSIS IN CAPITAL BUDGETING

The cash flows from an investment are estimated when the proposal is evaluated, however, the returns are not known until the cash flows actually occur. The uncertainty of returns from the moment, the funds are invested until management and investor know how much the projects has earned, is a primary determinant of a proposal's risk. The owner of a firm are ordinarily concerned with the riskiness of their capital, and management must therefore, take risk into account in evaluation of capital budgeting proposals.

In case, the cash flows associated with a proposal are known with certainty then the techniques such as NPV, IRR or any other may be used to evaluate the desirability of the proposal. However, when the cash flows are not known with certainty, a measure of risk of the proposal should also be brought into the evaluation system. Such resultant capital budgeting decision criterion will then evaluate the proposals by considering both the risk and return associated with the proposal. As already discussed above a proposal is said to contain risk when the set of possible cash flows is known but it is not possible at time (when the decision is being taken) to predict the specific cash flows that will actually occur in future.

For example, an investment requiring an initial outlay of Rs.50,000 is expected to result in cash inflow of Rs.70,000 at the end of 1 year. In this case, there is no risk involved, as both the inflows and outflow are known with certainty. However, if the inflow at the end of one year may be Rs. 60,000 or Rs, 70,000 or Rs. 80,000 or any other amount then the proposal is containing risk element.

The estimates used to evaluate the capital budgeting proposals are the projections of future conditions, therefore, as already stated, capital proposals involve risk because of uncertainties surrounding the key variables involved in the evaluation procedure. Consequently the financial analyst, evaluating the proposals must allow for a whole range of possible outcomes. Even the best estimate can go wrong as the events unfold; yet the decisions have to be made ahead of time. As a result, the risk inherent in the variations must be ascertained.

2.3. TECHNIQUES OF RISK ANALYSIS:

CONVENTIONAL TECHNIQUES OF RISK ANALYSIS

- ✓ Payback Period Method

- ✓ RAD Approach (Risk Adjusted Discount Rate).
- ✓ CE Approach (Certainty Equivalent).
- ✓ Sensitivity Analysis.

STATISTICAL TECHNIQUES OF RISK ANALYSIS

- ✓ Probability Distribution Approach.
- ✓ Decision Tree Approach.
- ✓ Simulation Analysis.

CONVENTIONAL TECHNIQUES OF RISK ANALYSIS

These techniques are also known as traditional or non-mathematical techniques to evaluate risk. These approaches are simple and based on theoretical assumptions. Some of the conventional techniques are as follows:

2.3.1PAYBACK PERIOD:

Payback Period method considers the time period over which the original investment in the project will be recovered by the firm out of the cash inflows of the project. The payback period is then compared with the target payback period. If the proposal's payback period is less than or equal to the target payback period, it may be accepted, otherwise rejected. In order to incorporate risk of the proposal, the target payback period may be shortened. As a result some project, which would have been on the verge of being selected, otherwise, will now be rejected. The shortening of the target payback period is based on the assumption that larger the recovery period, more risky the proposal would be.

The Payback Period as an approach to handle risk is simple and straight forward. But it fails to measure the risk, which may be of different degree in different alternative proposals. Moreover, it reduces only that risk which arises due to time period and thus allows for other risks to prevail. The payback period also ignores the time value of money as well as the cash flows arising after the payback period.

Once the risk has been identified and measured for a proposal, it can be considered in capital budgeting analysis in one of the two ways:

- ➢ To adjust the discount rate to reflect the risk, and
- ➢ To adjust the cash flows to incorporate the risk and then to use a risk less discount rate.

2.3.2 RISK ADJUSTED DISCOUNT RATE METHOD:

Another way of adjusting for risk is to modify the rate of return to include a risk, premium wherever needed. In a sense, the reasoning behind this is quite simple i.e., the greater the risk, the higher should be the desired return from a proposals. The RADR approach to handle risk in a capital budgeting decision process is a more direct method. The RADR is based on the premise that riskiness of a proposal may be taken care of, by adjusting the discount rate. The cash flows from a more risky proposal should be discounted at a relatively higher discount rate as compared to other proposals whose cash flows are less risky.

- A risk adjusted discount rate is a sum of risk free rate and risk premium. The Risk Premium depends on the perception of risk by the investor of a particular investment and risk aversion of the Investor.

So, Risks adjusted discount rate = Risk free rate+ Risk premium

- Risk Free Rate: It is the rate of return on Investments that bear no risk. For e.g., Government securities yield a return of 6 % and bear no risk. In such case, 6 % is the risk-free rate.
- Risk Premium: It is the rate of return over and above the risk-free rate, expected by the Investors as a reward for bearing extra risk. For high risk project, the risk premium will be high and for low risk projects, the risk premium would be lower.
- It is a method to incorporate risk in the discount rate employed in computing present value. Relatively risky projects would have high discount rates. Relatively safer projects would have low discount rates.

Advantages

- Simple to calculate and easy to understand.
- It has a great deal of intuitive.
- Appeal for risk adverse businessman.

Disadvantages

- Difficult to determine an appropriate discount rate.
- Risks are adjusted with discount rate not with cash inflows.

- It assumes that the risk increases with time but risk need not necessarily increase with time always. Proposals whose risk decreases with time may not be properly evaluated by this method.

2.3.3 CERTAINTY EQUIVALENT APPROACH:

An alternative approach to incorporate the risk is to adjust the cash flows of a proposal to reflect the riskiness. The CE approach attempts at adjusting the future cash flows instead of adjusting the discount rates. The expected future cash flows, which are taken as risky and uncertain, are converted into certainty cash flows.

The certainty equivalent represents the amount of guaranteed money an investor would accept now instead of taking a risk of getting more money at a future date. The certainty equivalent is closely related to the concept of risk premium or the amount of additional return an investor requires to choose a risky investment over a safer investment

The procedure for the CE approach can be explained as follow

Step 1: Estimation of the future cash flows from the proposal. These cash flows do have some degree of risk involved.

Step 2: The calculation of the CE factors for different years. These CE factors reflect the proportion of the future cash flow a finance manager would be ready to accept now in exchange for the future cash flow. The CE factors represent the level of present money at which the firm would be indifferent between accepting the present money or the future cash flow. For example, cash inflow of Rs. 10,000 is receivable after 2 years. However, if the inflow is available right now, the firm may be ready to accept even 70% of Rs. 10,000 i.e., Rs. 7,000 only. This 70% or .7 is the CE factor. For different years the CE factors, will be different to account for the timing as well as the varying degree of risk involved. It may be noted that higher the riskiness of a cash flow, the lower will be the CE factor.

Step 3: The expected cash flows for different years as calculated in step 1 above are multiplied by the respective CE factors and the resultant figures are described as certainty equivalent cash flows (Risk free cash inflows).

Step 4: Once all the cash flows are reduced to CE cash flows then these CE cash flows are dis- counted at risk free rate to find out the NPV of the proposal.

Decision rule in CE approach

Accept a proposal with positive CE NPV. In case of mutually exclusive proposals the rule

is that the proposal having the highest positive CE NPV is accepted.

Advantages

- The certainty equivalent method is simple and easy to understand and apply.
- It adjusts the risk with cash inflow, hence it is superior to RAD method.

Disadvantages

- It is difficult to find certainty equivalent co-efficient. There is no Statistical or Mathematical model available to estimate certainty Equivalent
- It does not directly use the probability distribution of cash inflows.

2.3.4 SENSITIVITY ANALYSIS

Sensitivity analysis, in simple terms, is a modeling technique which is used in Capital Budgeting decisions which is used to study the impact of changes in the variables on the outcome of the project. Sensitivity analysis analyses the impact each variable on NPV and also finds the sensitivity of each variable. It expresses risk in precise terms. It provides information as how to sensitive the estimated project parameters normally cash flow, discount rate, project life on net present value.

It is also called as what if analysis it attempts to answer questions like

- What if project life decreases?
- What is discount rate decreases or increases?
- What if cash inflows decreases and increases?

A sensitivity analysis can be conducted with regard to various variables like cash inflows, life of a project, discount rate OR Volume, prices, costs …etc. The impact of each variable of NPV is studied and the sensitivity of each variable is measured In order to do so we must obtain pessimist and optimistic values for those variables

Procedure:

Step 1**:** Establish the relationship between NPV &other variables

$$NPV = \sum_{i=1}^{n} CI * PVF(i) - I.O$$

CI: Cash inflow , IO: Initial Outlay, PVF: Present value factor , i: counter, N: project life

Step 2: Find out the range of variations between the most likely values and likely values for each basic variable

Variables	Likely ranges	Most likely
	Low --- High	**Moderate**
Cash Inflows	1,00,000 --- 2,00,000	1,50,000
Discount Rate	8% ---- 12%	10%
Project Life	2yrs ---- 4yrs	3 Years
Cash Outlay	2,00,000	

Step 3: Find NPV using most likely value NPV=172900

NPV Calculation for Moderate Values			
Year	**Cash Inflows**	**PVF@ 10%**	**PVF of Cash Inflows**
1	150000	0.909	136350
2	150000	0.826	123900
3	150000	0.751	112650
Total Present Value of Cash Inflows			372900
Initial Outlay			200000
Net Present Value			172900

Step 4: Allow one variable to vary at all time keeping all other variable constants

4(i) Allow projects life to vary keeping cash inflows &disc rate constant

Find NPV:- n:2 yrs CI: 1.50000 DR: 10%

Find NPV, n: 4yrs CI: 1.50000 DR: 10%

4(ii) Allow cash inflows to vary keeping discrete alpha N constant

Find NPV CI: 1,00,000 n =3yrs DR=10%

Find NPV CI: 2,00,000 n=3yrs DR=10%

4(iii)Allow disk rate to vary keeping cash inflows alpha project life constants

Find NPV DR=8% CI =150000 n: 3yrs

Find NPV DR=12% CI=150000 n=3yrs

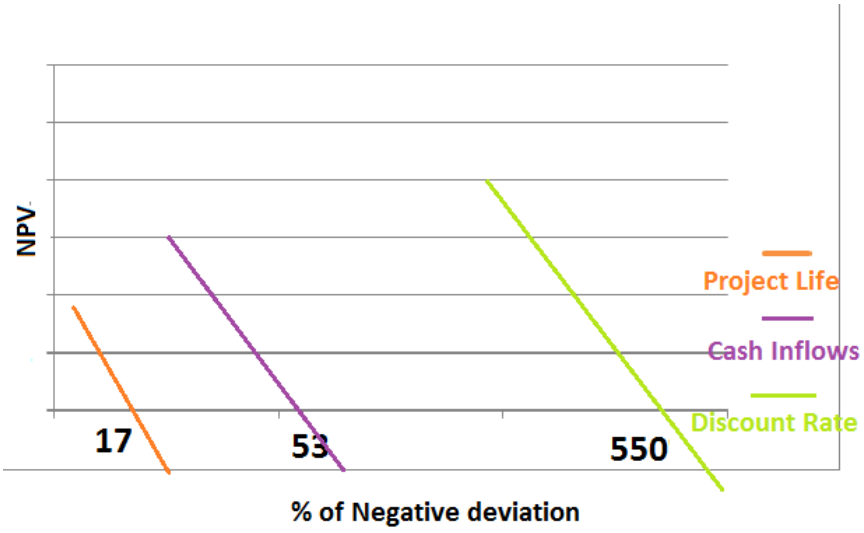
The Net Present Value of 4(i), 4(ii) and 4(iii) are given below:

Project Life	**NPV**	**Cash Inflows**	**NPV**	**Discount Rate**	**NPV**
2	60250	100000	48600	8	186565
4	275309	200000	297200	12	160275

Step 5: Represent informs of graph the relationship between NPV and three variables

Negative Relationship with NPV
N ↓ NPV ↓
CI ↓ NPV ↓
DR↑ NPV ↓

Step 6: Allow a negative deviation in each of variables & find the impact on NPV (negative deviation only) represent the negative deviations in the form of a graph.



a) For a 17% negative deviation in Project Life . NPV becomes negative hence CI is said to be the most sensitive variable.

b) For 53% negative deviation in CI, NPV becomes negative. Hence it is said to be moderate sensitive variable.

c) For 550% negative deviation in discount rate NPV becomes –ve. Hence it is least sensitive variable.

Step 7: Guide to forecasting

Most sensitive variable has to be accurately forecasted. Moderately sensitive variable and least sensitive variable can be approximately forecasted.

Advantages

- It establishes the relationship between NPV and other variables.
- It analyses the sensitivity of each variable.
- It acts as a guide to forecasting.

Disadvantages

- This analysis assumes that all variables are independent i.e. they are not related to each other, which is unlikely in real life.
- This analysis does not look to the probability of changes in the variables.
- This analysis provides information on the basis of which decisions can be made but does not

point directly to the correct decision.

II.STATISTICAL TECHNIQUES OF RISK ANALYSIS

The different techniques discussed above were conventional techniques to study, analyze and incorporate the risk associated with a proposal, fail to measure and quantify the risk in precise terms. On the other hand, there are certain statistical techniques available to measure and incorporate risk in a capital budgeting decision process. These techniques, as discussed below, can be used to evaluate the risk-return characteristics of a capital budgeting proposal. The most important concept used in these statistical techniques is that of probability. Therefore, before analyzing the statistical techniques of incorporating risk, the concept of probability must also be understood.

Concept of Probability:

The probability may be defined as the likelihood of happening or non-happening of an event. It may be described as a measure of chance of happening or non-happening of an event. For example, one may say that there are 20% chances that the sales will increase by 80% during the year, or that there are 75% chances that the firm will be able to achieve 50% market share over a period of next 5 years. These descriptions of 20% and 75% chances are the description of probability of the respective events. So, the probability may be taken as a measure of an opinion about the likelihood of happening of an event. If the event is certain to happen, then the probability is defined as one and if the event has no chance of occurrence, then the probability is described as 0. So, the probability always has a value between 0 and 1.

2.3.5 PROBABILITY DISTRIBUTION METHOD:

✓ This method uses the concept of probability for incorporating risk in evaluating capital budgeting proposals

✓ Probability is the chances that an event will occur. If the certain to happen probability is one. It is certain not to happen probability is zero. Thus probability of all events lies between 0 and 1.

✓ In this method cash flows are derived by probabilities because we cannot anticipate certainly the cash inflow from the projects. It is calculated based on probabilities.

Illustration:

Year 1		Year 2	
Cash Inflows	**Probability**	**Cash Inflows**	**Probability**
6,000	0.50	4,000	0.70
8,000	0.50	6,000	0.30

In year 1 there is .5 or 50% chances of getting Rs.6,000 as cash inflow, .5 or 50% chances of getting Rs.8,000 as cash inflow and 70% chances of getting Rs.4,000 and 30% chances of getting 6,000 in year2. The cash inflows of year 1 and year 2 are independent.

Independent and dependent Cash inflows : The application of this theory in analyzing risk in capital budgeting depends upon the behavior of the cash flows, from the point of view of behavioral cash flows being (i) independent, or (ii) dependent. The assumption that cash flows arc independent over time signifies that future cash flows are not affected by the cash flows in the preceding or following years. Thus, cash flows in year 2 are not dependent on cash flows in year 1 and so on. When cash flows in one period depend upon the cash flows in previous periods, they are referred to as dependent cash flows.

Advantages

- It adjusts the risk in cash inflows.
- It uses probability distribution of cash inflow.

Disadvantages

- It is a difficult and complex approach.
- Cash inflows are considered to be independent but in practice they are dependent.
- Sensitivity and variables are not analysed.

NORMAL PROBABILITY DISTRUBUTION:

The normal probability distribution can be used to further analyze the risk in investment decision. It enable the decision maker to have an idea of the probability of different expected values of NPV, that is, the probability of NPV having the value of zero or less, greater than zero and within the range of two values for example, within the range of Rs. 2000 and Rs. 3000 etc. If the probability of having NPV zero or less is low, eg. .01, it means that the risk in

the project is negligible. Thus, the normal probability distribution is an important statistical technique in the hands of decision makers for evaluating the riskiness of a project.

2.3.6 DECISION TREE APPROACH:

In this approach decision tree is constructed. Decision tree is a pictorial representation in tree form which indicates magnitude, probability and interrelationship of all possible outcomes. It shows the sequential cash inflows and the NPV of the proposed project under different circumstances.

Practically investment decisions may have implications for future or further investment decisions, and may also impact future decision and events. Such situation can be handled by taking a sequence of decisions over a period of time. The technique to handle this type of sequential decisions is done through "Decision Tree" technique. A Decision tree is a graphical representation of relationship between future decisions and their consequences.The sequence of events is shown in a format resembling branches of tree, each branch representing a single possible decision, its alternatives and the probable result in terms of NPV, ROI etc.The alternative with the highest amount of expected monetary value is selected.

Steps Involved in Decision Tree Analysis

Step 1: Draw decision tree.

Step 2: Identify path and calculate NPV for each path.

Step 3**:** Calculate joint probabilities.

Step 4**:** Calculate expected NPV by multiplying NPV of each path by joint probabilities

Step 5: Accept or Reject the project based on Criterion .If the expected NPV is positive accept the project. If the expected NPV is negative reject the project.

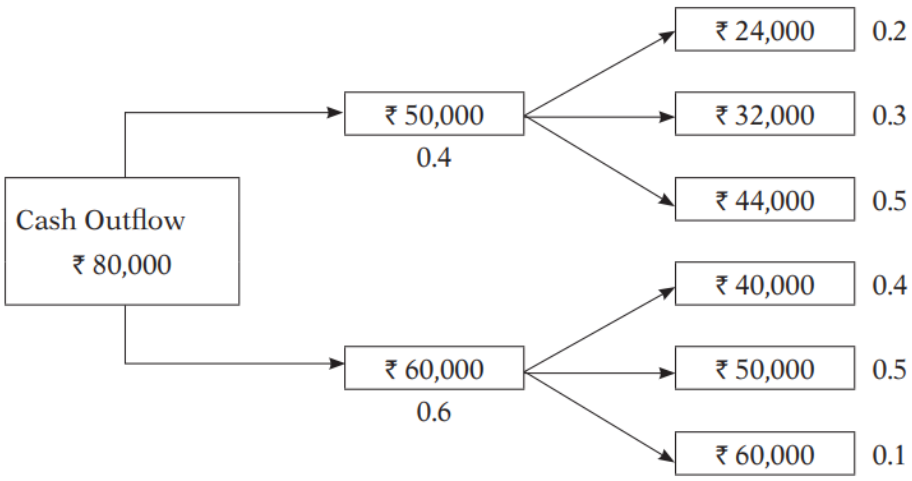
Illustration

The project cost ` 80,000 and the expected life of the project is 2 years. The firm uses 10% discount rate for this type of investments.

The net cash inflows in Year 1	
Cash Inflows	Probability
50,000	0.40
60,000	0.60

The probabilities assigned to CFAT for the Year 2			
If Cash inflows are 50,000		If Cash inflows are 60,000	
Cash Inflows	Probability	Cash Inflows	Probability
24,000	0.20	40,000	0.40
32,000	0.30	50,000	0.50
44,000	0.50	60,000	0.10

Solution: *Decision Tree:*



Advantages

- Risk is adjusted in cash inflows.
- Probability distribution is used.

- Cash flows are considered to be dependent.
- Graphic visualization.

Disadvantages

- It is tedious process.
- For very long projects it is inappropriate.
- Sensitivity of variables is not analyzed.

2.3.7 SIMULATION ANALYSIS:-

The Simulation Analysis is a method, wherein the infinite calculations are made to obtain the possible outcomes and probabilities for any choice of action. Simulation is yet another statistical technique to deal with uncertainty and is also based on the concept of probabilities. Theoretically speaking, simulation refers to *'Creation of an Appearance without the Reality'* There are several techniques of simulation, however, the Monto Carlo Method is the most common. The Monto Carlo Method is based on the concept of random numbers and is useful in the analysis of uncertainty.

The simulation analysis can be applied to capital budgeting decision situations also. When applied to capital budgeting, the simulation requires the generation of values of cash flows using predetermined-probability distribution and the random numbers. The different components of cash flows are placed in relation to one another in a mathematical model. The process of generating the values of cash flows is repeated numerous times to result in a probability distribution of cash flows. The process of generating the random number and using the probability distribution of cash flows help generating values of different variables. These values are then put in a mathematical model to develop a NPV. By repeating the same process for number of times say a thousand or ten thousands times, a probability distribution of NPV is created. The simulation allows considering the projects under alternative scenarios. The decision maker can consider the effect of a limited number of plausible combinations of variables affecting the outcome of a proposal

- ✓ Simulation analysis finds the impact of each variable on NPV allowing all variables to vary at same time.
- ✓ This technique applies predetermined probabilities and concept of random numbers to estimate risky outcomes.

Illustration

The application of simulation analysis has been analyzed in the following example.

Step 1: Divide the variables that effect the project into two categories Parameters and Exogenous variables

Parameters mean variables that are under direct control of the management and would remain constant. Exogenous variables mean variables that are not under direct control of management and would vary. Initial outlay and project life are considered as parameters. Cash inflows and discount rate are exogenous variables.

Step 2: Find out the probability distribution of exogenous variable.

Consider a project with an Initial outlay of Rs 7, 00,000 and a project life of 3yrs. Cash inflows and discount rate are exogenous variables hence probabilities have to be assigned to these Variables

Cash	Probability	Discount Rate	Probability
2,00,000	0.20	8%	0.50
3,00,000	0.30	9%	0.40
4,00,000	0.10	10%	0.10
5,00,000	0.40		

Step 3: Find the cumulative probability and assign a random number between 0 to 99. Select a value at random from probability distribution of each of the variables.

Cash Inflows	Probability	Cumulative	Assigned Random
2,00,000	0.20	0.2	1 - 19
3,00,000	0.30	0.5	20 - 49
4,00,000	0.10	0.6	50 - 59
5,00,000	0.40	1	70 - 99
Discount Rate	**Probability**	**Cumulative**	**Assigned Random**
8%	0.50	0.5	1 - 49
9%	0.40	0.9	50 - 89
10%	0.10	1	90 - 99

Select 5 random numbers (More number of trials increases reliability of the model. For learning purpose , we take 5 trials)

Trials	Random Nos	Cash Inflows	Trials	Random Nos	Discount Rate
1	52	4,00,000	1	27	8%
2	92	5,00,000	2	33	8%
3	76	5,00,000	3	94	10%
4	89	5,00,000	4	58	9%
5	30	3,00,000	5	97	10%

Step 4**:-** Find NPV for each Trail run

Trials	Initial Outlay	Project life	Cash Inflows	Discount Rate	Net Present Value
1	7,00,000	3 Years	4,00,000	8%	+330800
2	7,00,000	3 Years	5,00,000	8%	+5,88,500
3	7,00,000	3 Years	5,00,000	10%	+5,43,000
4	7,00,000	3 Years	5,00,000	9%	+5,65,500
5	7,00,000	3 Years	3,00,000	10%	+45800

Step 5:- Conclude feasibility of the project.

- ✓ If NPV is positive on majority of the runs accept the project.
- ✓ If NPV is negative on majority of the runs reject the project.

NPV is +ve on all the 5 trials hence proposal is accepted

A model is developed in the system & data is entered various variables vary at a same time. Random nos are selected by the computer itself and NPVs are calculated for innumerable trials. Finally +ve NPVs are counted & conclusion is given.

Advantages

- It separates the variable into parameter & exogenous variables.
- It allows all variables to vary at the same time.

- It uses the concept of random numbers, hence it is an unbiased approach.

Limitations

- This method is complex method.
- Finding the probability distribution of exogenous variables is difficult.

Differences between RAD method and CE method

RAD	CI
RAD = RF+RP	Riskless CI, Risky CI
Assumes risk increases with time	Does not assumes risk increases with time
Adjust the risk at discount rate	Adjust the risk at cash inflows
Uses RAD as discount rate	Uses risk free rate of return on discount rate
It is famous among corporates	Not much familiar among corporates

Differences between probability distribution and decision tree

Probability Distribution	Decision tree
Cash flows are considered independent.	Cash flows are considered dependent.
It does not establish a link between cash inflows.	It establishes a link between cash inflows.

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UNIT –III - Strategic Financial Management – SBAA7003

3. FINANCING DECISIONS

3. 1 FINANCING STRATEGY: HYBRID FINANCING

Hybrid financing instruments are those sources of finance which possess characteristics of both equity and debt

- The debt and equity are the two extreme points and in the mid-point lies the hybrid financing that offers the investors the benefits of both the equity and debt.
- Equity gives the right to have a residual claim on the cash flows and assets of the firm and have control over the management.
- Whereas, the debt represents the fixed claim over the cash flows and the assets of the firm, but generally, do not give the right to control the management.

HYBRID FINANCING INSTRUMENTS

1 Preference Shares

2 Convertible Debentures

3 Warrants

4 Options

PREFERENCE SHARES

A preference share is also a long-term source of finance. It is commonly known as hybrid financing instrument because it shares certain characteristics of debt also.Like debt has fixed interest rate, preference shares have fixed dividend and they also have a preference of payment at the time of liquidation just as debt holders get. They do not have any say in the management in the form of voting rights also do not have any share in the residual profits also. The preference dividend is also paid out of net profits after taxes but the only difference is that the dividend is fixed. In the weak financial situations, management may consider not paying the dividend to preference shareholders. If the shares are cumulative preference shares, the said dividend may be postponed but will have to pay if the next year financials are good. A specific type of preference share i.e. irredeemable preference share does not have a certain maturity also.

Features of Preference Shares:

1. Preference shares are long-term source of finance.
2. The dividend payable on preference shares is generally higher than debenture interest.
3. Preference shareholders get fixed rate of dividend irrespective of the volume of profit.

4. It is known as hybrid security because it also bears some characteristics of debentures.
5. Preference dividend is not tax deductible expenditure.
6. Preference shareholders do not have any voting rights.
7. Preference shareholders have the preferential right for repayment of capital in case of winding up of the company.
8. Preference shareholders also enjoy preferential right to receive dividend.

Advantages of Preference Capital

1. The earnings per share of existing preference shareholders are not diluted if fresh preference shares are issued.
2. Issue of preference shares increases the earnings of equity shareholders, i.e. it has a leveraging benefit.
3. Preference shareholders do not have any voting rights and hence do not affect the decision mak-ing of the company.
4. Preference dividend is payable only if there is Profit

Disadvantages of Preference Capital

1. It is very expensive as compared to the debt-capital because unlike debt interest, preference dividend is not tax deductible.
2. Although, there is no legal obligation to pay the preference dividends, when the payment is made it is done along with the arrears.
3. The preference shareholder can claim prior to the equity shareholders, in case the dividends are being paid or at the time of winding up of the firm.
4. If the company does not pay or skips the preference dividend for some time, then the preference shareholders could acquire the voting rights.

The preference capital is like the equity in the sense that the preference dividend is paid out of the distributable profits, it is not obligatory on the part of the firm to pay the preference dividend, these dividends are not tax-deductible. The portion of the preference capital resembles the debentures as the rate of dividend is fixed, preference shareholders are given priority over the equity shareholders in case of dividend payment and at the time of winding up of the firm, the preference shareholders do not have the right to vote and the preference capital is repayable.

CONVERTIBLE DEBENTURES

These are a different type of debentures which are also categorized as hybrid financing. In addition to the normal debenture features, these debentures have the option to convert the debenture into equity on certain terms and conditions. These debenture holders enjoy the

regular income of interest till the time they exercise their right or the option of converting it into equity shares.

Convertible debentures could be of three types:

- Compulsory convertible debentures provide for the conversion within 18 months of the issue
- Optional convertible debentures provide for the conversion within 36 months of the issue.
- Debenture with “call “ or “put” option in case the conversion exceeds 36 months.

Advantages

The convertible debentures are beneficial to the investor since they get an opportunity to become the owner of the company and might leave in case the company experiences the loss. But however, the convertible debentures are unsecured and in case the company goes bankrupt, the holder gets his money only after all the secured creditors are paid.

Disadvantages

The major disadvantage to the issuer is that, if the company makes huge profits, then the investor would like to become the shareholder or the owner which results in the dilution of ownership in the company.

WARRANTS

Similar to debentures, warrants also have the right to purchase equity shares of a company. Warrants are not a debenture or equity till the time they are exercised and equity is purchased. They are just a right or option to purchase equity which the holder has.

Companies include warrants in equity or debt issues because they can bring down the cost of financing and provide assurance of additional capital if the stock does well. Investors are more inclined to opt for a slightly lower interest rate on a bond financing if a warrant is attached, as compared with a straightforward bond financing.

How Do They Work?

A simple hypothetical example most easily illustrates how these investments work. Consider the imaginary company Widget Inc. (WIDG). In July 2020, Widget stock is trading for $100 per share, and the company issues call warrants with the following features:

The strike price (sometimes called "exercise price"): $130 per share.

Expiration date: July 1, 2025.

Warrant price: $5.

Suppose in July 2020 you saw this warrant and figured that, in five years, WIDG stock would easily be able to go up 50% from current levels. So the stock would trade for $150 within five years. If you were pretty certain in that assessment – and had the risk tolerance to do so – loading up on these warrants would make financial sense. The right to buy one share of Widget stock for $130 will be worth at least $20 per share if WIDG gets to $150, which is quadruple what you paid for the warrant.

The downside, however, is that if Widget stock trades for less than $130 by July 2025, the warrant would be worth nothing and you'd lose that investment.

The stock warrant certificate comprises of the following:

- Type of Warrant: There are two types of warrants, Viz. Call Warrant and Put Warrant. The call warrant gives the holder a right to buy certain shares at a specific time on or before the certain date while the Put warrant gives the right to sell these.
- Exercise Price: The exercise price or the strike price is the amount that needs to be paid either for the purchase of a call warrant or the sale of a put warrant.
- Expiration Date: On the warrant certificate, the date on which the warrant will get expired is clearly mentioned and after which the holder cannot exercise any rights.
- Underlying Asset: The underlying security for which the warrant seller is obliged to deliver or purchase from the warrant buyer is clearly stated in the warrant certificate.
- Warrant Style: It refers to the manner in which the warrants can be exercised. There are two styles: American and European style. In the former style, the warrants can be exercised any time before the expiration date, whereas in the latter style the warrants can be exercised on the expiration date itself.
- Conversion Ratio: It refers to the number of warrants that are needed to buy or sell one unit of investment

OPTIONS

There are debt instruments which accompany options that may be either call or put. These options convert the debt into equity. This kind of instruments remains debt at the time of issue until the time they are exercised. The post they are exercised, they become equity. A call option allows the holder of the option to buy something at a certain price and on or before a certain date whereas put option allows selling.

- The Stock Option is a security that gives the right to its holder, but not the obligation to buy or sell the outstanding stocks at a specific price and a specific date. The stock options are traded on the securities exchange like other shares.

- People purchase these stock options if they believe that the stock price is likely to go up or down soon.
- For example, if today the stock trades at Rs 1000 per share and is expected to increase in the next month to Rs 1200 per share, then you will buy the call option today at Rs 1000, so that you can sell it at RS 1200 in the next month and make a profit of Rs 200 on each share purchased.

A stock option is a contract in which following terms are included:

- The type of stock option There are two types of options, call option and put option. The call option gives the buyer the right not the obligation to buy the underlying stock, while the put option gives the right and not the obligation to sell them.
- One who buys the options are called as holders, whereas the ones who sell these, are called as writers.
- Strike Price is the price at which the option holder can buy or sell the underlying asset when the option is exercised.
- Option Premium, an amount paid to acquire the options. The option buyer has to pay a premium to the option seller for carrying on the risk.
- In a contract, the date on which the option expires is clearly mentioned. Thus, every option comes with an expiration date after which the options become worthless, and the holder has no right to exercise it.
- There are two types of option styles according to which the options can be exercised. The American Style and the European Style.
- The security for which the option seller has the obligation to deliver or purchase from the option buyer is called the underlying asset.
- Thus, the underlying asset for which the whole options contract is made is clearly mentioned therein .For example, if there are stock options, then the underlying asset is the shares of the specific company.
- The contract must include the "multiplier" which means the quantity of the underlying asset that needs to be delivered at the time option is exercised.
- The stock options are also issued to the specified employees of the company and are called as the Employee Stock Options

DEEP DISCOUNT BONDS (DDB)

A Deep Discount Bond is also a type of a zero interest bond. But it is not convertible. It has got a face value but the issue price of the Deep Discount Bond is a discounted value. The

Deep Discount Bond is redeemed at the expiry of a specified period at the face value. The return to the

Deep Discount Bond holders is available in the form of difference between the issue price and the realizable maturity value. There is no coupon rate and no interest is payable during the life of the Deep Discount Bond. The Industrial Development Bank of India issued in 1992, Deep Discount Bond of the face of Rs1,00,000 redeemable in 25 years. The issue price was however, Rs 2,700 and the investor were given option to get redemption at the end of 5th, 10th, 15th and 20th year at different values. If an investor holds the Deep Discount Bond for full 25 years, then the rate of return comes to about 15.5%.

3.2 LEASING

Suppose, we are going to establish a tea factory .First of all we require land, building and machinery which involves investment of huge funds. We do not have the entire fund required for setting up the factory. Now, what we can do is that we can go to a leasing company, get the machinery on lease without buying them. For that we need to pay an amount monthly to the leasing company which is called rental. This system is called lease. The same is done for the existing company also which go for expansion of their business. In case of existing companies, they may have the required fund but if they pay the entire amount from their earning, it will put a pressure on the current year's earnings resulting in reducing profit. Hence, companies go for alternative financing of assets like leasing.

Leasing is an arrangement between two parties, the lessor and the lessee. Where by the former arranges to buy capital equipments for the use of latter for an agreed period of time, in return for the payment of rent.

3.2.2. DEFINITION

According to James. Van Horne.

Lease is a contract where by the owner of an asset (lessor) grants to another party (lessee) the exclusive right to use the asset usually for an agreed period of time in return for payment of rent**".**

According to the equipment leasing association of UK definition, leasing is a contract between the lesser and the leaser for hire of a specific asset selected from a manufacturers or vender of such assets by the lessee. The leaser retains the ownership of the asset. The lessee pass possession and uses the asset on payment for the specified period.

3.2.3.ELEMENTS OF LEASING

Leasing is one of the important and popular parts of asset based finance. It consists of the following essential elements. One should understand these elements before they are going to study on leasing.

1. Parties: These are essentially two parties to a contract of lease financing, namely the owner and user of the assets.

2. Leaser: Leaser is the owner of the assets that are being leased. Leasers may be individual partnership, joint stock companies, corporation or financial institutions.

3. Lease: Lease is the receiver of the service of the assets under a lease contract. Lease assets may be firms or companies.

4. Lease broker: Lease broker is an agent in between the leaser (owner) and lessee. He acts as an intermediary in arranging the lease deals. Merchant banking divisions of foreign banks, subsidiaries indian banking and private foreign banks are acting as lease brokers.

5. Lease assets: The lease assets may be plant, machinery, equipments, land, automobile, factory, building etc.

3.2.4. FEATURES OF LEASING

The basic features of a lease are-

- There are essentially two parties associated in the leasing; the lessor (owner of the asset) and the lessee (user of the asset).However, in some cases a third party called lender or financer is involved when the lessor thinks it to be necessary.
- The asset- a vehicle, an aircraft, a machine, a computer, a building, etc can be a subject of leasing.
- The lease contract separates the ownership from the user of the asset. After the tenure is over the asset reverted to the owner.
- Lease contract is done for a specified period; may be for long-term(called finance lease) or for short-term(called operating lease)
- Lessee has to pay a consideration to the lessor for using the asset. This is called rentals.
- At the end of the lease period, the contract may be renewed or the asset may be sold to the lessee or the asset may be reverted to the owner

3.2.5. TYPES OF LEASING:-

a) Financial lease:-

In financial lease, the lessee selects the equipments, settles the price and terms of sales and auanges with the leasing company to buy it. He enters into irrevocable & non cancellable contract.

The lessee uses the equipment maintains it, insures and avails the after sales service and warranty backing it. He also bears the risk of obsolescence.

b) Operating Lease:-

In operating lease, the contractual period between lessor and lessee is less than the economic life of equipment. The lease is terminable by giving notice as per the agreement.

a. Normally the lease rentals are higher as compared to other leases due to short period.
b. The risk of obsolescence, cost of maintenance and other relevant expenditure would be paid by lessor.

Eg:- computers, vehicles etc..

c) Leverage Lease:-

A leverage lease is used for financing those assets which involves huge capital outlay It involves three parties lessor lessee & lender (or) financier.

Lessor acquires asset, but finances only a part of asset say 25% balance 75% is financed by lender. The lesser rent to the lessor & lessor pays interest & principle to the lender for the sum borrowed. Since debt is involved in this type of lease its called leverage lease.

d) Sales and lease back:-

Under this type of lease, firm which has an asset sells it to leasing company and gets it back on lease. The firm makes rental payment to the lessor generally stores, office building shopping centers are leased under this method.

e) Cross border Lease:-

It relates to lease transaction between lessor & lessee belonging to two different countries .In other words lessor may be of one country & lessee may be of another country.

f) Import Lease:-

In this case lessee and lessor belong to the same country but the equipment supplier belongs to a different country. The lessor imports the assets and leases it to lessee.

g) Sales aid lease:-

When the leasing company (lessor) enters an agreement with equipment manufacturer that it would market latter's product (equipment) through its leasing operation. This is called sales aid lease. Lessor gets lease rentals from lessee and also commission from manufacturers.

h) Direct lease:-

It is a lease under which the lessor owns/acquires the asset that is given to lessee.

i) Open Ended Lease & Close Ended Lease:-

At the end of the lease period, the lessee is given a choice to buy the equipment in the case of open ended leases. Under close ended lease no such choice is given, lessee has to return the asset.

j) Dry Lease & Wet Lease:-

It is common in aircraft industry. It is aircraft is leased along with fuel it is termed as wet lease. If the fuel is not included in lease along with the aircraft it is called dry lease.

k) Updated Lease:-

Updated lease is intended to protect the lessee from risk of obsolesce. In this asset the lessor agrees to replace the obsolete asset with new one at specified rank.

l) Percentage lease:-

Percentage lease provides for a fixed rent + some % of previous yrs revenue has to be paid to the lessor.

DIFFERENCE BETWEEN OPERATING LEASE AND FINANCIAL LEASE

Basis	**Operating Lease**	**Financial Lease**
Definition	A lease in which all risks and rewards related to asset ownership remain with the lessor for the leased asset is called operating lease. In this lease, the asset is returned by the lessee after using it for lease term agreed upon.	In financial lease (Also known as capital lease), the risks and rewards related to ownership of asset leased are transferred to the lessee.
Ownership	Ownership of the asset remains with the lessor for the entire lease period.	Ownership transfer option at the end of the lease period is there with the lessee. Title might or might not be

		transferred eventually.
Accounting Effect	Operating lease is treated generally like renting. That means, the lease payments are treated as operating expenses and the asset does not show on the balance sheet.	Financial lease is treated like loan generally. Here, the asset ownership is considered of the lessee and so asset appears on the balance sheet.
Purchase Option	In operating lease, the lessee does not have any option to buy the asset during the lease period.	Financial lease allows the lessee to have a purchase option at less than the fair market value of the asset.
Lease Term	Lease term extends to less than 75% of the projected useful life of the leased asset.	Lease term is generally more than or equal to estimated economic life of the asset leased.
Expenses Borne	Lessee pays only the monthly lease payment in operating lease.	In financial lease, lessee bears insurance, maintenance and taxes.
Tax Benefit	Since operating lease is as good as renting, lease payment is considered as expense. No depreciation can be claimed.	Lessee can claim interest and depreciation both as financial lease is treated like a loan.
Running Cost	In operating lease, no running or administration costs are to be borne for example: registration, repairs etc. since it gives only right to use the asset.	In a financial lease, running cost and administration expenses are higher.
Example	Normally, A Projector, Computers, Laptops, Coffee Dispensers etc	Normally, Plant and Machinery, Land, Office Building etc

3.2.6. ADVANTAGES OF LEASING:-

Leasing finance is one of the modern sources of finance, which plays a major role in the part of the asset based financing of the company. It has the following important advantages.

(i) Financing of fixed asset

Lease finance helps to mobilize finance for large investment in land and building, plant and machinery and other fixed equipments, which are used in the business concern.

(ii) Assets based finance

Leasing provides finance facilities to procure assets and equipments for the company. Hence, it plays a important and additional source of finance.

(iii)Convenient

Leasing finance is convenient to the use of fixed assets without purchasing. This type of finance is suitable where the company uses the assets only for a particular period or particular purpose. The company need not spend or invest huge amount for the acquiring of the assets or fixed equipments.

(iv)Low rate of interest

Lease rent is fixed by the lease agreement and it is based on the assets which are used by the business concern. Lease rent may be less when compared to the rate of interest payable to the fixed interest leasing finance like debt or loan finance.

(v) Simplicity

Lease formalities and arrangement of lease finance facilities are very simple and easy. If the leaser agrees to use the assets or fixed equipments by the lessee, the leasing arrangement is mostly finished.

(vi) Transaction cost

When the company mobilizes finance through debt or equity, they have to pay some amount as transaction cost. But in case of leasing finance, transaction cost or floating cost is very less when compared to other sources of finance.

(vii) Reduce risk

Leasing finance reduces the financial risk of the lessee. Hence, he need not buy the assets and if there is any price change in the assets, it will not affect the lessee.

8. Better alternative Now a days, most of the commercial banks and financial institutions are providing lease finance to the industrial concern. Some of the them have

specialised lease finance company. They are established to provide faster and speedy arrangement of lease finance

To the lessor:-

- Tax Benefits

  Sales tax – Lower rate on sale by lease than direct sale.

  Income tax – Depreciation can be claimed on lease rentals.
- Provides a stable and continuous manufacturing business to the lessor.

  Many manufacturers leases the product manufactured by them.

  Wider distribution.

  Better & stable sales even in unhealthy.
- High profitability

  Economic conditions.

  High rate of return.
- Off the balance sheet item

To the lessee:-

- Tax benefits (refer next page).
- Derive the benefits of assets without owning them.
- Less expensive when compared to other modes of acquiring.
- Lessee is able to save considerable amount of capital which otherwise would be looked up in an asset.
- Off the balance sheet item, hence debt-equity ratio could be kept intact. (refer point above).
- It does not affect creditability of lessee.
- At the end of tenure, an asset passes to the lessor, hence no trouble of disposing.
- Ideal for small firms going for modernization without huge outlay of cash.
- Technocrats will be more benefited as they find difficult to get money from promoters.
- Cheap finance – less documentation, as compared to term loans from banks or FIS.
- Obsolete equipment can be acquired through operational lease.

3.2.7. DEMERITS OF LEASING:-

- The lessor generally leases out the assets which are purchased by him with the help of bank credit. If the lessor fails to pay installments (by default) the bank seizes the asset, which would be huge damage to lessee.
- In case of financial lease, the lease does not get benefits of warranty or after sales service.
- Leasing keeps firms borrowing capacity in act is fallacious statement as debt capacity depends on debt servicing ability than on balance sheet ratios.
- In case of any loss due to natural calamities lessor would be indemnified by the insurance company but the lessee would not get any benefit, for the loss of production.
- The lessee has to pay rent immediately on acquiring the asset. This would burden him.
- Pride of ownership is not there for lessee.
- Lessee does not get the benefit of appreciation similarly he cannot even claim depreciation on earnings as he is not the owner of the assets.
- If the lessor does not wants to renew the agreement the lessee has to find a new lesser to lease the equipment. It would result in inconvenience.
- Restriction on use of equipment.
- Leasing like borrowing commits the company for a stream of payments in future.

3.2.8. NET ADVANTAGE OF LEASING:-

Net advantage means advantage that a lessee would get if he would lease rather than purchasing the asset through borrowing.

Particulars involved:-

- Lease rent paid – cost of lease – outflow.
- Depreciation – lessee cannot claim depreciation (tax shield foregone on depn – cost of lease) – outflow.
- Salvage value – lessee cannot obtain – cost of lease – outflow. Tax advantage on lease rent – benefit.
- Interest – tax shield foregone on interest – cost of lease – outflow.
- Cost of equipment – (investment saved) – benefit – inflow.

Steps for calculating NAL:-

Note down the lease rent (LR).

Find tax advantage on lease rent (LRX Tax).

Calculate depreciation – note down tax advantage on depreciation.

Note down salvage cost (salvage cost cannot be claimed hence included as a cost of lease).

Add the outflow due to lease & any other costs (loss) and deduct the gains from tax advantage on lease rent.

Find the PV of cash outflow.

Compare with cost of assets.

NAL = cost of assets – PV of cash outflow in the lease.

If NAL is +ve lease the asset., If NAL is -ve buy the asset.

EVALUATION OF LEASE- LESSEE'S POINT OF VIEW

Illustration 1 : An asset worth Rs.3,43,300 has to be acquired. There are two options

a) leasing.

b)Buying through loan.

Under leasing option. Yearly lease rent would be Rs.1,20,000, has to be paid for 5yrs. Under loan option the company has to pay 14% interest and the loan has to be repaid within 5yrs. The firm has 50% tax bracket. The life of the asset is 5yrs and has to be depreciated on straight line method. Which financial alternative should we select?

Solution

Step 1 : Calculate the amount of Installment

$$\text{Installment} = \frac{\text{Cost of asset}}{\text{Annuity Factor}}$$

$$\text{Installment} = \frac{343300}{3.433} = 100000$$

Annuity Factor

Year	PVF @14%
1	0.877
2	0.769
3	0.675
4	0.592
5	0.519
	3.433

Step 2: Segregate Interest component from installment

Year	Installment	Opening Balance	Interest	Principal	Closing Balance
1	100000	343300	48062	51938	291362
2	100000	291362	40791	59209	232153
3	100000	232153	32501	67499	164654
4	100000	164654	23052	76948	87706
5	100000	87706	12279	87721	-

Tax advantage on Depreciation and Interest

Depreciation = Cost of asset /Life of the asset

Depreciation = 343300/5 = 68,660

Tax advantage on depreciation = 34330 per annum

Year	Interest	Tax advantage on interest
1	48062	24031
2	40791	20395
3	32501	16251
4	23052	11526
5	12279	6139

Step 3 : Present Value of Cash outflow under Buying option

Year	Loan Installment	Tax Advantage on		Cash outflow after Tax	PVF @7%	Present Value of Cash outflows
		Interest	Depreciation			
1	100000	24031	34330	41639	0.935	38915
2	100000	20395	34330	45275	0.873	39545
3	100000	16251	34330	49419	0.816	40341
4	100000	11526	34330	54144	0.763	41306
5	100000	6139	34330	59531	0.713	42444
	Total Present Value of Cash outflow under Buying option					202551

Step 4 : Present Value of Cash outflow under Leasing option

Year	Lease Rentals	Tax Advantage on Lease Rentals	Cash outflow after Tax	PVF @7%	Present Value of Cash outflows
1	100000	50000	50000	0.935	46729
2	100000	50000	50000	0.873	43672
3	100000	50000	50000	0.816	40815
4	100000	50000	50000	0.763	38145
5	100000	50000	50000	0.713	35649
	Total Present Value of Cash outflow under leasing option				205010

Step 5: Conclusion

Total Present Value of Cash outflow under Buying option 202551

Total Present Value of Cash outflow under leasing option 205010

Buying is a better option as it involves lower cash flow than leasing

Practice Problem

ABC limited is considering acquisition of an asset worth Rs.12,00,000 with a life of 8 yrs. The equipment can be financed either with an 8 yr term loan at 14% with installments of Rs.2,58,676 per year. The equipment is subject to straight line method of depreciation. Assuming no salvage value and 50% tax bracket. Which financial alternative should it select?

LESSOR'S POINT OF VIEW- COMPUTING LEASE RENTALS

Sunny Leasing is considering to lease out an equipment costing Rs. 10,00,000 for five years, which is the expected life of the equipment, and has an estimated salvage value of Rs. 1,00,000. Sunny Leasing can claim a depreciation of 20% on w.d.v. of the asset but is not eligible for investment allowance. The firm falls under a tax rate of 50% and the minimum post-tax required rate of return is 12%. You are required to calculate the lease rental which the firm should charge.

Solution :

Present Value Factor at 12% discount rate is as below:

Year 1 = .893; Year 2= .797; Year 3 = .712; Year 4 = .636 and Year 5 = .567

Annuity Discount Factor at 12% for 5 years = 3.605

Step 1: Determine the cost of the asset = 10,00,000

Depreciation (Written Down Value Method)

Cost of Asset	1000000	Tax advantage
Less I year Depreciation	200000	100000
Written down Value	800000	
Less 2nd year Depreciation	160000	80000
	640000	
Less 3rd year Depreciation	128000	64000
	512000	
Less 4th year Depreciation	102400	51200
	409600	
Less 5th year Depreciation	81920	40960
	327680	

Step 2 : Determine the cash inflows to the lessor

year	Tax Advantage on depreciation	Salvage Value	Total Cash inflows	PVF @12%	PV of Cashflows
1	100000		100000	0.893	89300
2	80000		80000	0.797	63760
3	64000		64000	0.712	45568
4	51200		51200	0.636	32563
5	40960	100000	140960	0.567	79924
Total Present Value of Cash flow					**311115**

Minimum required net recovery through lease rentals= Cost of Assets + Present value of cash outflow (if any) - Present value of cash inflow

Minimum required net recovery through lease rentals= 10,00,000 - 311115 = Rs 6,88,885

Post-tax lease rentals = Minimum required net recovery through lease rentals/Annuity Factor

Post-tax lease rentals = 688885/3.605 = Rs 191,092

Pre-tax lease rentals = Post-tax lease rentals / (1-Taxrate)

Pre-tax lease rentals = 191,092 / (0.5) = Rs 3,82,184

Practice Problem

Magnum leasing company wants to quote lease rent for a particular asset. Calculate lease rent. Cost of asset : 15,00,000, Operating, maintenance & insurance : 2,50,000 in year I and there by increases by 6% annually.

Life of an asset – 6 Years

Salvage value – 6,00,000

Depreciation – 40% WDV method

Tax rate – 35%

Cost of capital – 10%

3.3. VENTURE CAPITAL:

Venture capital investment is defined as an activity by which investors support entrepreneurial talent with finance and business skill to exploit market opportunities and thus to obtain long term capital gains- Bank of England quarterly bulletin. It is a long term capital of finance high technology projects which are risky but at the same time has strong potential for growth. Venture capital provides financial and managerial skills in the early years, once it reaches the stage of profitability, they sell their equity holding at a high premium.

3.3.1 Features:

1. **New Ventures:**

   Investment is generally made in new entrepreneur that uses new technology to produce new product.

2. **Continuous involvement:**

   There is continuous involvement in the business after making investment by the investor.

3. **Mode of financing:**

   It is usually in form of equity participation, but when the company is too early to go to capital market. It may also take a form of convertible debts or long term loans.

4. **Long term investment:**

   It is a long term investment usually made in small or medium firms.

5. **Objective:**

   The objective of such investment is to make capital gains.

6. **Nature of firms:**

   Small/medium firms.

7. **High risk -return ventures:**

   They finance high risk –return ventures

8. **Hands-on-approach:**

   It's not only injection of money but also an input needed to set up a firm, like designing its market strategy set up firm, organize and manage it.

9. **Divestment:**

   Once the venture has reached full potential, the venture capitalist disinvests their holdings either to promoters or in the capital market.

3.3.2 STAGES IN VENTURE CAPITAL/ STEPS IN VENTURE CAPITAL FINANCING

Step1 Selection of Investment:

The venture capital institution checks the Venture Capital undertaking on following grounds before making selection

- History and track record of entrepreneur
- Market potentials of future
- Profitability
- Threats
- Feasibility of proposed projects

Step2: Financing

Stages of Financing: Provides financing at Early stage

a) Seed financing – to develop a concept of idea

b) R and D financing – for product development

c) Start up financing – for initial production

d) First stage financing – for full fledged manufacturing

e) Expansion financing/ Second stage financing/

It has manufacturing but yet requires fund to develop market infrastructure

f) Mezzine / Development finance

- To expand and diversification of business
- To facilate public issue(At this stage firm is listed in stock exchange)
- Acquisition – buyout financing

Acquisition – To acquire another form, Buyout – To buy control of sick unit.

Instrument of Financing: Equity or Debt.

<u>Equity</u>:

- Equity shares
- Preference shares
- Cumulative preference shares
- Participative equity shares
- Convertible preference shares

Debts:

- Conventional loan – similar to that of bank loan
- Zero interest bond: The VCI issues bonds on which only inflated par value is paid at time of maturity. No interest is paid.
  - Conditional loan:

    No predetermined repayment schedule or interest rate VCI gets % of sales as return.
  - Income notes: Combination of conditional and conventional loan.

Step3: Nurturing:

Hands-on-Nurturing:

Continuous and constant involvement in the operations of VCU

Hands-off-nurturing:

Passive role. They do not take part in operations of VCU. This is more appropriate in the later stages of venture.

Hands holding nurturing:

VCI provides nurturing if only asked for.

Objectives of Nurturing:

- To ensure proper utilization of resources.
- To provide guidance to tackle operational problems
- To ensure implementation within stipulated time and costs
- To provide supplementary finance
- To help him build strategies on technology, production, finance and marketing
- To advise on preventive and remedial action.

Step4: Disinvestment:

The disinvestment options available are

- Promoter buy back [selling the shares to promoters]
- Public issue [selling the shares to public]
- Conversion of debt to equity
- Sale to another VCF
- Liquidation - in case of failure of VCU

3.3.3 STEPS TO MAKE VENTURE CAPITAL MORE ATTRACTIVE AND POPULAR AMONG INVESTORS:

1. Should use wide instruments
2. Investors should be given tax shield for their investment in VCF's
3. Long term gains of VCF can be taxed at concessional rate
4. Venture capital managers could be developed management training for VC managers on high technology high risk ventures.
5. Promotion efforts such as venture capital clubs, fairs can be organized.
6. Liberal facilities to attract off share investors
7. Entrepreneurial tradition has to be built by society. Govt. should encourage tradition
8. Industry- institution interface, linkage between industry/university technological institutions should be developed.
9. R & D activities have to be encouraged.
10. Private sector participation:Private sector is often willing to put money in risky projects to get high returns.
11. Public issue through OTCEI: Malegam committee suggested making public issue through OTCEI. This initiative would facilate growth of new breed of venture capital assisted entrepreneurs.

3.3.4 VENTURE CAPITAL PLAYERS

I)Companies promoted by all India FIS

a. IDBI'S division of venture capital
b. RCTC [risk capital and technology finance corporation]
c. TDICI- (Technology development & information company)

II)Companies promoted by state FI

a. Gujarat venture capital fund
b. Andhra Pradesh industrial development corporation

III)Companies promoted by bank

a. Can bank venture capital fund
b. SBI venture capital fund
c. Indian investment fund-(Grind lays bank)
d. Infrastructure leasing [promoted by central bank of India]

IV) Companies promoted by private sectors

a. Indus venture capital fund (promoted by mafatlals & HL)
b. Credit capital venture fund ltd.
c. 20th century venture capital corporation ltd.

I. a) IDBI Venture capital fund: Started in 1986. It focuses on indigenously developed technology and adopting imported technology.

- Financial assistance for projects whose out lay 5lakhs – 2.5crores

The promoters slake should be at least

10%-for venture below 50lacs

15%-for venture above 50lacs

- Unsecured loan ranging between 9%-17% (product introduced in the mkt.) initial stage.
- Ventures such as chemicals, computer software electronics, bio technology, medical eqpt, food processing.

I.b) Risk capital & technology finance corporation:

- Subsidiary of IFCI
- Technology up gradation and development
- Provides finance in the form of short term

Conventional loan or interest free conditional loan and risk sharing by equity participation.

I.c) TDICI – technology development and information company of India

- Jointly created by ICICI and UTI
- Computer hardware, tissue culture, computer integrated manufacturing system, chemicals, food, engineering……..
- The assistance may be up to 2crores in form of equity & or conditional loans.
- Equity in the project would be held for 5-8 years and later on divested.

II a) Promoted by state Govt.

Gujarat venture capital fund:

- First state level venture finance company
- Financial assistance for projects where outlay ranges between 25lakhs to 20crores
- Provides finance through equity participation
- It finances firm engaged in bio-technology, surgical instruments, conservation of energy

II b) Andhra Pradesh industrial development corporation's venture capital ltd :

- Corpus of 13.5crore was contributed by world bank, IDBI and Andhra Pradesh.
- It provides assistance from 25lacs-1crore

III) Promoted by public sector banks

III a) Canara bank venture capital fund:

- Promoted by canara bank worth Rs10crore
- Focuses on commercialization of new technologies

III b) SBI capital markets ltd (SBI cap):

- Subsidiary of SBI capital ltd
- Has been giving high priorities on areas like import substitute hi export potentials.
- Disinvest in a period of three years.

IV a) Indus venture Capital Fund:

- Corpus 21crores contributed by many Indian and international institutions
- Giving importance in areas of health care electronics and computer technology.

IV b) 20th century VCF (Venture capital fund):

- Formed by 20th century finance corporation
- Corpus of Rs20crores to cater needs of small business man and sick industries

IV c) Credit capital venture fund limited:

- Set up by credit capital corporation ltd.
- Thrust is on export oriented projects and technology oriented projects
- CVF has launched a new fund worth Rs10crore called Information technology. Fund to provide direct equity support to technology information field.

3.2.5 SEBI guidelines for venture capital:

1. The public sector FIS, SBI, scheduled banks, foreign banks and their subsidiaries are eligible for setting VCF.
2. The minimum size of fund should be 10crores and debt equity rate 1:1.5.
3. The venture capital institution has to apply to SEBI In order to get registered
4. The SEBI will scrutinize the application if satisfied will send the intimation
5. The VCI has to pay registration fee and can get certificate of registration from SEBI.
6. The VCI can collect funds from Indian investors, foreign investors and NRI's
7. Every investor can contribute a minimum of Rs5,00,000
8. Investor for their contribution receive units
9. VCI cannot invest more than 40% of its corpus in a single VCU.

10. VCI has to invest at least 80% of its funds in unlisted equity shares
11. VCI must maintain records. It must submit periodical reports to SEBI, when asked
12. If VCI indulges in fraudulent activities, the SEBI could cancel the certificate of registration
13. VCI can get listed after expiry of 3 years from the date of issue of units to investors
14. Winding up

    VCI can wind up if following ways

    - When period stated in memorandum of association is over
    - If 75% of investors pass a resolution to wind up.

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4. DIVIDEND DECISIONS AND INFLATION IN FINANCIAL DECISIONS

4.1 DIVIDEND

Once a company makes a profit, it must decide on what to do with those profits. They could continue to retain the profits within the company, or they could pay out the profits to the owners of the firm in the form of dividends. The dividend policy decision involves two questions:

1) What fraction of earnings should be paid out, on average, over time? And,

2) What type of dividend policy should the firm follow? I.e. issues such as whether it should maintain steady dividend policy or a policy increasing dividend growth rate etc.

On the other hand Management has to satisfy various stakeholders from the profit. Out of the Stakeholders priority is to be given to equity share - holders as they are being the highest risk.

4.1.1 DEFINITION

According to the Institute of Chartered Accountants of India, dividend is "a distribution to shareholders out of profits or reserves available for this purpose." "The term dividend refers to that portion of profit (after tax) which is distributed among the owners / shareholders of the firm."

"Dividend may be defined as the return that a shareholder gets from the company, out of its profits, on his shareholdings." In other words, dividend is that part of the net earnings of a corporation that is distributed to its stockholders. It is a payment made to the equity shareholders for their investment in the company.

4.1.2 FEATURES OF DIVIDEND

- Dividends are distributed to equity share holders.
- Dividends are variable in nature.
- Dividends are optional payments there is no legal obligations on the part of the company to pay them any fixed dividend.
- Dividends are decided by board of directors
- Equity share holders have the last claim on income(they are paid after paying interest to debentures and pref.dividend to pref sh.holders)

- Dividends cannot be paid out of deprecation reserve or any other capital reserve
- Dividend can be paid only after providing deprecation
- It can be paid in the form of cash or bonus shares

4.1.3 DIVIDEND DECISION:-

The finance manager has to determine the amount of profit to be distributed as dividend and the amount of profit to be retained in the business for financing its long term growth

4.1.4 DIVIDEND THEORIES:-

It attempts to explain the (Relationship between the dividends and market value of the firm

According to one school of thought

Dividend Decision does not affect the share holders wealth and value of firm [irrelevance concept of dividend]

- Modigliani Miller's approach:

According to another school of though Dividend decision affects the value of the firm and share holders' wealth [relevance concept of dividend]

- Walter's approach
- Gordon's approach

RELEVANCE CONCEPT OF DIVIDEND

WALTER'S MODEL:

Prof James. E Walter strongly supports the doctrine that the dividend decision affects the value of the firm

According to Prof. James E. Walter, in the long run, share prices reflect the present value of future+ dividends. According to him investment policy and dividend policy are inter related and the choice of a appropriate dividend policy affects the value of an enterprise.

Statement:

Changes in dividend will affect the value of the firm. The Walter's model is based on relationship between (internal rate of return)

- **If r>k:** The firm can earn higher profits than what a share holders can earn from their investment. Such firms are termed as growth firms.

  Optimum Dividend policy: Plough back the entire earnings

  Dividend payment ratio=0

  Entire amount is kept as retained earnings no dividends

- **If r<k:** The firm earns a lower profit than what the share holders can earn from their investment they are termed as declining firm.

  Optimum dividend policy: To distribute entire earning as dividend.

  Dividend payment ratio:100% Entire earnings is distributed as dividend no retained earnings

- **If r=k:**The firm earnings is equal to the expectations of the share holders they are termed as normal firm

  Optimum dividend policy: No optimum dividend policy. It does not matter whether the firm retains or distribute.

Assumptions:

- The firm will not go for external finance such as debt or fresh issue of shares. It does the entire finance through retained earnings.
- The rate of return (r) and cost of capital (k) remains constant.
- The dividend declared by the firm and earnings per share remains constant.
- The firm has a very long life.

MATHEMATICAL FORMULA:

P0 = Market value of the share

$$P0 = \frac{D + \frac{r\,(Eps - D)}{k}}{k}$$

Where D = Dividend per share.

R = Rate of return

K = Cost of capital

E = Earning per share

Criticism:

Walter's model has subject to various criticisms many of its assumptions are unrealistic.

- Walter's assumption that financial requirements of a firm are met only by retained earnings is seldom true in real world situations. Firms do raise funds by debentures, eq.sha whenever they are in need of money.
- R may not constant:- The firm tend to choose more profitable projects, hence in real life r also changes.
- Similarly k may also not remain constant. The cost of capital may vary based on market conditions
- The firm may not have a perpetual life .The firm may wind up due to external and internal reasons.

Illustration 1 : Assume that there are three firms. Firm A B C.

Particulars	Firm A	Firm B	Firm C
Rate of return (r)	20%	15%	10%
Cost of capital (k)	15%	15%	15%
Earning per share (EPS)	4/-	4/-	4/-

Assume a payout ratio of 0%, 50%,and 100%.

Prove Walter's model

Dividend Payout Ratio	Dividend per Share	A LTD	B LTD	C LTD
		r>k Growth Firm	r=k Normal Firm	r<k Decline firm
DP = 0%	D=0	$\frac{0 + \frac{0.20}{0.15}(4-0)}{0.15}$	$\frac{0 + \frac{0.15}{0.15}(4-0)}{0.15}$	$\frac{0 + \frac{0.10}{0.15}(4-0)}{0.15}$
		=35.46	=26.67	=17.78
DP=50%	D=2	$\frac{2 + \frac{0.20}{0.15}(4-2)}{0.15}$	$\frac{2 + \frac{0.15}{0.15}(4-2)}{0.15}$	$\frac{2 + \frac{0.10}{0.15}(4-2)}{0.15}$
		=31.11	= 26.67	=22.22
DP= 100%	D=4	$\frac{4 + \frac{0.20}{0.15}(4-4)}{0.15}$	$\frac{4 + \frac{0.15}{0.15}(4-4)}{0.15}$	$\frac{4 + \frac{0.10}{0.15}(4-4)}{0.15}$
		=26.67	=26.67	=26.67

Dividend Payout Ratio	A LTD	B LTD	C LTD
	r>k Growth Firm	r=k Normal Firm	r<k Decline firm
DP = 0%	=35.46	=26.67	=17.78
DP=50%	=31.11	= 26.67	=22.22
DP=50%	=26.67	=26.67	=26.67

Growth firms are characterized by an internal rate of return > cost of the capital i.e. r > k. These firms will have surplus profitable opportunities to invest. Because of this, the firms in growth phase can earn more return for their shareholders in comparison to what the shareholders can earn if they reinvested the dividends somewhere else. Hence, for growth firms, the optimum payout ratio is 0%.

Normal firms have r = k. The firms in normal phase will make returns equal to that of a shareholder. Hence, the dividend policy is of no relevance in such a scenario. It will have no influence on the market price of the share. So, there is no optimum payout ratio for firms in the normal phase. Any payout is optimum.

Declining firms have an internal rate of return < cost of the capital i.e. r < k. Declining firms make returns that are less than what shareholders can make on their investments. So, it is illogical to retain the company's earnings. In fact, the best scenario to maximize the price of the share is to distribute entire earnings to their shareholders. The optimum dividend payout ratio, in such situations, is 100%.

Practice Problem 1 : Assume that there are three firms. Firm A B C.

Particulars	Firm A	Firm B	Firm C
Rate of return (r)	15%	10%	5%
Cost of capital (k)	10%	10%	10%
Earning per share (EPS)	8/-	8/-	8/-

Assume a payout ratio of 25%, 50%, 75% and 100%.Prove Walter's model

GORDONS MODEL:

The value of a share, like any other financial asset, is the present value of the future cash flows associated with ownership. On this view, the value of the share is calculated as the present value of an infinite stream of dividends.

Myron Gordon's Dividend Growth Model explains how dividend policy of a firm is a basis of establishing share value. Gordon's model uses the dividend capitalization approach for stock valuation. Myron Gordon relates the market value of the firm to the dividend policy.

Assumptions:

- No external financing:- The firm does not go for external financing.
- Constant return:- Rate of return(R) remains constant.
- Constant cost of capital:- K remains constant.
- Perpetual firm:- The firm has perpetual life.
- The firm is an all equity firm & it has no debt.
- No taxes:- Corporate taxes do not exist.
- Constant retention:- The retention ratio once decided remains constant. Thus growth rate is constant forever.
- Cost of capital is greater than growth rate K > br=g.

  K = cost of capital

  g = growth rate

Statement: According to this model change in dividend will affect the value of the firm.

Value of firm $P0 = E(1-b) / k-g$

Where Po is market price of the share.

E = earnings per share.

b = retention ratio.

g = growth rate (g=b*r).

k = cost of capital.

r = rate of return.

There are 3 kinds of firm

- Growth firm(r>k).
- Normal firm(r=k).
- Declining firm(k<r).

Criticism:

- Firms may raise funds by external sources also.
- R may not be constant always.
- K may not be constant always.
- Firm might not have perceptual life.
- Growth in dividend is not constant.
- Meaningful value is obtained when k>g. In other situations value of firm cannot be calculated.

Illustration 2 . Assume there are three firms A,B & C. Details regarding 3 firms are given

Particulars	Firm A	Firm B	Firm C
Eps	12	12	12
R	20%	15%	10%
K	15%	15%	15%

Prove Gordon's model when retention ratio is 0%, 25% & 50%.

Retention Ratio	**A LTD r>k Growth Firm**	**B LTD r=k Normal Firm**	**C LTD r<k Decline firm**
b = 0%	$\frac{12\ (1-0)}{0.15-(0\ x\ 0.20)}$	$\frac{12\ (1-0)}{0.15-(0\ x\ 0.15)}$	$\frac{12\ (1-0)}{0.15-(0\ x\ 0.10)}$
	= Rs 80	**= Rs 80**	**= Rs 80**
b =25%	$\frac{12\ (1-0.25)}{0.15-(0.25\ x\ 0.20)}$	$\frac{12\ (1-0.25)}{0.15-(0.25\ x\ 0.15)}$	$\frac{12\ (1-0.25)}{0.15-(0\ .25\ x\ 0.10)}$
	=Rs 90	**= Rs 80**	**Rs 72**
b = 50%	$\frac{12\ (1-0.50)}{0.15-(0.5\ x\ 0.20)}$	$\frac{12\ (1-0.50)}{0.15-(0.5\ x\ 0.15)}$	$\frac{12\ (1-0.50)}{0.15-(0.5\ x\ 0.10)}$
	=Rs120	**= Rs 80**	**=Rs 60**

Retention Ratio	A LTD r>k Growth Firm	B LTD r=k Normal Firm	C LTD r<k Decline firm
b = 0%	**Rs 80**	***Rs* 80**	***Rs* 80**
b =25%	**Rs 90**	***Rs* 80**	***Rs* 72**
b = 50%	**Rs120**	***Rs* 80**	***Rs* 60**

Growth Firm : As retention ratio increases , the value of firm increases. It assumes that the retain earnings are re invested in an all equity firm . This allows the earnings to grow at a rate of br. Thus in a growth firm it is better to retain profits than to distribute them

Normal Firm : In case of normal firm where r=k . Irrespective of firm's retention ratio, value of firms remains the same . Hence the earnings can be distributed or retained in the business

Decline Firm : In case of declining firm where r<k The retention of profits is undesirable by the share holders . Under such circumstances company should distribute all the profits to the share holders

Practice problem 2:. Calculate the value of the firm for the following data under Gordon's model

E = Rs 10/-

r = 20%

k = 15%

When retention ratio is a) 0% b) 50% c) 75% d) 100%.

Practice Problem 3: .Calculate by Gordon's models, the value of the firm whose details are

E = Rs 4/-

r = 10%

k = 12%

When a) Payout ratio is 25%.

b) Payout ratio is 50%.

c) Payout ratio is 75%.

REVISED GORDON'S MODEL

The bird in the hand augments:

Gordon concludes that in a normal firm where r=k. Dividend policy does not effect value of shares. But in revised model Gordon states that dividend will effect the value of the firm even in normal firm. Investors behaving rationally are risk averse Prefer easily dividend which are certain than the rate dividends which are uncertain hence the investors prefer to avoid uncertainty and willing to pay higher price for the shares which gives greater current dividend other things held constant.

To conclude Gordon: A normal firm(r=k) must also payout dividends to get a higher market price.

IRRELEVANCE CONCEPT OF DIVIDEND

4.1.4.1.3 MODIGLIANI AND MILLER APPROACH (MM APPROACH):

Modigliani and Miller states that the price of shares of a firm is determined by its earning capacity and investment decision and never by its dividend decision.According to the MM hypothesis, market value of a share before dividend is declared is equal to the present value of dividends paid plus the market value of the share after dividend is declared.

Assumptions:

- Capital markets are perfect.
- Investors behave rationally.
- There is no flotation or transaction costs.
- There are either no taxes or no difference between tax rates applicable to capital gains or dividends.
- Information is freely available to investors.
- The firm has a fixed investment policy.
- Risk or uncertainty does not exist. Investors are able to forecast future prices and dividends with certainty.
- Shares are infinitely divisible.

Statement:-

Payment of dividends will not affect the value of shares.

Formulae:-

1) $P0 = \frac{D1+P1}{1+Ke}$

2) $P1 = P0 (1+Ke) - D1$

3) No of shares to be issued

$\triangle n\ P1 = I-(e-nD1)$

Where E = earnings, nD1 = Dividend X no. of shares, I=investment

4) Value of firm

$$nP0 = \frac{P1 (n+\triangle n) - I + E}{1+Ke}$$

$$P0 = \frac{D1+P1}{1+Ke}$$

Where P0:- Prevailing market value of share

D1:- Dividend after one year

P1:- market value of share after one year

Ke:- Cost of capital

P1 = P0 (1+Ke) - D1

Computation of no. of shares to be issued

m*P1 = I - (X - nD1)

m:- no of shares to be issued

P1:- Price at which new shares to be made

I:- amount of investment required

X:- Total net profit of the firm during the period

nD1:- Total dividends paid during the proof after problems

PROOF:

Step1:-

MKT value of the shares in the beginning of the period is equal to the present value of dividend at end and mkt value of shares at end

$$P0 = \frac{D1+P1}{1+Ke} = \frac{P1}{1+Ke} + \frac{D1}{1+Ke}$$

D1:- Dividend at end

P1:- mkt value of share at end

Ke:- Cost of capital

1+ke:- Since taken after one year present value of money is considered

Step2:- Value of firm would be = no. of shares * mkt values of shares.

$$n * P0 = nP0 = \frac{n(D1+P1)}{1+Ke}$$

$$nP0 = \frac{nD1+nP1}{1+Ke}$$

Step 3:- Assuming that there is no external financing. The firm's internal source of finance also falls short hence fresh issue of shares has to be made

$\triangle$n=no of new shares issued at the end of period 1/Additional shares issue

$$nP0 = \frac{nD1}{1+Ke} + nP1 + \triangle nP1 - \triangle nP1$$

$$nP0 = \frac{nD1+(n\triangle n)\,P1-\triangle nP1}{1+Ke} \quad \text{———} \quad \text{Eqn (1)}$$

Step 4:

$\triangle$ nP1=No. of new shares * MV of shares at end

$\triangle$ nP1 = I - (E - nD1)

$\triangle$ nP1 = I-e + nD1 ——— Eqn (2)

I:- Investment required

E:- Earnings/net profit

nD1:- Total dividend

E- nD1 = Retained earnings.

Sub (2) in (1)

$$nP0 = \frac{nD1+(n+\triangle n)\,P1-(\,I-e+nD1)}{1+Ke}$$

$$nP0 = \frac{\cancel{nD1}+(n+\triangle n)\,P1-I+e-\cancel{nD1}}{1+Ke}$$

$$nP0 = \frac{(n+\triangle n)\,P1-I+e}{1+Ke}$$

Since D1 is not found in the formula of value of shares / firm . It is evident that dividend has no effect in the valuation of shares. Thus MM approach concludes that dividend has no effect in the valuation of share price.

Criticism:-

1) Perfect capital market does not exist for the following reasons.

- All investors are not logical while making investment.
- Shares are not infinitely divisible (they are available in market lots).
- Transaction cost exists.
- Flotation cost exists.
- Financial institutions are able to influence market decisions and investors buy & sell when FI's buy and sell.
- All investors do not get perfect information. FI's get better information compared to individual investors.
- Taxation Exists: Different rates of taxes on capital gains and dividend. Capital gains are charged at a lower rate than dividend.

2) The investment policy of the firm changes due to changes in return costs and market conditions.

3) Business risk of the firm will change because of changes in investment policies.

Illustration 3: A ltd has 1000 shares of 100 each. The company declared a dividend of Rs 10 per share. The company belongs to a risk class of 20%.The company expects to have a net income of Rs 25,000.The company has to make a new investment of Rs 48,000 in coming period.

What will be the price of the share when

a) Dividend is declared.

b) Dividend is not declared.

c) no. of new shares to be issued

When dividends are declared

$P_1 = P_0 * (1 + ke) – D1$

$P_1 = 100 (1 + 0.20) – 10$

$P_1 = 110$

New Issue of Equity Shares at the end of year/ Additional shares to be issued

$\Delta n\ P_1 = I – E + nD_1$

$\Delta n\ P_1 = 48000 – 25000 + (1000*10)$

$\Delta n\ P_1 = 33,000$

$\Delta n = \Delta n\ P_1 / P_1 = 33000/110 = 300$ Shares

$\Delta n = 300$ Shares

Value of firm

$nP_0 = (n + \Delta n) \times P_1 – I + E / (1 + ke)$

$nP_0 = (1000 + 300) \times 110 – 48000 + 25000 / (1 + 0.20)$

$nP_0 = 143000 – 48000 + 25000 / (1 + 0.20) = 1,00,000$

Value of firm (nP_0) = 1,00,000

When dividends are NOT declared

$P_1 = P_0 * (1 + ke) – D1$

$P_1 = 100 (1 + 0.20) – 0$

$P_1 = 120$

New Issue of Equity Shares at the end of year/ Additional shares to be issued

$\Delta n\ P_1 = I – E + nD_1$

$\Delta n\ P_1 = 48000 – 25000 + 0$

$\Delta n\ P_1 = 23,000$

$\Delta n = \Delta n\ P_1 / P_1 = 23000/120 = 191.67$ Shares

Value of firm

$nP_0 = (n + \Delta n) \times P_1 - I + E / (1 + ke)$

$nP_0 = (1000 + 191.67) \times 120 - 48000 + 25000 / (1 + 0.20)$

$nP_0 = 143000 - 48000 + 25000 / (1 + 0.20) = 1,00,000$

Value of firm (nP_0) = 1,00,000

Practice Problem 4 : A company has 25000 shares of Rs 100/- each. The firm is expected to declare a dividend of Rs 5 per unit of share. The company needs an investment of Rs 5,00,000 it has an earnings of Rs 2,50,000.It belongs to risk category of 10%.Prove Modimiller's model.

4.1.5 DIVIDEND POLICIES:-

"Dividend policy means the practice that management follows in making dividend payout decisions, or in other words, the size and pattern of cash distributions over the time to shareholders."

In other words, dividend policy is the firm's plan of action to be followed when dividend decisions are made. It is the decision about how much of earnings to pay out as dividends versus retaining and reinvesting earnings in the firm.

4.1.5.1Types of dividend policy

There are 4 types of dividend policy

a. Regular dividend policy
b. Stable dividend policy
c. Irregular dividend
d. Zero dividend policy

Regular dividend policy: In this type of dividend policy the investors get dividend at usual rate. Here the investors are generally retired persons or weaker section of the society who want to get regular income. This type of dividend payment can be maintained only if the company has regular earning.

Merits of Regular dividend policy:

- It helps in creating confidence among the shareholders.
- It stabilizes the market value of shares.

- It helps in marinating the goodwill of the company.
- It helps in giving regular income to the shareholders.

Stable dividend policy/ stability of dividends: Here the payment of certain sum of money is regularly paid to the shareholders.

Merits of stable dividend policy:

- It helps in creating confidence among the shareholders.
- It stabilizes the market value of shares.
- It helps in marinating the goodwill of the company.
- It helps in giving regular income to the shareholders.

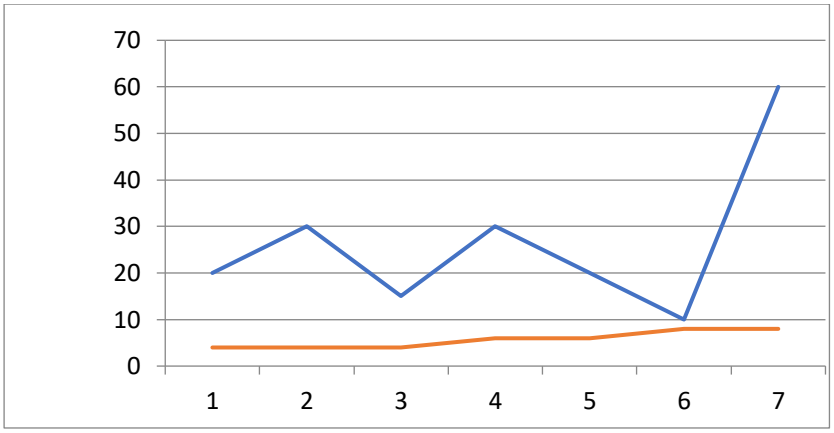
4.1.5.2 Forms of stability of dividend:-(or) Policies for declaring dividend

1) Constant dividend per share.
2) Constant payout.
3) Constant dividend per share plus extra dividend.

i) Constant dividend per share:-

The policy of paying a fixed amount per share as dividend irrespective of fluctuations in the earnings. The policy does not imply that DPS will never increase. When the earnings increases and expects to maintain that level, the annual dividend may also increased.

Year	EPS	DPS
1	20	4
2	30	4
3	15	4
4	30	6
5	20	6
6	10	8
7	60	8
8	40	8



Advantages:

- Dividends are stable.
- Preferred by FIs.
- Mkt price would be stable to certain extent.

Disadvantages:

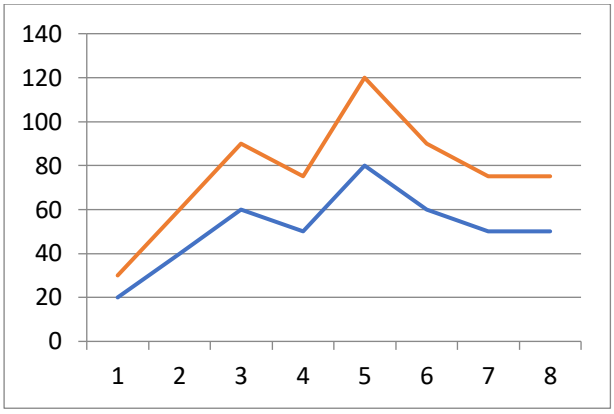
- Difficult to maintain such policy from earnings fluctuating year to year.
- Investors feel they don't get dividend proportionate to earnings.
- When earnings are high, but proportionate dividends were not given it declines market price. In practice when a company has good earnings in a year it earmarks the surplus into dividend equalization reserve so that they can easily payout the constant dividend even in bad time.

ii)Constant payout ratio:-

A certain percentage of net earnings is paid by way of dividends to share holders every year. In such a policy amount of dividend fluctuates in direct proportion with earnings of the company.

Illustration:-Assume 50% payout ratio

year	EPS	DPS
1	20	10
2	40	20
3	60	30
4	50	25
5	80	40
6	60	30
7	50	25
8	50	25



Advantages:

- No boredom dividends are existing.
- Dividend equalization need not be maintained.
- Dividends are proportionate to earnings.

Disadvantages:

- No stability in dividends.
- Financial institutions do not prefer.
- Market price will also fluctuate.

iii)Constant DPS + extra dividend :-

In this policy, the firm usually pays fixed dividend per share holders. However in period of market prosperity additional dividend is paid over the regular dividend. The extra dividend is cut by the firm as soon as the normal conditions return

Advantages:-

No boredom excitement in dividends

Disadvantages:-

Uncertainty about the extra dividends for which investors are generally not prepared.

c) Irregular dividend policy: as the name suggests here the company does not pay regular dividend to the shareholders. The company uses this practice due to following reasons:

- Due to uncertain earning of the company.
- Due to lack of liquid resources.
- The company sometime afraid of giving regular dividend.
- Due to not so much successful business.

d) Zero dividend policy

All surplus earnings are invested back into the business. Such a policy:

- is common during the growth phase
- should be reflected in increased share price.

When growth opportunities are exhausted (no further positive NPV projects are available):

- cash will start to accumulate
- a new distribution policy will be required.

Dividend is paid only if no further positive NPV projects available. This may be popular for firms in the growth phase or without easy access to alternative sources of funds.

However: cash flow is unpredictable for the investor. It gives constantly changing signals regarding management expectations.

4.1.6 FACTORS AFFECTING DIVIDENDS:

1) External factors
2) Internal factors

EXTERNAL FACTORS:-

1) **General state of economy:-** In case of uncertain economic conditions management may like to retain the whole are part of firm earnings to preserve firms liquidity similarly even during periods of periods firm would like to retain if the firm has larger investment opportunity
2) **State of capital market:-** f the firm has easy access to the capital market it would follow a liberal dividend policy. If it doesn't have a easy access to capital market then it is likely to adopt a more conservative policy.
3) **Legal Restrictions:-** A firm has certain legal restriction as per company acts regarding payment of dividend. Some of the restrictions are
   - Dividend can be paid out of the current profits only after paying to debenture holders & preference share holders.
   - A company is not entitled to pay dividends unless providing for deprecation.
   - Deprecation reserve or general reserve can't be used to pay dividends.
4) **Contractual Restrictions:-** Lenders of the firm generally restrict the dividend payments in order to protect their interest, esp. when the firm is experiencing profitability or liquidity problems.
5) **Tax policy:-**Tax policy followed the govt. also affects the dividend policy for eg. If the govt. provides tax incentives for retaining longer share of dividends then the management may be inclined to retain a larger amount of firm earnings.

INTERNAL FACTORS:

1) **Desire of share holders:** The desire of share holders plays a major role in determining dividend policies. Wealthy investors (capital gains)(low pay out ratio retain). Investors like institutional, retired persons, small investors except a regular dividend
2) **Financial needs of the company:-** If profitable investment opportunities exist it is better to retain earnings. In case of no good opportunities for investment the firm can distribute higher dividends.

3) **Nature of earnings:-F**irms have less competition (monopoly) earning a stable income can have a higher payout ratio as compared to firms having higher competition and fluctuating earnings
4) **Desire of control:-** In the firms desire for control then it should have a low dividend payout ratio. If the firm has higher dividend payout ratio it would affect firms ability to invest in profitable opportunity, in such a situation the firm has to go for fresh issue or loans from FIs in both the cases firm control is diluted. Hence if a firm desires for a higher control, it has to retain and distribute low dividends
5) **Liquidity position:-** If the firm's liquidity position is good it can afford to pay higher dividends. If the firm's liquidity is low then it has to pay either low dividends or distribute bonus shares.

4.1.7 FORMS OF DIVIDENDS

1**) Cash Dividend:-**

The dividend is paid in the cash. Adequate cash resources are required to pay in form of cash dividend most popular.

2) Property Dividend:-

In such a case it is paid in the form of assets other than cash generally companies products are distributed as dividends. This is not popular in India.

3) Stock Dividend:-

This is next to cash dividend in popularity. The company issues its own shares to share holders in addition to cash dividends. This is popularly known as "Issue of bonus shares".

4) Bond Dividend:-

In case the company does not have sufficient funds to pay it pays dividend in the form of bonds. The bond holders get regular interest on their bonds as well as bond money on due date. Not popular in India.

4.1.8 BONUS SHARES:

Bonus means extra dividend paid when this dividend is paid in form of shares it is termed as bonus shares. Issue of bonus shares does not affect the capital structure of the company.

Benefits of bonus shares:-

(A) For Investors

1) Immediately Realizable: Bonus shares can be sold in the market immediately after a shareholder gets it.
2) Not taxable: Bonus shares are not taxable.
3) Increase in future Income: Shareholders will get dividend on more shares than earlier in future.
4) Good Image increases the value in market: Bonus shares create very good image of the company and the shares. Thereby it results into increase in the value of the share in the market.

(B) For Company:

1) Economical: It is an inexpensive mode of raising capital by which cash resources of company can be used for some other expansion project.
2) Wider Marketability: When bonus shares are issued, market price of share is automatically reduced which increases its wider marketability.
3) Increase in Credit Worthiness: Issuing bonus shares mean capitalisation of profits and capitalisation of profits always increases the credit worthiness of the company to borrow funds.
4) More realistic Balance Sheet: Balance Sheet of the company will reveal more realistic picture after the issue of bonus shares.
5) More Capital Availability: After issuing bonus shares, more capital will be available and hence more capital can be utilised for more expansion works.
6) Unaltered Liquidity Position: Liquidity cash position of the company will remain unaltered with the issue of bonus shares because issue of bonus shares does not result into inflow or outflow of cash.

Disadvantages of Issue of Bonus Shares:

1) Rate of dividend decline: The rate of dividend in future will decline sharply, which may create confusion in the minds of the investors.
2) Speculative dealing: It will encourage speculative dealings in the company's shares.
3) Forgoes Cash equivalent: When partly paid up shares are converted into fully paid-up shares, the company forgoes cash equivalent to the amount of bonus so applied for this purpose.

4) Lengthy Procedure: Prior approval of central government through SEBI must be obtained before the bonus share issue. The lengthy procedure, sometime may delay the issue of bonus shares.

4.1.9 RIGHTS SHARE:-

In case of corporations the share holders are given per emptive, right to get some shares. Right shares are the shares issued to the share holders under pre emptive right.

A rights issue is one of the ways by which a company can raise equity share capital among the various types of equity share capital sources available. These are slightly different from the standard issue of shares. Right shares mean the shares where the existing shareholders have the first right to subscribe the shares.

In layman terms, rights issue gives a right to the existing shareholders to purchase additional new shares in the company. Rights shares are usually issued at a discount as compared to the prevailing traded price in the market. The existing shareholders are allowed a prescribed time limit/date within which need to exercise the right or the right will thereafter be forgone.

Features of Rights Issue of Shares

1) The rights shares allow preferential treatment to existing shareholders, where existing shareholders have the right to purchase shares at a lower price on or before a specified date. The shares are issued at a discount as a compensation for the stake dilution that will take place post issue of additional shares.
2) The existing shareholders can trade the rights to other interested market participants until the date at which the new shares can be purchased. The rights are traded in a similar way as the normal equity shares.
3) The amount of rights issue to the shareholders is usually at a proportion of existing holding.
4) The existing shareholders can also choose to ignore the rights; however, one may not do so as existing shareholding will be diluted post issue of additional shares and will result in a loss (in valuation) for existing shareholder.

4.1.10 STOCK SPLIT

A stock split is a change in the number of outstanding shares or stocks achieved through a proportional reduction or increase in the par value of the stock. The management employs this device to make a major adjustment in the market price of the firm's stock and

consequently in its earnings and dividends per share. In stock split only the par value and number of outstanding shares are affected.

4.1.11 LEGAL AND PROCEDURAL ASPECTS OF PAYMENT OF DIVIDEND:

- Source of Declaring Dividend
- Transfer to Reserves
- Declaration of Dividend out of Past Profits or Reserves
- Other Provisions and Aspects of Payment of Dividend

Source of Declaring Dividend:

(a) Out of current profits. Dividend can be declared by a company out of profits for the current year arrived at after providing depreciation.

(b) Out of past profits. Dividend can also be declared out of the undistributed profits of the company for any previous financial year or years arrived at after providing depreciation in accordance with the provisions of the Act.

(c) Out of moneys provided by the Government. A company may also declare dividend out of the moneys provided by the Central Government for the payment of dividend in pursuance of a guarantee by the government.

It may, however, be noted that no dividend can be declared or paid by a company unless:

(i) Depreciation has been provided for in respect of the current financial year.

(ii) Arrears of depreciation in respect of the previous year's falling after the commencement of the companies (Amendment) Act, 1960 have been set off against profits of the company.

(iii) Losses, if any incurred by the company in previous years falling after 28th December, 1960 have been written off against profits of the company for which dividend is proposed to be declared.

Transfer to Reserves:

The companies (Transfer of Profits to Reserves) Rules, 1975 require a company providing more than 10 per cent dividend to transfer a certain percentage of the current year's profits to reserves as specified below:

(a) Where the dividend proposed exceeds 10 per cent but dos not exceed 12.5 per cent of the paid up capital, the amount to be transferred to the reserves shall not be less than 2.5 per cent;

(b) Where the dividend proposed exceeds 12.5 per cent but does not exceed 15 per cent of the paid up capital, the amount to be transferred to reserves shall not be less than 5 per cent;

(c) Where the dividend proposed exceeds 15 per cent but does not exceed 20 per cent of the paid up capital, the amount to be transferred to reserves shall not be less than 7.5 per cent; and

(d) Where the proposed dividend exceeds 20 per cent of the paid up capital, the amount to be transferred to reserves shall not be less than 10 per cent of the current year's profits.

It may, however, be noted that that a company may voluntarily transfer a higher percentage of profits to reserves.

Declaration of Dividend out of Past Profits or Reserves:

If a company wants to declare dividend out of accumulated profits or reserves, it has to comply with the following conditions:

(a) The rate of dividend should not exceed the average of the rates at which dividend was declared by it in five years immediately preceding that year or ten per cent of its paid up capital, whichever is less.

(b) The total amount to be drawn for the declaration of dividend from the accumulated profits should not exceed an amount equal to one-tenth of the sum of its paid up capital and free reserves and the amount so drawn should first be utilised to set-off the losses incurred in the financial year.

(c) The balance of reserves after such drawl should not fall below fifteen per cent of its paid up capital.

Other Provisions and Aspects of Payment of Dividend:

(a) The decision in regard to the payment of final dividend is taken at the annual general meeting of the shareholders only on the recommendation of the directors. The shareholders themselves cannot declare dividend. However, interim dividend is declared by the directors and there is no need for a meeting of the shareholders to sanction the payment of such a dividend.

(b) Dividend on equity shares can be paid only after declaration of dividend on preference shares.

(c) When dividend is declared by a company, it must be paid by the company within 30 days of declaration of dividend.

(d) According to section 205 of the Companies Act, no dividend shall be payable except in cash: Provided that nothing in this section prohibits the capitalisation of profits or reserves of a company for the purpose of issuing fully paid up bonus shares.

(e) Any dividend payable in cash may be paid by cheque or warrant sent through the post directed to the registered address of the shareholder entitled to the payment of the dividend.

(f) In the absence of any specific provision in the Articles of Association of the company, dividend is paid on the paid up capital of the company. If there are calls in arrears, dividend is paid on the amount actually paid by the shareholders.

(g) No dividend can be paid on calls in advance.

(h) As per Finance Act, 1997 dividends paid or declared are subject to corporate dividend tax. At present (Assessment Year 2012-13) the rate of corporate dividend tax is 15% plus 7.5% surcharge and 3% education cess.

EVENTS AND DATES IN THE DIVIDEND PAYMENT PROCEDURE

a) Board resolution: The divided decision is the prerogative of the board of directors. Hence the board of directors should in the formal meeting resolve to pay the divided.

b) Shareholder's approval: The resolution of the board of directors to pay the dividend has to be approved by the shareholders in the annual general meeting.

c) Record date: The dividend is payable to shareholders whose names appear in the Register of Members as on the record date.

d) Dividend payment: Once a dividend declaration has been made, dividend warrants must be posted within 30 days. Within a period of 7 days, after the expiry of 30 days, unpaid dividends must be transferred to a special account opened with a scheduled bank.

4.2 INFLATION IN INVESTMENT DECISIONS

Limitations of conventional financial statements:-

a. Fail to disclose the current worth of enterprise.
b. Contains non comparable items.

Yr	sales	avg price index
1	1,00,000	100
2	1,50,000	200
3	2,00,000	300

Revised sales

Yr	sales	conversion	revised sales
1	1,00,000	300/100	3,00,000
2	1,50,000	300/200	2,25,000
3	2,00,000	300/300	2,00,000

Create problems at the time of replacement:-

Illustration:-

Machinery was purchased for Rs.1,00,000 and life expected to be 10yrs. The depth reserve would be for 1,00,000. But the price of machine would have become 2,00,000 then the firm has to face serious problems.

Mixes holding & operating gains:-

Illustration:-

100 units are purchased at Rs.6 out of which 50 units are sold in 1990. In 1991, 100 units are purchased at Rs 8, 150 units are sold

Conventional method

Sales (150 * 10) = 1500

Cost (50 *6 + 100 * 8) = 1100

Profit = 400

Actual operating cost is 300 that 100 is arised due to holding of inventory during rise in price 50 (8-6) = 100.

It's over reporting of profits hazardous – High taxes and on.

Hence Inflation is very essential to be studied while making a financial decision.

4.2.1 INFLATION AND FINANCIAL DECISION:-

1 **Funds requirement decision:-**

This decision involves estimation of total capital required for an enterprise.

Total capital required constitutes of cost if fixed asserts & working capital.

If cost of fixed assets = 10 lakhs

Working capital = 5 lakhs

Capital required 15 lakhs

Under inflationary conditions, the cost of asserts is bound to go up similarly is the working capital needs.

If the inflation rate is 10%

Then the funds required by the enterprise would 15L +(10% of 15L) = 16.5 lakhs. Inflation has to be considered to avoid problems because of shortage of funds.

2 **Financing decisions:-**It involves the sources from which the finance manager should raise the quantum of funds required by firm.The sources could be from fixed yield earning securities (pref sh, drs) or variable yield earning securities (eg- shares). Equity share holders are real risk bearers hence they should get a higher rate of returns. This can be made only when company earns higher profits. The finance manager while estimating cost and revenues should consider inflation or else his estimates may go wrong & he may not be able to make profits and satisfy equity share holders.

3 **Investment decision:-** This comprises relating to investment in fixed assets & current assets. Under inflationary conditions unnecessary delays has to be avoided to prevent cost overruns.

4 **Dividend decision:-** The dividend decision determines the percentage of profits to be distributed to share holders, amount of earnings to be retained in the business. The investor should take this decision by comprising the inflation particulars. If earnings are calculated, for eg:- after depreciated machinery on historical cost & dividends are distributed. But the actual cost of machinery would have gone up and the depn reserve is not sufficient to buy new machine. It would result in shortage of funds. Hence it is always better in corporate inflation while taking dividend decision & retains a suitable amount (optimum) of earnings in the business.

4.2.2 INFLATION & VALVE OF THE FIRM:-

a. Price – cost responsiveness

Sales – 5L

Cost - 3L

2L

Situation 1 Inflation↑ 15%

Cost ↑ 12%

Sales – 5,75,000

Cost -- 3,36,000

2,39,000 Value of firm increased by 39,000

Situation 2 sp ↑ by 6%

Cost ↑ by 12%

Sales 5,30,000

Cost 3,36,000

1,94,000 ↓ by 6000

If the responsiveness of selling price is less than inflation rate value of firm will decrease. If the responsiveness of selling price is more than inflation rate value of firm will increases.

Net borrower/ net lender position:-If a firms borrows more than it lends it is called net borrower firm. It gains value when interest rate goes up in inflation. For example a firm borrows say at 10%. Interest rate goes up to 12%. After inflation hence it gains value.

He has lent at 10% now the rate has increased to 12% in inflation then it loss its value.

Depreciation:- With inflation cost of assets increases. The funds in the depreciation reserve are not sufficient to buy new machinery. The firm loses its value as it has to arrange for extra funds.

INFLATION & CAPITAL BUDGETING:-

Inflation has ramifications for the realized value of a capital project. When evaluating capital projects, companies can evaluate capital projects in nominal or real (i.e. inflation adjusted) terms. Real cash flows are based on purchasing power at the time the decision to invest would is made. Under a real cash flow approach, the discount rate would remove the expected inflation rate, as the cash flows will already reflect the effects of inflation.

Commonly, capital projects are analyzed in nominal terms, so the discount rate applied is inclusive of expected inflation**;**

a. Real cash flow:-Inflation is not included.

b. Nominal cash inflow:- Inflation is included.

c. Real Discount Rate.

d. Nominal Discount Rate.

Use nominal cash inflow – nominal DR

4.2.3 INFLATION & FINANCIAL MARKET:-

- **Convertible Securities:-** Non convertible debentures and pref shares get the same interest through the interest rates in the economics has increased. Convertible option helps the investors to convert debentures into equity shares and get high dividend.
- **Participative Preference Share:-** Similarly a participative security helps the holders to get a fixed regular dividend plus a small portion of profit of the company. The extra component dividend helps him to cope up with inflation.
- **Flexible Rate Debenture:-** Fixed rate debentures earn a fixed return to the investors and investor is not able to cope with inflation. Eg:- 10% debentures for 10yrs.Flexible rate debentures earn a higher rate as year passes by and higher interest helps him to cope with inflation.
    - 1 3yrs 10% Interest
    - 4 7yrs 12% Interest
    - 10yrs 14% Interest
- **Derivatives:-** Future & options were introduced in the security market to cope up with inflation.
- **Real Estate Financing:-** New concept shared appreciation mortgage: In real estate financing the bankers lose some interest rate is charged from borrowers in an inflationary economy. So a new concept has been developed. Under SAM, the borrower has to pay fixed interest rate + a portion of appreciation value of land & building.

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5. MERGERS AND ACQUISITIONS

5.1 CORPORATE RESTRUCTURING

Restructuring of business is an integral part of modern business enterprises. The globalization and liberalization of Control and Restrictions has generated new waves of competition and free trade. This requires Restructuring and Re-organisation of business organization to create new synergies to face the competitive environment and changed market conditions. Restructuring usually involves major organizational changes such as shift in corporate strategies. Restructuring can be internally in the form of new investments in plant and machinery, Research and Development of products and processes, hiving off of non-core businesses, divestment, sell- offs, de-merger etc. Restructuring can also take place externally through mergers and acquisition (M&A) and by forming joint-ventures and having strategic alliances with other firms.

Corporate Restructuring is defined as a process of rearranging the organizational or business structure of the company for increased efficiency and profitable growth. Corporate Restructuring is the means that can be employed to meet challenges which confronts businesses. It is a process undertaken by a business for the purpose of bringing about changes for better and to make the business competitive.

Corporate Restructuring is the corporate management term for the act of partially dismantling and reorganizing a company for the purpose of making it more efficient and therefore more profitable. It generally involves selling off portions of the company and making severe staff reductions. Restructuring is often done as part of a bankruptcy or of a takeover by another firm, particularly a leveraged buyout by a private equity firm. It may also be done by a new CEO hired specifically to make the difficult and controversial decisions required to save or reposition the company. It indicates to a broad array of activities that expand or contract a firm's operations or substantially modify its financial structure or bring about a significant change in its organisational structure and internal functioning. It includes activities such as mergers, buyouts, and takeovers, business alliances, slump sales, demergers, equity carve outs, going private, leverage buyouts (LBOs), organisational restructuring, and performance improvement initiatives.

Reasons for Corporate Restructuring

Corporate restructure their firms with a view to:

- Induce higher earnings
- Leverage core competencies
- Divestiture and make business alliances
- Ensure clarity in vision, strategy and structure
- Provide proactive leadership
- Empowerment of employees, and
- Reengineering Process

1. **Induce Higher Earnings:** The prime goal of financial management is to maximize profit there by firm's value. Firm may not be able to generate constant profits throughout its life. When there is change in business environment, and there is no change in firm's strategies. The two basic goals of corporate restructuring may include higher earnings and the creation of corporate value. Creation of corporate value largely depends on the firm's ability to generate enough cash. Thus corporate restructuring helps to firms to increase their profits.

2. **Leverage Core Competence:** Core competence was seen as a capability or skill running through a firm's business that once identified, nurtured, and developed throughout the firm became the basis for lasting competitive advantage. For example Dell Computer built its first 10-year of unprecedented growth by creating an organisation capable of the speedy and in expensive manufacture and delivery of custom-built PCs. With the concept of organisational learning gaining momentum, companies are laying more emphasis on exploiting the rise on the learning curve. This can happen only when companies focus on their core competencies. This is seen as the best way to provide shareholders with increased profits.

3. **Divestiture and Business Alliances:** Some times companies may not be able to run all the companies, which are there in-group, and companies which are not contributing may need to be divested and concentrate on core competitive business. Companies, while keeping in view their core competencies, should exit from peripherals. This can be realised through entering into joint ventures, strategic alliances and agreements.

4. **Ensure Clarity in Vision, Strategy and Structure:** Corporate restructuring should focus on vision, strategy and structure. Companies should be very clear about their goals and the heights that they plan to scale. A major emphasis should also be made on issues concerning the time frame and the means that influence their success.
5. **Provide Proactive Leadership:** Management style greatly influences the restructuring process. All successful companies have clearly displayed leadership styles in which managers relate on a one-to-one basis with their employees.
6. **Empowerment of Employees:** Empowerment is a major constituent of any restructuring process. Delegation and decentralized decision making provides companies with effective management information system.
7. **Reengineering Process:** Success in a restructuring process is only possible through improving various processes and aligning resources of the company. Redesigning a business process should be the highest priority in a corporate restructuring exercise.

Joint ventures, Mergers, Amalgamations take over are the easiest & quickest way to expand capacities acquires dominance over market. It helps to conduct business in an efficient effective & competitive manner and to increase market share brand power

5.2 MERGERS AND ACQUISITIONS

A merger is a deal to unite two existing companies into one new company. There are several types of mergers and also several reasons why companies complete mergers. Mergers and acquisitions are commonly done to expand a company's reach, expand into new segments, or gain market share. All of these are done to please shareholders and create value.

It is acquisition of existing firm for the purpose of growth.The company acquires whole of the assets & liabilities or a part of it constituting an undertaking of another company where the latter company is dissolved.

5.2.1 TYPES OF MERGER:-

A merger is generally understood to be a fusion of two companies. The term "merger" means and signifies the dissolution of one or more companies or firms or proprietorships to form or get absorbed into another company. By concept, merger increases the size of the undertakings. Following are major types of mergers:

Horizontal Merger: Horizontal merger takes place when two or more corporate firms dealing in similar lines of activities combine together. For example, merger of two publishers or two luggage manufacturing companies. Reduces competition in industry.

- Economies of scale.
- Elimination or duplication of facilities.
- Puts an end to cost cutting.

Vertical Merger: This merger happens when two companies that have 'buyer-seller' relationship (or potential buyer-seller relationship) come together. Vertical merger is a combination of two or more firms involved in different stages of production or distribution. For example, joining of a spinning company and weaving company. Vertical merger may be forward or backward merger. When a company combines with the supplier of material, it is called backward merger and when it combines with the customer, it is known as forward merger.

- Low buying cost.
- Low distribution cost.
- Assured supplies and market.
- Creates an barrier to entry for competitors (Tackle competition).
- Better control over raw materials & Distribution

Conglomerate Mergers: Such mergers involve firms engaged in unrelated type of business operations. In other words, the business activities of acquirer and the target are neither related to each other horizontally (i.e., producing the same or competiting products) nor vertically (having relationship of buyer and supplier).In a pure conglomerate merger, there are no important common factors between the companies in production, marketing, research and development and technology. There may however be some degree of overlapping in one or more of these common factors. Such mergers are in fact, unification of different kinds of businesses under one flagship company. The purpose of merger remains utilization of financial resources, enlarged debt capacity and also synergy of managerial functions.

Congeneric Merger: In these mergers, the acquirer and the target companies are related through basic technologies, production processes or markets. The acquired company represents an extension of product-line, market participants or technologies of the acquirer. These mergers represent an outward movement by the acquirer from its current business scenario to other related business activities within the overarching industry structure.

Reverse Merger: In ordinary case, the company taken over is the smaller company; in a 'reverse takeover', a smaller company gains control of a larger one. The concept of takeover by reverse bid, or of reverse merger, is thus not the usual case of amalgamation of a sick unit which is non-viable with a healthy or prosperous unit but is a case whereby the entire undertaking of the healthy and prosperous company is to be merged and vested in the sick company which is non-viable. A company becomes a sick industrial company when there is erosion in its net worth. This alternative is also known as taking over by reverse bid.

The three tests should be fulfilled before an arrangement can be termed as a reverse takeover is specified as follows:

- The assets of the transferor company are greater than the transferee company,
- Equity capital to be issued by the transferee company pursuant to the acquisition exceeds its original issued capital, and
- The change of control in the transferee company through the introduction of a minority holder or group of holders.

This type of merger is also known as 'back door listing'. This kind of merger has been started as an alternative to go for public issue without incurring huge expenses and passing through cumbersome process. The benefits for acquiring company:

- Easy access to capital market.
- Increase in visibility of the company in corporate world.
- Tax benefits on carry forward losses acquired (public) company.
- Cheaper and easier route to become a public company

Acquisition: This refers to the purchase of controlling interest by one company in the share capital of an existing company. This may be by:

- Agreement with majority holder of Interest.
- Purchase of new shares by private agreement.
- Purchase of shares in open market (open offer)
- Acquisition of share capital of a company by means of cash, issuance of shares.
- Making a buyout offer to general body of shareholders.

When a company is acquired by another company, the acquiring company has two choices , one, to merge both the companies into one and function as a single entity and, two, to operate the taken-over company as an independent entity with changed management and

policies. ‘Merger’ is the fusion of two independent firms on co-equal terms. ‘Acquisition’ is buying out a company by another company and the acquired company usually loses its identity. Usually, this process is friendly.

5.2.2ADVANTAGES OF MERGER

1. **Economies of scale:-** This results in lower cost of production and sales due to higher level of operations.
    - ✓ Cheaper finance is available.
    - ✓ Cheap raw materials.
    - ✓ Better R & D/Technology.
    - ✓ Marketing & Distribution activities.
2. **Synergy:-**

    One may have funds, one may have investment proposal. Likewise one firm may have good R & D. One firm may have production efficiency. One firm may have established firms but lacks marketing orgn other firm may have strong marketing orgn. Hence Mergers could bring there firms together and be more efficient.
3. **Fast Growth:-**

    By acquiring a company enters a new market quickly avoids delay associated with building a new plant & establishing the new line of product.

    Mergers obviates all obstacles and then steps up pace of corporate growth.
4. **Tax Benefit:-** Especially in the case of reverse merger (profitable firm with non profitable one) are done for tax benefits. Tax laws allow set off and carry forward losses. This reduces tax-burden of profitable firm.
5. **Diversification:-** Especially in the case of conglomerate merger. The Merger between two unrelated firms reduces the risk factor. Profits of one firm could be adjusted with loss of one firm.
6. **Utilisation of surplus funds**: A firm in a mature industry may generate a lot of cash but may not have opportunities for profitable investment. In such a situation, a merger with another firm involving cash compensation often represent a more effective utilisation of surplus funds.

5.2.3 DISADVANTAGES OF MERGER:-

1. Elimination of healthy competition.
2. Concentration of economic power.
3. Adverse effect on national economy.
4. Cultural differences between companies.
5. Psychological factors.
6. Conflict between top management.
7. Problems due to minority share holders.

5.2.4 MOTIVES OF MERGER & ACQUISITION

1. Expansions & Growth
2. Dealing with entry of MNCs.
3. Economies of scale.
4. Synergy.
5. Acquiring the competition. “If you cant fight, Join them”.
6. Market penetration. Traditionally a company may be catering to middleclass or upper middleclass. Introducing a product for other market segment will be easier by acquiring a company which has good market share in the specific segment.
7. Surplus Resources.

   To obtain additional mileage from exsisting resources M & A is a good option.
8. Organization Motives.
   - Ego satisfaction due to size of combined enterprise.
   - Acquire outstanding management or technical personnel.
9. Financial Motives
   a. Tax Planning:-

      Subsidies are given for mix A activities – ESP when it acquires a sick unit.

   b. Sick units becomes viable with the mergers with it can reap the hidden benefits of the merging sick units.

   c. Assets stripping:-

      If the market value of shares is quoted below the net worth, it will be target for acquisition.

5.2.5 IMPACT OF MERGERS ON GENERAL PUBLIC

The word restructure particularly merger has been symbolic with conflict, dislocation and economic and financial pain or gain. It is largely perceived in terms of its external consequences for investors, employees, competitors, suppliers, and host communities. The impact of mergers on general public could be viewed as aspects of benefits and costs to,

(1) Consumers

(2) Workers or Employees

(3) General Public.

1. Consumers

Mergers are *beneficial* to the consumers of products or services, only when the merger realized economic (i.e., enhanced economies, and diversification which lead to manufacture better quality products at lower prices) gains. These economic benefits are transferred to the consumers in the form of lowers prices, and better quality products or services, which directly raise their standard of living and quality of life. While mergers are going to be *costly* when they create monopoly or minimize competition among companies. Creating monopoly or limiting competition leads to produce low quality products or provides low quality services like after sales services at reasonably high prices.

2. Workers

Workers or employees community would be *benefited* from merger or acquisition only when the restructuring helps in satisfying their demands, in the form of employment, increased wages, improved working environment, better living conditions and amenities. But the merger or acquisition of a company by a conglomerate or other acquiring company may have the effect on both sides of increasing welfare in the form of enhanced quality of life or it also decrease the welfare in the form of retrenchment of some employees, which would result purchasing power and makes their life miserable one.

3. General Public

As we have read in the above that mergers or acquisitions create monopoly or limit the competition. This will ultimately lead to centralized concentration of power in small number of corporate leaders, which results in the concentration of an economic aggregation of economic power in their hands. Here economic power means, the ability to control products' prices and industries output as monopolists. Generally such monopoly affects social

and political environment to lean everything in their favor with objective of maintaining power and expand their business empire. This advances lead to economic exploitation.

But in a free economy a monopolist does not stay for a long period as other corporate enter into this field to reap the benefits of high prices set in by the monopolist. Entry of new companies in this business enforces competition in the market, which will help to consumers to substitute the alternative products. Therefore, mergers or acquisitions is costly to the public only when creation of monopoly and possibility of entry of new companies in that business area.

Put in simple mergers are dangerous, when they elimination of healthy competition; concentration of economic power; and adverse effects on national economy. However, mergers are essential for the fast growth of the organisations. At the same time the dangers of mergers are more than off-set by advantages of mergers. This is possible only when every merger or acquisition proposal must be examined keeping in view the advantages and dangers, there by allowing mergers or acquisitions that help to a group of stakeholders.

5.2.6 LEGAL PROCEDURE FOR MERGERS:

Check the memorandum and articles of associations whether there are suitable provisions

- Provisions to amalgamate with any other company
- Provisions to carry on business of merging company
- Provision of adequacy of authorized capital of the merging company
- In case of no provisions are present memorandum should be altered.

Preparation of scheme of amalgamation:

- Define merging company and merged company
- Authorized share capital of both the companies
- Exchange ratio
- Change of name
- Protection of employment
- Main terms of scheme
- Board of directors from merging company to represent board in merged company
- Application to get court's approval

- Date of amalgamation
- Expenses of amalgamation

Approval of the board: The scheme of amalgamation must be approved by board of both merging and merged companies.

Intimation to stock exchange: The proposal of merger to be intimated to the stock exchange

Press release: The proposed merger scheme should be released in public. It is advertized in newspaper one in English and one in vernacular.

Approval of financial institutions /bank: Approval has to be got from bank, financial institutions that have financed to the company.

Approval of high court: The court should give approval to conduct meetings. Both the companies should apply separately to the court and court should pass the order and copy of the order has to be filled with registrar.

Notice of meetings: To be sent to the concerned parties 21 days ahead.

Separate meetings: To be conducted for creditors/members.

- ¾ th in value of creditors or share holders.
- 51% in numbers have to attend and approve.

In case of reverse merger: Reverse merger is profitable company merging with sick company and sick company exists. The acquirer company has to submit necessary statements of facts and working and obtain a declaration according to IT act.

Petition to high court: Confirmation of scheme has to be done by high court.

1) Official liquidator appointed by court will scrutinize the books of merging companies.
2) Court will fix a date for hearing
3) On the date of hearing any person including creditors or employees can make representation.
4) Scheme may be modified if required
5) Court passes the order.
6) Order should be filled with registration of companies within 30 days.
7) Copy of order has to be attached with memorandum of association
8) Copy of order has to be sent to associated banks and FIS

Finally share holders would surrender their shares in merging company and get new shares in exchange. All assets and liabilities are transferred from merging company to merged company.

5.2.7 FINANCIAL EVALUATION OF A MERGER/ACQUISITION

A merger proposal be evaluated and investigated from the point of view of number of perspectives. The engineering analysis will help in estimating the extent of operating economies of scale, while the marketing analysis may be undertaken to estimate the desirability of the resulting distribution network. However, the most important of all is the financial analysis or financial evaluation of a target candidate. An acquiring firm should pursue a merger only if it creates some real economic values which may arise from any source such as better and ensured supply of raw materials, better access to capital market, better and intensive distribution network, greater market share, tax benefits, etc.

The shareholders of the target firm will ordinarily demand a price for their shares that reflects the firm's value. For prospective buyer, this price may be high enough to negate the advantage of merger. This is particularly true if several acquiring firms are seeking merger partner, and thus, bidding up the prices of available target candidates. The point here is that the acquiring firm must pay for what it gets. The financial evaluation of a target candidate, therefore, includes the determination of the total consideration as well as the form of payment, i.e., in cash or securities of the acquiring firm.

Determining the purchase price

The process of financial evaluation begins with determining the value of the target firm, which the acquiring firm should pay. The total purchase price or the price per share of the target firm may be calculated by taking into account a host of factors. Such as assets, earnings, etc.

The market price of a share of the target can be a good approximation to find out the value of the firm. However, the market price of the share in many cases or may not be available at all or sometimes, the market price does not fully reflect the firm's financial and profitability position, as complete and correct information about the firm is nto available to the investors. Therefore, the value of the firm should be assessed on the basis of the facts and figures collected from various sources including the published financial statements of the target firm. The following approaches may be undertaken to assess the value of the target firm

1.Valuation based on assets: In a merger situation, the acquiring firm 'purchases' the target firm and, therefore, it should be ready to pay the worth of the latter. The value of a firm may be defined as:

Value = Value of all assets – External liabilities

2.Valuation based on earnings: The target firm may be valued on the basis of its earnings capacity.. In the earnings based valuation, the PAT (Profit After Taxes) is multiplied by the Price-Earnings Ratio to find out the value.

Market price per share = EPS × PE ratio

The earnings based valuation can also be made in terms of earnings yield as follows:

Earnings yield =EPS/MPS*100

The earnings yield gives an idea of earnings as a percentage of market value of a share.

3.Valuation based on dividends : Dividend yield is taken to calculate the market value of shares. Market price of the share is calculated based on the formula

$$P_0 = \frac{DO(1+g)}{ke-g}$$

D0 = Dividend in current year D1 = Dividend in the first year g = Growth rate of dividend P0 = Initial price

5.3 ACQUISITION OR TAKE OVER:

An acquisition or takeover can be defined as obtaining the control over the management of one company over the other without affecting its legal and entity.

E.g. A is the acquiring company and company B is the Target Company or acquired company. A takes over B, Both A and B exists. No company loses its legal entity. Just company A gets the management of company B. In order for one company to take over the other it should acquire minimum 25% of the voting capital. In practice to get effective control companies acquire 20-40% of voting capital.

5.3 .1 TYPES OF TAKEOVER:

Friendly takeover: If acquired company agrees to taken over by the acquiring company it is called friendly takeover. There is mutual agreement between companies.

Hostile takeover: When there is no mutual agreement between two companies the target company will try to resist the takeover and adopt strategies to prevent it. Then it is called "Hostile takeover".

5.3.2 TAKE OVER STRATEGIES

Other than Tender Offer the acquiring company can also use the following techniques:

• Street Sweep: This refers to the technique where the acquiring company accumulates larger number of shares in a target before making an open offer. The advantage is that the target company is left with no choice but to agree to the proposal of acquirer for takeover.

• Bear Hug: When the acquirer threatens the target company to make an open offer, the board of target company agrees to a settlement with the acquirer for change of control.

• Strategic Alliance: This involves disarming the acquirer by offering a partnership rather than a buyout. The acquirer should assert control from within and takeover the target company.

• Brand Power: This refers to entering into an alliance with powerful brands to displace the target's brands and as a result, buyout the weakened company.

5.3.3 TAKEOVER DEFENSIVE TACTICS

Normally acquisitions are made friendly, however when the process of acquisition is unfriendly (i.e., hostile) such acquisition is referred to as 'takeover'). Hostile takeover arises when the Board of Directors of the acquiring company decide to approach the shareholders of the target company directly through a Public Announcement (Tender Offer) to buy their shares consequent to the rejection of the offer made to the Board of Directors of the target company.A target company can adopt a number of tactics to defend itself from hostile takeover through a tender offer.

• Divestiture - In a divestiture the target company divests or spins off some of its businesses in the form of an independent, subsidiary company. Thus, reducing the attractiveness of the existing business to the acquirer.

• Crown jewels - When a target company uses the tactic of divestiture it is said to sell the crown jewels. In some countries such as the UK, such tactic is not allowed once the deal becomes known and is unavoidable.

• Poison pill - Sometimes an acquiring company itself becomes a target when it is bidding for another company. The tactics used by the acquiring company to make itself unattractive to a potential bidder is called poison pills. For instance, the acquiring company may issue substantial amount of convertible debentures to its existing shareholders to be converted at a future date when it faces a takeover threat. The task of the bidder would become difficult since the number of shares to having voting control of the company increases substantially.

• Poison Put - In this case the target company issue bonds that encourage holder to cash in at higher prices. The resultant cash drainage would make the target unattractive.

• Greenmail - Greenmail refers to an incentive offered by management of the target company to the potential bidder for not pursuing the takeover. The management of the target company may offer the acquirer for its shares a price higher than the market price.

• White knight - In this a target company offers to be acquired by a friendly company to escape from a hostile takeover. The possible motive for the management of the target company to do so is not to lose the management of the company. The hostile acquirer may change the management.

• White squire - This strategy is essentially the same as white knight and involves sell out of shares to a company that is not interested in the takeover. As a consequence, the management of the target company retains its control over the company.

• Golden parachutes - When a company offers hefty compensations to its managers if they get ousted due to takeover, the company is said to offer golden parachutes. This reduces their resistance to takeover.

• Pac-man defence - This strategy aims at the target company making a counter bid for the acquirer company. This would force the acquirer to defend itself and consequently may call off its proposal for takeover.

It is needless to mention that hostile takeovers, as far as possible, should be avoided as they are more difficult to consummate. In other words, friendly takeover are better course of action to follow.

5.3.4 TAKEOVER CODE:

1. **Notification of takeover:**

   If a company acquires 5% or more of voting capital, that target company and stock exchange has to be notified

2. **Limit to share acquisition:**

The company or individual can continue up to acquiring 10% of voting capital.

3. **Public announcement:**

If the holding exceeds 10%, public offer has to be made. Public offer has to be made in newspaper. One in vernacular one in English. It should contain the following.

- The paid up share capital of the target company.
- The total % of shares proposed to be acquired
- Minimum offer price: price at which acquirer is willing to buy from public
- Mode of payment
- Identity of acquirer
- % of shares held by acquirer
- Purpose of acquisition, future plans
- Highest and average price paid for the shares in previous 12 months.
- Date of posting of letters of offers to share holders
- Date of opening and closing the offer.

4. **Submission of letter to SEBI:**

Letter of offer to SEBI has to be sent within 14 days of public offer.

5. **Letter of offer to share holders:**

SEBI will vett. The offer and pass the comments to acquirer within 21 days. Letter of offer has to be sent to share holders after 21 days from date of submission of SEBI.

6. **Minimum no. of shares:**

Minimum no. of shares to be acquired is 20% of voting capital

7. **Offer must be open for a minimum of 30 days.**
8. **Minimum offer price:**

Average of weekly high and low in the past 6 months. [26 weeks]. An acquirer has to quote minimum offer price or something higher.

9. **Provision of escrow account:**

In order to show acquirer seriousness in purchase, the purchaser must deposit 90% of the amount required for acquisition in separate account called Escrow account. This fund cannot de utilized for any other purpose. This fund can be utilized only for acquiring company only.

10. Competitive bid:

It arises in the case if some other individual or company is also interested in same company. In that case competitive bid can be filed within 21 days of the public announcement. The original acquirer may revise or withdraw his offer based on competitive bid.

11. **Upward revision of offer** is possible up to 7 days prior to closure date to attract more public.
12. **The payment** has to be made to the share holders who sell the shares.

5.4 DIVESTURES

While mergers and acquisitions lead to expansion of business in some way or the other, divestiture move involves some sort of contraction of business. Divestiture as form of corporate restructuring signifies the transfer of ownership of a unit, division or a plant to someone else. Sale of its cement division by Coromandel Fertilizers Ltd. to India Cements Ltd. is an example of divestiture.

Divestiture strategy is pursued generally by highly diversified firms who have had difficulty in managing broad diversification and have elected to divest certain of their businesses to focus their total attention and resources on a lesser number of core businesses. Divesting such businesses frees resources that can be used to reduce debt, to support expansion of the remaining business, or to make acquisitions that materially strengthen the company's competitive position in one or more of the remaining core business.

For instance, A V Birla group divested a publicly announced paper and chemicals project and a sea water magnesia unit in Visakapatnam and MRPL a petrochemicals Joint Venture with HPCL, so as to strengthen its core business.

5.4.1 Reasons for Divesture

1. To sell off redundant business units

Most companies decide to sell off a part of their core operations, if they are not performing, in order to place more focus on the units that are performing well and are profitable.

2. To generate funds

Selling a business unit for cash is a source of income without a binding financial obligation.

3. To increase resale value

The sum of a company's individual asset liquidation value exceeds that of the market value of its combined assets, meaning there is more gain realized in liquidation than there is in retaining existing assets.

4. To ensure business survival or stability

Sometimes, companies face financial difficulties; therefore, instead of closing down or declaring bankruptcy, selling a business unit will provide a solution.

5. To comply with regulators

A court order requires the sale of a business to improve market competition.

5.4.2 Forms of Divestiture

Companies divest in order to efficiently manage their asset portfolio. There are multiple options to go about the process and effectively execute the disposition.

1.Partial sell-offs

Partial Sell off, is a form of divestiture, wherein the firm sells its business unit or a subsidiary to another because it deemed to be unfit with the company's core business strategy.Normally, sell-offs are done because the subsidiary doesn't fit into the parent company's core strategy. The market may be undervaluing the combined businesses due to a lack of synergy between the parent and the subsidiary. So the management and the board decide that the subsidiary is better off under a different ownership. Besides getting rid of an unwanted subsidiary, sell-offs also raise cash, which can be used to pay off debts

2. Spin-off demerger

A business strategy wherein a company's division or unit is separated and made into an independent company. In this case, a part of the business is separated and created as a separate firm. The existing shareholders of the firm get proportionate ownership. So there is no change in ownership and the same shareholders continue to own the newly created entity in the same proportion as previously in the original firm. The management of spun-off division is however, parted with. Spin-off does not bring fresh cash. The reasons for spin off may be:

(i) Separate identity to a part/division.

(ii) To avoid the takeover attempt by a predator by making the firm unattractive to him since a valuable division is spun-off.

(iii) To create separate Regulated and unregulated lines of business.

Example: Kishore Biyani led Future Group spin off its consumer durables business, Ezone, into a separate entity in order to maximise value from it.

3. Split-up demerger

When a company splits-up into one or more independent companies, and consequently, the parent company is dissolved or ceases to exist. This involves breaking up of the entire firm into a series of spin off (by creating separate legal entities).The parent firm no longer legally exists and only the newly created entities survive. For instance a corporate firm has 4 divisions namely A, B, C, D. All these 4 division shall be split-up to create 4 new corporate firms with full autonomy and legal status. The original corporate firm is to be wound up. Since de-merged units are relatively smaller in size, they are logistically more convenient and manageable. Therefore, it is understood that spin-off and split-up are likely to enhance shareholders value and bring efficiency and effectiveness.

4. Equity carve-out

A corporate approach wherein the company sells a portion of its wholly-owned subsidiary through initial public offerings or IPOs and still retains full management and control. This is like spin off, however, some shares of the new company are sold in the market by making a public offer, so this brings cash. More and more companies are using equity carve-outs to boost shareholder value. A parent firm makes a subsidiary public through an initial public offering (IPO) of shares, amounting to a partial sell-off. A new publicly-listed company is created, but the parent keeps a controlling stake in the newly traded subsidiary.

A carve-out is a strategic avenue a parent firm may take when one of its subsidiaries is growing faster and carrying higher valuations than other businesses owned by the parent. A carve-out generates cash because shares in the subsidiary are sold to the public, but the issue also unlocks the value of the subsidiary unit and enhances the parent's shareholder value.

The new legal entity of a carve-out has a separate board, but in most carve-outs, the parent retains some control over it. In these cases, some portion of the parent firm's board of directors may be shared. Since the parent has a controlling stake, meaning that both firms

have common shareholders, the connection between the two is likely to be strong. That said, sometimes companies carve-out a subsidiary not because it is doing well, but because it is a burden. Such an intention won't lead to a successful result, especially if a carved-out subsidiary is too loaded with debt or trouble, even when it was a part of the parent and lacks an established track record for growing revenues and profits.

5.5 PRIVATIZATION

Privatization may have several meanings. Primarily, it is the process of transferring ownership of a business, enterprise, agency, public service or public property from the public sector (a government) to the private sector, either to a business that operate for a profit or to a non-profit organization. It may also mean government outsourcing of services or functions to private firms, e.g. revenue collection, law enforcement, and prison management.

5.5.1 Potential Benefits of Privatisation

1. Improved Efficiency

The main argument for privatisation is that private companies have a profit incentive to cut costs and be more efficient. If you work for a government run industry, managers do not usually share in any profits. However, a private firm is interested in making profit and so it is more likely to cut costs and be efficient.

2. Lack of Political Interference

It is argued governments make poor economic managers. They are motivated by political pressures rather than sound economic and business sense. For example a state enterprise may employ surplus workers which are inefficient. The government may be reluctant to get rid of the workers because of the negative publicity involved in job losses. Therefore, state owned enterprises often employ too many workers increasing inefficiency.

3. Short Term View.

A government many think only in terms of next election. Therefore, they may be unwilling to invest in infrastructure improvements which will benefit the firm in the long term because they are more concerned about projects that give a benefit before the election.

4. Shareholders

It is argued that a private firm has pressure from shareholders to perform efficiently. If the firm is inefficient then the firm could be subject to a takeover. A state owned firm doesn't have this pressure and so it is easier for them to be inefficient.

5. Increased Competition

Often privatisation of state owned monopolies occurs alongside deregulation – i.e. policies to allow more firms to enter the industry and increase the competitiveness of the market. It is this increase in competition that can be the greatest spur to improvements in efficiency. For example, there is now more competition in telecoms and distribution of gas and electricity. However, privatisation doesn't necessarily increase competition; it depends on the nature of the market. E.g. there is no competition in tap water. There is very little competition within the rail industry.

6. Government will Raise Revenue from the Sale

Selling state owned assets to the private sector raised significant sums for them. It also means we lose out on future dividends from the profits of public companies.

5.5.2 Disadvantages of Privatisation

1. Natural Monopoly

Natural monopoly occurs when the most efficient number of firms in an industry is one. For example tap water has very significant fixed costs; therefore there is no scope for having competition amongst several firms. Therefore, in this case, privatization would just create a private monopoly which might seek to set higher prices which exploit consumers. Therefore it is better to have a public monopoly rather than a private monopoly which can exploit the consumer.

2. Public Interest

There are many industries which perform an important public service, e.g health care, education and public transport. In these industries, the profit motive shouldn't be the primary objective of firms and the industry. For example, in the case of health care, it is feared privatizing health care would mean a greater priority is given to profit rather than patient care. Also, in an industry like health care, arguably we don't need a profit motive to improve standards. When doctors treat patients they are unlikely to try harder if they get a bonus.

3. Government Loses out on Potential Dividends

Many of the privatized companies are quite profitable. This means the government misses out on their dividends, instead going to wealthy shareholders.

4. Problem of Regulating Private Monopolies

Privatisation creates private monopolies, such as the water companies and rail companies. These need regulating to prevent abuse of monopoly power. Therefore, there is still need for government regulation, similar to under state ownership.

6. Short-Termism of Firms

As well as the government being motivated by short term pressures, this is something private firms may do as well. To please shareholders they may seek to increase short term profits and avoid investing in long term projects.

5.6 BUY BACK OF SHARES

Share capital is a very essential part of a company, listed or unlisted. Share capital can be of two types i.e. equity share capital or preferential share capital. The share capital of a company has to be subscribed by one or more persons. After the share of a company has been allotted to the subscribing members, the subscribers have no right over the money gone as proceeds of the shares subscribed. All that the shareholder has is the right to vote at the general meetings of the company or the right to receive dividends or right to such other benefits which may have been prescribed. The only option left with the shareholder in order to realise the price of the share is to transfer the share to some other person.

But there are certain provisions in the companies act which allow the shareholders to sell their shares directly to the company and such provisions are termed as buy back of shares. Buy back of shares can be understood as the process by which a company buys its share back from its shareholder or a resort a shareholder can take in order to sell the share back to the company.

5.6.1 Reasons for Buy Back

To return surplus cash to shareholders

(ii) To increase the underlying share value

(iii) To support the share prices during temporary weakness.

(iv) To achieve or maintain a target capital structure.

(v) To prevent or inhibit unwelcome take-over bids.182

5.6.2 Conditions for a Buy Back

a) It should be authorised by the articles of association of the company.
b) A special resolution has been passed at the general meeting of the company authorising the buy back. If the buy back is or less than 10 percent of the total paid up equity share capital, a resolution at the general meeting is not needed to be passed rather a simple board resolution is enough. Provided that no offer of buy back shall be made within three sixty five days reckoned from the date of proceeding offer of buy back.
c) The buy back is or less than 25 percent of the total paid up equity share\ capital and free reserves
d) The ratio of debt owned by the company is not more than twice the capital and its free reserves after such buy back.
e) All the shares or other specified securities for buy back are fully paid up.
f) The buy back of shares or other specified securities listed on any recognised stock exchange is in accordance with the regulations made by the securities and exchange board of India in this behalf:
g) The buy back in respect of shares and other specified securities other than those specified in the aforesaid clause is in accordance with the guidelines specified.

5.6.3 Modes of Buy Back

a) From the existing security holders on a proportionate basis or
b) From the open market, through;

   i) stock market

   ii) book building process

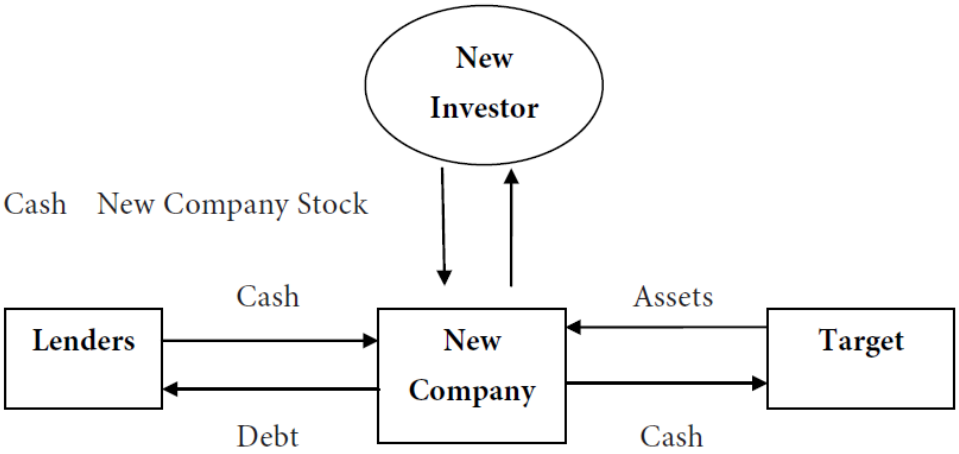
c) From odd lots, that is to say where the lot of securities of a public company, whose shares are listed on a recognised stock exchange, is smaller than such marketable lot, as may be specified by the stock exchange; or
d) By purchasing the securities issued to employees of the company under a scheme of stock option or sweat equity.

5.6.4 Procedure for Buy Back

- Where a company proposes to buy back its shares, it shall, after passing of the special/Board resolution make a public announcement at least one English National Daily, one Hindi National daily and Regional Language Daily at the place where the registered office of the company is situated.
- The public announcement shall specify a date, which shall be "specified date" for the purpose of determining the names of shareholders to whom the letter of offer has to be sent.
- A public notice shall be given containing disclosures as specified in Schedule I of the SEBI regulations.
- A draft letter of offer shall be filed with SEBI through a merchant Banker. The letter of offer shall then be dispatched to the members of the company.
- A copy of the Board resolution authorising the buyback shall be filed with the SEBI and stock exchanges.
- The date of opening of the offer shall not be earlier than seven days or later than 30 days after the specified date.
- The buy back offer shall remain open for a period of not less than 15 days and not more than 30 days.
- A company opting for buy back through the public offer or tender offer shall open an escrow Account.

5.7 Leveraged Buyout (LBO)

A leveraged buyout (LBO) is an acquisition of a company or a segment of a company funded mostly with debt. A financial buyer (e.g. private equity fund) invests a small amount of equity (relative to the total purchase price) and uses leverage (debt or other non-equity sources of financing) to fund the remainder of the consideration paid to the seller. Below is a simple diagram of an LBO structure. The new investors (e.g. and LBO firm or management of the target) form a new corporation for the purpose of acquiring the target. The target becomes a subsidiary of new company, or new company and the target can merge.



5.7.1 Steps In The LBO Analysis

a) Develop operating assumptions and projections for the standalone company to arrive at EBITDA and cash flow available for debt repayment over the investment horizon (typically 3 to 7 years).
b) Determine key leverage levels and capital structure (senior and subordinated debt, mezzanine financing, etc.) that result in realistic financial coverage and credit statistics.
c) Estimate the multiple at which the sponsor is expected to exit the investment (should generally be similar to the entry multiple).
d) Calculate equity returns (IRRs) to the financial sponsor and sensitize the results to a range of leverage and exit multiples, as well as investment horizons.
e) Solve for the price that can be paid to meet the above parameters (alternatively, if the price is fixed, solve for achievable returns).

5.7.2 Characteristics of a Good Leveraged Buyout (LBO)

The purpose of a leveraged buyout is to use the target firm's cash to pay back the debt used to buy the firm as quickly as possible. Based on this overall purpose, several characteristics of a good leveraged buyout (LBO) can be identified.

1. Steady and predictable cash flow - A steady and predictable cash flow will ensure that the LBO target firm will be able to meet its interest payments for the debt it will take on. Steady and predictable makes it easier to get a loan since there is less risk that the firm will not be able to meet interest payments.
2. Low Enterprise Value/EBITDA multiple - The Enterprise Value (EV)/EBITDA (Earnings before interest, tax, depreciation, and amortization) multiple is an indicator

of how easily the cash flows will be able to cover the purchase price. Enterprise Value refers to the total value of the firm--market capitalization (equity) plus long term debt

3. Large amount of tangible assets for loan collateral - Tangible assets will help to obtain more low-interest financing. The more low-interest financing the acquiring firm can get, the less cash will be necessary to repay the loans. Loan collateral includes current assets such as cash and inventory, as well as long term assets like factories, property, and equipment.
4. Potential for expense reduction - If the acquiring firm has good managers on hand (which is often the case in a leveraged buyout), then they hope to be able to reduce expenses when they acquire the target. Reducing expenses will free up cash and allow for faster repayment of the debt. Private firms that are targets for LBO's often have room for expense reduction since management is often entrenched and has little experience outside the firm.
5. Minimal future capital requirements - The acquirer doesn't want to have to make large cash outlays to keep the company running and growing. The acquirers want to use all the cash possible to pay of the debt.
6. Limited working capital requirements - This is pretty much the same as the point above. Any year-over-year increases in working capital result in less free cash flow (less money to pay down the debt). LBO's need money!
7. Clean balance sheet with little debt - Little debt will mean few obligations to pay off other loans. This makes the deal less risky (lower leverage = less risk) and allows excess cash to go to the debt necessary for the leveraged buyout.
8. Strong market position - A strong market position can ensure that the target company won't be squashed after the leveraged buyout goes through. Such a position makes cash flows less risky.
9. Divestible assets - Divestible assets provide the acquirers with extra means to raise cash, particularly if the cash flows are jeopardized, but also simply to pay off the debt more quickly. Such assets can include equipment, land, brands, etc.
10. Viable exit strategy - The point of a leveraged buyout is to get a return on the equity investment, this involves selling the company a few years after the LBO goes through. Without a good exit in site, the LBO probably won't (and shouldn't) happen.

5.8 DEMERGERS

Demerger is a form of corporate restructuring in which the entity's business operations are segregated into one or more components. It is the converse of a merger or acquisition. A demerger can take place through a spin out by distributed or transferring the shares in a subsidiary holding the business to company shareholders carrying out the demerger. The demerger can also occur by transferring the relevant business to a new company or business to which then that company's shareholders are issued shares of. Demergers can be undertaken for various business and non-business reasons, such as government intervention, by way of anti-trust law, or through decartelization.

5.8.1 Reasons for Demergers

Demerger is undertaken basically for two reasons. The first one as an exercise in corporate restructuring and the second one is to give effect to a kind of family partitions in the case of family owned/controlled companies essentially to give effect to informal family partitions.

Where demerger is an exercise of corporate restructuring the undertaking sought to be demerged is transferred from a transferor company to an existing transferee company. But where demerger is an exercise in family partition the different 'undertakings' of a company is transferred to a newly incorporated transferee companies to facilitate family partitions.

5.8.2 Modes of Demerger

1. Demerger by agreement between promoters
2. Demerger under the scheme of arrangement with approval by the court
3. Demerger under voluntary winding up and the power of liquidator.