ALL THE VERY BEST FOR YOUR EXAMS

SHORT NOTES FOR

CAIIB

ADVANCED BUSINESS & FINANCIAL MANAGEMENT

Though we had taken enough care to go through the notes provided here, we shall not be responsible for any loss or damage, resulting from any action taken on the basis of the contents. Creation of these short notes is the efforts of so many persons. First of all we thank all of them for their valuable contribution. We request everyone to go through the Macmillan book and update yourself with the latest information through RBI website and other authenticated sources. In case you find any incorrect/doubtful information, kindly update us also (along with the source link/reference for the correct information).

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CAIIB – GENERAL INFORMATION

Consists of 4 papers :

I. Compulsory Paper

1. Advanced Bank Management
2. Bank Financial Management
3. Advanced Business & Financial Management
4. Banking Regulations and Business Laws

II. Elective Papers (Candidates to choose any one of their Choice)

1. Rural Banking
2. Human Resources Management
3. Information Technology & Digital Banking
4. Risk Management
5. Central Banking

- Only existing employees of banks who had cleared JAIIB can appear for CAIIB Exam.
- CAIIB exams are conducted in on-line mode only.
- The examination will be conducted normally twice a year in May / June and November / December on Sundays.
- The duration of the examination will be of 2 hours.
- **Examination Pattern** :
  (i) Question Paper will contain 100 objective type multiple choice questions for 100 marks including questions based on case studies/ case lets. The Institute may however vary the number of questions to be asked for a subject.
  (ii) There may be some numerical questions in some of the CAIIB subjects where, no options will be provided. These questions will not be in the MCQ pattern and the answer has to be keyed in by the candidate.
  (iii) The examination will be held in Online Mode only.
  (iv) There will be no negative marking for wrong answers.
  (v) Questions for the examination will be asked for:
    a. Knowledge testing
    b. Conceptual grasp
    c. Analytical/ logical exposition
    d. Problem solving
    e. Case analysis

- **Passing Criteria** :
  1. Minimum marks for pass in the subject is 50 out of 100.
  2. Candidates securing at least 45 marks in each subject with an aggregate of 50% marks in all subjects of examination in a single attempt will also be declared as having completed the Examination.
  3. Candidates will be allowed to retain credits for the subject they have passed in an attempt till the expiry of the time limit for passing the examination.

  Note : A candidate will be given 5 attempts for completion of exam (CAIIB) but, within a maximum period of three years, whichever is earlier, from the time he/she registers for the exam. These 5 attempts need not be consecutive.

- **"Class of Pass" Criteria :**
  - **First Class :** 60% or more marks in aggregate and pass in all the subjects in the FIRST PHYSICAL ATTEMPT.
  - **First Class with Distinction :** 70% or more marks in aggregate and 60% or more marks in each subject in the FIRST PHYSICAL ATTEMPT.
  - Candidates who have been granted exemption in the subject/s will be given **"Pass Class"** only.

- **Cut-off Date of Guidelines /Important Developments for Examinations** :
  - In respect of the exams to be conducted by the Institute for the Period from February to July of a calendar year, instructions/guidelines issued by the regulator(s) and important developments in banking and finance up to 31st December will only be considered for the purpose of inclusion in the question papers.
  - In respect of the exams to be conducted by the Institute for the period from August to January of a calendar year, instructions/guidelines issued by the regulator(s) and important developments in banking and finance up to 30th June will only be considered for the purpose of inclusion in the question papers.

- **Exam Fees**

Description	Fees*
First attempt fee	5,000
Second attempt fee	1,300
Third attempt fee	1,300
Fourth attempt fee	1,300
Fifth attempt fee	1,300

* Plus Convenience charges and Taxes as applicable.

Please Note: Candidates are required to Register for every attempt separately

SYLLABUS

The details of the prescribed syllabus which is indicative are furnished in the booklet. However, keeping in view the professional nature of examinations, all matters falling within the realm of the subject concerned will have to be studied by the candidate as questions can be asked on all relevant matters under the subject.

Candidates appearing for the examination should particularly prepare themselves for answering questions that may be asked on the latest developments taking place under the various subject/s of the said examination although those topics may not have been specifically included in the syllabus. Further, questions based on current developments in banking and finance may be asked. **Candidates are advised to refer to financial news papers / periodicals more particularly "IIBF VISION" and "BANK QUEST" published by IIBF.**

MODULE A: THE MANAGEMENT PROCESS

Basics of Management

Definition of Management, The Management Process, Functions of Management, Importance of Management, Management Thoughts & Approaches, Management Challenges & Opportunities, Introduction to Strategic Management, Business Environment Analysis

Planning

Fundamentals of Planning, Steps in Planning, Importance of Planning, Advantages and disadvantages of planning, Management by Objectives, Plan Components, Contingency planning, Forecasting & Decision Making

Organizing

Introduction and Fundamentals of Organizing, Importance of Organisation, Stages in Organising Process, The Organising Process, Principles of organizing, Types of Organisations, Organisation structure, Organisation charts and manuals, The Organisation culture, Authority & Responsibility, Key Issues in Organisation Structure, Organisational Change, Conflict Dynamics

Staffing

Functions of Staffing, Objectives of staffing, Nature of staffing, Facets of staffing, Significance of staffing, System approach to staffing, Recruitment, Selection, Training, Retention and development, Knowledge and learning management, Performance Appraisal, Human Resource Development

Directing

Characteristics of directing, Importance of directing, Elements of directing, Leadership, Motivation, Communication, Supervision

Controlling

Basics of Controlling, Characteristics of controlling, Advantages of controlling, Limitations of controlling, Types of control management, Control process, Relation between planning and control, Control Techniques, Control technique and Information Technology

MODULE B: ADVANCED CONCEPTS OF FINANCIAL MANAGEMENT

Sources of Finance and Financial Strategies

Equity Capital, Internal Accruals, Preference Capital, Term Loans, Debentures, Alternative Financing Strategies in the Context of Regulatory Requirements

Financial and Operating Leverages

Financial Leverage, Degree of Financial Leverage and its Behaviour, Operating Leverage, Degree of Operating Leverage and its Behaviour, Combined or Total Leverage

Capital Investment Decisions

Objective of capital investment decisions, Estimation of project cash flows, Forecasting and its relation to regulation of capital for short, medium and long term periods, Relationship between sales, production and other functional budgets, Cash Forecasts, Cost analysis for projects, Methods of Investment appraisal; Social Cost Benefit Analysis

Capital Budgeting for International Project Investment Decisions

Foreign Investment Analysis, Special Considerations-Foreign & Home Currency Cash Flows, Foreign Currency Discount Rates Computation, International Portfolio Investment and Institutional Constraints, Direct and Indirect Channels for International Portfolio Investment, Exchange and Country Risk, Return and Risk of Foreign Investment, Capital asset pricing model, Arbitrage pricing theory; International Capital Budgeting Issues involved in overseas projects, Approaches for evaluation of overseas projects, Evaluation methods, , Impact of transfer pricing

Adjustment of Risk and Uncertainty in Capital Budgeting Decision

Sources & Perspectives on Risk, Sensitivity Analysis, Scenario Analysis, Hillier Model, Simulation Analysis, Decision Tree Analysis, Corporate Risk Analysis, Managing Risk, Project Selection Under Risk, Risk Analysis in Practice

Decision Making

Decision Making using Cost-Volume-Profit (CVP) Analysis, Decision Making using Relevant Cost Concepts, Decision Making using Activity Based Costing, Ethical and Non-Financial Considerations Relevant to Decision Making

MODULE C: VALUATION, MERGERS & ACQUISITIONS

Corporate Valuations
Approaches to Corporate Valuation, Adjusted Book Value Approach, Stock and Debt Approach, Direct Comparison Approach, Discounted Cash Flow Approach, Steps involved in valuation using DCF Approach,

Discounted Cash Flow Valuation
Estimating Inputs, Approaches to Discounted Cash Flow Models, Various discounted Cash Flow Models, Dividend Discount Model, Applicability of the Dividend Discount Model,

Other Non-DCF valuation models
Relative valuation model, Equity Valuation Multiples Model, , Enterprise value multiples Model, Choosing the right multiples,
Book value approach Model, Stock and debt approach

Special cases of valuation
Intangibles –Brand, Human valuation etc., Real estate Firms, Start-up firms, Firms with negative or low earnings, Financial Service companies, Distressed firms, Valuation of cash and cross holdings, Warrants and convertibles, Cyclical & non-cyclical companies, Holding companies, E-commerce firms

Mergers, Acquisitions and Restructuring
Types of Transactions, Reasons for Merger, Mechanics of a Merger, Costs and Benefits of a Merger, Exchange Ratio in a Merger, Purchase of a Division / Plant, Takeovers, Leveraged Buyouts, Acquisition Financing, Business Alliances, Managing Acquisitions, Divestitures, Holding Company, Demergers
Deal structuring and financial strategies

Negotiations, Payment and legal considerations, Tax and accounting considerations, Tax reliefs and benefits in case of Amalgamation in India, Financial reporting of business combinations, Deal Financing, Financing of cross border acquisitions in India

MODULE D: EMERGING BUSINESS SOLUTIONS

Hybrid Finance
Advantages and disadvantages of Hybrid securities, Types of hybrid securities, Preference Share Capital, Features of Warrants, Features of Convertible Debentures, Differences between Warrants and Convertible debentures, Valuation of Warrants, Valuation of Compulsorily Convertible (Partly or fully) Debentures, Objective of issuing Warrants and Convertible debentures, Features of Foreign Currency Convertible Bond (FCCB), Mezzanine Financing, Innovative Hybrids

Start-up Finance
Benefits to startup under the Startup Plan, Startup definition in India, Challenges faced by Startups, State Startup Policy, Pitch Presentation, Programmes and competitions for startups, Tax exemptions, Funding, Investor's outlook in Startups, Funding schemes and programmes, International challenges and bridges

Private Equity and Venture Capital
Characteristics of Venture Capital Investments, Characteristics shared by Private Equity and Venture Capital as well as their key distinctions, Financing options available through Venture Capital, Investment in Private equity, Benefits obtained through private equity, Drawbacks to the practice of private equity, , Due diligence, Exit Strategies

Artificial Intelligence
History of Artificial Intelligence, Applicability of Artificial Intelligence, Artificial Intelligence in Banking and Finance, The future scope of Artificial Intelligence, Neural Networks, Control Theory and Cybernetics, Rational Agents, Motion and Manipulation, Tools and Techniques of Artificial Intelligence, Artificial Intelligence and Morality

Business Analytics as Management Tool
Essentials of Business analytics, Types of Analytics, Elements of Business Analytics, Big Data Analytics, Web and Mobile Analytics, Comparing web Vs Mobile Analytics, Importance of Business Analytics

Green and Sustainable Financing
ISO Standards for Green Finance, Building Green Finance, International Best Practices towards Green Finance, Public Policy in India, Progress of Green Finance in India, Challenges and way forward, Growth of Regulatory Framework, National Efforts towards Green and Sustainable Financing, RBI Views on Climate Risk and Sustainable Finance

Special Purpose Acquisition Company
Advantages of SPAC, Disadvantages of SPAC, SPAC Formation and Timelines, The SPAC Merger, Stakeholders, Characteristics of SPACs, Process, SPAC Capital Structure, Trust Account, Warrants, Forward Purchase, IPO Agreements, De-SPAC Process

MODULE - A - THE MANAGEMENT PROCESS

Unit-1: Basics of Management

Definition of Management

- The Cambridge Dictionary refers to Management as 'the activity or job of being in charge of a company, organization, department, or team of employees'.
- Scientific management, also known as 'Taylorism', is a management theory which was used for analysing and synthesizing workflows with the main objective of improvement of economic efficiency and labour productivity.

Functions of Management

Planning

- This involves setting of goals, determining the objectives of the organisation and selecting the future course of action required to be taken for accomplishing the objectives of the organisation.
- When you plan, you decide in advance about what needs to be done, when and where it needs to be done, how it shall be done and who would be doing it.

Organising

Organising involves taking decisions about division of work, allocation of responsibility and authority and task coordination. It also involves the following areas:

- Task Management
- The Reporting Structure
- Decision Making

Staffing

- The major staffing activities include recruitment, selection, training, development and motivation of the various categories of employees and fixation of their compensation and reviewing it from time to time.
- Staffing also takes care of promotions, job rotations, job enrichment, transfers, termination and retirement activities

Directing

- Directing covers the functions of guiding and supervising the activities performed by subordinates.
- It includes Leadership, motivation, communication and supervision.

Controlling

The control function deals with monitoring and measuring of performances of people and comparing them with the pre-decided standards and projections. Controlling involves the following four steps:

- Establishing performance standards
- Measurement of actual performance
- Comparison of actual performance against the established standards
- Taking corrective actions to achieve the desired objectives.

Importance of Management

- Effective Change Management Tool
- Helps achieve group goals
- Optimum utilisation of resources
- Improved functioning of business
- Development of various resources
- Contributes towards better organization
- Proper Direction to the organization
- Integration of various interests
- Management of fluctuations
- Innovation
- Inculcation of team spirit
- Problem solving
- Helps Employee Growth

Management Thoughts & Approaches

Classical or Traditional School

The classical school believes in the use of technology for increasing efficiency of the employees, and lays down more emphasis on the organisation, looks at the organisation as a machine and the employees as its parts, who are important only as a means of production.

The salient features of the classical or traditional school include:

- Having an integrated and centralised system
- Greater emphasis on production
- Concentration on errors and their rectification
- Assuming employees' continuity irrespective of organisational changes
- Based on an accounting model and
- Giving equal weightage to different types of jobs and employees.

Neoclassical or Behavioural School

This school of thought propounded the influence of human actions on the very existence of an organisation. An organisation, according to this theory, comprises of both formal and informal forms of organization, a fact which was overlooked by the Classical theorists. This School of Thought had the following salient features:

- Focus on motivation
- Different persons get motivated diversely for satisfying their specific needs.
- For efficiency measurement, communication is a critical input.
- For organizational performance, team-work is essential
- The thought has two different perspectives, viz. Human Relations perspective and Psychological perspective.

This school of thought was also the originator of Maslow's hierarchy of needs, Douglas McGregor's X and Y Theory and Motivation-Hygiene Theory.

Maslow's Heirarchy Of Needs

- Human beings have wants and desires which influence their behavior. Only unsatisfied needs influence behavior, satisfied needs do not.
- Since needs are many, they are arranged in order of importance, from the basic to the complex.
- The person advances to the next level of needs only after the lower-level need is at least minimally satisfied.
- The further the progress up the hierarchy, the more individuality, humanness and psychological health a person will exhibit.

Douglas Mcgregor's X And Y Theory

Theory X stated that humans do not work without close supervision, while Theory Y propounded that humans love to work and there is no need of coercing them to work for achieving organisational goals.

Theory X Assumptions:

- The average human being is inherently lazy by nature and desires to work as little as possible. He dislikes the work and will like to avoid it, if he can.
- He avoids accepting responsibility and prefers to be led or directed by some other.
- He is self-centered and indifferent to organizational needs.
- He has little ambition, dislikes responsibility, prefers to be led but wants security.
- He is not very intelligent and lacks creativity in solving organizational problems.
- He, by nature, resists change of any type

Theory Y Assumptions:

- Work is as natural as play, provided the work environment is favourable. An average man is not really against doing work.
- People can be self-directed and creative at work if they are motivated properly.
- Self-control on the part of people is useful for achieving organizational goal. External control and threats of punishment alone do not bring out efforts towards organizational objectives.
- People have capacity to exercise imagination and creativity.
- People are not by nature passive or resistant to organizational needs. They have become so as a result of experience in organisations.

Motivation Hygiene Theory

Frederick Herzberg's two-factor theory, or intrinsic/extrinsic motivation, concludes that certain factors in the workplace result in job satisfaction, but if absent, lead to dissatisfaction.
The factors that motivate people can change over their lifetime, but "respect for me as a person" is one of the top motivating factors at any stage of life. He distinguished between:

- **Motivation:** (e.g., challenging work, recognition, responsibility) which give positive satisfaction, and
- **Hygiene factors:** (e.g., status, job security, salary and fringe benefits) that do not motivate if present, but, if absent, result in demotivation.

Quantitative School or Management Science

The Quantitative School of Management emphasises use of mathematical and statistical models for finding solutions to managerial problems. The scientific management techniques, laid down by Fredrick Winslow Taylor, also helped in laying down the foundations of this approach. The main characteristics of the quantitative approach to management include:

- Creation of models, theories and hypotheses.
- Collection of empirical data.
- Development of mathematical and statistical models.
- Data analysis.
- Experimenting in controlled environment.
- Testing with changes in variables.
- Development of various instruments.
- Development of quantitative techniques.

The System School of Management

This school of management thought was propounded by Daniel Katz, and Ludwig Von Bertalanffy, They advocated the concept of management being an open system, which is required to interact with the environment constantly for getting resources, which are both valuable and limited.

The Contingency School of Management

- It stated that there cannot be a unique way of managing an organization, which can be labelled as the best way to manage or lead a business.
- The best or the optimal way shall always depend or be contingent on the internal and external environment.
- The contingency school of management thought is criticised for being reactive and for failure to be proactive and for not providing some standard
- principles and procedures to be applied in specific situations.
- This approach can turn out to be expensive in terms of money and time and development of a proper theory of management principles becomes almost impossible.

The Contemporary School of Management

- Management theory continues to advance because of constant evolution of business practices and management techniques, especially in the wake of technological advancements. Further, continuous research is giving rise to new approaches to management.
- The concepts of 'Total quality management' and 'Learning organization' are quite relevant in this context.

Total Quality Management

Total Quality Management focuses on the management of an organisation for delivering high quality goods and services to its customers. The approach originated in Japan after the Second World War. The four main elements of this approach are:

- Employee involvement
- Customer focus
- Standardisation
- Continuous Monitoring

Deming, Juran and Crosby were three main contributors to the Total Quality Management approach. William Edwards Deming considered the quality of people more important than the quality of products. He laid down the following fourteen principles of Total Quality Management:

- Consistency of purpose
- Adoption of the new philosophy
- Ceasing dependence on inspection
- Stopping lowest bid system
- Introduction of all-round improvement
- Instituting On-the-job training
- Instituting leadership
- Driving out fear by improving two-way communication.
- Breaking down barriers between staff areas and departments
- Eliminating exhortations

- Eliminating arbitrary numerical targets
- Permitting pride of workmanship
- Encouraging education
- Action for achieving transformation

Learning Organisation

A learning organisation may be defined as an organisation where all the employees take part in identifying and solving the problems which it faces, and which permits the organisation to continuously enhance its capacity to grow and learn, so as to achieve the organisational goals.

The five disciplines of a learning organisation are:

- Personal Mastery
- Shared vision
- Mental Models
- Team learning
- Systems Thinking

Management Challenges & Opportunities

Management faces a lot of challenges for achieving the business objectives and also gets a lot of opportunities, which need to be properly evaluated in a time bound manner.

Several issues which are faced by the management include:

- Which business model to adopt?
- How to manage the information explosion?
- How to manage the changes taking place every now and then?
- How to face the threat of globalisation?
- How to manage the impact of environmental sustainability?

Business Models

Business models are based on the type of clients to be served, the product offerings, the revenue earning model, ways of differentiating and sustaining competitive advantages, and the manner in which products or services are provided.

Some Business Models are:

- Solution Providing or Consulting Services: eg. IBM
- Profit Pyramid Model
- Multi-component Systems Model
- Advertisement Model
- Switchboard Model: This model allows a firm to acts as an intermediary for connecting multiple sellers with multiple buyers. eBay, Amazon, Flipkart

- Time Model: This model depends on how fast research and development happens.
- Efficiency model
- Blockbuster model
- Profit multiplier model
- Entrepreneurial model
- De Facto industry standard model

Information Explosion Managing the Change

- New Products & Services
- Technological Changes
- Employee Management

Globalization and Environmental Sustainability Impact of Globalization

- Increase in Transport of Goods
- Economic Specialisation
- Reduced Biodiversity

Impact of Environmental Sustainability

- GOAL 1: NO POVERTY
- GOAL 2: ZERO HUNGER
- GOAL 3: GOOD HEALTH AND WELL-BEING
- GOAL 4: QUALITY EDUCATION
- GOAL 5: GENDER EQUALITY
- GOAL 6: CLEAN WATER AND SANITATION
- GOAL 7: AFFORDABLE AND CLEAN ENERGY
- GOAL 8: DECENT WORK AND ECONOMIC GROWTH
- GOAL 9: INDUSTRY, INNOVATION, AND INFRASTRUCTURE
- GOAL 10: REDUCED INEQUALITIES
- GOAL 11: SUSTAINABLE CITIES AND COMMUNITIE
- GOAL 12: RESPONSIBLE CONSUMPTION AND PRODUCTION
- GOAL 13: CLIMATE ACTION
- GOAL 14: LIFE BELOW WATE
- GOAL 15: LIFE ON LAND
- GOAL 16: PEACE, JUSTICE, AND STRONG INSTITUTIONS
- GOAL 17: PARTNERSHIPS:

Strategic Management

Strategic management is defined as the process by which a firm manages the formulation and implementation of its strategy". Strategy combines explicit statements and implicit beliefs and understandings in and around an organization about:

- Mission: Its core purpose and how, if at all, its mission will (or must) change in future.
- Vision: An image of its future direction and what it intends to achieve.
- Clientele: its scope, meaning, thereby, its main clientele now and those in the future
- Resources: The resources and competences that create value for its clientele and how these will (or must) change to maintain and enhance the future value created.
- Present and Future: The foundations of its present competitive standing and future sustainability.

Difference Between Plan and Strategy

Strategies

- Corporate strategy
- Business strategy
- Functional strategy

Elements of Strategic Management

- Environmental Scanning
- Strategy Formulation
- Strategy Implementation
- Strategy Evaluation and Control

Phases of Strategic Management

- Basic Budgetary Planning
- Forecast-based Planning
- Externally Oriented (Strategic) Planning
- Integrated strategic plan/SM

Benefits of Strategic Management

- The management gets a clearer sense of strategic vision of the business entity.
- Management is able to clearly focus on strategically important issues, faced by the entity.
- The dynamic environment can be better understood by management.

Business Environment Analysis

- A business does not operate in isolation and, to succeed, the management must understand the environment in which it operates.
- Effective managers must understand their external environment well and have to remain prepared for any eventualities and contingencies.

Unit-2: Planning

Fundamentals of Planning

- Planning is the process of engaging in thoughtful discussion before undertaking a task, which entails engaging in in-depth contemplation about that task and going into all the details meticulously to be ready with an execution and implementation plan, to save both effort and time.
- During the planning, each possibility, both present and future, that is even remotely connected to the goals, will be taken into consideration.

The process of planning

Planning is a process of fixing objectives and finding ways of accomplishing them

Opportunity Analysis

Opportunity analysis entails analysing the opportunity, being aware of the opportunity, and basing the development of the business plans on this opportunity.

Objective Establishment

Without knowing the objective, it is impossible to develop a strategy for its accomplishment.

Developing Planning Premises

- The collection of future forecasting-derived assumptions is known as the planning premises determination.
- The predicting must be based on a realistic assessment of the environment in which the plans are to be executed, as well as a creative understanding of the surroundings.

The premises cover the following areas:

- Forecasting
- Basic Policies
- Existing Plans

Alternatives Identification

The process of determining the availability of various means to attain goals is referred to as "identifying alternative means."

Evaluating Alternatives

- When comparing the various approaches, the use of statistical methods and computers proves to be extremely beneficial.
- One of the processes might be less desirable or effective compared to the others, while another might be more suited to the immediate goal.

Selecting the best Alternative

At this stage, the plan is to be adopted, and the numerous options are to be evaluated, so that it can be determined which plan can best assist in the accomplishment of the business objectives.

Formulating Derivative Plan

It includes making sub plans or secondary plans.

- Development of the new policies and procedures
- Coordination of the activities of the derivative plans
- Working in accordance with the targets of the main plan

Follow-up & Reviewing a plan

- Planning is a continuous process for ensuring attainment of business objectives.
- It is very important for a business entity to continuously monitor the implementation of the plans and keep adjusting and amending the plans as required.

Importance of Planning

A SMART goal is a carefully planned, clear and trackable objective. SMART is an acronym that stands for Specific, Measurable, Achievable, Realistic, and Timely.

- Helps Goal Creation
- Provides Direction
- Tackles Uncertainty
- Discards overlapping and wasteful activities
- Promotes Innovative Ideas
- Decision Making Facilitation
- Controlling

Basic Advantages of Planning

- Planning reduces uncertainty.
- Planning is focused on objectives.
- Planning facilitates control.
- Planning encourages creativity and innovation.
- Planning anticipates problems and copes with change.
- Planning works with the board by destinations.
- Planning limits vulnerabilities
- Planning works with co-appointment.
- Planning works on worker’s moral.
- Planning helps in accomplishing economies.
- Planning works with controlling.
- Planning gives the upper hand to the managers
- Planning empowers development

More Advantages in Planning

- Coordination of Various Activities
- Optimisation of Resources
- Inspirations and Responsibilities
- Establishment of Execution Principles
- Adaptability

Basic Disadvantages of Planning

- The process of planning takes a significant amount of time.
- The planning process may result in lack of trustworthy data.
- The process of planning could end up being very expensive.
- The act of planning results in rigidity.
- Planning is an exercise in fighting against change as the environment in which an organisation operates is ever-changing and dynamic.
- Planning could give a false impression of the organisation's strength.
- The plan may be adapted to fit the interests of individual participants rather than the goals of the overall endeavour.
- Inter-departmental rivalries may impact the effectiveness of planning.
- Human errors can result in bad planning.
- A rapidly changing environment may make planning harder.
- A manager's daily work schedule may be affected by his involvement in planning process.

More Disadvantages in Planning

- Forestalls Activity
- Lack of Concern
- Forestalls Adaptability
- Hinders Innovativeness

Management By Objective

- The phrase "management by objective" (MBO) was coined by Peter F. Ducker
- It is the process that is used for goal planning and the establishment of clear parameters for those goals
- Planning is the central idea behind the 'Management by Objectives'
- It implies that an Organisation and the people, who make up that Organisation, aren't just responding to incidents and issues; rather, they are being pro-active and are taking preventative measures.

Limitations of MBO

- The MBO approach frequently disregards the culture of the organisation as it exists today as well as its working conditions.
- Goals and targets receive a greater amount of attention. When managers forget about participation, employees' willingness to contribute, and the value of MBOs for management's professional growth, they put constant pressure on workers to achieve their objectives.
- Managers will frequently place a greater emphasis on goal setting than they will on issues pertaining to operations.
- The MBO approach does not place a strong emphasis on the significance of the environment in which objectives are formulated.
- Many managers have the habit of viewing MBO as a comprehensive system that, once implemented, can address any and all management concerns.
- Overdependence can bring problems into the MBO system.

Steps that make up the management by objectives technique

- The first thing to do is either establish or alter the organisational goals for the whole company. The company's mission and vision should serve as the basis for developing this comprehensive overview.
- The second step is to communicate to employees the goals and priorities of the organisation.
- The third step is to encourage participation from the staff members in the process of setting individual goals.
- The monitoring of the progress made by the staff members is the focus of the fourth step.
- The fifth step is to evaluate and then reward the progress that employees have made.

Advantages of MBO

- It provides a means for determining one's goals and planning to achieve those goals.
- Planning enables one to behave in a proactive manner and to approach the accomplishment of goals in a disciplined manner.
- It also gives you the ability to plan for unforeseen circumstances and limitations that could make planning more difficult.
- The process of MBOs also enables the preparation of contingency plans and strategies for overcoming roadblocks, which may be obstacles to the plan.
- Objectives should be measurable so that progress can be monitored and altered as necessary. If goals are effectively set, managed, and accomplished, organisations have the potential to improve their overall efficiency
- A more effective use of the available resources
- An emphasis on the most important aspects of the results.

Disadvantages of MBO

- The process of setting goals can be time-consuming, which means that both the managers and the employees have less time to get their actual work done.
- The MBO programme requires elaborate written goals, careful communication of goals, and detailed performance appraisals, all of which contribute to an increase in the amount of paperwork an organisation generates.
- To achieve success, it is necessary for all of the employees to work together.
- Goals can become out of date and put a damper on employees' ability to take initiative and be creative.
- Too much multi-tasking can result in inefficiencies.
- The inability of the subordinate to feel at ease.
- Inflexibility.
- It might make the workers' lives more difficult and frustrating.
- MBO is an approach based on rewards and sanctions.
- MBO, sometimes, might lack appreciation by the employees and workers

Key Components of Planning

- Objectives/ Goals
- Policies/ Overviews
- Procedures/ Directions/ Rules
- Programs/ Methods
- Budgets/Funding
- Time Schedule.
- Core values/ Mission/ Vision
- SWOT Analysis.
- Management.

Environmental Analysis

- "Environmental Analysis" refers to the process of examining all of the factors, both internal and external, that have an impact on the performance of the organisation. This can be done both systematically and qualitatively.
- The opportunity and the threats, that are external to the organisation, are portrayed by the external components, whereas the strength and the vulnerability of the business entity are shown by the internal components.

Environmental Analysis Steps includes:

- Identifying
- Scanning
- Analysing
- Forecasting

PESTLE Analysis

PESTLE refers to the following six factors that can have an impact on the company:

- Political
- Economic
- Social
- Technological
- Legal
- Environmental

PESTEL analysis involves three steps

- Identify the relevance of each of the PESTEL factors to the firm
- Identify and categorize the information for each factor
- Analyze the data and draw conclusions

Advantages of PESTLE analysis

- Cost effectiveness
- Easy framework
- Deep understanding
- Development alertness
- Opportunities exploitation

Internal Analysis

- It is initiated by the management of the company to identify the areas of risk and opportunity in the business.
- It reveals both the organization's strengths and its weaknesses in these areas.

Internal Analysis Tool

GAP Analysis

- The Gap Analysis is a tool for conducting assessments that gives organisations the ability to analyse and identify internal weaknesses as well as performance deficiencies.
- It is very easy to understand and put into practice, and it is helpful to compare the current position of the organisation to its projected position in the future.

Strategy Evaluation

The process of analysing the outcomes brought about by the execution of a strategic plan is referred to as strategy evaluation. It is very useful and helpful to check that everybody understands the business strategy and works well with it.

SWOT Analysis

- SWOT stand for Strengths Weaknesses Opportunities Threats.

- The SWOT analysis is a useful model for conducting evaluations because it takes into account both internal and external factors simultaneously.
- It is especially helpful to conduct a SWOT analysis to obtain a comprehensive overview of a company, its products, its brand, or a new project at any stage in the project life cycle.

Contingency Planning

- Contingency plans can be defined as alternative plans that can be put into effect if certain key events do not occur as expected.
- The contingency plan minimises the risk associated with such unforeseen unpredictable events. The contingency plans are referred to as "Plan B" because they always work as an alternative course of action if things do not go as planned.

It involves the following:

- Specifying trigger points
- Estimating when contingent events are likely to occur
- Assessing the impact of each contingent event
- Estimating the potential benefit or harm of each contingent event
- Developing alternate plans
- Being sure that the contingency plans are compatible with current strategy and that they are financially feasible.

Forecasting And Decision Making

Forecasting

- The process of predicting or estimating the future based on the evidence from the past and the present is referred to as forecasting.
- The process of forecasting gives knowledge about the possible occurrences of the future as well as the implications those events will have for the business.
- It is not possible for forecasting to lessen the complexities and unpredictability of the future.
- Managers at different levels may be given the responsibility of making forecasts, or external or internal economists and statisticians may be employed for the task.
- Since forecasting makes use of a wide variety of methods, another name for the discipline is Statistical Analysis.

Types of Forecasts

- Long Term Forecasts (3 to 5 years)
- Medium Term Forecasts (1 to 3 years)
- Short Term Forecasts (>1 year - 1 to 6 months)

Forecasting process and its elements

- Identifying and Developing the Structure

- Estimating future Course of Business
- Analysis of Deviations in previous forecasts

The main criteria for evaluating alternatives

- Cost, Profitability, Break-even Point
- Market, Sales potential, Competitive reaction
- Ability to meet corporate objectives
- Strengths and weaknesses
- Timing
- Intuition about success

Decision Making

- Actual selection of one course of action, from among several alternatives, is called decision-making.
- Decision making is not confined to planning alone but also embraces other aspects of management like organising, staffing, controlling etc.
- Decision-making is a rational process and, to have a high degree of effectiveness, should be based on systematic analysis of all the relevant facts and not based on just intuition.
- Decision making plays an important role in enhancing the efficiency of the organisation as decisions relating to future course of action, are taken in advance.

Decision Making By Groups

- Whether a particular decision is to be made by an individual or a group depends on the policy of the organisation and thinking of top management. Before the task is assigned to a group to decide on a particular matter, the exact scope of the group's authority to make that decision, should be clearly spelt out.

Advantages of Group Decisions

- Thorough evaluation
- Implementation of decisions is easier
- Enhanced team spirit.

Disadvantages of Group Decisions

- Time consuming and costly
- Disagreements and indecisions
- No-participation or domination

Various Conditions for Decision-Making

The situations may be classified broadly into three scenarios, as under:

Certainty:

If the decision maker knows exactly what is going to happen, it is the condition of certainty, and he is able to precisely forecast the outcome. However, such conditions can be rarely expected to exist, in real business environment.

Risk:

- When information is available only partially or it is insufficient to estimate the outcome precisely, the decision is to be taken under the conditions of risk.
- As the outcome is not certain, a probability is assigned to each estimated outcome.
- When a probability estimate is assigned to expected outcome based on the past experience, it is called objective probability, and if it is assigned on the basis of intuition, it is called subjective probability.

Uncertainty

When the decision maker feels that probabilities for various estimated outcomes cannot be assigned, it is called the situation of uncertainty. In such a situation, there is no way of measuring the likelihood attached to each estimate.

Principles of Decision-Making

- **Principle of Definition**: Correct identification of issues involved goes a long way is arriving at a better decision. It is, therefore, important to be aware of the exact problems. After the exact problems have been correctly identified and defined, the work of the decision maker becomes easier.
- **Principle of Evidence:** Whenever a decision is based on evidence, it is likely to be better compared to decisions taken on the details which are not backed by evidence.
- **Principle of Identity:** In a decision-making process, it is important to consider, with an open mind, the viewpoints of all the people involved, before taking a final decision.

Unit-3: Organizing

Organising

Organising is the process of establishing or organising effective authority relationships between selected tasks, individuals, and workplaces to group work together in an efficient manner, as well as the process of separating work into sections and departments.

Stages In Organising Process

- Defining and reviewing the plans and objectives of the company.
- Determining the work activities needed to accomplish the objectives
- Categorising and grouping essential work activities into manageable units
- Assigning activities and delegating authority
- Designing a hierarchy of relationships

Principles of Organising

Work Specialisation

Work specialisation refers to the degree to which tasks within an organisation are broken up into distinct jobs. This concept is synonymous with the term "division of labour" Every worker receives instruction on how to carry out the particular responsibilities that are associated with their particular function.

Authority

The legitimate power that is delegated to managers so that they may make decisions, issue orders, and allocate resources on behalf of the organisation in order to accomplish the goals of the organisation is referred to as authority. The manager's job role determines the scope of his or her authority as well as the level of authority that comes with

Chain of Command

- It is the continuous chain of authority that, in the end, connects every individual with the most senior position in the organisation, with a managerial position serving as the connecting link at each successive level in between.
- The concepts of responsibility and accountability are enforced through a chain of command. The two guiding principles that underpin it are the **Scalar Principle and the Unity of Command**.
- According to the principle of unity of command, each worker should have just one manager, supervisor, or other reporting authority to whom he or she is directly accountable for work-related matters.
- According to the scalar principle, there ought to be a transparent chain of command that extends from the position of supreme authority at the very top of the organisation to each

and every person working there, connecting all of the managers working at the various levels. It involves a concept known as a **'gang plank'**, which allows a subordinate to contact a superior or his superior in an emergency using a method that contradicts the hierarchy of control.

Delegation

The act of delegating responsibilities or authority at work to other people, such as workers or subordinates, is known as delegation.

Span Control

- The number of workers who are under a manager's supervision is referred to as their "span of control," which is also sometimes referred to as their "span of management." It refers to the number of people who report directly to a manager and are accountable for the boss's actions.
- When a manager has a high number of people reporting to him, there is said to be a wide span of influence over the organisation. structure. A manager is said to have a restricted range of authority when there are fewer direct reporters under their supervision.

Types of Organisation

- Centralised and decentralized organization
- Line and Staff Organisation
- Functional Organisation
- Committee Organisation

Centralised and Decentralised Organisation

- Centralised Organisation: A centralised business structure is one in which key decisions, such as those on resource allocation, are made by a single individual, and that individual also provides the primary strategic direction for the company.
- Most small firms are run in a centralised manner, in which the business owner is responsible for making all essential choices concerning products, services, strategic direction, and other crucial areas. On the other hand, the size of an Organisation is not necessary for it to be centralised.
- Decentralised Organisation: It functions by delegating decision making capabilities to multiple teams across geographies. Most of the planning, strategy and decision making is dome by middle and low level management with the involvement of team members.

Line And Staff Organisation

"line-staff organisation" refers to the method by which authorities (such as managers) formulate objectives and instructions, which are subsequently carried out by employees and other workers. A large and complicated business may use a line-staff organisational structure in an effort to increase their level of adaptability without giving up their managerial authority.

- Line executives always hold the authority of command, and the primary responsibilities of staff supervisors are to guide, advise, and counsel line executives.
- Within the line and staff organisation, work is segmented and specialised in accordance with individual needs.
- The entirety of the organisation is broken up into a variety of functional divisions, each of which has staff specialists assigned to it.The characteristics of specialisation make it possible to achieve efficiency in one's work.
- There are two different channels through which authority might flow simultaneously in a company or organisation: a. Line Authority b. Staff Authority
- The line executive retains control of the commanding role, while staff members are limited to advisory roles.

Advantages of Line and Staff Organisation

- Providing relief to line of executives
- Professional counsel
- Benefits of specialization
- Improvement in co-ordination
- Benefits of Research and Development
- Training
- Balanced decisions
- Unity of action

Disadvantages of Line and Staff Organisation

- A fundamental misunderstanding
- Lack of reliable guidance
- Conflicts between line and staff
- Expensive
- Assumption of authorit
- Staff steals the show

Functional Organisation

- A functional organizational structure organizes a company into different departments based on areas of expertise. It contributes to the preservation of quality as well as uniformity in the performance of a variety of functions across the entire company.
- FW Taylor was the one who initially proposed the idea of a functional organisation and advocated for the placement of knowledgeable individuals in key roles.
- All the activities of a functional organisation are broken down into their respective functions, which include functions like operations, finance, marketing, and personal relations.

There are three different authorities: line, staff, and function

- Each functional area is assigned to functional specialists who are vested with the authority to make all decisions pertaining to that function anytime that function is carried out anywhere within the organisation.
- The principle of unity of command does not apply to such an organisation because it already has a line structure in place for that purpose.

Advantages of Functional Organisation

- Specialisation
- Efficient Control
- Efficiency
- Cost-Effectiveness
- Expansion

Disadvantages of Functional Organisation

- Confusion
- Lack of coordination
- Difficulty in determining accountability
- Conflicts
- Expensive

Committee Organisation

- A committee organization represents a group of people with various kinds of knowledge, which is formally constituted to solve specific problems of the organization.
- A committee helps to gather collective ideas and information, properly analyze them which helps to make strong managerial decisions and solve difficult problem.

Advantages of Committee Organisation

- Improved Quality of Decisions
- Establishing goals, plans, and policies
- Participatory Management
- Decrease Prejudice and Conflicts
- Dealing with Complicated Problems
- Commitment to Implementation
- Sharing of authority

Disadvantages of Committee Organisation

- Creating Conflict
- Delay in Decisions
- The Possibility of Diversion

- The Shifting Tendency
- Lack of Secrecy
- Distribution of Responsibilities
- Division of Accountability

Organisation Structure

Formal Organisation

- The accomplishment of the organisational goals is intended to serve as the motivation for the formal organisation structure.
- A formal organisational structure delegates distinct responsibilities to each individual member of the group.
- In a formal organisation, each member is given a specific amount of authority or decision-making power, depending on the nature of the organisation.
- The establishment of hierarchical connections between superiors and subordinates is a direct consequence of a formal organisational structure.

Advantages of Formal Organisation

- Organised Tasks
- Successful Completion of Organisational Objectives
- Avoidance of duplication of functions
- Harmony
- Establishing One's Place in the Chain of Command
- Placement of a greater emphasis on work

Disadvantages of Formal Organisation

- Postponing an Action
- Does not consider the employees' social requirements:
- Placement of exclusive emphasis on work

Informal Organisation

- Individuals create some social and friendly groups within the organisation. This structure is formed by a network of social and friendly groups.
- Primary purpose of these structures is to facilitate the attainment of psychological fulfilment.
- An informal organisational structure does not have a predetermined chain of command or set way for information to flow through it.
- Iit is impossible to determine the origin of information because any individual can contact any other member of the organisation.
- The formal organisation structure is necessary for the existence of informal organisational structures.

Advantages of Informal Organisation
- Effective and Rapid Communication
- Satisfies societal requirement
- Correct response
- Utilisation of informal organisation as a strategic tool

Disadvantages of Informal Organisation
- Engage in Rumour-Spreading
- No Organised Tasks
- Potential to have unfavourable effects
- Placement of a greater emphasis on individual interests

Organisation Charts And Manuals
- According to George R. Terry, an organisation chart is a "graphical form" that illustrates the essential components of an organisation. These components include key functions and the relationships that are associated with them, channels of supervision, and the degree to which each employee is in charge.
- In larger firms, organisation charts are frequently accompanied with organisation manuals to provide further context.

Organisation Charts
Organisation charts can be divided into two parts:
- **Master Charts**: This chart displays the entirety of the formal organisation structure.
- **Supplementary Charts**: Supplementary charts provide an in-depth look at the linkages, authorities, and responsibilities that exist inside a particular department or significant component of an organisation's specified area of responsibility.

Organisation charts can also be classified into the following three types based on how organisation charts are prepared:
- Vertical chart or Top-down chart
- Horizontal Chart or left to right chart
- Circular Chart

Organisation Manuals
- An organisation manual adds to the information that is provided in an organisation chart by providing more data and serving as a supplement.
- A compact book that contains information about the aims of the organisation, the authority and responsibilities of various positions, as well as the processes and procedures that are to be followed is called an organisation manual.

The organisation manual can be broken up into the following four sections:

- Policy Manual
- Operational Manual
- Organisational Manual
- Rules and Regulations Manual

Advantages of Organisation Chart and Manual

- Management Tool
- Avoidance of Overlapping and Duplicate Activities
- Resolution of Organisational Conflicts
- Training Guides
- Reference to Outsiders

Disadvantages of Organisation Chart and Manual

- Rigidity
- A Partially Completed Picture
- Inadequate Description
- Potential for Psychological Issues

The Organisation Culture

- The values, attitudes, beliefs, and behaviours that characterise and contribute to an organisation's one-of-a-kind social and emotional work environment are referred to as the organisation's culture. Organisational culture is also referred to as corporate culture.
- The organisational culture is one of the things that is the most difficult to change because it is unique to each company and is comprised of both written and unwritten rules that have been developed over the course of time.

Types of Organisational Culture

- The Clan Culture
- The Adhocracy Culture
- The Culture of the Market
- The Hierarchy Culture

Authority And Responsibility

Authority

- A superior has the legal right to issue commands to those under his or her supervision.
- The position of the boss within the organisation is the primary factor that, in most cases, determines who has authority.
- A superior can give his subordinate the authority to do something under his supervision.
- The chain of command moves from superior to subordinate in a downward direction.

- Authority can be defined as the legitimate power that an individual or group possesses over other individuals.

Responsibility

- Responsibility is an outcome of the superior-subordinate relationship, in which the subordinate accepts the obligation to carry out the responsibilities that have been delegated to him. The subordinate cannot delegate this responsibility to anyone else.
- The chain of responsibility moves from the subordinate to the superior position in an ascending order.
- It means making a moral commitment to complete the work that has been allotted.

Sources of Authority

- Legitimate Authority
- Coerciveness
- Rewarding Authority
- Expertise
- Referent Authority

Forms of Responsibility
Operating responsibility:

- Individuals are held accountable for their own actions in the workplace through the concept of "operating responsibility."
- The person who is doing the work is the one who is responsible for, or obligated to fulfil, operating responsibility.

Ultimate Responsibility:
The manager is ultimately responsible for fulfilling his or her final task, which is to see to it that the work is carried out effectively by the staff members.

Organisational Change

- The term "organisational change" refers to the actions that are taken by a company or business to modify a significant aspect of their organisation.
- These aspects may include the company's culture, the underlying technologies or infrastructure that it makes use of to function, or their internal procedures.

The need for organisational transformation is driven by a variety of variables:-

- New management at the helm of the business entity or in other areas or departments
- Alterations to the organisational structure of teams
- The introduction of innovative technologies
- The adoption of novel business models

There are three primary categories of organisational changes, which are as follows:

- Developmental Change
- Changes during Transition
- Transformational changes

Management of Change

- A methodical and systematic strategy for addressing the transition or change of an organisation's objectives, procedures, or technologies, is referred to as "change management.
- The goal of change management is to put into action tactics that will bring about change, control change, and assist individuals in becoming accustomed to change.
- The evaluation of each change request in terms of its potential effect on the project is an essential part of project management, and plays an important part in change management.

Resistance to Change

- The act of rejecting or battling against modifications or changes that affect the status quo is what we mean when we talk about change resistance. This resistance may show itself in a single worker or permeate the entire workplace.
- A lack of readiness to adjust one's behaviour in response to changing conditions can be defined as resistance to change. It can be done in an indirect or direct manner, organised or on a personal level.

There is a clear indication of resistance to change in functions such as:

- Denunciation or Fault Finding
- Nit-picking over tiny details
- Offensive or Insulting remarks
- Absence in meetings
- Dishonouring commitments
- Continuous arguments
- Disruptive behaviour

Approaches to Change Management

Lewin's Change Management Model: The model consists of three primary phases

- Unfreeze
- Change
- Refreeze

McKinsey 7S Model: The Seven Stages of the model

- Strategy
- Structure
- Systems

- Values that are shared
- Style
- Staff
- Skills

Kotter's Change Management Principles: His theory of change management is structured in eight phases, with each phase concentrating on a key principle that addresses people's reactions to change.

- A rising sense of urgency
- Putting together the team
- Getting the vision right
- Communicating
- Getting things off the ground
- Concentrating on goals for the near term
- Not giving up
- Adapting to new circumstances

Nudge Theory:

- The essence of this principle consists of gently nudging or pushing someone, as well as encouraging and motivating them to make a change. It is based on indirect encouragement and enablement.
- It avoids direct instruction or enforcement. Instead of telling people to change, you pave the way for them to choose to do so by themselves.

ADKAR Model:

- The ADKAR Model or theory of change is a goal-oriented tool or model that enables various change management teams to concentrate on the steps or activities that are directly related to the goals it wants to achieve.
- Change managers can use models to identify various gaps or gaps in the process of change management in order to provide efficient training to employees.
  A: Awareness/Consciousness - regarding the requirement and prerequisite for change
  D: Desire - to both be a part of and contribute to the process of change.
  K: Knowledge - how to effect this transformation
  A: Ability - the ability to integrate change on a consistent basis
  R: Reinforcement - both to maintain its current position and to add additional support later.

Bridges' Transition Model:

This approach, model, or theory is distinguished by the fact that it concentrates on progression rather than modification and, as a result, remains static.

The model centres on three primary steps, which are described in the following order:

- End, give up and let go
- Neutral zone
- New beginning

Kubler-Ross Five Stage Model:

This model is also known as the grief model because it discusses the various emotional states and stages that people go through when they become aware that their time on earth is ending. The model, which assists in comprehending and coping with one's own personal trauma, has gained widespread acceptance all over the world.

- Denial
- Anger
- Bargaining
- Depression
- Acceptance

Conflict Management

The process of resolving conflicts through conflict management aims to achieve a balance between minimising the potential for negative outcomes and maximising the potential for positive outcomes. The goal is to improve learning and group outcomes, such as an organization's efficiency or performance in a given environment. Skills needed for conflict management are given below:

- Clear and effective communication
- Listening attentively
- Engaging in the practice of empathy.
- Problem solving
- Positive attitude
- Setting the priority levels
- Being patient.
- Understanding others' body language.

Conflict Resolution Strategies

- Refrain from ignoring the conflict
- Explain the nature of the issue
- Organise a meeting between various parties involved
- Identify a solution
- Maintain vigilance and follow up on the situation regarding the conflict

Unit-4: Staffing

Staffing

Managers are responsible for building an organisation through the process of recruiting, selection, and development of individuals as capable employees. This process is known as staffing.

Functions of Staffing

- Obtaining qualified individuals for various job positions inside the organization
- The process of staffing ensures that the most qualified candidates are selected for open positions, which results in greater levels of both productivity and performance.
- It contributes to the promotion of the most effective and efficient usage of human resources in a variety of ways.
- The successful recruitment of the right person raises the level of job satisfaction and morale experienced by workers
- The process of staffing serves to guarantee that human resources are used more effectively.
- It secures the organization's continued existence as well as its continued expansion using development managers.
- Proper people can be placed in the right jobs with the help of staffing services.
- Staffing is a function that is used in many different contexts. It is the responsibility of managers at every level of management to carry it out.

Important Objectives of Staffing

- To get the appropriate employees for the appropriate positions.
- To educate and cultivate the available human resources.
- To design policies for personnel matters, such as transfer, promotion, and other related work.
- To effectively shape the available human resources and to motivate those resources toward better levels of performance.
- To create a positive and productive working connection between employers and employees as well as between different groups of employees.
- To ensure that the demands of the workers are met to the workers' satisfaction so that they will become dedicated and loyal to the organisation.
- To keep positive human interactions in place in order to foster strong morale among the workforces.

Primary Facets of Staffing

- Recruitment
- Selection
- Training

Significance Of Staffing

- Recognizes Competent Staff
- Enhancement of Overall Performance
- Ongoing Capability for Survival and Development
- The Optimal Employment of the Available Human Resources
- Increases Job Satisfaction and Contributes to a Positive Morale

Recruitment

Staffing refers to the process of hiring individuals who are the most qualified for a job whereas recruiting is the process of finding potential applicants for a job and encouraging them to apply for the vacant post. The primary stages involved in the recruitment process:

- Determining the need for hiring
- Conceiving a recruitment strategy
- Drafting a job description
- Publicising the position
- Recruiting candidates for the position
- Examining applications
- Conducting a phone interview or initial screening
- Conducting interviews
- Evaluating candidates
- Conducting a background check
- Making a decision
- Checking references
- Making an offer of employment
- Hiring candidates
- On boarding of candidates

Types of Recruitment

- Internal Recruiting
- Retained Recruiting
- Contingency Recruiting
- Recruiting for Staffing Agencies
- Outplacement Recruiting
- Reverse Recruiting

Selection

The phase of the staffing process known as selection is the component of the hiring procedure that entails selecting an employee to hire from a shortlist of exceptional applicants who have been reduced.

The Selection Process

- Preliminary Interview
- Taking Applications
- Examining the Applications
- Employment Tests
- Formal Interview
- Verification of References
- Medical Tests
- Final Selection and Appointment

Training

Training is the process of increasing the skills, capacities, and knowledge of workers so that they are better suited to perform certain job duties. The training process shapes the way people think and ultimately leads to improved work performance from those individuals.

Importance of Training

- Boosts Employee Morale
- Decreased requirement for supervision
- Reduction in the number of accidents
- Increased Promotion Chances
- Increased productivity

Types of Training

- **On-the-job Training**: This type of training refers to the methods that are used to instruct workers while they are performing their regular duties at an organisation.
- **Off-the-job Training** :. Training that takes place in a setting that is not the employee's normal place of employment is referred to as "off the job training."

Retention and Development

Practices that contribute to retention arise in every area of HR, and all positions within an organisation will need to collaborate with one another to develop and implement retention plans that incorporate multiple facets.

Effective Practices in Retention

- Hiring
- Possibilities of Socialising
- Training and development
- Compensation and rewards
- Fair Supervision
- Employee involvement

Knowledge And Learning Management

The processes of generating, exchanging, utilising, and managing information and knowledge inside an organisation are collectively referred to as "knowledge management."

Benefits of Knowledge Management

- Making knowledge accessible in order to support the development of products and services that are more innovative
- Shorter development cycles
- Managing creative endeavours and educational growth
- Getting the most out of the experience and knowledge of staff members.
- Facilitating employees' access to pertinent concepts that are necessary for them to perform their jobs in a satisfactory manner
- Problem Solving
- Management of both physical assets and intellectual property

There is a model of KM that has been formally specified, and it consists of four different parts. These aspects are referred to as socialisation, combination, externalisation, and internalisation, respectively. This paradigm, which comes under the heading of the SECI Model for Knowledge Management, was established by Nonaka and Takeuchi

Learning Management Systems and the SECI Model

Socialisation

- True knowledge management requires that there be a constant flow of information and knowledge amongst employees, and this flow should not be restricted in any way.
- The utilisation of chat rooms and the opportunity for employees to communicate with one another while they are studying are two features that are made possible,by learning management systems (LMS).

Externalisation

- One approach is to connect the material covered in online learning courses to events that are taking place in actual workplaces.
- For instance, workers can participate in training and then be directly asked to apply what they've learned to their jobs outside of the context of a virtual learning environment.
- Testing the employees' expertise is yet another method for integrating externalisation into the process. Then, based on how well individuals do their jobs, externalisation can be utilised as a method to develop new forms of training and learning.

Combination

The combination component of the knowledge management theory has many potential applications in the world of business. One approach to achieving this goal is to make use, in the process of regularly updating and streamlining training, of both the feedback of employees and the input of subject matter experts.

Internalisation

The ultimate purpose of utilising a learning management system is for employees to internalise the information that they have gained. They should be taught essential skills in a manner that enables them to immediately put those skills to use in their work.

Performance Appraisal

- The phrase "performance appraisal" refers to the periodic examination of an employee's contribution to a company in terms of both job performance and overall contribution.
- An employee's abilities, achievements, and growth—or lack thereof, depending on the results—are analysed during a performance assessment, which is also known as annual review, performance review or evaluation, or employee appraisal.
- Performance reviews are used by businesses to provide employees with comprehensive feedback on their work, as well as to justify salary raises and incentives, as well as choices regarding employment termination.

Types of Performance Appraisals

- Self-evaluation is when individual employees evaluate their own behaviour and performance on the job.
- Peer assessment is a rating of an individual's performance given by their workgroup or other co-workers.
- 360-degree feedback assessment incorporates comments from the participant, as well as those of their supervisor and peers.
- Negotiated appraisal is a more recent trend that involves a mediator and aims to minimise the adversarial aspect of performance reviews by allowing the subject to present first. This is done to moderate the impact of performance evaluations on employees. Also places an emphasis on the positive aspects of the individual before offering any constructive criticism.

Methods of Performance Appraisal

Broadly, all methods of appraisals can be divided into two different categories.

- Past-Oriented Methods
- Future-Oriented Methods

Past – Oriented Methods

a) Rating Scales: Rating scales consists of several numerical scales representing job related performance criterions such as dependability, initiative, output, attendance, attitude, etc. Each scale ranges from excellent to poor. The total numerical scores are computed and final conclusions are derived.

Advantages – Adaptability, easy to use, low cost, every type of job can be evaluated, large number of employees covered, no formal training required.
Disadvantages – Rater's biases.

b) Trait Analysis: Under this method, checklist of statements of traits of employee in the form of Yes or No based questions is prepared. Here the rater only does the reporting or checking and HR department does the actual evaluation.
Advantages – economy, ease of administration, limited training required, standardization.
Disadvantages – Raters biases, use of improper weights by HR, does not allow rater to give relative ratings.

c) Forced Choice Method: The series of statements arranged in the blocks of two or more are given and the rater indicates which statement is true or false. The rater is forced to make a choice. HR department does actual assessment.
Advantages – Absence of personal biases because of forced choice.
Disadvantages – Statements may be wrongly framed.

d) Forced Distribution Method: Here employees are clustered around a high point on a rating scale. Rater is compelled to distribute the employees on all points on the scale. It is assumed that the performance is conformed to normal distribution. Assumption of normal distribution, unrealistic, errors of central tendency may occur.

e) Critical Incidents Method: The approach is focused on certain critical behaviours of employees that make all the difference in the performance. Supervisors as and when they occur record such incidents.
Advantages – Evaluations are based on actual job behaviours, ratings are supported by descriptions, feedback is easy, reduces recent biases, chances of subordinate improvement are high.
Disadvantages – Negative incidents can be prioritized, forgetting the positive ones, overly close supervision.

f) Confidential Records: Mostly used by government departments, and in older organisations where the concept of self-assessment is not encouraged.
Here the report is given in the form of Annual Confidential Report (ACR) and may record ratings with respect to following items; attendance, self-expression, team work, leadership, initiative, technical ability, reasoning ability, originality and resourcefulness, etc. The system is highly secretive and confidential. Feedback to the assessee is given only in case of an adverse entry.

g) Pen portrait: The assessor pictures in writing about the assessee, regarding his qualities and performance as well as his potential. Armies use this method in evaluating cadets.

Future-Oriented Methods

a) Management by Objectives: A concept popular till recently and introduced by the management Guru, Peter Drucker, where performance is rated against the achievement of objectives stated by the management. MBO process goes as under.

- Establish goals and desired outcomes for each subordinate in a conference between the management and the concerned subordinate.
- Set performance standards.
- Assess performance achieved against goals set for the employee through frequent performance review meetings
- Identify reasons for shortfall and give feed-back for improvement.
- Establish new goals and new strategies for the coming year.

b) Assessment Centre Approach Method:

- Under this method, many evaluators join together to judge employee performance in several situations with the use of a variety of criteria. It is used mostly to help select employees for the first level supervisory positions
- The use of situational exercises (such as an in-basket exercise, management games, role-playing, critical incident and leaderless group discussion, etc.),
- Evaluators are drawn from experienced managers with proven ability at different levels of management
- They evaluate all employees, both individually and collectively and each candidate is given one of the four categories: more than acceptable, less than acceptable and unacceptable,
- A summary report is prepared by the members and a feedback on a face-to-face basis is administered to all the candidates who ask for it.

c) Behaviourally Anchored Rating Scales (BARS)

A BARS is a tool for evaluating employees in a defined set of performance dimensions by comparing their behaviors with specific behavior examples that anchor each performance level, usually on a five-, seven- or nine-point scale.

- Generate Critical Incidents
- Develop Performance Dimensions
- Reallocate Incidents
- Scale of Incidents
- Develop Final Instrument

The BARS technique has advantages like – More accurate judgment, establishes clear standards, provide good feedback to the people being appraised, make the dimensions more independent of each other and it provides independence to the rater.

d) Key Result Areas (KRAs): KRAs refer to general areas of outcomes or outputs for which the department's role is responsible. The Individual Performance and Development Plan has two component parts, the Performance Plan and its related Individual Development Plan.

The Performance Plan is constructed by the manager and employee together, focusing on priority-setting for the performance management cycle and, working co-operatively through a four-step process:

- Agreeing upon Key Results Areas
- Agreeing upon Performance Objectives
- Agreeing upon Key Performance Indicators and their associated Performance Targets
- Agreeing upon Action Plans

Human Resource Development

- The purpose of human resource development is to enhance the efficiency of individuals, groups, and organisations through the coordinated implementation of various training, organisation, and career advancement initiatives.
- HRD, helps people become more capable. The workforce receives new skills, knowledge, and attitudes as a result of HRD's efforts.
- People are able to become more engaged to their jobs when an adequate HRD programme is implemented. It is necessary to have a reliable performance appraisal system in order to evaluate individuals according to their level of achievement.
- With the assistance of HRD, a culture of trust and respect can be established in a given setting.
- With the assistance of HRD, an accepting attitude toward change can be developed. The employees discovered that they had improved capabilities in terms of being able to solve problems.
- It contributes to the overall improvement of the employees' progress. The organisation's sense of teamwork is also boosted by HRD's efforts.
- it assists in the development of a "efficiency culture" within the firm. It results in an increase in the efficiency of the organisation.
- It encourages greater participation from staff members. When they do a good job, workers have a sense of pride and a sense of having accomplished something.
- It also helps to collect data on employee programmes and policies that is helpful and objective, which further facilitates better planning for human.

Types of Human Resource Development

HRD can take many forms, such as on-the-job training or work shadowing, classroom education or education obtained online, opportunities for professional development and growth, and training to ensure compliance with laws and regulations.

- Learning the facets of a work while actually performing the tasks associated with that employment is what is meant by "on-the-job training."

- Another related method is "work shadowing", in which an employee watches another employee perform the duties of their job in order to acquire the necessary abilities.
- Another type of growth is intellectual or professional growth, which can take the form of attending classes at a university or certification programmes, as well as job-specific trainings and seminars that focus on how to perform one's job more effectively

Managing Diversity

The workforce is becoming increasingly diverse in terms of generations represented. The workforce is growing increasingly diverse in terms of age, with members of generations ranging from the seasoned Baby Boomers who have years of expertise to the fresh-faced Generation Z members.

Advantages of generation diversity:

- Problem-solving
- Understanding diverse audiences
- Occasions for educational growth
- Mentorship

Healthy Industrial Relations

- The term "industrial relations" refers to the interaction that exists between workers and management, which can either directly or indirectly be traced back to the relationship between unions and employers.
- Industrial progress is impossible without cooperation of labours and harmonious relationships. Therefore, it is in the interest of all to create and maintain good relations between employees (labour) and employers (management).
- The management and the trade union both need to approach the building of good industrial relations with a positive attitude if they want to see it succeed. Healthy industrial relations require a number of important characteristics to be present, including mutual respect, understanding, goodwill, and acknowledgement of dignity.

Management of Change

Management of change involves managing the interaction between the people who are leading the change effort and those who are expected to implement the new strategies. It also involves managing the organisational context in which changes can take place and managing the emotional bonds that are essential for any transition. The following points and strategies can help for better management of change within a workplace

Gaining an Understanding of the Change Process:

- Preparation
- Implementation
- Follow-through

Acquiring an Awareness of the Drivers of Change:

In order for managers to successfully manage change, they must first understand why it is required. If you don't do this, it will be impossible to addresses fundamental issues and challenges like:

- Which pressures are driving the shift that is occurring?
- Are these pressures from within, such as the introduction of new leadership?
- Are these pressures from the outside world, such as the creation of new technology, a shift in your business, or the appearance of a new competitor?

Formulating a Strategy

- Once you have an understanding of the reason for the shift, the next step is to devise a plan.
- This plan should include a high-level overview of the reasons for change, describe the scope of the project, identify the main stakeholders, organise a team, and present a thorough roadmap of the tasks that will be required to finish the project.

Clarity of Communication

- In the end, you will need to be competent of explaining change to two audiences that couldn't be more different from one another. The first category includes all of your staff members and other members of your team.
- These personnel need to understand not just why the change is necessary but also how their job responsibilities will be affected by the change.

Be Ready to Overcome Obstacles

No matter how well prepared you are for the possibility of change, there is no guarantee that everything will go according to plan. Ensure that you are prepared for a variety of possible outcomes.

Formulating Career Strategy

- The first step is to do an in-depth analysis of your values, strengths, and motivators
- The second step is to be aware of your advantages.
- Conduct research into the many possibilities and make the most of the opportunities.
- Developing Expertise.
- Developing a network.
- Considering and evaluating your alternatives.
- Taking an action.

Stress Management

- The term "stress management" refers to a wide range of treatments and psychotherapies that are aimed at regulating the degree of stress experienced by a person, particularly the level of chronic stress, typically with the intention and the goal of enhancing day-to-day functioning.

Unit-5: Directing

Directing

Directing is an important function as people, working in the organisation, are guided, motivated, counselled, supervised, and led towards the achievement of organisation's goals through the practice of directing.

Characteristics

- The initiator of action
- All-encompassing function
- Constantly occurring activity
- Descending order of hierarchical structure
- The human factor

Elements of Directing

Leadership

The term "leadership" refers to both a set of behaviours and a set of attributes that can be acquired through training and development respectively. Leadership is the process of inspiring other people to work toward a common goal and organising their resources to make that objective a reality.

Importance of Leadership

- Begins or starts the action
- Co-ordinates efforts
- Provides motivation
- Helps maintain equilibrium: with the assistance of four instruments of direction function:
  - A strategic combination of compelling leadership qualities
  - Communication that is clear and concise
  - Strict oversight
  - Efficient and effective motivation.
- Adapts to changing circumstances
- Makes effective use of available resources

Leadership Roles and Responsibilities

- Direction at all levels
- Representative of the Organisation
- Helping Integration and Reconciliation of Personal Goals with Business Goals
- Garners support
- Acts as Friend, Philosopher and Guide

Leadership Qualities

- Outward Look
- Vision and foresight
- Intelligence
- Capabilities in Communication
- Objective approach free from bias
- Knowledge of work
- Sense of responsibility
- Self-confidence and the ability to exert one's will
- Humanist

Leadership Models

Authoritarian Leadership

- An authoritarian leadership style is described as being as leaders behavior that asserts absolute authority and control over subordinates and demands unquestionable obedience from subordinate.
- Creativity would suffer as a result of limited input from the team if this method is implemented, despite the fact that it is effective in a short period of time.
- Leadership methods based on authoritarianism are utilised whenever the members of a team require guidance.

Advantages of the authoritarian leadership style

- It is possible to cut down on the amount of time needed to reach an important conclusion.
- It is possible to clear the command chain and punctuate.
- The amount of repetition that occurs during the execution of the plans can be reduced.
- Implementing an authoritarian paradigm of leadership lead to the production of consistent results.

Disadvantages of the authoritarian leadership style

- Management style that is overly authoritarian might provoke discontent among workers.
- By utilising this paradigm, you run the risk of stifling the originality and innovation of your workforce.
- It is detrimental to the coordination and cooperation of the group.
- The amount of input from the group stands severely cut back.
- The utilisation of this model significantly contributes to an increase in the employee turnover rate.

Participative Leadership

It is a style of leadership in which all members of the organization work together to make decisions. Participative leadership is also known as democratic leadership

Advantages of the participative leadership style:

- The inspiration of workers and the gratification they got from their jobs rose.
- It allows for a more efficient utilisation of the employees' creative potential.
- It assists in the development of powerful teams.
- It is possible to achieve high levels of productivity.

Disadvantages of the participative leadership style:

- The process of making decisions takes some time.
- Leaders are more inclined to apologise to their employees than employees themselves.
- There would on occasion be problems with communication.
- Because of the openness with which information is shared, potential security problems may emerge.
- If staff lack the necessary skills, poor decisions may be made.

Delegative Leadership

- The delegative leadership style, also known as the 'laissez-faire' leadership style, is an approach that gives subordinates the power to make most of the decisions regarding their day-to-day activities.
- This strategy has the potential to be successful provided the members of the team are knowledgeable, willing to accept responsibility, and like the opportunity to work on their own.

Advantages of the delegative leadership style:

- Employees with more experience are eligible for perks that are determined by their level of experience and credentials.
- The originality of the concepts and the inventiveness are very much appreciated.
- A productive working atmosphere that is the result of leadership that emphasizes delegation.

Disadvantages of the delegative leadership style

- There is a lack of clarity regarding command accountability.
- The representative leadership struggled to adjust to the changes that were occurring.

Transactional Leadership

- Transactional leadership, also known as managerial leadership, is a leadership style where leaders rely on rewards and punishments to achieve optimal job performance from their subordinates.
- Transactions between a leader and his followers, including incentives, admonition, and other commutations, are utilised by the transactional leadership model to accomplish the goal of getting the work done.
- The leader makes sure that everyone is aware of the objectives, and everyone on the team is aware of how they will be rewarded for meeting the requirements.

This type of giving and taking is more concerned with adhering to existing routines and procedures in an accomplished manner.

Advantages of the Transactional leadership style

- Time-bound, measurable, and detailed objectives that are within the employees' reach, which have been developed by the leaders.
- Enhanced levels of motivation and output from staff members.
- It can oust chaos in the chain of command or at least bring it to a manageable level.
- The utilisation of this model results in the production of a system that is simple for managers to put into action and straightforward for workers to adhere to.
- Employees have the ability to choose their own reward system.

Disadvantages of the Transactional leadership style

- There is a possibility of inhibiting inventiveness and creativeness.
- Having empathy does not add any value.
- It fosters the development of more followers than leaders among the workforce.

Transformational Leadership

- It is a management philosophy that encourages and inspires employees to innovate and develop new ways to grow and improve the path to a company's future success. It's a management style that's designed to give employees more room to be creative, look to the future, and find new solutions to old problems.
- The leader inspires his or her followers by providing them with a clear vision, and then the leader encourages and empowers the followers to work toward achieving the goal. The leader is also responsible for serving as an example of the vision.

Advantages of the Transformational leadership style

- A decrease in the number of employees who leave their jobs as a result of utilising this methodology.
- A strong emphasis by the transformational leadership on the importance of the business vision.
- When utilising this technique, you will see that your employees have a good morale.
- It uses several methods of motivation and inspiration in order to gain the support of the personnel.
- This style to leadership is not one of compulsiveness.
- The transformational leadership style places a high priority on the interaction between parties.

Disadvantages of the Transformational leadership style

- It is possible for leaders to lie to their employees.

- It's possible that you'll need continuous encouragement and continuous feedback.
- The work cannot move further until the staff give their approval.
- It has the potential to sometimes lead to a divergence of protocols and principles.

Motivation

The word "motivation" is derived from the Latin word "motive," which can be translated as "necessity," "incline," or "drive" within a person. People are motivated to take action so that the goal can be achieved. It is possible that psychological factors are what drive people's behaviour during the course of the task they are trying to accomplish.

Types of Motivation

- Extrinsic Motivation (Motivation Derived from Outside Sources)
- Intrinsic Motivation (Motivation that comes from Within)

Impact of Motivation

- Conformational Changes: This is when the choice is made to carry out a behaviour.
- Perseverance: It is a persistent effort in the direction of a goal, in spite of the presence of obstacles.
- Intensity: Intensity is a visible manifestation of the dedication and enthusiasm with which one pursues a goal.

Theories of Motivation

Alderfer's ERG Theory of Motivation

- The ERG model was established by Clayton Alderfer, who took Maslow's
- Hierarchy of Needs and turned it into a three-factor model of what motivates people. Existence, relatedness, and development are the three distinct types of needs that are represented by the letters E, R, and G. The three demands listed above are what drive every single human being.
- Existence, which essentially refers to both a person's physical and mental well- being, is the most tangible and motivating of Alderfer's three requirements, and it is also the need that comes first.
- The need for Relatedness, a sense of community, and a healthy relationship with oneself are the next levels of importance.
- The need for Growth, which essentially refers to self-development, fulfilment, and the feeling of realising your potential, is the one of the wants in the ERG model that is the least tangible, but it is still very important.

Herzberg's Theory of Motivation

The two factors known as the "Hygiene factor" and the "Motivating factor" have an impact on one's level of motivation in the workplace. If the hygiene factors are not present, the employee will put in less effort into their work. When present, motivation factors will inspire an employee to put forth their best effort in their work.

- **Motivational Factors:** (a sense of accomplishment, challenging work, recognition, responsibility, promotion, growth) which give positive satisfaction.
- **Hygiene factors:** (company policies, supervision, relationships, working conditions, compensation policies, status, job security, salary and fringe benefits) that do not motivate if present, but, if absent, result in demotivation.

McClelland's Needs Theory of Motivation

McClelland held the belief that an individual's unique needs are developed over the course of their lifetime and are shaped by the various experiences they have throughout their lives. McClelland's Needs Theory is also referred to as the Three Need theory and the Learned Needs Theory from time to time. McClelland has recognised three fundamentally important wants that motivate people:

- Need for Power
- Need for Affiliation
- Need for Achievement

The individuals with high achievement needs are highly motivated by competing and challenging work. They look for promotional opportunities in job. They have a strong urge for feedback on their achievement. Such individuals try to get satisfaction in performing things better. High achievement is directly related to high performance. Such individuals look for innovative ways of performing job. They perceive achievement of goals as a reward, and value it more than a financial reward

Porter and Lawler's Motivation

- The Porter and Lawler theory of motivation is predicated on the supposition that receiving rewards can lead to a sense of fulfilment, and that sometimes performing well can result in receiving rewards. They have a hypothesis that the correlation between performance and satisfaction is due to another variable that is rewarded in some way.
- Porter and Lawler contend that performance is not necessarily a direct result of being satisfied. Instead, the opposite is true because once people have achieved their goals of satisfaction, they are more likely to become complacent. On the other hand, performance can result in a feeling of satisfaction if there is effective reward system.

Equity Theory

- John S. Adams, a behavioural psychologist, was the first person to develop equity theory in the early 1960s. The core of the equity theory is the principle of balance or equity. As per this motivation theory, an individual's motivation level is correlated to his perception of equity, fairness and justice practiced by the management.

- Higher is individual's perception of fairness, greater is the motivation level and vice versa. While evaluating fairness, employee compares the job input (in terms of contribution) to outcome (in terms of compensation) and also compares the same with that of another peer of equal cadre/category.

Vroom's Expectancy Theory of Motivation

- The expectation theory of motivation, developed by Victor Vroom, states that an individual's expectations about the future have an effect on the individual's level of motivation.
- According to Vroom, the specific factors that determine an individual's level of motivation are the degree to which they place a high value on any reward that is associated with a particular action (known as "Value"), the degree to which they believe that they will be able to achieve positive results as a direct result of the effort that they put into something (known as "Expectancy"), and the degree to which they believe that achieving positive results will result in a reward (known as "Belief (Instrumentality). A lack of motivation may be present if any one of these variables is absent.

Self Determination Theory

- The work of psychologists Edward Deci and Richard Ryan was the foundation for the development of self determination theory. They came up with a theory about what motivates people, and it suggested that people are driven by a desire to improve themselves and find satisfaction in their lives.
- Self-determination is a belief that each person possesses the capacity to choose their own path in life and take responsibility for managing their own affairs. This quality is very important in terms of a person's psychological health and well-being. People have the experience of regaining control over their lives and the choices they make when they practise self-determination.

Communication

Communication refers, in its most fundamental sense, to the act of conveying meaning from one individual to another by using a shared set of symbols.

Communication Models

Linear Model

- Linear communication is one-way communication where a sender or speaker transmits a message to a receiver who reads or listens to the message but doesn't respond.
- Larold Lasswell, a sociologist and psychologist, created this linear communication model in 1948. The model asks five basic questions: who, what, which channel, to whom, and to which effect? This model allows you to define any piece of communication easily.

The model, as it was first conceived, was made up of five components, all of which were arranged in a sequential fashion:

- The origin of the information
- Its transmission
- The transmission channel
- The receiver
- The destination

Dynamic Model:

Other models of communication processes have been developed in order to cater to the requirements of students of communication whose interests differ from those of quantitatively oriented theorists such as Shannon, Weaver, and Wiener. This was done in order to meet the requirements of students of communication. The art of dynamic communication is one that is always developing, and it consists of the capabilities of interacting consciously and responding thoughtfully to others.

Levels of Communication

- Communication Not Directed Toward Me
- Communication Between Individuals
- Intrapersonal Communication:
- Organisational Communication
- Mass Communication

Communication In Organisation

Organisational communication is a broad field that includes all forms of communication that allow businesses, government agencies, and non-profit organisations to function, grow, connect with stakeholders, and contribute to society. It allows us the following:-

- Performing duties that are connected to particular functions and responsibilities within the realms of sales, services, and production.
- Responding to new circumstances with innovative approaches at both the individual and organisational level.
- Carry out responsibilities by upholding policies, procedures, or regulations that support day-to-day and ongoing operations.
- Cultivate relationships in which "human messages are directed at people within the organization.
- Management's role in coordinating, planning, and controlling how operations are carried out within the organization

Supervision

According to Vitiates – "Supervision refers to the direct and immediate guidance and control of subordinates in the performance of their task."

George R. Terry and Stephen G. Franklin have defined supervision as "Supervision is guiding and directing efforts of employees and other resources to accomplish stated work outputs."

Supervision is the process of interaction, guidance and control of subordinates by meeting them regularly about the performance of their work. It is intended at ensuring that the subordinates work according to the plans and policies of the organization. A supervisor plays two important roles:

- Supervisor communicates the plans, policies, decisions and strategies of management to the subordinates.
- If there are complaints, grievances and suggestions of the subordinates, he communicates the same to the management. Thus, the supervisor plays the role of link between the subordinates and the management.
- A supervisor also acts as a guide to the subordinates. He helps them in their professional development by enhancing their knowledge and skills relating to their assigned jobs. He also acts as a motivator and mentor for the subordinates.

Unit-6: Controlling

Controlling

- Within an organisation, "Controlling Process" refers to a method that can be implemented to check whether or not certain criteria are being met. It entails gathering information about a system, process, person, or group of people in a thoughtful manner, in order to arrive at decisions that are necessary regarding each of these entities.
- The controlling function determines the degree to which actual performance varies from predetermined benchmarks. It investigates the factors that led to such deviations and makes an effort to make adjustments in accordance with those findings.

Characteristics Of Controlling

- Controlling is beneficial to the accomplishment of organisational goals.
- The procedure makes the most efficient use of the available resources.
- Controlling judges ensuring the correct application of the standard.
- Discipline and order are also established as a result of the process.
- The process of controlling the employees motivates the employees and boosts employee morale, which, in turn, leads to increased effort and labour from the employees within the organisation.
- Controlling ensures accurate planning for the future by reevaluating the previously established standards.
- The results of an organisation as a whole will improve as a result of control.
- The exercise of control reduces the number of errors that occur.

Advantages Of Controlling

- Assists in accomplishing Organisational Goals
- Helps in minimising errors
- Making Efficient and effective use of resources
- Validates accuracy of standards
- Improves order and disciple and motivates staff
- Results in better coordination within the organization
- Simplifies supervision and helps in delegation and decentralization
- Provides feedback for data improvement for future planning.

Limitations Of Controlling

- It may be costly to implement, especially in smaller firms.
- It is difficult to compare the actual performance with the accepted standards, specially in case of standards not expressed in quantitative terms.
- There is little or no control on external factors like government policies, changes in consumer behaviour, technological changes, competition, etc.

- There may be resistance from employees as they may consider it as restricting their freedom.
- Over-dependence on controls may lead to laxity in supervision.
- The operations of the organisation may slow down if the rules are implemented rigidly.
- The organisation may be exposed more errors and frauds if wrong controls are executed.

Types of Control Management

Broadly, the control management can be of 3 types, based on the timing of the control:

- **Feedback control:** These controls are based on the feedback received after the activity has taken place. So, the corrective action can be taken only for carrying out similar activity in future.
- **Proactive control:** These are future-directed controls which anticipate problems well in advance and the corrective action is taken accordingly.
- **Concurrent control:** These controls are based on the real-time engagement of the controller as the activity is being carried out. So, the corrective action can be taken simultaneously with carrying out the activity, to take care of any deficiencies observed.

Basic Elements and Steps of the Control Process

The process of establishing goals and standards:

- Although the process of establishing goals and standards is part of the planning process, it also plays a significant part in the controlling process. This is due to the fact that the primary objective of control is to steer the activities of acompany in the direction of those goals.
- It is very important for managers to communicate their organization's goals, standards, and objectives as clearly as possible.
- In this regard, there should never be any room for employees' interpretations to vary. Managers are required to set goals and take action based on those goals, and those goals can either be tangible and specific or intangible and abstract.

Comparing the actual performance to the predetermined goals and criteria:

- Once managers have a clear understanding of their objectives, they should measure and evaluate their actual performance before making comparisons. This step basically helps them know if their plans are working as intended.
- Once a plan has been put into action, managers are required to continuously monitor and assess its effectiveness. If things are not functioning as they should, then they should always be prepared to take the necessary corrective actions. In order to accomplish this, they must continually assess their current performance in relation to the goals they have set for themselves.
- First, managers need to measure actual performance before they can compare it to past performance. They can do this by measuring results in a monetary context, seeking feedback from customers, and so on.

Taking steps to make necessary corrections:
Managers are obligated to take immediate corrective action whenever there are gaps between actual performance and the goals that they have set for their teams. When taken promptly, corrective action can not only mitigate the existing damage but also prevent it from occurring again in the future.

Continuing to monitor the effects of corrective actions:
It is not enough for managers to simply implement corrective measures; they must also bring these measures to their inevitable and logical conclusion. Even this step requires thorough evaluation and comparison. Managers have an obligation to work on finding a solution to the problem until they do.

Relation Between Planning And Control
The processes of planning and controlling are inextricably linked to one another. The objectives of the organisation are determined through the planning process, and the controlling process ensures that they are met. The relationship between planning and control may be explained as under:

- The Planning Stage is the Originator of Control: During the planning phase, objectives and targets are established. A control process is required in order to successfully meet these objectives. Therefore, planning comes before controlling.
- Controls help Planning Sustain for Long-Term: The path that planning takes can be influenced by controlling. The act of controlling draws attention to the parts of the process that require planning.
- The control process supplies information that can be used for planning:

During the controlling process, the actual performance is compared to the standards that were established, and any deviations that are found are recorded. The data gathered for the purpose of exercising control are also utilised in the planning process.

- Planning and controlling are interconnected in the following ways: The first function that management is responsible for is planning. In order to enhance the performance going forward, the appropriate corrective actions have been taken. The first step in any process should be planning, and the last step should be control. Both must have the other in order to function properly.
- Planning and control involve looking into the future: Both planning and control are concerned with the activities that will take place in the future within the business. Planning is always done with an eye toward the future, and control also looks ahead. The accomplishment of a company’s objectives is the primary focus of both planning and controlling.

Control Techniques
Controlling techniques are the tools that are used to establish control over business activities, monitor those activities, and take any necessary corrective actions.

Controlling a business effectively can be accomplished using any number of methods, both traditional and modern. The selection of the methods absolutely needs to be done in a strategic manner. When deciding on the approach that will be most effective, the organisation needs to take into consideration:

- The Character of the Company or the type of business
- Specific Clientele or Users to Aim For
- The challenges that the Organizations are currently facing

Traditional Techniques of Control

Personal Observation

- The manager does this by personally observing the employees or workers at the location of the business. It is also known as On-the-Spot Observation or Direct Observation.
- The employees are pressured and motivated to perform at their highest level of productivity when they are directly observed. A significant amount of time is required for supervision when utilising this method.
- Managers acquire genuine and first-hand information for the analysis. In the event that the operations are not performing as expected, the managers have the ability to make adjustments there and then. It allows employees to discuss issues or problems simultaneously. Additionally, it improves the employees' overall sense of well-being and morale.

Break-even Analysis

- This control method illustrates the relationship between cost and volume at varying levels of production output. The Cost, Volume, and Profit analysis is another name for this approach. It forecasts the profits and losses that will result from changes in the amount of output that is produced.
- The break-even point refers to the point at which the purchase price and the selling price are equal to one another.

Break Even Point = Fixed Cost / (Price - Variable Cost).

Under the Break-Even Analysis technique, the evaluation is based on:

- Break-even Point
- Angle of Incidence
- Contribution Margin
- Margin of Safety.

Statistical Reports

Information is gathered by the manager so that performance can be evaluated across functional areas. The information that is gathered is then utilised for the purpose of comparison. Involved in this process is the examination of numerical information in the form of:

- Averages
- Percentages
- Coefficient of determination
- Ratios, etc.

The aforementioned information is presented by the organisation in the form of charts, graphs, tables, and so on. The data can be more easily visualised with the help of these reports, and the areas that require attention can be located. As a result, it is the method for data analysis that is utilised the most and provides the most benefit.

Budgetary Control:

Comparing and analysing the actual performance with the planned performance is an integral part of the budgeting process. In general, the following are included among the steps in budgeting:

- Establishing criteria by subdividing the overarching goals of the company into those of individual departments.
- A comparison of the actual performance to the budget and standards that were previously defined.
- Determine the logical deviations from the plan and take corrective actions after you have calculated them.
- Having control over one's budget makes it easier to have control over one's day- to-day activities. Consideration must also be given to the amount of resources and labour that will be required to accomplish the goals.
- There is a possibility that the final budget that was formulated will turn out to be inaccurate and costly.

The following is a list of the various types of budgets that are typically prepared by organisations:

- Cash Budget
- Sales Budget
- Production Budget
- Capital Budget
- Material Budget

Modern Techniques Of Control

Return on Investment:

Calculating the rate of return on investment (ROI) allows us to measure the return that was generated. Using this rate, one can better evaluate the company's current financial situation.

ROI Formula: Return on Investment = Net Income / Total Investment.

There are two ways in which we can increase our return on investment:

- By increasing the volume of sales in a manner that is proportionally greater than the overall investment.
- By lowering the total investment while maintaining the same level of sales volume.

It is useful for:

- Examining the differences and similarities in terms of wealth between the two eras and companies.
- Finding areas that have a negative impact on return on investment
- Attracting investors and enhance the company's reputation.
- Comparison among departments

Financial Statement and Ratio Analysis

Calculating a variety of Ratios is made easier, which in turn contributes to better financial management of the organisation. In order to accomplish this goal, data is compiled from the financial statements of the companies.

The following ratios are used the most frequently:

- Profitability Ratios
- Liquidity Ratios
- Solvency Ratios
- Turnover Ratios

Responsibility Accounting

- It is a method of accounting in which the amount of responsibility placed on the individual employee is taken into consideration. Therefore, businesses will conduct an assessment to determine whether or not the employee is capable of carrying out the responsibility in accordance with the criteria that have been established.
- This method of command and control works well for large organisations that have a number of different departments.

In general, there are four distinct categories of responsibility centres:

- Revenue Centre
- Cost Centre
- Profit Centre
- Investment Centre

PERT and CPM

- Project Evaluation and Review Technique (PERT) is a procedure through which activities of a project are represented in its appropriate sequence and timing. It is a scheduling technique used to schedule, organize and integrate tasks within a project.
- The critical path method (CPM) is a technique where you identify tasks that are necessary for project completion and determine scheduling flexibilities. A critical path in project management is the longest sequence of activities that must be finished on time in order for the entire project to be complete.

- It is in the managers' best interest to reduce the total amount of time and money required to complete the activity.

Management Information System

- MIS, is essentially responsible for providing information that facilitates the making of sound decisions. Managers are able to retrieve any data whenever it is required. It is one of the techniques for cost-effectively controlling that managers have at their disposal.
- In addition to this, it helps manage a massive quantity of data and delivers information at precisely the right moment. The information that is obtained from MIS is reliable and aids in the process of making decisions.

MIS is comprised of two primary parts:

- The Collection of Data
- The Management of Data

Management Audit

- It is the process of examining how a company uses its resources. It is started by the top level of management in order to guarantee that the management will perform effectively.
- While internal audit may be a continuous affair and periodicity may depend on the size of the organisation, management audit may be conducted at intervals decided by the Board of the Company which may be more than a year, say every two or three years.
- After the conclusion of the financial audit, the next step is the management audit. During the course of the audit, the overall management process will be subjected to close scrutiny.

Control Technique and Information Technology

The objectives of IT control relate to the confidentiality, integrity, and availability of data, as well as the general management of the enterprise's IT function as a whole. The techniques of control are listed below:

Organisational Control Techniques:

- When a company installs significant amounts of hardware and software and also appoints human resources, the company must first establish the co-ordination between the newly installed information system and the newly appointed human resources.
- Fixing the responsibilities of the manager, senior managers, and every employee in the team who handles information systems is how this organisational control is implemented.

Management Control Techniques:

Appointing an expert committee comprising experts from all fields, Everyone will apply their specialised knowledge and experiences to examine the IT system of the organisation and report back if they find any errors or fraudulent activity in it.

Financial Control Techniques:

- Delegation of financial powers
- Authorization to access the system
- Budgetary Control
- A unique sign indicating the cancellation of these documents
- Dual control over asset and entry
- Input and output verification
- Safekeeping the login passwords for servers and IT systems
- Segregation of Duties

Data Processing Environment Controls Techniques

The company ought to appoint some specialists for the control of the data processing environment. The environment in which data is processed today is composed of electronic and electrical components. Therefore, a specialised supervisor who checks it at regular intervals is required for it.

Physical Access Controls techniques

The term "physical access" refers to an unauthorised third party reaching into your database. You need to create security layers so that you can thwart any attempts of gaining unauthorised access in the data centre.

Logical Access Controls Techniques

The malicious hacking and virus will be used to gain unauthorised access to the logical system. Therefore, you should use malicious hacking and antivirus software to put a stop to it at any cost.

SDLA Controls Techniques

SDLA means system development life cycle. It is also essential that it be controlled. The standardisation of the system development life cycle is one way that this can be accomplished.

BCP Controls Techniques

"BCP" refers to the "business continuity process." Maintaining control of it would be possible if you have a sufficient number of backups and a solid recovery strategy in place in case the system is destroyed.

Application Controls Techniques

It is necessary to block unauthorised access to the recorded database in every computer-based system so that changes cannot be made and data cannot be removed. The two widely used application systems that an auditor needs to keep an eye on are SAP and Quick-book.

Categories of IT Control

IT General Controls (ITGC)
Controls over the IT environment, computer operations, access to programmes and data, as well as programme development and programme changes, are all included in ITGC.

IT Application Controls
Transaction processing controls, also known as "input-processing-output" controls, are what are meant when someone talks about IT application controls.

IT Control and the CIO/CISO
Usually, the Chief Information Officer (CIO) or the Chief Information Security Officer (CISO) of an organisation is the one who is accountable for the safety, accuracy, and dependability of the systems that manage and report the company's data, including its financial data.

Internal Control Framework
- The COBIT Framework, also known as the Control Objectives for Information Technology Framework, is a framework that has seen widespread adoption and was developed by the IT Governance Institute.
- COBIT is a framework that is widely used that contains best practices for the governance and management of information and technology.
- COBIT offers comparable and detailed guidance for information technology, while the interrelated Val IT focuses on higher-level IT governance and value-for-money concerns. The four COBIT major domains are:
  - Planning and organising
  - Acquiring and implementing
  - Delivering and supporting
  - Monitoring and evaluating

COSO
The Committee of Sponsoring Organizations of the Treadway Commission (COSO) identifies five components of internal control
- control environment
- risk assessment
- control activities
- information and communication
- monitoring

MODULE – B : ADVANCED CONCEPTS OF FINANCIAL MANAGEMENT

Unit-7: Sources of Finance and Financial Strategies

Introduction

Owners or promoters: finance to start the business is generally provided by the persons who moot the idea of business.

- Since the owners are going to stay with the project, their finance is long term finance.
- However, if the project is too big and the promoters do not have enough money, normally long-term borrowing is preferred.
- Since at times, processing of term loans takes time, promoters also go in for bridge finance which is a temporary funding to fill the time gap between the fund requirement and the actual release by the long-term lenders.
- Term finance is provided by banks and financial institutions.

Debt equity ratio: Which means how much ideally promoters should contribute as equity and how much they should borrow for long term. This depends on various factors but the general and safe norm is if equity is Rs. 100, one can safely borrow up to Rs. 200. [2:1]. The entire requirement of long-term funds will depend on the size and capital requirement of the project.

Working capital finance: The finance required for running a business [Current assets - current liabilities]

- Current assets: Which are created and extinguished in an operational cycle.
- An operational cycle: Time or period in which cash, after going through various forms is converted back into cash. For example, with cash you buy raw materials that are converted into finished goods through work in process and later when the finished goods are sold, they are converted into debtors or receivables and upon realisation or debt collection, the cash comes back into the business.
- Like in any business, and depending on the creditworthiness of the business entity and the established norms, credit is generally available for procuring goods.
- Therefore, to that extent, fewer funds are required.
- The gap between these assets and the said liabilities is the working capital gap which can be financed by a bank.
- However, the bankers will always insist on the borrower to provide his contribution towards the gap.
- The quantum of working capital finance varies from time to time based on the level of business activities and the gap.
- It also depends on how you manage and minimise the gap.

Financial strategies are those permutations and combinations which a business adopts or avails to satisfy its funds requirements, whether these are long-term or short-term.

- Strategies are so worked out as to maximise the advantages and minimise the cost of funds.
- A clean finance is the costliest, because the lender who has no assets to fall upon in case of a default and runs higher risks which he would cover by charging higher rate of interest.
- Equity is a clean finance and although it appears to be cheap, the cost of servicing is very high because the equity shareholders will expect good returns over the years in the form of dividend, which is always distributed after the company pays its taxes.

Equity Capital

- Capital generally means the amount invested for establishing a business which is owned by the promoter.
- In accounting terms, it means the amount remaining after selling all the assets and paying off all the liabilities.
- It also represents the money the owner brought in at the time of setting up the business and the profits he earned but did not take away over a period of time.
- Over a period of time, as business developed, various forms of organisations or entities evolved with the arrival of corporates.
- A corporate has hordes of investors who come from various walks of life and who may neither know one another nor may be related to each other.
- It was at the time of arrival of corporates, that the term Equity got coined.
- Equity means a quality of being fair or impartial, something that is fair and just.

Equity capital has the following features as well as advantages;

- Each unit has the same value called nominal value.
- Equity holder has two types of financial rights; the right to income (dividend) and the right to retaining surplus assets in case of liquidation.
- Additionally, they also have voting rights (except in case of Differential Voting Right shares), whenever so required by the governing act viz. Companies Act, 2013
- Anyone can buy or subscribe to any number of Equity Shares subject the terms and conditions prescribed in the Articles of Association of the Company
- All subscribers to the Equity Shares are governed by a common document called Memorandum and Articles of Association
- All subsequent transferees of such shares also have to abide by the above document.
- The Equity Shareholder can exit at will by following the prescribed rules.
- If the company is listed on a stock exchange, the liquidity of the Equity Shares increases since the holder can sell it to anyone through the exchange.
- Equity Shares can be priced by the issuer at the nominal value or at a premium or discount subject to extant regulations and guidelines.

- Also, subject to extant regulations and guidelines, Equity Capital can be enhanced, reduced, subdivided, bought back or issued free of cost.

Some other terms related to the equity capital are:

- Authorised Capital or Nominal Capital.
- This represents the maximum amount of capital that the company is authorised to issue which can be in any instalments as the Board decides.
- This is prescribed by the Memorandum and Articles of Association of the Company and in case of any change, the company has to go to the shareholders as prescribed in the Act.

Issued Share Capital

- The part of authorised capital which is issued to public for subscription.
- This includes shares issued for cash and for consideration other than cash to promoters of a company or other people.

Subscribed Share Capital;

- It is the portion of the issued share capital that is subscribed to by the public, i.e., applied for and allotted by the company.
- It also includes the face value of the company's shares issued for consideration other than cash.
- It is possible that all the shareholders, who have been called upon to subscribe to the capital, may not respond and therefore the actual subscribed capital may be less than the called up one.

Called-up Share Capital:

This is that part of the Issued Capital that the company has called up from the shareholders. The call can be one or more subject to the extant regulations and need of funds by the company.

Paid up Share Capital:

- Paid up capital is the amount of money a company has received from shareholders in exchange of shares.
- However, even after subscription, some may skip or delay the actual payment and, in such case, the paid-up capital can still be lesser than the subscribed capital.
- Calls in Arrears are a part of the called up or subscribed capital which the company can follow up and rightfully collect when the shareholders fail to pay the full or part amount.
- Unpaid Share Capital is, as the name suggests, the amount finally determined as unpaid for which the management can take suitable decision.
- Forfeited Shares are that part of the subscribed capital which is not fully paid as required and as a final resort, the company forfeits the amount so that it can be reissued as the Board decides, subject to the regulations.

Why Equity Capital and not Long-Term Loans?

- Except owners or promoters, no one would be able to take the inherent risk.
- The relations and friends also can be convinced to take or participate in the risk.
- Lenders can never assume the risk because they are interested in the immediate and guaranteed return or reward.
- Hence equity is a natural choice and the first option to raise funds.

Depending of the size of the project, the equity portion is determined. Apart from the natural and the first choice, raising funds through equity have quite a few advantages which are enumerated below: Although there is expectation, the equity holders are not required to be paid compulsorily any reward or interest or compensation.

- Unlike loans, there is no repayment involved.
- It provides the risk capital which otherwise is difficult to source.
- It gives to the holder a sense of ownership
- Higher amount of equity provides higher level of safety and confidence to the lenders.

Internal Accruals

- As a measure of financial prudence, no company can or would like to distribute the entire earnings after tax to the shareholders.
- There are also dividend distribution rules which the regulators want the management to follow.
- As a result, part of the Profit After Tax (PAT) is retained in the company, which is usually reflected in the general reserve.
- These retained profits are internal accruals of the company.

These arise out of the cash profits i.e.

- PAT
- Non-cash profits charged to the Profit & Loss account, in the form of provisions or reserves
- Depreciation charged to the Profit & Loss account.

Advantages:

- There is no restriction on the use of internal accruals, except as mentioned above.
- These can be used for long term as well as short term purposes.
- Internal accruals do not have any cost for use or servicing
- Internal accruals are readily available.
- Internal accruals are as liquid as the form in which these remain invested.
- The use or availing of internal accruals does not change the ownership structure or results in the dilution of control.
- There is no cost of raising these funds.

Disadvantages

- Just because internal accruals are readily and easily available, there is tendency of indiscriminate application of retained earnings.
- The cost of these funds in reality is higher because these represent undeclared dividend.
- These funds, therefore, belong to the equity shareholders and they expect reasonable return on these.
- Retained earnings are deprivation of dividend and over- use of such earnings may hurt the shareholders particularly the minority shareholders.
- The company cannot build a good dividend track record resulting into lesser interest by investing public.
- Safety cover provided by the retained earnings is reduced by the use of it.
- The ease of use and no cost element induces the management to lock up the funds in projects which may not be as well scrutinised as the ones undertaken with IPO proceeds or borrowed funds. This hurts the equity holders.

Preference Capital

This is that part of the capital which provides lesser risk to the investor compared to that which is taken by the equity investors. As the name suggests, the holder gets a preference with respect to dividend as well as payment is case of liquidation, which is one of the major monetary considerations for any investor. It is a quasi-risk capital because it is not as safe as secured debts which get payment priority over preference shares in case of liquidation of a company. Host of regulations with regard to the issue of preference shares exist. If equity is a common stock, preference share is preferred stock.

Main features of the preference capital

- It is a stock which is preferred over equity shares with regards to the payment of dividend and repayment in case of liquidation.
- Unlike equity capital, the dividend rate of preference share is fixed just like debentures.
- Generally speaking, the preference shares are entitled to dividend if distributable profits are available and hence dividend distribution is not obligatory like equity capital.
- Like equity capital, preference shares are paid dividend out of post-tax profits and hence the dividend on preference shares is not a tax-deductible expense.
- There are cumulative preference shares where the dividend is guaranteed. In other words, if in a year the company does not have enough profits to declare dividend, it is accumulated to the credit of the shareholders and paid when, in a subsequent year, the distributable surplus is available.
- Redeemable Preference Shares are those which get repaid as per the terms of issue. Under the current provisions of the Companies Act, 2013, companies limited by shares are prohibited from issuing Preference Shares which are not redeemable. All the preference shares are required to be redeemed within a period not exceeding 20 years. Redemption has

to be made out of profits or out of the proceeds of fresh share issue for such redemption purpose. However, in case of banks, perpetual debt instruments can be issued.

- Preference shareholders have a limited right to participate in voting only on some of the resolutions as specified in the Companies Act, 2013. Where dividend on preference shares has not been paid for two years or more, such shareholders get a right to vote on all company resolutions.

Why companies raise preference capital and the reasons are not far away to find:

- It is a good source of funds for very long period up to twenty years. In case of infrastructure companies, the period can even be more than twenty years.
- Mostly such securities are privately placed and hence the cost of raising such funds is not high.
- There is no compulsion to pay dividend unless cumulative preference shares are issued.
- The recurring cost in the form of dividend is fixed and known beforehand unlike dividend on equity shares.
- The current owners do not have to dilute their equity holding and hence they retain the present level of control over management.
- It is a part of the net worth of the company and hence it helps is improving the debt equity ratio.
- Absence of voting rights, unless the company skips dividend for two or more years, gives a comfort to the management who generally does not like interference.
- No security is provided to the preference shareholder unlike in case of debentures.

However, there are certain drawbacks, from the point of view of the management and the equity shareholders, which are enumerated below.

- Possibility of management interference in case of non-payment of dividends for more than two years.
- Dividend paid is a non-deductible expenditure which increases the real cost of funding.
- Redemption reserves are to be created leading to lower retained earnings which in turn may affect long term capital out lay plans to be funded out of internal accruals.
- Equity shareholders feel side-lined when the preference for dividend payout is given to preference shareholders.
- In case of liquidation, these shareholders get prior charge over the residual assets compared to the equity shareholders.
- Contingency of voting right devolution to these shareholders creates uncertainty and apprehension in the mind of the management.

Term Loans

- This is another major source of long-term finance by which a company can obtain term loans from banks or financial institutions.

- While banks also give working capital finance, the Financial Institutions are allowed to give only such loans which are repayable over the years as per the terms and conditions of the sanction.
- This source is different from equity and relatively, cheaper to service. The equity forms are either a permanent source where repayment is not there or a very long period like 20 years is available for repayment in the case of preference shares or capital. Term loans can be for long to medium terms stretching to about ten years.

Main features of Term Loans

- **Period:** All loans, except demand loans, are term loans and are generally granted for short terms to long terms. Short term loans are repaid within a year. Long term is period from 5 to 10 years and medium term is a range from 1 to 5 years. This is the period within which the loans are to be fully repaid. Loans granted for housing are generally for long period ranging from 5 years to 30 years.
- **Purpose:** Term loans are granted to acquire assets like land, buildings, plant and machinery to establish a factory or set up a project which are tangible and have a long useful life. For the reasons such as long gestation period, slow start to cash generation cycle and longer life, a longer period is granted for repayment. If the project is already running and loan is taken for capacity build up, a shorter period up to 5 years will suffice as cash flows are already there. Short to medium term loans are preferred for other tangible assets such computers, peripherals, furniture, renovations etc. Loans are also granted for housing and soft furnishing.
- **Interest:** Term loans carry a fixed and predetermined rate of interest. The rate to be charged is negotiated and depends upon factors such as period, risk, rating of the borrower or creditworthiness as well as the purpose. Interest is payable either monthly or quarterly and sometimes it is embedded into the equal monthly instalment (EMI) which combine both interest and principal.
- **Repayment:** Loans are generally repaid over the granted period and generally in instalments which are monthly, quarterly, half yearly or yearly. In some specific but time bound acquisition of assets, there is recovery by bullet payment in one shot. Moratorium is granted for principal repayments where projects are large and cash generations are likely to take time.
- **Currency:** In many large projects, the import component of assets is quite large where the loans are granted in foreign currency to facilitate proper requirement, since the quotations are foreign currency denominated and by the time the actual import takes place the INR element may be a different amount.
- **Security:** Uncertainty over a long period obviously enhances risk perception and so also insecurity in the mind of the lender. Even otherwise, no lender can or will lend without securing the term loan by creating charge over the primary assets.
- **Amount of loan:** In case of purchase of existing assets, the lender carries out an independent valuation and after providing a margin to cover value fluctuation and borrower's margin or contribution, the loan amount is determined. In cases where the term loan is for creation of

fixed assets by the borrower, the loan amount is arrived at by the debt/equity ratio, as decided by the lender.

- **Appraisal:** The appraisal process of a term loan by the lender depends on the size and complexity of the project financed. However, no term loan is granted without examining the economic viability and technical feasibility.
- **WCTL:** This is not a type of normal term loan given by any bank or Financial Institution. It is a term loan against the current assets. It is used in the banking industry when a working capital loan, given by a bank, is not being properly serviced by the borrower due to temporary liquidity constraints.
- **Conversion:** Conversion of loan into equity is generally not a planned action except when the banks and the borrower agree upfront to convert loans into equity at a later stage. In such a case, at the expiry of the agreed term, the loan is converted into the equity of the borrower. The valuation mechanism is pre-agreed. Sometimes, it is optional for the lender to convert.
- **Moratorium:** It takes time for any project to start generating cash flows, positive cash flows and profits. Bigger the project, longer the time. Therefore, till such time the borrower starts generating required cash flows, the lenders give time to start the repayment.

A list of typical terms, conditions and requirements incorporated in the loan agreements.

- Reconstitution of the board.
- Induction of the independent directors.
- A seat on the board.
- Prior consent or approval of the lender required for following actions: Examples; Mergers, hiving off, restructuring, new projects, equity expansion or dilution, investments in or creation of subsidiaries, fresh or big funding exercise etc.
- Statutory registrations or approvals.
- Infusion of additional funds by the promoters.
- Prohibition on withdrawal of loans or funds already brought in by the promoters.
- Consent required of the lender if any other loans are being repaid.
- Restrictions on dividend pay-outs.
- Submission of quarterly data and annual audited financial statements.
- Requirements of rating by independent and reputed rating agency.
- Ceiling on further borrowings.
- Inspections and visits.
- Insisting on First charge failing which pari-passu charge.
- Prohibition on creating further charges.
- Pledge of promoters’ shares or collaterals of personal assets of the promoters.
- Restrictions on promoters’ right to dispose their shares.
- Appointment of compliance officers and proper Key Managerial Persons.
- Strong Corporate governance.
- Maintenance of prudent financial ratios including debt equity.

Debentures

- Section 2(30) of the Companies Act, 2013 defines "debenture" which includes debenture stock, bonds or any other instrument of a company evidencing a debt, whether constituting a charge on the assets of the company or not. In other words, it is a written instrument acknowledging debt by the company promising repayment at a certain future date.
- This is another form of long- term borrowing targeted at various individuals or institutions that subscribe to the issue and pay to the company. The terms of issue like tenure, rate of interest, denomination, minimum subscription, total issue size etc. all form part of the issue document.

Features of debentures

- **An instrument:** Debenture is an instrument issued by the borrower company promising to pay, at fixed future date, a certain amount to the holder.
- **Agreement or deed.** If debentures are issued to more than 500 persons, Trustees are required to be appointed to look after interest of the debenture holders.
- **Regulations:** Section 71 of the companies Act, 2013 contains provisions relating to issue of debentures covering the points such as manner, procedures, convertibility, voting rights, redemption, creating reserves, prospectus or invitation, trust etc.
- **Fixed tenure:** Loans are repaid in instalments over a period of time. On the other hand, debentures are repaid on a fixed date on expiry of the term. Repayment on maturity is also called redemption. Perpetual bonds are also permitted to be issued.
- **Fixed rate of interest:** The rate of interest is also prefixed. In case of so called, Zero- Coupon bonds also, a fixed rate of interest, payable at the time of redemption, is involved as these are issued at a discount to their redemption value.
- **Options with the issuer:** The company issuing debentures can incorporate an option like call option where it can repay the principal before due date at a fixed price. This is called call option.
- **Option with the investor:** The mpany issuing debentures can incorporate an option like put option where the investor has the option to demand redemption before due date at a fixed price. This is called put option.
- **No voting rights:** Section 71(2) of the Companies Act,2013 prohibits giving any voting rights to a debenture holder.
- **Stake in the company:** In case of convertible (wholly or partly) debentures, which are permitted to be issued, the debenture holder gets an equity stake in the company after conversion in the equity followed by voting rights. The ratio of conversion as well as the price at which shares will be valued is indicated in the offer document.

Types of debentures:

- **Based on tenure:** There are debentures specifying redemption with call options, put options, or with fixed tenure under this kind. Perpetual bonds with call option, are also permitted to be issued.
- **Based on security:** Many a times, to offer lower rate of interest and a sense of security to the investors, secured debentures are issued providing first or second charge over the fixed assets of the company and appointing trustees if the number of holders exceeds 500.
- **Based on Convertibility:** To provide additional incentive to the investors, the companies issue partly or fully convertible debentures so that at a future date, upon conversion, the debentures holders can be growth participants and also have voting rights.
- **Based on negotiability:** The debenture is a debt instruments and mostly transferable by way of a registered transfer form. However, in case of bearer debentures the transfer takes place by mere delivery. Such debentures are rare due to concerns such as money laundering and benami transactions.

Advantages and disadvantages:

- Advantages emanate from the features of debentures such low cost of raising of funds, known and fixed future interest liability, known date of redemption liability facilitating planning of fund management, no dilution of owners' equity and management powers, flexibility to provide negotiated cost of servicing and redemption period beforehand, some of which are not available in Institutional Long Terms where the company does not have as much bargaining power.
- Disadvantages are that once issued, no negotiation of terms is possible, rating requirement may create some unanticipated problems, statutory requirement of creating reserve funds and investment there of and finally you deal with numerous investors as against one lender in case of Long-Term Loan.

Unit-8: Financial and Operating Leverages

Financial Leverage

- Financial leverage is a strategy to use borrowed funds to enhance return on the investment of equity investors.
- It means enhancing EPS without shareholders bringing money themselves but by borrowing.

Calculating Financial Leverage

- ***Debt- to- Assets ratio is calculated as Total Debt / Total Assets***
- ***Debt- to- Equity ratio is calculated as Total Debt / Total Equity***
- ***Debt-to EBIDTA ratio is calculated as Total Debt /EBIDTA***
- ***Du-Pont analysis uses the "equity multiplier" as a measure of financial leverage. Equity Multiplier = Total assets / Total Equity***
- ***Interest Coverage ratio is calculated as EBIT / Interest expense***

Degree of Financial Leverage and its behaviour

- For calculating the degree of financial leverage, we seek to establish correlation between the operating profit (EBIT) and the interest expense, which is assumed to be a fixed expense.
- Degree of Financial Leverage (DFL) is defined as ratio of percentage change in EPS and percentage change in EBIT, and can be mentioned as under:

DFL = Percentage change in earnings per share (EPS) / Percentage change in earnings before interest and tax (EBIT)
DFL = EBIT (Earnings before interest and tax) / EBT (Earnings before tax)

Example

Particulars	Scenario 1	Scenario 2
EBIT	1,00,000	1,50,000
Interest	20,000	20,000
EBT	80,000	1,30,000
Tax @ 50%	40.000	65,000
PAT	40,000	65,000
No of Shares	10,000	10,000
EPS	4	6.5

Calculate the Degree of Finance Leverage (DFL) from the above given data

a. 1
b. 1.25

c. 1.33
d. 1.5

Ans - b

Solution:
Degree of Finance Leverage (DFL) = % Change in EPS / % Change in EBIT
= 62.5% / 50%
= 1.25
....

A firm's details are as under:
Sales (@100 per unit) - Rs. 24,00,000
Variable Cost - 50%
Fixed Cost - Rs. 10,00,000
It has borrowed Rs. 10,00,000 @ 10% p.a. and its equity share capital is Rs. 10,00,000 (Rs. 100 each).
Consider tax @ 50 %.
Let us calculate its Degree of Financial Leverage

Solution:
Contribution = Sales - Variable cost
= 24,00,000 - 12,00,000 = 12,00,000
EBIT = Contribution - Fixed cost
= 12,00,000 - 10,00,000 = 2,00,000
EBT = EBIT - Interest
= 2,00,000 - 1,00,000 = 1,00,000
Degree of Financial Leverage = EBIT / EBT
= 2,00,000 / 1,00,000 = 2 times
....

- When DFL is more than one (1), financial leverage becomes relevant. More the DFL, higher is the financial leverage.
- A positive DFL means that the firm is operating at a level higher than the break-even point and EBIT and EPS also move in the same direction.
- Negative DFL indicates that the firm is operating at lower than the break-even point and EPS is negative.
- When the business is operating at Break-even level, EBT is nil (EBIT = Fixed Interest)

Degree of Finance Leverage (DFL) = EBIT / NIL = Undefined

- When the business is operating below the Break-even level, EBT is negative (bur EBIT is assumed to be positive)

Degree of Finance Leverage (DFL) = EBIT / EBT = will be a negative number as EBT is negative.

Operating Leverage

- In financial leverage, we establish a correlation between the fixed financial cost i.e. interest and the profit of the business.
- In operating leverage, we consider other fixed expenses except interest and correlate these to the profit.
- A more scientific way to assess the susceptibility of a business to its level of operation is by calculating the Degree of Operating Leverage (DOL)

The formula used is:

Degree of Operating Leverage (DOL) = Percentage Change in EBIT / Percentage change in Sales
Or
DOL = Contribution / EBIT
Contribution = Sales Revenue – Variable Cost
EBIT = Contribution – Fixed Operating Costs

Example

A company sells 1000 units of product X at Rs. 50 having variable cost of Rs. 30 per unit and fixed cost of Rs. 15,000. Let us calculate its Degree of Operating Leverage

Solution:
Sales (50 x 1000 units) - 50,000
Variable Cost (30 x 1000 units) - 30,000
Contribution - 20,000
Fixed Cost - 15,000
Profit (EBIT) - 5,000
Degree of Operating Leverage = Contribution / EBIT
= 20,000 / 5,000
= 4 times
…………………………………….

- When DOL is more than one (1), operating leverage is relevant.
- A positive DOL/ OL means that the firm is operating at higher level than the break- even level and both sales and EBIT moves in the same direction.
- In case of negative DOL/ OL, firm operates at lower than the break-even sales and EBIT is negative.

Relationship between leverage, break-even point and fixed cost

There is a relationship between leverage and Break-even point. Both are used for profit planning. The relationship between leverage, break-even point and fixed cost is as under:

Leverage	Break-even point
Firm with high leverage	Higher Break-even point
Firm with low leverage	Lower Break-even point

Fixed cost	Operating leverage
High fixed cost	High degree of operating leverage
Lower fixed cost	Lower degree of operating leverage

Combined Leverage

- This is a combination of financial and operative leverages
- The degree of total leverage (DTL) is a measure of the sensitivity of cash flows to owners to changes in unit sales that is derived by combining a firm's degree of operating leverage and degree of financial leverage. The following formula is used for calculating the degree of total leverage (DTL)

Degree of Total leverage (DTL) = Percentage change in EBT / Percentage change in Sales

It is a product of both financial and operating leverages and can be written as:

DTL = DFL x DOL

= EB1T/EBT x Contribution/EBIT

= Contribution/EBT

Example

If Degree of Operating Leverage is 0.94 and Degree of Financial Leverage is 1.09, Degree of Combined Leverage would be?

Solution

A degree of combined leverage (DCL) is a leverage ratio that summarizes the combined effect that the degree of operating leverage (DOL) and the degree of financial leverage has on earnings per share (EPS) , given a particular change in sales.

Degree of combined leverage (DCL) = DOL X DFL

DCL = 0.94 X 1.09 = 1.02

DOL = Degree of operating leverage

DFL = Degree of financial leverage

....

A firm has sales of Rs. 10,00,000, variable cost of Rs. 7,00,000 and fixed costs of Rs. 2,00,000 and debt of Rs. 5,00,000 at 10% rate of interest. What are the operating, financial and combined leverages?

Solution:

Statement of Profit	**(Amt in Rs.)**
Sales	10,00,000
Less: Variable Cost	7,00,000
Contribution	3,00,000
Less: Fixed Cost	2,00,000
EBIT	1,00,000
Less: Interest @ 10% on 5,00,000	50,000
Earnings before tax (EBT)	50,000

Financial Leverage = EBIT / EBT
= 1,00,000 / 50 000 = 2

Operating Leverage = Contribution / EBIT
= 3,00,000 / 1,00,000 = 3

Combined Leverage = Contribution / EBT
= 3,00,000 / 50 000 = 6

- The degree of financial leverage reveals the sensitivity of owners' cash flows to variations in operating cash flows.
- And the level of operating leverage indicates how sensitive operating cash flows are to fluctuations in sales.
- In the case of operating leverage, fixed operating expenses serve as a pivot: The greater the fraction of fixed operating costs, the more sensitive operating cash flows are to variations in sales.
- Fixed financial charges, such as interest, serve as a pivot in the context of financial leverage: The bigger the share of financing with fixed cost sources, such as debt, the greater the sensitivity of owners’ cash flows to changes in operating cash flows.
- Combining the effects of both types of leverage, it is clear that fixed operating and financial costs operate as a pivot to enhance the sensitivity of available cash flows to changes in the number of units sold.

Unit-9: Capital Investment Decisions

Objective of Capital Investment Decisions

- The goal of management is to increase the wealth of the shareholders as much as possible.
- In order to achieve this goal, the Finance Manager is responsible for analysing potential investment possibilities and identifying those that can boost the value of the company.
- Consider the following scenario: three companies, Company A, Company B, and Company C, all have the same assets and opportunities for investment
- However, the management of Company A does not take advantage of its investment opportunities and instead distributes all of its earnings to its shareholders
- the management of Company B only makes the investments necessary to replace deteriorating plant and equipment and distributes any leftover earnings to its shareholders
- the management of Company C invests in all of those possibilities that generate a return that is higher than what the shareholders could have received if they had invested the funds themselves.
- This allows them to earn a higher return.
- The objective of the capital investment decision is to first assess the requirement and then think about the sources, the cost, the form and the time

Estimation of Project Cash Flows

- Cash requirement of any project can be safely analyzed in terms of long term, short term, owned, borrowed, fixed cost, working capital, inflows and outflows.
- All this can be appropriately included in a projected cash flow statement.

The process requires the following;
Identify the elements of cash flow: A business typically will have three elements of cash flows:
Initial Investment: Capital expenditure and the contribution for net working capital to start the project.
The Operating one will comprise of the outflow and resulting inflow of the operations of the business.
The Terminal is the one what remains that is net inflow after paying off all the realizations of the assets on liquidation of the business when the economic life comes to an end.

All the flows are post tax for the reasons that that element does not belong to the business or the owners.

How to estimate and basis of each such element:
There are four principles to be kept in mind.

- 1st: Separation Principle which means we have to separate the investment side from finance side which simply means separating assets for servicing cost of it. Cost flows in to investment side and the interest, if any, flows in to financing side.
- Then there is Incremental which means estimate separately the cost which will be incurred even if the project is not run from the cost which we incur while running it. We can also say it is fixed versus variable cost.
- While considering the cash flows, considering the Post -tax Cash Flow Always, is advisable since the tax payments cannot be ignored. This is the Third Principle.
- If you ignore, you will have to Discount Pretax Flows with a discount rate which may or may not be reliable. The last principle is consistency principle.

Collate all the components of cash flow:

- All the components of the cash flow namely fixed capital, working capital, own capital (Equity), long term borrowing, outflow for operations such as purchases, production expenses, operating and administration expenses, selling expenses, interest cost, and inflow on account of sales and services are collated and net flow or the cash balance is found out to complete the cash flow statements.
- This is prepared for the period of the entire project period or for reasonably long enough period to reach a break even or achieve other objectives such as debt free status of closure or hive off etc.

Cash Forecasts

- Cash forecasts shall also include the inflow on account of sales and services.
- Forecasting sales will be an elaborate exercise and will take into account various factors such as estimated demand, production capacity planned, procurement or availability of raw materials, fixing price of the product, keeping in mind the competition and need to penetrate the market in the face of current market conditions and market leaders, availability or required engagement of working capital funds, discounts, incentives to marketing team, cost of sales campaigns, exhibitions, touring, advertisements etc.

Illustration

XYZ Ltd is evaluating the purchase of a new machinery with a depreciable base of Rs. 1,00,000; expected economic life of 4 years and change in earnings before taxes and depreciation of Rs. 45,000 in 2021, Rs. 30,000 in year 2022, Rs. 25,000 in year 2023 and Rs. 35,000 in year 2024. Assume straight-line depreciation and a 20% tax rate. You are required to compute relevant cash flows.

Solution

Depreciation = 1,00,000 divided by 4 = Rs. 25,000 per year

Evaluation Techniques

- Payback period, discounted payback period
- Payback period is the period at the end of which the initial investment is entirely returned to the investor.
- Return of investment = Net cash flow for each of the years of operation.
- When the cumulative cash flow is equal to the investment, the investment is considered to be returned and no further.
- It is to be remembered that both the positive or negative cash flows are to be added till the total net cash flow equals the amount of the initial investment.

When Cash Inflow is Same

Example: A firm requires an initial cash outflow of Rs. 24000 & cash inflows for 5 years are rs. 6000 every year. Calculate payback period.

When Cash Inflow is not same

Example: A firm requires an initial cash outflow of Rs. 20000 & cash inflows for 5 years are rs. 5000, 7000, 6000, 6000, 8000. Calculate payback period.

The following points are worth noting:

- This method simply identifies the period in which the initial investment in the project is fully recovered.
- It does not take time value of money into account unless it is discounted payback period method.
- This is suitable for small businesses where it is not worth spending more time and money to make more detailed or scientific analysis.
- The shorter the period for recovery of initial investment, lesser is the risk and better or quicker is the probability to earn profits.
- Payback Period method ignores the cash flow beyond the payback period and hence ignores profit aspect.
- While payback period method is used across the line, the other more sophisticated methods are used in larger sized budgeting exercise.

Illustration

Suppose a project costs Rs. 20,00,000 and yields annually a profit of Rs. 3,00,000 after depreciation @ 10% (straight line method) but before tax at 50%. The first step would be to calculate the cash inflow from this project. The cash inflow is calculated as follows:
While calculating cash inflow, depreciation is added back to profit after tax since it does not result in cash outflow. The cash generated from a project therefore is equal to profit after tax plus depreciation. The payback period of the project shall be:
Payback period = Rs. 20,00,000 Rs. 3,50,000/Year = 5.71 Years

Illustration

Rs. 30,000 cash outlay for a project with annual cash inflows of Rs. 6,000 would have a payback period of 5 years (Rs. 30,000/ Rs. 6,000). The problem with the Payback Period is that it ignores the time value of money. In order to correct this, we can use discounted cash flows in calculating the payback period. Referring back to our example, if we discount the cash inflows at 15% required rate of return, we have:

The cumulative total of discounted cash flows after ten years is Rs. 30,114. Therefore, our discounted payback is approximately 10 years as opposed to 5 years under simple payback. It should be noted that as the required rate of return increases, the distortion between simple payback and discounted payback grows.

Accounting Rate of Return (ARR)

- The foregoing method of appraisal does not help you to know the rate of return because we stop once the investment is recovered.
- The methods to determine the rate of return are many but the most common, easy, simple and practical is the accounting rate of return.
- This method involves estimating the revenue and expenses for say over three years and to find out the average rate of return which can be considered as the rate for appraising the investment.

Accounting Rate of Return = Average annual net Income/ Investment

ILLUSTRATION

Suppose A Ltd. is going to invest in a project a sum of Rs. 3,00,000 having a life span of 3 years. Salvage value of machine is Rs. 90,000. The profit before depreciation for each year is Rs. 1,50,000. The Profit after Tax and value of Investment in the Beginning and at the End of each year shall be as follows:

Net Present Value (NPV)

- The meaning of NPV: A bird in hand is better than two in the bush!
- A rupee now is more valuable than the same rupee a year later.
- This is what the present value means.
- Net present value used in terms of cash flow means the present value of all future cash flows.
- Cash flows mean net flow = The inflow - outflows
- Net flow after setting off the negative flows.
- If the NPV = 0, then the project will neither add value nor are you likely to lose.
- Positive NPV means project can be given go ahead the negative is red signal.

Strengths and limitations of NPV method:

The main strength of the NPV is that it takes into account the time element and brings the rate of return nearer to the reality.

- It helps you quickly evaluate the surplus you will end up with at the end of the project period and whether it matches your expectations all things considered.
- The biggest limitation is that it is all estimate and surreal.
- The discounting factor applied is very subjective.
- Moreover, this method does not provide the overall result of profit or loss over the period of the project.
- Equivalent Annual Costs (EAC): This cost of the asset is other than that for acquisition. In other words, it is an annual cost of owning, operating and maintaining an asset over its life time.
- Net present value = Present value of net cash inflow - Total net initial investment

The NPV method can be used to select between mutually exclusive projects; the one with the higher NPV should be selected.

Illustration

Compute the net present value for a project with a net initial investment of Rs. 1,00,000. The net cash flow for year one is Rs. 55,000; for year two is Rs. 80,000 and for year three is Rs. 15,000. Further, the company's cost of capital is 10%. [PVIF @ 10% for three years are 0.909, 0.826 and 0.751]
Recommendation: Since the net present value of the project is positive, the company should accept the project

Internal Rate of return (IRR)

An Internal Rate of Return means an annual rate of growth in investment a business is going to generate.
The concept of calculating NPV and IRR is the same.
However, while calculating IRR, the NPV is set to zero;

The formula and calculation used to determine this figure are as follows:

0 = CF t = 0 + [CF t = 1 ÷ (1 + IRR)] + [CF t = 2 ÷ (1 + IRR)^2] + … + [CF t = n ÷ (1 + IRR)^ n]
Or, an alternative method to calculate the IRR is the following:

0 = NPV Σ CF n ÷ (1 + IRR)^ n
However, the formula is such that the resultant IRR will not be generated easily and therefore permutations and combinations through excel sheet on trial and error basis will give you the result which finally can be tested by simple calculations.
If this rate of return is higher than basic or required RR(RRR), then only the investment is worth.
RRR is equivalent to the cost of funds.

Limitations of the IRR method:

- If the factors comprising the IRR calculations are difficult to predict, it may be misleading. In case cash flows intermittently turn positive as well as negative, there can be multiple rates. If the estimates in IRR and NPV differ drastically from actual results, the analysts will have to choose to combine IRR analysis with scenario analysis.
- Scenarios can show different possible NPVs based on varying assumptions.
- If studied in conjunction with weighted average cost of capital (WACC) and or Required Rate of Return (RRR), the results can be more authentic.
- Multiple IRRs: This situation arises when the project has non-conventional or casual or interruptive cash flows.

Definition and explanation of MIRR:

- A Modified IRR is the one calculated to correct aberrations arising out of disruptive or alternatively positive and negative cash flows as also to correct the unrealistic assumption of investing intermittent cash inflows at project IRR.
- Under this approach, any negative cash flow in any period, during the life of the project, is treated as the cost of the project and added to the initial cost of the project by discounting at the cost of the capital.
- This is called the Present Value of Costs (PVC).
- Also, the project inflows are compounded at the cost of capital to arrive at the total compounded terminal value (TV) of the inflows.
- Then an appropriate rate of discount for this compounded terminal value is found out so that this discounted terminal value is equal to the total present value of the cost of the project (PVC). This discount rate is called MIRR.

ILLUSTRATION

The calculation of MIRR can be illustrated through the following example. Square Limited is evaluating a project which has the following initial investment and cash inflows:

Profitability Index

- This is an index that either explains or represents the relationship between the cost and the benefit of a project proposal.
- It is also called value investment ratio or profit investment ratio.
- PI is calculated by dividing the present value of future expected cash flows by the initial investment amount in the project.
- Higher the Index better is profitability of the project. Anything below 1 indicates that the project is unprofitable.

Mathematically: The Profitability Index (PI) is calculated as below:

Profitability Index (PI) = Sum of discounted cash inflows/ Initial cash outlay or Total discounted cash outflow (as the case may be)

Illustration

Suppose we have three projects involving discounted cash outflow of Rs. 5,50,000, Rs. 75,000 and Rs. 1,00,20,000 respectively. Suppose further that the sum of discounted cash inflows for these projects are Rs. 6,50,000, Rs. 95,000 and Rs. 1,00,30,000 respectively. Calculate the respective Profitability Index (PI) for the three projects.

Solution

The respective Profitability Index for the three projects would be as follows:

Profitability Index (PI) = Sum of discounted cash inflows/ Initial cash outlay or Total discounted cash outflow (as the case may be

PI = Rs. 6,50,000 / Rs. 5,50,000 = 1.18

PI = Rs. 95,000 /Rs. 75,000 = 1.27

PI = Rs. 1,00,30,000 /Rs. 1,00,20,000 = 1.001

It can be seen that in absolute terms, project 3 gives the highest cash inflows yet its Profitability Index is low.

This is because the outflow is also very high. The Profitability Index factor helps us in ranking various projects.

Social Cost Benefit Analysis

- Central and State Governments and local bodies or designated corporations take up many projects of infrastructure developments, airports, ports, bridges, dams etc.
- To support decision making process, SCBA is carried out. On one hand we have total cost of the project and on the other hand the social cost as well as benefits.
- One has to attach or allot value to each such impact or benefit. Adverse impact will have negative value and the benefits will have positive value.
- Adverse impact is the social cost. Loss of mangroves, generation of pollution, impact on plants, extinction of some birds and rare species, water level going down, health hazards are some of the social cost and environment impact.
- Benefits are ease of travel, fuel savings, time savings, employment generation, uplifting of living standards and bringing order in traffic management and safety, among others.
- If net result of positive and negative values is positive and equal or more than the cost of the project, the project is considered as beneficial.

Unit-10: Capital Budgeting for International Project Investment Decisions

Foreign Investment Analysis

- Special Considerations-Foreign & Home Currency Cash Flows
- Adoption of a currency conversion rate, particularly for cross currency transactions, will need care and efforts.
- If the project implementation time is long, the foreign currency valuation can pose problem because of the rate volatility.
- Your imports and exports, borrowings and repayments, dividends and repatriation; all will be at rates fluctuating from time to time.
- Elaborate workings and spread sheets, including for estimates, will be required.
- One may have to keep updating or revising in case of major exchange rate fluctuation.
- Moreover, the foreign investment cash flows, made in the relevant foreign currency, may need integration with Indian cash flows if the activities are integrated or the project cost benefits are shared both between the overseas outfit and local entity.
- One has to make a choice about the currency, on the basis of which one is dominant from the project point of view.

Foreign Currency Discount Rates Computation

- Converting local currency into a foreign currency is done at a prevailing rate which is called spot rate.
- Even spot rate varies from one form or mode of the currency to another such as currency notes, travellers' cheques, telegraphic transfer etc. However, if you want to contract for purchase at a future date, the rate called forward contract rate is to be adopted.
- If you want to sell your local currency to buy say USD at a future date, there will be discount to the value of your currency because you will have to pay future premium.
- Future contract rate needs to be adjusted by the interest rate and the time factor.
- To calculate the forward rate, we have to multiply the spot rate by the ratio of interest rates and adjust for the time until expiration.
- Thus, this aspect of currency rates is an important aspect while conducting the exercise of capital budgeting for foreign investments.

Capital Asset Pricing Model

- The abbreviated term CAPM describes the relationship between the risk and the returns or specifically, between the systemic risk and expected returns.
- The returns are always based on the risk and the time value of money.
- For pricing of a particular security or investment product, one has to undertake quite a few analyses.
- CAPM is one such method.

- This is generally done for risky assets, so that the price paid is appropriated to generate expected returns.
- Basically, one would like to find out risk free return over a time.
- A beta is generated, which is a measure of volatility or the systemic risk compared to the market as a whole.
- A security beta is calculated by dividing the product of the co-variance of the security's returns and the market returns by the variance of the of the market returns over a specified period.
- If it was possible to accurately forecast future cash flows, this type of derivative method would not be necessary. However, that not being the case, an investor would like to depend on such pricing method.

Calculation of CAPM

Cost of Equity (re) = Risk-Free Rate + Levered Beta x Market Risk Premium Cost of Equity (re) = rf + βL x (rm – rf)
where: rf = risk-free rate βL = levered beta
rm = expected return on the market rm – rf = market risk premium

Risk-Free Rate (rf):

- The expected rate of return on an investment in a security considered to have no inherent risks is referred to as the risk-free rate.
- The actual risk-free rate that is used in CAPM shifts depending on the yields that are currently available for the selected security.

Market Risk Premium (rm – rf or mrp)

The difference between the expected return on an investment and the risk-free rate is known as the market risk premium.

Beta (β)

The S&P 500 index has traditionally been used as a stand-in for the market when calculating beta, which is a measure of the co-variance between the rate of return on a company's stock and the return on the overall market (systematic risk).

Example: rf = 7% , βL = 1.20 Rm – rf = 6%, Calculate Cost of equity using CAPM method Cost of Equity (re) = rf + βL x (rm – rf)
= 7% + 1.2 (6%) = 7% + 7.2%
= 14.2%

Example: Calculate cost of equity where risk free rate of return is 10%, the firm's beta is equal to 1.75 & market return in 15%
Cost of Equity (re) = rf + βL x (rm – rf)

= 10% + 1.75 (15%-10%)
= 10% + 1.75*5
= 10% + 8.75% =18.75%

Arbitrage Pricing Theory

- This is an alternative method to CAPM.
- While CAPM takes into account security returns and market returns, this method or theory goes beyond it, thinking that market sometimes misprices securities.
- APT, therefore, tries to take advantages of any or many arbitrage opportunities or derivatives in the market or the economy.
- It uses the linear relationship between the asset's expected return and a number of macroeconomic factors or variables that affect or capture the systemic risk.
- GDP, Domestic Inflation Rate, Stock Indices, Gold Prices, risk free rate of interest are such factors.

ILLUSTRATION

For example, the following four factors have been identified as explaining a stock's return and its sensitivity to each factor and the risk premium associated with each factor have been calculated: (RP means Risk Premium)

- Gross domestic product (GDP) growth: ß = 0.6, RP = 4%
- Inflation rate: ß = 0.8, RP = 2%
- Gold prices: ß = -0.7, RP = 5%
- Sensex index return: ß = 1.3, RP = 9%
- The risk-free rate is 3%

Using the APT formula, the expected return is calculated as:

Expected return = 3% + (0.6 x 4%) + (0.8 x 2%) + (-0.7 x 5%) + (1.3 x 9%) = 15.2%

Example: Let us take a look at an arbitrage pricing theory example. For this example, let's consider our asset as a commodity stock called GOLD 123. The stock has two risk factors associated with it – inflation and the price of the U.S Dollar currency.

Rf (risk free rate) = 2%

Inflation – Risk premium = 2%, Beta = 0.2

U.S Dollar – Risk Premium =10%, Beta = 0.5

E(ri) = Rf + β1 *(factor 1) + β2 *(factor 2) + …+ βn *(factor n)

E(ri) = 0.02 + 0.2 * (0.02) + 0.5 * (0.10)

= 0.02 + 0.004 + 0.05

= 0.074, or 7.4%

In this arbitrage pricing theory example, the expected return of GOLD 123 is equivalent to 7.4%.

Issues Involved In Evaluation of Overseas Projects

While the methods of evaluation of overseas projects are the same as for the domestic projects, the following issues are involved:

Calculation of Discount rate: Arriving at an appropriate discount rate is essential for applying the discounting methods of project evaluation. While the risk-free interest/discount rate is readily available in both India and the foreign country, we have to arrive at the relevant risk-adjusted discount rate.

The method applied for this will be clear from the following

(1 + ra) = (1 + rf) * (1 + rp) Where,

ra = risk-adjusted discount rate, rf = risk-free discount rate

rp = the risk premium

Illustration: The following data is provided:

a. The risk-free discount rate in USA is 4%

b. The risk-free discount rate in India is 7%

c. The risk-adjusted discount rate, required by the company in India is 12% We have to calculate the risk-adjusted discount rate in USA, which will be acceptable to the company.

(1 + 0.12) = (1 + 0.07) * (1 + rp)

(1 + rp) = 1.12/ 1.07 = 1.0467

Calculate the risk adjusted discount rate for US$, as under:

(1 + ra) = (1 + rf) * (1 + rp) or,

(1 + ra) = (1 + 0.04) * 1.0467 = 1.0888 = 8.88%

Risk-adjusted discount rate, applicable for cash flows in US$

- Here we have assumed that the risk premium, required by the company for the US project is same as acceptable to it for a similar Indian project.
- However, in practice, it may require a higher risk premium in view of the additional risks involved like, trade barriers, currency fluctuations, stringent laws etc.

Approaches For Evaluation Of Overseas Project

There are, basically, two approaches for foreign project evaluation, viz. Home Currency Approach and Foreign Currency Approach.

Home Currency Approach

- Under this approach, all the cash flows of the project are converted in to home currency (rupee) by applying the actual/estimated spot rate at the time of the cash flow.
- These cash flows are then discounted using the domestic risk-adjusted discount rate.

Illustration: The following data is provided:
The cash flows of the project are as under (in US$, lakh):

- Initial investment 100
- First year net cash inflow 30
- Second year net cash inflow 40
- Third year net cash inflow 50
- Fourth year net cash inflow 50
- The risk-adjusted rupee discount rate, required by the company, which is envisaging project in USA, is 12%
- The notional risk-free interest rate in USA is 4% The notional risk-free interest rate in India is 7% Current Spot rate of 1 US$ is Rs. 80
- We have to calculate the PV of the cash inflows of the project which has a useful life of 4 years, using the Home Currency approach.

Solution:
1st calculate the estimated spot rate for 1 US$, as under: S1 = 80 * (1 + 0.07)/ (1 + 0.04) or,
S1 = 80 * (1.07)/ (1.04) = 80 * 1.0288
= Rs. 82.310
For 2nd Year,
S2 = 80 * (1.0288)2 = 80 * 1.0585
= 84.6820
For Third Year
S3 = 80 * (1.0288)3 = 80 * 1.0889
= 87.1130
For Fourth Year
S4 = 80 * (1.0288)4 = 80 * 1.1203
= 89.6250

Foreign Currency Approach

- Under this approach, the cash flows of the project remain in the foreign currency only and are not converted in to home currency (rupee).
- These cash flows are then discounted, using the risk-adjusted discount rate of the foreign currency.
- The present value of the discounted cash flow, thus arrived, is converted in to home currency by applying the Present Spot Rate.

Unit-11: Adjustment of Risk and Uncertainty in Capital Budgeting Decision

Introduction

- Capital budgeting is required for project implementation which generally takes long time.
- Budgeting means estimating cost and revenue to be incurred and earned in the future period whether it is a project to be established or is a running enterprise.
- The word capital budgeting is for new projects generally.
- Cost = land, plant, labour, materials and engagement of working capital.
- Capital or cash has its own cost depending on time, volume, source including foreign sourcing.
- Revenue estimating exercise is also not simple where it is dependent on many factors including market behaviour and competition.
- Each element of cost and revenue, therefore, poses many questions and uncertainty.

Sensitivity Analysis

- The uncertainty of future movements of certain variables can move either way, that puts all our present estimates and the project or investments to jeopardy.
- We need to safeguard against this.
- The variables and important components of capital budget are cost, revenue and net profits.
- Taking all possible variables into account will be a difficult task, making calculations complex.
- Sensitivity analysis aims to assess the impact of changes in each of these important variables on our projections or estimates.

- The steps that need to be taken in order to perform a sensitivity analysis are as follows:
- Identifying the factors that have an impact on the NPV (or IRR) of the project.
- Developing a mathematical understanding of the connections between the different variables.
- Conducting an analysis to determine how the changes in each of the variables will affect the net present value (or internal rate of return) of the project.

Scenario Analysis

- This method is an extension of or a step forward compared to the sensitivity analysis where only one variable was changed at a time.
- In this method, one plans for say, three scenarios namely, normal or the expected, optimistic and the pessimistic scenario.
- In the normal scenario, all the variables show expected values and the best values are taken for the optimistic scenario.
- It is in the pessimistic scenario the worst values are placed.
- Thus, all the variables move in the same directions at the same time.
- To explain the analysis in figures, the following table is presented.

Example:
Cost of the Project - 35,00,000
Annual Cash Inflows - 12,00,000
Project Life (Years) - 6
Discounting rate - 10%

Determine NPV under the following scenario
Best Case Scenario 1: All variable remain unchanged
Initial Project Cost - (35,00,000)
Life of the project - 6 years
Annual Cash Inflow - 12,00,000
PV @10% - 4.355
PV of Cash inflows - 52,26,000
NPV - 17,26,000

Scenario 2: Most likely case scenario:
Initial Project cost (I) by 20%, life remain same, decrease in annual cash inflow by 10% & increase in cost of capital to 12%

Initial Project Cost - (42,00,000)
Life of the project - 6 years
Annual Cash Inflow - 10,80,000
PV @10% - 4.1114
PV of Cash inflows - 44,40,312
NPV - 2,40,312

Scenario 3 : Worst case
Initial Project cost (I) by 20%, life of the project (d) to 5 years, decrease in annual cash inflow by 20% & increase in cost of capital to 12%

Initial Project Cost - (42,00,000)
Life of the project - 5 years
Annual Cash Inflow - 9,80,000
PV @10% - 3.604
PV of Cash inflows - 34,59,840
NPV - 7,40,160

Hillier Model
- An investor applies various techniques of analyzing the risk involved in any particular investment decision.

- Hillier's Model is one amongst many of these risk analysis techniques.
- This model is also based on NPV like earlier methods.
- Prof. Fredrick. S. Hillier of Stanford University suggested this model. Hillier's view was that the risk associated with the cash inflows is reflected in the standard deviation of the cash inflows.
- Lesser the deviation of cash flows from the mean value, the lesser would be the risk and vice versa.
- He argued that for risk analysis, value of standard deviation of net present value may be obtained through analytical deviation of the cash inflows.
- Two cases can be considered for such analysis viz. no correlation among cash flows and perfect correlation among cash flows.
- When cash flows for different years are perfectly correlated, the behaviour of cash flows in all years is alike.
- But, if they are not correlated, it implies that cash inflow in any particular year will be independent of the cash inflow in any other year during the life of the project.
- The formulae, though bit complicated, are presented below.

Uncorrelated Cash Flows

NPV = n∑t=1 [Ct / (1+i)t] – I
∂ (NPV) = n∑t=1 [∂t2/ (1+i)2t]1/2

Correlated Cash Flows
NPV = n∑t=1 [Ct / (1+i)t] – I
∂(NPV) = n∑t=1[∂t/ (1+t)t]

Where, Ct = Expected cash flow of the year "t"
∂t= standard deviation of cash flow for the year "t"
i = risk free rate
I = initial investment

Simulation Analysis

- Simulation means not real, imitation or deception.
- It is a process of creating a similar but artificial situation.
- What we do here is that firstly, we conduct analysis by finding out sensitivity of certain criteria of merit such as NPV, IRR, or any such criterion, to variation in basic factors.
- Then as a next step, we do simulations to find out likelihood under various scenarios to enable us to take the best suited decision.

The steps involved can be briefly stated as under:

- Prepare model project report on expected lines.

- Calculate NPV. (it can be IRR too)
- Find out how the NPV is influenced by or related to the parameters and the exogenous variables.
- Parameters are input variables specified by the decision maker who is in charge of the project.
- Exogenous variables are those whose value is determined outside the model and imposed on the model.
- These are not in control of the decision maker. This may probably depend on random event.
- For example, if we use seeds, fertilisers and water and then depend on rains to give us say 100 tons of a crop; the seeds, fertilisers, water and yield are endogenous and the rainfall is the exogenous factor which is not influenced by other variables.
- Fix the values of the parameters and also estimate the probability of distributions of exogenous variables.
- Select a value at random from the probability distributions of each of the exogenous variables.
- Determine the NPV with relation to the randomly generated values of exogenous variables and the predetermined or specified parameter values.
- Simulate the above exercise to any number of times to generate large number of simulated NPV.
- Plot the frequency distribution of the NPV and then consider which simulation is most probable or suitable.
    - Most of the simulations are done using computers because of computational tedium and the multiplicity.
    - Manual calculations become lengthy and bit difficult.
    - This tool is versatile. Its capacity to handle multi factor project is a great scoring point.
    - It can deal with complex inter relationships among parameters and exogenous variables, which are otherwise difficult to deal with manually.
    - Despite heavily relying on computer computations, it does not replace skilled judgement which is required in selecting variables and combinations.
    - Although this is a powerful tool, the treatment of correlations between variables remains a major problem. If correlations are not handled properly, it can give misleading conclusions.

Decision Tree Analysis

Like scenario analysis, another method to help in corporate decision making is Decision Tree method, which a graphical representation of possible outcomes(with their associated probability), attached to each decision.

So, there are two elements in a decision tree:

- Branch, which represents a decision (which is an alternative course of action) and
- Node, at the end of the branch, which represents the reward of the decision along with the probability attached to that reward.

Corporate Risk Analysis

- Every existing business firm has its own unique risk profile for its cash flows.
- When a new project/ investment is envisaged, which has its own risk profile, the combined risk profile of the firm is likely to undergo a change.
- Corporate Risk Analysis is the evaluation of this impact of the new project/investment on the combined risk profile of the firm.
- A corporate faces variety of risks like economic, competition, financial, reputation, operational, compliance, security etc.
- It is to be evaluated what type of corporate risk analysis one has to do while embarking up on a project and preparing capital budget.
- The project may have impact, good or bad, on the corporate.
- For example, in a portfolio of securities, when a new security is to be added, it may impact the overall profile of the portfolio due to a different standard deviation of its returns and the correlation of its returns with the returns on the other securities in the portfolio.
- Similarly, we may analyse what the risk connected with a project will mean in terms of corporate risk?
- A project is like a product in a bouquet of other projects carried out by the corporate.
- A project on a standalone basis or by itself may look risky or not so profitable.
- However, if you look in conjunction with the overall product or project profile of the corporate, it may be a complimentary one.
- Diversification, backward integration or a captive power plant cannot be viewed or reviewed independently.

Managing Risk

- The cost
- Financial Leverage
- Pricing
- Sequential Investment
- Information Intelligence
- Strategic Alliance
- Insurance
- Supply chain management
- Shorter time to market
- Derivatives
- Contingency planning

Project Selection Under Risk

- Evaluation using our judgemental capabilities
- How quickly we become risk free
- Risk adjusted discount rate

- Certainty Expectations

Risk Analysis in Practice

We have several methods of risk analysis. These contain various ways and complicated mathematical formulae, some of which are quite complex. However, while applying any such method, what we keep common in our mind is certain features of compilation. We will now cover some of these in the paragraphs to follow.

- Revenue Estimation
- Cost Estimates
- Flexibility in investing
- Sensitivity Analysis
- Scenario Analysis
- Decision Making:
    - Decision Making using Cost-Volume-Profit (CVP) Analysis
    - Decision Making using Relevant Cost Concepts
    - Decision Making using Activity Based Costing
    - Ethical and Non-Financial Considerations Relevant to Decision Making

Unit-12: Decision Making

Decision Making Using Cost-Volume-Profit (CVP) Analysis

- In practical terms, the cost, volume and the price are the important ingredients of any profit analysis.
- Cost has two main components namely, fixed and variable.
- The fixed cost per unit will go down if volume of production or sales increases.
- Variable cost generally varies with volume but here too the variance will depend on the product mix and the processes adopted.
- Higher volume of productions will generally reduce the cost of production due to economy of scale, but incremental cost due to upscaling the facilities may again change the cost structure.
- Higher volume in sales may accompany with disproportionate increase in marketing cost, some of which will be for brand building and the rest may commensurate with the sales volumes.
- While pricing will have direct impact on profitability, it in fact determines the breakeven point.
- Higher the sales realisation, earlier the breakeven point.
- Volume will also have direct impact on absolute profits, which too will be a determining factor in calculating the breakeven point.
- An investor will have many constraints and criteria while taking a decision to invest.

Some important points affecting investment decisions due to cost, volume and price, which ultimately determine profits and the breakeven point, are noted below.

- When we introduce a new product in the market, we cannot expect high volumes and therefore the costing will be higher.
- In the aforesaid scenario, we will have to keep the price affordable or practically low to attract new set of buyers, which will delay the breakeven point.
- In case of a consumer products having large market, we will have to plan for big volumes which will require large capital investment.
- In the aforesaid scenario, to carve out a reasonable market share, huge advertisement and brand building expenses will have to be incurred affecting the cost and profitability.
- Moreover, building large capacity will need huge investment delaying the payback period.
- A speciality product, on the other hand, can be launched with high price and good margins but may need brand building and huge R&D expenditure.

Decision Making Using Relevant Cost Concepts

- In decision making, one of the other ways is to classify the costs according to whether they are relevant or not to a particular decision.
- This concept is called Relevant Cost Concept and is valid and applicable for not only while planning an investment, but also while running a business, on the premises that decision making is a constant process and cost is an integral part of it.

- Why we call it a Relevant Cost is because the cost is not a fixed or onetime concept but a concept relevant at a given time for a given situation.
- It varies in total from one alternative to another.
- In fact, every business decision has its cost whether known, unknown, direct or indirect.
- Let's now discuss in more detail various cost elements.
- Relevant costs are those future costs which will be affected by a decision whereas, irrelevant costs are those which are not affected by the decision.
- To give a simple example, if one owns both, a diesel and a petrol car, and he has to undertake a long journey, the decision about using diesel or petrol car will take into account the costs of petrol and diesel but not the cost of road tax and insurance, as these costs are already incurred and will remain the same, irrespective of the decision.
- So, the costs of petrol and diesel are relevant costs, while the costs of road tax and insurance are irrelevant cost.
- In this example, the costs of road tax and insurance are called "Sunk Costs" as these are made even before the decision making process starts.
- Sunk cost does not mean that it is a wrongly incurred expenditure or has no benefit. In our above example, road tax and insurance costs have to be incurred and have their benefits. The only point is that these are irrelevant to the decision of making a choice of using which of the cars.
- Relevant costs are also categorised as Avoidable costs, while the irrelevant costs are categorised under Unavoidable costs.
- This is because avoidable costs are incurred only if a specific business decision is made while the unavoidable costs will have to be incurred irrespective of the outcome of the decision.
- In our above example, the road tax and insurance costs are unavoidable costs while the cost of petrol and diesel are the avoidable costs.
- The relevant cost concept helps the decision making process by discarding the irrelevant cost data and thus, make the decision making process less complicated.
- While using the concept of Relevant costs, it is worthwhile to examine the so called "Opportunity Costs".
- When you conceive a project, you had an alternative use available or was in mind which could have given you some X return.
- When you use the resources for another project, you will lose that opportunity and potential income. That lost income is the opportunity cost.
- It may be noted that opportunity cost, as a part of decision making, will arise only when use of Scares Resources is Involved.

Some of the important areas of decision making, which involve the Relevant Cost Concept, are as under:

- Add or drop a product line or segment:
- Make or buy decision

- Setting price of a product:
- Accepting or rejecting special orders
- Heavy discount offers from suppliers
- Import Substitutes
- Raw material mix
- Sale and Deals
- Outsourcing an activity or service

Decision Making Using Activity Based Costing (ABC)

- Prior to the emergence of ABC, companies typically calculated profitability using the allocation method.
- This allocation method involved allocating costs to a product or customer using metrics such as the total number of units produced, accounts, customers, or transactions.
- Activity Based Costing (ABC) is used for estimating the cost which in turn is used for decision making.
- It has been widely used to help the management in taking important decisions like pricing, outsourcing etc.
- The method is used for costing of products, service or even a customer who is being serviced, all termed as objects under this method.
- The method is named after activity, which is the focus of the process.
- ABC method of costing is based on the fact that the products and services, provided by a company to its customers, involves various such activities which are not exclusively related to one product or service.

  For example: The quality control department ensures that all the products and services provided by the company are of desired quality.
- But the service provided by this department is not equally spread over all such products and services.

Activity-Based Costing (ABC) is technique of appropriately assigning the costs of such activities to various products and services of the company.

- ABC involves identification of each cost driving activity and apportioning its cost to different products or jobs.
- The basis for this allocation is the quantity of each such cost driving activity required for their completion.
- Under this technique, the overhead costs of the company are identified with each cost driving activity.

Methodology of Activity Based Costing Method

The basis of attribution of cost can be the benefit received from the indirect activates.

The cost attribution can also be based on the activities undertaken to produce each product or service.

The following terms are used while operating ABC System:

- Cost Object
- Cost Pool
- Cost Driver

- ABC method can give us product profitability as well as customer profitability.
- It can also throw light of process efficiency. In short, activity-based cost information is both intuitive and logical.
- To conclude, it makes sense to those charged with the task of improving performance and the method provides them with transparent information on the cost ramifications of their decisions.

Activity Cost Driver Rate = Total cost of activity/Activity Driver

Character-Based Decision-Making Model

- There are many models which suggest framework for deciding the ethical soundness of a decision.
- Prominent among them is the Character-Based Decision-Making Model, developed by Josephson Institute of Ethics.
- It provides a framework that can be used to decide whether a decision is morally and ethically sound.

The pillars of this model are:

- Trustworthiness,
- Respect,
- Responsibility,
- Fairness, and
- Citizenship.

The model suggests a seven-step path to better decisions. These steps are:

- Stop and Think
- Clarify Goals
- Determine Facts
- Develop Options
- Consider Consequences
- Choose
- Monitor and Modify

The model suggests the rationalization of obstacles to ethical decision making, as under: rationalizations

- If It's Necessary, It's Ethical
- The False Necessity Trap
- If It's Legal and Permissible, It's Proper
- It's Just Part of the Job
- It's All for a Good Cause
- I Was Just Doing It for You
- I'm Just Fighting Fire with Fire
- It Doesn't Hurt Anyone
- Everyone's Doing It
- It's Ok if I Don't Gain Personally
- I've Got It Coming
- I Can Still Be Objective

The model involves the Golden Rule – "Help when you can and avoid harm when you can."
It also involves the principle that, in general, the company should make decisions that promote the greatest amount of moral justness.

MODULE - C: VALUATION, MERGERS & ACQUISITIONS

Unit-13: Corporate Valuations

Introduction

Corporate valuation is the process of determining the value of a company entity, and it is most commonly used in the context of the financial industry.

There are two primary types of value, which are as follows:

- **Book Value:** Book value can be described as the value of an asset or the complete business entity as established by the books or the financials of the company. Thus, we may say that the book value can be derived from the Balance Sheet.
- **Market Value:** This refers to the value that is derived through the analysis of the market. The market capitalization of a company, often known as the number of outstanding shares multiplied by the share price, defines the market worth of a company.
- The market value is fundamentally an equity value because equity investors value a company's shares apart from debt lenders and other investors.
- The term "enterprise value," which is synonymous with "firm value," refers to the value that is placed on a complete company, including its debts and other commitments.
- ***Enterprise's Value = Equity value + short-term debts + long-term debt + current portion of long-term debts + capital lease obligations + preferred securities + non-controlling interests + other non-operating liabilities – (Cash and cash equivalents).***

Approaches to Corporate Valuation

Market approach

- The market approach is a valuation method that determines the value of a company, an intangible asset, an ownership stake in a firm, or of securities, by taking into account the price of a recent transaction or the price of assets that are comparable to the one being valued.
- When determining the value of an asset, the market approach takes into account its size, quantity, quality, and other characteristics, in addition to the values of comparable assets. This value is then applied to the item under examination.
- This method assists in determining the worth of a business by making a comparison of the business (under valuation) to other businesses of a comparable nature that have been sold in more recent times.

Income approach

When valuing a company, the income approach is utilised to determine the present or current value of the company's expected future earnings or cash flows. The net operating income (NOI) of the company is determined using this method, and then that figure is divided by the rate of capitalization.

Cost approach

- The cost approach, which is also known as the asset-based approach, is able to extract value by combining the FMV (Fair Market Value) of the company's net assets. This method is also known as the asset-based approach (assets less its liabilities).
- This methodology has a tendency to determine the worth of the firm on the basis of the value of the assets held by the business. The use of this method is particularly helpful for asset-intensive businesses, holding corporations, and troubled entities whose worth is less than their whole net tangible value.

Methods of Determining Value of Firm

- Adjusted Book Value Approach
- Stock and Debt Approach
- Direct Comparison Approach
- Discounted Cash Flow Approach.

Adjusted Book Value Approach

- It is a measure of a company's valuation after all the liabilities and assets are adjusted to reflect true market value.
- The degree of precision that may be achieved, using the book value approach, is directly proportional to the degree to which the net book values of the assets accurately represent their fair market values. There are three potential causes for a discrepancy between book prices and market values:
    - The book value of an asset might become increasingly disconnected from its actual value as a result of inflation.
    - Constant technological advancements render some essential assets obsolete and render them useless even before depreciation has taken place.
    - Organisational capital, which is an extremely important form of capital, is not shown on the balance sheet.

Stock And Debt Approach

- When a company's securities are traded on a public exchange, the worth of the company can be determined by simply adding the current market value of all of its outstanding securities.
- The efficiency of the market is the fundamental assumption that underpins the market-based approach. This indicates that the price, at which an asset is trading on the market, is the estimation of its intrinsic worth.
- Instead of utilising the price that existed on the date of the lien, some appraisers recommend using an average of recent stock prices, because of the volatility of stock prices.
- Whether or not it is rational to take the average of things, is dependent on how efficient the stock market is. If the market is believed to be efficient, which indicates that prices of

securities reflect all of the information that is readily available to the public, then there is no need for averaging.

Direct Comparison Approach

- The Direct Comparison Approach is founded on the Principle of Substitution, which states that a buyer will not pay more for a given property than the cost of a comparable, competitive property with the same utility in the open market, provided there is no delay in making the transaction.
- The most important aspect of this analysis is locating these comparable businesses and determining their current market prices.

The valuation method involves three steps:

- Determining the property's highest and best use,
- Identifying similar properties that have sold, and
- Adjusting the comparable sales' values.

The common multiples used in the direct comparison method include:

- Enterprise value to sales
- Company value to EBIT
- Price to earnings
- Price to book value
- Price to sales

Discounted Cash Flow Approach

- The present value of potential future cash flows can be calculated using a method known as discounted cash flow, or DCF. Obtaining an investment's value, with the use of this strategy, is possible.
- The DCF technique requires one to apply a discount rate to each periodic cash flow of the company. The discount rate is determined by that company's cost of capital. The total Present Value (PV) of all future cash flows can be calculated by multiplying this discount by each future cash flow to arrive at a number that represents the total present value of all future cash flows.
- This idea is helpful for calculating the value of a prospective acquisition, of a possible investment in an annuity, or of a purchase of a fixed asset.
  ct = The amount received for period t n = Total number of periods
  r = The Discount rate
- When valuing a company with the discounted cash flow methodology, it is necessary to make cash flow projections over an unspecified amount of time unlike a project which is presumed to have a definite life.

- Also, the basic presumption in a capital project is that it will not expand during its life-cycle. But, a business entity is anticipated to expand in the future. In order to accomplish this objective, the value of the company is typically segmented into two time periods, namely: Value of the firm = Present value of cash flow during the explicit forecast period + Present value of cash flow after the explicit forecast period

Valuation Using DCF Approach

Step 1. Analyse historical performance to calculate
Operating Invested Capital:

- Operating Invested Capital refers to that portion of the invested capital which is used to acquire only operating assets. The operating working capital is also added to it to arrive at total Operating Invested Capital.

Operating working capital = operating working capital assets – non-interest bearing current liabilities.
Operating working capital assets = total working capital assets - non-operating working capital assets (excess cash and marketable securities)

Net operating profit less adjusted taxes (NOPLAT):

NOPLAT = EBIT – Taxes on EBIT

- EBIT is the operating income that the company would have received before taxes if it did not have any debt obligations. During the process of computing EBIT, interest expenses, interest income, and revenue or loss from non-operating activities are not taken into account.
- The calculation of NOPLAT for ABC Industries, assuming a marginal tax rate of 30 percent is given below:

Return on Invested Capital:
ROIC = NOPLAT / Operating Invested Capital

Net Investment:

- The difference between the amount of gross investment and the amount of depreciation is known as the net investment.
- The term “gross investment” refers to the sum of “cumulative expenditure,” which includes expenditure on current as well as non-current assets.” The term “depreciation” refers to any and all costs that are not paid in cash.
- Net investment made over the year = (Net non-current/fixed assets at the end of year + Net current assets at the end of year) Minus (Net non-current/fixed assets at the beginning of year + Net current assets at the beginning of year)

STEP 2: Calculating the Free Cash Flow

- The post-tax cash flow created from the operations of the company is known as the Free Cash Flow. This cash flow is calculated after the firm has accounted for investments in fixed assets and the net working capital that is necessary for the operations of the company.
- The Free Cash Flow (FCF) can be calculated as follows:
  FCF = NOPLAT – Net investment
  FCF = (NOPLAT + Depreciation) – (Net investment + Depreciation) FCF = Gross cash flow – Gross investment
- If we have to calculate free cash flow available to investors of both equity and debt, we should add the non-operative cash flow to the figure of FCF arrived above.

Step 3: Estimating the Cost of Capital

The rate of return that must be offered to investors in exchange for their capital is referred to as the cost of capital. If the funds have to be borrowed, the cost will be proportional to the interest that is accrued and has to be paid back on the loan. If the funds are equity, then the cost is the return that investors anticipate receiving, which can come either through an increase in the stock's price or from dividends.

Three stages:

- The first step is to calculate the percentages of each source that will be used to raise funds.
- In the second step, you will calculate the marginal cost of each source.
- The third step involves determining the weighted average cost of capital using the appropriate formula.
- The weighted average cost of capital, or WACC, is a marginal cost, or the cost of raising more capital, that is averaged across the various sources of capital.

Step 4: Forecasting Performance

- After examining past performance and estimating the cost of capital, we go on to constructing financial forecasts. The following are the steps:
- Choose the explicit time period for the forecast.
- In order to improve the company's performance in the future, you should develop a strategic vision.
- Translate the strategic vision into financial forecasts.
- Check that everything is aligned and consistent.
  - The worth of a company can be calculated as the present value of the predicted cash flows that will be generated by the company in the future.
  - The growth rate that will be used to anticipate future revenues and earnings is the most important input in the valuation process, especially for high-growth companies. A company can be valuable if it owns assets that generate current cash flows or if it has other valuable characteristics or if It is anticipated that such assets will be acquired in the foreseeable future.

Step 5: Determining the Terminal or Continuing Value

- The first type of value is known as the continuing value, and it is a reflection of the current value of the anticipated cash flows that will result from maintaining the investment until the end of its life.
- The second type of value is known as the liquidation or salvage value, and it refers to the amount of net cash flow that the company would obtain if it ended the project right now.
- The third type of value is known as divestiture value, which is the sum that the investor with the highest offer will pay for the asset in question.
- Depending on which of these three values is the highest, a company must decide whether to continue working on an existing project, whether to liquidate the project, or whether to sell it to someone else.
- The estimation of the continuing value is accomplished in two stages:
- Selection of a suitable method: The broad classifications of the various methods used for finding out the continuing value include cash-flow and non-cash flow methods.

Cash Flow Methods:

- Growing free cash flow perpetuity method
- Value driver method Non-Cash Flow Methods:
- Replacement Cost Method
- Price-PBIT ratio method
- Market-to-book ratio method
- Both the cash flow methods of arriving at the terminal value, assume that after explicit forecast period, the cash flows will grow at a constant rate forever. So, the formula will be:

Computation of the continuing value: When attempting to determine the worth of a business that is expected to go on, many people turn to the rising free cash flow perpetuity technique. The weighted average cost of capital (also known as WACC) and a constant growth rate (G) are two essential components that must be specified for finding the continuing value using this approach.

Step 6. Calculating the firm value and interpreting the results

- The final step of the valuation process involves computing the worth of the company and evaluating the results of that calculation.
- The following components can be added together to arrive at an estimate of the company's value:
- The value, in present terms, of the free cash flow over the time covered by the explicit forecast.
- Continued Value after the explicit forecast period, discounted to its present value.
- The value of non-operating assets not taken into account when the free flow analysis was carried out.

Unit-14: Discounted Cash Flow Valuation

Estimating Inputs

For applying the DCF method of valuing a firm or any other asset, we need the following inputs:

- The predicted cash flows in future
- The discount rate that is suitable for the given level of risk associated with these cash flows
- The estimated cash flow growth rate and
- The estimated pattern of growth.

Expected Cash Flows

- The dividend is the only source of cash flow that an equity investor receives from a publicly traded company, financial models that use dividends as cash flows are referred to as dividend discount models.
- A broader definition of cash flows to equity would be the cash flows that are left over after the cash flow claims of non-equity investors in the firm have been met (interest and principal payments to debt holders and preferred dividends), as well as after enough of these cash flows have been reinvested into the firm to sustain the projected growth in cash flows. This concept is known as the free cash flow to equity (FCFE), and the types of models that make use of this concept, are referred to as FCFE discount models.
- The total cash flow to all claim holders in the company is what is referred to as the cash flow to the firm. One technique to calculate this cash flow is to add the free cash flows to equity to the cash flows to lenders (debt) and preferred stockholders. The models that make use of these cash flows are referred to as FCFF models, and this cash flow is referred to as the free cash flow to the firm (FCFF).

Discount Rates

- Discounting determines the present value of future cash flows by using a rate that is the cost of capital that most accurately reflects the risk and timing of the cash flows. This rate is called the discount rate.
- Cash flows with a higher level of risk should have higher discount rates. There are two different perspectives on risk. The first type of risk is known as default risk, When looking at debt, the rate that reflects the possibility of default is referred to as the cost of debt.
- The second method to look at risk is to consider how it relates to the difference between actual returns and expected returns. The actual returns on an investment with a high level of risk, may be considerably different from the predicted returns; the bigger the deviation, the higher the level of risk.
- The cost of capital can be determined by taking the average of the cost of equity, as well as the cost of borrowing money after taxes, which is determined by the default risk, and then weighting the average by the proportions that are used for each type of funding.

- The discount rates, that are applied in discounted cash flow valuations, ought to be reflective of the riskiness of the cash flows being valued. To be more specific, the cost of debt needs to include a default premium or spread to account for the risk of the debt going into default, and the cost of stock needs to include a risk premium to account for the risk of equity.

Estimating future Growth

- We need estimates of the predicted growth rate for revenues and the expenses, in order to make projections about future cash flows. The rate of inflation, that is anticipated, is an essential component in the process of predicting the growth rate.
- There are three different methods that can be used to estimate growth. One strategy is to investigate the past of a company and employ the historical growth rate that was reported by that company.
- The second method is to get estimates of growth from sources that have a greater level of expertise. For some analysts, this means using the estimates provided by a company's management, while for others, it takes the form of employing the consensus estimates of growth produced by others who follow the firm.
- The third method is to conduct a survey. The surveys are used to collect information on the expectations that investors have for predicted growth.

Estimating Growth Patterns

- When valuing a company in general, there are three main approaches, that may be taken, for the growth pattern:
- We can assume that the company is already in stable growth
- We can assume a time of consistent high growth and subsequently lower growth rate to stable growth (two-stage growth); or
- We can provide for an interim period to get to sustained growth (three-stage or n-stage models).

- The rate of expansion of a company over the most recent time period allows us to divide businesses into three distinct categories.
- Companies considered to have stable growth report earnings and revenue growth that is equal to or lower than the nominal growth rate of the economy in which they operate.
- Companies are considered to have moderate growth if their earnings and revenue grow at a rate that is just slightly faster than the economy's nominal growth rate.

The earnings and sales of high-growth companies expand at a rate that is significantly faster than the nominal growth rate of the economy as a whole.

Approaches to Discounted Cash Flow Models

Various Discounted Cash Flow Models

- **Enterprise DCF Model:** The enterprise DCF model applies a discount rate equal to the weighted average cost of capital to the free cash flow to the firm (FCFF).
- **Equity DCF Model:** It can be implemented in two different ways: the dividend discount model and the free cash flow to equity model. The dividend discount model takes into account the cost of equity when calculating a discount on the expected dividend stream. The free cash flow to equity model also takes into account the cost of equity when calculating a discount on the free cash flow to equity.
- **Adjusted Present Value (APV) Model:** The APV model discounts the unlevered equity cash flow (which is the same as the free cash flow to the firm) at the unlevered cost of equity (the cost of equity assuming the firm has no leverage) and adds to it the discounted value of the interest tax shield on debt. This results in an estimate of the present value of the unlevered equity cash flow.
- **The Economic Profit Model:** In the economic profit model, the economic profit stream is discounted using the weighted average cost of capital, and then the currently invested capital is added to the resulting value.

Dividend Discount Model

The Dividend Discount Model is a quantitative method of valuing a company's equity shares price based on the assumption that the fair price of share equals the present value of the company's future dividends.

The various dividend discount models used for valuation are as under:

- Constant Growth Model
- Zero Growth Model
- Two Stage Model
- H Model
- Three Stage Model

Constant Growth Model

One of the most common assumptions used by dividend discount models is that the dividend paid out per share would increase at a rate that is fixed (g). According to this hypothesis, the value of a share is computed as follows:

Two Stage Model

- It is based on the assumption of two primary stages of dividend growth: that the exceptional growth—whether positive or negative—will last for a set number of years, after which the usual growth rate will take over and continue indefinitely.

- In the event where the dividends increase at a rate that is proportional to the rate of growth, the market price of the equity share will be:

H Model

- The H model, as opposed to the traditional two-stage model, postulates that the exceptional growth rate in the beginning stage does not remain constant but rather decreases linearly over time until it achieves a stable rate in the steady stage.
- The H model, which was developed by Fuller and Hsia, makes the assumption that the earnings growth rate starts off at a high initial rate (ga), and then decreases at a linear rate over the course of 2H years to a stable growth rate (gn), which is maintained forever. This model also assumes that the earnings growth rate will remain stable forever, after the stability has been achieved. It operates under the presumption that the dividend payment rate and the cost of equity will not change over the course of time and will not be affected by the fluctuating growth rates.
- The H model is more realistic than the two-stage model, which predicts that the growth rate would suddenly slow down after a given amount of time. Instead, the H model predicts that the growth rate will gradually slow down over time. On the other hand, presuming that the dividend pay-out rate will remain unchanged during all stages of growth appears to be an unrealistic expectation. Because of this, the model cannot be used by any company that pays out zero or very little dividends at the present time. The applicability of the model is severely restricted due to the requirement that it exhibit both rapid development and substantial pay-outs.

Three Stage Model

Combining the two-stage model with the H model resulted in the creation of the three- stage growth model. It presupposes that there will be an initial time of stable high growth, a second period of growth that will decrease in a linear fashion, and a third era of steady low growth that will continue on indefinitely.

Unit-15: Other Non-DCF valuation models

Introduction
Non-DCF methods for valuation are as follows:-

- Relative Valuation Model
- Equity Valuation Multiples Model
- Enterprise Value Multiples Model
- Book Value Approach Model
- Stock and Debt Approach Model

Relative Valuation Model
A relative valuation places an asset's worth in comparison to the prices at which other, comparable assets are selling on the market, at the moment.

Steps Involved in Relative Valuation

Conducting Research on the Concerned Organisation
You need to perform a comprehensive analysis of the subject company, which is the company that will ultimately be evaluated. This analysis should focus on the subject company's position within its industry and its financial standing.

Identifying Businesses That Are Analogous
Following the analysis of the subject firm, the next stage is to choose other businesses that are comparable to the original company in terms of the types of industries they specialise in, the kind of customers they cater to, the scope of their operations, and so on.

Determining the Multiples Used in Valuation: They can be organised into the following two major groups:

- Stock valuation multiples, such as the price-earnings ratio, the price-book value ratio, and the price sales ratio, and
- Enterprise valuation multiples, (EV-EBITDA ratio, EV-FCFF ratio, EV-book value ratio, and EV-sales ratio).

Figuring Out the Valuation Multiples for the Other Comparable Companies:
Calculate the valuation multiples for each of the similar companies by using the observed financial characteristics and values of the companies being compared.

Establishing a Value for the Concerned Business

- It is possible to evaluate the subject company if one considers the valuation multiples that have been observed for comparable companies.

- You can accomplish this in a straightforward manner by applying the average multiples of the comparable companies to the pertinent financial attributes of the subject company.

Equity Valuation Multiples Model

P/E Multiple:

P/E multiple = Market price per share/ Earnings per share.

One way to express the price-earnings multiple is as follows: P0 /E1 where P0 is the current market price per share and E1 is the expected earnings per share a year from now.

P/B Multiple:

P/B multiple = Market price per share/ Book value per share.
Book value per share (B) = (Shareholders funds-Preference capital)/ Number of outstanding equity shares

PEG

- PEG Ratio is defined as the ratio of price to earnings divided by the anticipated annual growth rate in earnings per share.
- PEG ratio = PE ratio/Expected growth rate
- The multiple of the P/B to the ROE, is known as the value ratio. Value Ratio = P/B / ROE
- The multiple of P/S to NPM is referred to as PSM. PSM = P/S / NPM
- the company is undervalued if the PEG multiple is less than 1, whereas it would appear that the stock is overvalued if the PEG multiple is greater than 1.

Relative PE Ratio:

- A company's price earnings ratio is measured in relation to the average for the market using relative price earnings ratios.
- You can calculate it by dividing the current PE ratio of a company by the average PE ratio for the market:

Enterprise Value Multiples Model

- Enterprise value multiples put the emphasis on the value of the business itself, in contrast to equity multiples, which place the emphasis on the value of the equity.
- Typically, some measure of earnings, assets, or sales contributes to the determination of the enterprise value.
- The following are some examples of enterprise value multiples that are regularly used:
  - EV/EBITDA multiple
  - EV/EBIT multiple
  - EV/FCFF multiple
  - EV/BV multiple

- EV/Sales multiple

Book Value Approach Model

- Relying just on the data shown in a company's balance sheet is the least complicated method for determining the company's market value. Values that are based on uncertain projections of the future are considered by some to be a less accurate assessment of value than values that are based on book values that are found on a balance sheet.
- Company's balance sheet able to produce a trustworthy assessment of the value of the firm's assets and equity.
- Book value is a good proxy for real worth when applied to a tangible asset that has no growth potential, very few growth opportunities, or no chances at all for producing greater returns. Book value and true worth will be very different for an organisation that has large chances for growth and the possibility of producing returns that are significantly higher than average.
- The degree of precision that may be achieved using the book value technique is directly proportional to the degree to which the net book values of the assets accurately represent their fair market values.

Book Value Revision to Account for Replacement Cost

- The earning power of an asset might not be related to the book value of the asset, particularly if the asset is old, it is likely to be related to the current cost of replacing the asset. Therefore, current replacement costs may be used in place of the asset's book value.
- Cash and Cash Equivalents: The value of money does not change under any circumstances. As a result, assigning a value to it is not problematic in any way.
- Receivables: In most cases, the value of receivables is determined by their face value. When the creditworthiness of the debtors is in question, it is prudent to set aside money to cover possible defaulted debts.

Adjusting Book Values to Reflect Liquidation Values

- Finding out how much cash the assets listed on a company's balance sheet could bring in if the company were immediately put into liquidation is the method that provides the most accurate approximation of the fair market value of those assets.
- If there is a healthy secondary market for the assets, then the liquidation values will be the same as the prices on the secondary market. Nevertheless, there aren't any active secondary markets for the majority of business assets.
- The fact that the liquidation value approach pays no attention to organisational capital is its most significant shortcoming. The company is valued not as a going concern but rather as a collection of assets that can be sold separately from one another.

Problems with Asset-Based Valuation

- The asset-based valuation approach, in essence, makes an attempt to recast the balance sheet by (a) determining the assets and liabilities that are included on the balance sheet based on their most recent values in the market and (b) determining which assets and liabilities are not included on the balance sheet and assigning a market value to each of those assets and liabilities.
- However, despite its apparent ease, it actually raises a number of very challenging issues:
- The assets that are included on the balance sheet might not be actively traded, which means that it might be difficult to obtain accurate market values for them.
- Even if the information is available, market values may not accurately reflect the true value of the asset due to inefficiencies in the market.
- It is possible that the cost of an asset's curren replacement or its selling price (its liquidation value) does not accurately reflect the value that the asset contributes when used in a particular going concern.
- Intangible assets are typically what are considered omitted assets. It can be difficult to recognise and assess their worth.
- Even if individual assets can be located and valued, it is likely that the total of the individual values of all identified assets will not equal the value of the assets as a whole. It is difficult to put a price on the asset known as "synergy." The question that needs to be answered in order to properly value the company is how much its individual assets are worth when added together.

Stock and Debt Approach

- When a company's securities are traded on a public exchange, the value of the company can be determined by simply adding up the current market value of all of the company's outstanding securities. Appraisers of properties use a straightforward methodology that they refer to as the stock and debt approach.
- Another name for this strategy is the market-based approach.

Unit-16: Special cases of valuation

Intangibles-Brand, Human Valuation

- The traditional forms of intellectual property assets, such as patents, trademarks, and copyrights, are what are meant to be referred to as "intellectual capital." Intangible assets might take the form of a company's brand name, patents or technological competence.
- Conventional accounting standards either grossly underestimate their value or ignore intangibles entirely; as a result, the balance statements of these companies provide little indication in this regard.
- Intangible assets contribute significantly to the market valuations of organisations; there is evidence, that brand name alone may explain more than half of the value in many consumers' product companies.
- The failure to value these intangible assets causes a distortion not just in accounting measures of profitability like return on equity and capital, but also in market measures of value like P/E ratios and EV/EBITDA multiples.

Independent & Cash-Flow-Generating Intangible Assets

Those intangible assets that are attached to a particular product or product line and create cash flows, are the ones that are the least complicated to evaluate. These assets typically have finite lifespan, over which the cash flows have to be estimated.

Trademarks, Copyrights, and Licenses:

- The owner of a trademark, copyright, or licence has the sole authority to manufacture or sell the associated goods or render the associated service. As a direct result of this, their value is determined by the cash flows that can be produced as a result of holding the exclusive right.
- A discounted cash flow valuation of the asset can be obtained by first estimating the expected cash flows that will result from owning the asset, then applying a discount rate to these cash flows that is reflective of the uncertainty associated with them, and finally taking the present value of this value.
- Alternately, we have the option of attempting a relative value, which is when we apply a multiple to the revenues or income that we believe can be earned by the copyright or the trademark. The multiple is often estimated by taking a look at the prices at which assets of a comparable nature have been sold in the past.

Franchises:

- The owner of a franchise is granted the right to promote and sell a company's branded good or service under the franchise's name.
- In either scenario, the individual who buys the franchise, known as the franchisee, is responsible for paying the franchisor (McDonald's or Maruti Suzuki), either an initial charge or an ongoing annual cost in order to operate the franchise. In exchange, the individual receives

the power of the brand name, as well as the support of the corporation and advertising backing.

Approaches For Valuation

There are three distinct approaches that we can take in order to arrive at an estimate of the worth of these intangible assets.

- Capital Investment
- Discounted Cash Flow Valuation
- Relative valuation

Real Estate Firms

- The approaches of intrinsic and relative valuation, that we used to analyse equities, ought to be applicable to the analysis of real estate as well.
- Both real estate and financial assets share a number of aspects in common, including the fact that their values should be decided by the cash flows that they create, the degree of uncertainty associated with those cash flows, and the predicted growth in those cash flows. The asset's value rises in proportion to the risk level.
- Many people believe that the risk and return models, that are utilised in the analysis of financial assets, cannot be utilised in the analysis of real estate due to the differences in the levels of liquidity that exist between the two markets as well as the types of investors that participate in each market.

Discounted Cash Flow Valuation

The value of any asset that produces cash flows is equal to the asset's predicted cash flows multiplied by their present value. It is possible to use discounted cash flow valuation models, such as the dividend discount model, to determine the value of cash-flow producing real estate investments in the same way that these models can be used to determine the value of financial assets. In order to properly evaluate real estate investments by using discounted cash flow valuation, the following steps need to be taken:

- Determination of the level of risk associated with real estate investments and basing your estimate of the appropriate discount rate on this level of risk.
- Determination of an estimate of the anticipated cash flows which are expected from the real estate investment over the course of the asset's life.

Start-up Firms

- There are many analysts who contend that it is impossible to assign a value to these companies because they do not have a history and, in certain cases, do not have any goods or services that they can sell.
- The current value of the predicted cash flows from a young company's operations is what determines its worth.

Information Constraints

- There are some companies, particularly those operating in emerging parts of the economy, in which you can experience informational difficulties. To begin, most of these businesses have not been around for more than a year or two, which results in a history that is quite limited in scope.
- Second, the existing disclosures of their financial position provide relatively little information regarding the aspect of their assets—expected growth and Third, these companies are frequently the pioneers in the industry in which they operate. In many instances, there is neither a competition nor a peer group against whom they can be evaluated in order to determine their standing.

The Analysis Framework in General

- Step 1: Assessment of the Enterprise's Current Standing-
- Step 2: Revenue Growth Estimation-
- Step 3: Stable-growth Associated Operating Margin Estimation-
- Step 4: Estimate Reinvestment to Generate Growth-
- Step 5: Risk and Discount Rate Estimates:
- Step 6: Firm Valuation-
- Step 7: Estimating Equity Value and Per-Share Value

The special features of Financial Service Companies

- Use of debt for earning income
- Heavily Regulated Sector
- Difficulty in measuring reinvestment
- Capital Adequacy Norms
- Difficulty in choice of multiples
- Issues faced for income estimation due to Provisioning for Losses
- Government directives about the choice of financial mix

Discounted Cash Flow Valuation:

- The present value of the anticipated cash flows that will be generated by an asset is what is taken into consideration when developing a discounted cash flow model to determine the asset's worth.
- We will begin by analysing dividend discount models, cash flow to equity models, and excess return models. These models are used to determine the worth of banks and other financial sector companies.

Dividend Discount Models

We evaluate equity as the present value of the anticipated dividends by using the rationale that dividends are the only source of cash flows that a stakeholder in a publicly traded company is entitled to receive.

Basic Models:

According to the fundamental dividend discount model, the value of a stock is equal to the present value of the dividends that are anticipated to be received from that specific stock. If we make the assumption that a publicly listed company's equity has an endless life, then we get the following results:

Inputs to Model:

We require estimates of the cost of equity, the expected payment ratios, and the estimated growth rate in profits per share over time in order to evaluate a stock via the dividend discount model.

Asset Based Valuation:

- We determine the value of a financial services company's existing assets, deduct the amount of debt and any other claims that are still due, and then report the difference as the equity's value.
- In the case of a bank, for instance, this would entail estimating the value of the bank's equity by first assessing the loan portfolio of the bank (which would represent the firm's assets) and then deducting the value of any outstanding debt.
- Estimating the worth of the equity in a company requires first valuing the policies that are now in effect at the company (in the case of an insurance provider), then deducting the predicted claims that would come from these policies as well as any other debt that is currently outstanding.

Distressed Firms

Here, we examine companies with negative earnings, substantial assets, and substantial debt. Equity investors in this company have the choice to dissolve the company and pay off the debt. This call option on the underlying firm can increase the value of the shares, particularly when there is substantial uncertainty over the value of the assets.

Equity in Highly Levered Distressed Firms:

- The majority of publicly traded companies have two aspects of equity. The first advantage is that the equity investors run the company and have the power to decide at any time whether or not to liquidate its assets and pay off any other claim holders.
- The second benefit is that the liability of equity investors is limited to the amount of equity that they have invested in those companies. It is possible for the option value of equity to be

higher than the discounted cash flow value in companies that have big obligations and negative earnings.

Payoff on Equity as an Option:

- The holders of equity have a right to any cash flows that remain after all other financial claimholders have been paid off (including debt holders, preferred stock holders, and so on).
- The same rule applies in the event that a company is put into liquidation. Equity owners are entitled to the cash that remains in the company after all of the company's outstanding debt and other financial demands have been satisfied.

Valuation of Cash and Cross Holdings

- There is a line item for cash and marketable securities on the balance sheet of every company. This line item refers to the company's holdings of cash and assets that are nearly equivalent to cash. Investments in short-term government securities or commercial paper are examples of near-cash investments. Both of these types of investments can be easily turned into cash at a very cheap cost and in a very short amount of time.
- As time goes on, fewer and fewer transactions will be conducted using currency as a medium of exchange. As a direct result of this, we anticipate that the need for cash will reduce as technological advancements in the banking industry make it possible for customers to make payments using credit cards or through various digital modes.

Differences between Cash Valuation Approaches

Warrants and Convertibles

- Convertible bonds and stock allows the holder to convert the bonds or stock into shares of common equity at a predetermined price per share.
- Because the value of such debt is equivalent to the value of the common stock, it is dependent of the enterprise value of the company; as a result, it cannot be subtracted from the enterprise value of the company in order to determine the equity value of the company.
- The assumption that all of a target company's debt and preferred stock will be converted into equity upon acquisition is one strategy for determining the value of such debt and stock Cyclical & Non-cyclical Companies

Holding Companies

Holding companies can be appraised using a variety of different approaches, including those based on free cash flow and dividend discount models. Holding companies need to be valued for their ability to provide superior investment opportunities and to make sound strategic decisions.

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Unit-17: Mergers, Acquisitions and Restructuring

Introduction

- Acquisition is the process of one entity buying out another and absorbing it into itself, as contrast to merger, which refers to the combination of two separate entities into one.
- In the context of Indian law, the term "merger" is more accurately rendered as "amalgamation." The amalgamations can be by merger of firms within the limits of the Companies Act, and acquisition through takeovers.
- The Securities and Exchange Board of India (SEBI) oversees takeovers, although the Companies Act governs mergers and acquisitions (M&A) deals.
- A Take-over occurs when both, the company doing the take-over and the company being taken-over, are able to continue operating independently following the completion of the deal. If the acquisition results in consolidation, it means the legal dissolution of both of the companies involved and the creation of a new company into which the prior entities are combined. When a merger results in the legal dissolution of only one of the corporations involved, it is called absorption.

Merger and Its Types

Merger is the coming together of two separate businesses into one. The process of dissolving one or more businesses, corporations, or proprietorships in order to construct another company through absorption into it, is what is meant by the phrase "merger." The combined business would be significantly larger after the transaction was completed.

Types of Merger

- **Horizontal Merger:** The two businesses that have recently merged are both operating in the same market sector. As a result, the newly consolidated company will likely have a larger market share than its predecessors. and it is possible that it will move closer to becoming a monopoly or a near monopoly in order to eliminate competition.
- **Vertical Merger:** This type of merger takes place when two organisations that have a "buyer-seller" relationship come together to form a single entity.
- Mergers Between Conglomerates: Mergers of this kind include companies whose lines of business are completely unconnected to one another. These types of mergers actually involve the consolidation of several distinct types of enterprises into a single parent organisation.
- **Cogeneric Merger:** The acquiring company and the company it is merging with are connected in some way, whether it is through fundamental technologies, industrial methods, or market segments These mergers represent an outward shift by the acquirer from its existing business environment to other similar business activities within the overall structure of the industry as a whole.
- **Reverse Merger:** A reverse merger occurs when a smaller, unlisted company acquires a larger, publicly listed company. This allows the unlisted company to avoid the lengthy and

complicated process that would be necessary to be followed in the event that it desired to issue its shares to the public through an Initial Public Offering.

Acquisition

This term refers to the purchase of a controlling interest in the share capital of an existing firm by one corporation from another corporation. This could happen by:

- An arrangement with the person who holds the majority of the interest.
- The acquisition of fresh shares through a confidential agreement.
- Acquisition of shares through the open market (open offer)
- The acquisition of a portion of a company's share capital by the payment of cash and the issuing of shares.
- Making an offer to buy out the general body of shareholders in the company.

When one company acquires another, the acquiring firm has two options:-

- It can combine both businesses into a single entity and operate as a single entity, or
- It can continue to run the taken-over company as an independent entity but with new management and different policies.

When a firm is "acquired," it means that it has been bought out by another corporation, and the acquired company typically loses its identity. This method is normally done in a cordial manner.

Purchase of Division or Plant

- It is possible for one corporation to purchase a division or factory from another company. The acquiring company purchases the relevant division's assets, assumes responsibility for the division's liabilities, and makes a monetary payment of compensation to the selling company.
- For instance, Abbott Laboratories paid $3.72 billion to acquire the pharmaceuticals business of Piramal Health Care. Abbott Laboratories was a competitor of Piramal Health Care.
- It is important to keep in mind that only a fraction of the assets and liabilities of one company are taken over by another firm when a transaction is carried out in this manner.

Takeover

- A takeover often comprises the acquisition of a specified interest in the equity capital of a company, which grants the acquirer the ability to exert control over the operations of the company.
- For instance, HINDALCO was able to acquire control of INDAL after purchasing a 54 percent stake in the company from its international parent company, Alcan. INDAL, on the other hand, was ultimately absorbed into HINDALCO after some time.
- Takeover generally is used when the transaction is without the consent of the shareholders of the target company or, in other words, it is hostile takeover.

Acquisition, on the other hand, refers to an amicable agreement or consent of the majority shareholders of the target company.

Leveraged Buyout

A takeover or the purchase of a division can also be referred to as a leveraged buyout, which differs in that it is mostly accomplished with the assistance of loan financing.

Divestitures

Divestitures result in a smaller asset base and a loss of control.

Types of divestitures

- Partial Selloff
- The Transfer of Ownership
- Demerger
- Equity Carveout
- PSU Disinvestment

Reasons for Merger

Synergistic operating economics

V (AB) > V(A) + V (B).

- According to Mark L. Sirower of Boston Consulting Group, who wrote “The Synergy Trap,” synergy is the increase in performance of the combined firm over what the two firms are already expected or required to accomplish as independent firms.
- Synergy is the result of combining the resources of two or more companies. This could be due to complementary services, economies of scale, or both of these factors.

Taxation

It is possible that the provisions of the Income Tax Act that allow for losses to be offset against other income or carried forward are yet another compelling argument for the merger and acquisition. The amalgamated company will see tax savings as well as a reduction in its tax liabilities.

Growth

- A company is able to grow at a faster rate using the mode of mergers and acquisitions as opposed to the other mode, which is organic growth. The reduction in “Time to Market” was the driving force behind this decision.
- The acquiring company avoids delays that would have been caused by the purchase of a building and site, the establishment of the plant, and the hiring of people, among other things.

The Consolidation of Production Capabilities and the Enhancement of Market Power
The decrease in total number of competitors results in an increase in marketing power. The merging of two or more plants can boost the output capacity of the overall operation.

Economies of Scale
Cost savings are the result of a more intensive utilization of manufacturing capabilities, distribution networks, engineering services, research and development facilities, data processing systems, and so on and so forth.

Economies of Scope
A company might broaden the range of its activities by making use of a certain set of capabilities or assets that it already owns.

Economies of Vertical Integration
Vertical integration can lead to cost savings by combining the resources of multiple enterprises operating at various stages of a value chain or production process.

Complementary Resources
- ❖ A merger could make sense for two companies if those companies' resources are complementary to one another. For instance, a small company that is developing a revolutionary product could require the engineering capabilities and marketing reach of a large company.
- ❖ It is possible that the unique product can be successfully manufactured and marketed if the two companies that created it decide to merge into one.

Utilization of Surplus Funds
- ❖ Although a company operating in an established market might make a lot of cash, it might not have many options for making lucrative investments.
- ❖ In circumstances like these, a merger with another company that involves cash compensation is frequently the case that reflects a more effective utilization of surplus capital.

Managerial Effectiveness
A company that has been plagued by managerial shortcomings can frequently benefit enormously from the superior management that is expected to emerge as a sequel to the merger of the two companies.

Industry Consolidation
Consolidation is required for boosting efficiency whenever there are an excessive number of players and surplus capacities.

Dubious Reasons for Mergers

There are instances when the desire to diversify, achieve a cheaper cost of financing, and achieve a greater rate of earnings growth will lead a company to pursue a merger. At first glance, these goals appear to be worthy; it is highly unlikely that they will increase value.

Diversification

One of the most frequently cited goals of mergers is to lessen overall risk by increasing diversification of operations. The degree to which risk is minimized is, contingent on the degree to which the revenues of the merging firms are correlated with one another.

Lower Financing Costs

If two companies, A and B, decide to merge, the equity of both companies will serve to safeguard the creditors of the newly formed firm AB. Though this additional protection lowers the cost of debt, it places an additional burden on the shareholders of the companies involved.

Growth in Earnings

- ❖ It is indeed possible that a merger will provide the impression that earnings are growing. If investors are misled, a price increase could result from this. if the market is “inefficient,” it may be susceptible to being hypnotized by the allure of earnings growth.
- ❖ In a market that is inefficient, such an illusion might be successful for a while. The false profits are sure to vanish once the market reaches its optimal level of efficiency.

Mechanics of Merger

- ❖ The Companies Act is the primary legislation that governs the process of mergers and acquisitions in India. In addition to company law, the Securities and Exchange Board of India Act and the Competition Act also have provisions that regulate mergers and acquisitions.
- ❖ The Companies Act is primarily concerned with protecting the interests of creditors, the SEBI Act is primarily concerned with protecting the interests of minority shareholders, and the Competition Act is primarily concerned with protecting the interests of consumers from being harmed as a result of diminished competition resulting from mergers.

Legal Procedure of Amalgamation

- ❖ An In-Depth Analysis of Object Clauses
- ❖ Communication with Stock Exchanges
- ❖ Board Approvals of the Draft Amalgamation Proposal
- ❖ An In-Depth Analysis of Object Clauses
- ❖ Communication with Stock Exchanges
- ❖ Board Approvals of the Draft Amalgamation Proposal
- ❖ Application to the NCLT/s
- ❖ Notice to the shareholders and creditors of the company

- Conducting Meetings of Shareholders and Creditors
- Petition to the National Company Law Tribunal (NCLT) for the Confirmation and Passing Orders
- Filing the Order Copy with the Registrar of Companies
- Transfer of Assets and Liabilities
- Issue of Equity and Debentures

Competition Issues

- The Competition Act of 2002 is the primary legal document in India that governs antitrust and competition concerns. The Competition Commission has the authority to investigate potentially monopolistic or restrictive business practices.
- Within a period of seven days after the board of directors of concerned enterprises approve the combination, any person or enterprise that proposes to enter into a combination can approach the Commission for approval of the combination. This must be done within seven days of the board of directors of concerned enterprises approving the combination. The Commission has the authority to ban the combination if it deems that it already has or is likely to have an appreciably negative effect on the level of competition inside India.

Tax Aspects

The combined firm will have access to the following deductions, to the extent that they were available to the company that was merging, and to the extent that they are still unabsorbed or unfulfilled:

- Investments in fixed assets devoted to scientific research
- The cost of purchasing or acquiring patent rights, copy rights, and technical know-how
- The cost of acquiring a licence to provide telecommunications services as an operating expense
- Depreciation of the costs incurred in the planning stage
- The ability to carry forward losses as well as unused depreciation

Cost And Benefits Of Merger

The advantage of the merger is the difference between the present value (PV) of the combined entity PVAB and the present value of the two entities if they are kept separate (PVA + PVB). Hence,

Benefit = PVAB – (PVA+PVB)

Compensation in Cash

- If we assume that the compensation to firm B will be paid in cash, then the cost of the merger, when viewed from the perspective of business A, is equal to the cash payment made for purchasing firm B, less the present value of firm B.

Cost = Cash – PVB

The difference between the benefits and the costs constitutes the net present value (NPV) of the merger from the perspective of firm A.

So **NPV to A = Benefit – Cost or**

NPV to B = Cash – PVB

Compensation in Stock

The company A intends to acquire the other company B and compensation is delivered in the form of shares rather than cash. The true cost, when B's shareholders get a fraction α of the share capital of the combined firm, is equal to:

Cost = α * PVAB – PVB

Where α = shares offered by A / (shares offered + no. of shares of M).

Benefit = PVAB – (PVA+PVB)

NPV to A = Benefit – Cost NPV to B = Cost

Cash vs. Stock Compensation

The decision of whether to be compensated in cash or shares is primarily determined by four different criteria.

- Overvaluation
- Taxes
- Sharing of Risks and Rewards
- Discipline

Exchange Ratio in Merger

In a merger, the acquiring company would often offer the shares of its own company in exchange for those of the target company. The offer is presented in the form of an exchange ratio, also known as a swap ratio, which is the number of shares that the acquiring company is prepared to give up in return for one share of the target company. Factors involved in Determining the Exchange Ratio

Book Value Per Share

It is possible to calculate the exchange rate by comparing the book values of each share held in each of the two companies.

Disadvantages include

- The valuations of books do not take into account shifts in the relative purchasing power of money.
- Book values and genuine economic values frequently diverge significantly from one another.

Earnings Per Share

Let's say that the EPS of the acquiring firm is Rs. 10.00, while the EPS of the acquired firm is Rs. 5.00. The exchange ratio, calculated based on earnings per share, will be 0.5, which is written as 5/10. This indicates that ten shares of the target company will be acquired in return for five shares of the acquiring company.

Ratio does not take into consideration the following:

- The disparity in the pace of increase in earnings that the two companies have experienced.
- The increases in earnings that were a direct result of the merger.
- The distinct risks that are connected with the financial outcomes of the two businesses.

Market Price Per Share:

- The exchange ratio could be determined by looking at how the share prices of the acquiring company and the target company compare to one another on the market.
- For illustration purposes, if the target company's equity shares are selling for Rs. 25 and the acquiring company's equity shares are selling for Rs. 100, the market price- based exchange ratio would be 0.25 (25/100). This indicates that one share of the acquiring firm will be traded for four shares of the acquired firm. They are an accurate reflection of the company's existing profitability, growth potential, and risk characteristics.

Dividend Discounted (DD) Value Per Share:

The current value of the anticipated stream of dividends is what is meant to be represented by the dividend discounted value per share. It is possible to calculate the exchange ratio by comparing the relative DD values per share of the two companies that are merging.

Discounted Cash Flow (DCF) Value Per Share:

The DCF value per share = (Firm value using DCF Method – Debt Value)/No. of Equity shares.

The exchange rate can be calculated using the relative DCF values per share of the companies that are merging. When fairly solid business plans and cash flow estimates are provided for a period of five to ten years for the merging companies, the DCF value approach is a good choice for determining the worth of the combined company.

Purchase of A Division/ Plant

When one company buys the division of another company or when one company takes over another company by gaining a controlling equity share, the acquiring company needs to put a value on the ownership position that it has obtained. In the event of the purchase of a division, the bidder company obtains one hundred percent ownership

- Status Quo Value: The discounted cash flow (DCF) method and the market multiple method are the two most popular approaches that are taken when determining the value of the status quo.
- DCF Method: The present value of the free cash flows that will be generated in the future is what is meant by the DCF value of a company (or business division).

- There are three primary stages involved in the DCF technique of company valuation. First, determine the value, in present terms, of the free cash flow that will result from the transaction. In the second step, the horizon value is calculated and then discounted to the current time. The third step involves calculation of the worth of the transaction, by adding together the "present value" of "free cash flow" and the "horizon value."
- Market Multiple Method: Similar assets should be sold for values that are comparable to one another, you can determine the value of a firm by looking at the value placed on other businesses that are comparable to it.
- Value of Control: The importance of Control Acquiring is that Companies are frequently willing to pay a price that is greater than the worth of the status quo in order to get the right to control the management of the businesses that they are acquiring. Value of Control = Value of Firm, if it is optimally managed – Value of firm with current management.
- Value of Synergy: The vast majority of acquisitions have the potential to result in synergy, which can manifest itself in one or more of the following ways:
  - Decreased overhead expenses as a result of economies of scale.
  - Decreased costs associated with research and development, advertising, marketing etc.
  - A faster rate of growth as a result of the combined entity's increased influence in the market.
  - A more extended period of growth as a result of improved competitive advantages.
  - A decrease in the cost of capital as a result of increased debt capacity
  - Increased efficiency in the use of tax havens.

Takeovers

A takeover often entails the acquisition of a certain block of a business's equity capital, which grants the acquirer the ability to exert control over the operations of the company. In order to obtain full control of the acquired firm, an acquirer typically needs to purchase more than fifty percent of the paid-up equity of the target company.

A takeover may be done through the following ways:

- **Open market purchase:** The shares of the publicly traded company are purchased on the stock market by the acquirer.
- **Negotiated Acquisitions:** In a transaction that has been arranged, the acquirer purchases shares of the target firm from one or more current owners, the majority of whom are likely to be promoter shareholders.
- **Preferential allotment:** This type of purchase is obviously a friendly acquisition that is carried out with the intention of providing the acquirer with a strategic position in the firm as well as injecting finances into the organisation.

SEBI Takeover Code

- Disclosure
- Trigger Point
- Merchant Banker
- Public Announcement
- Offer Price
- The Responsibilities of the Acquirer
- Obligations of the Board of the Target Company
- Bids from Competitors
- Establishment of an Escrow Account
- Creeping Acquisition

Anti Takeover Defences

Pre-Offer Defences

- Staggered board
- The provision of Super Majority Clause
- Poison pills
- Poison Puts
- Dual class
- Golden parachute

Post-offer Defences

- Greenmail
- Pacman defence
- Litigation
- Restructuring of Assets
- Restructuring of the liabilities

Anti-takeover Defences in India

- Make Preferential Allotment
- Creeping Enhancement
- Amalgamate Group Companies
- Sell the Crown Jewels
- Search for a White Knight

Leveraged Buyouts

- A leveraged buyout is the process of transferring control of a company while primarily using debt as financing.

- While some leveraged buyouts entail the acquisition of an entire company, others focus on purchasing only a portion of an existing company's operations.
- A management buyout is the term used to describe a transaction in which the management of a business unit purchases the business unit outright (MBO).

Following the completion of the buyout, the company (or the business unit) will in all likelihood transition into a private company.

Value Creation in LBO

There appear to be three primary variables that contribute to the creation of value in an LBO:

- The value of the firm is increased as a result of operational improvements.
- Cash generated from operations is put toward paying down debt, which results in an increase in the proportion of enterprise value held by equity shareholders.
- A tax shield is provided by the interest on the debt.

Qualities of Good LBO Candidate

- Good management team
- Consistent Cash flows
- The opportunity for enhancing operational effectiveness
- Adaptability with regard to the sale of assets that are no longer needed
- Requirements for capital expenditures are quite low
- Easy Exit

Acquisition Financing

It is the funding a company specifically for the purpose of acquiring another company in the form of equity, debt or hybrid practices.

The following is a list of characteristics that are typical of purchase financing:

- Either the overseas subsidiary of the Indian company or a special purpose entity formed overseas for the purpose of acquisition receives the loan. The loan is issued for the purpose of acquisition.
- On the basis of the guarantee offered by the Indian parent company, financing is offered by international financial institutions and by overseas branches of Indian banks.
- When deciding whether or not to provide financial assistance, lenders look at the acquirer's cash flow. The amount of financing is typically between three and six times EBITDA
- The cost of financing is determined by a number of factors, including the robustness of the acquisition target, the ingenuity of the parent company, the availability of legal recourse to the lenders, and the type of debt that the bank is participating in Business Alliances
- There has been a considerable increase in the number of different types of business alliances, such as joint ventures, strategic alliances, equity partnerships, licencing, franchising alliances, and network alliances.

- For example: In 1999, IBM established business collaborations with firms such as Cisco and Dell PCs that were worth a combined total of $30 billion.
- The desire to share risks and gain access to new markets, cut expenses, achieve favourable regulatory treatment, or purchase (or exit) a business is one of the primary drivers behind the formation of business partnerships.

Managing Acquisitions

A corporation needs to fulfil the following requirements in order to improve its chances of creating value:

- Keep your attention on the Right Targets: an acquirer might decide not to pursue a deal with a company because it is either too large, too small, involved in an unrelated business, quoting at a high price-earnings multiple, not amenable to acquisition, culturally alien, or any combination of these factors.
- Ensure that synergies are accurately estimated: Each potential acquisition should be evaluated based on the most accurate information possible.
- Negotiate in a disciplined manner
- Organize and exercise command over the integrating: A conscientious effort needs to be made to think through the consequences of the merger, predict problems that may occur, comprehend the nature of these problems, and work out a solution to these problems that is reasonable and mutually acceptable.

Divestitures

- It refers to the act of a corporation selling one of its divisions or undertakings to another firm or forming an entirely new company out of the remaining elements of its business. There are many different motivations behind divestiture and demerger, including the following:
- To focus on the most important aspects of the business
- It is possible that the Division's or Business' contributions to the total income are insufficient.
- The size of the company can be too great to be managed effectively
- The company might have an immediate need for funds since it is considering alternative investment opportunities.

Different Forms of Divestitures or Demerger

- Complete or Partial Sale of Assets: A sell off is the process by which one organisation transfers ownership of an asset, factory, division, product line, or subsidiary to another organisation in exchange for a purchase consideration paid in the form of cash or securities. Partial sell off is a type of divestment in which the corporation sells a business unit or a subsidiary to another entity because the subsidiary is determined to be incompatible with the primary business strategy of the parent company.
- Spin-off: In this scenario, a portion of the business is segmented off and spun off into its own independent company. The company's current stockholders will each get a proportionate

ownership stake in the business. The management of the spin-off subsidiary, on the other hand, has been replaced. A spin-off does not result in new financial gain.

One possible motive for spinning off an entity is to:

- Provide a component or division its own distinct identity.
- Prevent a hostile takeover of the company by a potential acquirer by making the company less appealing to the potential acquirer by spinning off a profitable segment.
- Split regulated and uncontrolled business lines into their own distinct entities.
    - Split-up
    - Equity Carve Outs
    - The Demerger of Two Family-Owned Businesses or Their Division
    - Partial Selloff

Holding Company

A holding company is a corporation that owns the equity of multiple other companies in order to exert influence over those companies. A holding company does not necessarily have to own one hundred percent of the investee business's equity.

The following are some of the other benefits that come with running a holding company:

- Central control
- Flexibility for growth
- Continuity and succession planning
- Tax planning
- Risk mitigation
- Legal protection for valuable assets of the group
- Optimum utilisation of funds

Demergers

- A demerger is the process by which one business transfers one or more of its undertakings to another company. It is common practice to refer to the company whose undertaking is transferred as the demerged company, and the business to whom the undertaking is transferred as the resultant company.
- A demerger is an efficient method for splitting a large company empire and finding a solution to the problem of succession. Demerger of Reliance Industries Ltd (RIL) is the biggest such example in Indian corporate history which was a spin-off and not split-up

Unit-18: Deal Structuring and Financial Strategies

Negotiations

- An agreement between two parties (the acquirer and the target firms) specifying their rights and obligations is known as a deal structure. The procedure that leads to the formation of this agreement is referred to as the deal- structuring process.
- The process of deal structuring entails establishing how risk will be distributed and achieving as many of the major objectives of both the acquirer and the target as possible. The extent to which the acquiring company takes on the liabilities of the target organisation is referred to as risk sharing.

Payment And Legal Considerations

The overall consideration, which can come in the form of cash, common stock, or debt, or even a combination of all three of these things, can be considered the method of payment.

Form of Acquisition Vehicle and Post-closing Organisation

When deciding on an acquisition vehicle or post-closing organisation, it is necessary to take into consideration the elements listed below:

- The cost and level of formality involved in the organization
- The ease with which ownership can be transferred
- The continuous existence of the organization
- Management control
- The convenience of obtaining financial support
- Ease of assimilation into the system
- The manner in which earnings shall be distributed
- The scope of individual responsibility
- Taxation

Selecting the Appropriate Acquisition Vehicle

- The corporate structure that is most frequently utilised, is the acquisition vehicle, because it provides the majority of the attributes that buyers want, such as limited liability, flexible financing, continuity of ownership, and transaction flexibility.
- An ESOP structure may be an easy way for small privately held businesses to transfer the owner’s equity in the company to the employees while providing significant tax benefits.

Selecting Suitable Post-closing Organization

- Structures such as divisional and holding company arrangements are frequently used after closing. The goals that the acquirer hopes to accomplish should guide the selection of the post-closing organization. The acquiring company may opt for a structure that makes post-closing integration easier, reduces the risk of the target's known and unknown liabilities, minimizes taxes.

- Because it allows for the greatest amount of control, the corporate or divisional structure is frequently chosen when the acquirer plans to immediately integrate the target after the transaction has been finalized. Because of the distributed ownership in joint ventures and partnerships, decision making may be slowed down or made more controversial.
- A financial buyer can choose a holding company structure because the buyer has no intention of really running the target company for any significant amount of time after the acquisition.
- If the value of the tax benefits is large and the risk is high, a partnership or joint venture form can be the best option. Everyone contributes to the whole cost of achieving the goal. The acquired company can stand to benefit from the various partners' or owners' access to specialised knowledge and experience.

The current operational losses, tax credits, and loss carry forwards and carry backs are all passed on to the owners when a business is structured as a partnership or an LLP. This also prevents the possibility of double taxation.

Different Types of Payment Consideration

- Cash
- Non-cash
- Mix of cash and stock
- Convertible Securities

Tax Reliefs & Benefits In Case of Amalgamation in India

If an amalgamation takes place within the meaning of section 2(1B) of the Income Tax Act, 1961, the following tax reliefs and benefits shall be available:

Tax Relief to The Amalgamating Company

Exemption from Capital Gains Tax [Sec. 47(Vi)]:

Under section 47(vi) of the Income-tax Act, capital gain arising from the transfer of assets by the amalgamating companies to the Indian Amalgamated Company is exempt from tax as such transfer will not be regarded as a transfer for the purpose of Capital Gain.

The two conditions that must be satisfied, are;

- The scheme of amalgamation satisfies the conditions of Section 2(1B); and
- The amalgamated company is an Indian Company

Allotment of Shares In Amalgamated Company To The Shareholders Of Amalgamating Company [Section 47(Vii)& 49(2)]

Any transfer by a shareholder in a scheme of amalgamation of shares held by him in the amalgamating company shall not be regarded as transfer if –

- Transfer is made in consideration of allotment to him of shares in the amalgamated company
- Amalgamated company is an Indian company.
- Section 49(2)-provides that in above case the Cost of Shares of the amalgamating company shall be the Cost of Shares to the amalgamated company.

Tax Relief to the Shareholders of the Amalgamating Company

Exemption from Capital Gains Tax [Sec 47(vii)]

Under section 47(vii) of the Income-tax Act, capital gains arising from the transfer of shares by a shareholder of the amalgamating companies are exempt from tax as such transactions will not be regarded as a transfer for capital gain purpose, if:

- The transfer is made in consideration of the allotment to him of shares in the amalgamated company; and
- Amalgamated company is an Indian company.

Tax Relief to The Amalgamated Company:

Section 72A of the Income Tax Act, 1961 deals with the mergers of the sick companies with healthy companies and to take advantage of the carry forward of accumulated losses and unabsorbed depreciation of the amalgamating company.

But the benefits under this section with respect to unabsorbed depreciation and carry forward losses are available only if the followings conditions are fulfilled:

- There should be an amalgamation of –
  - A company owning an industrial undertaking or ship or a hotel with another company, or
  - A banking company referred in section 5(c) of the Banking Regulation Act, 1949 with a specified bank or
  - One or more public sector company or companies engaged in the business of operation of aircraft with one or more public sector company or companies engaged in similar business.
- The amalgamated company should be an Indian Company.
- The amalgamating company should be engaged in the business, in which the accumulated loss occurred or depreciation remains unabsorbed, for 3 years or more
- The amalgamating company should hold continuously as on the date of amalgamation at least three-fourth of the book value of the fixed assets held by it two years prior to the date of amalgamation.
- The amalgamated company holds continuously for a minimum period of five years from the date of amalgamation at least three-fourths in the book value of fixed assets of the amalgamating company acquired in a scheme of amalgamation
- The amalgamated company continues the business of the amalgamating company for a minimum period of five years from the date of amalgamation.

- The amalgamated company fulfils such other conditions as may be prescribed to ensure the revival of the business of the amalgamating company or to ensure that the amalgamation is for genuine business purpose.
- The amalgamated company, which has acquired an industrial undertaking of the amalgamating company by way of amalgamation, shall achieve the level of production of at least 50% of the installed capacity of the said undertaking before end of four years from the date of amalgamation and continue to maintain the said minimum level of production till the end of five years from the date of amalgamation.
- The amalgamated company shall electronically furnish to the AO a certificate in Form 62 duly verified by an accountant, with reference to the books of account and other documents showing particulars of production along with the return of income for the AY relevant to FY falling within a period of five years from the date of amalgamation.

Note: In case the above specified conditions are not fulfilled then that part of brought forward loss and unabsorbed depreciation which has been set off by amalgamated company shall be treated as income of the amalgamated company for the year in which failure to fulfil above conditions occurred.

Availability of MAT credit

- Section 115JB of the ITA levies MAT on a company if the amount of income-tax payable under general provisions of the ITA is less than 15% of the company's 'book profits'. In such case, the 'book profits' computed are deemed to be the total income of the company and income-tax is levied thereon at 15%.
- However, the excess of MAT paid over normal tax liability for the year is permitted to be carried forward under Section 115JAA of the ITA for set-off in future years in which normal tax liability exceeds MAT liability.

Capital Gains Taxes

- If the shares qualify as capital assets under Section 2(14) of the ITA, the gains arising upon transfer of the shares would attract capital gains tax liability.
- As per Section 45, capital gains tax must be assessed at the time of transfer of the capital asset, and not necessarily at the time when consideration is received by the transferor or on the date of the agreement to transfer.

Tax issues in Domestic M&A

- Tax issues arise in domestic M&A transactions when the conditions stipulated under the ITA are not fulfilled. These issues typically cover the following cases:
- Allotment of securities or payment of cash consideration to shareholders of amalgamating company
- Part consideration paid directly to shareholders of demerged company
- Availability of MAT credit

- Merger of Limited Liability Partnership into a company

Tax issues in Cross-border M&A

- In cross-border transactions, tax concerns emerge when two countries seek to tax the same income or the same legal entity, resulting in double taxation of the money. Countries enter bilateral DTAAs to limit their taxing rights voluntarily through self-restraint, thereby avoiding overlapping tax claims.
- For a buyer, it is essential to determine whether a tax withholding duty exists when making a payment to a seller. India is undergoing a transformation of its current investment climate. Foreign Direct Investments ("FDI") from Mauritius, Singapore, and Cyprus accounted for more than fifty percent of all FDI in India. India appears to be altering the status quo and limiting investors' access to tax benefits by amending its DTAAs with each of these countries. Moreover, worldwide concern over treaty violations is growing.

Financial Reporting of Business Combinations

An entity shall account for each business combination by applying the acquisition method. Applying the acquisition method requires:

- Identifying the acquirer
- Determining the acquisition date
- Recognising and measuring the identifiable assets acquired, the liabilities assumed and any noncontrolling interest in the acquiree
- Recognising and measuring goodwill or a gain from a bargain purchase.

Under I-GAAP, shares acquired by the buyer would be recorded at cost and continued to be done so in subsequent years as well. However, under Ind-AS method of accounting, investments will be recorded at fair value, unless the buyer opts to record its investments in its subsidiaries and associates at cost.

The purchase method must be used to account for business combinations by a company that maintains its financial statements in accordance with International Financial Reporting Standards (IFRS) or Generally Accepted Accounting

Principles (GAAP)

- According to the purchase method of accounting, the purchase price or acquisition cost is calculated, assigned first to tangible net assets and then to intangible net assets using a cost-allocation strategy, and then recorded on the books of the purchasing business.
- Acquired assets less assumed liabilities are referred to as net assets. Any difference between the purchase price and the acquired net assets' fair market value is recorded as goodwill. Acquirer must record assets, liabilities, and any non-controlling interest in the target at their fair value as of the acquisition date in accordance with current accounting rules.

Recognising Acquired Net Assets and Goodwill at Fair Value

- Current accounting standards mandate recording 100% of the assets bought and liabilities assumed, even if the acquirer buys less than 100% of the target, in order to facilitate comparisons across various transactions.
- Non-controlling/minority interest is shown separately from the parent's equity in the equity account of the consolidated balance sheet. Additionally, the consolidated income statement should include the revenues, expenses, gains, losses, net income or loss, and other income related to the non-controlling interest.

Deal Financing

- M&A deals are frequently financed using cash, stock, debt, or a combination of all three.
- The choice of financing source or sources is influenced by a number of variables, such as the state of the capital markets, the liquidity and creditworthiness of the target and acquiring companies, the combined borrowing capacity of the target and acquiring companies, the size of the transaction, and the target shareholders' preference for cash or acquirer shares.

The various financing options, available to an acquirer are:

- Issue of equity and/or preference shares
- Internal accruals
- Long Term loans from banks or other lenders
- Issue of convertible/non-convertible debentures or other types of domestic or foreign debt instruments.

Financing of Cross Border Acquisitions in India

- The Reserve Bank of India (RBI) has announced guidelines that limit an Indian bank's capacity to finance the acquisition of equity shares. Under general, a bank cannot finance a promoter's contribution to equity, and banks cannot finance the acquisition of equity shares.
- Financing for a domestic acquisition is typically obtained from non-banking financial companies (NBFCs) or through the issuance of non-convertible debentures (NCDs) by the acquirer, which can be subscribed for by foreign portfolio investors (FPIs), mutual funds, and alternative investment funds (AIFs).

In India, cross-border acquisitions are typically divided into the following two categories:

- Inbound acquisitions
- Outbound acquisitions

Use of LMAs or Other Standard Loans

- Credit agreements and inter-creditor agreements for any acquisition financing will typically be based on the most recent forms published by either the Asia Pacific Loan Market Association

(APLMA) or the Loan Market Association (LMA), depending on whether the financing is in a foreign currency and was obtained from foreign lenders.

- When it comes to the distribution of NCDs, the Companies Act of 2013 stipulate a few requirements for the debenture trust deed that must be met. If the NCDs are traded on a stock exchange, then the debenture trust deeds are also subject to the various requirements that are set forth by SEBI. In addition, the information memorandum or the offering memorandum for NCDs must be in a format that is required by the Companies Act and applicable SEBI regulations.

The Fund Raising Structures

- The funds can be raised through the following modes:
- Inbound Acquisition Finance: Offshore Acquirer
- Inbound Acquisition Finance: FOCC
- Outbound Acquisition Finance
- Financing from Offshore Sources
- Domestic Acquisition Finance

Module - D: Emerging Business Solutions

Unit-19: Hybrid Finance

Introduction

- The characteristics of debt and equity which are combined into a single instrument is known as a hybrid security.
- For many years, Indian companies have been actively participating in the hybrid securities market by issuing preference shares, optionally or compulsorily convertible securities, and foreign currency convertible bonds, among other types of hybrid securities.
- The issuance of hybrid securities, which give companies the ability to optimise the proportion of debt to equity in their overall capital structure, has become the preferred method for companies.
- The maturity terms of hybrid issuances can vary, several call options can be exercised, and there is some leeway to increase the coupon rate.

Forms of Hybrid

- Financing
- Preference capital,
- Warrants,
- Convertible debentures,
- Inventive hybrids

Foreign Currency Convertible Bond (FCCB):

- A convertible bond that is denominated in a foreign currency is a subtype of a convertible debenture.
- This is an instrument issued outside India but denominated in a different currency.
- US Dollar is one of the most common currencies used for the Foreign Currency Convertible Bonds.
- India's capital raising efforts, of late the proportion of Foreign Currency Convertible Bonds to External Commercial Borrowings (ECB) and Rupee Denominated Bonds (RDB) has been quite low as is evident from the following table:

Types of Hybrid Securities

- Preference Shares
- Warrants
- Convertible Debentures/Bonds
- Foreign Currency Convertible Bonds
- Mezzanine Financing

Advantages of Hybrid Securities

- Higher yield: Hybrid securities generally offer a higher rate of return than debt
- Less volatile market price: Hybrid securities show less volatility in their market price as there is a regular, pre-determined, return.
- Risk diversification: Hybrid securities can diversify the overall risk for the issuer as these do not have any strict definition of either equitable securities or debt securities,

Disadvantages of Hybrid Securities

Assessment is difficult: Calculation of return on hybrid securities is not as simple as on equity or bond securities and, therefore, investing through these is more complicated.

Preference Share Capital

- Higher priority claim on both the company's income and assets than the equity shareholders have.
- A dividend is guaranteed to preference shareholders, and this dividend must be paid out before any dividends are distributed to regular shareholders.
- Cumulative or non-cumulative type of preference shares.
- The repercussions of failing to pay the dividend on preference shares are not nearly as severe as those of failing to pay, for example, the interest on a debt obligation:
- Preference shareholders, in contrast to creditors, do not have a legal claim to receive the dividend, which means that they are unable to push the company into bankruptcy if they are not paid.
- However, in the event that the company is put into liquidation, which involves the sale of all of its assets and the use of the proceeds to settle all of its debts and pay off its owners, the preference shareholders will receive everything that is rightfully theirs before the equity shareholders receive anything.
- In India, we have several Credit Rating Agencies like CRISIL, ICRA, CARE, Fitch etc., which are nationally recognised.
- The term "perpetual or irredeemable preference shares" refers to preference shares that do not have a maturity date.

Salient Provisions of the Companies Act, 2013

As per Section 43 of the Companies Act, 2013, Preference Share Capital in case of any company limited by shares, means that part of the issued share capital of the company which carries or would carry a preferential right with respect to:

- Payment of taxable or tax-free dividend, as a fixed amount or at a fixed rate.
- Repayment of paid-up or deemed paid-up share capital, in the case of a winding up or repayment of capital, with or without any fixed premium or premium on any fixed scale, specified in the memorandum or articles of the company.

- Capital shall be deemed to be preference capital, notwithstanding that it is entitled to either or both of the following rights, namely:
- Right to participate in dividends over and above the preferential right to dividend, with capital not entitled to any preferential right; and/or
- right to participate fully or to a limited extent in the surplus left on winding up after all payments are made, with capital not entitled to that preferential right.
- Section 47: Dividend in respect of a class of preference shares has not been paid for a period of 2 years or more, such class of preference shareholders shall have a right to vote on all the resolutions placed before the company.
- Section 55: The issue and redemption of preference shares by a company limited by shares, further states that issue of irredeemable shares is prohibited and puts an outer limit of a period not exceeding 20 years from the date of their issue but permits issue of preference shares for a period exceeding 20 years for infrastructure projects, subject to the redemption of such percentage of shares as may be prescribed on an annual basis at the option of such preferential shareholders. Specific terms and conditions need to be fulfilled for such redemption.

Types of Preference Shares

- Cumulative Preference Shares
- Non-Cumulative Preference Shares
- Participating Preference Shares
- Non-Participating Preference Shares
- Redeemable Preference Shares
- Non-Redeemable Preference Shares
- Convertible Preference Shares
- Non-Convertible Preference Shares
- Adjustable-rate Preference Shares

Purpose of issuing Preference Shares

- It is an improved method for acquiring capital in an uninteresting primary market.
- If a firm's shares can't be bought and sold, it might have trouble obtaining funds, but the possibility of getting one's money back at some point in the future could entice investors to invest in the company.
- In most cases, the preference shares are redeemed when there is a surplus of cash and there are no other successful ventures in which to invest the money.
- If there is a loss or a reduction in profit, there will be no dividend paid out, which is not the case with debentures or loans.
- The investor interest in preference capital keeps fluctuating with the change in taxation laws.
- Preference dividend, which was exempt from taxation in the hands of investors is once again taxable in the hands of the investor.

- Therefore, investors' willingness to accept a lower rate of dividend on preference capital, which was resulting in a lower cost of preference capital for the companies that were issuing it.

Redemption of Preference Shares

- Redemption refers to the process of repaying an obligation at predetermined times and amounts over the course of its existence.
- It is a contract that gives the holder the right to redeem preference shares at an agreed upon price either at the conclusion of a specific time period or before the end of that time period.
- The redemption date, also known as the maturity date, is typically printed on the share certificate, and it indicates the day on which the repayment of the debt is planned to take place.
- These shares are issued on the terms and conditions that the shareholders will be refunded the money invested by them in addition to the dividend that they get over the tenure of preference shares.

Methods of Redemption of Fully Paid Up Preference Shares
Section 55 of the Companies Act 2013:

- Relating to redemption of preference shares.
- It ensures that there is no reduction in shareholder's funds due to redemption.
- Therefore, it either issues fresh shares or distributable profits are retained and transferred to Capital redemption reserve Account.
- This is done to safeguard the interest of outsiders who are to be paid before the redemption of preference shares.
- The interest is safeguarded if the nominal value of capital redeemed is substituted thus maintaining the same amount of shareholder fund.
- In case of redemption through fresh issue, the shareholder fund is kept intact directly while in case of distributable profits being retained and transferred to Capital Redemption Reserve Account, the same is kept intact indirectly.
- In this case, the amount which would have gone to shareholders in the form of dividend is retained in the business and is used for settling the claim of preference shareholders.
- The transfer of divisible profits to Capital redemption Reserve account makes them Non-divisible profits.

Perpetual Non-Cumulative Preference Shares

This type of Preference Shares is issued by Indian banks as part of Additional Tier 1 Capital, subject to extant legal provisions, only in Indian rupees and should meet the following terms and conditions to qualify for inclusion in Additional Tier 1 Capital for capital adequacy purposes:

- The instruments should be issued by the bank (not a bank-created SPV) and fully paid up.
- Bank boards may decide how much PNCPS to raise.

- Perpetual Non-Cumulative Preference Shares (PNCPS) in Additional Tier 1 Capital cannot exceed 1.5% of risk-weighted assets.
- Once this minimum total Tier 1 capital is met, any additional PNCPS issued by the bank can be added.
- Excess PNCPS can be considered Tier 2 capital if less than 2% of RWAs, while meeting minimum Total Capital of 9% of RWAs.
- The PNCPS have no maturity date, step-ups, or other redemption incentives.
- Investor dividends may be fixed or floating, based on a market-determined rupee interest benchmark rate.
- PNCPS shouldn't have a "put option." However, banks may issue instruments with a call option at a specific date.
- The call option on the instrument is acceptable after it has run for at least five years;
- To exercise a call option, a bank must have RBI (Department of Regulation) clearance;
- A bank must not do anything that generates an expectation that the call will be exercised. The dividend/coupon reset date need not be co-terminus with the call date to avoid such expectations. Banks may, at their discretion, consider a gap between dividend/coupon reset date and call date.
- Banks must not exercise a call unless:
  - They replace the called instrument with capital of the same or better quality at conditions sustainable for the bank's income capacity; or
  - The bank demonstrates that its capital position is well above the minimum capital requirements after the call. Exercise of calls due to tax event and regulatory event may be permitted.
- The bank must have full discretion at all times to cancel distributions/payments. Dividends can neither be cumulative nor have a credit sensitive coupon feature.
- PNCPS should absorb principal losses at a pre-specified trigger point either by converting to common shares or by writing down the instrument
- Neither the bank nor a related party (as defined by relevant Accounting Standards) should purchase PNCPS, nor should the bank directly or indirectly fund the purchase. Banks should also not grant advances against their PNCPS.
- FIIs and NRIs may invest up to 49% and 24% of the issue, respectively, with each investor limited to 10% and 5%.

Redemption of Preference Shares By Fresh Issue Of Shares

- A company can use the proceeds from fresh issue of shares to redeem preference shares.
- A problem arises when a fresh issue of shares is made at a premium.

For securities premium account, Section 52 of the companies Act, 2013 provides that the securities premium account may be applied by the company:

Features of Warrants

- The holder of a warrant has the right but not the responsibility to purchase a predetermined number of equity shares at a predetermined price during a predetermined time period.
- This right is granted by the warrant.
- In some cases, warrants are attached to the debt instruments in order to "sweeten" the terms of debt issues.
- In many cases, the warrants are issued to the promoters, on a preferential basis, to provide them an option to increase their stake in the company within a specified future period.
- Warrants are also issued to institutional investors and other strategic investors, by the way of preferential allotment, to allow such entities to increase their stake if the company performs well.
- As per regulation in India, in the case of preferential allotments, the buyer of the warrants has to pay 25% of the price, upfront.
- This amount is adjusted against the final payment that is made in case the warrants are exercised. In case the warrants are not exercised, the entire upfront payment is forfeited. To protect the interest of the minority shareholders, the pre-determined price of warrant conversion in cases of preferential allotment cannot be less than either:
  - The average of the weekly high and low of the closing prices of the related shares quoted on the stock exchange during the 6 months preceding the relevant date or,
  - The average of the weekly highs and lows of the closing prices of the related shares quoted on a stock exchange during the 2 weeks preceding the relevant date
  - The warrants do not carry any dividend or voting rights. Only after warrants are converted into equity shares, the investor gets these rights.

Features of Convertible Debentures

The following are the provisions that apply to Fully or Partially Convertible Debentures, also known as FCDs and PCDs, in accordance with SEBI guidelines:

- It is required that the conversion premium as well as the timing of the conversion be determined and reported in the prospectus.
- If the conversion takes place at or after 18 months but before 36 months from the date of allotment, the holder of the debenture will have the option to convert either partially or fully if the conversion takes place during this time period.
- Unless the conversion duration is made optional with "put" and "call" options, a conversion term, that is longer than 36 months, will not be approved.
- If the fully convertible debentures have a conversion time that is longer than 18 months, there will be a mandatory requirement for a credit rating. It is obvious from the SEBI guidelines that there are now three different forms of convertible debentures that can be issued in India.

Debentures that are automatically convertible and have a conversion provision that takes effect after 18 months. Debentures with an optional conversion feature that allow for the conversion to take place within 36 months. Debentures that allow for conversion after 36 months but have "call" and "put" features in addition to that provision.

Differences between Warrants and Convertible Debentures

- The debenture and the option in a convertible debenture cannot be separated from one another. However, a warrant, if issued as an attachment to debenture, can be removed at any time.
- Warrants have the ability to be issued on their own. They do not have to be associated with any other instrument.
- Warrants can normally be exercised for monetary compensation.
- The conversion of convertible securities results in just an accounting transfer, but the exercise of warrants leads to the injection of additional capital into the company.
- The vast majority of convertibles have a call provision, which provides the issuer with the option to either refund the debt or force conversion. This decision is based on whether the conversion value is more than or lower than the call price. Warrants, on the other hand, in usually cannot be cancelled.
- Compared to warrants, convertibles often have more time until they expire.
- In case of warrants issued on preferential basis, 25% amount is paid upfront and this is forfeited if the holder decides not convert these into equity shares. In case of optionally convertible debentures, no forfeiture is involved.

Valuation of Warrants

- The methods that are used to value options can be used to warrants because a warrant is comparable to a call option on the equity stock of the corporation that is issuing the warrant.
- The maximum value that a warrant can have is determined by taking the current stock price and subtracting the exercise price from it.
- The stock price itself determines the maximum value that a warrant can have.
- The warrant price lies within the parameters established by the lower limit and the upper limit.

The following variables have an effect on the gap that exists between the current market price of the warrant and its minimum acceptable level:

- The fluctuation in the prices of the stocks
- Remaining time before expiration
- Risk Free interest rate
- The Value of the Stock
- Exercise Price

Applying the Black Scholes Model

If one is willing to disregard the complexities brought about by dividends and/or dilution, it is possible to assess the value of a warrant by following this approach.

- Black Scholes model is used for valuation of options.
- As warrant is like a call option, this model can be used for its valuation also.

Valuation of Compulsorily Convertible (Partly Or Fully) Debentures

- Debentures that can be converted into equity shares at the choice of the holder can be issued internationally under the heading of "Convertible Debentures".
- In India, in addition to such debentures, Companies also issue debentures which are compulsorily convertible partly or entirely into equity shares.
- For instance, the Tata Iron and Steel Company made available party convertible debentures with a par value of rupees 1,200 in June 1989.

The most important provisions of these partly convertible debentures were as follows:

- A mandatory conversion of Rs. 600 par value into equity shares of Rs. 100 at a premium of Rs. 500 on February 1,1990,
- An interest rate of 12% per annum payable twice yearly, and
- The redemption of the non-convertible portion at the end of 8 years.

Value of a Partially Convertible Debenture

- What kind of value does a partially convertible debenture have, such as the one that TISCO had issued?
- The holder of such debentures was entitled to receive
- Interest at a predetermined rate throughout the term of the debenture,
- Equity shares upon partial conversion, and
- Payment pertaining to the portion of the debenture that was not convertible.

Valuation of Optionally Convertible Debentures

- The valuation of an optionally convertible debenture is similar to that for a compulsorily convertible debenture.
- A premium may be paid by the market for the option, available with the debenture-holder, to decline the conversion.
- The amount of such premium will depend on the future prospects of the issuing company.
- In case of well established companies, there may not be any such premium, but in case of a company, where the market is not so sure about its future prospects, the premium may be higher.
- In any case, the valuation of an optionally convertible debenture will never be less than the valuation of a similar compulsorily convertible debenture.

Conversion Ratio and Conversion Price

- CR = number of equity shares that can be obtained in exchange for one debenture upon conversion.

- A number that is related to this one is called the conversion price, and it is denoted by the letter P.
- The conversion price is the price per share that the holder really pays when the conversion takes place.
- These ideas might be better understood with reference to their illustration.
- In January 2016, AB Limited issued convertible debentures at a par value of 100 rupees each.
- The holder of a debenture has the ability to convert one debenture into 5 equity shares at any time prior to the maturity date of January 1, 2022.
- This results in a conversion ratio of 5, denoted by CR.
- When the par value of Rs. 100 is divided by 5, the resulting number is the price per share, P, which is Rs. 20.
- The conversion price is equal to the par value of the debenture divided by the number of shares received, which is equal to twenty rupees.
- At the time of issuance, the conversion price, much like the exercise price of a warrant, is established at a level that is around 20–30% higher than the price that is currently being offered on the market.
- In addition, both the conversion ratio and the conversion price will remain unchanged during the duration of the debenture.
- There is, as is customary, a clause in place to safeguard the convertible debenture-holders, to provide protection against dilution caused by bonus issuance, stock splits, and the sale of equity shares at prices lower than the conversion price.

Objective of Issuing Warrants and Convertible Debentures
Conventional explanations, on one hand, and contemporary financial reasons, on the other, make up the two basic categories here.

Conventional Explanations
Two of the most common reasons cited by executives in the financial industry for the issuance of warrants and convertible debentures are as follows:
- They make it possible for businesses to inexpensively issue debt;
- They give businesses the potential to offer equity shares at some point in the future and put an additional charge on top of the current pricing.

Modern Finance Explanation
- The popularity of convertible debentures and debentures with warrants can be better understood with the help of modern financial theory,
- This provides improved explanations for this phenomenon.
- These instruments facilitate better matching of cash flows, generate financial synergy, and help alleviate agency issues.

Matching of Cash Flows

- Financial instruments that can be easily serviced are typically preferred by businesses.
- Because of the low initial interest burden, convertible debentures or debentures with warrants may be tempting to a developing but risky company.
- Naturally, if the company is successful, the investors will try to convert their investment.
- Although it will result in pricey dilution, the company might not mind if it takes place when it is in a position to pay for it.

Financial Synergy

- When it is particularly expensive or impossible to evaluate the risk characteristics of the issuing company, it makes sense to purchase convertible debentures as well as debentures that come with warrants.
- Imagine that you are conducting an analysis of a brand-new business that has plans to produce a brand-new product that will be offered for the very first time in India.
- You are unsure if the company is high risk (in which case your projected yield on straight debentures will be 20%) or low risk (in which case your expected yield on St debentures will be 15%).
- You do not know which category the company falls under.
- In a scenario such as this one, convertible debentures and debentures that come with warrants offer some degree of protection against inaccurate risk assessments.

Agency Cost

- The agency concerns that are linked with financing can be mitigated with the use of convertible debentures and debentures that come with warrants.
- In order to limit the amount of risk that the offer is exposed to, the holders of straight debentures set restrictions on the offer.
- They behave in this manner to reduce the potential for incurring default risk.
- On the other hand, equity investors want the company to take on high risk initiatives since their claim is analogous to that of holders of call options.
- If the competing demands of equity owners and debt holders are not met in an appropriate manner, the company may be forced to forego potentially lucrative investment possibilities.
- Debentures that can be converted into equity and debentures that come with warrants could give a solution to this dispute that is acceptable to all parties.
- When you invest in these assets, you will likely be less concerned about the potential increase in future risk, and as a result, you will be less likely to apply very stringent debt covenants.
- Because you have a stake in the outcome of both wins and losses, it does not bother you if the company takes on unanticipated risk or behaves in a manner that is not in line with the interests of bondholders.

Features of Foreign Currency Convertible Bond (FCCB)

- Foreign currency convertible bond (FCCB) is a bond issued in a currency other than the issuer's domestic currency, i.e., foreign currency.
- A convertible bond is a hybrid of debt and equity instruments.
- The holder gets a regular coupon and principal payment, but they also get the option to convert the bond into equity shares.
- The conversion rate at which the bonds will be converted to equity is specified in the terms of issue of the bonds.
- As the holder has the option, if the stock price is below the conversion price on the relevant date, he will not convert the bond into equity shares.
- FCCB investors are usually hedge funds and foreign investors.
- These bonds may also have a call option, whereby, the right of early redemption lies with the bond issuer, or put option whereby, the right of early redemption lies with bondholder.
- FCCBs are generally issued by corporates in those currencies which are stable and for which, the interest rates are lower.
- The coupon payments on such bonds are lower than that on a straight coupon- bearing plain vanilla bond, because of the attraction of conversion option.

Mezzanine Financing

- Gives the lender the right to convert the debt in to equity of the company in case of default.
- Mezzanine financing is normally for raising funds for specific projects or to finance an acquisition.
- Mezzanine financing can provide higher returns to investors compared to normal debt instruments.
- However, for the issuing company, its cost is lower than the cost of equity capital
- Therefore, it can be considered as very expensive debt or cheaper equity.
- Mezzanine debt is often an unsecured debt.
- It may be structured with partially fixed and partially variable interest rates.
- It typically matures in more than 5 years, depending on the scheduled maturities of existing debt in the books of the issuing company.

Unit-20: Start-up Finance

Introduction

- Startup refers to a business that is just getting started.
- Startups are created by one or more business owners who desire to provide a good or service, they feel there is a market for.
- These businesses typically have large startup expenses and little income, which is why they seek funding from a number of sources, including venture capitalists.
- Wikipedia defines 'a startup or start-up as a company or project undertaken by an entrepreneur to seek, develop, and validate a scalable business model.
- Under the Department for Promotion of Industry and Internal Trade (DPIIT), Startup India was established to effectively handle the incentive disbursement process for new businesses.
- The Startup India Hub: offers a variety of services under Startup India, and connects aspirants to other significant ecosystem builders, launched the project in April 2016.

"Startup India" Initiative: January 2016.

- The program's goal is to create a strong environment for fostering innovation and startups in the nation, which will promote long-term economic growth and provide countless job possibilities.
- January 16, 2016: "Startup India Action Plan" was unveiled in order to include all these goals under a single overarching policy framework for the entire country while taking into account all facets of the startup ecosystem.

Startup Definition in India

Initial Definition

An entity shall be considered a startup:

- Up to 5 years from the date of its incorporation/registration
- If its turnover for any of the financial year has not exceeded Rs. 25 crore
- If it is working towards innovation, development, deployment or commercialisation of new products, processes or services driven by technology or intellectual property
- Provided that any such entity formed by splitting up or reconstruction of a business, already in existence, shall not be considered a "Startup".

Expanded Startup Definition

Under the Startup India Action Plan, startups that meet the definition as prescribed under GSR Notification 127 (E), are eligible for recognition under the program.

An entity shall be considered a startup

- If it is incorporated as a private limited company (as defined in the Companies Act 2013) or registered as a partnership firm (registered under Section 59 of the Partnership Act 1932) or a limited Liability partnership (under the Limited Liability Partnership Act, 2008) in India, and
- Up to 10 years from the date of its incorporation/registration.
- If its turnover for any of the Financial Year since Incorporation/ registration has not exceeded 100 crore and
- It is working towards innovation, improvement or development of products or processes or services or if it is a scalable business with a high potential of employment generation or wealth creation.
- Provided that any such entity formed by splitting up or reconstruction of a business already in existence shall not be considered as a startup.

Challenges Faced by Startups

- Failure to plan appropriately
- Unrealistic Expectations
- Knowledge and skills gaps
- Time management and productivity
- Lack of Leadership
- Fierce Competition, lack of demand, and Ineffective marketing
- Winning Trust of Customers
- Hiring Suitable Candidates
- Partnership Decision Making.
- Financial Management
- Securing funding
- Cyber Security

Pitch Presentation

- The pitch presentation is a slide presentation usually using either Power point or Keynote Slides in the background, that helps the entrepreneur to showcase its business and provide the reasons for which an investor should invest into the business.
- The pitch presentation came into picture in the late 1990s, during the dotcom boom.

The entrepreneur should focus on the following, while preparing slides for pitch presentation:

- The Problem Statement i.e. The issues faced by business/society
- Solutions to solve the issue
- Business Model
- The Technology used
- Business and Commercial Activity
- The Competitive Environment
- The Team Composition

- Predictions and Significant Events
- Present Status and Timelines for Execution
- Executive Summary and call for action

Pitch Deck is an intuitive, all-in-all presentation building platform exclusively for start- ups, offered by Startup India.

Programmes and Competitions for Startups

- Incubator Grand Challenge
- Startup India Yatra
- Rule 170(1) of GFR 2017
- Inspire
- National Startup Award
- SCO (Shanghai Cooperation Organisation) Startup
- Women Capacity Development Programme (WING)
- GEM Startup Runway

Innovation Zones

- The government is establishing Innovation Zones at the level of Urban Local Bodies (ULBs) in order to enhance the basic level of public service delivery and governance.
- This is done in order to improve the overall quality of life for citizens and to handle local problems in the areas of sanitation, cleanliness, health, trash, water, taxation, traffic, enforcement, and any and all other facets of citizen services supplied by ULBs.

States Startup Ranking

- The States Startup Ranking was established in April 2017 with the intention of harnessing the force of competitive unionism and fostering the growth of a thriving startup ecosystem across the nation.
- The primary purpose of this study is to assess the states and territories with regard to certain intervention areas that are crucial to the development of a healthy ecosystem.
- Additionally, a States Ranking Framework has been established as part of the strategy.
- This framework raises awareness regarding the volume and scope of state-driven initiatives and encourages reciprocal learning among ecosystem players.
- The ranking framework is based on seven reform are as that are essential to the expansion of startup ecosystems.

Startup India Showcase

The most promising new businesses to emerge from India's startup scene are featured in the form of virtual profiles on an online discovery platform called as Startup India Showcase.
Launched: 16th of January 2016,

There have been innovations in many different fields:

- Finance technology
- Enterprise technology
- Social impact technology
- Education technology
- Health technology

Digital Demo Day

- The Digital Demo Day is a conference and display for new technology companies who are just getting started in Germany.
- It provides a platform for industrial tech startups, primarily in the fields of virtual reality (VR), augmented reality (AR), internet of things (IoT) cyber security, smart devices, drones, and robotics, to showcase their digital technologies for people to test out and get in touch with.
- It honours inventiveness by bringing together colleges, corporations, small and medium-sized businesses, and startups, all of which are searching for chances in digital transformation.
- A trip to Germany was taken for the purpose of exposure, and there, at the Digital Demo Day, a few entrepreneurs took part.

Animal Husbandry Startup Grand Challenge

- Initiated by: Department of Animal Husbandry and Dairying in collaboration + Startup India.
- 1st edition was released by the Prime Minister in 2019,
- 2nd edition of the same publication was released in 2021 during an event marking National Milk Day in Anand, Gujrat.
- The purpose of the competition is to encourage the development of novel and practical approaches to resolving challenges and issues that are prevalent in the animal husbandry and dairy industries.

Ayushman PMJAY Startup Grand Challenge

- Startup India + Ayushman PMJAY Startup Grand Challenge: Extending an invitation to India's newest businesses to develop innovative solutions for the National Health Authority Support for Ayushman Bharat Jan Arogya Yojana's efficient Implementation.
- Challenge consists of inviting startups that are primarily working in the fields of medical devices, digital health, hospital services, hospital management, health communication, medical workforce training and capacity building, and reducing the cost of operations, amongst other fields.

Textile Grand Challenge

- It is anticipated that by the year 2025, the global market for garments made from textiles will reach $1.3 trillion.

- In a similar vein, it is anticipated that the domestic market for garments will reach 59.3 billion dollars by the year 2022.
- The primary objective is to introduce innovation into the sector of concern, which will, in the long run, contribute to the industry's expansion.

Innovation Challenge

- Goal: developing a Portable Device for Water Quality Testing.
- Launched by the Department of Drinking Water and Sanitation's National Jal Jeevan Mission (NJJM) + Department of Drinking Water and Information

Technology.

- Both surface water and groundwater are used as sources of potable water in rural regions, with groundwater accounting for 80% of the total.
- However, because there is a limited amount of groundwater available, particularly in dry and semi-arid regions, there has been an increase in the consumption of surface water.
- For the purpose of ensuring that portable drinking water satisfies the requirements of BIS IS 10500: 2012(Second version) and later revisions, the standard Drinking water Quality Protocol, 2019, has set certain significant factors that need to be adhered to in order to be compliant.

MNRE Startup Grand Challenge

- Kicked off to achieve the goal of lowering carbon emissions while also ensuring energy security and access.
- The possibilities that are now available aim to investigate the potential for bigger contributions from renewable resources in the fields of livelihood, health, water, and innovation in products, services, and business models.
- The Ministry of New and Renewable Energy (MNRE) offers a one-of-a-kind opportunity for innovative businesses and entrepreneurs to solve some of the most pressing problems that the Renewable Energy Sector in India is now facing.

Startup India Single Use Plastic International Challenge

- In order to encourage inventors and startups to develop design solutions.
- To help reduce the amount of single-use plastic used in the food and beverage industry, The SUP Challenge-Goa is calling for the participation of innovative startup companies.
- Grants will be provided to the selected startups so that they can pilot their solutions with F&B Partner in Goa.
- The Prevent Waste Alliance, which is an initiative of the German Federal Ministry for economic Cooperation and Development + ECCA Family foundation, is the organisation that is providing funding for this programme, which is being executed by the Incubation Network.

- There was a total of 8 Entrepreneur Support Organizations (ESOs) that were considered for the role of running the SUP Challenge with the F&B Partner in the 5 nations of India, the Philippines, Thailand, Vietnam, and Indonesia.

The following benefits will be made available through the programme

- Individualized guidance from seasoned professionals in the sector
- Grant funding for 10 pilots
- An exhibition of the impact of successful pilot projects
- Occasions to Establish Professional Contacts
- Seminars and online presentations
- An Opportunity for a Pilot Project with F&B Partners in Goa

Research Park

As of May, 2021, the following eight new research parks had been established:

- IIT Delhi
- IIT Kanpur
- IIT Gandhinagar
- IIT Mumbai
- IIT Guwahati
- IIT Kharagpur
- IIT Hyderabad
- IIsc Banglore

Single Point Registration Scheme

- Initiated by Ministry of Micro, Small, and Medium Enterprises.
- The Indian Government is the single biggest buyer of a wide variety of products.
- The Government Stores Purchase Programme was initiated in 1955-1956 with the purpose of increasing the proportion of purchases made from the micro- and small-scale business sectors.
- The Micro and Small Enterprises who wish to participate in Government Purchases must first become registered with NSIC under the Single Point Registration Scheme (SPRS).
- Under the Single Point Registration Scheme, the National Small Industries Corporation (NSIC) is willing to register any micro and small businesses that have an Udyog Aadhar Memorandum (UAM) or an EM Part – II (Optional).
- Those micro and small businesses who have begun commercial production but have not yet reached their one-year anniversary of operation are the ones that are qualified to be registered under this programme.
- Validity: 2 years, after which it will be subject to review and must be renewed.

- This review and renewal will be determined by an evaluation of the Registered Micro and Small Enterprise's continuous Commercial and Technical Competence in manufacturing or producing.
- Micro and small enterprises that fall under the Single Point Registration umbrella and have a maximum annual revenue of Rs. 5 lacs are eligible to receive a

Provisional Registration certificate.
This certificate is valid for 1 year and can be used by businesses that have already begun commercial production but have not yet reached their first anniversary in business.

Extra Mural Research

- Extra Mural Research/Core Research Grant by Science and Engineering Research Board (SERB) under Ministry of Science and Technology is a funding scheme to educational institutions, research laboratories, and other R&D Organisations to execute basic research in all frontier regions of Science and Engineering is in the focus for more than 40 years sine from the start of SERC.
- The programme is designed to encourage both upcoming and established researchers in the fields of science and engineering to pursue individual-centric competitive financing models for their research.
- Candidates need to prove that they are citizens of India.

Tax Exemptions
Section 56(2) (viib)

- Implemented by means of the Finance Act 2012 with the intention of discouraging the generation and use of unaccounted money through the subscription of shares of a closely held company at a value that is higher than the Fair Market Value of the shares of such Company.
- This was done with the intention of preventing tax evasion. According to the part that is being referred to, the total value that is greater than the fair market value is considered to constitute revenue for the company under the heading Income from Other Sources for the applicable fiscal year.
- On the basis of a self-declaration, startups have been granted an exemption from income tax under section 56(2)(viib) for the issuance of shares at a price higher than their fair market value.

ESOPs

- ESOPs are subject to double taxation.
- At Exercise, Perquisite = FMV – Exercise Price
- This perquisite is subject to a TDS deduction from the employer.
- This sum is reflected as Income from Salary on the Employees Form 16, which may be seen here.

- Second, when the ESOP is finally put up for sale.
- On the other hand, the tax burden at the time of Exercise was reduced in the Budget for 2020.
- by delaying the payment of taxes (on ESOPs) for a period of 5 years, or until the employee leaves the company, or until the person sells their shares, whichever comes first.

Section 80-IAC

- The turnover criteria for eligible startups has been increased to Rs.100 crores from the limit of Rs.25 crores as a result of the amendment that was provided by the Finance Act in Section 80-IAC of the Income Tax Act.
- Eligible startups can claim deductions under this section for any 3 consecutive years out of 10 years beginning from the year in which such eligible startups are incorporated. This modification went into effect from April 2021.

Section 54 GB [excused from paying tax on capital gains]

- Eligible Assesses: A person or a Hindu Undivided Family (HUF)
- Asset: sale of residential property (a house or a piece of land)

Funding

- The term “funding” refers to the sum of money that is necessary to begin and continue operating a business for the purposes of product creation, manufacturing, expansion, sales and marketing, inventory, and office spaces.
- Easy availability of finance is absolutely necessary for business owners in the early phases of a company’s development, in order to ensure its continued success.
- Once a certain amount of time has passed and there is a proof of concept, only then will funding from angel investors and venture capital firms become accessible.
- The situation is the same with loans from banks.
- As a result, it is essential to offer seed capital to new businesses that are developing novel concepts in order for them to carry out proof of concept tests.
- The Startup India Seed Fund Scheme’s primary mission is to aid new businesses in India in establishing a proof of concept, developing prototypes, breaking into new markets, conducting product tests, and going into business.
- This would make it possible for the businesses to advance to a level where they are able to solicit financial backing from angel investors or venture capitalists, as well as seek loans from commercial banks or other financial institutions.
- The seed and proof of concept development stages of the Indian startup ecosystem are plagued by insufficient funding.
- At this level in the game, the funding is absolutely essential for the startup, and it may make or break the company for entrepreneurs that have great business ideas.

Eligibility requirements to submit an application for the Startup India Seed Fund Scheme:

- The startup must already be recognised by DPIIT, and it must not have been incorporated for more than 2 years at the time of the application.
- The company that is just getting started has to have an idea for a business that will allow them to build a product or service that is suitable for the market, can be successfully commercialised, and has room to grow.
- In order to solve the issues that are the focus of the startup's efforts, the company's primary product or service, as well as its business strategy, distribution model, or methodology, should make use of technology.
- New businesses that are making an innovative effect in a variety of industries, including social impact, waste management, financial inclusion, education, agriculture, food processing, biotechnology, the health sector, energy, defence, transportation, space, trains, oil and gas, and textiles.
- The startup company cannot have received more than 10 million rupees in financial help from any other programme offered by the central or state governments.
- The prize money from competitions and grand challenges, subsidised working space, founder monthly allowance, access to labs, and access to prototyping facility are not included in this.
- In accordance with the Companies Act of 2013 and the SEBI (ICDR) Regulations of 2018 [last amended as on April 2022], India-based promoters must own at least 51% of the company's shares before submitting an application to the incubator for the scheme.

The following is a list of the requirements that must be met for an incubator to be eligible to apply for funding from the Startup India Seed Fund Scheme:

- The incubator must be a recognised legal entity, such as a society that has been registered under the Societies Registration Act of 1860, a trust that has been registered under the Indian Trust Act of 1882, a limited liability company that has been registered under the Companies Act of 1956 or the Companies Act of 2013, or a statutory body that has been established by an act of legislature.
- It must have been operational for a period of at least 2 years prior to the date of application
- The bare minimum requirement is that it should have the capacity to seat 25 people.
- As of the date of application, that particular incubator must have at least 5 start- up companies actively participating in the incubation process.

In the event that neither the central nor the state government is providing assistance to the incubator, then the incubator in question must satisfy the following conditions:

- Active for a minimum of 3 years, should have submitted audited annual report for a minimum of 2 years, and additionally, at least 10 startups must be physically undergoing incubation in the incubator on the date of application.
- It is necessary for it to meet any extra criteria that may be stipulated by the Experts Advisory Committee. The following individuals will participate as members of the EAC Committee:

- Chairman
- Representative of NITI Aayog
- Financial Advisor
- Additional Secretary/ Joint Secretary/ Director/ Deputy Secretary
- Representative of Department of Science and Technology
- Representative of Department of Biotechnology
- Representative of Indian Council of Agricultural Research
- Representative of Ministry of Electronics and Information Technology
- Secretary, DPIIT from the Startup Ecosystem; nominated 3 expert members, investors, specialists in the domain of R&D, Technology development and commercialization entrepreneurship and other relevant domains.

- A grant of up to 5 crore Indian Rupees will be granted to a shortlisted incubator on a milestone-based basis in 3 or more instalments;
- The money should only be used by the incubator to make payments to qualified new businesses; it should not be used to build new facilities or pay for any other expenses.
- As part of the management fees, 0.5% of the seed fund award will be allocated to the incubator as a component of the management fees; however, the incubator is prohibited from using these management fees to pay for the construction of facilities or any other administrative costs.
- Utilised for selecting the beneficiary startup, conducting due diligence, paying administrative expenses, and monitoring the beneficiary firm's success.

Selection of Startups

Each of the incubators that submits an application for the Startup India Seed Fund Scheme, will be required to form a committee comprised of industry professionals who are qualified to evaluate and choose entrepreneurs to receive seed funding.

Members of the following groups will make up the ISMC:

- Representative from State Government's Startup Nodal Team
- Representative of a venture Capital Fund or Angel Network
- Nominee of Incubator
- A domain expert from Academia
- Two successful Entrepreneurs
- A domain expert from Industry
- Any other relevant Stakeholder

Utilisation and Accounting of Funds

- The business incubator - keep a separate trust and retention account that is dedicated solely to a particular project at any nationalised bank.
- According to the terms of this plan, the monies will be distributed in three or more instalments, depending on the milestone.

- Any net return obtained from the beneficiary startup may be put toward additional investing in the beneficiary startup.
- In the event that there is no further funding of startups using this money, for a period of 3 years the monies are to be returned to DPIIT.
- Each incubator is required to provide a report for each fiscal year detailing the monies that have been approved, received, and disbursed to each startup.
- The incubator is obligated to provide a comprehensive report on the status of the utilisation of funds as well as audited expenditures for each and every fiscal year.

Successful Implementation Indicators

The following criteria must be met by incubators for all beneficiary startups, and these criteria must be recorded.

- The status of the proof-of-concept phase
- The status of the prototype development phase
- The status of the product development phase
- The status of the field testing phase
- The degree to which the market launch is progressing
- The amount of funding obtained from angel investors, loans, or venture capital
- The number of jobs created by startups
- The Turnover Rate of New Businesses
- Any suitable parameter not mentioned earlier

Those startups that have been shortlisted must provide the incubator with specifics on the aforementioned criteria in every progress report.

The same information will be supplied in real time by the incubator to Startup India via their online Dashboards, and it would be presented quarterly to EAC.

The incubator is responsible for reporting the return on each individual investment made in a startup, and an appropriate matrix may be developed for this purpose.

Types Of Financing

Debt Financing:

- **Borrowing:** From a lender, paying that money back with interest within a predetermined amount of time, and adhering to the deadlines that have been established for the payback of the loan.
- **Lender:** Does not have any influence over the company, and in order to secure financing, the fledgling company can be required to submit some form of collateral.
- **Through:** Banking institutions, non-banking financial institutions, government loan programmes, and other similar avenues

Equity Financing

- It comprises selling equity shares of the company in exchange for the capital that was provided.
- Startups are required to share ownership in the company, even though they are not required to offer collateral for the same.
- Possible to acquire it through: Angel investors, venture capitalists, crowd funding incubators and accelerators, as well as from one's own family and friends through self-financing.

Grant

- A grant is an incentive, typically financial, that is granted by one organisation to another organisation in order to promote the achievement of a goal or to encourage superior performance.
- A grant does not call for any sort of payback of the monies.
- The disbursement of grants occurs in stages, with each one contingent on the previous one having been successfully completed.
- In the case of a grant, the investor will not receive any return on their investment.
- In most cases, grants can be obtained from the Central Government, the State Government, Corporate Challenges, or grant programmes run by private entities.

Stages of Startups and Sources of Funding

- Idea Phase
- Seed Stage
- Series A Stage
- Scaling
- Exit Options

Process to Startup Fund Raising

- Determining whether or not money is required
- Assessing the need for funding
- Assessing Investment Readiness
- Preparation of Pitch deck/presentation
- Investor Targeting
- Due diligence by Interested Investor
- Term Sheet

The new company needs to design a plan that is based on milestones and includes specific timetables for the things it wants to accomplish in the future years.

Investors' Outlook In Startups

- Objective and Problem Solving

- Management and Team
- Market Landscape
- Scalability and Sustainability
- Customers and Suppliers
- Competitive Analysis
- Sales and Marketing
- Financial Assessment
- Exit Avenues

Funding Schemes and Programmes

- SIDBI Funds of Funds Scheme Established by: Government of India Fund value: Rs. 10,000 crore
- Goals: increasing the amount of available capital, stimulating private investment, and ultimately fostering the expansion of the Indian startup ecosystem.
- The money was originally intended to be used as a fund of capital for new businesses.
- In June 2016, it was proposed by the cabinet, and shortly thereafter, it was founded by the Department for the Promotion of Industry and Internal Trade (DPIIT).
- Capital is provided by FFS [Fund of Fund Scheme] to SEBI-registered alternative investment funds, often known as daughter funds, so that these funds can make further investments in startup companies.
- Because of this, the fund of funds does not make direct investments in the new businesses.
- The selection of daughter funds and the monitoring of the distribution of committed money are both tasks that fall under the purview of SIDBI as it carries out its duties to manage the FFS.
- Throughout the many stages of a startup's lifespan, the fund of funds is utilised to supply the necessary funding.
- As of 31March 2022, SIDBI had committed Rs. 7,225.45 crore to 86 AIFs further 1541.79 crore has been distributed to 51 AIFs.
- A total of Rs. 9,408 crore has been invested in startups by AIFs under FFS to boost 582 startups.
- The indicative process is as below for considering applications under

Credit Guarantee

- Corpus: Rs. 500 crore per year for the next 4 years has been launched
- Purpose: Making it simpler for early-stage entrepreneurs to secure funding.
- The total amount of money available through the Credit Guarantee Scheme for new businesses is Rs. 2,000 crore.
- Its goal is to provide coverage of guarantee for about 15,000 crores for 3,000 startups, with the average loan amount to eligible borrowers being 5 crore.

Startup India Seed Fund Scheme

- launched by: Department for Promotion of Industry and Internal Trade (DPIIT) on 19th April 2021
- Amount: Estimate of Rs. 945 crore to provide funding to startups for proof of concept, product trials, prototype development, commercialisation and market entry.
- These would allow the startups to reach the maturity level to raise investments from angel investors or venture capitalist or seek loans from financial institutions or commercialised banks.
- The scheme will provide handholding to approx. 3600 entrepreneurs through 300 incubators in the coming 4 years from 2021.
- The scheme was announced by the Prime Minister in January 2021 in his Address of Prarambh: Start-up India International Summit.
- DPIIT has constituted Expert Advisory Committee to assess and select the incubators.
- These Incubators will then constitute Incubator Seed Management Committee to assess, select and observe startups.
- As on 16th March 2022, the Startup India Seed Fund Scheme (SISFS) has received more than 140 incubator applications, out of which 76 incubators have been selected by the EAC, and more than Rs. 290 crores have been approved to them.

Startup India Global Venture

- Startup India Global Venture is held every year by the DPIIT in order to mobilise Global Capital for Innovation in India.
- It will assemble many representatives of leading Global Venture Capital Firms, Limited Partners, Family Offices, High Network Individuals, Government of India Officials and Top Corporates.
- The 2022 Global Venture Capital session was conducted on 16th January, 2022 with the aim to mobilize domestic and global capital for Indian startups.
- The roundtable witnessed participation from 75 key industry leads and investors from Indian and Global ecosystems representing north of USD 30 billion Assets Under Management.

Venture Capital Assistance Scheme

- **Purpose:** To provide eligible projects with monetary assistance in the form of an interest-free loan from SFAC [Small Farmers' Agribusiness Consortium] in order to make up for any shortfall in the capital requirements for the successful execution of the project.
- **Through:** Financial participation, it is possible to facilitate agricultural entrepreneurs' investments in the establishment of agribusinesses.
- **Administered by:** Ministry of Agriculture and Farmers Welfare
- Also offers assistance in the development of bankable Detailed Project Reports (DPRs) by means of the project Development Facility.

- Farmers, producer groups, partnership or proprietary firms, self-help organisations, companies, units in agri export zones, arbitrageurs, and agriculture graduates can submit the application on their own or in groups for the purpose of setting up agribusiness ventures.

SIP-EIT

- Encourage innovation, recognise the value and capabilities of global intellectual property, and encapsulate opportunities for growth in the ICTE sector,
- Goals: Support for International Patent Protection in Electronics and Information Technology (SIP-EIT) programme.
- Run by: The Ministry of Electronics and Information Technology.
- To provide financial support to MSMEs and technology startups so that they can file international patents.
- The applicant must fulfil the investment restrictions in plant and machinery or equipment that are specified in the MSME Development Act 2006 of the Government of India.
- Additionally, the applicant must be registered as a company under the Companies Act of the Government of India.

Start-up India for Financing SC/ST and/or Women Entrepreneurs

- Start-up Small Industries Development Bank of India makes arrangements for bank loans ranging from 10 lakhs to 1 crore to be Applicant at least one borrower belonging to a scheduled caste or scheduled tribe, or at least one woman,
- Purpose: Establishing a greenfield business in India.
- A manufacturing firm, a trading concern, or a service concern could make up the enterprise.
- In the case of businesses that are not run by individuals, at least 51% of the company's shareholdings and the controlling stake need to be owned by either a person from a historically oppressed group or a woman.
- Minimum age: 18 years old for the SC/ST or female entrepreneur.
- Greenfield refers to an enterprise that is the beneficiary's first foray into the manufacturing, commercial, or service industries.

Biotechnology Ignition grant

- **By:** The Biotechnology Industry Research Assistance Council
- **Purpose:** to provide financial support for the numerous innovative concepts that have not yet satisfied the requirement for mentorship and funding.
- Made available to scientist entrepreneurs working in research institutes, academic institutions, and startups.
- **Eligibility:** Applicant must either be an incubatee or have a registered firm that already possesses an R&D laboratory that is operational.
- Designed to improve the commercialization of scientific findings by awarding funding at an early stage in the development process.

- These grants are intended to help bridge the gap that exists between discovery and creation.

Technology Development Fund

- **Carried out by:** DRDO on behalf of the Ministry of Defence
- To meet the requirements of the Tri-services, Defence production, and DRDO.
- **Purpose:** To encourage the participation of public and private industries, particularly micro, small, and medium-sized enterprises (MSMEs), in order to establish an atmosphere conducive to the development of cutting-edge technological capabilities for use in defence applications through the incorporation of a research and development culture in industry.

The following are the criteria that must be met to be eligible:

- Public limited companies, private limited companies, partnership firms, limited liability partnerships, one-person companies, and sole proprietorships that are registered in accordance with applicable Indian laws.
- An Indian citizen who resides in India and who owns at least 51% of the company's shares in order to exercise ownership and control over the business.
- Micro, Small, and Medium-Sized Businesses (MSMEs) and Startups Registered in India. To the extent that it does not exceed 90% of the overall cost of the project, funding will be considered for projects with costs of up to Rs. 10 crore.

High Risk High Reward Research by Science and Engineering Research Board (SERB)

- **Run by:** The Department of Science and Technology
- **Purpose:** Provides assistance and encourages the submission of novel ideas and proposals that are anticipated to have a significant impact on the field of science and technology.
- This programme provides funding for high-risk projects with the potential for high rewards.
- **Primary objective:** To provide assistance to proposals that are conceptually novel and precarious;
- If they are fortunate and successful, it is anticipated that they will have a transformative effect on the scientific and technological community. This may take the form of the formulation of new hypotheses or the achievement of scientific discoveries that facilitate the development of new technologies.
- **Eligibility:** applicant [Individual or Group] needs to be a citizen of India and have a permanent academic or research job at an organisation that has been acknowledged.

Unit-21: Private Equity and Venture Capital

Introduction

- Investors contribute venture capital, which is a form of private equity as well as a type of finance, to new enterprises and start-up organizations that they believe have the ability to expand their operations over the long term.
- The majority of funding for new businesses comes from wealthy individuals, investment banks, and various other types of financial institutions.
- Nevertheless, it does not always take the form of monetary compensation; rather, it may also be supplied in the form of specialized knowledge or managerial experience.
- Small businesses with outstanding growth potential, or businesses that have expanded rapidly in the recent past and appear to be in a position to continue their expansion, are the traditional recipients of venture capital.
- It is possible for a young private, firm that is not yet ready or willing to access the public financial market, to look into obtaining venture capital.
- Venture capital fund anticipate a high rate of return on their investments.
- The industry of venture capital has only recently reached a certain level of maturity and sophistication, particularly in the United States,during the course of the past half century or more.
- Private equity is a word that is frequently encountered in business contexts.

Why does VC Exist

- It is a result of the existing deficiencies in bank lending.
- Visiting a bank is the typical first step for someone who is interested in beginning a new enterprise.
- However, banks will only provide financing to newly established companies if those companies already possess tangible assets to use as collateral for the loan (e.g., a factory).
- However, in today's information economy, many new businesses have little tangible assets, making it difficult for them to obtain a bank loan.
- Additionally, the risk involved in starting a new business is rather significant.
- The risk level is so high that even if financial institutions were willing to lend, they would have to apply interest rates that were so prohibitively expensive that no one would take out the loan.
- Venture capitalists flourish in the high-risk environment that traditional financial institutions avoid.
- They are willing to provide financial backing to very new businesses that have no assets and likely to do business with people with little or no prior expertise as well.
- Instead of providing financial assistance in the form of a loan, the investors demand a share of the company as compensation for the risk they are taking, so that they can take a greater

percentage of the upside, which means they can get a portion of the profits that will be made in the future.

- Another distinction is that the word "bank" simply refers to money. However, venture capital consists of financial backing in addition to strategic guidance on how to create enterprises, making it more beneficial to business owners.

Characteristics of Venture Capital Investments

The following is a list of the most important aspects of a venture capital arrangement, although there are no standard terms and conditions that apply to venture capital companies.

High Risk, High Return:

Investors in venture capital are typically willing to take on a high level of risk in the hope of achieving a high rate of return on their investment.

Control:

The venture capitalist not only provides the aided company with funding, but also takes an active interest in leading the company.

Shareholders:

The venture capitalist will often make a subscription to stock or quasi-equity financing instruments, which gives it the opportunity to partake in both the risk and the profit of the company in which it invests. The financial burden that is placed on the aided company is often minimal in the early years of the partnership.

Exit Strategy:

- The venture capitalist typically has an exit strategy in place for his or her investment in the business being aided after 3 to 7 years.
- In most cases, the promoter of the company, that is receiving assistance, has the first option to purchase the equity investment that is being held by the VC.

Characteristics Shared by Private Equity and Venture Capital, as well as their Key Distinctions

The following is a list of characteristics that are shared by private equity and venture capital:

- They are established as autonomous pools of capital, to which contributions may be made by institutions or high-net-worth individuals, and they are managed by managers who have significant financial incentives directly connected to the funds' levels of success.
- They make investments in businesses that are either unable or not yet prepared to raise funds from members of the general public.
- There are not many restrictions placed on the activities they engage in.
- Equipped with carefully drafted investment agreements, they engage in active oversight of the enterprises in which they have invested.

Distinctions between private equity and venture capital

- A private equity investment might be used by the investee company to restructure either its finances or its operations.
- In contrast to venture capitalists, private equity investors typically put their money into established businesses in their later stages of development that have a proven track record.
- Private equity investors place a greater premium on good corporate governance, whereas various venture capital investors devote more of their attention on management capability.
- A private equity investment deal may incorporate debt, which is unusual for a venture capital investment deal.

Financing Options Available Through Venture Capital

The various forms of venture capital can be categorized according to the stages of a company's development in which they are most useful. The following are the three primary forms of venture capital financing:

1. Financing for the initial stages of development
2. Financing for Expansion
3. Acquisition Financing

The following is a list of the many forms of financing based on the stages of business development:

- Finance at a low level for the purpose of validating and developing a new idea.
- Financing for new businesses in their formative stages, when those businesses have financial needs related to product development and marketing.
- Initial investment, which may include funding for manufacturing and early sales.
- A second round of financing, often known as an operational capital injection, given to early stage enterprises that are selling items but are not yet generating a profit
- The third round of financing, also known as a mezzanine financing, is when a company receives the funding necessary to expand after experiencing recent financial success.
- The fourth round of funding is sometimes referred to as bridge financing, and it comprises financing for the process of becoming public.

The Procedures Involved in Obtaining Venture Capital Funding

1. The Beginning of a Transaction
2. Screening and shortlisting
3. Detailed Evaluation and rating of proposals
4. The Final Deal Negotiations
5. Post-Investment-Related Activities
6. Exit Plan

Advantages of Venture Capital Funding

- The investor will receive a significant amount of wealth and expertise from the investment, despite the fact that the investment is time consuming and fraught with risk.
- The amount of funding that can be delivered through equity is enormous.
- The business owner is in a less precarious situation because there is no responsibility for the company to repay the investor's money. This is because the investor is well aware of the risks associated with the project.

Disadvantages of Venture Capital Funding

- The procedure is drawn out and difficult because there is a significant amount of risk involved.
- The founder loses his or her independence and control of the business after an investor becomes a part owner.
- Since the investments are made with a long-term objective, the return of the earnings is often delayed.
- Both the potential for the investment's purpose and the return on investment are undetermined and uncertain

The Importance of Private Equity and Venture Capital for New Businesses

- Due to the fact that their options are limited, entrepreneurs and small businesses that are just getting started often choose to work with venture capitalists.
- They are not in a position to raise funds through the stock market due to the numerous conditions that must be satisfied before a company can launch an initial public offer or become a listed company.
- On the other side, entrepreneurs would also prefer venture capital investments over loan financing because the latter places on them a significant amount of responsibility to pay interest, which is especially problematic for young businesses that are not yet profitable.
- But why is it considered a short-term investment to engage in venture capital?
- Typically, venture capitalists invest for a period of five years; after that, when the company has reached a substantial size or stature, the venture capitalists sell their ownership and make returns that are multiples of their initial investment.
- In most cases, this takes place during a time in the development of the business when the company is in need of additional funds and is eager to raise more capital.
- This may occur if the startup decides to sell its shares to additional investors or if it goes public in the market by way of an initial public offering (IPO).
- At this point, investment bankers are brought in, which paves the way for the owners to execute their exit plan.

Indian Venture Capital Firms

- Blume Ventures
- Kalaari Capital

- Nexus Venture Partners

Roles at a VC

Analysts: Those with the least experience.

- These individuals are either folks who have recently graduated from school or MBA students who are participating in an internship.
- Primary responsibility: To attend conferences and to look for business opportunities that might fit inside the framework of the investment thesis of the fund being managed by the venture capital firm.
- They also undertake research on the market and analyse potential business opportunities and also look at the competitive environment to help the decision makers at the Venture Capital Fund take proper and informed decisions.

Associate: Comes immediately following the analyst post.

- An associate may either be junior or senior depending on their experience.
- People who arrive with a financial background and significant skills in creating relationships are typically the types of people who are considered associates.
- Associates at a company do not participate in the decision-making process, but they may surely make a good first impression on those who are responsible for making decisions.
- Even if they are senior members of the company and have the ability to make choices when it comes to investments, they do not have complete control over how the company puts its overall plan into action.
- A principal can get you in the door and act as your guide to help you receive funding by bringing you through the full process.

Principals: are persons who are on the cusp of becoming partners in the company.

- They hold a position of authority inside the company, yet they cannot
- be ranked among the most senior employees of the company.

Partners

They are considered to be the most senior members of a venture capital firm, placing them a tier above principals.

There are two types of partners:

1. General Partners
2. Managing Partners

- The difference between these two titles is determined by whether the individual only has a say in the decisions pertaining to investments or whether they also have the ability to weigh in on operational matters.
- In addition to making investments, partners are responsible for bringing in new financial backing for the money with which the company will be working in the future.

General Partners

The actual management of the fund is often handled by experienced investment experts who have a history of successful performance. And they have to juggle a number of different jobs:

- **Arrange capital:** They raise capital by contacting potential limited partners (LPs) and selling them on the fund's concept (they also actually make a deck like startup founders do). And, if everything goes well, possibly get some cheques from them.
- **Invest:** They need to find new companies to back (a process that venture capitalists refer to as "Deal Flow"), investigate those companies (known as "Due Diligence"), and finally put money into those companies (obviously by writing a cheque).
- **Grow:** Now that they have invested in these new businesses, they are providing whatever assistance they can in order to assist the companies in growing. It might be anything from strategy to the recruitment of staff to referrals to possible business partners or even investors for the subsequent round of funding.
- **Exit:** The GPs will either try to take the company public by means of an initial public offering (IPO), sell it to another company by means of a merger and acquisition (M&A), or sell it to another investor (Secondary sale). At this stage, they begin to generate revenue, which is then distributed to limited partners (LPs).

Returns for Venture Capital

- There is a correlation between high risk and high rewards.
- When compared to the return that public equity markets generate (12–15%) and far greater than the return that debt markets give (8–10%), venture capital is predicted to generate a return in the range of 25–35% annually.
- Following in the footsteps of Rajan In the end, Rajan was successful in raising $50 million, which he then invested in 25 different businesses. Rajan's fund needs to be at least 10x its original size in order to earn an annualized return of 25%,

Investment In Private Equity

- A non-publicly traded form of capital is known as private equity, and it belongs to the alternative investment class known as "alternative investments."
- Private equity is comprised of funds and investors that either directly invest in private enterprises or that engage in buyouts of public corporations, which ultimately results in the delisting of public stock.

- Private equity receives its funding from both institutional and individual investors, and this funding can be put to use to finance the development of new technologies, complete acquisitions, increase working capital, and reinforce and strengthen a balance sheet.
- The Limited Partners (LP) of a private equity fund normally own 99% of the fund's shares and have limited liability, while the General Partners (GP) own 1% of the fund's shares and have full liability.
- These later parties are furthermore accountable for carrying out and managing the investment.
- Private equity is a different type of private financing that exists apart from public markets and involves funds and investors directly investing in firms or engaging in buyouts of such companies. This type of financing takes place away from public markets.
- Private equity firms make their money by charging investors in a fund fees for management and performance.
- One of the benefits of private equity is that it makes it easier for entrepreneurs and company founders to gain access to alternative forms of capital, and it also reduces the pressure of having to perform well on a quarterly basis. These benefits are nullified, however, by the fact that valuations of private equity are not determined by the forces of the market.

Sources of Private Equity

- Investment in private equity comes mostly from institutional investors and accredited individuals who are in a position to commit significant sums of money over extended periods of time.
- Private equity investments typically need to be held for a considerable amount of time before they can result in liquidity events such as an initial public offering (IPO) or a sale to a public company.
- This is because a turnaround of financially troubled companies or the ability to sell to a public company can take a long time.

Benefits Obtained Through Private Equity

- Companies and startups can benefit in a number of ways from private equity investments. Companies favour it because it gives them access to cash as an alternative to conventional financial processes like bank loans with high interest rates or listing on public markets.
- Venture capital is one type of private equity that is used to finance businesses in their early stages, in addition to financing ideas.
- In the event of businesses that have been delisted from public markets, private equity financing may be able to assist these businesses in pursuing unconventional methods of business expansion out of the public eye.
- If not, the pressure of quarterly profitability will significantly restrict the time frame that senior management has available to try to turn a firm around or experiment with new ways to cut losses or make money.

Drawbacks to the Practice of Private Equity

- To begin with, it may be challenging to liquidate holdings in private equity since, in contrast to public markets, there is no ready-made order book that brings together buyers and sellers.
- This might make it difficult to find a buyer or a seller.
- In order to complete the sale of an investment or a company owned by the business, the company must first conduct a search for a buyer.
- Second, the price of a company's shares in private equity transactions is not established by the forces of the market but rather through talks between potential buyers and sellers, in contrast to the situation that typically exists for publicly traded companies.
- Third, the rights of shareholders in private equity are typically decided on a case-by-case basis through negotiation rather than being determined by a broad governance framework, as is the case with their counterparts in public markets.
- This is in contrast to how rights are typically determined in public markets.

What Is The Process Behind Private Equity?

Private equity firms seek funding for their funds from a variety of investors, including institutional investors and accredited investors. The funds then invest in a variety of assets.
The following is a list of the most common forms of funding through private equity:

Funding in difficult times:

- Also known as distress funding or vulture financing, and it involves the investment of money in struggling businesses that have business units or assets that are not performing as expected.
- Goal: to either produce a profit from the sale of their assets or to turn around the management of the company by implementing any necessary changes to their operations or management.
- In the latter scenario, assets can include anything from tangible property like machinery and real estate to intangible forms of property like patents.
- In the United States, businesses that have already declared bankruptcy under Chapter 11 of the US Bankruptcy Code are frequently considered viable candidates for this kind of funding.
- After the 2008 global financial crisis, there was a rise in the amount of distressed finance provided by private equity firms.

Leveraged Buyouts:

- This is the most common type of private equity investing, and it entails buying out a company completely with the goal of improving its business and financial health, and then reselling it for a profit to an interested party or executing an initial public offering (IPO).
- Before the year 2004, the most common type of leveraged buyouts undertaken by private equity firms consisted of the sale of non-core business units of publicly listed companies.
- The following is an explanation of how the leveraged buyout process works.

- A private equity firm will first locate a possible acquisition target before forming a special purpose entity, often known as an SPV, to provide the necessary cash for the acquisition.
- In most cases, businesses will finance a transaction by utilising a combination of debt and equity in their capital structure.
- It is possible that as much as 90% of the total funds will come from debt financing, which will then be transferred to the balance sheet of the acquired company in order to take advantage of the tax benefits.
- To turn around a company, private equity companies will use a range of techniques, ranging from laying off a significant portion of the workforce to completely revamping the management team.

Real Estate Private Equity:

- After the 2008 financial crisis caused a drop in real estate prices, there was a boom in the number of people looking for this sort of funding.
- Commercial real estate and real estate investment trusts (REITs) are two examples of typical places where monies are invested.
- When compared to investments in other types of private equity funding, the minimum amount of capital required to purchase shares in real estate funds is significantly larger.
- In addition, the money from the investors is held in escrow for a period of time equalling several years at a time.
- REITS have also been active in India for quite some time now.
- During the Financial Year 2021-22, an amount of Rs. 949.99 crore was raised as against Rs. 14,300 crore in the Financial Year 2020-21.

Fund of funds:

- Primary objective: To invest in other funds, most commonly mutual funds and hedge funds.
- They provide an alternative access point for investors who are unable to meet the minimum investment criteria of some funds.
- However, opponents of these types of funds object to the higher management fees associated with them (due to the fact that they are rolled up from numerous funds) and the possibility that unrestricted diversification does not always result in the most effective method to multiply profits.
- During the Financial Year 2021-22, the average domestic net assets under management amounted to Rs. 47,088.98 crore as against Rs. 26,485.80 crore in the Financial Year 2020-21.

Venture Capital:

- A sort of private equity, venture funds funding is a type of investment in which investors (also known as angels) donate capital to entrepreneurs.
- Angels are another name for investors.

- There are a few different formats that venture capital can take, and each one corresponds to a specific stage at which it is supplied.
- Seed financing is when an investor provides the initial funding needed to take a concept from a prototype all the way to a finished product or service.
- Series A financing, on the other hand, enables an entrepreneur to actively compete in an existing industry or to build a new one.
- Early stage finance, on the other hand, can assist an entrepreneur grow a company even further.

How Do Companies That Invest In Private Equity Make Money?

- Management fees: Most significant contributor to total revenue for private equity firms.
- A management fee and a performance fee are frequently included in the fee structure of private equity companies, despite the fact that this structure can often vary from firm to firm.
- Some companies deduct 20% of the total earnings made from the sale of a business in addition to charging an annual management fee equal to 2% of the assets under management.
- There is a lot of competition for jobs in private equity firms, and there is a good reason for this.
- Take, for instance, a company that has one billion dollars' worth of assets under control (AUM).
- This company, much like the vast majority of private equity firms, probably has no more than 25 investment experts working for it at any given time.
- The 20% of total revenues earned by the private equity firm is used to create millions of dollars in fees for the firm.
- As a result, some of the most influential personalities in the investing industry are drawn to positions in companies that use this business model.

Problems Associated With Private Equity

- The amount of income, earnings, and exorbitant salaries earned by employees at nearly all private equity firms prompted a call for more transparency in the private equity industry beginning in 2015.
- This was largely due to the fact that the amount of income earned by employees at private equity firms is on the rise.
- In India, SEBI has come out with Securities and Exchange Board of India (Alternative Investment Funds) Regulations, 2012 to regulate Venture Capital Funds and Private Equity Funds.
- The number of Alternative Investment Funds registered with SEBI went up to 732 as on 31st March, 2021 from 641 as on 31st March, 2020.
- The investments as on 31st March, 2021 = Rs. 2,00,484 crore as against Rs. 1,53,403 crore on 31st March, 2020.

Important International Players Who Have a Presence in India

- The Carlyle Group
- Warbug Pincus
- Bain Capital
- TPG Growth Capital
- CVC Capital Partners
- The Blackstone Group
- KKR & Company
- Everstone Capital
- Baring Private Equity Asia
- CLSA Capital Partners

Indigenous Companies Having Business Operations in India

- Kotak Private Equity
- Chrys Capital Management
- True North's India Value Fund
- Motilal Oswal Private Equity
- IDFC Private Equity Fund.
- The ICICI Venture Capital Fund
- CX Partners
- Premji Invest
- Kedaara Capital
- JM Financial Private Equity

The Legal and Administrative Structure of India

Private equity funds in India are typically organised as trusts and registered with the Securities and Exchange board of India as alternative investment funds in accordance with the Securities and Exchange board of India (Alternative Investment Funds) Regulations, 2012. Private equity funds can also be established in the form of companies or limited liability partnerships, in addition to trusts (LLP).

The SEBI (Alternative Investment Funds) Regulations, 2012

The Securities and Exchange Board of India introduced the SEBI (Alternative Investment Funds) Regulations, 2012, with the goal of increasing both the accountability of market participants and the stability of the market. The Securities and Exchange Board of India (Venture Capital Funds) Regulations, 1996 were superseded and nullified by the regulations that were notified on May 21, 2012.

Applicants can seek registration as an AIF in one of the following categories, and in sub- categories thereof, as may be applicable: [Ref. Regulation 3(4)]

Category I AIF: AIFs which invest in start-up or early stage ventures or social ventures or SMEs or infrastructure or other sectors or areas which the government or regulators consider as socially or economically desirable and shall include venture capital funds, SME Funds, social venture funds, infrastructure funds and such other Alternative Investment Funds as may be specified. [Ref. Regulation 3(4)(a)]

- Venture capital funds (Including Angel Funds)
- SME Funds
- Social Venture Funds
- Infrastructure funds

Category II AIFs: AIFs which do not fall in Category I and III and which do not undertake leverage or borrowing other than to meet day-to-day operational requirements and as permitted in the SEBI (Alternative Investment Funds) Regulations, 2012. [Ref. Regulation 3(4)(b)] Various types of funds such as real estate funds, private equity funds (PE funds), funds for distressed assets, etc. are registered as Category II AIFs.

Category III AIFs: AIFs which employ diverse or complex trading strategies and may employ leverage including through investment in listed or unlisted derivatives. [Ref. Regulation 3(4)(c)] Various types of funds such as hedge funds, PIPE Funds, etc. are registered as Category III AIFs .

Angel Fund:

"Angel fund" is a sub-category of Venture Capital Fund under Category I Alternative Investment Fund that raises funds from angel investors and invests in accordance with the provisions of Chapter III-A of AIF Regulations. In case of an angel fund, it shall only raise funds by way of issue of units to angel investors. "Angel investor" means any person who proposes to invest in an angel fund and satisfies one of the following conditions, namely,

(a) An individual investor who has net tangible assets of at least two crore rupees excluding value of his principal residence, and who:

- has early stage investment experience, or
- has experience as a serial entrepreneur, or
- Is a senior management professional with at least ten years of experience;
- ('Early stage investment experience' shall mean prior experience in investing in start-up or emerging or early-stage ventures and 'serial entrepreneur'shall mean a person who has promoted or co-promoted more than one start-up venture.)

(b) a body corporate with a net worth of at least ten crore rupees; or

(c) An AIF registered under these regulations or a VCF registered under the SEBI (Venture Capital Funds) Regulations, 1996. Angel funds shall accept, up to a maximum period of 3 years, an investment of not less than Rs. 25 lakh from an angel investor.

Crucial Stages In The Process Of Investing In Private Equity

In India, private equity investments are frequently made in privately held businesses that are not listed on any stock exchange. Investing in publicly traded companies is not recommended for a number of reasons, including a dearth of high-quality assets and stringent requirements for delisting. Private equity transactions include seed capital, Angel investments, venture capital, growth capital, and late stage investments such as private investment in public equity, buyouts, and turn around capital. Early stage investments include venture capital, growth capital, and growth stage investments including:

- ❖ Teaser sent by investment bankers
- ❖ Non-disclosure agreement (NDA)
- ❖ Memorandum Regarding Confidential Information
- ❖ Valuations
- ❖ Expression of interest
- ❖ Permitting Access to Data
- ❖ Management meetings
- ❖ Formal notice of intent
- ❖ Contract for the purchase of shares

Due Diligence

- ❖ Any transaction must be carried out and planned for with the utmost care.
- ❖ As a consequence of this, prior to the closing of a deal, the buyer or the investor is required to conduct extensive research concerning the target company.
- ❖ The procedure encompasses a wide range of topics, including commercial and legal considerations in addition to accounting and tax difficulties.
- ❖ During the process of performing due diligence, there is no single, definitive formula that must be adhered to.
- ❖ The performance of due diligence is unquestionably vital from the point of view of the purchaser.
- ❖ This is because conducting due diligence gives the buyer the opportunity to refute many allegations and lowers the risk associated with acquiring a company.
- ❖ Also helps the seller.
- ❖ The thorough study and analysis of the seller’s financial situation may, on occasion, show the company’s true value on the open market.
- ❖ As a result, it is not unusual for sellers to perform due diligence on their own businesses before selling them. Carrying out an exercise known as “due diligence” is a vital step to take in order to discover any potential dangers or flaws in the deal.
- ❖ Therefore, protecting a buyer from potential future dangers.

The essential steps :

- ❖ An Overview of the Company Being Targeted

- This covers the following areas:
- Financial Matters
- Corporate Matters
- Customer Relationship and Sales
- Contractual Matters
- Employee Management Issues
- Litigation
- Tax Issues
- Intellectual Property Matters
- Transactions Involving Related Parties

Exit Strategies

- The realisation of returns on the investments that the private equity firm has made in the company is the primary goal of an investment in private equity.
- A private equity fund's lifespan is typically predetermined to be somewhere between 5 and 10 years.
- To put it another way, private equity investors buy things with the intention of selling them.
- In point of fact, it is a common practice for an investor to begin formulating a plan for the exit motion immediately following the completion of a purchase.
- A private equity fund will purchase a firm, then work to raise its value by taking operational and managerial control of the business before ultimately selling the company.

Exit strategies are always evolving to keep up with shifting market conditions, however some of the more prevalent tactics include the following:

- Initial offering to the public
- Trade Sale
- Secondary Buyout
- Procedure with Two Separate Tracks
- Recapitalization Through the Use of Leverage

Unit-22: Artificial Intelligence

Introduction

- The term "artificial intelligence" (AI) refers to the replication of human intelligence in computers that have been trained to think like people and emulate the activities that humans engage in.
- The concept of artificial intelligence can be conceptualised as a computer- controlled robot designed to look and behave just like a human person.
- The application of artificial intelligence is widespread throughout a variety of industries, including the banking processes, medical healthcare, institutes, surveillances, and the act of social media.
- The most exciting aspect of artificial intelligence is the prospect of new research leading to the creation of computer programmes that think with minds that are as fully functional as those of humans.
- The technique of making machines that are capable of performing tasks that previously required intelligence and were either carried out by humans or by other machines when necessary.
- The creation of an artificial brain and its subsequent transfer to a computer in order for it to carry out tasks in a manner analogous to those carried out by a human, constitutes the entirety of artificial intelligence.

History of Artificial Intelligence

The study of artificial intelligence is still in its development as a discipline.

- 1950s : Scientists and researchers began to investigate the prospect of computers processing intellectual powers equivalent to those of human beings, the academic discipline of Artificial Intelligence was born as a field of study.
- Alan Turing, a mathematician from the United Kingdom, is credited with being the first person to suggest a test to assess whether or not a machine is intelligent Eventually be known as the Turing Test, a machine plays an imitation game in which it attempts to pass itself off as a human being by responding to a series of questions in a manner that is consistent with how a person would respond.
- Turing held the belief that a machine could be judged to have the same level of intelligence as a human being provided it could convince a person that they were having a conversation with another human being when in reality they were not.
- John McCarthy, a professor at the Massachusetts Institute of Technology, is credited with being the one who first coined the term "artificial intelligence" in 1956.
- The symposium, which AI researchers later came to refer to as the Dartmouth Conference, was essential in establishing AI as a separate field of study.

- The conference also identified the primary objectives of artificial intelligence, which are to comprehend and simulate the cognitive processes of people and to create robots that behave in a manner that is analogous to this.

Applicability of Artificial Intelligence

- There are many different industries that have found applications for artificial intelligence, such as medical diagnosis, stock trading, robot control, law, remote sensing, scientific discoveries, and even toy manufacturing.
- Nevertheless, many uses of AI are not viewed as utilising AI.
- According to Nick Bostrom's research, a significant amount of artificial intelligence has made its way into general applications, without being classified as AI.
- Many thousands of AI applications are deeply embedded in the infrastructure of every industry.
- The algorithms of the artificial intelligence are designed to make the decision by using the real time data, combining all the information by using the sensors, remote inputs, digital data, and from different sources.
- Research in artificial intelligence has the potential to make an important and useful contribution to the education of people.
- At the very least in many instances, an intellectual difficulty can be handled by first breaking it down into pieces and then coming up with a solution for each of those individual components.
- Educators and cognitive scientists have come up with the concept of intelligent computer assisted instruction (CAI), in which a computer would be programmed to act as a "tutor" that would observe a student's efforts as they worked to solve a problem.

Contribution of Google

Google has made immense contributions to the field of Artificial Intelligence over a period of time. Some of the important contributions of Google to Artificial Intelligence are as under:

Search Engine Algorithm -Google RankBrain

- The adoption of Google's RankBrain, a search engine algorithm that is based on machine learning and its use was officially confirmed on October 26, 2015.
- It assists Google in processing search results and providing users with search results that are more relevant to their queries.
- RankBrain was mentioned by Google in an interview in 2015, and the company stated that it was the third most significant factor in the ranking algorithm, after links and content.
- "RankBrain was used for less than 15% of queries as of 2015," according to the report.
- According to the findings, the results produced by RankBrain are within 10% of those produced by the human search engine engineers working for Google.

AI Hub

- AI Hub provides developers and data scientists working on artificial intelligence (AI) systems with access to a collection of components to use in their work.
- Making artificial intelligence more accessible to more companies requires making it simpler for them to find, exchange, and reuse the tools and work they already have.
- However, until very recently, there was a lack of machine learning expertise among workers, which made it difficult to construct a comprehensive resource.
- The AI Hub is a one-stop shop for plug-and-play machine learning (ML) content.
- This content includes pipelines, Jupyter notebooks, TensorFlow modules, and more.

Advantage:

- 1st : make available to all companies in the world high-quality machine learning resources that have been built by Google Cloud AI, Google Research, and other teams located within Google.
- 2nd: it gives businesses access to a private and protected portal where they may upload and share machine learning resources within their own companies.
- Because of this, it is simple for companies to reuse pipelines and deploy them to production in GCP — or on hybrid infrastructures by utilising the Kubeflow

Pipeline system — in just a few simple steps.
Kubeflow Pipeline System

- Container-centric end-to-end machine learning (ML) processes are what Kubeflow pipelines are all about.
- Components, which are self-contained collections of code that are packaged as container images, are what are used to construct pipelines.
- In the machine learning (ML) workflow, each component of the pipeline is responsible for a specific stage, such as preprocessing, data transformation, or training a model.
- The Kubeflow Pipelines system is responsible for orchestrating the execution of pipelines, which includes the creation and running of component containers in the sequence specified by the workflow graph so as to .
- Build and distribute repeatable machine learning workflows with the Kubeflow Pipelines system.
- Create machine learning experiments and deploy them into production using the Kubeflow Pipelines system.
- Kubeflow Pipelines is a new component of Kubeflow, which is a well-known open source project initiated by Google.
- It packages machine learning code in a manner analogous to the construction of an application in order to make it accessible to other users within an organisation.
- Kubeflow Pipelines offers a workbench for the composition, deployment, and management of reusable end-to-end machine learning workflows.

- This makes it a hybrid solution without lock-in that can be used from the prototyping stage all the way through production.

In addition to that, it makes it possible for users to conduct experiments in a quick and dependable manner, allowing them to explore a variety of ML techniques and determine which ones perform best for the application they are developing

Google Duplex and Hold for Me

- An innovative artificial intelligence technology, known as Google Duplex,
- At first, its use was limited to reservations at restaurants; but, since then, it has been broadened to include various kinds of activities.
- In May 2018, during the Google I/O developer conference, Google CEO Sundar Pichai made the initial announcement of Google Duplex.
- He demonstrated how the service could schedule phone appointments using a voice that was controlled by AI without requiring the user to take any action.
- The artificial intelligence was not only able to comprehend what was being said on the other end of the line, but it could also provide appropriate responses to the questions that were asked of it and add “ums” and pauses in its speech so that it appeared to be more human-like.

Artificial Intelligence In Banking And Finance

- Utilising AI-based systems allows for increased productivity, which in turn leads to cost savings, as well as the ability to make decisions utilising information that is unavailable to human decision-makers.
- The employment of an AI algorithm system allows for the detection of fraudulent activity, as well as the easy identification of anomalies.
- Following the implementation of AI technology inside the banking industry, the services sector has become one that is more technologically relevant and focused on the consumer.

A few examples of how artificial intelligence is being used in the banking industry are given below:

- Customer service/engagement (Chatbot)
- Robo Advice
- Predictive Analytics with a General Purpose Focus
- Cybersecurity
- Scoring Credit and Direct Lending for Customers

Hybrid Information System (HIS)

- A software system known as a hybrid information system is created by combining various artificial intelligence methodologies and techniques, such as a fuzzy expert system, a neuro-fuzzy system, and a genetic-fuzzy system.
- This results in the construction of the hybrid information system.

- An efficient learning system, also known as an HIS system, is one that not only combines the beneficial aspects of various learning paradigms and representations, but also over comes the limitations of processing capabilities.
- These systems are also utilised for the purpose of finding solutions to issues that arise in a variety of contexts.

The following examples highlight the importance of HIS in the field of finance:

Portfolio Management

- The management of a portfolio is an involved and complicated task that contributes significantly to the decision-making process.
- HIS has seen widespread use in portfolio selection, and it has been playing a vital role in the operations of a great number of organisations and financial institutes.
- The term "artificial intelligence" describes one of the most fundamental aspects of the modern world, and financial institutions have started incorporating related technology into their services and products in order to maintain their relevance

Stock Market Prediction:

- A wide range of computer methods, which are necessary due to the highly unpredictable nature of the stock market.
- Because hybrid systems are able to combine the skills of many systems with the special traits that each system possesses, they are utilised to a far greater extent in the field of financial prediction than they are in any of the other AI disciplines.

The Future Scope of Artificial Intelligence

In Artificial Intelligence, the computer performs the following functions:

- The processing of the natural language in order to make it possible for it to communicate effectively in English, natural language
- For the purpose of storing the auditory inputs, it requires the Knowledge Representation.
- Once the inputs have been saved, the next step in automated reasoning is to use the knowledge that has been saved to answer and question or draw any graphics.
- Machine Learning is required in order to adopt all of the functions in order to take advantage of newly processed and stimulated ideas and patterns.

Neural Networks

- The term "artificial neural networks" refers to a category of exceptionally effective methods that have seen a surge in popularity over the past few years.
- The reason for this is that when utilised in supervised data mining applications, they are capable of producing extremely accurate predictions.

- These networks are examples of highly adaptable algorithms that can be used to solve a wide variety of modelling challenges, including supervised and unsupervised issues.
- When there is a categorical dependent variable, neural networks can be used instead of logistic regression and decision trees, or they can be used in conjunction with both of those methods.
- Because of their high degree of adaptability and the fact that they are capable of working with continuous dependent variables, neural networks are suitable for use in situations that include regression.
- Neural networks have the potential to evolve into models that are significantly more sophisticated, more flexible, and potentially more accurate when utilised in applications where other methods such as regression, logit, and decision trees may be used.
- Flaws: One of the models' flaws is that it might be challenging to understand what they are trying to convey.
- When there are numerous input variables and those variables have non-linear correlations with the target variable, neural nets are especially successful.
- Neural nets are especially effective when there are many input variables.

Control Theory And Cybernetics

- Ktesibios of Alexandria is credited with building the earliest self-controlling machine, which was a water clock that had a regulator that kept a steady flow rate.
- This was about the year 250 B.C.
- The definition of what an artefact is capable of doing was shifted as a result of this creation.
- In the past, only living organisms had the ability to adjust their actions in reaction to shifts in their surrounding environment.
- Other types of self-regulating feedback control systems include the steam engine governor [developed by James Watt (1736–1819)]
- Thermostat [Cornelis Drebbel (1572–1633)] who also developed the submarine.
- The 19th century saw the development of the mathematical theory behind reliable feedback systems.
- Norbert Wiener is widely regarded as the seminal figure in the development of what is now known as control theory (1894–1964).
- Wiener, along with his colleagues Arturo Rosenblueth and Julian Bigelow, questioned the behaviourist dogma, much in the same way as Craik did (who also employed control systems as psychological models) (Rosenblueth et al., 1943).
- They believed that purposeful behaviour originated from a regulatory system that was attempting to reduce "error," which they defined as the

The Connection between Thought and Language

- Verbal Behaviour – 1st released by B. F. Skinner in the year 1957.

- Written by the foremost authority in the field, this description of the behaviourist method of language acquisition was exhaustive and specific in its coverage of its subject matter.
- However, in a strange turn of events, a review of the book became just as widely known as the book itself, and it nearly entirely extinguished people's interest in behaviourism.
- Linguist Noam Chomsky, who had recently released a book on his own theory and was the author of the review, had written the article.
- The book was titled Syntactic Structures.
- Chomsky pointed out that the behaviourist theory did not handle the concept of creativity in language; it did not explain how a child could understand and make up words that he or she had never heard before.

Goals

- The overarching challenge of emulating (or fabricating) intelligence has been subdivided into a number of specific challenges.
- These are specific characteristics or skills that researchers anticipate an intelligent system to possess.

The most emphasis has been paid to the characteristics that are detailed below:

- Reasoning, problem-solving
- Knowledge representation

Rational Agents

- The study of rational agents is what's meant to be encompassed by the term "artificial intelligence."
- A rational agent could be anything that makes decisions, including a person, company, machine, or even a piece of software. After taking into account the agent's previous and current perceptions (that is, the agent's perceptual inputs at a particular instant), it performs an action that will result in the best possible outcome.
- An AI system consists of an agent and the environment in which it operates. The agents behave in accordance with their surroundings. It's possible that the environment has other agents in it.

Tools & Techniques of Artificial Intelligence

The tools and techniques used by Artificial Intelligence are as under:

- Search and Optimization
- Logic
- Probabilistic Methods for Uncertain Reasoning
- Classifiers and Statistical Learning Methods

Unit-23: Business Analytics as Management Tool

Introduction

- Business analytics (BA) refers to the combination of skills, technologies, and practices that are used to analyse the data and performance of an organisation in order to gain insights and make decisions in the future that are driven by data.
- Statistical analysis is one of the most common methods used in business analytics.
- Objective of business analysis: To determine which datasets are valuable and which have the potential to boost revenue, productivity, and efficiency.
- Used to make accurate predictions of future events that are related to the activities of consumers, and trends in the market.
- Also help create more efficient operations, which could contribute to an increase in revenue, if it is used to its full potential.

Data Mining History and Origins

- During late 1980s and early 1990s, data warehousing, business intelligence, and analytics technologies began to develop.
- These innovations provided an enhanced capability to evaluate the ever-increasing amounts of data that organisations were creating and gathering.
- By the year 1995, when the 1st International Conference on Knowledge

Discovery and Data Mining was held in Montreal, the phrase “data mining” was already in common usage.

- The Association for the Advancement of Artificial Intelligence (AARI), was the organisation that was responsible for sponsoring the event.
- The conference, which has been held annually since 1999 and is commonly referred to as KDD 2021 and so on, is primarily coordinated by Special Interest Group on Knowledge Discovery in Data (SIGKDD), which is part of the

Association for Computing Machinery that focuses on knowledge discovery and data mining.

- In 1997, the first issue of a specialised journal called Data Mining and Knowledge Discovery was released to the public.
- In 2016, a second publication known as the American Journal of Data Mining and Knowledge Discovery was made available to readers.

Essentials of Business Analytics

There are numerous different applications for Business Analytics (BA); however, when it comes to commercial enterprises, BA is most commonly used to:

- Analyse data coming from a range of different sources. Anything from cloud applications to marketing automation tools and customer relationship management software could fall under this category.
- Find patterns within the data sets by employing more complex analytics and statistical methods. These patterns can assist you in predicting future trends and providing you with new information regarding consumers and the behaviours they engage in.
- Keep an eye on key performance indicators (KPIs) and trends as they evolve in real time. Because of this, it is much simpler for companies to not only store all of their data in a single location but also draw correct and speedy conclusions from those data.
- Back and support decisions based on the most recent available facts. Because BA gives us access to such a large amount of data that we can put to use in support of business decisions, we can be certain that we are well-informed not only for one but also for multiple distinct scenarios.

Types of Analytics
- Descriptive analytics
- Diagnostic analytics
- Predictive analytics
- Prescriptive analytics

Elements of Business Analytics
- Data Mining
- Text Mining
- Data Aggregation
- Forecasting
- Data Visualisation

Excel Proficiency
Being proficient with Excel requires being able to execute and create functions, pivot tables, and charts. The following is a list of the numerous Excel skills that need to be kept up to date:
- Spreadsheets
- Workbooks
- Formulas
- Data Linking
- Pivot Tables
- Charts
- Data Analytics
- Macros and Automatization
- IF Statements
- Data Validation

Big Data Analytics

- Big data analytics is the application of more advanced analytical methods to very large, diverse data sets.
- These data sets might be organised, semi-structured, or unstructured, come from a variety of sources, and range in size from terabytes to zettabytes.
- Big data is a term that refers to data sets that are so large or complex that typical relational databases are unable to effectively record, manage, or process the data in a timely manner.
- This form of data is known as unstructured data.
- Big data can be characterised by high volume, high velocity, or high diversity, or all three of these properties simultaneously.
- The rise of artificial intelligence (AI), mobile, and social platforms, as well as the Internet of Things (IoT), are all contributing to an increase in the complexity of data through the introduction of new forms and sources of data.

Uses of Big Data Analytics

- Enhancing the integration of the customers Gathering data that is structured, semi-structured, and unstructured from the various touch points that customers have with the firm in order to obtain a comprehensive understanding of the client's actions and the factors that motivate them so that we may better our personalised marketing. Data sources can include social media, sensors, mobile devices, sentiment and call log data.
- Detecting and minimising frauds Monitoring transactions in real time and staying on the lookout for strange patterns and behaviours that could indicate fraudulent activity. Companies are able to detect and prevent fraud by utilising the power of big data in conjunction with predictive and prescriptive analytics, as well as the comparison of historical and transactional data.
- Improving the efficiency of the supply chain. Collecting and examining large amounts of data to figure out how items get to their final destination, highlighting areas of inefficiency as well as opportunities to cut costs and save both time and money. Tracking vital information from the warehouse to its final destination with the use of sensors, logs, and transactional data is possible.

Big data analytics is also used in the following six industries

- Manufacturing
- Retail
- Health Care
- Oil & Gas
- Telecommunication
- Financial Services

Web and Mobile Analytics

Traditional web analytics and mobile web analytics are two different approaches to the same research question:

- How mobile website users behave. Mobile web analytics is a term that is used in the business world to describe the process of collecting data from customers who browse a website using their mobile phones.
- It is helpful in determining which aspects of the website work best for mobile traffic and which mobile marketing campaigns work best for the business. Some examples of mobile marketing campaigns include mobile advertising, mobile search marketing, text campaigns, and desktop promotion of mobile websites and services.

Platforms

- HTML/JavaScript
- WordPress Mobile Pack
- PHP
- NET
- Java
- Python
- ColdFusion
- Ruby on Rails
- node.js/Connect
- TypePad Pro

Problems with Tracking

- Visitor identification
- JavaScript page tagging
- HTTP Cookies
- Image Tags
- IP Address

Collecting Mobile Web Analytics Data

- Packet Sniffing
- Image Tags or Beacons
- Link Redirection
- HTTP Header Analysis
- IP Address Analysis
- WAP Gateway Traffic logs

Unit-24: Green and Sustainable Financing

ISO Standards for Green Finance

- Investors have been drawn to growing industrial areas, such as renewable energy, energy efficiency, green building, and recycling, not only due to the prospect of healthy financial returns in a developing part of the economy, but also by the ethos of ethical and environmental investments.
- These, once "niche" green investors, are becoming more and more popular, leading to the emergence of tools and approaches that aim to determine what constitutes green and sustainable investing kinds and practices.
- In light of this context, the International Organization for Standardization (ISO) is working on a set of standards to underlie and catalyse green and sustainable finance.
- Investments in environmental initiatives and programmes will benefit from having more organisation, openness, and credibility, as a result of this.

- ISO/TC 207, Environmental management
- ISO/TC 322, Sustainable finance
- ISO/TC 309, Governance of organisations

These committees fall under the umbrella of ISO. The various ISOs are

- ISO 32210: Framework for Sustainable Finance
- ISO 14007: Environmental costs and Benefits
- ISO 14008: Monetary valuation of environmental impacts
- ISO 14097: Assessing and reporting investments related to climate change

Building Green Finance

- ISO 14000, released in August, 2022, provides guidance on identifying and assessing environmental aspects and impacts, and performance criteria for projects, assets and activities.
- The intent is to support the development of green finance by assisting borrowers and financiers to take into account the environmental aspect and impacts or environmental performance of the project, asset or activity for which funds are sought.
- Applicable to: individual, corporate or public entities providing or seeking green finance, regardless of size.
- A framework to determine relevant environmental criteria supported by credible information is presented.
- Objective: To avoid, minimize, reduce and mitigate adverse environmental impacts and risks, as well as to identify opportunities to optimize environmental performance.

- Key concepts involved in identifying and assessing relevant environmental criteria, including significance, context and materiality as well as "do no significant harm", are examined and examples presented.
- The relationship between what is determined to be environmentally significant and materiality is also explained.
- Concerns related to greenwashing that affect green financing decisions are addressed.
- Relevant information is identified to assist borrowers and financiers to align with the principles presented and to facilitate access to green finance.
- Intended users can determine the application that best suits their internal and external context.

Instruments to fund Green Financial Project

- Governments, charities, banks, and private investors can finance "green" initiatives using a variety of methods.
- They can be divided into four categories: loan, equity, and risk-mitigation products.
- Global foundations and NGOs typically provide project-specific grants, such as for decentralised solar mini-grids for rural electrification.
- Credit enhancement guarantees and insurance products are risk-mitigation tools.
- In guarantees, government agencies, development financial institutions(DFIs), or financial services firms can assure lenders that payment will be made in full or in part in the event that the borrowers default.
- Environmental risk liability coverage and environmental loss insurance are features of green insurance products.
- The DFIs may offer early-stage seed money to launch a project under equity.
- Additionally, for an ownership stake in such ventures or assets, venture
- capitalists and private equity funds may invest, or the general public may do so through initial public offerings (IPOs).

About Green Bonds

- Green bonds are a type of unsecured debt instrument that is used to finance green projects that provide benefits to the environment.
- The commitment of an issuer of a green bond to use the proceeds from the sale of the bond to finance or re-finance "green" projects, assets, or business activities distinguishes a green bond from a standard bond.
- Can be issued up front by either public or private actors
- In the same manner as traditional bonds, green bonds involve the issuing entity providing a guarantee that the amount borrowed will be repaid over a predetermined amount of time and compensating the creditors through the issuance of a coupon that bears either a fixed or variable interest rate.

Framework for Green Bond Issuance

- The Green Bond Principles (GBP) : collection of optional process principles
- Established by: International Capital Market Association.
- Purpose: to increase the transparency and integrity of the green bond market around the world.
- They advise the issuers to construct a framework for the process of issuing green bonds, which should include 4 essential components.
  - 1st: Usage of profits in situations when the GBP has established criteria for determining which types of initiatives are qualified to be labelled as "green."
  - 2nd approach: A technique of evaluating and selecting projects, in which the issuers are required to describe the environmental objectives of the project as well as the risks that are expected to be incurred and the strategies that will be used to mitigate those risks.
  - 3rd: Management of the proceeds, which requires the issuers to store the money in a sub-account or a separately managed account and to keep the lenders updated on the movement of the money.
  - Last: the GBP discusses different techniques for providing transparent reports to the lenders, including the impact that the project will have. The Climate Bonds Initiative has released a set of voluntary guidelines and a certification scheme in order to promote investments that are truly linked with the goal of tackling climate change.
- Green Masala Bond: Bonds that are issued outside of India but are denominated in Indian Rupees rather than the local currency have been issued by Indian corporations.

Benefits of Green Investment

- Providing an additional source of financing for environmentally friendly
- Making it possible to finance more environmentally friendly projects over the long term by reducing the maturity mismatch
- Improving the issuers' reputations and providing more transparency regarding environmental strategy
- Facilitating the "greening" of traditionally "brown" sectors
- Making newly developed environmentally friendly financial products accessible to investors who are committed to the long term

Advantages of investing in green bonds

- Investors can balance financial and environmental returns
- Meets ESG/green investing requirements
- Improved risk assessment in an opaque fixed income market through proceeds reporting
- Potential use of pure-play, project, and ABS to actively hedge against climate policy risks in a portfolio with emissions-intensive assets
- Recognized by UNFCCC as non-state actor "climate action"

- Private interaction with issuers on ESG topics relevant to green bond issuance results in more thorough credit profiles of borrowers.
- Added openness of proceeds use and reporting requirements gives green bond investors an informational edge (on spending efficiency, project specifics and updates, impact performance).
- Tracking and reporting proceeds utilisation improves internal governance and the issuer's credit quality.

Disadvantages of investments in green bonds

- A market that is still in its infancy and is quite small, with bond amounts that are relatively low.
- The absence of universal criteria can increase the potential for confusion, as well as the damage to one's reputation if the green integrity of a bond is called into question.
- There is a restricted amount of room for the legal enforcement of green integrity
- A lack of uniformity can result in research that is more difficult to understand and a requirement for further due diligence that is not always met.

Advantages of issuing green bonds

- Presenting and carrying out the issuer's approach to environmental, social, and governance concerns.
- Strong demand from investors might result in oversubscription, which opens up the possibility of increasing the amount issued.
- Increasing the investor base diversity of bond issuers, potentially lowering their sensitivity to changes in bond demand.
- There is evidence of an increase in investors who "buy and hold" green bonds, which may result in decreased bond volatility on the secondary market.
- Advantages to one's reputation (for example, marketing can promote the issuer's support for green investment and the issuer's green credentials.)
- Clarification of the sustainability plan and increased confidence in its validity.
- The ability to take advantage of "economies of scale," given that the majority of issuance expenses are associated with the process of setting up the system. h) The monitoring and reporting of how profits are used leads to improvements in internal governance structures, as well as communication and the exchange of knowledge between the treasury and project sides of a corporation.

Disadvantages of issuing green bonds

- The one-time and continuing transaction costs associated with labelling and the accompanying administrative, certification, reporting, verification, and monitoring requirements.
- The risk to a bond's reputation if its "green credentials" are called into question.

- Investors have the right to claim for damages in the event of a "green default," which occurs when an issuer violates the terms of an agreement even though the bond was paid in full.

Public Policy In India

- Since 2007, India has placed a significant emphasis on green financial practices.
- Within the context of sustainable development, the Reserve Bank of India issued a notification in December 2007 titled "Corporate Social Responsibility,

Sustainable Development and Nonfinancial Reporting – Role of Banks."

- Within this notification, the Reserve Bank highlights the significance of issues pertaining to global warming and climate change.
- The National Action Plan on Climate Change (NAPCC) was developed in 2008
- Goal: outlining the general policy framework for reducing the effects of climate change.
- This plan was formulated with a vision.
- Within the Ministry of Finance in India, the Climate Change Finance Unit, (CCFU) : established in 2011
- Purpose: to serve as a coordinating agency for the many institutions in India that are responsible for green finance.
- Since 2012, the Security and Exchange Board of India (SEBI) has made it required for the top 100 listed businesses based on market capitalization at BSE and NSE to publish annual business responsibility reports.
- In May of 2017, SEBI published guidelines for the issuance of green bonds, in which the disclosure criteria were specified.
- In addition, the Companies Act of 2013 requires businesses to report annually on their progress toward fulfilling their Corporate Social Responsibilities (CSR).
- This requirement was enforced by the Ministry of Corporate Affairs.
- The Report of the Committee on Corporate Governance, which was released in October 2017, suggested that the board of directors should gather together at least once a year to particularly discuss succession planning, ESG, risk management, and strategy.
- In recent years, India has implemented a number of different economic and financial incentives.
- These incentives are in line with the commitments that India made under the Paris Agreement in 2015
- To reduce the intensity of its greenhouse gas emissions: by 33 to 35% below the levels that they were at in 2005
- To achieve 40% of its installed electric power capacity from non-fossil sources by 2030.

Progress of Green Finance In India

Improvement in General Awareness

- There is a dearth of information available from traditional sources that may be used to evaluate the level of awareness regarding green finance and sustainable development.
- When viewed in this light, Google Trends has the potential to be a very useful instrument for gaining a knowledge of the pattern of Google searches conducted in various places and at various times.
- It is possible for us to have a better understanding of the interest in a particular subject by analysing the amount of searches conducted on Google.
- In Google Trends, the information on the number of searches made in Google on any topic is normalised as the proportion of the total number of searches made in an area during the given time period on all topics.

Green Lending

- As part of the green finance initiative, the Reserve Bank has included the small renewable energy sector under its Priority Sector Lending (PSL) scheme in 2015.
- As at end-march 2020, the aggregate outstanding bank credit to the non-conventional energy sector was around Rs. 36,543 crore, constituting 7.9% of the outstanding bank credit to the power generation compared to 5.4% in March 2015.
- The commercial banks' exposure to the non-conventional energy sector varied among bank groups and the major states in India.

Green Bonds

- Green bonds are the bonds issued by any sovereign entity, inter-governmental groups or alliances and corporates with the aim that the proceeds of the bonds are utilised for projects classified as environmentally sustainable.
- For India, we first extracted most bonds issued by the corporate and government since January 21, 2015, irrespective of whether they are green bonds or not.
- In this regard, we have taken those bonds where the country of risk has been marked as India, irrespective of the issuers' country of incorporation.
- Our data includes the initial issuance amount in US$, coupon rate, debt to total assets ratio, and we then looked at whether the bond proceed was to be utilised for green projects or not, for over 5000 bonds issued in Indian market since 2015.
- India started issuing green bonds since 2015. As of February 12, 2020, the outstanding amount of green bonds in India was US$16.3 billion India issued green bonds of about US$8 billion since January 1, 2018, which constituted about 0.7% of all the bonds issued in the Indian financial market.

- Although the value of green bonds issued in India since 2018 constituted a very small portion of the total bond issuance, India maintained a favourable position compared to several advanced and emerging economies.

SEBI Guidelines on issue of Green Bonds in India

- In 2016, SEBI was responsible for establishing the green bond criteria in India.
- 30th May 2017: The Securities and Exchange Board of India (SEBI) came out with a circular stating the disclosure requirements for issuance and listing of Green Debt Securities in India.
- Earlier in December, 2015, SEBI had come out with a Concept Paper for issuance of Green Bonds in India.
- The Concept Paper brought out the need for enhanced disclosures for issuance of green bonds so as to differentiate it from other form of debt securities issued and listed in India and the Circular is largely in line with the concept paper.

Definition of "Green"

The SEBI Circular defines the term "Green" or "Green Debt Securities" in the following manner:

- A Debt Security shall be considered as "Green" or "Green Debt Securities", if the funds raised through issuance of the debt securities are to be utilised for project(s) and/or asset(s) falling under any of the following broad categories:
- Internationally, for all issuance of Green Bonds or Climate Bonds, an independent reviewer/ certifier has to be appointed mandatorily who certifies whether the targeted project assets qualify to be eligible assets or not.
- However, as per the SEBI Circular for any issuance of Green Debt Securities in India, the issuer may use its discretion to appoint an independent reviewer/ certifier and it is not a mandatory requirement. Disclosure requirements
- In order to issue Green Debt Securities, the provisions of SEBI (Issue and Listing of Debt Securities - ILDS) Regulations, 2008 are to be complied with.
- Therefore, the disclosure requirements provided therein in ILDS Regulations have to be adhered to.

Disclosure requirements

In order to issue Green Debt Securities, the provisions of SEBI (Issue and Listing of Debt Securities - ILDS) Regulations, 2008 are to be complied with. Therefore, the disclosure requirements provided therein in ILDS Regulations have to be adhered to. Additionally, the following details also have to be disclosed in the offer document:

- A statement on environmental objectives of the issue of Green Debt Securities;
- Brief details of decision-making process that the issuer has followed/would follow for determining the eligibility of project(s) and/or asset(s), for which the proceeds are been raised through issuance of Green Debt Securities. Indicative details to be provided is as under:

- Process followed/ to be followed for determining how the project(s) and/or asset(s) fit within the eligible green projects;
- The criteria, making the project(s) and/or asset(s) eligible for using the Green Debt Securities proceeds; and
- Environmental sustainability objectives of the proposed green investment.

- Details of the system/procedures to be employed for tracking the deployment of the proceeds of the issue.
- Details of the project(s) and/or asset(s) or areas where the issuer, proposes to utilise the proceeds of the issue of Green Debt Securities, including towards refinancing of existing green project(s) and/ or asset(s), if any.
- If the issuer appoints an independent third-party reviewer/certifier, for reviewing /certifying the processes including project evaluation and selection criteria, project categories eligible for financing by Green Debt Securities, etc. then such appointment of such reviewer/ certifier shall have to be disclosure in the offer document.

Responsibilities of the issuer

In addition to the responsibilities entrusted on the issuer of debt securities under SEBI (ILDS) Regulations, the following additional responsibilities have been entrusted upon the issuers of Green Debt Securities under the Circular:

- The issuer must maintain a decision-making process which it uses to determine the continuing eligibility of the project(s) and/or asset(s), which would include, without limitation, a statement on the environmental objectives of the Green Debt Securities and a process to determine whether the project(s) and/or asset(s) meet the eligibility requirements.
- The issuer must ensure that all project(s) and/or asset(s) funded by the proceeds of Green Debt Securities, meet the documented objectives of Green Debt Securities.
- The issuer should utilise the proceeds only for the stated purpose(s), as disclosed in the offer document.

Unit-25: Special Purpose Acquisition Company

Introduction

- A company that does not carry any commercial operations and is incorporated purely for the purpose of raising capital through an Initial Public Offering (IPO) or is incorporated for the goal of acquiring or merging with an existing company, is known as a special purpose acquisition company (SPAC).
- A company, structured in this way, enables investors to contribute money to a fund, which is subsequently used for the acquisition of one or more unnamed enterprises, which are only revealed after the IPO.

Advantages of SPAC

- Speedier Execution
- Discovery of the price up front
- The possibility of raising additional capital
- Reduced Marketing Cost
- Ease of access to specialised operational knowledge

The following is a list of the additional benefits:

- It shortens the time it takes for a company to become publicly traded.
- Both valuations and finances will be raised as well.
- It grants a greater degree of control over the stipulations of the transaction.
- There is less regulatory oversight of SPACs.
- When compared to an IPO, the process of going public with a high-leverage company is made much simpler by the availability of SPACs.

Disadvantages Of SPAC

- Inability to Track Use
- Poor Returns
- Low Market Cap
- Increasing Regulatory Oversight
- Shareholding dilution
- Deficiency in available capital
- Compact Timeframe for Compliances
- Narrow Scope for Financial diligence
- Absence of underwriting and comfort letter

SPAC Formation & Timelines

- After the initial public offering (IPO), the proceeds are deposited into a trust account, and the SPAC normally has between 18 and 24 months to find and finalise a merger with a target firm.

- This process is frequently referred to as de-SPACing.
- In the event that the SPAC is unable to accomplish a merger within the specified amount of time, the SPAC will be liquidated, and the profits from the IPO will be distributed back to the public shareholders.
- The public shareholders of the SPAC have the option to vote against the deal once a target firm has been found and an announcement of a merger has been made.
- Alternatively, they may choose to redeem their shares.
- If the SPAC needs additional finances to complete a merger, it may choose to issue debt or additional shares through a transaction known as a private investment in public equity (PIPE) agreement. Alternatively, the SPAC may sell additional assets.

The SPAC Merger

- After its formation, the SPAC will normally be required to seek the permission of shareholders for a merger, and it will also prepare and file a proxy statement (or a joint registration and proxy statement on Form S-4 if it intends to register new securities as part of the merger).
- This document will contain a description of the proposed merger as well as aspects pertaining to governance, all of which will be seeking approval from the shareholders.
- Additionally, it will include a plethora of financial information about the company that is the target of the merger, such as pro forma financial statements demonstrating the effects of the merger, historical financial statements, and management's discussion and analysis (MD&A).
- The merger will be finalised and the target business will transition into a publicly traded firm as soon as shareholders provide their consent to the SPAC merger and all regulatory issues are resolved.
- Within 4 business days of the closing, a Form 8-K must be filed with the United States Securities and Exchange Commission (SEC).
- This Form 8-K, which is commonly referred to as the Super 8-K, must contain information that is equivalent to what would be required in a Form 10 filing of the target company.

Stakeholders

Typically, special purpose acquisition companies (SPACs) have 3 different stakeholder groups:

1. Sponsors
2. Investors
3. Targets

Every one of them is unique in the demands, worries, and viewpoints that they have.

Process

- When the SPAC obtains the funds through the IPO, the money is placed in a trust and kept there for a predetermined amount of time or until the acquisition is completed, whichever comes first.

- The Special Purpose Acquisition Company (SPAC) is obligated to repay the funds to investors after deducting bank and broker costs in the event that the planned acquisition is not completed or the legal requirements are not yet complete.
- A Special Purpose acquisition company is made up of seasoned business leaders who are self-assured about their reputation in the industry and the fact that they have the knowledge necessary to assist them in locating a lucrative company to purchase.
- When seeking financial backing from investors, the founders of a company are the primary selling point.

SPAC Capital Structure

- To raise the necessary funds to finish the acquisition of a private company, a SPAC typically conducts an IPO.
- The funds are often gathered from institutional and retail investors and are kept in a trust account.
- In exchange for their investment, investors get units of SPAC, each of which contains a share of common stock and a warrant to buy more shares at a later time.
- After the IPO, the units can be split up into warrants and shares of common stock that can be sold on the open market.

Trust Account

- In connection with the closure of the IPO, a sum equal to or greater than 100% of the gross proceeds of the IPO is used to finance the trust account, with roughly 95% of the funds coming from the general public and 5% from the sponsors.
- The money in the trust account is invested in government securities, or it is kept as cash, to pay for the business combination, the redemption of common stock under a compulsory redemption offer, the payment of the deferred underwriting discount, any transaction costs, and the company's working capital following the De-SPAC transaction.

Warrants

- The warrants are purchased in their whole by the sponsor, whereas the units offered for sale to the general public often include only a portion of a single warrant.
- In larger initial public offerings (IPOs) these days, the issuance of one-third of the warrant is more prevalent; nonetheless, the standard practise is to issue half of the warrant.
- In every circumstance, the entirety of the warrants can be put to use.
- In most cases, the share price at the time of the first public offering will serve as the basis for determining the strike price of the warrant.
- The public warrants are typically settled in cash, with the investor being required to pay an amount equal to the warrant's strike price in exchange for a share of the company's stock.
- On the other hand, the founder warrants are net settled, meaning that the founder is not required to make a payment in cash but rather receives a number of shares of stock with a fair

market value equal to the difference between the trading price of the stock and the warrant's strike price.

Forward Purchase

- Affiliates of the sponsor or institutional investors engage into a forward purchase agreement with the SPAC, devoted to purchase equity (stock or units) in conjunction with the De-SPAC transaction to the extent that the additional funds are necessary to complete the transaction.
- In situations in which a private equity fund or another investor with a limited investment mandate commits forward purchase, it may be appropriate to condition the obligation of the investor on the De-SPAC Transaction satisfying the investment mandate of the investor.
- This is because private equity funds and other investors with limited investment mandates often make forward purchase commitments.

IPO Agreements

The establishment of the SPAC as well as the initial public offering of the SPAC both involve the customary signing of a series of contracts and other documents. There are a few documents that are universal to all SPACs, such as the registration rights agreement and the certificate of incorporation. The remaining documents are specific to SPACs and cannot be found elsewhere.

- Charter
- Securities Purchase Agreement
- Warrant Agreement
- Promissory Note
- Sponsor Constituent Document
- Letter Agreement
- Registration Rights Agreement
- Private Placement Warrants Purchase Agreement
- Securities Assignment Agreement
- Administrative Service Agreement

DE-SPAC Process

The following procedures make up each stage of the De-SPAC process:

- Requirements for Shareholder Approval
- Founder Approbation Votes
- Disclosure of Material on a Super 8-k Form
- Redemption Offer

Important Formula

Some of these Formulas may not be applicable for BFM, but I request all of you to go through all of them to understand the concepts clear for ABM, BFM and ABFM.

ABFM Important Formula

Earnings Per Share	**EAT/No of Equity Shares**
Degree of Operating Leverage (DOL)	**% change in EBIT / %change in Sales**
Impact of Fixed Cost: DOL	**Contribution / EBIT**
Degree of Financial Leverage (DFL)	**% change in EPS / %change in EBIT**
Impact of Interest Cost: DFL	**EBIT / EBT**
Degree of Combined Leverage (DCL) OR Degree of Total Leverage (DTL)	**% change in EPS / %change in Sales**
Impact of Interest Cost and Fixed Cost: DCL	**Contribution / EBT**
Break-Even Formula: Break- Even Point	**Fixed Cost / Contribution per Unit**
Pay Back Period	**Initial Investment / Annual Cash Inflow**
Net Present Value (NPV)	**Present value of net cash inflow - Total net initial investment** if NPV ≥ 0 :- Accept the Proposal if NPV ≤ 0 :- Reject the Proposal
Accounting Rate of Return (ARR)	**(Average Annual Net Earning after Taxes / Average Investment) × 100%**
ARR	**(Average Profit / Average Investment) × 100%**
Average profit made yearly	**Total Profit / No.of Years**
Average Investment	**{(Initial Investment−Scrap) / 2} + Scrap Value**
Average Investment	**(Initial Investment + Scrap Value)/2**
Average Investment	**{(Initial Investment−Salvage Value) /2} + Salvage Value**
Deprecation per year	**(Price of Machine−Salvage Value) / Life of Machine (Year)**
Break-even Point (per month in units)	**(Fixed Cost p.m.+number of setups × cost per setup) / Contribution p.u.**
Profit per month	**{Monthly demand (units) × Contribution per unit} − Fixed Cost per month + setup cost per month**
Activity cost driver rate	**Total cost of activity / Activity driver**

Non-DCF Valuation Models: EBITDA Basis Book Value Basis Seles Basis	 **EV / EBITDA** **EV / Book Value** **EV / Sales Value**
P/E multiple	**Market price per share / Earnings per share**
Price-earnings multiple	**P0 / E1**
The book value per share (B)	**(Shareholders funds−Preference capital) / Number of outstanding equity shars**
EV to EBITDA Multiple	**Enterprise value (EV) / Earnings before Interest, Taxes, Depreciation, and Amortization**
EV/EBIT Multiple	**Enterprise value (EV) / Earnings before Interest, Taxes, (EBIT)**
EV/FCFF Multiple	**Enterprise value (EV) / Free cash flow to firm(FCFF)**
EV/BV Multiple	**Enterprise value (EV) / Book value of assets (BV)**
EV/Sales Multiple	**Enterprise value (EV) / Sales(S)**

1. Raw material Turnover Ratio = Cost of RM used / Average stock of R M

2. SIP Turnover = Cost of Goods manufactured / Average stock of SIP

3. Debt Collection period = No. days or months or Weeks in a year/Debt Turnover Ratio.

4. Average Payment Period = No. days or months or Weeks in a year/Creditors Turnover Ratio.

5. Inventory Turnover Ratio = Cost of Goods Sold / Average Inventory.

6. Debtors Turnover Ratio = Net Credit Sales / Average Debtors.

7. Creditors Turnover Ratio = Net Credit Purchases / Average Credits.

8. Defensive Interval Ratio = Liquid Assets / Projected Daily Cash Requirement

9. Projected daily cash requirement = Projected operating cash expenses / 365.

10. Debt Equity Ratio = Long Term Debt / Equity.

11. Debt Equity Ratio = Total outside Liability / Tangible Net Worth.

12. Debt to Total Capital Ratio = Total Debts or Total Assets/(Permanent Capital + Current Liabilities)

13. Interest Coverage Ratio = EBIT / Interest.

14. Dividend Coverage Ratio = N. P. after Interest & Tax / Preferential dividend

15. Gross Profit Margin = Gross Profit / Net Sales * 100

16. Net Profit Margin = Net Profit / Net Sales * 100

17. Cost of Goods Sold Ratio = Cost of Goods Sold / Net Sales * 100.

18. Operating Profit Ratio = Earnings Before Interest Tax / Net Sales * 100

19. Expenses Ratio or Operating Ratio = Expenses / Net Sales * 100

20. Net Profit Ratio = Net Profit After interest and Tax / Net Sales * 100

21. Operating Expenses Ratio = (Administrative + Selling expenses) / Net Sales * 100

22. Administrative Expenses Ratio =(Administrative Expenses / Net Sales) * 100

23. Selling Expenses Ratio =(Selling Expenses / Net Sales) * 100

24. Financial Expenses Ratio = (Financial Expenses / Net Sales) * 100

25. Return on Assets = Net Profit After Tax / Total Assets.

26. Total Assets = Net Fixed Assets + Net Working Capital.

27. Net Fixed Assets = Total Fixed Assets – Accumulated Depreciation.

28. Net Working Capital = (CA –CL) – (Intangible Assets + Fictitious Assets + Idle Stock + Bad Debts)

29. Return on Capital Employed = Net Profit Before Interest and Tax / Average Capital Employed.

30. Average Capital employed = Equity Capital + Long Term Funds provided by Owners & Creditors at the beginning & at the end of the accounting period divided by two.

31. Return on Ordinary Share Holders Equity = (NPAT – Preferential Dividends) / Average Ordinary Share Holders Equity or Net Worth.

32. Earnings Per Share = Net Profit After Taxes and Preferential dividends / Number of Equity Share.

33. Dividend per Share = Net Profit After Taxes and distributable dividend / Number of Equity Shares.

34. Dividend Pay Out Ratio = Dividend per Equity Share / Earnings per Equity Share.

35. Dividend Pay Out Ratio = Dividend paid to Equity Share holders / Net Profit available for Equity Share Holders.

36. Price Earning Ratio = Market Price per equity Share / Earning per Share.
37. Total Asset Turnover = Cost of Goods Sold / Average Total Assets.

38. Fixed Asset Turnover = Cost of Goods Sold / Average Fixed Assets.

39. Capital Turnover = Cost of Goods Sold / Average Capital employed.

40. Current Asset Turnover = Cost of Goods Sold / Average Current Assets.

41. Working Capital Turnover = Cost of Goods Sold / Net Working Capital.

42. Return on Net Worth = (Net Profit / Net Worth) * 100

43. DSCR = Profit after Tax & Depreciation + Int. on T L & Differed Credit + Lease Rentals if any divided by Repayment of Interest & Installments on T L & Differed Credits + Lease Rentals if any.

44. Factory Cost = Prime cost + Production Overheads.

45. Cost of Goods Sold = Factory Cost + Selling, distribution & administrative overheads

46. Contribution = Sales – Marginal Costs.

47. Percentage of contribution to sales = (Contribution / Sales) * 100

48. Break Even Analysis = F / (1 – VC / S)
F = Fixed costs, VC = Total variable operating costs & S = Total sales revenue

49. Break Even Margin or Margin of Safety = Sales – Break Even Point / Sales.

50. Cash Break Even = F – N / P – R or F – N / 1 – (VC / S)

51. BEP = Fixed Costs / Contribution per unit.

52. Sales volume requires = Fixed cost + Required profit / Contribution per unit.

53. BEP in Sales = (Fixed Costs / Contribution per unit) * Price per unit.

54. Contribution Sales Ratio = (Contribution per unit / Sale price per unit) * 100

55. Level of sales to result in target profit after Tax = (Target Profit) / (1 – Tax rate / Contribution per unit)
56. Level of sales to result in target profit = (Fixed Cost + Target profit) * sales price per unit Contribution per unit.

57. Net Present Value = - Co + C1 / (1 + r)

58. Future expected value of a present cash flow = Cash Flow (1 + r) ^ t

59. Present value of a simple future cash flow = Cash Flow / (1 + r) ^ t

60. The Discount Factor = 1 / (1 + r) ^ t

61. Notation used internationally for PV of an annuity is PV (A, r, n)

62. Notation used internationally for FV of an annuity is FV (A, r, n)

63. The effective annual rate = (1 + r) ^ t – 1 or (1 + (r / N)) – 1)
N = Number of times compounding in a year

64. PV of end of period Annuity = A { (1- (1 / (1+r) ^ n) / r

65. CR = CA : CL

66. Net Worth = CA - CL

67. DER = TL/TNW or debt/equity or TL/equity

68. Price Elasticity of Supply = (% change in quantity supplied/(% change in price)

69. PV = P / R * [(1+R)^T - 1]/(1+R)^T

70. PV = P / (1+R)^T

71. FV = P * (1 + R)^T

72. FV = P*(1-R)^T

73. FV = P / R * [(1+R)^T - 1]

74. FV = P / R * [(1+R)^T - 1] * (1+R)

75. EMI = P * R * [(1+R)^T/(1+R)^T-1)]

76. FV of annuity = A/r ×{(1+r)^n-1}

77. Bond Price = (1/(1+R)^t)((coupon*((1+R)^t-1)/R)+Face Value)

ALL THE VERY BEST FOR YOUR EXAMS

SHORT NOTES FOR

CAIIB

ADVANCED BUSINESS & FINANCIAL MANAGEMENT

Though we had taken enough care to go through the notes provided here, we shall not be responsible for any loss or damage, resulting from any action taken on the basis of the contents. Creation of these short notes is the efforts of so many persons. First of all we thank all of them for their valuable contribution. We request everyone to go through the Macmillan book and update yourself with the latest information through RBI website and other authenticated sources. In case you find any incorrect/doubtful information, kindly update us also (along with the source link/reference for the correct information).

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