BA LLB Paper Code: 207

Subject: Economics-I

UNIT-I: Introduction to Economics

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UNIT-I

Definition:

Microeconomics (from Greek prefix *mikro-* meaning "small" and economics) is a branch of economics that studies the behavior of individual households and firms in making decisions on the allocation of limited resources. Typically, it applies to markets where goods or services are bought and sold. Microeconomics examines how these decisions and behaviors affect the supply and demand for goods and services, which determines prices, and how prices, in turn, determine the quantity supplied and quantity demanded of goods and services. This is in contrast to macroeconomics, which involves the "sum total of economic activity, dealing with the issues of growth, inflation, and unemployment." Microeconomics also deals with the effects of national economic policies (such as changing taxation levels) on the aforementioned aspects of the economy. Particularly in the wake of the Lucas critique, much of modern macroeconomic theory has been built upon 'micro foundations'—i.e. based upon basic assumptions about micro-level behavior.

One of the goals of microeconomics is to analyze market mechanisms that establish relative prices amongst goods and services and allocation of limited resources amongst many alternative uses. Microeconomics analyzes market failure, where markets fail to produce efficient results, and describes the theoretical conditions needed for perfect competition. Significant fields of study in microeconomics include general equilibrium, markets under asymmetric information, choice under uncertainty and economic applications of game theory. Also considered is the elasticity of products within the market system.

Wealth Definition:

The early economists like J.E. Cairnes, J.B.Say, and F.A.Walker have defined economics as a science of wealth. Adam Smith, who is also regarded as father of economics, stated that economics is a science concerned with the nature and causes of wealth of nations. That is, economics deal with the question as to how to acquire more and more wealth by a nation. J.S.Mill opined that it is the practical science dealing with the production and distribution of

wealth. The American economist F.A.Walker says that economics is that body of knowledge, which relates to wealth. Thus, all these definitions relate to wealth.

However, the above definitions have been criticized on various grounds. As a result, economists like Marshall, Robbins and Samuelson have put forward more comprehensive and scientific definitions. Emphasis has been gradually shifted from wealth to man. As Marshall puts, it is "on the one side a study of wealth; and on the other, and more important side, a part of the study of man."

Welfare Definition:

According to Marshall, economics not only analysis the aspect of how to acquire wealth but also how to utilize this wealth for obtaining material gains of human life. In fact, wealth has no meaning in itself unless it is used to purchase all those things which are required for our sustenance as well as for the comforts necessary for life. Marshall, thus, opined that wealth is a means to achieve certain ends. In other words, economics is not a science of wealth but a science of man primarily. It may be called as the science which studies human welfare. Economics is concerned with those activities, which relates to wealth not for its own sake, but for the sake of human welfare that it promotes. According to Canon, "The aim of political economy is the explanation of the general causes on which the material welfare of human beings depends." Marshall in his book, "Principles of Economics", published in 1890, describes economics as, "the study of mankind in the ordinary business of life; it examines that part of the individual and social action which is most closely connected with the attainment and with the use of the material requisites of well being".

On examining the Marshall's definition, we find that he has put emphasis on the following four points:

(a) Economics is not only the study of wealth but also the study of human beings. Wealth is required for promoting human welfare.

(b) Economics deals with ordinary men who are influenced by all natural instincts such as love,

affection and fellow feelings and not merely motivated by the desire of acquiring maximum wealth for its own sake. Wealth in itself is meaningless unless it is utilized for obtaining material things of life.

(c) Economics is a social science. It does not study isolated individuals but all individuals living in a society. Its aim is to contribute solutions to many social problems.

(d) Economics only studies 'material requisites of well being'. That is, it studies the causes of material gain or welfare. It ignores non-material aspects of human life.

This definition has also been criticized on the ground that it only confines its study to the material welfare. Non-material aspects of human life are not taken into consideration. Further, as Robbins said the science of economics studies several activities, that hardly promotes welfare.

Scarcity Definition:

Lionel Robbins challenged the traditional view of the nature of economic science. His book, "Nature and Significance of Economic Science", published in 1932 gave a new idea of thinking about what economics is. He called all the earlier definitions as classificatory and unscientific. According to him, *"Economics is the science which studies human behaviour as a relationship between ends and scarce means which have alternative uses."* This definition focused its attention on a particular aspect of human behaviour, that is, behavior associated with the utilization of scarce resources to achieve unlimited ends (wants). Robbins definition, thus, laid emphasis on the following points:

- 'Ends' are the wants, which every human being desires to satisfy. Want is an effective desire for a thing, which can be satisfied by making an effort for obtaining it. We have unlimited wants and as one want gets satisfied another arises. For instance, one may have the desire to buy a car or a flat. Once the car or the flat is purchased, the person wishes to buy a more spacious and designable car and the list of his wants does not stop here but goes on one after another. As human wants are unlimited, we have to make a choice between the most urgent want and less urgent wants. Thus the problem of choice arises. That is why economics is also called as a science of choice. If wants had been limited,

they would have been satisfied and there would have been no economic problem.

(*b*) 'Means 'or resources are limited. Means are required to be used for the satisfaction of various wants. For instance, money is an important means to satisfy many of our wants. As stated, means are scarce (short in supply in relation to demand) and as such these are to be used optimally. In other words, scarce or limited means/resources are to be economized. We should not make waste of the limited resources but utilize them very judiciously to get the maximum satisfaction.

(c) Robbins also said that, the scarce means have alternative uses. It means that a commodity or resource can be put to different uses. Hence, the demand in the aggregate for that commodity or resource is almost insatiable. For instance, if we have a hundred rupee note, we can use it either to purchase a book or a fashionable clothe. We may use it in other unlimited ways as we like.

Let us now turn our attention to the definitions put forward by modern economists. J.M.Keynes defined economics as the study of the management of scarce resources and of the determination of income and employment in the economy. Thus his study centered on the causes of economic fluctuations to see how economic stability could be established. According to F. Benham, economics is, "a study of the factors affecting the size, distribution and stability of a country's national income." Recently, economic growth and development has taken an important place in the study of economics. Prof. Samuelson has given a growth oriented definition of economics. According to him, economics is the study and use of scarce productive resources overtime and distribute these for present and future consumption. In short, economics is a social science concerned with the use of scarce resources in an optimum manner and in attainment of desired level of income, output, employment and economic growth.

Methodology:

The Deductive Method:

Deduction Means reasoning or inference from the general to the particular or from the universal to the individual. The deductive method derives new conclusions from fundamental assumptions or from truth established by other methods. It involves the process of reasoning from certain laws or principles, which are assumed to be true, to the analysis of facts.

Then inferences are drawn which are verified against observed facts. Bacon described deduction as a "descending process" in which we proceed from a general principle to its consequences. Mill characterised it as a priori method, while others called it abstract and analytical.

Deduction involves four steps: (1) Selecting the problem. (2) The formulation of assumptions on the basis of which the problem is to be explored. (3) The formulation of hypothesis through the process of logical reasoning whereby inferences are drawn. (4) Verifying the hypothesis. These steps are discussed as under.

(1) Selecting the problem:

The problem which an investigator selects for enquiry must be stated clearly. It may be very wide like poverty, unemployment, inflation, etc. or narrow relating to an industry. The narrower the problem the better it would be to conduct the enquiry.

(2) Formulating Assumptions:

The next step in deduction is the framing of assumptions which are the basis of hypothesis. To be fruitful for enquiry, the assumption must be general. In any economic enquiry, more than one set of assumptions should be made in terms of which a hypothesis may be formulated.

(3) Formulating Hypothesis:

The next step is to formulate a hypothesis on the basis of logical reasoning whereby conclusions are drawn from the propositions. This is done in two ways: First, through logical deduction. If and because relationships (p) and (q) all exist, then this necessarily implies that relationship (r) exists as well. Mathematics is mostly used in these methods of logical deduction.

(4) Testing and Verifying the Hypothesis:

The final step in the deductive method is to test and verify the hypothesis. For this purpose, economists now use statistical and econometric methods. Verification consists in confirming whether the hypothesis is in agreement with facts. A hypothesis is true or not can be verified by observation and experiment. Since economics is concerned with human behaviour, there are problems in making observation and testing a hypothesis.

For example, the hypothesis that firms always attempt to maximise profits, rests upon the observation that some firms do behave in this way. This premise is based on a priori knowledge which will continue to be accepted so long as conclusions deduced from it are consistent with the facts. So the hypothesis stands verified. If the hypothesis is not confirmed, it can be argued that the hypothesis was correct but the results are contradictory due to special circumstances.

The Inductive Method:

Induction "is the process of reasoning from a part to the whole, from particulars to generals or from the individual to the universal." Bacon described it as "an ascending process" in which facts are collected, arranged and then general conclusions are drawn.

The inductive method was employed in economics by the German Historical School which sought to develop economics wholly from historical research. The historical or inductive method expects the economist to be primarily an economic historian who should first collect material, draw generalizations, and verify the conclusions by applying them to subsequent events. For this, it uses statistical methods. The Engel's Law of Family Expenditure and the Malthusian Theory of Population have been derived from inductive reasoning.

Scope:

Scope means the sphere of study. We have to consider what economics studies and what lies beyond it. The scope of economics will be brought out by discussing the following.

a) Subject – matter of economics.
b) Economics is a social science
c) Whether Economics is a science or an art?
d) If Economics is science, whether it is positive science or a normative science?

a) Subject – matter of economics: Economics studies man's life and work, not the whele of it, but only one aspect of it. It does not study how a person is born, how he grows up and dies, how human body is made up and functions, all these are concerned with biological sciences, Similarly Economics is also not concerned with how a person thinks and the human organizations being these are a matter of psychology and political science. Economics only tells us how a man utilizes his limited resources for the satisfaction of his unlimited wants, a man has limited

amount of money and time, but his wants are unlimited. He must so spend the money and time he has that he derives maximum satisfaction. This is the subject matter of Economics.

Economic Activity: It we look around, we see the farmer tilling his field, a worker is working in factory, a Doctor attending the patients, a teacher teaching his students and so on. They are all engaged in what is called "Economic Activity". They earn money and purchase goods. Neither money nor goods is an end in itself. They are needed for the satisfaction of human wants and to promote human welfare.

To fulfill the wants a man is taking efforts. Efforts lead to satisfaction. Thus wants- Efforts-Satisfaction sums up the subject matter of economics.

b) Economics is a social Science: In primitive society, the connection between wants efforts and satisfaction is close and direct. But in a modern Society things are not so simple and straight. Here man produces what he does not consume and consumes what he does not produce. When he produces more, he has to sell the excess quantity. Similarly he has to buy a product which is not produced by him. Thus the process of buying and selling which is called as Exchange comes in between wants efforts and satisfaction.

Nowadays, most of the things we need are made in factories. To make them the worker gives his labor, the land lord his land, the capitalist his capital, while the businessman organizes the work of all these. They all get reward in money. The laborer earns wages, the landlord gets rent the capitalist earns interest, while the entrepreneur's (Businessman) reward is profit. Economics studies how these income—wages, rent interest and profits-are determined. This process in called "Distribution: This also comes in between efforts and satisfaction.

Thus we can say that the subject-matter of Economics is

1. Consumption- the satisfaction of wants.
2. Production- i.e. producing things, making an effort to satisfy our wants
3. Exchange- its mechanism, money, credit, banking etc.
4. Distribution – sharing of all that is produced in the country. In addition, Economics also studies "Public Finance"

Macro Economics – When we study how income and employment is generated and how the level of country's income and employment is determined, at aggregated level, it is a matter of macro-economics. Thus national income, output, employment, general price level economic

growth etc. are the subject matter of macro Economics.

Micro-Economic – When economics is studied at individual level i.e. consumer's behavior, producer's behavior, and price theory etc it is a matter of micro-economics.

c) Economics, a Science or an Art? Broadly different subjects can be classified as science subjects and Arts subjects, Science subjects groups includes physics, Chemistry, Biology etc while Arts group includes History, civics, sociology Languages etc. Whether Economics is a science or an art? Let us first understand what is terms 'science' and 'arts' really means.

A science is a systematized body of knowledge. A branch of knowledge becomes systematized when relevant facts hove been collected and analyzed in a manner that we can trace the effects back to their and project cases forward to their effects. In other words laws have been discovered explaining facts, it becomes a science, In Economics also many laws and principles have been discovered and hence it is treated as a science. An art lays down formulae to guide people who want to achieve a certain aim. In this angle also Economics guides the people to achieve aims, e.g. aim like removal poverty, more production etc. Thus Economics is an art also. In short Economics is both science as well as art also.

d) Economics whether positive or normative science: A positive science explains "why" and "wherefore" of things. i.e. causes and effects and normative science on the other hand rightness or wrongness of the things. In view of this, Economics is both a positive and. normative science. It not only tells us why certain things happen, it also says whether it is right or wrong the thing to happen. For example, in the world few people are very rich while the masses are very poor. Economics should and can explain not only the causes of this unequal distribution of wealth, but it should also say whether this is good or bad. It might well say that wealth ought to be fairly distributed. Further it should suggest the methods of doing it.

Economic Problems:

Economic problem is the problem of how to make the best use of limited, or scarce, resources. The economic problem exists because, although the needs and wants of people are endless, the resources available to satisfy needs and wants are limited. Limited resources

Resources are limited in two essential ways:

1. Limited in physical quantity, as in the case of land, which has a finite quantity.

2. Limited in use, as in the case of labour and machinery, which can only be used for one purpose at any one time.

Opportunity cost:

Choice and opportunity cost are two fundamental concepts in economics. Given that resources are limited, producers and consumers have to make choices between competing alternatives. All economic decisions involve making choices. Individuals must choose how best to use their skill and effort, firms must choose how best to use their workers and machinery, and governments must choose how best to use taxpayer's money.

In microeconomic theory, the opportunity cost of a choice is the value of the best alternative forgone, in a situation in which a choice needs to be made between several mutually exclusive alternatives given limited resources. Assuming the best choice is made, it is the "cost" incurred by not enjoying the benefit that would be had by taking the second best choice available.

Economic Agents:

A person, company, or organization that has an influence on the economy by producing, buying, or selling: The proper functioning of market economy is influenced mostly by the state interaction with the economic agent.

Economists like to refer to the people they study as economic agents. Economic agents come in two basic varieties, producers and consumers, and we study their behavior in the Theory of the Firm and the Theory of the Consumer

Economic Organizations:

The three major international economic organizations are the World Bank, the International Monetary Fund (IMF), and the World Trade Organization (WTO). The WTO emerged out of the General Agreement on Tariffs and Trade (GATT) in 1995; it is an arrangement across countries that serves as a forum for negotiations on trading rules as well as a mechanism for dispute settlements in trade issues. By contrast, the World Bank and IMF deal with their member countries one at a time. They have little influence with industrial countries but can affect

developing countries during times of economic crisis and when those countries seek additional foreign exchange resources. The origins and evolution of the three organizations are of considerable interest. Perhaps even more important in light of the recent financial crises in Mexico, East Asia, and a few other countries, are the questions that arise about the current and future roles of the IMF and the World Bank.

These questions cover a broad set of issues. A healthy open trading system is crucial for the progress of the international economy. It is particularly important in providing an environment in which developing countries can successfully reform their policies and achieve rapid economic growth and rising living standards for all. I have been particularly interested in the relationship between preferential trading arrangements, such as the North American Free Trade Agreement (NAFTA), and the WTO. The issue is simple: the WTO is based on the principle of open, nondiscriminatory trade among its members, while preferential trading arrangements are, by their nature, discriminatory. Under NAFTA, for example, goods originating in Mexico and Canada are not subject to duties when they enter the United States, yet the same goods from other countries are subject to U.S. duties. Assuring that preferential trading arrangements will not block progress in multilateral liberalization is important, and I am now completing a paper in which I analyze how much discrimination has been a factor under the first three years of NAFTA.

My other major concern regarding international economic organizations is closely related to the subject of developing countries' economic policy reforms. I want to know what the current and future roles of the World Bank and IMF will be in economic policy reform in developing countries. In the case of the World Bank, for example, to what extent will the Bank need to focus its resources on poor countries and the support of economic policy reforms, as opposed to tackling "new issues," such as gender and ethnicity (including treatment of minorities). Both the Bank and the IMF have been criticized by many in light of the Asian financial crises of 1997 and 1998.

Marginalism:

One of the methodological principles of bourgeois political economy, based on the use of the analysis of marginal values in research on economic laws and categories.

Marginal analysis in economic theory was introduced in the middle of the 19th century by A. Cournot of France and J. von Thuenen and H. Gossen of Germany. Marginalism became widespread in the last quarter of the 19th century, when bourgeois political economists initiated an intensive search for new forms and methods of theoretical analysis and of capitalist apologetics. Marginalism was used after about 1880 by the basic schools in bourgeois political economy, such as the Austrian school and the mathematical school. A thorough substantiation of marginalism was developed by J. B. Clark.

Marginalism views economics as the interaction of individual economies. In marginalism the study of the laws of economic functioning is based on the analysis of the economic behavior of the decision-maker during the production process and in the market. In this analysis quantitative methods can be used. Mathematical analysis is particularly useful in studying the functional connection between factors (for example, the dependence of demand for merchandise on the price, the prices of other goods, and the income of the consumer; the effect of various ratios of input of labor and capital on productivity). It is equally useful in deriving marginal functions (marginal utility, demand elasticity, the marginal productivity of the factors of production). The specific mathematical approach for marginal analysis was developed by the economists of the mathematical school.

The shift from free competition to all-powerful monopolies, and also the growing rate of state-monopoly regulation of the economy, placed before the bourgeois economists a number of practical tasks that could not be implemented by a strict reliance on the subjectivistic understanding of economic processes. Among the tasks were determining the use of economic-mathematical models, analyzing and forecasting market trends, computing the coefficients of the elasticity of demand, and optimalizing production inputs.

The characteristic feature of contemporary marginalists is the departure (although inconsistent) from the orthodox subjectivist interpretation of the economic categories and the enhancement, especially in the works of econometrists, of the role of formal-logical and empiric analysis. Thus, several bourgeois economists and econometrists (H. Schultz, C. Cobb, and P. Douglas) were able to develop mathematical methods of research into some problems of the economy, particularly forecasting and analyzing demand and optimalizing production inputs. A number of provisions and findings of the marginal-school economists had a definite influence on the development of a number of fields of applied mathematics, including theory of games, linear programming, and operations research. The basic marginalistic conceptions, such as marginal utility, marginal rate of replacement, marginal productivity, and marginal capital efficiency, are used in the contemporary bourgeois theories of demand, the firm, prices, and market equilibrium.

Time Value of Money:

The idea that money available at the present time is worth more than the same amount in the future due to its potential earning capacity. This core principle of finance holds that, provided money can earn interest, any amount of money is worth more the sooner it is received.

A time value of money calculation is a calculation that solves for one of several variables in a financial problem.

In a typical case, the variables might be: a balance (the real or nominal value of a debt or a financial asset in terms of monetary units), a periodic rate of interest, the number of periods, and a series of cash flows. (In the case of a debt, cash flows are payments against principal and interest; in the case of a financial asset, these are contributions to or withdrawals from the balance.) More generally, the cash flows may not be periodic but may be specified individually. Any of the variables may be the independent variable (the sought-for answer) in a given problem. For example, one may know that: the interest is 0.5% per period (per month, say); the number of periods is 60 (months); the initial balance (of the debt, in this case) is 25,000 units; and the final balance is 0 units. The unknown variable may be the monthly payment that the borrower must pay.

Differences between Macro and Microeconomics:

To an extent, both macro and microeconomics look at supply and demand, as well as price levels. However, each field views these factors from a different standpoint. To better grasp the meaning of macroeconomics, it might be helpful to think of it as a "top-down approach" toward understanding the economy. Macroeconomics paints a picture of the economic conditions in a particular country as a whole; however, knowledge of macroeconomic principles can be used to develop an understanding of conditions for the individual players in the economy. Likewise, microeconomics looks at the economy from the bottom up, but the information it gathers about individual households and businesses is helpful in gaining an understanding of general economic conditions. The difference of micro and macroeconomics may seem well-defined on the surface, but these two categories of study can overlap in significant ways. In fact, no student of the economy can truly comprehend the meaning of macroeconomics without comprehending the meaning of microeconomics as well.

Positive v/s normative science:

It deals with thing as they “ought to be”. It has no objection to discussion the moral rightness or wrongness of things. Economics is not only explaining facts as they are but also justifies them.

Positive Science deals with things as they are means “What is”. It explains their causes and effect but it remain strictly neutral as regards ends, it refuses to pass moral judgments.

Both can be distinguish as follows:

Basis: Positive Normative

- Expresses What is : What ought to be
- Based on Cause & effect of facts : Ethics
- Deal with Actual or realistic situation : Idealistic situation
- Value judgment Are not given : Are given

Partial vs. General:
Microeconomic models are usually classified as partial and general equilibrium models. As a layman, I understand that partial equilibrium focuses attention on a few economic variables to find the equilibrium, while general eq. models capture a larger interaction.

Static vs. Dynamic: Microeconomic models are usually classified as partial and general equilibrium models. As a layman, I understand that partial equilibrium focuses attention on a few economic variables to find the equilibrium, while general eq. models capture a larger interaction.

Short run vs. Long run:
In microeconomics, the long run is the conceptual time period in which there are no fixed factors of production, so that there are no constraints preventing changing the output level by changing the capital stock or by entering or leaving an industry. The long run contrasts with the short run, in which some factors are variable and others are fixed, constraining entry or exit from an industry. In macroeconomics, the long run is the period when the general price level, contractual wage rates, and expectations adjust fully to the state of the economy, in contrast to the short run when these variables may not fully adjust.

Economic offences:

Economic and financial offences cover fraud, forgery and counterfeiting, offences against the legislation governing cheques (in particular forgery or use of stolen cheques), forgery or use of credit cards, undeclared employment, offences against companies (such as misuse of company assets).

1. The process through which statutes are enacted by a legislative body that is established and empowered to do so.

2. A particular bill or other piece of legislation

The legislation changed how we run our business as we must do our best to foresee possible governmental and regulation changes

Relation between Economics and Law:

Law and economics or economic analysis of law is the application of economic theory (specifically microeconomic theory) to the analysis of law. Economic concepts are used to explain the effects of laws, to assess which legal rules are economically efficient, and to predict which legal rules will be promulgated.

Positive law and economics

Positive law and economics uses economic analysis to predict the effects of various legal rules. So, for example, a positive economic analysis of tort law would predict the effects of a strict liability rule as opposed to the effects of a negligence rule. Positive law and economics has also at times purported to explain the development of legal rules, for example the common law of torts, in terms of their economic **efficiency.**

Normative law and economics

Normative law and economics goes one step further and makes policy recommendations based on the economic consequences of various policies. The key concept for normative economic analysis is efficiency, in particular, allocative efficiency.

A common concept of efficiency used by law and economics scholars is Pareto efficiency. A legal rule is Pareto efficient if it could not be changed so as to make one person better off without making another person worse off. A weaker conception of efficiency is Kaldor-Hicks efficiency. A legal rule is Kaldor-Hicks efficient if it could be made Pareto efficient by some parties compensating others as to offset their loss

UNIT – II

Demand:

Meaning: The demand for any commodity at a given price is the quantity of it which will be bought per unit of time at that price.

Elements of Demand: According to the definition of demand here are three elements of demand for a commodity:-

(i) There should be a desire for a commodity.

(ii) The consumer should have money to fulfill that desire.

(iii) The consumer should be ready to spend money on that commodity.

Thus we can define demand as the desire to buy a commodity which is backed by sufficient purchasing power and a willingness to spend.

Determinants of Demand:

There are many economic, social and political factors which greatly influence the demand for a commodity. Some of these factors are discussed below:

(1) Price of the Commodity

(2) Price of Related Goods

(i) Complementary Goods

(ii) Substitute Goods

(3) Level of Income and Wealth of the Consumer

(i) Necessaries

(ii) Inferior goods

(iii) Luxuries

(4) Tastes and Preference

(5) Government Policy

(6) Other Factors:

(i) Size and Composition of Population

(ii) Distribution of Income and Wealth

(iii) Economic Fluctuations

Law of Demand:

The law of demand states that, other things being equal, the demand for good increases with a decrease in price and decreases in demand with a increase in price. The term other things being equal implies the prices of related goods, income of the consumers, their tastes and preferences etc. remain constant.

Demand Schedule:

A Demand schedule is a list of the different quantities of a commodity which consumes purchase at different period of time. It expresses the relation between different quantities of the commodity demanded at different prices.

(i) Individual Demand Schedule: It is defined as the different quantities of a given commodity which a consumer will buy at all possible prices.

(ii) Market Demand Schedule: Market demand schedule is defined as the quantities of a given commodity which all consumers will buy at all possible prices at a given moment of time.

Demand Curve is simply a graphic representation of demand schedule. It expresses the relationship between different quantities demanded at different possible prices of the given commodity.

Individual Demand Curve: The graphic representation of Individual Demand is known is Individual Demand Curve.

Market Demand Curve: The graphic representation of market demand schedule is known as Market Demand Curve .Thus market demand curve is the one that represents total quantities of a

commodity demanded by all the consumers in the market at different prices. It is the horizontal summation of the individual demand curves.

Demand Curve slopes downwards:

Reasons are:-

(i) Law of Diminishing Marginal Utility: The law of demand is based on the law of diminishing marginal utility which states that as the consumer purchases more and more units of a commodity, the satisfaction derived by him from each successive unit goes on decreasing. Hence at a lesser price, he would purchase more. Being a rational human beings the consumer always tries to maximize his satisfaction and does so equalizing the marginal utility of a commodity with its price i.e. Mux = px. It means that now the consumer will buy additional units only when the price falls

(ii) New Consumers: When the price of a commodity falls many consumers who could not begin to purchase the commodity e.g. suppose when price of a certain good 'x' was Rs. 50 market demand was 60 units now when the price falls to Rs. 40, new consumers enter the market and the overall market demand rises to 80 units.

(iii) Several Use of Commodity: There are many commodities which can be put to several uses e.g. coal, electricity etc. When the prices of such commodities go up, they will be used for important purpose only and their demand will be limited. On the other hand, when their price fall they are used for varied purpose and as a result their demand extends. Such inverse relation between demand and price makes the demand curve slope downwards.

(iv) Income Effect : When price of a commodity changes, the real income of a consumer also undergoes a changes. Hence real income means the consumer's purchasing power. As the price of a commodity falls the real income of a consumer goes up and he purchases more units of a commodity eg. Suppose a consumer buys units wheat at a price Rs. 40/kg now, when the price falls to Rs. 30/kg. His purchasing power or the real income increase which induces him to buy more units of wheat.

(v) Substitution Effect : As the price of a commodity falls the consumer wants to substitute this good for those good which now have become relatively expensive e.g. among the two substitute goods tea and coffee, price of tea falls then consumer substitutes tea for coffee. This is caused the 'Substitution effect' which makes the demand curve sloped downwards. In a nutshell, with a fall in price more units are demanded partly due to income effect and partly due to substitution effect. Both of these are jointly known as the 'price effect'. Due to this negative price effect the demand curve slopes downwards.

Exceptions to the Law of Demand:

Exceptions to the law of demand refer to such cases where the law of demand does not operate, i.e., a positive relationship is established between price and quantity demanded.

- Giffen Goods: Sir Giffen made an interesting observation in 1845 during famine in Ireland. When price of potatoes went up, poor people purchased more quantity of potatoes instead of less quantity as expected from the law of demand. The reason was that between two items of food consumption meat and potatoes- potatoes were still cheaper, with the result that the poor families purchased more of potatoes and less of meat. This is known as Giffen effect which is seen in cheap necessary foodstuffs. Again, the word 'Giffen' is not synonymous with 'inferior'. It simply refers to those goods which have a positive relationship with price.
- Conspicuous Goods or Goods of Ostentation
- Conspicuous Necessities
- Future Expectations About Prices

- Change in Fashion

- Ignorance
- Emergency

Change in Demand:

(1) Movement along the Same Demand Curve : When due to change in price alone demand changes, it is expressed by different points on the same demand curve.

(i) Expansion of Demand: When with a fall in price, demand for a commodity rises (other things being equal it is called expansion of demand. It is represented through the downward movement along the demand curve.

(ii) Contraction of Demand: When with an increase in price, demand for a commodity falls (other things being equal) It is called contraction of demand. It is represented by upward movement along the demand curve.

(2) Shifting of Whole Demand Curve: - When due to change in factors other than price of the same commodity like change in taste, income etc. the demand changes, the entire demand curve shifts either upwards or downwards.

(i) Increase in demand: - When due to favorable change in factors other than the price the demand of the commodity rises it is called increase in demand. It is represented by a right ward shift in the demand curve.

Increase in demand takes place in two ways:-

(a) When more purchase takes place at same price.

(b) When same purchase takes place at more price. Here DD is the original demand curve where Q1 quantity is bought a P price. Due to the change in factors the quantity purchased increases to Q2 at the same price P. this causes the demand curve to shift upward or to the right. This shift in demand curve is called increase of demand.

(ii) Decrease in Demand: When due to change in factors other than the price the demand of the

commodity falls, it is called decrease in demand. Its is represented by a left ward shift in the demand curve.

Decrease in demand takes place in two ways :-

(a) When less purchase takes place a same price.

(b) When same purchase takes place at less price.

Here DD is the original demand curve where Q1 quantity is bought at P price. Due to the change in other factors the quantity purchased decreases to Q2 at same price P.This cause the demand curve to shift downward or leftward. This shift in demand curve is called decrease in demand.

Elasticity of Demand:

Meaning: The elasticity of demand measures the responsiveness of the quantity demanded of a good to change in its quantitative determinant. Types Elasticity of demand are as follows :-

- Price Elasticity of Demand
- Income Elasticity of Demand
- Cross Elasticity of Demand

Price Elasticity of Demand:

The Degree of responsiveness of the quantity demanded of a good to a change in its prices of goods.

Methods to measures the elasticity of demand;

(1) % or Proportionate Method

(2) Total Outlay or Total Expenditure Method

(3) Point Elasticity or Geometric Method

(4) Arc Elasticity Method

There are five degrees of Price Elasticity of Demand :-

(i) Perfectly Elastic Demand : A Perfectly elastic demand is one in which demand is infinite at the prevailing price. It is a situation where the slightest rise in price causes the quantity

demanded of the commodity to fall to zero.

(ii) Perfectly Inelastic Demand: Perfectly inelastic demand is one in which a change in quantity demanded. It is a situation where even substantial changes in price leave the demand unaffected.

(iii) Unitary Elastic Demand: unitary elastic demand is one in which the quantity demanded changes by exactly the same percentage as the price. It is a situation when change in quantity demanded in response to change in price of the commodity is such that total expenditure of the commodity, remains same.

(iv) Greater than Unitary Elastic Demand or Elastic Demand: A elastic demand is one in which the quantity demanded changes by a larger percentage than the price. It is a situation when change in quantity demanded in response to change in price of the commodity is such that the total expenditure on the commodity increases when prices decreases and total expenditure decreases when price increases.

(v) Less than Unitary Elastic Demand or Inelastic Demand: Inelastic Demand is one in which quantity demanded changes by a smaller percentage than the change in price. It is a situation when change in quantity demanded in response to change in price of the commodity is such that total expenditure on the commodity decreases when price falls and total expenditure increases when price rises.

(2) Total Outlay Method: Under this the elasticity of demand can be measured by considering the changes in price and the subsequent change in the total quantity of goods purchased and the total amount of money spent on it. This method gives only the nature of elasticity and not the exact numerical value.

Degree of prices elasticity of demand according to this method as follows:

(i) Elastic Demand: The demand for a commodity is elastic when the total expenditure on it increases with a fall in price.

(ii) Unitary Elastic Demand: here, with a fall in price the total outlay of the consumers on that commodity remains the same, though he purchase more in terms of units. Elasticity in this case

equals to one.

(iii) Inelastic demand: A commodity will have inelastic demand when with a fall in its price the total expenditure on it also falls. Here, the elasticity is less than unity.

(3) Point Elasticity Method: In this method we measure elasticity at a given point on the demand curve. Here we make use of derivatives rather than finite changes in price and quantity. Point elasticity can also be calculated as :-

(4) Arc Elasticity: It is a measure of the average responsiveness to price change exhibited by a demand curve over some finite stretch of the curve.

Determinants of Price Elasticity of Demand:

(i) Nature of Commodity

(ii) Substitute Goods

(iii) Position of a Commodity in a Consumer's Budget

(iv) Number of Uses

(v) Time Period

(vi) Consumer Habit

(vii) Joint or Tied Demand

(viii) Price Expectation

Income Elasticity of Demand:

Income elasticity of demand is the ratio of change in demand to the change in income.

$$= \frac{\% \text{ Change in Quantity Demanded}}{\% \text{ Change in Income}}$$

Degrees of Income Elasticity of Demand

(i) Negative Income Elasticity of Demand: Negative Income Elasticity of Demand is one in which demand for a commodity falls as the income rises. This holds good for

inferior goods.

(ii) Zero Income Elasticity of Demand: Zero income elasticity of demand is one in which demand of a commodity does not change as the income changes. This holds good for essential goods.

(iii) Greater than Zero but less than One Income Elasticity of Demand:

Greater than zero but less than one income elasticity of demand is one in which demand for a commodity rises less than in proportion to a rise in income.

(iv) Unitary Income Elasticity of Demand: Unitary income elasticity of demand is one in which the demand for a commodity rises in the same proportion as the rise in income.

(v) Greater than Unitary Income Elasticity of Demand: Greater than unitary income elasticity of Demand is one in which the demand for commodity rises more than in proportion to rise in income.

Cross Elasticity of Demand

The cross elasticity of demand is the responsiveness of demand for commodity X to change in price of commodity Y and is represented as follows:-

$$= \frac{\text{Proportionate Change in the Quantity Demanded of Commodity X}}{\text{Proportionate Change in the Price of Commodity Y}}$$

The relationship between X and Y commodities may be substitute as in case of tea and coffee or complementary as in the case of ball pens and refills.

(i) Cross elasticity = Infinity where Commodity X is nearly a perfect substitute for Commodity Y

(ix) Cross Elasticity = Zero where Commodities X and Y are not related

(x) Cross Elasticity = Negative where Commodities X and Y are complementary

Thus, if Ec approaches infinity, means that commodity X is nearly a perfect substitute for commodity Y. On the other hand, if Ec approaches Zero it would mean that the two commodities

in question are not related at all. Ec shall be negative when commodity Y is complementary to commodity X.

Factor affecting Elasticity of Demand:

(i) Nature of Commodity: Ordinarily, necessaries like salt, Kerosene, oil, match boxes, textbooks, seasonal vegetables, etc. have less than unitary elastic demand. Luxuries like air conditioner, costly furniture, fashionable garments etc. have greater than unitary elastic demand. The reason being that change in their price has a great effect on their demand. Comforts like milk, transistor cooer, fans etc have neither very elastic nor very inelastic demand. Jointly Demanded Goods like car & petrol, pen & ink, camera & films etc. have ordinarily in elastic demand for example rise in price of petrol will not reduce its demand if the demand for cars has not decreased.

(ii) Availability of Substitutes: Demand for those goods which have substitute are relatively more elastic. The reason being that when the price of commodity falls in relation to its substitute, the consumer will go in for it and so its demand will increase. Commodities have no substitute like cigarettes, liquor etc. have inelastic demand.

(iii) Different Uses of Commodity: Commodities that can be put to a variety of uses have elastic demand, for instance, electricity has multiple uses. It is used for lighting, room-heating, air-conditioning, cooking etc. If the tariffs of electricity increase, its use will be restricted to important purpose like lighting. It will be withdrawn from important uses. On the other hand, if a commodity such as paper has only & a few uses, its demand is likely to be inelastic.

(iv) Postponement of the Use: Demand will be elastic for those commodities whose consumption can be postponed for instance demand for constructing a house can be postponed. As a result demand for bricks, cement, sand etc. will be elastic. Conversely goods whose demand cannot be postponed, their demand will be inelastic.

(v) Income of Consumer: People whose incomes are very high or very low, their demand will ordinarily be inelastic. Because rise or fall in price will have little effect on their demand. Conversely middle income groups will have elastic demand.

(vi) Habit of Consumer: Goods to which a person becomes accustomed or habitual will have in

elastic demand like cigarette, coffee tobacco. Etc. It is so because a person cannot do without them.

(vii) Proportion of Income Spent on a Commodity: Goods on which a consumer spends a very small proportion of his income, e.g. toothpaste, needles etc. will have an inelastic demand. On the other hand goods on which the consumer spends a large proportion of his income e.g. cloth etc. their demand will be elastic.

(viii) Price Level: Elasticity of demand also depends upon the level of price of the concerned commodity. Elasticity of demand will be high at higher level of the price of the commodity and low at the lower level of the price.

(ix) Time Period: Demand is inelastic in short period but elastic in long period. It is so because in the long run, a consumer can change his habits more conveniently in the short period.

Importance or significance of Elasticity of Demand

(i) Helpful in Price Determination: The concept of elasticity helps a monopolist in fixing prices for his product. He will fix a higher price in those markets where there is inelastic demand for his product. Conversely, he will fix a lower price for the same product in some other segments of the market where there is elastic demand for that particular product. In this way he can discriminate the price to maximize his profit.

(ii) Useful for Government: Government fixes a higher tax rates in case of goods having inelastic demand and a lower tax rate for good having elastic demand.

(iii) Useful in International Trade: It helps to calculate the terms of trade and the consequent gain from foreign trade. If the demand for home product is inelastic, terms of trade will be profitable to the home country.

(iv) Helpful in Forecasting Demand: It is possible to forecast the demand for a particular commodity by analyzing its states of elasticity.

(v) Elasticity of Demand: Elasticity of demand also helps in taking decision regarding devaluing or revaluing a country in terms of foreign currency.

Theory of Supply / Supply and Its Determinants:

Meaning: "The supply of good is the quantity offered for sale in a given market at a given time at various prices". Thus, the important features of supply may be concluded as:-

(i) It is the quantity of commodity offered for sale in the market at various prices.

(ii) It is flow and is always measured in terms of time.

Determinants of Supply are follows:

(i) Price of the Good

(ii) Price of Related

(iii) Price of Factors of Production

(iv) State of Technology

(v) Government Policy

(vi) Other Factor: Includes various individual policies, exchange policies, trade policy etc. Time is another important factor influencing supply e.g. it is quite difficult to adjust the supply to the changing conditions in the short period. But such adjustments in supply become easy if the time period is long. Again, transparent and infrastructural facilities positively affect the supply of a good.

Law of Supply:

In the Words of Dooley, "The law of supply states that other things remaining the same, higher the prices the greater the quantity supplied and lower the prices the smaller the quantity supplied".

Assumption of the Law:

(i) It is assumed that incomes of buyers and sellers remain constant.

(ii) It is assumed that the tastes and preferences of buyers and sellers remain constant.

(iii) Cost of all the factors of production is also assumed to be constant.

(iv) It is also assumed that the level of technology remains constant.

(v) It is also assumed that the commodity is divisible.

(vi) Law of supply states only a static situation.

Criticisms of Law of Supply:

(i) It Explains Only the Static Situation

(ii) Expectation of Change in the Prices in

(iii) It does not apply on Agricultural Products

(iv) It does not apply on Artistic

(v) It does not apply on the Goods of Auction

Why Supply Curve upward sloping:

The following reason are responsible through which supply increase with increase in price & Vice-versa:-

(i) Seller becomes ready to offer more goods from their old stocks.

(ii) Producer increase their production in view of high profit possibilities.

(iii) New firms enter the market visualizing higher profit which in turn, increases supply & vice-versa.

Exception of the law of supply:

(1) Social distinction goods

(2) Antique goods

(3) Labor supply curve

(4) Agriculture commodity

(5) Perishable commodity

(i) Perfectly Elastic Supply: Under this, supply tends to be infinitely elastic. It happens when nothing is supplied at a lower price but a small increase in price causes the quantity supplied to

increase to an infinite extent indicating that the producers are ready to supply any quantity at that price. Here, the supply curve becomes parallel to x axis

(iii) Perfectly Inelastic Supply: At times, the supply of a commodity may not change at all to any change in price. Such a commodity is said to have zero elasticity of supply or perfectly inelastic supply. Graphically, the supply curve drawn is parallel to Y axis.

(iii) Unit Elastic: When the proportionate change in the quantity supplied is equal to the proportionate change in price, the supply of the commodity is said to be of unit elasticity. Here, the coefficient of elasticity of supply is equal to one, i.e. Es = 1. As given in the figure, relative change in the quantity supplied (q) is equal to the relative change in the price (p).

(iv) More than Unit Elastic Supply or Relatively greater Elastic Supply :

Elasticity of supply is said to be more than unity when a small change in price leads to a substantial change in commodity supplied. It means that relative change in commodity supplied is more than the relative change in price.

(v) Less than Unit Elastic Supply or Relatively less Elastic Supply : In this case a substantial change in price leads to a very small change in quantity supplied. It means that the quantity supplied is lesser in proportion than the change in price of the commodity. Thus, Es < 1.

Elasticity of Supply measured

(i) Percentage Method:

It is depicted of follows:

= Proportionate Change in Quantity Supplied

Proportionate Change in Price

(ii) Geometric Method (Point Method):

Measuring the elasticity at a particular point of the supply curve is known as point elasticity of supply

(iii) Arc Method: It is a measure of the average responsiveness to price change exhibited by a supply curve over some finite stretch of the curve.

Shift of Demand and Supply and Change in Supply:

(1) Movement along the Same Supply Curve: When due to change in price alone, the supply changes it is expressed by different points on the same supply curve.

(i) Expansion of Supply: When supply of a commodity increases on an increase in its price, it is called expansion. It is shown by upward movement of supply curve.

(ii) Contraction of Supply: when supply of a commodity decrease on a falls in its price, it is called contraction of supply; It is shown by downward movement of supply curve.

Both expansion and contraction of supply is shown as under:-

Original supply of commodity is OQ, at price OP. When the price increases to OP1, the supply increase to OQ1 i.e. T1 on Supply curve. This is expansion of supply. When the price falls to OP2 Supply decreases to OQ2 i.e. T2 on supply curve. This is contraction of Supply:

(2) Shifting of the Whole Supply Curve: When due to change in factors other than price of the same commodity like change in income, change in taste etc, the supply changes it makes the supply curve shift either leftward or rightward of the original supply curve. This is called shifting of the supply curve.

(i) Increase in Supply: When supply of a commodity increases due to change in any factor other than price it is called increase in supply. It is shown by rightward shift of supply curve.

(ii) Decrease in Supply: When the supply of a commodity decreases due to a change in any factor other than price, it is called decrease in supply. It is shown by leftward shift of the supply curve.

Elasticity of Supply/ concept of Elasticity:

According to Samuelson, 'Elasticity of Supply is the degree of responsiveness of supply of a commodity to a change in its price.' It is measured by dividing the percentage change in the quantity supplied of a commodity by the percentage change in its price. It can be expressed as follows:-

% Change in Quantity Supplied

% Change in Price

Factors affecting the Elasticity of Supply:

(i) Nature of the Commodity

(i) For perishable goods, its supply will not respond in an effective manner to the change in price. So it has an inelastic supply.

(ii) For durable goods, its supply will respond effectively and it will have an elasticity of supply.

(ii) Production Time

(iii) Techniques of Production

Price Determination of a Commodity: The competition between buyers and sellers, by the relation of the demand to the supply, of the call to the offer. The competition by which the price of a commodity is determined is threefold.

The same commodity is offered for sale by various sellers. Whoever sells commodities of the same quality most cheaply is sure to drive the other sellers from the field and to secure the greatest market for him. The sellers therefore fight among themselves for the sales, for the market. Each one of them wishes to sell, and to sell as much as possible, and if possible to sell alone, to the exclusion of all other sellers. Each one sells cheaper than the other. Thus there takes place a competition among the sellers which forces down the price of the commodities offered by them.

But there is also a competition among the buyers; this upon its side causes the price of the proffered commodities to rise.

Finally, there is competition between the buyers and the sellers: these wish to purchase as cheaply as possible, those to sell as early as possible. The result of this competition between buyers and sellers will depend upon the relations between the two above-mentioned camps of competitors – i.e., upon whether the competition in the army of sellers is stronger. Industry leads two great armies into the field against each other, and each of these again is engaged in a battle among its own troops in its own ranks. The army among whose troops there is less fighting, carries off the victory over the opposing host.

Concepts of Production: Total Product:

Total product (also known as total physical product) is defined as the total quantity of output produced by a firm in the given inputs. Total product identifies the specific outputs which are possible using variable levels of counts. An understanding of total product is essential to the

short-run analysis of a firm's production. Changes in total product are taken into account closely when there are changes in variable costs (labor) of production.

Average Product:

Average Product is defined as the product produced per unit of variable input employed when fixed inputs are held constant. It is commonly thought of as the amount of product produced by every worker.

Marginal Product:

'Marginal Product is similar to average product but is looked at from another perspective. Discrete marginal product is defined as the change in total product that comes as a result of a one unit increase in the variable input/capital level of a firm. Continuous marginal product is calculated as the derivative of total product with respect to the variable input employed. This can be represented as

(dTP)/(dVI)=MP

where TP is total product, MP is marginal product and VI is variable inputs. The analysis of marginal product is foundational to explaining the law of supply (upward-sloping supply curve) via the Law of Diminishing Marginal Returns.

Returns to Factor and Returns to Scale:

Returns to a factor:

1. Only one factor varies while all the rest are fixed.

2. The factor-proportion varies as more and more of the units of the variable factor are employed to increase output.

4. Returns to a factor or to variable proportions end up in negative returns.

3. It is a short-run phenomenon.

5. Returns to variable proportions are caused by indivisibility of certain fixed factors, specialization of certain variable factors, or sub-optimal factor proportions.

Returns to scale:

1. All or at least two factors vary.

2. Factor proportion called scale does not vary. Factors are increased in same proportion to increase output.

3. It is a long-run phenomenon.

4. Returns to scale end up in decreasing returns.

5. Returns to scale can be attributed to economies and diseconomies of scale caused by technical and/or managerial indivisibilities, exhaustibility of natural and managerial resources, or depreciability of certain factors.

Returns to a factor relate to the short-period production function when one factor is varied keeping the other factor fixed in order to have more output, the marginal returns or marginal product of the variable factor diminishes.

This relates to the Law of Variable Proportions. On the other hand, returns to scale relate to the long-period production function when a firm changes its scale to production by changing one or more of its factors. This refers to the Law of Returns to Scale.

Assumptions:

We explain the relation between the returns to a factor and returns to scale on the assumptions that:

(1) There are only two factors of production, labour and capital;

(2) Labor is the variable factor and capital is the fixed factor;

(3) Both factors are variable in returns to scale and the production function is homogeneous.

Costs and Revenue Concepts:

Revenue:

Profit making is considered to be the most important objective of firm. Like the consumers aim

at utility maximization, the producers aim at the profit maximization. Profit is a difference between total cost and total revenue. Profit can be increased either by reducing the cost of production or by increasing the revenue. In this unit, we are going to learn various concepts of total revenue, the behiour of revenue under different market conditions and the importance of concept of revenue.

Fixed cost	A cost which does not vary with output in the short-run (e.g. rent, insurance, etc).	
	Variable cost	A cost which varies with output in both the short and long-run (e.g. raw materials, direct labour, etc).
	Sunk cost	A cost which is irrecoverable upon exiting the industry (e.g. advertising, R&D, etc).
	Total cost	TC = TFC + TVC
	Average cost	Cost per unit of output. TC/Q
	Marginal cost	The addition to TC from producing one more unit of output. change in TC/change in Q
	Total Revenue	The total income gained from selling the firm's output. TR = P-Q
	Average revenue	Revenue per unit of output. TR/Q

Marginal revenue	The addition to TR from selling one more unit of output. change in TR/change in Q
Internal Economies of Scale	Internal economies of scale can be defined as a fall in long-run average cost associated with an increase in output for an individual firm.
External Economies of Scale	Internal economies of scale occur when an individual firm expands, whereas external economies of scale have an impact on the entire industry and therefore lower the long-run average cost curve at each output level.
Diseconomies of scale	A rise in long-run average costs as output increases.
Allocative efficiency	Where society gets the optimum mix of goods and services in the highest possible quantities, at which point P = MC.
Productive efficiency	Any level of output at which LRAC is minimised; occurs where LRAC = LRMC.
Dynamic efficiency	Reinvestment of profits into R&D to promote faster rate of technological development that will reduce costs and produce

	better quality products for consumers. Often finance with supernormal profits (hence feasible when AR>AC)
Minimum efficient scale	The level of output at which LRAC stops falling (i.e. the smallest level of output at which the firm is productively efficient).
Normal profit	The minimum (accounting) profit which the entrepreneur needs to remain in long-term production (i.e. the opportunity cost of capital and enterprise). Occurs at the level of output where AR = AC.
Supernormal profit	Any profits in excess of normal profits. Occurs at any level of output where AR > AC

UNIT-III

Perfect competition – a pure market

Perfect competition describes a market structure whose assumptions are strong and therefore unlikely to exist in most real-world markets. Economists have become more interested in pure competition partly because of the growth of e-commerce as a means of buying and selling goods and services. And also because of the popularity of auctions as a device for allocating scarce resources among competing ends.

Assumptions for a perfectly competitive market

- Many sellers each of whom produce a low percentage of market output and cannot influence the prevailing market price.
- Many individual buyers, none has any control over the market price
- Perfect freedom of entry and exit from the industry. Firms face no sunk costs and entry and exit from the market is feasible in the long run. This assumption means that all firms in a perfectly competitive market make normal profits in the long run.
- Homogeneous products are supplied to the markets that are perfect substitutes. This leads to each firms being "price takers" with a perfectly elastic demand curve for their product.
- Perfect knowledge – consumers have all readily available information about prices and products from competing suppliers and can access this at zero cost – in other words, there are few transactions costs involved in searching for the required information about prices. Likewise sellers have perfect knowledge about their competitors.
- Perfectly mobile factors of production – land, labour and capital can be switched in response to changing market conditions, prices and incentives.
- No externalities arising from production and/or consumption.

Evaluation – Understanding the real world of imperfect competition!

It is often said that perfect competition is a market structure that belongs to out-dated textbooks and is not worthy of study! Clearly the assumptions of pure competition do not hold in the vast majority of real-world markets, for example, some suppliers may exert control over the amount of goods and services supplied and exploit their monopoly power. On the demand-side, some consumers may have monopsony power against their suppliers because they purchase a high percentage of total demand. Think for example about the buying power wielded by the major supermarkets when it comes to sourcing food and drink from food processing businesses and farmers. The Competition Commission has recently been involved in lengthy and detailed investigations into the market power of the major supermarkets. In addition, there are nearly always some barriers to the contestability of a market and far from being homogeneous; most markets are full of heterogeneous products due to product differentiation – in other words, products are made different to attract separate groups of consumers.

Consumers have imperfect information and their preferences and choices can be influenced by the effects of persuasive marketing and advertising. In every industry we can find examples of asymmetric information where the seller knows more about quality of good than buyer – a frequently quoted example is the market for second-hand cars! The real world is one in which negative and positive externalities from both production and consumption are numerous – both of which can lead to a divergence between private and social costs and benefits. Finally there may be imperfect competition in related markets such as the market for key raw materials, labour and capital goods. Adding all of these points together, it seems that we can come close to a world of perfect competition but in practice there are nearly always barriers to pure competition. That said there are examples of markets which are highly competitive and which display many, if not all, of the requirements needed for perfect competition. In the example below we look at the global market for currencies.

Currency markets - taking us closer to perfect competition

- The global foreign exchange market is where all buying and selling of world currencies

takes place. There is 24-hour trading, 5 days a week.

- Trading volume in the Forex market is around $3 trillion per day – equivalent to the annual GDP of France! 31% of global trading takes place in London alone.
- Most trading in currencies is 'speculative.'

The main players in the currency markets are as follows:

- Banks both as "market makers" dealing in currencies and also as end-users demanding currency for their own operations.
- Hedge funds and other institutions (e.g. funds invested by asset managers, pension funds).
- Central Banks (including occasional currency intervention in the market when they buy and sell to manipulate an exchange rate in a particular direction).
- Corporations (for example airlines and energy companies who may use the currency market for defensive 'hedging' of exposures to risk such as volatile oil and gas prices.)
- Private investors and people remitting money earned overseas to their country of origin / market speculators trading in currencies for their own gain / tourists going on holiday and people traveling around the world on business.

Why does a currency market come close to perfect competition?

- Homogenous output: The "goods" traded in the foreign exchange markets are homogenous - a US dollar is a dollar and a euro is a euro whether someone is trading it in London, New York or Tokyo.
- Many buyers and sellers meet openly to determine prices: There are large numbers of buyers and sellers - each of the major banks has a foreign exchange trading floor which helps to "make the market". Indeed there are so many sellers operating around the world that the currency exchanges are open for business twenty-four hours a day. No one agent in the currency market can, on their own influence price on a persistent basis - all are 'price takers'. According to Forex_Broker.net "The intensity and quantity of buyers

and sellers ready for deals doesn't allow separate big participants to move the market in joint effort in their own interests on a long-term basis."

- Currency values are determined solely by market demand and supply factors.

- High quality real-time information and low transactions costs: Most buyers or sellers are well informed with access to real-time market information and background research analysis on the factors driving the prices of each individual currency. Technological progress has made more information immediately available at a fraction of the cost of just a few years ago. This is not to say that information is cheap - an annual subscription to a Bloomberg or a Reuter's news terminal will cost several thousand dollars. But the market is rich with information and transactions costs for each batch of currency bought and sold has come down.

- Seeking the best price: The buyers and sellers in foreign exchange only deal with those who offer the best prices. Technology allows them to find the best price quickly.

What are the limitations of currency trading as an example of a competitive market?

- Firstly the market can be influenced by official intervention via buying and selling of currencies by governments or central banks operating on their behalf.

Monopolistic Competition:

A type of competition within an industry where:

1. All firms produce similar yet not perfectly substitutable products.

2. All firms are able to enter the industry if the profits are attractive.

3. All firms are profit maximizers.

4. All firms have some market power, which means none are price takers

Pure monopoly and perfect competition are two extreme cases of market structure. In reality, there are markets having large number of producers competing with each other in order to sell their product in the market. Thus, there is monopoly on one hand and perfect competition on other hand. Such a mixture of monopoly and perfect competition is called as monopolistic competition. It is a case of imperfect competition.

Monopolistic competition has been introduced by American economist Prof. Edward Chamberlin, in his book 'Theory of Monopolistic Competition' published in 1933.

Features of Monopolistic Competition:

The following are the features or characteristics of monopolistic competition:-

1. Large Number of Sellers: There is large number of sellers producing differentiated products. So, competition among them is very keen. Since number of sellers is large, each seller produces a very small part of market supply. So no seller is in a position to control price of product. Every firm is limited in its size.

2. Product Differentiation: It is one of the most important features of monopolistic competition. In perfect competition, products are homogeneous in nature. On the contrary, here, every producer tries to keep his product dissimilar than his rival's product in order to maintain his separate identity. This boosts up the competition in market. So, every firm acquires some monopoly power.

3. Freedom of Entry and Exit: This feature leads to stiff competition in market. Free entry into the market enables new firms to come with close substitutes. Free entry or exit maintains normal profit in the market for a longer span of time.

4. Selling Cost: It is a unique feature of monopolistic competition. In such type of market, due to product differentiation, every firm has to incur some additional expenditure in the form of selling cost. This cost includes sales promotion expenses, advertisement expenses, salaries of marketing staff, etc. But on account of homogeneous product in perfect competition and zero competition in monopoly, selling cost does not exist there.

5. Absence of Interdependence: Large numbers of firms are different in their size. Each firm has its own production and marketing policy. So no firm is influenced by other firm. All are independent.

6. Two Dimensional Competition: Monopolistic competition has two types of competition aspects viz.

- Price competition i.e. firms compete with each other on the basis of price.
- Non price competition i.e. firms compete on the basis of brand, product quality advertisement.

7. Concept of Group: In place of Marshallian concept of industry, Chamberlin introduced the concept of Group under monopolistic competition. An industry means a number of firms producing identical product. A group means a number of firms producing differentiated products which are closely related.

8. Falling Demand Curve: In monopolistic competition, a firm is facing downward sloping demand curve i.e. elastic demand curve. It means one can sell more at lower price and vice versa.

Imperfect Competition:

A type of market that does not operate under the rigid rules of perfect competition. Perfect competition implies an industry or market in which no one supplier can influence prices, barriers to entry and exit are small, all suppliers offer the same goods, there are a large number of suppliers and buyers, and information on pricing and process is readily available. Forms of imperfect competition include monopoly, oligopoly, monopolistic competition, monopsony and oligopoly

Perfect competition is often viewed as a theoretical model, because every industry or market operates in some form of imperfect competition. For example, some industries rely on heavy initial capital investment, such as industrial manufacturers and telecom providers. This makes the prospect of having many competitors practically impossible. In the real world, markets are evaluated by their relative closeness to perfect competition, and efforts are made to approach it.

Monopoly:

A market structure characterized by a single seller, selling a unique product in the market. In a monopoly market, the seller faces no competition, as he is the sole seller of goods with no close substitute.

In a monopoly market, factors like government license, ownership of resources, copyright and patent and high starting cost make an entity a single seller of goods. All these factors restrict the entry of other sellers in the market. Monopolies also possess some information that is not known to other sellers.

Duopoly:

Market situation in which only sellers supply a particular commodity to many buyers. Either seller can exert some control over the output and prices, but must consider the reaction of its sole competitor (unless both have formed an illegal collusive duopoly)

A situation in which two companies own all or nearly all of the market for a given product or service. A duopoly is the most basic form of oligopoly, a market dominated by a small number of companies. A duopoly can have the same impact on the market as a monopoly if the two players collude on prices or output. Collusion results in consumers paying higher prices than they would in a truly competitive market and is illegal under U.S. antitrust law

Oligopoly:

Market situation between, and much more common than, perfect competition (having many suppliers) and monopoly (having only one supplier). In oligopolistic markets, independent

suppliers (few in numbers and not necessarily acting in collusion) can effectively control the supply, and thus the price, thereby creating a seller's market. They offer largely similar products, differentiated mainly by heavy advertising and promotional expenditure, and can anticipate the effect of one another's marketing strategies. A situation in which a particular market is controlled by a small group of firms.

An oligopoly is much like a monopoly, in which only one company exerts control over most of a market. In an oligopoly, there are at least two firms controlling the market.

DUMPING LEGAL DEFINITION

- The act of selling goods at less than fair market value, typically for the purpose of injuring a competitor and gaining market share.
- The selling of large amounts of a stock, or stocks in general, at whatever market prices are in effect. For example, investors might dump stocks on hearing of an outbreak of fighting in some part of the world.
- The selling of a product in one market at an unusually low price while selling the same product at a significantly higher price in another market. For example, a firm may sell a product in its home market at a price covering all costs, and then sell the product in a foreign market at a significantly lower price, covering only variable costs. See also antidumping.

- The sale of goods of one nation in the markets of a second nation at less than the price charged within the first nation. Dumping can eliminate competitors by undercutting their prices
- Selling goods or commodities in another country at prices that are substantially below the going market price. International trade regulations attempt to prevent dumping. Violations may be reported to the World Trade Organization.
- Selling a large amount of securities in a market with no concern for what effect that is likely to have on the price or the product
- The selling of large amounts of a stock or stocks in general at whatever market prices are in effect. For example, investors might dump stocks upon hearing of an outbreak of fighting in some part of the world.
- The selling of a product in one market at an unusually low price while selling the same product at a significantly higher price in another market. For example, a firm may sell a product in its home market at a price covering all costs and then sell the product in a foreign market at a significantly lower price covering only variable costs.

Dumping- Evolution of the term:

It has long been customary to speak of one market as a _dumping ground for the surplus products of another market when the producers of the latter for any reason sell their commodities in the former at unusually low prices.

From this usage it was a natural outcome to speak of selling in a distant market at reduced prices as dumping, but the word used in this sense appeared not to have entered into the literature of economics until the first years of the twentieth century. In 1903 and 1904, the tariff question was the dominant political issue in Great Britain, and in a huge output of polemical literature which marked the tariff controversy. The term became well established and appeared with or without apologetic quotation marks in book after book.

The term dumping has since found its way into the economic terminology of the French, German, Italian and probably other languages. Initially, it had a vague and uncertain meaning, and is still used indiscriminately for such diverse price-practices such as severe competition, customs undervaluation, bargain, sacrifice or slaughter sales , local price-cutting and selling in one national market at a lower price than in another.

In recent years, however, the increased use of the term by academic economists with their creditable tendency towards the exact establishment of terminology and of the development of legislation dealing with dumping and allied price-practices, which made necessary some measure of precision in the differentiation between various price practices, have both contributed to the consistency of the usage. Extensive variations in the use of the term both as to gist and implication are nevertheless still present.

According to Dale, the origin of the word dump is uncertain. Its usage by the early nineteenth century had come to mean the act of throwing down in a lump or mass, as with a load from a cart, and it was then a natural extension to apply the word to the disposal of refuse and to describe as a dumping ground, a market for the disposal of surplus stock. During this time, dumping was used in English language trade literature to illustrate loosely a situation in which goods were sold cheaply in foreign markets. Today, however, the term is used intentionally to signify the practice of price discrimination in international trade.

Importance:

The term was applied persuasively to describe almost any situation in which goods were sold abroad at cheap prices, irrespective of the cause of the cheapness, the insinuation being that the goods were unwanted in their country of derivation and were exported only to get rid of them.

Economists have always defined dumping as transnational price discrimination where prices vary between national markets. Although economists still object in principle, they now accept that dumping may also be defined as transnational sale below costs. Deard off admits this new. The definition has broadened over the years; some now consider dumping including _sales below costs', at least presumptively….this alternative criteria for dumping have gradually acquired elevated status of an alternative definition.

However, there is no correlation between price discrimination and sales below cost. Sales below cost may occur with or without discrimination and yet, on the other hand discrimination may take place without selling below costs. The term dumping is employed most often, even in careless business language to signify selling the same commodities at different prices in different markets. Commercially, the term is often uncritically extended to cover various types of sales at prices lower than those generally current, even if the prices are uniform to all purchasers.

Types of Dumping

1. Sporadic Dumping: Occasional sale of a commodity at below cost in order to unload an unforeseen and temporary surplus of the commodity such as cheese, milk, wheat etc. in the international market without reducing domestic prices.

2. Predatory Dumping: Temporary sale of a commodity at below its average cost or a lower price abroad in order to derive foreign producers out of business, after which prices are raised to take advantage of the monopoly power abroad.

3. Persistent Dumping: Continuous tendency of a domestic monopolist to maximize total profits by selling the commodity at a higher price in the domestic market than internationally (to meet the competition of foreign rivals).

Impact of Dumping:

Dumping usually occurs because of the following reasons:

(1) Producers in one country are trying to stay competitive with producers in another country,

(2) Producers in one country are trying to eliminate the producers in another country and gain a larger share of the world market,

(3) Producers are trying to get rid of excess stuff that they can't sell in their own country,

(4) Producers can make more profit by dividing sales into domestic and foreign markets, then charging each market whatever price the buyers are willing to pay.

Wage determination:

wage law is the body of law which prohibits employers from hiring employees or workers for less than a given hourly, daily or monthly minimum wage. More than 90% of all countries have some kind of minimum wage legislation. Until recently, minimum wage laws were usually very tightly focused. In the U.S. and Great Britain, for example, they applied only to women and children. Only after the Great Depression did many industrialized economies extend them to the general work force. Even then, the laws were often specific to certain industries. In France, for example, they were extensions of existing trade union legislation. In the U.S., industry specific wage restrictions were held to be unconstitutional.

Coverage was later extended to most of the labor force. A minimum wage is the lowest hourly, daily or monthly remuneration that employers may legally pay to workers. Equivalently, it is the lowest wage at which workers may sell their labor. Although minimum wage laws are in effect in many jurisdictions, differences of opinion exist about the benefits and drawbacks of a minimum wage.

Rent, Interest, and Profits:

Introduction:

A. Labor markets, because wages and salaries account for about 70 percent of our national income. (If proprietors' income, which is largely labor income, is added to wages and salaries, the return to labor increases to 80 percent.)

B. The three sources of income—rent, interest, and profits—which compose the remaining 20 percent of our national income.

1. Why do different parcels of land in different locations receive different rent payments?

2. What factors determine interest rates and causes interest rates to change?

3. What are the sources of profits and losses and why do profits and losses change over time?

II. **Economic rent** is the price paid for use of land and other natural resources that are fixed in supply. (Note that this definition differs from the everyday use of the term.)

A the demand for land is downward sloping because of diminishing returns and the fact that producers must lower the price of the product to sell additional units of output.

B. Perfectly inelastic supply of the resource is one unique feature of the supply side of the market that determines rent. Land has no production cost; it is a "free and non reproducible gift of nature." Its quantity does not change with price (with a few exceptions).

C. Changes in demand therefore determine the amount of rent. This will be determined by several factors.

1. The price of the product grown on the land,

2. The productivity of the land, and

3. The prices of other resources combined with the land for production.

D. Land rent is viewed as a surplus payment because it performs no incentive function to provide more supply; it is not necessary to ensure the availability of land.

E. Some argue that rent should be taxed away, since it is unearned, or that land should be nationalized and owned by the state.

1. Henry George's proposal for a single tax of up to 99 percent of land rent asserted that this tax could eliminate other taxes. Unlike the effect of a tax on other resources, the tax on land would not have a negative incentive effect.

2. Critics of the single-tax idea make several points.

a. Current levels of government spending are too great to be supported by rent taxes.

b. It is difficult to separate the rent component from other income resulting from the combined use of land with other resources.

c. Unearned income goes beyond land and land ownership; capital gains and interest income might also be considered unearned.

d. It is unfair to tax current owners, who may have paid a steep market price for the land and therefore find that the rent return is not high relative to that price.

E. Each parcel of land is not equally productive. More productive land will be in great demand and therefore will receive different rents. These different rent payments allocate land to its most productive use.

F. In reality, land has alternative uses and costs. From society's perspective, rent is a surplus; but an individual firm must pay rent to attract the land away from alternative uses. Without rent to allocate land among its various uses, there would be no market mechanism to make sure each piece of land was being utilized in its most valuable fashion. Therefore, rent does provide an important function to our economic system.

Interest is the price paid for the use of money. It is usually viewed as the money that must be paid for the use of one dollar for one year.

A. Two aspects of interest are important.

1. It is stated as a percentage, and the Truth in Lending Act of 1968 requires lenders to state the costs and terms of consumer credit in terms of an annualized interest rate.

2. Money itself is not an economic resource, but it is used to acquire capital goods, so in hiring money capital, businesses are ultimately buying the use of real capital goods.

B. The loan able funds theory of interest.

1. The supply of loan able funds is an upward-sloping curve—a larger quantity of funds will be made available at high interest rates than at low interest rates. Most individuals prefer present consumption and must be paid to defer consumption by saving.

2. The demand for loan able funds is inversely related to the rate of interest. At higher interest rates fewer investment projects will be profitable since fewer projects yield the high rate of return needed to compensate for the high interest cost.

3. Economists disagree about the responsiveness of the quantity of investment funds supplied to changes in interest rates. Most economists believe that saving is relatively insensitive to interest

rate changes and believe the supply of funds is inelastic.

4. Whether the curves are elastic or inelastic, the equilibrium interest rate equates the quantities of loan able funds supplied and demanded.

5. Households rarely lend savings directly to businesses. Households place their savings in financial institutions and receive an interest payment. Businesses borrow funds from financial institutions and pay an interest payment.

6. Changes in the supply of funds may occur as a result of changes in tax policy or social insurance benefits.

7. Anything that changes the rates of return on potential investments, such as improvements in technology or a decrease in the demand of the final product, will change the demand for funds.

8. Both households and businesses operate on both the supply and demand sides of the market for loan able funds. While households supply loan able funds, they may also borrow to finance large purchases and education. Similarly, businesses may save in the market for loan able funds, and governments may borrow to finance deficits.

C. Banks and other financial institutions not only gather and make available the savings of households, but also create funds through the lending process.

D. There are many different interest rates with different names and they vary for many reasons. 1. Varying degrees of risk (riskier loans carry higher rates),

2. Differing maturities on the loan (higher rates usually on longer term loans),

3. The size of the loan (larger loans have lower rates),

4. Taxability (interest on some local and state bonds is tax free; the interest would be lower, since lenders don't have to pay federal taxes on that interest income),

5. Market imperfections play a role, because some banks in smaller towns have more market power than banks that have a lot of competition.

E. Economists usually refer to what is called the "pure rate of interest," which is best

approximated by the interest paid on long term, riskless bonds such as the long term bonds of the

U.S.government. In spring 2001 this rate was 5.5 percent. The current rate can be found in the third section of the daily Wall Street Journal and other publications.

F. The role of the interest rate is important because it affects both the level and composition of investment and R&D spending.

1. The level of investment varies inversely with the interest rate. The Federal Reserve System will increase and decrease the money supply and thus influence interest rates. Changes in investment will affect the level of GDP.

2. Interest rates will also have an effect on borrowing for R&D. Again, R&D depends upon the cost of borrowing money as compared to the expected rate of return on the R&D project.

3. Nominal interest rates are those stated in terms of current dollars; the "real" interest rate is the rate of interest expressed in terms of dollars of constant or inflation-adjusted value. The real interest rate is the nominal rate minus the rate of inflation.

5. It is the real interest rate, not the nominal rate, that businesses should consider in making their investment and R&D decisions.

G. Application: Usury laws specify maximum interest rate that can be charged on loans. The purpose is to make borrowing more accessible to low-income borrowers. However, Figure 29-2 demonstrates several problems with usury laws.

1. There will be a shortage of credit if the usury rate is below the market rate. Riskier borrowers may be excluded from borrowing from established financial institutions.

2. Credit-worthy borrowers will be able to borrow at below-market "prices."

3. Lenders will receive less than market rates of return on the funds loaned.

4. Funds will not be allocated to their most efficient use.

IV. Economic profits are what remains of a firm's total revenue after it has paid individuals and other firms for materials, capital and labor supplied to the firm (the explicit costs) and allowed

for payment to self employed resources (the implicit costs).

A. The role of the entrepreneur is most important in a capitalist economy. Profits are the reward paid for entrepreneurial ability, which includes taking initiative in combining resources for production, making non routine policy decisions, introducing innovations in products and production processes, and taking risks associated with the uncertainty of all of the above functions.

1. A **normal profit** is the minimum required to retain the entrepreneur in some specific line of production.

2. An economic profit is any profit above the normal profit. This residual profit also goes to the entrepreneur. This residual profit does not exist under pure competition in a static economy. It occurs because of the dynamic nature of real-world capitalism and the presence of monopoly power.

B. There are several sources of economic profits, but they would not occur in a static, unchanging economy. Thus, the first prerequisite is that the economy be dynamic.

1. In a dynamic economy, the future is uncertain and some risks cannot be insured against.

2. Uninsurable risks stem from three general sources:

a. Changes in the general economic environment

b. Changes in the structure of the economy; and

c. Changes in government policy.

3. Some or all of the economic profit in a real, dynamic economy may be compensation for risk taking.

4. Some of the economic profit may be compensation for dealing with the uncertainty of innovation.

5. Monopoly power is a less desirable source of economic profits because such profits stem from a misallocation of resources.

C. The functions of profits include the following:

1. The expectation of profits encourages firms to innovate, which stimulates new investment. This will expand output and employment.

2. Profits allocate resources among alternative lines of production. Resources leave unprofitable ventures and flow to profitable ones, which is where society is signaling it wants these resources to be allocated.

V. Labor income is the dominant type of income, with wages and salaries constituting about 70 percent of national income. If one adds in a part of proprietors' income, which is probably largely labor income, the share rises to about 80 percent. Therefore, the "capitalists'" share of income is only about 20 percent. These percentages have remained remarkably stable in the U.S. since 1900.

Risk Theory of Profit:

Prof. Hawley, an American economist in 1907, propounded the risk-bearing theory of profit. Prof. Hawley remarks, "The profit of an undertaking, or residue of the product after the claims of land, labor and capital are satisfied, is not the reward of management or coordination but of the risk and responsibilities that the undertaker subjects himself to". So, according to this theory, profit is the reward for risk-taking in business. Every business involves some risk or other. Since the entrepreneur undertakes the risk, he is entitled to receive profit. If he does the reward, he will not be prepared to undertake the risks. Hence, higher the risk, the greater is the possibility of profit. This profit of the entrepreneur exceeds the ordinary return on capital. If it were less than the ordinary return on capital, the entrepreneur would not be prepared to undertake the risk.

The main objections to this theory are as follows:

1. No Direct Relation between Risk and Profit

Unlike the theory, there is no direct relation between risk and profit. It is not necessary that if the risk were high, the profit would correspondingly be high. In reality, profit is influenced by several factors addition to risk bearing. Profit may arise due to superior ability or monopoly position.

2. Reward for Risk-avoidance

According to Prof. Carver profits arise not because risks are borne, but because the superior entrepreneurs are able to reduce them. So profit is the reward for risk-avoidance rather than risk-taking. Still it cannot be denied that a great deal of pure profit is the reward for risk taking.

3. Unforeseeable Risks

A strong criticism has been made by Prof. Knight. According to him profit does not arise due to all kinds of risk. It arises only due to unforeseeable risks. The foreseeable risks such as fire, accident can be insured. So an insurable risk is, in reality, no risk at all. Profit arises only due to unforeseeable risks such as fall in price, changes in fashion new discovery. These risks are non-insurable. So these risks give rise to profit. Prof. Knight referred to unforeseeable risk as uncertainty-bearing. So profit is the reward for uncertainty bearing, which is the special function of the entrepreneur. Peter Duckers also regards profit as the reward for undertaking unforeseeable risk, which cannot be provided against.

Interest:

Interest is money paid by a bank or other financial institution to an investor or depositor in exchange for the use of the depositor's money.

Amount of interest is (usually) a fraction (called the interest rate) of the initial amount deposited called the principal amount.

$$A = P\,(1 + r\,)\,t\,.$$

Notation:

r: interest rate per unit time

P: principal amount

A: amount due (account balance)

t: time

These quantities are related through the equation:

$A = P(1 + rt)$.

If a portion of the interest is credited after a fraction of a year, then the interest is said to be compounded. If there are *n* compounding periods per year, then in *t* years the amount due is

$A = P1 + r\ n\ nt$

The annual interest rate equivalent to a given compound interest rate is called the effective interest rate.

UNIT-IV

Concept of Money:

A commodity, asset, or (most commonly) currency that may be exchanged for goods and services. Usually, the domestic government issues its own money and provides penalties to persons and businesses in its jurisdiction that do not accept it. Money and the money supply are integral to determining interest rates, inflation, and especially economic growth. There is no uniform agreement as to what qualifies as money; some economists include more mediums of exchange than other economists. Every society throughout history has used some sort of money, even bartering economies traded for something perceived to be equivalent.

A generally accepted medium for the exchange of goods and services, for measuring value, or for making payments. Many economists consider the amount of money and growth in the amount of money in an economy very influential in determining interest rates, inflation, and the level of economic activity. There is some disagreement among economists as to what types of things actually should be classified as money; for example, should balances in money market funds be included.

Functions of Money:

Money is any good that is widely accepted in exchange of goods and services, as well as payment of debts. Most people will confuse the definition of money with other things, like income, wealth, and credit. Three functions of money are:

1. Medium of exchange: Money can be used for buying and selling goods and services. If there were no money, goods would have to be exchanged through the process of barter (goods would be traded for other goods in transactions arranged on the basis of mutual need). For example: If I raise chickens and want to buy cows, I would have to find a person who is willing to sell his cows for my chickens. Such arrangements are often difficult. But Money eliminates the need of the double coincidence of wants.

2. Unit of account: Money is the common standard for measuring relative worth of goods and service.

3. Store of value: Money is the most liquid asset (Liquidity measures how easily assets can be spent to buy goods and services). Money's value can be retained over time. It is a convenient way to store wealth.

Impact of Money:

Activating the concept of money can influence people's own expressions of emotion as well as their reactions to the emotional expressions of others. Thinking about money increases individuals' disposition to perceive themselves in a business-like relationship with others in which transactions are based on objective criteria and the expression of emotion is considered inappropriate. Therefore, these individuals express less emotion in public and expect others to do likewise. Six experiments show that subtle reminders of money lead people to have more negative attitudes toward expressing emotions in public and to avoid expressing emotion in their written communications. In addition, money-primed participants judge others' emotions to be

more extreme and are disposed to avoid interacting with persons who display these emotions, especially when participants believe that these emotions are expressed in public.

Inflation and Deflation:

In economics inflation means, a rise in general level of prices of goods and services in a economy over a period of time. When the general price level rises, each unit of currency buys fewer goods and services. Thus, inflation results in loss of value of money. Another popular way of looking at inflation is "too much money chasing too few goods". The last definition attributes the cause of inflation to monetary growth relative to the output / availability of goods and services in the economy.

In case the price of say only one commodity rise sharply but prices of other commodities falls, it will not be termed as inflation. Similarly, in case due to rumors if the price of a commodity rises during the day itself, it will not be termed as inflation.

(a**) DEMAND - PULL INFLATION**: In this type of inflation prices increase results from an excess of demand over supply for the economy as a whole. Demand inflation occurs when supply cannot expand any more to meet demand; that is, when critical production factors are being fully utilized, also called Demand inflation.

(b) **COST - PUSH INFLATION**: This type of inflation occurs when general price levels rise owing to rising input costs. In general, there are three factors that could contribute to Cost-Push inflation: rising wages, increases in corporate taxes, and imported inflation. [imported raw or partly-finished goods may become expensive due to rise in international costs or as a result of depreciation of local currency

Types of inflation such as:

(1) Currency inflation whereby prices rise NOT because of an increase in money supply, but a decline in value of the currency on world markets (*i.e.* G5 manipulation of dollar 40% lower in 1985 led to 1987 Crash & capital flight back to Japan creating bubble there);

(2) capital concentration into one sector causing bubble which can be purely domestic or inspired internationally with rising currency as was the case in Japan 1989 or USA into 1929;

(3) the classroom plain vanilla idea of a rise in prices with an increase in in money supply such as sudden discovery of gold in California, Australia and Alaska during 19th century, and the import of gold and silver from America into Europe by Spain that created wholesale systemic inflation in all European economies, and

(4) Commodity inflation that is caused by a drop in supply such as food due to weather or exhaustion of resources.

(5) Money supply remains unchanged, but the VELOCITY increases from leverage (i.e. lending).

Deflation:

Deflation is the opposite of inflation. Deflation refers to situation, where there is decline in general price levels. Thus, deflation occurs when the inflation rate falls below 0% (or it is negative inflation rate). Deflation increases the real value of money and allows one to buy more goods with the same amount of money over time. Deflation can occur owing to reduction in the supply of money or credit. Deflation can also occur due to direct contractions in spending, either in the form of a reduction in government spending, personal spending or investment spending. Deflation has often had the side effect of increasing unemployment in an economy, since the process often leads to a lower level of demand in the economy. In economics, deflation is a decrease in the general price level of goods and services. Deflation occurs when the inflation rate falls below 0% (a negative inflation rate). This should not be confused with disinflation, a slow-down in the inflation rate (i.e., when inflation declines to lower levels).

Inflation reduces the real value of money over time; conversely, deflation increases the real value of money – the currency of a national or regional economy. This allows one to buy more goods with the same amount of money over time.

Economists generally believe that deflation is a problem in a modern economy because it increases the real value of debt, and may aggravate recessions and lead to a deflationary spiral. Historically not all episodes of deflation correspond with periods of poor economic growth. Deflation occurred in the U.S. during most of the 19th century (the most important exception was during the Civil War). This deflation was caused by technological progress that created significant economic growth. This deflationary period of considerable economic progress

preceded the establishment of the U.S. Federal Reserve System and its active management of monetary matters.

Deflation is likewise multidimensional

(1) The classroom version of a decrease in money supply;

(2) Failure of money supply expansion to match increase in demand for money

_ (a) as in deleveraging during economic decline as VELOCITY collapses and thus even QE1, QE2,

QE3 failed to produce inflation because they were less than the destruction of capital from deleveraging

_ (b) the classic contraction in money supply during economic declines relative to the shift in demand from assets to liquidity

_ (c) rise in the demand for money outpaces the available supply as in flight to quality money supply growth falls below economic expansion money supply growth falls below population expansion (more people making due with the same amount of money)

(3) Contraction in available capital due to rising costs private or public

_ (a) from sudden price sock as in OPEC during 1970s creating STAGFLATION

_ (b) sudden rise in taxation causing decline in VELOCITY of money

_ (c) confiscation of assets by regulation

_ (d) historical forced loans,

_ (e) criminalization of normal human activity to confiscate assets as penalty under pretense of law

(4) in a precious metal money supply the debasement of new currency causes Gresham's Law whereby the the older money supply is then hoarded thereby shrinking the TOTAL supply of money

(a) This causes prices to rise in terms of the debased new currency ONLY creating an admixture of inflation (rising prices systemically) coinciding with a deflation caused by the contraction in the

TOTAL available money supply

(5) Collapse in government / rule of law causes wealth to shift and concentrate in tangible assets

(Flight to quality) that survives the transition to a new government and monetary system

(a) This is normally associated with a collapse in the legal tender status of money whereby government no longer accepts its own currency in payment for taxes

(i) As was the case in Rome

(ii) Japan constantly demonetized previous currency or devalued it by a factor of 10 causing wealth to hoard in tangible assets and barter to emerge as rice displaced coins for 600 years because of devaluation by government.

Supply of and Demand for Money:

Monetary theory develops the link between money supply and other macroeconomic variables, including the price level and output (GDP). In this chapter we begin with competing theories of money demand and some empirical evidence about the behavior of money demand.

The Quantity Theory of Money

This theory, developed by the classical economists over 100 years ago, related the amount of money in the economy to nominal income. Economist Irving Fisher is given credit for the development of this theory. It begins with an identity known as the equation of exchange:

MV = PY

Where M is the quantity of money, P is the price level, and Y is aggregate output (and aggregate income). V is velocity, which serves as the link between money and output. Velocity is the number of times in a year that a dollar is used to purchased goods and services.

The equation of exchange is an identity because it must be true that the quantity of money, times how many times it is used to buy goods equals the amount of goods times their price.

To move towards the quantity theory of money

Fisher makes two key assumptions:

1. Fisher viewed velocity as constant in the short run. This is because he felt that velocity is affected by institutions and technology that change slowly over time.

2. Fisher, like all classical economists, believed that flexible wages and prices guaranteed output, Y,

to be at its full-employment level, so it was also constant in the short run.

Putting these two assumptions together let’s look again at the equation of exchange:

MV = PY

If both V and Y are constant, then changes in M must cause changes in P to preserve the equality between MV and PY. This is the quantity theory of money: a change in the money supply, M, results in an equal percentage change in the price level P.

We can further modify this relationship by dividing both sides by V:

M = (1/V) x PY

Since V is constant we can replace (1/V) with some constant, k, and when the money market is in equilibrium, Md = M. So our equation becomes

Md = k x PY the quantity theory of money, money demand is a function of income and does not depend on interest rates.

Central Banking: Functions:

A Central Bank is defined in terms of its functions and as per Vera Smith, "The primary definition of Central Banking is a banking system in which a single bank has either complete control or a residuary monopoly of note issue."

As per Sayers, the Central Bank "Is the organ of Government that undertakes the major financial operations of the government and by its conduct of these operations and by other means, influences the behavior of financial institutions so as to support the economic policy of the government."

The broadest definition has been given by Economist De Knock and as per him a Central Bank is "A Bank which constitutes the apex of the monetary and banking structure of its country and which performs as best as it can in the national economic interest.

Functions of a Central Bank:

Majority of Economists has accepted the following functions to be performed by a Central Bank and it is been framed by the economist De Knock.

1. Regulator of Currency:

□□The central bank is the issue bank and it has a monopoly note issue. Notes issued by it flows as legal tender money.

The issue department issues notes and coins to commercial banks and coins are manufactured in the government mint but are placed into flow through the central bank.

Various Central banks had been adopting varied modes of note issue in various nations. The central bank is obligatory by statute to hold a specified volume of gold and foreign securities versus the notes issue.

In few nations, the quantity of gold and foreign securities abides a fixed proportion amidst 30 to 45 percent of the total notes issued.

In few other nations, a minimum specified quantity of gold and foreign currencies is obligatory to be kept against note issue by the Central Bank.

2. Banker, Fiscal Agent and Adviser to the Administration:

In general, Central Bank performs as bankers, fiscal agents and advisers to their corresponding law of administration. As a banker to the law of administration, the central bank holds the deposit investment of the central and state governments and makes spending on behalf of the law of administration. And hence, however, it denies paying interest on government deposit investments.

It purchases and sells foreign currencies on behalf of the law of administration.

It holds the inventories of gold of the law of administration and thus it is the guardian of administration's finance and affluence.

As a fiscal agent, the central bank makes short term loans to law of administration for a term not more than 90 days.

As an adviser, the central bank advises government on fiscal and money matters as protecting, devaluation and revaluation, inflation or deflation of the currency, balance of payments, deficit financing etc.

3. Guarding of Cash Reserves of Commercial Banks:

Commercial banks are necessitated by law to keep reserves equal to a certain percentage of both time and demand deposits liabilities with the central bank.

It is on the origin of these reserves that the central bank shifts funds from one bank to another to make possible the clearing of cheques.

Thus the central bank performs as the guardian of the cash reserves of commercial banks and facilitates in making feasible their transactions.

Other functions:

1. Monopoly of note issue:

Note issue primarily is the main function of a central bank in every country. These days, in all the countries where there is a central bank generally it has got the monopoly of the sole right of note issue. In the beginning this was not the function of central bank, but gradually all the central bank gas acquires this function.

There are many advantages of the note issue by central banks some important ones are as follow:

1. Central bank controls the credit creating power of commercial bank. By controlling the amount of currency in circulation, the volume of credit can be controlled to quite a large extent.

2. People have more confidence in the currency issued by the control bank because it has the protection and recognition of the government.

3. In the event of monopoly of note issue of central bank, there will be uniformity in the currency system in the country.

4. The currency of the country will be flexible if the central bank of the country has the monopoly of note issue because central bank can bring about changes very early in the volume of paper money according to the needs of business, industry and messes.

5. The system of note issue has some advantages. If the central bank of the country has the monopoly of note issue, all such advantages will accrue to the government.

2. Bankers, Agent and Adviser to the Government:

As banker to the government, central bank provides all those service and facilities to the government which public gets from the ordinary banks. It operates the account of the public enterprise. It mangers government departmental undertaking and government funds and where there is a need gives loan to the government. From time to time, central bank advice the government on monetary, banking and financial matters.

3. Custodian of Cash Reserve of Commercial Bank:

Central bank is the bank of banks. This signifies that it has the same relationship with the commercial banks in the country that they gave with their customers. It provides security to their cash reserves, give them loan at the time of need, gives them advice on financial and economic matter and work as clearing house among various members bank.

4. Custodian of Nation's Reserve of International:

Central bank is the custodian of the foreign currency obtained from various countries. This has become an important function of central bank. These days, because with its help it can stabilize the external value of the currency.

5. Lender of the Last Resort:

Central bank works as lender of the last resort for commercial banks because in the time of need it provides them financial assistance and accommodation. Whenever a commercial bank faces financial crisis, central bank as lender of the last resort comes to its rescue by advancing loans and the bank is saved from being failed.

6. Clearing House Function:

All commercial bank have their accounts with the central bank. Therefore, central bank settles the mutual transactions of banks and thus saves all banks controlling each other individually for setting their individual transaction.

7. Credit Control:

These days, the most important function of a central bank is to control the volume of credit for bringing about stability in the general price level and accomplishing various other socio economic objectives. The significance of this function has increased so much that for property understanding it. The central bank has acquired the rights and powers of controlling the entire banking.

A central bank can adopt various quantitative and qualitative methods for credit control such as bank rate, open market operation, changes in reserve ratio selective controls, moral situation etc.

Other Functions:

Besides the 7 functions explained above, central banks perform many other functions that are as Follows:

8. Collection of Data

Central banks in almost all the countries collects statistical data regularly relating to economic aspects of money, credit, foreign exchange, banking etc. from time to time, committees and commission are appointed for studying various aspects relating to the aforesaid problem.

9. Central Banking in Developing Countries

The basic problem of underdeveloped countries is the problem of lack of capital formation whose main causes are lack of saving and investment. Therefore, central bank can play an important role by promoting capital formation through mobilizing saving s and encouraging investment

Credit Control through Monetary Policy:

1. Bank Rate Policy (BRP):

The Bank Rate Policy (BRP) is a very important technique used in the monetary policy for influencing the volume or the quantity of the credit in a country. The bank rate refers to rate at which the central bank (i.e RBI) rediscounts bills and prepares of commercial banks or provides advance to commercial banks against approved securities. It is "the standard rate at which the bank is prepared to buy or rediscount bills of exchange or other commercial paper eligible for purchase under the RBI Act". The Bank Rate affects the actual availability and the cost of the credit. Any change in the bank rate necessarily brings out a resultant change in the cost of credit available to commercial banks. If the RBI increases the bank rate than it reduce the volume of commercial banks borrowing from the RBI. It deters banks from further credit expansion as it becomes a more costly affair. Even with increased bank rate the actual interest rates for a short term lending go up checking the credit expansion. On the other hand, if the RBI reduces the bank rate, borrowing for commercial banks will be easy and cheaper. This will boost the credit creation. Thus any change in the bank rate is normally associated with the resulting changes in the lending rate and in the market rate of interest. However, the efficiency of the bank rate as a tool of monetary policy depends on existing banking network, interest elasticity of investment demand, size and strength of the money market, international flow of funds, etc.

2. Open Market Operation (OMO):

The open market operation refers to the purchase and/or sale of short term and long term securities by the RBI in the open market. This is very effective and popular instrument of the

monetary policy. The OMO is used to wipe out shortage of money in the money market, to influence the term and structure of the interest rate and to stabilize the market for government securities, etc. It is important to understand the working of the OMO. If the RBI sells securities in an open market, commercial banks and private individuals buy it. This reduces the existing money supply as money gets transferred from commercial banks to the RBI. Contrary to this when the RBI buys the securities from commercial banks in the open market, commercial banks sell it and get back the money they had invested in them. Obviously the stock of money in the economy increases. This way when the RBI enters in the OMO transactions, the actual stock of money gets changed.

Normally during the inflation period in order to reduce the purchasing power, the RBI sells securities and during the recession or depression phase she buys securities and makes more money available in the economy through the banking system. Thus under OMO there is continuous buying and selling of securities taking place leading to changes in the availability of credit in an economy. However there are certain limitations that affect OMO via; underdeveloped securities market, excess reserves with commercial banks, indebtedness of commercial banks, etc.

3. Variation in the Reserve Ratios (VRR):

The Commercial Banks have to keep a certain proportion of their total assets in the form of Cash Reserves. Some part of these cash reserves are their total assets in the form of cash. Apart of these cash reserves are also to be kept with the RBI for the purpose of maintaining liquidity and controlling credit in an economy. These reserve ratios are named as Cash Reserve Ratio (CRR) and a Statutory Liquidity Ratio (SLR). The CRR refers to some percentage of commercial bank's net demand and time liabilities which commercial banks have to maintain with the central bank and SLR refers to some percent of reserves to be maintained in the form of gold or foreign securities. In India the CRR by law remains in between 3-15 percent while the SLR remains in between 25-40 percent of bank reserves. Any change in the VRR (i.e. CRR + SLR) brings out a change in commercial banks reserves positions. Thus by varying VRR commercial banks lending capacity can be affected. Changes in the VRR helps in bringing changes in the cash reserves of commercial banks and thus it can affect the banks credit creation multiplier. RBI increases VRR

during the inflation to reduce the purchasing power and credit creation. But during the recession or depression it lowers the VRR making more cash reserves available for credit expansion.

(B) Qualitative Instruments or Selective Tools:

The Qualitative Instruments are also known as the Selective Tools of monetary policy. These tools are not directed towards the quality of credit or the use of the credit. They are used for discriminating between different uses of credit. It can be discrimination favoring export over import or essential over non-essential credit supply. This method can have influence over the lender and borrower of the credit. The Selective Tools of credit control comprises of following instruments.

1. Fixing Margin Requirements:

The margin refers to the "proportion of the loan amount which is not financed by the bank". Or in other words, it is that part of a loan which a borrower has to raise in order to get finance for his purpose. A change in a margin implies a change in the loan size. This method is used to encourage credit supply for the needy sector and discourage it for other non-necessary sectors. This can be done by increasing margin for the non-necessary sectors and by reducing it for other needy sectors.

Example: - If the RBI feels that more credit supply should be allocated to agriculture sector, then it will reduce the margin and even 85-90 percent loan can be given.

2. Consumer Credit Regulation:

Under this method, consumer credit supply is regulated through hire-purchase and installment sale of consumer goods. Under this method the down payment, installment amount, loan duration, etc is fixed in advance. This can help in checking the credit use and then inflation in a country.

3. Publicity:

This is yet another method of selective credit control. Through it Central Bank (RBI) publishes various reports stating what is good and what is bad in the system. This published information can help commercial banks to direct credit supply in the desired sectors. Through its weekly and monthly bulletins, the information is made public and banks can use it for attaining goals of monetary policy.

4. Credit Rationing:

Central Bank fixes credit amount to be granted. Credit is rationed by limiting the amount available for each commercial bank. This method controls even bill rediscounting. For certain purpose, upper limit of credit can be fixed and banks are told to stick to this limit. This can help in lowering banks credit expoursure to unwanted sectors.

5. Moral Suasion:

It implies to pressure exerted by the RBI on the indian banking system without any strict action for compliance of the rules. It is a suggestion to banks. It helps in restraining credit during inflationary periods. Commercial banks are informed about the expectations of the central bank through a monetary policy. Under moral suasion central banks can issue directives, guidelines and suggestions for commercial banks regarding reducing credit supply for speculative purposes.

6. Control through Directives: Under this method the central bank issue frequent directives to commercial banks. These directives guide commercial banks in framing their lending policy. Through a directive the central bank can influence credit structures, supply of credit to certain limit for a specific purpose. The RBI issues directives to commercial banks for not lending loans to speculative sector such as securities, etc beyond a certain limit.

7. Direct Action:

Under this method the RBI can impose an action against a bank. If certain banks are not adhering to the RBI's directives, the RBI may refuse to rediscount their bills and securities. Secondly, RBI may refuse credit supply to those banks whose borrowings are in excess to their capital. Central bank can penalize a bank by changing some rates. At last it can even put a ban on a particular bank if it does not follow its directives and work against the objectives of the monetary policy. These are various selective instruments of the monetary policy. However the success of these tools is limited by the availability of alternative sources of credit in economy, working of the Non-Banking Financial Institutions (NBFIs), profit motive of commercial banks and undemocratic nature off these tools. But a right mix of both the general and selective tools of monetary policy can give the desired results.

Money markets and capital markets:

As money became a commodity, the money market became a component of the financial markets for assets involved in short-term borrowing, lending, buying and selling with original maturities of one year or less. Trading in the money markets is done over the counter and is wholesale. Various instruments exist, such as Treasury bills, commercial paper, bankers' acceptances, deposits, certificates of deposit, bills of exchange, repurchase agreements, federal funds, and short-lived mortgage-, and asset-backed securities.[1] It provides liquidity funding for the global financial system. Money markets and capital markets are parts of financial markets. The instruments bear differing maturities, currencies, credit risks, and structure. Therefore they may be used to distribute the exposure.

Commercial Banking: Functions:

According to Prof. Sayers, "A bank is an institution whose debts are widely accepted in settlement

of other people's debts to each other." In this definition Sayers has emphasized the transactions from debts which are raised by a financial institution.

According to the Indian Banking Company Act 1949, "A banking company means any company which transacts the business of banking. Banking means accepting for the purpose of lending of investment of deposits of money from the public, payable on demand or other wise and withdraw able by cheque, draft or otherwise."

Functions of Commercial Banks:

Commercial bank being the financial institution performs diverse types of functions. It satisfies the financial needs of the sectors such as agriculture, industry, trade, communication, etc. That means they play very significant role in a process of economic social needs. The functions performed by banks are changing according to change in time and recently they are becoming customer centric and widening their functions. Generally the functions of commercial banks are divided into two categories viz. primary functions and the secondary functions. The following chart simplifies the **functions of banks**.

Primary Functions of Commercial Banks:

Commercial Banks performs various primary functions some of them are given below :

1. Accepting Deposits: Commercial bank accepts various types of deposits from public especially from its clients. It includes saving account deposits, recurring account deposits, fixed deposits, etc.

These deposits are payable after a certain time period.

2. Making Advances: The commercial banks provide loans and advances of various forms. It includes an over draft facility, cash credit, bill discounting, etc. They also give demand and demand and term loans to all types of clients against proper security.

3. Credit creation: It is most significant function of the commercial banks. While sanctioning a loan

to a customer, a bank does not provide cash to the borrower Instead it opens a deposit account from where the borrower can withdraw. In other words while sanctioning a loan a bank automatically creates deposits. This is known as a credit creation from commercial bank.

Secondary Functions of Commercial Banks:

Along with the primary functions each commercial bank has to perform several secondary functions too. It includes many agency functions or general utility functions. The secondary functions of commercial banks can be divided into agency functions and utility functions.

Agency Functions : Various agency functions of commercial banks are

1. To collect and clear cheque, dividends and interest warrant.
2. To make payment of rent, insurance premium, etc.
3. To deal in foreign exchange transactions.
4. To purchase and sell securities.
5. To act as trusty, attorney, correspondent and executor.
6. To accept tax proceeds and tax returns.

General Utility Functions: The general utility functions of the commercial banks include

1. To provide safety locker facility to customers.
2. To provide money transfer facility.
3. To issue traveler's cheque.
4. To act as referees.
5. To accept various bills for payment e.g. phone bills, gas bills, water bills, etc.

6. To provide merchant banking facility.
7. To provide various cards such as credit cards, debit cards, Smart cards, etc.

Organization and Operations (Credit Creation): The creation of credit or deposits is one of the most vital operations of the commercial banks. Similar to other corporations, banks aim at earnings profits. For this intention, they accept cash in demand deposits and advance loans on credit to customers. When a bank advances funds, it does not pay the amount in currency notes. However, it introduces a current account in the name of the investor and lets him to withdraw the necessary amount by cheques. By this way, banks create deposits or credit.

Demand deposits mount in two ways:

1. When the customer deposits currency with commercial banks, and
2. When banks advance loans, discount bills, provide overdraft facilities and make deposit investments through bonds and securities.

The first type of demand deposits is termed “primary deposits”. Banks play a passive play in introducing them.

The second type of demand deposits is termed as “derivative deposits”. Banks actively create deposits.

As per Withers,

Banks can generate credit by introducing a deposit, every time they advance a loan.

- This is for the reason that every time a loan is sanctioned, imbursement is made through cheques by the customers.
- All such imbursements are regulated through the clearing house.

- As long as the loan is due, a deposit of that amount remains pending in the books of the bank.

- Thus every loan creates a deposit; however, this is an overstated and tremendous outlook.

- They go to the contra intense.
- They hold that banks cannot create money out of skinny air.
- They can lend only what they have in cash.
- Hence, they cannot and do not create funds.

The Progression of Credit Creation:

A bank can lend parity to its surplus reserves. However, the whole banking system can lend and create credit up-till a multiple of its nominal surplus funds deposits.

The deposit multiplier is based upon the required reserve which is the foundation of credit creation.

Metaphorically, the required reserve ratio is given as:

$$RRr = \frac{RR}{D}$$

Or $RR = RRr \times D$

Where RR is the required cash reserves with banks, RRr is the required reserve ratio and D is the demand deposits of banks.

To represent that D is based on RR and RRr, we have divide both sides equally by RRr like the following:

$$\frac{RR}{RRr} = \frac{RRr \times D}{RRr}$$

Or $\frac{RR}{RRr} = D$

Or $\frac{1}{RRr} = \frac{D}{RR}$

Or $D = \frac{1}{RRr} \times RR$

Where 1 / RRr, is the reciprocal of the percentage ratio and is termed as the deposit expansion multiplier. It ascertains the bounds of the deposit expansion of a bank.

The optimum amount of demand deposits which the banking system can support with any specified value of RR is by applying the multiplier to RR.

Taking the original variation in the amount of deposits (ΔD) and in cash reserves (ΔRR), it follows from any specified percentage of RRr.

$$\Delta D = RR \times \frac{1}{RRr}$$

Non-Banking Financial Institutions: Meaning:

A non-bank financial institution (NBFI) is a financial institution that does not have a full banking license or is not supervised by a national or international banking regulatory agency. NBFIs facilitate bank-related financial services, such as investment, risk pooling, contractual savings, and

brokering. Examples of these include insurance firms, pawn shops, cashier's check issuers, check cashing locations, payday lending, currency exchanges, and microloan organizations. Alan Greenspan has identified the role of NBFIs in strengthening an economy, as they provide "multiple

alternatives to transform an economy's savings into capital investment [which] act as backup facilities should the primary form of intermediation fail."

Role:

NBFIs supplement banks by providing the infrastructure to allocate surplus resources to individuals and companies with deficits. Additionally, NBFIs also introduces competition in the provision of financial services. While banks may offer a set of financial services as a packaged

deal, NBFIs unbundle and tailor these service to meet the needs of specific clients. Additionally, individual NBFIs may specialize in one particular sector and develop an informational advantage.

Through the process of unbundling, targeting, and specializing, NBFIs enhances competition within the financial services industry.

Growth:

Some research suggests a high correlation between a financial development and economic growth.

Generally, a market-based financial system has better-developed NBFIs than a bank-based system,

which is conducive for economic growth.

Stability:

A multi-faceted financial system that includes non-bank financial institutions can protect economies from financial shocks and enable speedy recovery when these shocks happen. NBFIs provide "multiple alternatives to transform an economy's savings into capital investment, serve as backup facilities should the primary form of intermediation fail."

However, in the absence of effective financial regulations, non-bank financial institutions can actually exacerbate the fragility of the financial system.

Since not all NBFIs are heavily regulated, the shadow banking system constituted by these institutions could wreak potential instability. In particular, CIVs, hedge funds, and structured investment vehicles, up until the 2007-2012 global financial crisis, were entities that focused NBFI

supervision on pension funds and insurance companies, but were largely overlooked by regulators.

Because these NBFIs operate without a banking license, in some countries their activities are largely unsupervised, both by government regulators and credit reporting agencies. Thus, a large NBFI market share of total financial assets can easily destabilize the entire financial system. A prime example would be the 1997 Asian financial crisis, where a lack of NBFI regulation fueled a

credit bubble and asset overheating. When the asset prices collapsed and loan defaults skyrocketed,

the resulting credit crunch led to the 1997 Asian financial crisis that left most of Southeast Asia and Japan with devalued currencies and a rise in private debt.

Due to increased competition, established lenders are often reluctant to include NBFIs into existing

credit-information sharing arrangements. Additionally, NBFIs often lack the technological capabilities necessary to participate in information sharing networks. In general, NBFIs also contribute less information to credit-reporting agencies than do banks

Money Markets and Capital Markets: Meaning and Instruments:

As money became a commodity, the money market became a component of the financial markets

for assets involved in short-term borrowing, lending, buying and selling with original maturities of

one year or less. Trading in the money markets is done over the counter and is wholesale. Various instruments exist, such as Treasury bills, commercial paper, bankers' acceptances, deposits, certificates of deposit, bills of exchange, repurchase agreements, federal funds, and short-lived mortgage-, and asset-backed securities. It provides liquidity funding for the global financial system. Money markets and capital markets are parts of financial markets. The instruments bear differing maturities, currencies, credit risks, and structure. Therefore they may be used to distribute the exposure.

Participants:

The money market consists of financial institutions and dealers in money or credit who wish to either borrow or lend. Participants borrow and lend for short periods of time, typically up to thirteen months. Money market trades in short-term financial instruments commonly called "paper." This contrasts with the capital market for longer-term funding, which is supplied by bonds and equity.

The core of the money market consists of interbank lending--banks borrowing and lending to each other using commercial paper, repurchase agreements and similar instruments. These instruments are often benchmarked to (i.e. priced by reference to) the London Interbank Offered Rate (LIBOR) for the appropriate term and currency.

Finance companies typically fund themselves by issuing large amounts of asset-backed commercial paper (ABCP) which is secured by the pledge of eligible assets into an ABCP conduit.

Examples of eligible assets include auto loans, credit card receivables, residential/commercial mortgage loans, mortgage-backed securities and similar financial assets. Certain large corporations with strong credit ratings, such as General Electric, issue commercial paper on their own credit.

Other large corporations arrange for banks to issue commercial paper on their behalf via commercial paper lines.

In the United States, federal, state and local governments all issue paper to meet funding needs.

States and local governments issue municipal paper, while the US Treasury issues Treasury bills to fund the US public debt:

□□Trading companies often purchase bankers' acceptances to be tendered for payment to overseas suppliers.

□□Retail and institutional money market funds

□□Banks

□□Central banks

□□Cash management programs

□□Merchant banks

Functions of the money market:

□□Transfer of large sums of money

□□Transfer from parties with surplus funds to parties with a deficit

□□Allow governments to raise funds

□□Help to implement monetary policy

□□Determine short-term interest rates

Common money market instruments:

□□Certificate of deposit - Time deposit, commonly offered to Common money market instruments:

□□Certificate of deposit - Time deposit, commonly offered to consumers by banks, thrift institutions, and credit unions.

□□Repurchase agreements - Short-term loans—normally for less than two weeks and frequently for one day—arranged by selling securities to an investor with an agreement to repurchase them at a fixed price on a fixed date.

□□Commercial paper - short term usanse promissory notes issued by company at discount to face value and redeemed at face value

□□Eurodollar deposit - Deposits made in U.S. dollars at a bank or bank branch located outside the

United States.

□□Federal agency short-term securities - (in the U.S.). Short-term securities issued by government sponsored enterprises such as the Farm Credit System, the Federal Home Loan Banks and the Federal National Mortgage Association.

□□Federal funds - (in the U.S.). Interest-bearing deposits held by banks and other depository institutions at the Federal Reserve; these are immediately available funds that institutions borrow or lend, usually on an overnight basis. They are lent for the federal funds rate.

□□Municipal notes - (in the U.S.). Short-term notes issued by municipalities in anticipation of tax receipts or other revenues.

□□Treasury bills - Short-term debt obligations of a national government that are issued to mature in three to twelve months.

□□Money funds - Pooled short maturity, high quality investments which buy money market securities on behalf of retail or institutional investors.

□□ Foreign Exchange Swaps - Exchanging a set of currencies in spot date and the reversal of the exchange of currencies at a predetermined time in the future.

Capital market:

Capital markets are financial markets for the buying and selling of long-term debt- or equity backed securities. These markets channel the wealth of savers to those who can put it to long-term productive use, such as companies or governments making long-term investments. Financial regulators, such as the UK's Bank of England (BoE) or the U.S. Securities and Exchange

Commission (SEC), oversee the capital markets in their jurisdictions to protect investors against fraud, among other duties.

Modern capital markets are almost invariably hosted on computer-based electronic trading systems; most can be accessed only by entities within the financial sector or the treasury departments of governments and corporations, but some can be accessed directly by the public.

There are many thousands of such systems, most only serving only small parts of the overall capital markets. Entities hosting the systems include stock exchanges, investment banks, and government departments. Physically the systems are hosted all over the world, though they tend to be concentrated in financial centers like London, New York, and Hong Kong. Capital markets are defined as markets in which money is provided for periods longer than a year.

A key division within the capital markets is between the primary markets and secondary markets. In primary markets, new stock or bond issues are sold to investors, often via a mechanism known as underwriting. The main entities seeking to raise long-term funds on the primary capital markets

are governments (which may be municipal, local or national) and business enterprises (companies). Governments tend to issue only bonds, whereas companies often issue either equity or bonds. The main entities purchasing the bonds or stock include pension funds, hedge funds, sovereign wealth funds, and less commonly wealthy individuals and investment banks trading on their own behalf. In the secondary markets, existing securities are sold and bought among investors

or traders, usually on a securities exchange, over-the-counter, or elsewhere. The existence of secondary markets increases the willingness of investors in primary markets, as they know they are likely to be able to swiftly cash out their investments if the need arises.

A second important division falls between the stock markets (for equity securities, also known as

shares, where investors acquire ownership of companies) and the bond markets (where investors become creditors).

The money markets are used for the raising of short term finance, sometimes for loans that are expected to be paid back as early as overnight. Whereas the *capital markets* are used for the raising

of long term finance, such as the purchase of shares, or for loans that are not expected to be fully paid back for at least a year.

Funds borrowed from the *money markets* are typically used for general operating expenses, to cover brief periods of illiquidity. For example a company may have inbound payments from customers that have not yet cleared, but may wish to immediately pay out cash for its payroll.

When a company borrows from the primary *capital markets*, often the purpose is to invest in additional physical capital goods, which will be used to help increase its income. It can take many

months or years before the investment generates sufficient return to pay back its cost, and hence the finance is long term

Together, *money markets* and *capital markets* form the financial markets as the term is narrowly understood. The capital market is concerned with long term finance. In the widest sense, it consist

of a series of channels through which the saving of the community are made available for industrial and commercial enterprises and public authorities

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