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M.A.ECONOMICS
(First Year)

Monetary Economics

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MONETARY ECONOMICS

Unit I: Classical Theories

Demand for Money Quantity theories of money – Fisher and Cambridge- Keynesian monetary theory- James Tobin's portfolio analysis of money demand- Don Patinkin's Integration– Real Balance Effect- Milton Friedman's reformulated quantity theory.

Unit II: Supply of Money

Supply of Money Types and determinants of money supply – money multiplier- Theories of interest rate – classical – Keynes – Hicks – Hansen.

Unit III: Money and Capital Market

Money and Capital Market Significance and functions of Money market and capital market - Role of financial intermediaries – Effects of financial intermediation- Non-banking financial institutions – Gurley and Shaw theory.

Unit IV: Banking and its functions

Banking Functions of Commercial banks - Credit creation – process and limitations Role of Commercial banks after nationalization – after reforms- Role of RBI – Regulation of money supply and credit- Narasimham Committee Reports– 1991 and 1998- RaguramRajan Committee Report -2007.

Unit V: Monetary Policies

Monetary Policy Objectives and Instruments of Monetary policy– Limitations of monetary policy- Monetarism and Keynesianism – Comparison - Supply side policies.

Text Books:

1. Bain, Keith and Howells, Peter: Monetary Economics: Policy and its theoretical Basis, Palgrave Macmillan, 2nd Edition, 2009
2. Mishkin .S. Frederic-The Economics of Money, Banking and Financial Markets, Pearson Publication, 11th Edition, 2015

References:

1. Jhingan, M.L. (2005), Monetary Economics [Konark Publication, New Delhi].
2. Sundaram, K.P.M. (2003), Money, Banking and International Trade [Vikas, New Delhi].

TABLE OF CONTENTS

UNIT	TITLE	PAGE NO.
I	Classical Theories of Money	1 - 45
II	Supply of Money	46 – 75
III	Money and Capital Market	76 - 110
IV	Banking and its functions	111 - 133
V	Monetary Policies	134 - 150

UNIT - I

CLASSICAL THEORIES OF MONEY

1.1. Introduction

Recently a number of economists have shown a revived in the monetary theory of the classicists and of the members of the Lausanne School and their successors. It has been maintained that all of these authors held basic- ally common views which have been called "the classical system". Moreover, it has been argued that this system suffers from serious formal shortcomings, in particular that either it is inconsistent or it must leave the absolute price level indeterminate. We believe a summary of the results of the discussion is now appropriate, and that the conflicting views can be evaluated and to some extent reconciled. Moreover, the arguments can be stated rigorously without recourse to the mathematical apparatus which has been employed. A detailed restatement is therefore included in the belief that the discussion will become available to many who did not follow it before. However, the immediate centre of contention is Patinkin restatement and refinement of the Lange position. We shall therefore describe the Lange-Patinkin version of the classical system and the difficulties which they have shown to be inherent in it. A more satisfactory structure which Patinkin has called "the modified classical system" will then be outlined. Finally, it will be argued through re-examination of some of the classical writings that most of the group probably never held views like those ascribed to them. Indeed, it will appear that "the modified classical system" is a considerably closer approximation to their analysis. No doubt it is true that "the classics", particularly as the term has been used in the discussion, denotes too heterogeneous a group to permit wholesale judgement to be passed on the basis of selections from several members alleged to be representative. Nevertheless, many of the members of that group, among them some of those specifically accused, have passages in their writings which explicitly contradict the charges against them. We do not mean that none of these writers ever expressed himself incorrectly or in a misleading manner on this subject, or that they were all in possession of a full analysis of the logical structure of the problem. It does, however, seem

that in most cases where the problem was considered was analysed in a manner which is at least formally valid.

Consider an exchange economy using (say) paper money as a medium of exchange. An individual who demands (supplies) a commodity gives up (receives) an equal value of the medium of exchange. If we call paper money a good and sum over all individuals, then by definition the total value of goods1 (including money flow) demanded in this economy is identically equal to the total value of goods (including money flow) supplied. This result, which Lange Calls Walras' Law2, has nothing whatsoever to do with equilibrium in the various markets, and holds for all price configurations. Suppose that at any given set of prices people will supply commodities when and only when they use (and intend to use) the money received to demand other commodities c immediately", i.e., during the period under considerate Again, by summing over all individuals, we see that at any set of prices the total money demand for commodities will be equal to the total money value of the quantity supplied of all commodities. It is this which Lange and Patinkin have identified with Say's Law. Because it is taken to hold no matter what the price structure and to distinguish it from other versions of the “Law" we shall refer to it as Say's Identity.

Patinkin in discussing his version of the classical system indicates one particular set of circumstances which involves Say's Identity. He states that the classics, particularly members of the Lausanne School, believed that money has no utility of its own, taking this to imply that in the static classical world there is no reason for any individual to desire any cash balances. Anyone who receives cash will try to exchange all his (useless) money for goods which have utility, so that, if there is a non-zero money supply, prices will rise indefinitely and the money market will be in equilibrium only with infinite prices. Patinkin concludes that a classical economy can operate only if there are no stocks of money, and presents the paradox that this sort of “monetary economy” must in effect be a barter economy with a non-existent money acting only as a unit of account! Moreover, if people have no money stocks and never add, or want to add, to them, Say's Identity clearly holds, as it must

in a barter economy, since commodities will be demanded at once in any exchange.

An immediate implication of Say's Identity, or rather an equivalent way of stating it, is that the quantity of money demanded, considered either as a stock or a flow, is independent of the price structure and is always equal to the quantity of money supplied. For at any set of prices, the value of the total quantity of commodities supplied is equal to the total (non-reservation or flow) demand for money. Likewise the value of the total commodity demand is the quantity of money flow supplied. Thus with Say's Identity the quantity of money flow demanded must always equal the quantity supplied. Moreover, the quantity of money stock supplied and demanded (cash balances) will be equal when and only when the demand for and supply of cash flows are equal, because if there is, e.g., an excess supply of cash, people will want to get rid of more money flow than is demanded. Thus, Say's Identity holds if and only if the quantity of money (stock or flow) is always equal to the quantity supplied. In our Say's Identity economy, let the money price of all commodities double (the quantity of money remaining unchanged or varying in an arbitrary manner). Since the relative prices of all commodities have remained the same we cannot expect buyers or sellers to make any substitutions among commodities. Only a substitution of money for commodities (an excess supply of commodities) is indicated, commodity prices having risen. But Say's Identity clearly precludes this too. Thus nothing will change with the change in price level. It follows that the quantity demanded of each commodity will depend only on relative commodity prices. What is meant by the Leontief ([i5])-Lange-Patinkin contention that the classical supply and demand (excess demand) functions are homogeneous of degree zero in prices alone? In particular, this functional form requires that the quantity of any commodity demanded or supplied be unaffected by a proportional change in prices no matter what is happening to the stock of cash-even if the stock of cash remains constant. It also requires that quantities demanded or supplied and relative prices of commodities, can never, even momentarily, be affected by the quantity of money. The condition that equilibrium exists in all commodity markets can be sufficient at most to determine relative commodity prices. To

determine absolute prices we must look at the remaining market-the money market. But the money market is always in equilibrium, no matter what the levels of the various prices. Hence, the condition that it be in equilibrium cannot be used to determine absolute prices. We conclude that in a Say's Identity economy, relative commodity prices are determinate, commodity quantities demanded and supplied depend only on relative commodity prices, and absolute (money) prices are indeterminate. Money is a "veil" since a good can have importance in the determination of equilibrium in the various markets of an economy only if the market for this good can conceivably be out of equilibrium. This version of the classical system the analysis of price determination is thus necessarily incomplete as it cannot specify (equilibrium) absolute prices. According to Lange and Patinkin, the classics nevertheless sought to dichotomize the pricing process by determining relative prices in the "real sector" of the economy and absolute prices by introducing an additional relationship-the so-called Cambridge equation or its equivalent in a cash balance or other form of the quantity theory of money. This relates the quantity of money which people wish to hold to the price level by postulating that the quantity of cash the public demands will rise with absolute prices. Thus there would, ceteris paribus, be one and only one equilibrium price level corresponding to every level of the supply of cash-that at which people were willing to hold the amount of cash supplied. Clearly this contradicts Say's Identity which, as we have seen, requires that the quantity of cash demanded equal the supply no matter what the price structure. Thus, with the addition of a quantity theory or any other explanation of the absolute price level, this version of the classical system becomes self-contradictory. Without any such addition the system is incomplete in its explanation of the behaviour of the economy.

1.2. Demand for Money Quantity theories of money

Demand for money is a prominent issue in macroeconomics due to the important role that monetary demand plays in the determination of the price level, interest income. Demand for money arises from two important functions of money. The first is that money acts as a medium of exchange and second is a store of value. Thus individuals and businessman wish to hold money

partly in cash and partly in the form of assets. In fact, people demand for money is not for nominal money holdings but real money balances, because if people are merely concerned with nominal money holdings irrespective of the price level, they said to suffer from money illusion. In this unit we will discuss the relationship between money supply and general prices, which is mainly dealt by the two approaches of the quantity theory of money, viz., Fisher approach and Cambridge approach. Both the approaches suggest that an increase in money supply result in proportionate increase in the price level. People hold money because it has purchasing power its ability to buy goods and services. This amount varies across persons depending upon his income, preferences, interest rate, etc. The demand for money is the demand for real balances or (M/P). When there is an increase in the general price level (p), nominal money balances (M) has to be increased in proportion to the rise in the price level ceteris paribus, to keep real balances constant. However, in recent years Baumol, Tobin and Friedman have put forward new theories of demand for money.

1.2.1. Quantity theory of Money: Fisher Approach

The transactions version of the quantity theory of money was provided by the American economist Irving Fisher in his book- The Purchasing Power of Money (1911). According to Fisher, "Other things remaining unchanged, as the quantity of money in circulation increases, the price level also increases in direct proportion and the value of money decreases and vice versa".

Fisher's quantity theory is best explained with the help of his famous equation of exchange:

$$MV = PT$$

(Or)

$$P = MV/T$$

Like other commodities, the value of money or the price level is also determined by the demand and supply of money.

1. Supply of Money:

The supply of money consists of the quantity of money in existence (M) multiplied by the number of times this money changes hands, i.e., the velocity of money (V). In Fisher's equation, V is the transactions velocity of money

which means the average number of times a unit of money turns over or changes hands to effectuate transactions during a period of time. Thus, MV refers to the total volume of money in circulation during a period of time. Since money is only to be used for transaction purposes, total supply of money also forms the total value of money expenditures in all transactions in the economy during a period of time.

2. Demand for Money:

Money is demanded not for its own sake (i.e., for hoarding it), but for transaction purposes. The demand for money is equal to the total market value of all goods and services transacted. It is obtained by multiplying total amount of things (T) by average price level (P). Thus, Fisher's equation of exchange represents equality between the supply of money or the total value of money expenditures in all transactions and the demand for money or the total value of all items transacted.

Supply of money = Demand for Money

(Or)

Total value of money expenditures in all transactions = Total value of all items transacted

$$MV = PT$$

Or

$$P = MV/T$$

Where,

M is the quantity of money

V is the transaction velocity

P is the price level.

T is the total goods and services transacted.

The equation of exchange is an identity equation, i.e., MV is identically equal to PT (or MV = PT). It means that in the ex-post or factual sense, the equation must always be true. The equation states the fact that the actual total value of all money expenditures (MV) always equals the actual total value of all items sold (PT). What is spent for purchases (MV) and what is received for sale (PT) are always equal; what someone spends must be received by someone. In this sense, the equation of exchange is not a theory but rather a truism. Irving

Fisher used the equation of exchange to develop the classical quantity theory of money, i.e., a causal relationship between the money supply and the price level. On the assumptions that, in the long run, under full-employment conditions, total output (T) does not change and the transactions velocity of money (V) is stable, Fisher was able to demonstrate a causal relationship between money supply and price level. In this way, Fisher concludes, "… the level of price varies directly with the quantity of money in circulation provided the velocity of circulation of that money and the volume of trade which it is obliged to perform are not changed". Thus, the classical quantity theory of money states that V and T being unchanged, changes in money cause direct and proportional changes in the price level. Irving Fisher further extended the equation of exchange so as to include demand (bank) deposits (M') and their velocity, (V') in the total supply of money.

Thus, the equation of exchange becomes:

$$MV + M'V' = PT$$

or

$$P = \frac{MV + M'V'}{T}$$

Thus, according to Fisher, the level of general prices (P) depends exclusively on five definite factors:

(a) The volume of money in circulation (M);

(b) Its velocity of circulation (V);

(c) The volume of bank deposits (M');

(d) Its velocity of circulation (V');

(e) The volume of trade (T);

The transactions approach to the quantity theory of money maintains that, other things remaining the same, i.e., if V, M', V', and T remain unchanged, there exists a direct and proportional relation between M and P; if the quantity of money is doubled, the price level will also be doubled and the value of money halved; if the quantity of money is halved, the price level will also be halved and the value of money doubled.

Assumptions of Fisher's Quantity Theory:

Fisher's transactions approach to the quantity theory of money is based on the following assumptions:

1. Constant Velocity of Money:

According to Fisher, the velocity of money (V) is constant and is not influenced by the changes in the quantity of money. The velocity of money depends upon exogenous factors like population, trade activities, habits of the people, interest rate, etc. These factors are relatively stable and change very slowly

2. Constant Volume of Trade or Transactions:

Total volume of trade or transactions (T) is also assumed to be constant and is not affected by changes in the quantity of money. T is viewed as independently determined by factors like natural resources, technological development, population, etc., which are outside the equation and change slowly over time. Thus, any change in the supply of money (M) will have no effect on T. Constancy of T also means full employment of resources in the economy.

3. Price Level is a Passive Factor:

According to Fisher the price level (P) is a passive factor which means that the price level is affected by other factors of equation, but it does not affect them. P is the effect and not the cause in Fisher's equation. An increase in M and V will raise the price level. Similarly, an increase in T will reduce the price level.

4. Money is a Medium of Exchange:

The quantity theory of money assumed money only as a medium of exchange. Money facilitates the transactions. It is not hoarded or held for speculative purposes.

5. Constant Relation between M and M':

Fisher assumes a proportional relationship between currency money (M) and bank money (M'). Bank money depends upon the credit creation by the commercial banks which, in turn, are a function of the currency money (M). Thus, the ratio of M' to M remains constant and the inclusion of M' in the equation does not disturb the quantitative relation between quantity of money (M) and the price level (P).

6. Long Period:

The theory is based on the assumption of long period. Over a long period of time, V and T are considered constant.

Thus, when M', V, V' and T in the equation MV + M'Y' = PT are constant over time and P is a passive factor, it becomes clear, that a change in the money supply (M) will lead to a direct and proportionate change in the price level (P). The effects of a change in money supply on the price level and the value of money are graphically shown in Figure 1.1 (A) and (B) respectively:

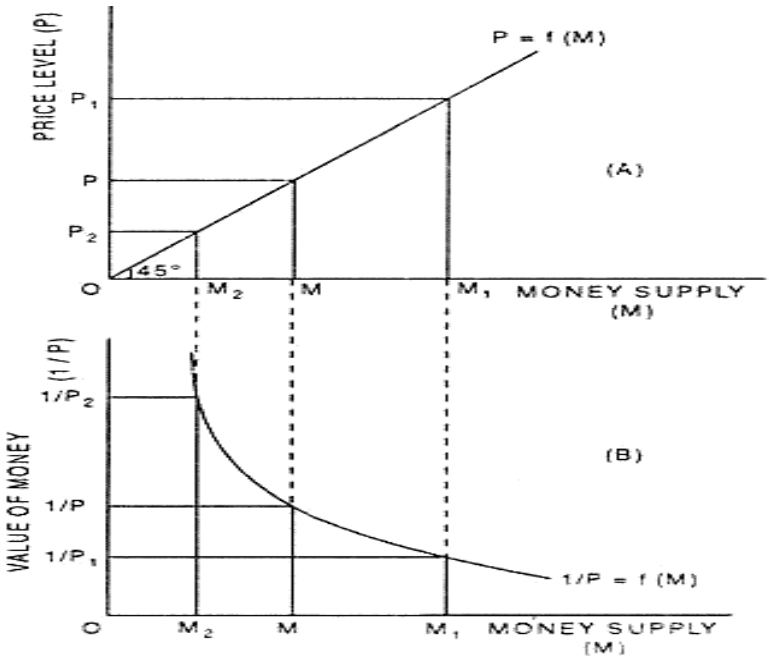

Fig.1.1. Fisher Quantity theory

(i) In Figure 1.1(A), when the money supply is doubled from OM to OM_1, the price level is also doubled from OP to OP_1. When the money supply is halved from OM to OM_2, the price level is halved from OP to OP_2. Price curve, P = f(M), is a 45° line showing a direct proportional relationship between the money supply and the price level.

(ii) In Figure 1.1(B), when the money supply is doubled from OM to OM_1; the value of money is halved from O1/P to $O1/P_1$ and when the money supply is halved from OM to OM_2, the value of money is doubled from O1/P to $O1/P_2$. The value of money curve, 1/P = f (M) is a rectangular hyperbola curve showing an inverse proportional relationship between the money supply and the value of money.

Example:

Fisher's quantity theory of money can be explained with the help of an example. Suppose M = Rs. 1000. M' = Rs. 500, V = 3, V' = 2, T = 4000 goods.

Thus, when money supply in doubled, i.e., increases from Rs. 4000 to 8000, the price level is doubled. i.e., from Re. 1 per good to Rs. 2 per good and the value of money is halved, i.e., from 1 to 1/2. Thus, when money supply is halved, i.e., decreases from Rs. 4000 to 2000, the price level is halved, i.e., from 1 to 1/2, and the value of money is doubled, i.e., from 1 to 2 over time.

$$P = \frac{MV + M'V'}{T}$$

$$P = \frac{(1000 \times 3) + (500 \times 2)}{4000}$$

$$= \text{Re. 1 per good}$$

Value of money (1/P) = 1

If the supply of money is doubled

$$P = \frac{(2000 \times 3) + (1000 \times 2)}{4000}$$

$$= \text{Rs. 2 per good}$$

Value of money (1/P) =1/2

Thus, V tends to remain constant so that any change in supply of money (M) will have no effect on the velocity of money (V).

Criticisms of Quantity Theory of Money:

The quantity theory of money as developed by Fisher has been criticised on the following grounds:

1. Interdependence of Variables:

(i) M Influences V – As money supply increases, the prices will increase. Fearing further rise in price in future, people increase their purchases of goods and services. Thus, velocity of money (V) increases with the increase in the money supply (M).

(ii) M Influences V' – When money supply (M) increases, the velocity of credit money (V') also increases. As prices increase because of an increase in money supply, the use of credit money also increases. This increases the velocity of credit money (V').

(iii) P Influences T – Fisher assumes price level (P) as a passive factor having no effect on trade (T). But, in reality, rising prices increase profits and thus promote business and trade.

(iv) P Influences M – According to the quantity theory of money, changes in money supply (M) is the cause and changes in the price level (P) is the effect.

But, critics maintain that a change in the price level occurs independently and this later on influences money supply.

(v) T Influences V – If there is an increase in the volume of trade (T), it will definitely increase the velocity of money (V).

(vi) T Influences M – During prosperity growing volume of trade (T) may lead to an increase in the money supply (M), without altering the prices.

(vii) M and T are not Independent – According to Keynes, output remains constant only under the condition of full employment. But, in reality less-than-full employment prevails and an increase in the money supply increases output (T) and employment.

2. Unrealistic Assumption of Long Period:

The quantity theory of money has been criticised on the ground that it provides a long-term analysis of value of money. It throws no light on the short-run problems. Keynes has aptly remarked that "in the long-run we are all dead". Actual problems are short-run problems. Thus, quantity theory has no practical value.

3. Unrealistic Assumption of full Employment:

Keynes' fundamental criticism of the quantity theory of money was based upon its unrealistic assumption of fall employment. Full employment is a rare phenomenon in the actual world. In a modern capitalist economy, less than full employment and not full employment is a normal feature. According to Keynes, as long as there is unemployment, every increase in money supply leads to a proportionate increase in output, thus leaving the price level unaffected.

4. Static Theory:

The quantity theory assumes that the values of V, V', M' and T remain constant. But, in reality, these variables do not remain constant. The assumption of constancy of these factors makes the theory a static theory and renders it inapplicable in the dynamic world.

5. Simple Truism:

The equation of exchange (MV = PT) is a mere truism and proves nothing. It is simply a factual statement which reveals that the amount of money paid in exchange for goods and services (MV) is equal to the market

value of goods and services received (PT), or, in other words, the total money expenditure made by the buyers of commodities is equal to the total money receipts of the sellers of the commodities. The equation does not tell anything about the causal relationship between money and prices; it does not indicate which the cause is and which the effect is.

6. Technically Inconsistent:

Prof. Halm considers the equation of exchange as technically inconsistent. M in the equation is a stock concept; it refers to the stock of money at a point of time. V, on the other hand, is a flow concept, it refers to velocity of circulation of money over a period of time, and M and V are non-comparable factors and cannot be multiplied together. Hence the left-hand side of the equation MV = PT is inconsistent.

7. Fails to Explain Trade Cycles:

The quantity theory does not explain the cyclical fluctuations in prices. It does not tell why during depression the prices fall even with the increase in the quantity of money and during the boom period the prices continue to rise at a faster rate in spite of the adoption of tight money and credit policy.

The proper explanation for the decline.in prices during depression is the fall in the velocity of money and for the rise in prices during boom period is the increase in the velocity of money. Thus, the quantity theory of money fails to explain the trade cycles. Crowther has remarked, "The quantity theory is at best, an imperfect guide to the causes of the cycle."

8. Ignores Other Determinants of Price Level:

The quantity theory maintains that price level is determined by the factors included in the equation of exchange, i.e. by M, V and T, and unrealistically establishes a direct and proportionate relationship between the quantity of money and the price level. It ignores the importance of many other determinates of prices, such as income, expenditure, investment, saving, consumption, population, etc.

9. Fails to Integrate Monetary Theory with Price Theory:

The classical quantity theory falsely separates the theory of value from the theory of money. Money is considered neutral and changes in money supply are believed to affect the absolute prices and not relative prices. Keynes

criticises this view and maintains that money plays an active role and both the theory of money and the theory of value are essential parts of the general theory of output, employment and money. He integrated the two theories through the rate of interest.

10. Money as a Store of Value Ignored:

The quantity theory of money considers money only as a medium of exchange and completely ignores its importance as a store of value. Keynes recognised the stores of value function of money and laid emphasis on the demand for money for speculative purpose as against the classical emphasis on the transactions and precautionary demand for money.

11. No Discussion of Velocity of Money:

The quantity theory of money does not discuss the concept of velocity of circulation of money, nor does it throw light on the factors influencing it. It regards the velocity of money to be constant and thus ignores the variation in the velocity of money which are bound to occur in the long period.

12. One-Sided Theory:

Fisher's transactions approach is one- sided. It takes into consideration only the supply of money and its effects and assumes the demand for money to be constant. It ignores the role of demand for money in causing changes in the value of money.

13. No Direct and Proportionate Relation between M and P:

Keynes criticised the classical quantity theory of money on the ground that there is no direct and proportionate relationship between the quantity of money (M) and the price level (P). A change in the quantity of money influences prices indirectly through its effects on the rate of interest, investment and output.The effect on prices is also not predictable and proportionate. It all depends upon the nature of the liquidity preference function, the investment function and the consumption function. The quantity theory does not explain the process of causation between M and P.

14. A Redundant Theory:

The critics regard the quantity theory as redundant and unnecessary. In fact, there is no need of a separate theory of money. Like all other commodities, the value of money is also determined by the forces of demand

and supply of money. Thus, the general theory of value which explains the value determination of a commodity can also be extended to explain the value of money.

15. Crowthers Criticism:

Prof. Crowther has criticised the quantity theory of money on the ground that it explains only 'how it works' of the fluctuations in the value of money and does not explain 'why it works' of these fluctuations. As he says, "The quantity theory can explain the 'how it works' of fluctuations in the value of money… but it cannot explain the 'why it works', except in the long period".

Implications of Quantity Theory of Money:

Various theoretical and policy implications of the quantity theory of money are given below:

1. Proportionality of Money and Prices:

The quantity theory of money leads to the conclusion that the general level of prices varies directly and proportionately with the stock of money, i.e., for every percentage increase in the money stock, there will be an equal percentage increase in the price level. This is possible in an economy – (a) whose internal mechanism is capable of generating a full-employment level of output, and (b) in which individuals maintain a fixed ratio between their money holdings and money value of their transactions.

2. Neutrality of Money:

The quantity theory of money justifies the classical belief that money is neutral' or 'money is a veil' or 'money does not matter'. It implies that changes in the money supply are neutral in the sense that they affect the absolute prices and not the relative prices. Since, consumer spending and business spending decisions depend upon relative prices; changes in the money supply do not affect real variables such as employment and output. Thus, money is neutral.

3. Dichotomisation of the Price Process:

The quantity theory also justifies the dichotomisation of the price process by the classical economists into its real and monetary aspects. The relative (or real) prices are determined in the commodity markets and the absolute (or nominal) prices in the money market. Since money is neutral and

changes in money supply affect only the monetary and not the real phenomena, the classical economists developed the theory of employment and output entirely in real terms and separated it from their monetary theory of absolute prices.

4. Monetary Theory of Prices:

The quantity theory of money upholds the view that the general level of prices is mainly a monetary phenomenon. The non-monetary factors, like taxes, prices of imported goods, industrial structure, etc., do not have lasting influence on the price level. These factors may raise the prices in the short run, but this price rise will reduce actual money balances below their desired level. This will lead to fall in money spending and a consequent fall in the price level until the original price is restored.

5. Role of Monetary Policy:

In a self-adjusting free-market economy in which changes in money supply do not affect the real macro variables of employment and output, there is little room left for a monetary policy. But the classical economists recognised the existence of frictional unemployment which represents temporary disequilibrium situation.

Such a situation arises when wages and prices are rigid downward. To me such a situation of unemployment, the classical economists advocated a stabilising monetary policy of increasing money supply. An increase in the money supply increases total spending and the general price level. Wage will rise less rapidly (or relative wages will fall) in the labour surplus areas, thereby reducing unemployment Thus, through a judicious use of monetary policy, the time lag between disequilibrium and adjustment can shortened; or, in the case of frictional unemployment, the duration of unemployment can be reduce. Thus, the classical economists assigned a modest stabilising role to monetary policy to deal with the disequilibrium situation.

1.2.2. Cambridge Equations (Or) Cash Balances Approach:

As an alternative to Fishers quantity theory of money, Cambridge economists Marshall, Pigou, Robertson and Keynes formulated the cash balances approach. Like value theory, they regarded the determination of value of money in terms of supply and demand. Robertson wrote in this

connection: “Money is only one of the many economic things. Its value, therefore, is primarily determined by exactly the same two factors as determine the value of any other thing, namely, the conditions of demand for it, and the quantity of it available.” The supply of money is exogenously determined at a point of time by the banking system. Therefore, the concept of velocity of circulation is altogether discarded in the cash balances approach because it obscures the motives and decisions of people behind it. On the other hand, the concept of demand for money plays the major role in determining the value of money. The demand for money is the demand to hold cash balances for transactions and precautionary motives. Thus the cash balances approach considers the demand for money not as a medium of exchange but as a store of value. Robertson expressed this distinction as money “on the wings” and money “sitting”. It is “money sitting” that reflects the demand for money in the Cambridge equations. The Cambridge equations show that given the supply of money at a point of time, the value of money is determined by the demand for cash balances. When the demand for money increases, people will reduce their expenditures on goods and services in order to have larger cash holdings. Reduced demand for goods and services will bring down the price level and raise the value of money. On the contrary, fall in the demand for money will raise the price level and lower the value of money.

The Cambridge cash balances equations of Marshall, Pigou, Robertson and Keynes are discussed as under:

Marshall’s Equation:

Marshall did not put his theory in equation form and it was for his followers to explain it algebraically. Friedman has explained Marshall’s views thus: “As a first approximation, we may suppose that the amount one wants to hold bears some relation to one’s income, since that determines the volume of purchases and sales in which one is engaged. We then add up the cash balances held by all holders of money in the community and express the total as a fraction of their total income.” Thus we can write:

$$M = kPY$$

where M stands for the exogenously determined supply of money, k is the fraction of the real money income (PY) which people wish to hold in cash and demand deposits, P is the price level, and Y is the aggregate real income of the community. Thus the price level P = M/kY

Or the value of money (the reciprocal of price level) is 1/P = kY/M

Pigou's Equation:

Pigou was the first Cambridge economist to express the cash balances approach in the form of an equation:

$$P = kR/M$$

where P is the purchasing power of money or the value of money (the reciprocal of the price level), k is the proportion of total real resources or income (R) which people wish to hold in the form of titles to legal tender, R is the total resources (expressed in terms of wheat), or real income, and M refers to the number of actual units of legal tender money. The demand for money, according to Pigou, consists not only of legal money or cash but also bank notes and bank balances. In order to include bank notes and bank balances in the demand for money, Pigou modifies his equation as

$$P = kR/M \{c + h (1-c)\}$$

Where c is the proportion of total real income actually held by people in legal tender including token coins, (1-c) is the proportion kept in bank notes and bank balances, and h is the proportion of actual legal tender that bankers keep against the notes and balances held by their customers.

Pigou points out that when k and R in the equation P=kR/M and k, R, c and h are taken as constants then the two equations give the demand curve for legal tender as a rectangular hyperbola. This implies that the demand curve for money has a uniform unitary elasticity.

This is shown in Figure 1.2, where DD1 is the demand curve for money and Q1M1, Q2M2, and Q3M3 are the supply curves of money drawn on the assumption that the supply of money is fixed at a point of time. The value of money or Pigou purchasing power of money P is taken on the vertical axis. The figure shows that when the supply of money increases from OM1 to OM2, the value of money is reduced from OP1 to OP2. The fall in the value of money by P1P2 exactly equals the increase in the supply of money by M1M2. If the

supply of money increases three times from OM1 to OM3 the value of money is reduced by exactly one-third from OP1 to OP3.

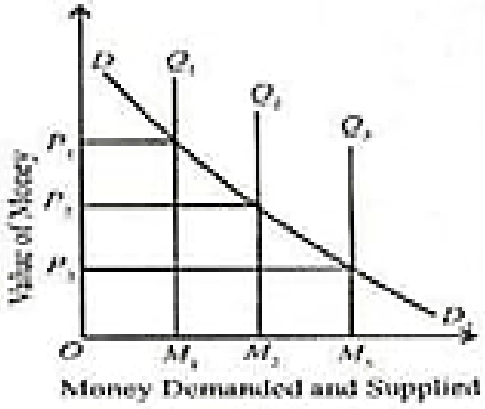

Fig.1.2. Cambridge Approaches

Thus the demand curve for money DD1 is a rectangular hyperbola because it shows changes in the value of money exactly in reverse proportion to the supply of money.

Robertson's Equation:

To determine the value of money or its reciprocal the price level, Robertson formulated an equation similar to that of Pigou. The only difference between the two beings that instead of Pigous total real resources R, Robertson gave the volume of total transactions T. The Robertsonian equation is

$$M = PkT \text{ (or)}$$

$$P = M/kT$$

Where P is the price level, M is the total quantity of money, k is the proportion of the total amount of goods and services (T) which people wish to hold in the form of cash balances, and T is the total volume of goods and services purchased during a year by the community. If we take P as the value of money instead of the price level as in Pigous equation, then Robertsons equation exactly resembles Pigous P = kT/M.

Keynes's Equation:

Keynes in his A Tract on Monetary Reform (1923) gave his Real Balances Quantity Equation as an improvement over the other Cambridge equations. According to him, people always want to have some purchasing power to finance their day to day transactions. The amount of purchasing power (or

demand for money) depends partly on their tastes and habits, and partly on their wealth. Given the tastes, habits, and wealth of the people, their desire to hold money is given. This demand for money is measured by consumption units. A consumption unit is expressed as a basket of standard articles of consumption or other objects of expenditure. If k is the number of consumption units in the form of cash, n is the total currency in circulation, and p is the price for consumption unit, then the equation is

$$n = pk$$

If k is constant, a proportionate increase in n (quantity of money) will lead to a proportionate increase in p (price level). This equation can be expanded by taking into account bank deposits. Let k be the number of consumption units in the form of bank deposits, and r the cash reserve ratio of banks, then the expanded equation is $n=p (k + rk)$ again, if k, k and r is constant, p will change in exact proportion to the change in n. Keynes regards his equation superior to other cash balances equations. The other equations fail to point how the price level (p) can be regulated. Since the cash balances (k) held by the people are outside the control of the monetary authority, p can be regulated by controlling n and r. It is also possible to regulate bank deposits k‟ by appropriate changes in the bank rate. So p can be controlled by making appropriate changes in n, r and k so as to offset changes in k.

Criticisms of the Cash Balance Approach:

The cash balances approach to the quantity theory of money has been criticised on the following counts:

1. Truisms:

Like the transactions equation, the cash balances equations are truisms. Take any Cambridge equation: Marshall $P=M/kY$ or Pigou $P=kR/M$ or Robertsons $P=M/kT$ or Keynes $p=n/k$, it establishes a proportionate relation between quantity of money and price level.

2. Price Level does not Measure Purchasing Power:

Keynes in his A Treatise on Money (1930) criticised Pigou cash balances equation and also his own real balances equation. He pointed out that measuring the price level in wheat, as Pigou did or in terms of consumption units, as Keynes himself did, was a serious defect. The price level in both

equations does not measure the purchasing power of money. Measuring the price level in consumption units implies that cash deposits are used only for expenditure on current consumption. But in fact they are held for "a vast multiplicity of business and personal purposes." By ignoring these aspects, the Cambridge economists have committed a serious mistake.

3. More Importance to Total Deposits:

Another defect of the Cambridge equation "lies in its applying to the total deposits considerations which are primarily relevant only to the income deposits." And the importance attached to k is misleading when it is extended beyond the income deposits.

4. Neglects other Factors:

Further, the cash balances equation does not tell about changes in the price level due to changes in the proportions in which deposits are held for income, business and savings purposes.

5. Neglect of Saving-Investment Effect:

Moreover, it fails to analyse variations in the price level due to saving-investment inequality in the economy.

6. K and Y not Constant:

The Cambridge equation, like the transactions equation, assumes k and T (or R or T) as constant. This is unrealistic because it is not essential that the cash balances (k) and the income of the people (Y) should remain constant even during the short period.

7. Fails to Explain Dynamic Behaviour of Prices:

The theory argues that changes in the total quantity of money influence the general price level equi proportionally. But the fact is that the quantity of money influences the price level in an essential erratic and unpredictable way. Further, it fails to point out the extent of change in the price level as a result of a given change in the quantity of money in the short period. Thus it fails to explain the dynamic behaviour of prices.

8. Neglects Interest Rate:

The cash balances approach is also weak in that it ignores other influences, such as the rate of interest which exerts a decisive and significant influence upon the price level. As pointed out by Keynes, the relation between

quantity of money and price level is not direct but indirect via the rate of interest, investment, output, employment and income. This is what the Cambridge equation ignores and hence fails to integrate monetary theory with the theory of value and output.

9. Demand for Money not Interest Inelastic:

The neglect of the rate of interest as a causative factor between the quantity of money and the price level led to the assumption that the demand for money is interest inelastic. It means that money performs only the function of medium of exchange and demand for Money not Interest Inelastic: The neglect of the rate of interest as a causative factor between the quantity of money and the price level led to the assumption that the demand for money is interest inelastic. It means that money performs only the function of medium of exchange and does not possess any utility of its own, such as store of value.

10. Neglect of Goods Market:

Further, the omission of the influence of the rate of interest in the cash balances approach led to the failure of neoclassical economists to recognise the interdependence between the commodity and money markets. According to Patinkin, "They laid an undue concentration on the money market a corresponding neglect of the commodity markets, and a resulting, dehumanising of the analysis of the effects of monetary changes."

11. Neglects Real Balance Effect:

Patinkin has criticised the Cambridge economists for their failure to integrate the goods market and the money market. This is borne out by the dichotomy which they maintain between the two markets. The dichotomisation implies that the absolute price level in the economy is determined by the demand and supply of money, and the relative price level is determined by the demand and supply of goods. The cash balances approach keeps the two markets rigidly apart. For instance, this approach tells that an increase in the quantity of money leads to an increase in the absolute price level but exercises no influence on the market for goods. This is because of the failure of Cambridge economists to recognise "the real balance effect." The real balance effect shows that a change in the absolute

price level does influence the demand and supply of goods. The weakness of cash balances approach lies in ignoring this.

12. Neglects Speculative Demand for Money: Another serious weakness of cash balances approach is its failure to consider the speculative demand for money. The neglect of the speculative demand for cash balances makes the demand for money exclusively dependent on money income thereby again neglecting the role of the rate of interest and the store of value function of money.

1.3. KEYNESIAN MONETARY THEORY

The main thrust of Keynes's criticism of classical quantity theory of money was directed at its conclusion that (i) velocity of circulation is constant, and (ii) full employment of resources is the natural state of a free market economy. Keynes believed that velocity of circulation was volatile and there often existed underemployment of resources due to recessionary conditions in the economy.

Classical economists believed that people demanded money only for transactions purpose and money balances held for transactions purposes were proportional to nominal income. Keynes challenged this viewpoint and held that people could hold income-earning assets such as bonds instead of holding money balances. To the transactions motive for holding money. Keynes added precautionary motive and speculative motive (that is demand for money as an asset for holding money. Income or interest earned on assets such as bonds is the opportunity cost of holding money. The higher the rate of interest on these assets, the less money will be held by the public. It is worth noting that people have adjusted their money holdings until what they demand equals what they actually have. If people have more money than what they demand, they will spend either on consumer goods and services or invest more. On the other hand, if their demand for money to hold is greater than what they presently have, they will try to acquire more money either by reducing expenditure on goods and services or selling some of their assets such as bonds and shares. Keynes laid stress on financial investment in bonds as a major way to reduce one's money holdings.

The task of a monetary theory is to explain the influence of changes in money supply on the level of economic activity (i.e., levels of real income, output and employment) and the price level. Keynes's monetary theory explains the effect of variation in money supply on the level of economic activity through its effect on the rate of interest which determines investment in the economy. In what follows we first explain the impact of expansion in money supply on the levels of real income and employment. In the second stage of our analysis of Keynes's monetary theory we show how changes in money supply affect the price level in the economy.

Keynes's Monetary Theory: Integrating Money Market with Goods Market:

According to Keynes, rate of interest is determined by equilibrium between demand for money and supply of money (i.e., through money market equilibrium).The effect of money supply on rate of interest and the effect of rate of interest on aggregate demand provides a mechanism through which changes in money supply affect the goods market which determines level of economic activity in the economy, that is, level of output and employment. We know from the study of money market that monetary policy has a profound effect on the rate of interest. Thus, if rate of interest is reduced as a result of an increase in money supply, the rate of investment will rise and the increase in investment will lead to increase in income and employment via the multiplier. Thus, when in times of recession, money supply in the economy is increased it will cause investment to increase and as result, there will be an increase in aggregate expenditure (i.e., aggregate demand) which will lead to the increase in real national income (aggregate output) and employment will increase, in this way Keynes succeed in integrating money market with goods market.

Transmission Mechanism: How, according to Keynes, the change in money supply leads to the increase real income output and employment is shown in the following scheme:

The first link in the transmission mechanism is the effect of expansion in money supply on the rate of interest which depends on how far demand for

money holdings is sensitive (i.e., elastic) to the changes in rate of interest. The expansion in money supply (M^S) causes the rate of interest to fall.

The second step in the transmission mechanism is the influence of change in rate of interest on the rate of investment, which is determined by the elasticity of investment with respect to rate of interest. The fall in rate of interest leads to the increase in investment in the economy.

The next step in the process is the effect of increase in investment on aggregate demand and therefore on national income (aggregate output) and employment in the economy. The effect of investment on income, output and employment is determined by the size of multiplier.

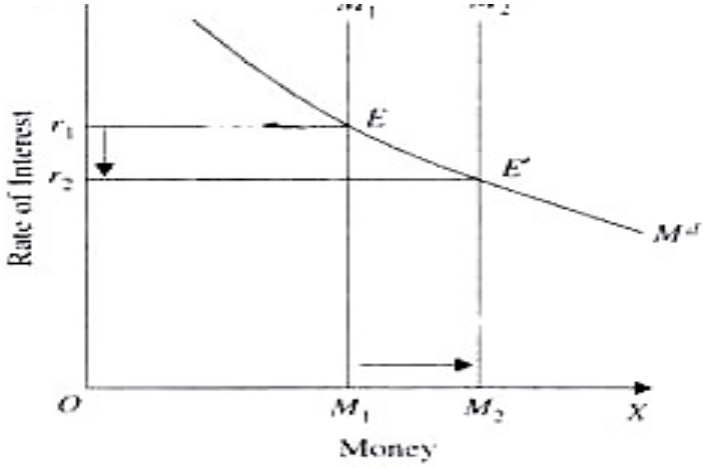

Fig.1.3. Money supply and Rate of Interest

We explain below at length the above factors and show how the increase in money supply affects the level of economic activity. It may be noted that expansion in money supply which leads to the increase in aggregate demand will affect both the real national income (i.e., GNP) and the price level jointly. However for better understanding of the subject by the students we shall explain the Keynesian monetary theory with regard to the relation between money supply and price level separately as well.

Money Supply and Rate of Interest:

Rate of interest, according to Keynes, is a purely monetary phenomenon. Demand for money to hold depends on the level of income and rate of interest. At a higher current rate of interest, less money is demanded by the people to hold and vice versa. Therefore, money demand curve (M^d) or what Keynes calls

liquidity preference curve slopes downward as shown by M^d curve in Figure Rate of interest is determined by demand for money and supply of money. This is shown in Fig. 1.3 where the quantity of money fixed by the Government is OM^d so that money supply curve is M_1^S. The intersection of demand for money curve M and the supply of money curve M_1^S determines r rate of interest. Thus at rate of interest r_1 demand for money to hold is equal to the available supply of money M_1.

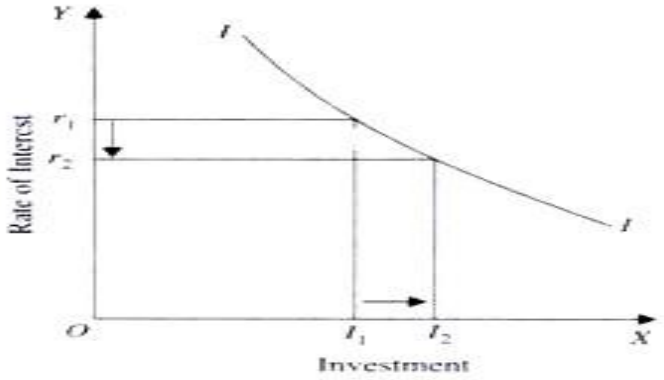

Fig.1.4. Rate of Interest and Investment

Now, observing that there is unemployment of labour and other resources and recessionary conditions prevail in the economy, the central bank takes steps to raise money supply. The central bank can raise money supply by purchasing Government securities from the market (that is undertaking open market operations) or lowering cash-reserve ratio (CRR) of the banks. Suppose ultimately these steps lead to the expansion in money supply to M_2. It will be seen from Fig. 1.3 that with the increase in money supply from M_1 to M_2, rate of interest falls to r_2 at which demand for money holdings equals the increased supply of money M_2. It may however be noted that the extent to which rate of interest falls as a result of expansion in money supply depends on the elasticity of demand for money holdings with respect to the rate of interest. The higher the elasticity of demand for money with respect to the rate of interest, the smaller the fall in rate of interest as a result of increase in money supply by the central bank of a country.

Rate of Investment:

The next link in the chain of causation is the effect of change in rate of interest on rate of investment in the economy. In the Keynesian system, investment in the economy depends on the rate of interest on the one hand and marginal

efficiency of investment (MEI) on the other. Marginal efficiency of investment (i.e., expected rate of profit), it may be emphasised, depends on the expectations of entrepreneurs. The determination of investment is shown in Fig. 1.4 where II is the investment demand curve whose position depends on the profit expectations of the entrepreneurs which determine marginal efficiency of investment. At the rate of interest r_1, investment equal to I_1 will be made. Now, if the expansion in money supply results in fall in rate of interest to r_2, investment increases to I_2. It is worth noting that the increase in investment as a result of change in the rate of interest depends on the responsiveness (that is, elasticity) of investment demand to the change in rate of interest. The higher the elasticity of investment expenditure to the changes in the rate of interest, the greater will be the increase in investment for a given fall in the rate of interest.

Investment and Aggregate Demand:

Next step in the transmission mechanism of the effect of money supply on the national income and price level is concerned with the impact of increase in investment on aggregate demand. Aggregate demand which we may write as AD is determined in the Keynesian theory by the sum of private consumption expenditure, private investment expenditure (I), Government's expenditure on goods and services (G) and net exports (X_n) that is, excess of exports over imports. Thus

$$AD = C + I + G + X_n$$

When the rate of interest is reduced as a result of expansion in money supply and causes investment to increase, it will shift the aggregate demand curve upward. This is depicted in Fig. 1.5 where initially with investment equal to I_1 along with other variables, aggregate demand curve is AD_1 or $C + I_1 + G + X_n$. When due to the expansion in money supply and resultant fall in rate of interest investment increases from I_1 to I_2, aggregate demand curve shifts

upward to the new position C + I_2 + G + X_n. The upward shift in aggregate demand curve is equal to the increase in investment (ΔI) from I_1 to I_2.

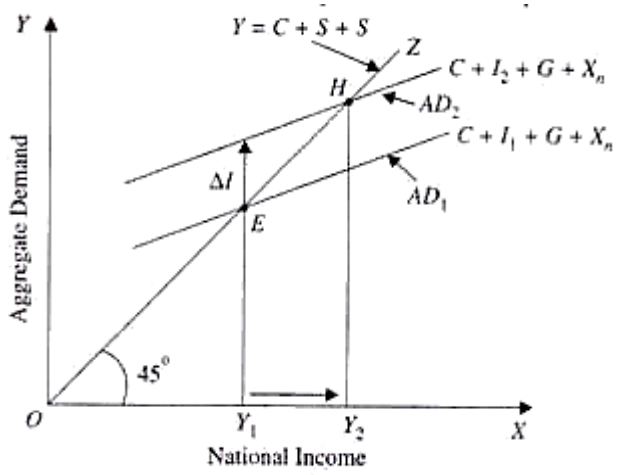

Fig.1.5. the effect of increase in investment on aggregate demand and national income

Keynes Theory of Money and Prices:

We know turn to explain the Keynesian monetary theory with regard to the relationship between the supply of money and the price level. Keynes believed that changes in money supply could being about changes in the price level but contrary to the classical economists' view he explained that there was no any direct and proportionate relationship between the quantity of money and the price level. He showed that changes in money supply indirectly affect the price level through its effect on the rate of interest. When money supply is increased, given the demand for money holdings curve, it leads to the fall in the rate of interest depending upon how far money demand curve is sensitive to the rate of interest.

A change in the rate of interest affects investment which through multiplier process affects aggregate expenditure or demand. It is then the magnitude of aggregate demand relative to aggregate supply of output that causes price level to change. Thus, relation between money and the price level far from direct and proportionate is only indirect. The Keynesian theory emphasises that the price level is in fact a consequence of aggregate demand or expenditure relative to aggregate supply rather than of quantity of money. The real cause of fluctuations in price level is to be found in fluctuations in the level of aggregate expenditure.

Therefore, changes in the quantity of money can bring about changes in the level of prices only if they change aggregate demand in relation to the supply of output. Unless aggregate expenditure increases, there can be no increase in demand for goods. And if demand for goods does not increase, the question of rise in price level does not arise. However, even if aggregate demand or expenditure does increase, prices may still not rise if the supply curve of output is fairly elastic.

Therefore, the effects of a change in quantity of money on the price-level depend on the following factors:

(i) Effect of changes in money supply on the level of aggregate demand or spending;

(ii) Relation between aggregate spending and the volume of production.

As regards the volume of aggregate expenditure or aggregate demand, in the Keynesian theory it depends on the following:

(a) Rate of interest which is determined by the demand for money and the supply of money;

(b) The investment demand curve which determines the increase in investment demand following a fall in the rate of interest; and

(c) The propensity to consume which determines the magnitude of the multiplier effect of increase in investment.

(d) Supply of money.

1.4. JAMES TOBIN'S PORTFOLIO ANALYSIS OF MONEY DEMAND

By introducing speculative demand for money, Keynes made a significant departure from the classical theory of money demand which emphasized only the transactions demand for money. However, as seen above, Keynes' theory of speculative demand for money has been challenged. The main drawback of Keynes speculative demand for money is that it visualises that people hold their assets in either all money or all bonds. This seems quite unrealistic as individuals hold their financial wealth in some combination of both money and bonds.

This gave rise to portfolio approach to demand for money put forward by Tobin, Baumol and Freidman. The portfolio of wealth consists of money, interest-bearing bonds, shares, physical assets etc. Further, while according

to Keynes' theory, demand for money for transaction purposes is insensitive to interest rate, the modem theories of money demand put forward by Baumol and Tobin show that money held for transaction purposes is interest elastic. We discuss below the Post-Keynesian theories of demand for money put forward by Tobin, Baumol and Friedman.

1.4.1. Tobin's portfolio approach to demand for money:

An American economist James Tobin, in his important contribution explained that rational behaviour on the part of the individuals is that they should keep a portfolio of assets which consists of both bonds and money. In his analysis he makes a valid assumption that people prefer more wealth to less. According to him, an investor is faced with a problem of what proportion of his portfolio of financial assets he should keep in the form of money (which earns no interest) and interest-bearing bonds. The portfolio of individuals may also consist of more risky assets such as shares. According to Tobin, faced with various safe and risky assets, individuals diversify their portfolio by holding a balanced combination of safe and risky assets. According to Tobin, individual's behaviour shows risk aversion. That is, they prefer less risk to more risk at a given rate of return. In the Keynes' analysis an individual holds his wealth in either all money or all bonds depending upon his estimate of the future rate of interest.

But, according to Tobin, individuals are uncertain about future rate of interest. If a wealth holder chooses to hold a greater proportion of risky assets such as bonds in his portfolio, he will be earning a high average return but will bear a higher degree of risk. Tobin argues that a risk averter will not opt for such a portfolio with all risky bonds or a greater proportion of them. On the other hand, a person who, in his portfolio of wealth, holds only safe and riskless assets such as money (in the form of currency and demand deposits in banks) he will be taking almost zero risk but will also be having no return and as a result there will be no growth of his wealth. Therefore, people generally prefer a mixed diversified portfolio of money, bonds and shares, with each person opting for a little different balance between riskiness and return. It is important to note that a person will be unwilling to hold all risky assets such as bonds unless he obtains a higher average return on them. In view of

the desire of individuals to have both safety and reasonable return, they strike a balance between them and hold a mixed and balanced portfolio consisting of money (which is a safe and riskless asset) and risky assets such as bonds and shares though this balance or mix varies between various individuals depending on their attitude towards risk and hence their trade-off between risk and return.

Tobin's Liquidity Preference Function:

Tobin derived his liquidity preference function depicting relationship between rate of interest and demand for money (that is, preference for holding wealth in money form which is a safe and "riskless" asset. He argues that with the increase in the rate of interest (i.e. rate of return on bonds), wealth holders will be generally attracted to hold a greater fraction of their wealth in bonds and thus reduce their holding of money.

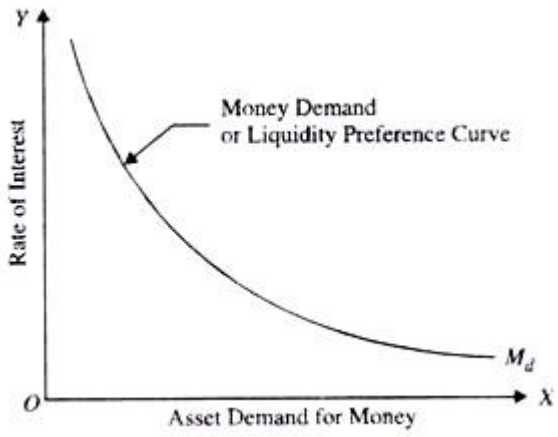

Fig.1.6 Tobin Liquidity preference curve

That is, at a higher rate of interest, their demand for holding money (i.e., liquidity) will be less and therefore they will hold more bonds in their portfolio. On the other hand, at a lower rate of interest they will hold more money and less bonds in their portfolio. This means, like the Keynes's speculative demand for money, in Tobin's portfolio approach demand function for money as an asset (i.e. his liquidity preference function curve) slopes downwards as is shown in Fig.1.6 where on the horizontal axis asset demand for money is shown. This downward-sloping liquidity preference function curve shows that the asset demand for money in the portfolio increases as the rate of interest on bonds falls. In this way Tobin derives the aggregate liquidity preference curve by determining the effects of changes in interest rate on the asset

demand for money in the portfolio of individuals. Tobin's liquidity preference theory has been found to be true by the empirical studies conducted to measure interest elasticity of the demand for money. As shown by Tobin through his portfolio approach, these empirical studies reveal that aggregate liquidity preference curve is negatively sloped. This means that most of the people in the economy have liquidity preference function similar to the one shown by curve M_d in Fig.1.6.

Evaluation:

Tobin's approach has done away with the limitation of Keynes' theory of liquidity preference for speculative motive, namely, individuals hold their wealth in either all money or all bonds. Thus, Tobin's approach, according to which individuals simultaneously hold both money and bonds but in different proportion at different rates of interest yields a continuous liquidity preference curve. Further, Tobin's analysis of simultaneous holding of money and bonds is not based on the erroneous Keynes's assumption that interest rate will move only in one direction but on a simple fact that individuals do not know with certainty which way the interest rate will change. It is worth mentioning that Tobin's portfolio approach, according to which liquidity preference (i.e. demand for money) is determined by the individual's attitude towards risk, can be extended to the problem of asset choice when there are several alternative assets, not just two, of money and bonds.

1.4.2. BAUMOL'S INVENTORY APPROACH TO TRANSACTIONS DEMAND FOR MONEY:

Instead of Keynes's speculative demand for money, Baumol concentrated on transactions demand for money and put forward a new approach to explain it. Baumol explains the transaction demand for money from the viewpoint of the inventory control or inventory management similar to the inventory management of goods and materials by business firms. As businessmen keep inventories of goods and materials to facilitate transactions or exchange in the context of changes in demand for them, Baumol asserts that individuals also hold inventory of money because this facilitates transactions (i.e. purchases) of goods and services. In view of the cost incurred on holding inventories of goods there is need for keeping optimal inventory of goods to

reduce cost. Similarly, individuals have to keep optimum inventory of money for transaction purposes. Individuals also incur cost when they hold inventories of money for transactions purposes.

They incur cost on these inventories as they have to forgone interest which they could have earned if they had kept their wealth in saving deposits or fixed deposits or invested in bonds. This interest income forgone is the cost of holding money for transactions purposes. In this way Baumol and Tobin emphasised that transaction demand for money is not independent of the rate of interest. It may be noted that by money we mean currency and demand deposits which are quite safe and riskless but carry no interest. On the other hand, bonds yield interest or return but are risky and may involve capital loss if wealth holders invest in them. However, saving deposits in banks, according to Baumol, are quite free from risk and also yield some interest. Therefore, Baumol asks the question why an individual holds money (i.e. currency and demand deposits) instead of keeping his wealth in saving deposits which are quite safe and earn some interest as well.

According to him, it is for convenience and capability of it being easily used for transactions of goods that people hold money with them in preference to the saving deposits. Unlike Keynes both Baumol and Tobin argue that transactions demand for money depends on the rate of interest. People hold money for transaction purposes "to bridge the gap between the receipt of income and its spending." As interest rate on saving deposits goes up people will tend to shift a part of their money holdings to the interest-bearing saving deposits. Individuals compare the costs and benefits of funds in the form of money with the interest- bearing saving deposits. According to Baumol, the cost which people incur when they hold funds in money is the opportunity cost of these funds, that is, interest income forgone by not putting them in saving deposits.

Baumol's Analysis of Transactions Demand:

A Baumol analysis the transactions demand for money of an individual who receives income at a specified interval, say every month, and spends it gradually at a steady rate. This is illustrated in Fig. 1.7. It is assumed that individual is paid Rs. 12000 salary cheque on the first day of each month.

Suppose he gets it cashed (i.e. converted into money) on the very first day and gradually spends it daily throughout the month. (Rs. 400 per day) so that at the end of the month he is left with no money. It can be easily seen that his average money holding in the month will be Rs. = 12000/2 = Rs. 6,000 (before 15th of a month he will be having more than Rs. 6,000 and after 15th day he will have less than Rs. 6,000).Average holding of money equal to Rs. 6,000 has been shown by the dotted line. Now, the question arises whether it is the optimal strategy of managing money or what is called optimal cash management. The simple answer is no. This is because the individual is losing interest which he could have earned if he had deposited some funds in interest-bearing saving deposits instead of withdrawing all his salary in cash on the first day.

He can manage his money balances so as to earn some interest income as well. Suppose, instead of withdrawing his entire salary on the first day of a month, he withdraws only half of it i.e. (Rs. 6,000 in cash and deposits the remaining amount of Rs. 6,000 in saving account which gives him interest of 5 per cent, his expenditure per day remaining constant at Rs. 400.

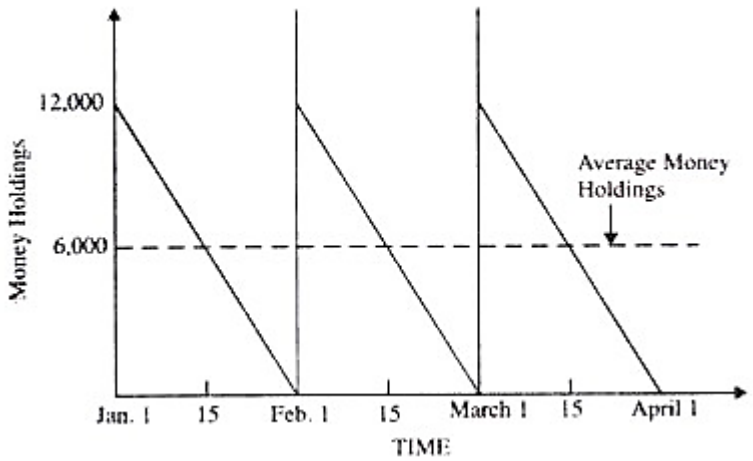

Fig.1.7. Stream of cash payments and transactions demand for money

Even in case of saving deposits, the asset which we are taking for illustration, one has to spend on transportation costs for making extra trips to the bank for withdrawing money from the Savings Account. Besides, one has to spend time in the waiting line in the bank to withdraw cash each time from the saving deposits.

Thus, the greater the number of times an individual makes trips to the bank for withdrawing money, the greater the broker's fee he will incur. If he withdraws more cash, he will be avoiding some costs on account of brokerage fee. Thus, individual faces a trade-off problem-, the greater the amount of pay cheque he withdraws in cash, less the cost on account of broker's fee but the greater the opportunity cost of forgoing interest income. The problem is therefore to determine an optimum amount of money to hold. Baumol has shown that optimal amount of money holding is determined by minimising the cost of interest income forgone and broker's fee. Let us elaborate it further. Let the size of the pay cheque (i.e. salary) be denoted by Y, the average amount of the cash he withdraws each time the individual goes to the bank by C, the number of times he goes to the bank to withdraw cash by T, broker's fee which he has to bear each time he makes a trip to the bank by b. In the first scheme of money management when he gets his whole pay-cheque cashed on the first day of every month he incurs broker's fee only once since he makes only a single trip to the bank.

Thus T in our first case is equal to one T = Y/C = 12000/12000 = 1 because in this case C = Y. In the second, case, T = 12000/6000 =2 and in the third case T = 12000/4000 =3.

Interest income lost by holding money is the average amount of money holding multiplied by the interest rate. As seen above, average money held is one half of cash withdrawn each time (i.e., C/2). Thus the total cost incurred on broker's fee and interest income forgone is given by Total Cost =bT + r(C/2)

Where b stands for broker's fee

As seen above, T = Y/C

Therefore, Total Cost = b(Y/C) + r(C/2)

Baumol has shown that average amount of cash withdrawal which minimises cost is given by

$$C = \sqrt{2bY/r}$$

This means that average amount of cash withdrawal which minimise cost is the square root of the two times broker's fee multiplied by the size of individual's income (Y) and divided by the interest rate. This is generally referred to as Square Root Rule.

For this rule, it follows that a higher broker's fee will raise the money holdings as it will discourage the individuals to make more trips to the bank. On the other hand, a higher interest rate will induce them to reduce their money holdings for transaction purposes as they will be induced to keep more funds in saving deposits to earn higher interest income. That is, at a higher rate of interest transactions demand for money holdings will decline. Keynes thought that transactions demand for money was independent of rate of interest. According to him, transactions demand for money depends on the level of income.

1.5. DON PATINKIN INTEGRATION– REAL BALANCE EFFECT

Don Patinkin in his monumental work Money, Interest and Prices criticises the Cambridge economists for the homogeneity postulate and the dichotomisation of goods and money markets and then reconciles the two markets through the real balance effect. The homogeneity postulate states that the demand and supply of goods are affected only by relative prices. It means that a doubling of money prices will have no effect on the demand and supply of goods. Mathematically, the demand and supply function for goods are homogeneous of degree zero in prices alone. Thus this homogeneity postulate precludes the price level from affecting the goods market as well as the money market. Patinkin criticises this postulate for its failure to have any determinate theory of money and prices.

Another closely related assumption which Patinkin criticises is the dichotomisation of the goods and money markets in the neo-classical analysis. This dichotomisation means that the relative price level is determined by the demand and supply of goods, and the absolute price level is determined by the demand and supply of money. Like the homogeneity postulate, this assumption also implies that the price level has absolutely no effect on the monetary sector of the economy, and the level of monetary prices, in turn, has no effect on the real sector of the economy. After condemning the neo-classical assumptions outlined above, Patinkin integrates the money market and the goods market of the economy which depend not only on relative prices but also on real balances. Real balances mean the real purchasing power of the stock of cash holdings of the people. When the price

level changes, it affects the purchasing power of people's cash holdings which, in turn, affects the demand and supply of goods. This is the real balance effect. Patinkin denies the existence of the homogeneity postulate and the dichotomisation assumption through this effect. For this, Patinkin introduces the stock of real balances (M/P) held by community as an influence on their demand for goods.

Thus the demand for a commodity depends upon real balance as well as relative prices. Now if the price level rises, this will reduce the real balances (purchasing power) of the people who will spend less than before. This implies a fall in the demand for goods and the consequent fall in prices and wages.

The price decline increases the value of money balances held by the people which, in turn, increases the demand for goods directly. The initial decrease in commodity demand creates a state of involuntary unemployment. But unemployment will not last indefinitely because as wages and prices fall, the real balance effect tends to increase commodity demand directly and indirectly through the interest rate. With sufficiently large fall in wages and prices, the full employment level of output and income will be restored. Finally, even if there is the "liquidity trap", the expansion of the money supply will increase money balances and full employment can be restored through the operation of the real balance effect. Thus absolute prices play a crucial role not only in the money market but also in the real sector of the economy. Patinkin further points out that "once the real and monetary data of an economy with outside money are specified, the equilibrium values of relative prices, the rate of interest, and the absolute price level are simultaneously determined by all the markets of the economy." In this way, Patinkin also introduces the real balance effect in the general equilibrium analysis. Besides removing the classical dichotomy and the homogeneity postulate and integrating the monetary and value theory through the real balance effect, Patinkin also validates the quantity theory conclusion. According to Patinkin, the real balance effect implies that people do not suffer from 'money illusion'. They are interested only in the real value of their cash holdings. In other words, they hold money for 'what it will buy'. This means that a doubling of the quantity of money will lead to a doubling of the price level, but relative

prices and the real balances will remain constant and the equilibrium of the economy will not be changed.

The real balance effect is illustrated, diagrammatically in Fig. 1.8 by using the IS and LM technique because the IS curve represents the goods market and the LM curve the money market. To begin with, we take a situation when the economy is in equilibrium at OY_1 level of income when the IS and LM curves intersect at point A where the interest rate is Or_1. Assuming OY_F as the full employment level, the pressure of unemployment-is measured by Y_1-Y_1 which causes wages and prices to fall simultaneously.

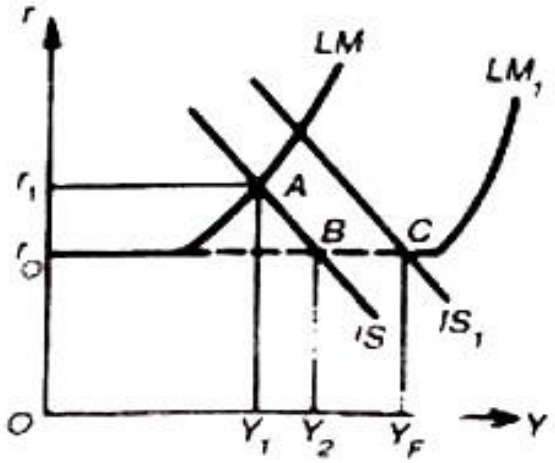

Fig.1.8.

This results in an increase in the real value of people's money holdings which shifts the LM curve to the right to LM_1. It intersects the IS curve at point B the income level OY_2 with the result that the interest rate falls to Or_0 which stimulates investment, discourages savings and increases consumption. Even when the interest rate falls to its minimum level Or_0, the level of demand in the commodity market as represented by the IS curve is not high enough to lead the economy to the full employment level OY_F. Rather, unemployment measured by Y_2-Y, remains in the economy. This much unemployment leads to a further fall in wages and prices, and to the increase in demand for consumption goods which shifts the IS curve to the right to IS_1 so that it intersects the LM_1, curve at point C at the full employment level OY_F. Thus under conditions of wage and price flexibility when the IS and LM curves shift rightwards, the real balance effect ultimately leads the economy to full employment level, even in the liquidity trap situation as shown above when investment is interest inelastic.

Conclusion:

Thus the real balance effect demonstrates three theoretical points: first, it eliminates the classical dichotomy between value and monetary theory; second, it validates the conclusions of the quantity theory that in equilibrium, money is neutral and the interest rate is independent of the quantity of money through the real balance effect; and third, the wage-price flexibility leads to full employment in the long-run and that the Keynesian underemployment equilibrium is a disequilibrium situation.

Criticisms of Patinkin Analysis of the Real Balance Effect:

Patinkin's analysis of the real balance effect has been severely criticised by Johnson, Archibald, Lipsey, Lloyd and other economists.

1. Not Applicable in Equilibrium Situations:

Johnson points out that there is no need for the real balance effect so long as the real analysis is confined to equilibrium situations. The real balance is needed only to ensure the stability of the price level and not to determine the real equilibrium of the system.

2. Conceptually Inadequate:

Archibald and Lipsey regard Patinkin's analysis of the real balance effect as conceptually inadequate. According to them, Patinkin traces the real balance analysis as a short-run phenomenon and does not work it out through the long-run.

3. Price Stability without Real Balance Effect:

Cliff Lloyd has criticised Patinkin for holding the classical view that people do not suffer from 'money illusion', and that their behaviour is influenced by the real balance effect. He has shown that the stability of the price level can be had without taking the real balance effect. According to him, by assuming that money is available in fixed quantity and people want to hold it, will bring price stability. But 'money illusion' will not be absent.

4. Failure to Explain Increase in Monetary Wealth:

Shaw has criticised Patinkin for his failure to analyse the manner in which the increase in monetary wealth comes about. According to him, Patinkin simply assumes a doubling of money balances and analyses only the resultant effects. In practice, money stock does not change in this manner.

"Nor, in most cases, do people experience the happy variations of helicopters carrying a surfeit of bank notes. . ."

Conclusion:

Despite these criticisms, "the introduction of the real balance effect disposes of the classical dichotomy, that is, it makes it impossible to talk about relative prices without introducing money; but it nevertheless preserves the classical proposition that the real equilibrium of the system will not be affected by the amount of money, all that will be affected will be the level of prices."

1.6. MILTON FRIEDMAN'S REFORMULATED QUANTITY THEORY

Friedman in his essay, "The Quantity Theory of Money—A Restatement" published in 1956 beautifully restated the old quantity theory of money. In his restatement he says that "money does matter". For a better understanding and appreciation of Friedman's modern quantity theory, it is necessary to state the major assumptions and beliefs of Friedman.

First of all Friedman says that his quantity theory is a theory of demand for money and not a theory of output, income or prices.

Secondly, Friedman distinguishes between two types of demand for money. In the first type, money is demanded for transaction purposes. It serves as a medium of exchange. This view of money is the same as the old quantity theory. But in the second type, money is demanded because it is considered as an asset. Money is more basic than the medium of exchange. It is a temporary abode of purchasing power and hence an asset or a part of wealth. Friedman treats the demand for money as a part of the wealth theory.

Thirdly, Friedman treats the demand for money just like the demand for any durable consumer good.

The demand for money depends on three factors:

(a) The total wealth to be held in various forms

(b) The price or return from these various assets and

(c) Tastes and preferences of the asset holders.

Friedman considers five different forms in which wealth can be held, namely, money (M), bonds (B), equities (E), physical non-human goods (G) and human capital (H). In a broad sense, total wealth consists of all types of "income".

Friedman means “aggregate nominal permanent income” which is the average expected yield from wealth during its life time. The wealth holders distribute their total wealth among its various forms so as to maximise utility from them. They distribute the assets in such a way that the rate at which they can substitute one form of wealth for another is equal to the rate at which they are willing to do.

Accordingly the cost of holding various assets except human capital can be measured by the rate of interest on various assets and the expected change in their prices. Thus Friedman says there are four factors which determine the demand for money. They are: price level, real income, rate of interest and rate of increase in the price level. The demand for money is unitarily elastic. The relationship between the demand for money and real income (output of goods and services) is also direct. But it is not proportional as in the case of price. Thus while changes in the price level cause direct and proportional changes in the demand for money, changes in real income create direct but more than proportional changes in the demand for money.

The rate of interest and the rate of increase in the price level constitute the cost of holding cash balances. If money is kept in the form of cash, it does not earn any income. But if the same money is lent out, it could earn some income in the form of interest to the owner. The interest is the cost of holding cash. At higher interest rate the demand for money would be less. On the other hand, a lower rate of interest creates an increase in the demand for money. Thus there is an inverse relationship between the rate of interest and the demand for money. The rate of increase in the price level also influences the demand for money. There is an inverse relationship between the rate of increase in the price level and the demand for money. When the price level increases at a high rate, the cost of holding money will increase. The people would like to hold smaller cash balances. The demand for money will decline. On the other hand when the price level increases at a low rate, the cost of holding money will decline and the demand for money increases.

Fourthly, Friedman believes that each form of wealth has its own characteristics and a different yield or return. In a broad sense money includes currency, demand deposits and time deposits which yield interest.

Money also yields real return in the form of convenience, security etc., to the holder which is measured in terms of price (P). When the price level falls, the rate of return on money is positive because the value of money increases. When the price level rises, the value of money falls and the rate of return is negative. Thus P is an important variable in the demand function of Friedman. The rate of return on bonds, equities and physical assets consists of currently paid interest rate and changes in their prices. As far as human wealth is concerned it is very difficult to measure the conversion of human into non-human wealth due to institutional constraints. But there is some possibility of substituting human wealth for non-human wealth. Freidman calls the ratio of non-human wealth to human wealth or ratio of wealth to income as W. According to Friedman, income elasticity of demand for money is greater than unity. Besides, there are certain variables like the tastes and preferences of the wealth holders which also affect the demand functions. These variables are represented by m.

Friedman's quantity theory of money can be explained diagrammatically in the following figure:

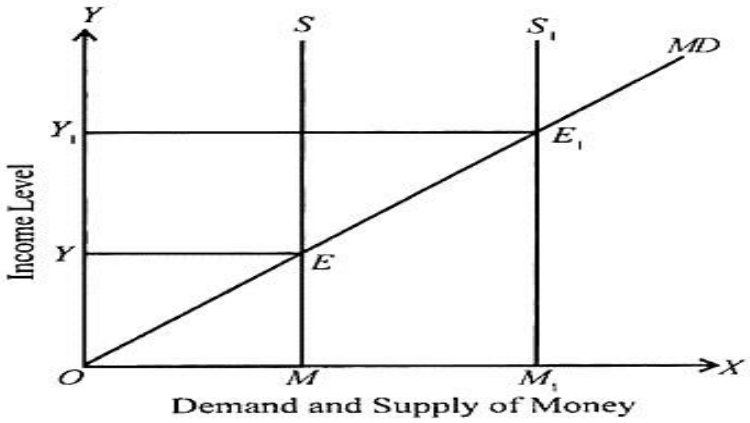

Fig.1.9. Friedman quantity theory

In the figure while the X-axis shows the demand and supply of money, Y-axis measures the income level. MD is the demand curve for money which changes along with income. MS is the supply curve for money. These two curves intersect at point E and the equilibrium income level OY is determined. If there is an increase in money supply, the supply curve shifts to M_1S_1. At this level the supply is greater than demand and a new equilibrium is established at E_1. At the new equilibrium level the income increases to OY_1.

Permanent Income Hypothesis:

Friedman gave the Permanent Income Hypothesis as an explanation of the short and long period consumption function. According to him, there is no tendency for the proportion of income saved to increase at higher income levels. He rejects the use of "current income" as the determinant of consumption expenditure. He divides consumption and income into "permanent" and "transitory" components, so that

$$Ym = Yp + Yt \text{ and}$$

$$Cm = Cp + Ct$$

Where Y stands for income, C stands for consumption and m, p and t stand for their measured, permanent and transitory components. Permanent income is to be defined as the means of income which is regarded as permanent by the consumer. It depends on time-horizon and farsightedness. It includes non-human wealth like personal attributes of the earners. Y being the measured income or current income, it may be larger or smaller than his permanent income in any period.

The differences between measured and permanent income are due to the transitory component of income (Yt). The transitory income may rise or fall depending on cyclical variations. If the transitory income is positive, the measured income will be higher than the permanent income; if it is negative it will be lower than the permanent income. The transitory income can also be zero in which case measured income equals permanent income. Permanent consumption is the amount planned to consume in a given period. Measured consumption is divided into permanent consumption (Cp) and transitory consumption (Ct). Measured consumption may be more than permanent consumption if the transitory consumption is positive. It will be less than permanent consumption if the transitory consumption is negative and it will be equal to permanent consumption if the transitory consumption is zero.

Permanent consumption is a multiple (K) of permanent income Yp

$$Cp = KYp$$

$$\text{And } K = f(r,w,u)$$

$$\text{Therefore } Cp = K(r,w,u,)Yp$$

Where K is the function of the rate of interest (r), the ratio of income to wealth (w), and the consumer's propensity to consume (u). This equation tells us that in the long period consumption increases in proportion to change in Yp. Thus K is the permanent average propensity to consume. Friedman contended that the secular decline in (r) since 1920s has tended to raise the value of K. But there has been a long run decline in wealth (w) which tends to reduce the value of K.

Three factors have said to influence the propensity to consume.

Firstly, there has been a deep decline in farm population increasing consumption with urbanisation and ultimately increasing K.

Secondly, there has been a sharp decline in the size of the families leading to more saving and less consumption and reducing the value of K.

Thirdly, the large provision of social security reduced the need for keeping more savings. It has increased the propensity to consume resulting in a higher value of K. The cumulative effect of all these factors is to raise consumption in proportion to the change in the permanent income component.

The relationship between the permanent and transitory components of income and consumption are based on the following assumptions:

1. There is no correlation between transitory and permanent income.
2. There is no correlation between permanent and transitory consumption.
3. There is no correlation between transitory consumption and transitory income.
4. The differences in permanent income alone affect consumption

The Permanent Income Hypothesis can be diagrammatically depicted Figure

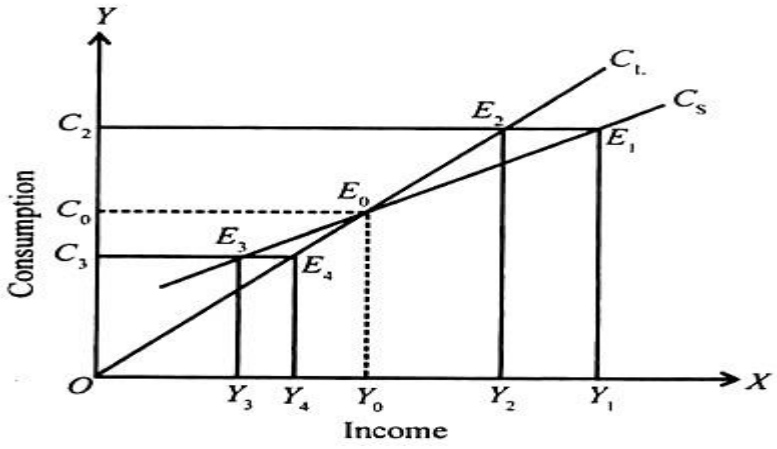

Fig.1.10

X axis measures income and Y axis consumption. CI is the long run consumption function and Cs is the short run consumption function. At OY_0 income level Cs and CI coincide at E_0. At this point changes in permanent income and measured income (i.e., current income) are identical. So are permanent and measured consumption as shown by OCo. If we move to the left of point E_0 on the Cs curve at E_3, the measured income declines to OY_3 due to negative transitory income component. As the permanent income OY_4 is higher than the measured income OY_3permanent consumption will remain at OC_3 (= Y_4 E_4) and will also equal to measured consumption (Y_3E_3 = Y_4E_4). Thus when permanent income is less than one it is possible for measured consumption Y_3E_3 to be higher than measured income OY_3 because of the stability of permanent income. This generally keeps the measured consumption static.

On the other hand a movement to the right of point E_0 on the Cs Curve at E_1, Shows the measured income to be OY_1. Here the measured consumption is OC, (=Y_1E_1). But OC_2 (=E_2Y_2) level of consumption can be maintained permanently at the permanent income level OY_2. Thus Y_1 Y_2 is the positive transitory income component of measured income OY_1, which is higher than the permanent income OY_2. The Permanent Income Hypothesis of Friedman is consistent with cross-section budget data. It suggests that current consumption or measured consumption will tend to be high during recession and low during boom period.

Criticism:

Friedman's Permanent Income Hypothesis is criticised on the following grounds: Firstly, Friedman's assumption that there is no connection between transitory components of consumption and income is not real. This assumption says that when measured income increases or decreases it does not affect consumption but it does affect only savings. But this is very much contrary to the natural behaviour of the consumers. A person who have windfall gain does not deposit the entire amount in the bank but enjoys a whole or part of it in current consumption. Similarly a person who has met with a loss would definitely reduce or postpone his consumption than rush to the bank to withdraw the amount to meet his requirements.

Secondly, Friedman's hypothesis states that the APC of all families, whether rich or poor is the same in the long run. But this is not true. The consumption of low income families is higher relative to their incomes and the saving of high income families is higher relative to their incomes. Even among the persons with level of permanent income same saving and consumption differ.
Thirdly, the usage of terms like 'permanent, 'transitory' and 'measured' have tended to affect the clarity of the theory. The concept of measured income creates confusion by mixing with permanent and transitory income on the one hand and permanent and transitory consumption on the other.
Fourthly, the distinction between human and non-human wealth is sadly missing in Friedman's theory.

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UNIT - II

SUPPLY OF MONEY

2.1. Introduction

In a modern economy, money is a complex phenomenon. By and large it is regarded as something which is generally used as a means of payment and accepted for the settlement of debts. The supply of money is a stock at a particular point of time, though it conveys the idea of a flow over time. The term 'the supply of money' is synonymous with such terms as 'money stock', 'stock of money', 'money supply' and 'quantity of money'. The supply of money at any moment is the total amount of money in the economy. There are three alternative views regarding the definition or measures of money supply. The most common view is associated with the traditional and Keynesian thinking which stresses the medium of exchange function of money. According to this view, money supply is defined as currency with the public and demand deposits with commercial banks. Demand deposits are savings and current accounts of depositors in a commercial bank. They are the liquid form of money because depositors can draw cheques for any amount lying in their accounts and the bank has to make immediate payment on demand. Demand deposits with commercial banks plus currency with the public are together denoted as M_1, the money supply. This is regarded as a narrower definition of the money supply.

The second definition is broader and is associated with the modern quantity theorists headed by Friedman. Professor Friedman defines the money supply at any moment of time as "literally the number of dollars people are carrying around in their pockets, the number of dollars they have to their credit at banks or dollars they have to their credit at banks in the form of demand deposits, and also commercial bank time deposits." Time deposits are fixed deposits of customers in a commercial bank. Such deposits earn a fixed rate of interest varying with the time period for which the amount is deposited. Money can be withdrawn before the expiry of that period by paying a penal rate of interest to the bank.

So time deposits possess liquidity and are included in the money supply by Friedman. Thus this definition includes M_1 plus time deposits of commercial

banks in the supply of money. This wider definition is characterised as M_2 in America and M_3 in Britain and India. The third definition is the broadest and is associated with Gurley and Shaw. They include in the supply of money, M_2 plus deposits of savings banks, building societies, loan associations, and deposits of other credit and financial institutions.

The choice between these alternative definitions of the money supply depends on two considerations. One a particular choice of definition may facilitate or blur the analysis of the various motives for holding cash; and two from the point of view of monetary policy, an appropriate definition should include the area over which the monetary authorities can have direct influence. If these two criteria are applied, none of the three definitions is wholly satisfactory.

The first definition of money supply may be analytically better because M_1 is a sure medium of exchange. But M_1 is an inferior store of value because it earns no rate of interest, as is earned by time deposits. Further, the central bank can have control over a narrower area if only demand deposits are included in the money supply.

The second definition that includes time deposits (M2) in the supply of money is less satisfactory analytically because "in a highly developed financial structure, it is important to consider separately the motives for holding means of payment and time deposits." Unlike demand deposits, time deposits are not a prefect liquid form of money.

This is because the amount lying in them can be withdrawn immediately by cheques. Normally, it cannot be withdrawn before the due date of expiry of deposit. In case a depositor wants his money earlier, he has to give a notice to the bank which allows the withdrawal after charging a penal interest rate from the depositor.

Thus time deposits lack perfect liquidity and cannot be included in the money supply. But this definition is more appropriate from the point of view of monetary policy because the central bank can exercise control over a wider area that includes both demand and time deposits held by commercial banks.

The third definition of money supply that includes M_2 plus deposits of non-bank financial institutions is unsatisfactory on both the criteria. Firstly, they do not serve the medium of exchange function of money. Secondly, they

almost remain outside the area of control of the central bank. The only advantage they possess is that they are highly liquid store of value. Despite this merit, deposits of nonbank financial institutions are not included in the definition of money supply.

2.2 Determinants of Money Supply

There are two theories of the determination of the money supply. According to the first view, the money supply is determined exogenously by the central bank. The second view holds that the money supply is determined endogenously by changes in the economic activities which affect people's desire to hold currency relative to deposits, the rate of interest, etc. Thus the determinants of money supply are both exogenous and endogenous which can be described broadly as: the minimum cash reserve ratio, the level of bank reserves, and the desire of the people to hold currency relative to deposits. The last two determinants together are called the monetary base or the high powered money.

1. The Required Reserve Ratio:

The Required reserve ratio (or the minimum cash reserve ratio or the reserve deposit ratio) is an important determinant of the money supply. An increase in the required reserve ratio reduces the supply of money with commercial banks and a decrease in required reserve ratio increases the money supply. The Required reserve ratio is the ratio of cash to current and time deposit liabilities which is determined by law. Every commercial bank is required to keep a certain percentage of these liabilities in the form of deposits with the central bank of the country. But notes or cash held by commercial banks in their tills are not included in the minimum required reserve ratio.

But the short-term assets along with the cash are regarded as the liquid assets of a commercial bank. In India the statutory liquidity ratio (SLR) has been fixed by law as an additional measure to determine the money supply.

The SLR is called secondary reserve ratio in other countries while the required reserve ratio is referred to as the primary ratio. The raising of the statutory liquidity ratio (SLR) has the effect of reducing the money supply with commercial banks for lending purposes, and the lowering of the statutory

liquidity ratio (SLR) tends to increase the money supply with banks for advances.

2. The Level of Bank Reserves:

The level of bank reserves is another determinant of the money supply. Commercial bank reserves consist of reserves on deposits with the central bank and currency in their tills or vaults. It is the central bank of the country that influences the reserves of commercial banks in order to determine the supply of money. The central bank requires all commercial banks to hold reserves equal to a fixed percentage of both time and demand deposits.

These are legal minimum or required reserves. Required reserves (RR) are determined by the required reserve ratio (RRr) and the level of deposits (D) of a commercial bank RR=RR r× D. If deposits are Rs 80 lakhs and required reserve ratio is 20 percent, then the required reserves will be 20% x 80=Rs 16 lakhs. If the reserve ratio is reduced to 10 per cent, the required reserves will also be reduced to Rs 8 lakhs.

Thus the higher the reserve ratio, the higher the required reserves to be kept by a bank, and vice versa. But it is the excess reserves (ER) which are important for the determination of the money supply. Excess reserves are the difference between total reserves (TR) and required reserves (RR) ER=TR-RR. If total reserves are Rs 80 lakhs and required reserves are Rs 16 lakhs, then the excess reserves are Rs 64 lakhs (Rs 80 Lakhs – 16 lakhs). When required reserves are reduced to Rs 8 lakhs, the excess reserves increase to Rs 72 lakhs. It is the excess reserves of a commercial bank which influence the size of its deposit liabilities. A commercial bank advances loans equal to its excess reserves which are an important component of the money supply. To determine the supply of money with a commercial bank, the central bank influences its reserves by adopting open market operations and discount rate policy. Open market operations refer to the purchase and sale of government securities and other types of assets like bills, securities, bonds, etc., both government and private in the open market. When the central bank buys or sells securities in the open market, the level of bank reserves expands or contracts. The purchase of securities by the central bank is paid for with cheques to the holders of securities who, in turn, deposit them in commercial

banks, thereby increasing the level of bank reserves. The opposite is the case when the central bank sells securities to the public and banks which make payments to the central bank through cash and cheques, thereby reducing the level of bank reserves.

The discount rate policy affects the money supply by influencing the cost and supply of bank credit to commercial banks. The discount rate, known as the bank rate in India, is the interest rate at which commercial banks borrow from the central bank. A high discount rate means that commercial banks get less amount by selling securities to the central bank. The commercial banks, in turn, raise their lending rates to the public, thereby making advances dearer for them. Thus there will be contraction of credit and the level of commercial bank reserves. Opposite is the case when the bank rate is lowered. It tends to expand credit and the consequent bank reserves. It should be noted that commercial bank reserves are affected significantly only when open market operations and discount rate policy supplement each other. Otherwise, their effectiveness as determinants of bank reserves and consequently of money supply is limited.

3. Public's Desire to Hold Currency and Deposits:

People's desire to hold currency (or cash) relative to deposit in commercial banks also determines the money supply. If people are in the habit of keeping less in cash and more in deposits with the commercial banks, the money supply will be large. This is because banks can create more money with larger deposits. On the contrary, if people do not have banking habits and prefers to keep their money holdings in cash, credit creation by banks will be less and the money supply will be at a low level.

4. High Powered Money and the Money Multiplier:

The current practice is to explain the determinants of the money supply in terms of the monetary base or high-powered money. High-powered money is the sum of commercial bank reserves and currency (notes and coins) held by the public. High-powered money is the base for the expansion of bank deposits and creation of the money supply. The supply of money varies directly with changes in the monetary base, and inversely with the currency and reserve ratios.

5. Other Factors:

The money supply is a function not only of the high-powered money determined by the monetary authorities, but of interest rates, income and other factors. The latter factors change the proportion of money balances that the public holds as cash. Changes in business activity can change the behaviour of banks and the public and thus affect the money supply. Hence the money supply is not only an exogenous controllable item but also an endogenously determined item.

Conclusion:

We have discussed above the factors which determine money supply through the creation of bank credit. But money supply and bank credit are indirectly related to each other. When the money supply increases, a part of it is saved in banks depending upon the depositors' propensity to save. These savings become deposits of commercial banks who, in turn, lend after meeting the statutory reserve requirements. Thus with every increase in the money supply, the bank credit goes up.

But it may not happen in exactly the same proportion due to the following factors:

(a) The marginal propensity to save does not remain constant. It varies from time to time depending on changes in income levels, prices, and subjective factors.

(b) Banks may also create more or less credit due to the operation of leakages in the credit creation process.

(c) The velocity of circulation of money also affects the money supply. If the velocity of money circulation increases, the bank credit may not fall even after a decrease in the money supply. The central bank has little control over the velocity of money which may adversely affect bank credit.

2.3. MEASURES OF MONEY SUPPLY IN INDIA:

There are four measures of money supply in India which are denoted by M_1 M_2 M_3, and M_4. This classification was introduced by the Reserve Bank of India (RBI) in April 1977. Prior to this till March 1968, the RBI published only one measure of the money supply, M or defined as currency and demand

deposits with the public. This was in keeping with the traditional and Keynesian views of the narrow measure of the money supply.

From April 1968, the Reserve Bank of India also started publishing another measure of the money supply which it called Aggregate Monetary Resources (AMR). This included M_1 plus time deposits of banks held by the public. This was a broad measure of money supply which was in line with Friedman's view. But since April 1977, the RBI has been publishing data on four measures of the money supply which are discussed as under:

M_1:

The first measure of money supply consists of:

(i) Currency with the public which includes notes and coins of all denominations in circulation excluding cash on hand with banks;

(ii) Demand deposits with commercial and cooperative banks, excluding inter-bank deposits; and

(iii) 'Other deposits' with RBI which include current deposits of foreign central banks, financial institutions and quasi-financial institutions such as Industrial Development Bank of India (IDBI), Industrial Finance Corporation of India (IFCI), International Monetary Fund (IMF), International Bank for Reconstruction Development (IBRD) etc. The RBI characterises M_1 as narrow money.

M_2:

The second measure of money supply is M_2 which consists of plus post office savings bank deposits. Since savings bank deposits of commercial and cooperative banks are included in the money supply, it is essential to include post office savings bank deposits. The majority of people in rural and urban India have preference for post office deposits from the safety viewpoint than bank deposits.

M_3:

The third measure of money supply in India is M_3 which consists of M_1 plus time deposits with commercial and cooperative banks, excluding interbank time deposits. The RBI calls M_3 as broad money.

M_4:

The fourth measure of money supply is M_4 which consists of M_3 plus total post office deposits comprising time deposits and demand deposits as well. This is the broadest measure of money supply. Of the four inter-related measures of money supply for which the RBI publishes data, it is M_3 which is of special significance. It is M_3 which is taken into account in formulating macroeconomic objectives of the economy every year. Since M_1 is narrow money and includes only demand deposits of banks along with currency held by the public, it overlooks the importance of time deposits in policy making. That is why, the RBI prefers M_3 which includes total deposits of banks and currency with the public in credit budgeting for its credit policy. It is on the estimates of increase in M_3 that the effects of money supply on prices and growth of national income are estimated. In fact M_3 is an empirical measure of money supply in India, as is the practice in developed countries. The Chakravarty Committee also recommended the use of M_3 for monetary targeting.

2.4 HIGH-POWERED MONEY AND THE MONEY MULTIPLIER

The current practice is to explain the determinants of the money supply in terms of the monetary base or high-powered money. High-powered money is the sum of commercial bank reserves and currency (notes and coins) held by the public. High-powered money is the base for the expansion of bank deposits and creation of the money supply. The supply of money varies directly with changes in the monetary base, and inversely with the currency and reserve ratios.

The use of high-powered money consists of the demand of commercial banks for the legal limit or required reserves with the central bank and excess reserves, and the demand of the public for currency. Thus high-powered money, H=C+RR+ER, where C represents currency, RR the required reserves and ER the excess reserves.

A commercial bank's required reserves depend upon its deposits. But a bank usually holds reserves in excess of its required reserves. In fact, banks do not advance loans up to the legal limits but precisely less than that. This is to

meet unanticipated cash withdrawals or adverse clearing balances. Hence the need arises for maintaining excess reserves by them. The money supply is thus determined by the required reserve ratio and the excess reserve ratio of commercial banks. The required reserve ratio (RRr) is the ratio of required reserves to deposits (RR/D), and the excess reserve ratio (ERr) is the ratio of excess reserves to deposits (ER/D).

Currency held by the public is another component of high-powered money. The demand for currency by the public is expressed as a proportion of bank deposits. Thus the currency ratio Cr=C/D, where C is the currency and D deposits. The currency ratio is influenced by such factors as changes in income levels of the people, the use of credit instruments by the public, and uncertainties in economic activity.

The formal relation between the money supply and high-powered money can be stated in the form of equations as under:

The money supply (M) consists of deposits of commercial banks (D) and currency (C) held by the public. Thus the supply of money

$$M=D+C \qquad ...(1)$$

High-powered money (H) (or monetary base) consists of currency held by the public (C) plus required reserves (RR) and excess reserves of commercial banks. Thus high-powered money

$$H=C+RR+ER \qquad ...(2)$$

The relation between M and H can be expressed as the ratio of M to H. So divide equation (1) by (2):

$$\frac{M}{H}=\frac{D+C}{C+RR+ER} \qquad ...(3)$$

Divide the numerator and denominator of the right hand side of the equation (3) by D:

$$\frac{M}{H}=\frac{\frac{D}{D}+\frac{C}{D}}{\frac{C}{D}+\frac{RR}{D}+\frac{ER}{D}}$$

or

$$\frac{M}{H}=\frac{1+\frac{C}{D}}{\frac{C}{D}+\frac{RR}{D}+\frac{ER}{D}} \qquad ...(4)$$

By substituting Cr for C/D, RRr for RR/D and ERr for ER/D, equation (4) becomes

$$\frac{M}{H}=\frac{1+Cr}{Cr+RRr+ERr} \qquad ...(5)$$

Thus high-powered money

$$H=\frac{Cr+RRr+ERr}{1+Cr}\times M \qquad ...(6)$$

And money suply

$$M=\frac{1+Cr}{Cr+RRr+ERr}\times H \qquad ...(7)$$

Equation (7) defines money supply in terms of high-powered money. It expresses the money supply in terms of four determinants, H, Cr, RRr, and ERr. The equation states that the supply of high-powered money, the higher the money supply. Further, the lower the currency ratio (Cr), the reserve ratio (RRr), and the excess reserve ratio (ERr), the higher the money supply, and vice versa. The relation between the money supply and high-powered money is illustrated in Figure 2.1.

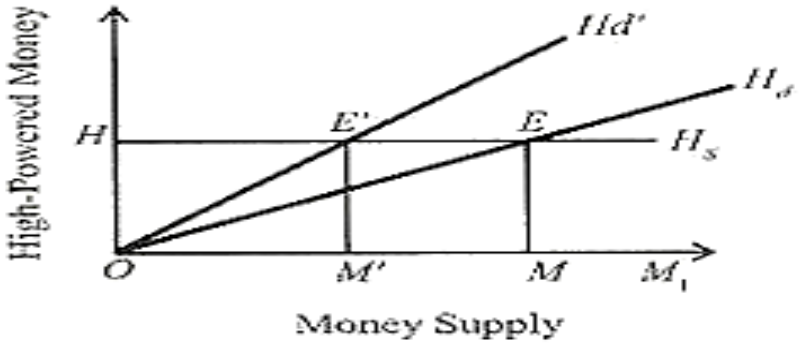


Fig.2.1

The horizontal curve Hs shows the given supply of high-powered money. The curve Hd shows the demand for high-powered money associated with each level of money supply and represents equation (6). The slope of the Hd curve is equal to the term (Cr+RRr+ERr)/ (1+Cr). Given Cr, RRr, Err and the high-powered money Hs, the equilibrium money supply is OM. If the money supply is larger than this, say OM_x, there will be excess demand for high-powered money. On the contrary, a less than OM money supply will mean less demand for high-powered money. If there is an increase in any one of the ratios Cr or RRr or ERr, there would be an increase in the demand for high-powered money. This is shown by the Hd' curve in Figure 2.1 where the increase in the demand for high-powered money leads to decline in the money supply to OM'

The quotient of equation (7) is the money multiplier m. Thus

$$m = 1 + Cr/ Cr + RRr + ERr$$

Now the relation between the money supply and high-powered money of equation (7) becomes M-mH, Equation (9) expresses the money supply as a function of m and H.

In other words, the money supply is determined by high powered money (H) and the money multiplier (m). The size of the money multiplier is determined

by the currency ratio (Cr) of the public, the required reserve ratio (RRr) at the central bank, and the excess reserve ratio (ERr) of commercial banks. The lower these ratios are, the larger the money multiplier is. If m is fairly stable, the central bank can manipulate the money supply (M) by manipulating H. The central bank can do so by open market operations. But the stability of m depends upon the stability of the currency ratio and the reserve ratios RRr and ERr. Or, it depends upon off-setting changes in RRr and ERr ratios. Since these ratios and currency with the public are liable to change, the money multiplier is quite volatile in the short run. Given the division of high-powered money between currency held by the public, the required reserves at the central bank, and the excess reserves of commercial banks, the money supply varies inversely with Cr, RRr and ERr. But the supply of money varies directly with changes in the high-powered money. This is shown in Figure 2.2.

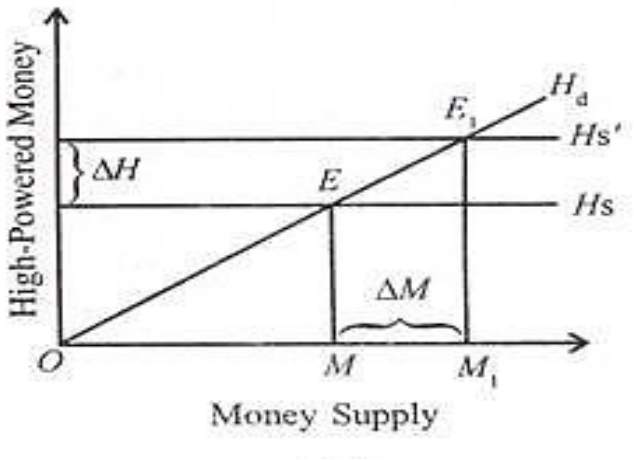


Fig.2.2

An increase in the supply of high-powered money by ΔHs' shifts the Hs curve upward to Hs'. At E, the demand and supply of high-powered money is in equilibrium and money supply is OM. With the increase in the supply of high-powered money to Hs', the supply of money also increases to OM_1, at the new equilibrium point E_1. Further, Figure 2.2 reveals the operation of the money multiplier. With the increase in the high-powered money by ΔH, the money supply increases by ΔM. Some economists do not take into consideration excess reserves in determining high-powered money and consequently the money supply. But the monetarists give more importance to excess reserves. According to them, due to uncertainties prevailing in banking operations as

in business, banks always keep excess reserves. The amount of excess reserves depends upon the interaction of two types of costs: the cost of holding excess reserves, and the cost generated by deficiency in excess reserves. The first cost is in terms of the market rate of interest at which excess reserves are maintained. The second cost is in terms of the bank rate which is a sort of penalty to be paid to the central bank for failure to maintain the legal required reserve ratio by the commercial bank.

The excess reserve ratio varies inversely with the market rate of interest and directly with the bank rate. Since the money supply is inversely related to the excess reserve ratio, decline in the excess reserve ratio of banks tends to increase the money supply and vice versa. Thus the money supply is determined by high-powered money, the currency ratio, the required reserve ratio and the market rate of interest and the bank rate. The monetary base or high-powered money is directly controllable by the central bank. It is the ultimate base of the nation's money supply. Of course, the money multiplier times the high-powered money always equals the money supply, i.e. M=mH. This formulation tells us how much new money will be created by the banking system for a given increase in the high-powered money. The monetary policy of the central bank affects excess reserves and the high-powered money identically. Suppose the central bank makes open market purchases. This raises the high-powered money in the form of excess reserves of banks. An increase in money supply that results from it comes from the banking system which creates new money on the basis of its newly acquired excess reserves. Thus this concept tells us that the monetary authorities can control the money supply by changing the high-powered money or the money multiplier.

2.5. THEORIES OF INTEREST RATE

2.5.1. Introduction

Interest can be explained as an amount which is paid by a borrower for using funds belonging to someone else. Therefore, it is transaction between surplus and deficit units. The surplus units lend money because they earn an attractive amount for parting with money. The waiting period involves a 'reward' which induces the lender to forego the use of money.

Secondly, a lender can part with money for some time limit as he would like to use the money for his own requirements. Thus, timing is an important consideration in the borrowing and lending transaction as the time element should be suitable to the borrower and the lender. Interest also has another dimension. It involves a rate at which funds are borrowed. This rate is need based, dependant on market position of demand and supply of funds. To take a loan therefore, an interest rate is to be paid.

There are different opinions about the meaning of interest. The classical theorists like Alfred Marshall felt that interest was the price paid for abstinence of money. Knut Wicksell related interest with productivity. He later reformulated his theory and considered four factors for determining the rate of interest — saving, investment, hoarding and money supply. Keynes contributed to the liquidity preference theory, i.e., reward paid for surrendering preference for liquidity. He considered interest as a purely monetary factor. Finally, neo-Keynesians opined on interest with a more logical reasoning. They showed interest as equilibrium between stock and flow variables of the real monetary section. They developed the theory called the IS - LM theory. One of the most useful things in the capital market of the country is to be familiar with the kind of interest rates that operate in the environment. The investor should know that he has to cope with the different kinds of interest rates called by different names and to be a successful investor he should be able to recognize the kinds of interest rates and by whom these rates are fixed.

2.5.2. Forms of Interest:

i. Static Form:

The rate of interest is an indication of the real productivity of capital goods. The creation of capital requires postponement of current consumption and, therefore, it can be equated as a reward for abstaining or postponement of consumption. It is also a reward for inducing some income earners to make a change in the preference of time in favour of future consumption. In the static condition, interest is not affected by the level of money and prices because changes in the quantity of money lead to a proportionate change in all prices leaving percentage ratio of money yield to money.

Also, interest rates are not influenced by the behaviour of banks. Interest, according to this view, is the interplay of demand and supply. Demand raises the productivity of capital and the goods supplied come from the current consumption. The rate of interest is called annual rate, full stock equilibrium rate, classical real rate and true real rate.

ii. Dynamic Form:

Dynamic form adds the role of banks saving and creation of new money in the short-run. This is also called loanable funds theory of interest. (a) Equilibrium rate is independent of price, and (b) that the market rate or nominal rate is inversely related to the price level. High price level means low market rate and vice versa. It also states that there is a difference between natural rate and market rate. While natural rate continues to be stable, rise in the market rate occurs when it exceeds the natural rate and a gap can be identified between saving and desired investment and the price falls.

2.5.3. CLASSICAL THEORIES OF INTEREST RATE

The economists like Ricardo, J. S. Mill, Marshall and Pigou developed the, classical theory of interest which is also known as the capital theory of interest or the saving-investment theory of interest or the real theory of interest. According to this theory, interest is a real phenomenon and the rate of interest is determined exclusively by the real factors, i.e., the supply of and demand for capital under perfect competition. The supply of capital is governed by thrift (i.e. saving) or time preference and the demand for capital is influenced by the productivity of capital.

Assumptions of Classical Theory of Interest:

The classical theory of interest is based upon the following assumptions:

(i) Perfect competition exists in the factor market.

This assumption has the following implications:

(a) The equilibrium rate of interest is determined by the competitive forces of demand and supply in the capital market.

(b) Interest rate is flexible, i.e., it freely moves to whatever level the demand and supply forces dictate.

(ii) The theory assumes full employment of resources.

This assumption has the following implications:

(a) Saving involves sacrifice of abstaining from or postponing of consumption and interest is the reward for abstinence or waiting: it is only when all resources are fully employed, higher rate of interest is paid to induce people to save or abstain from consumption or postpone consumption

(b) Income level is assumed to be constant; it is at the full employment level that income and output do not change and become constant.

(c) The assumptions of full employment and given level of income lead to the further assumption that the demand and supply schedules of capital are independent and do not influence each other; it is only when income changes as a result of a change in investment, that saving changes in consequence.

(iii) Economic agents act rationally, i.e., they are motivated by self-interest and want to maximise economic benefit.

(iv) The price level is assumed to be constant. If it changes then the economic agents do not suffer money illusion, i.e., savers and investors react to changes in the real interest rates and not the changes in the money interest rates.

(v) Money is neutral and serves only as a medium of exchange and not as a store of value.

Supply and Demand for Capital:

Supply of Capital:

The supply of capital depends upon savings which, in turn, depend upon a number of psychological, economic and institutional factors broadly classified as – (a) the will to save, (b) the power to save, and (c) the facilities to save. Saving means curtailment of consumption or postponement of the present consumption. Thus, saving involves a sacrifice, abstinence or waiting. The rate of interest is considered to be the reward for abstinence or waiting. It is an inducement for the act of saving or foregoing the present consumption. In deciding between the present consumption (which involves no saving) and the future consumption (which requires saving), the individual has to take into consideration the

opportunity cost of each alternative and the opportunity cost is measured by the rate of interest.

For example, if the current rate of interest is 5% then by consuming Re. 1 of income now, the individual is foregoing the consumption of Rs. 1.05 one year later. Thus, the higher the current rate of interest, the greater the opportunity cost of present consumption as compared to the future consumption, and, as a result, greater the inducement to save out of the present income. Hence, saving is interest elastic and there is a positive relationship between the rate of interest and saving. The supply curve of capital or the saving schedule (SS curve in Figure 2.3.) slopes upward to the right which indicates that higher the rate of interest, larger will be the savings and greater will be the supply of capital and vice versa.

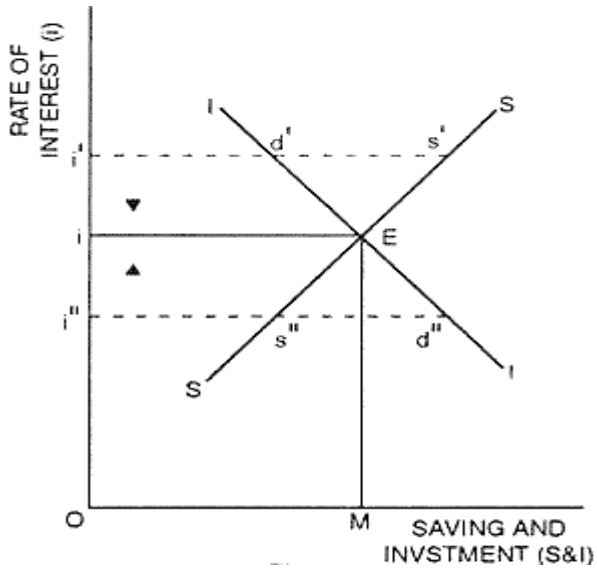


Fig.2.3. supply of capital

Demand for Capital:

Capital is demanded by the investors because it is productive and brings profits to them. The demand for capital or investment demand depends, on the one hand, on the productivity of capital, i.e., returns on investment, and on the other hand, on the rate of interest, i. e., the cost of investment. Productivity of capital is subject to the law of diminishing returns. Additional units of capital are less productive than the earlier units; with the investment of more and more capital, the marginal productivity of capital declines. The producer will continue his investment of capital as long as the productivity of capital is more than the rate of

interest and will stop further investment when the productivity of capital equals the rate of interest. This shows that at higher rates of interest, the producers demand less capital and at lower rates of interest, they demand more capital. Thus, the demand for capital is inversely related to the rate of interest. The demand curve for capital or the investment schedule slopes downward to the right which indicates that higher the rate of interest, smaller the demand for capital.

Determination of Rate of Interest:

Assuming the income level to be given, the rate of interest is determined by the intersection of the demand curve and the supply curve of capital.

The determination of equilibrium rate of interest of the following three conditions:

(i) The supply of capital or saving is an increasing function of the rate of interest:

$S = f(i); dS/di > 0$

(ii) The demand for capital or investment is a decreasing function of the rate of interest:

$I = f(i); dI/di < 0$

(iii) The supply of capital equals the demand for capital:

$$S = I$$

Where, S = saving, I = investment, i = rate of interest.

Demand curve for capital intersects the supply curve of capital at point E. The equilibrium rate of interest is Oi and OM is the quantity of capital demanded and supplied at this rate. In other words, at the equilibrium rate of interest, i.e., Oi, saving = investment = OM. Any deviation from the equilibrium rate of interest (Oi) will be unstable. If, at any time, the rate of interest rises to Oi the supply of capital exceeds the demand for capital (i s' > id'). As a result of this excess of capital supply, the rate of interest will fall to its equilibrium level (Oi). Similarly, if the rate of interest falls to Oi", the demand for capital exceeds the supply of capital (i" d" > i" s"). As a result of this excess of capital demand, the rate of interest rises to its equilibrium level (Oi).

Features of Classical Theory:

The distinguishing features of the classical theory of interest are given below:

1. Capital Theory of Interest:

In the classical theory, interest is defined as reward for the use of capital and the rate of interest is determined by the demand and supply of capital. The supply of capital is a positive and the demand for capital is a negative function of the rate of interest.

2. Real Theory:

The classical theory is concerned with the real rate of interest which is determined purely by the real factors of saving and investment. The concept of real rate of interest can be defined as the money or market rate of interest less the anticipated rate of inflation. If it is assumed (as the classical theory does) that the price level is constant and everyone anticipates that it will remain constant, then the real and money rates of interest are equal.

3. Flow Theory:

The theory is stated in flow terms. Total saving and total investment have been considered as flows per unit of time. In other words, the supply of saving is regarded as a flow of funds into the capital market and the demand for investment as a flow of funds off the capital market. The equilibrium of the capital market requires the equilibrium between the flows of saving and investment.

4. Equilibrating Mechanism:

According to the classical theory, the rate of interest is the equilibrating force between saving and investment. Whenever there is disequilibrium between saving and investment, the equilibrium is restored through changes in the rate of interest. If at any time, saving exceeds investment (i' s' > i' d' at Oi' rate of interest), the rate of interest falls and brings equality between saving and investment. On the other hand, if investment exceeds saving (i" d" > i" s" at Oi" rate of interest), the rate of interest rises and brings equality between saving and investment.

5. Positive Rate of Interest:

An important feature of the classical theory of interest is that it assumes a positive real rate of interest. The theory implicitly requires that the demand and supply curves of capital intersect at a positive real rate of interest. If, for example, the two curves do not intersect at a positive rate of interest, then, at zero rate of interest, there will be excess supply of capital (Os > Od). This is a situation of general glut which implies that equilibrium is inconsistent with fill employment.

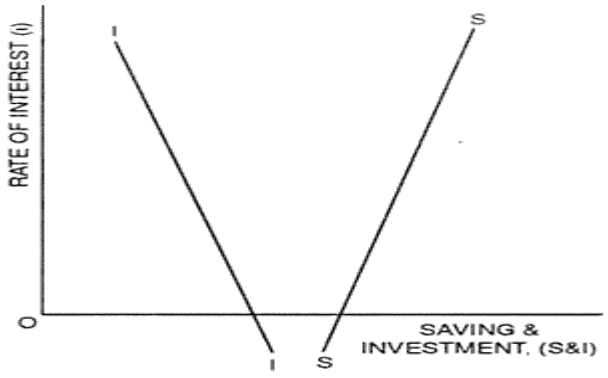


Fig.2.4.

Criticisms of Classical Theory:

The classical theory of interest has been criticized by Keynes on many grounds:

1. Interest not a Reward for Saving:

Keynes has criticized the classical view that interest is the reward for saving or capital on the following grounds:

(a) An individual can get interest by lending money which he has not saved but has inherited from his forefathers.

(b) If a person hoards his savings in the form of cash, he earns no interest,

(c) Savings depend not only on the rate of interest but also on the level of income, hence interest cannot be a reward for saving,

(d) Keynes regards interest as a monetary phenomenon and defines the rate of interest as a reward for parting with liquidity (or cash balances) rather than a reward for saving.

2. Saving and Investment not Interest Elastic:

The classical theory assumes that saving and investment are interest elastic, i.e., sensitive to changes in the rate of interest. But it is not always

so. In reality, investment depends more on marginal efficiency of capital and future expectations than on the rate of interest, particularly during periods of depression. Similarly, savings are rarely interest elastic. People may save without any rise in the rate of interest, or may save even if the rate of interest falls to zero. In fact, savings are more influenced by the level of income than by the rate of interest.

3. Rate of Interest not Equilibrating Force:

According to the classical economists, the equality between saving and investment is maintained by the interest rate adjustment mechanism. Keynes objected to this view and gave a different mechanism for restoring the equality. According to him, income, and not rate of interest, is the equilibrating force between saving and investment. Whenever saving exceeds investment, income level declines. As a result, saving falls and becomes equal to investment. Similarly, if investment exceeds saving, income level rises, saving increases and becomes equal to investment.

4. Role of Money Ignored:

The classical theory of interest assumes money to be neutral, merely acting as a medium of exchange. It ignores the role of money as a store of value, i.e., it does not take in to consideration the possibility that saving may be hoarded. It also completely ignores the important role the quantity of money, the created money and the bank credit can play in the determination of the rate of interest. All these factors make the classical theory unrealistic and irrelevant in the modern dynamic world.

5. Unrealistic Assumption of Full Employment:

The classical theory is unrealistic because it operates under the special conditions of full employment. Normally, less-than full employment, and not full employment, conditions prevail in the actual world. According to Keynes, when there are unemployed resources in the economy, people need not be paid for abstaining from consumption (i.e., for saving). The problem in such an economy is to put idle resources to use rather than to withdraw already employed resources from their existing employment. Hence, under unemployment conditions, interest cannot be a reward for abstinence or waiting.

6. Discrepancy between Market and Natural Rates:

The classical economists assume that discrepancy between the natural (real) and market (money) rates of interest is merely a chance and cannot exist for a long time. But, according to Wicksell, Keynes and other monetary economists, the market rate of interest normally deviates from the natural rate of interest and this deviation is due to the influence of monetary factors like creation and destruction of bank credit.

7. Narrow View of Supply of Capital:

The classical economists included only saving in the supply of capital. But in reality, the supply of capital comprises of dishoarded money. Moreover, newly created money and bank credit also form important sources of supply of capital.

8. Narrow View of Demand for Capital:

According to the classical theory, the demand for capital comes only from the investors for meeting investment expenditures. It completely ignores the fact that loans are also taken for consumption purposes.

9. Indeterminate Theory:

Keynes criticised the classical theory of investment on the ground that it is indeterminate. According to the classical theory, the rate of interest is determined by the intersection of saving and investment curves. The position of the saving curve depends upon the level of income; saving curve shifts to the right if income increases and vice versa. Thus, we cannot know the rate of interest unless we already know the income level. But, we cannot know income level without first knowing the volume of investment and the knowledge of the volume of investment requires the prior knowledge of the rate of interest. Thus, the classical theory of interest offers no solution; it cannot tell what the rate of interest will be unless we already know the rate of interest.

2.5.4. KEYNES THEORIES OF INTEREST RATE

The determinants of the equilibrium interest rate in the classical model are the 'real' factors of the supply of saving and the demand for investment. On the other hand, in the Keynesian analysis, determinants of the interest

rate are the 'monetary' factors alone. Keynes' analysis concentrates on the demand for and supply of money as the determinants of interest rate. According to Keynes, the rate of interest is purely "a monetary phenomenon." Interest is the price paid for borrowed funds. People like to keep cash with them rather than investing cash in assets. Thus, there is a preference for liquid cash. People, out of their income, intend to save a part. How much of their resources will be held in the form of cash and how much will be spent depend upon what Keynes calls liquidity preference, Cash being the most liquid asset, people prefer cash. And interest is the reward for parting with liquidity. However, the rate of interest in the Keynesian theory is determined by the demand for money and supply of money.

Demand for Money:

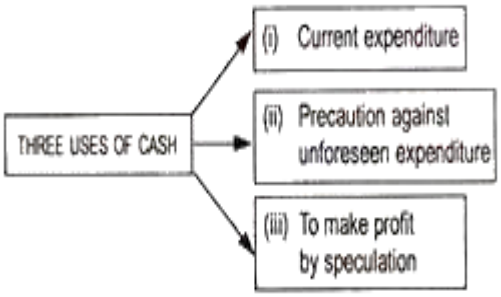
Demand for money is not to be confused with the demand for a commodity that people 'consume'. But since money is not consumed, the demand for money is a demand to hold an asset.

The desire for liquidity or demand for money arises because of three motives:

(a) Transaction motive

(b) Precautionary motive

(c) Speculative motive



(a) Transaction Demand for Money:

Money is needed for day-to-day transactions. As there is a gap between the receipt of income and spending, money is demanded. Incomes are earned usually at the end of each month or fortnight or week but individuals spend their incomes to meet day-to-day transactions. Since payments or spending are made throughout a period and receipts or incomes are received after a period of time, an individual needs 'active balance' in the form of cash to

finance his transactions. This is known as transaction demand for money or need- based money—which directly depends on the level of income of an individual and businesses. People with higher incomes keep more liquid money at hand to meet their need-based transactions. In other words, transaction demand for money is an increasing function of money income.

Symbolically, $T_{dm} = f(Y)$

Where, T_{dm} stands for transaction demand for money and Y stands for money income.

(b) Precautionary Demand for Money:

Future is uncertain. That is why people hold cash balances to meet unforeseen contingencies, like sickness, death, accidents, danger of unemployment, etc. The amount of money held under this motive, called 'Idle balance', also depends on the level of money income of an individual. People with higher incomes can afford to keep more liquid money to meet such emergencies. This means that this kind of demand for money is also an increasing function of money income. The relationship between precautionary demand for money (P_{dm}) and the volume of income is normally a direct one.

Thus, $P_{dm} = f(Y)$

(c) Speculative Demand for Money:

This sort of demand for money is really Keynes' contribution. The speculative motive refers to the desire to hold one's assets in liquid form to take advantages of market movements regarding the uncertainty and expectation of future changes in the rate of interest. The cash held under this motive is used to make speculative gains by dealing in bonds and securities whose prices and rate of interest fluctuate inversely. If bond prices are expected to rise (or the rate of interest is expected to fall) people will now buy bonds and sell when their prices rise to have a capital gain. In such a situation, bond is more attractive than cash. Contrarily, if bond prices are expected to fall (or the rate of interest is expected to rise) in future, people will now sell bonds to avoid capital loss. In such a situation, cash is more attractive than bond. Thus, at a low rate of interest, liquidity preference is high and, at a high rate of interest, securities are attractive. Now it is clear

that the speculative demand for money (S_{dm}) varies inversely with the rate of interest. Thus, $S_{dm} = f(r)$

Where, Y is the rate of interest.

Total Demand for Money:

The total demand for money (D_M) is the sum of all three types of demand for money. That is, $D_m = T_{dm} + P_{dm} + S_{dm}$. The demand for money has a negative slope because of the inverse relationship between the speculative demand for money and the rate of interest. However, the negative sloping liquidity preference curve becomes perfectly elastic at a low rate of interest. According to Keynes, there is a floor interest rate below which the rate of interest cannot fall. This minimum rate of interest indicates absolute liquidity preference of the people.

This is what Keynes called 'liquidity trap'. In Fig. 2.5, D_m is the liquidity preference curve. At minimum rate of interest, r-min, the curve is perfectly elastic. However, there is a ceiling of interest rate, say r-r-max, above which it cannot rise. Thus, interest rate fluctuates between r-max and r-min.

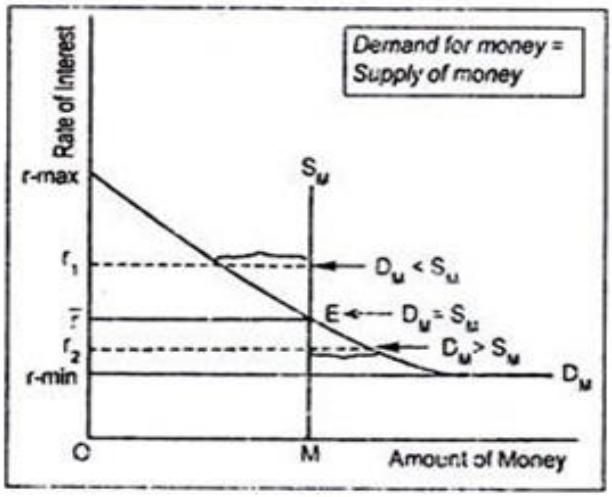


Fig.2.5.Liquidity Trap

Money Supply:

The supply of money in a particular period depends upon the policy of the central bank of a country. Money supply curve, S_M, has been drawn perfectly inelastic as it is institutionally given.

Determination of Interest Rate:

According to Keynes, the rate of interest is determined by the demand for money and the supply of money. OM is the total amount of money supplied by the central bank. At point E, demand for money becomes equal to the supply of money. Thus, the equilibrium interest rate is determined at or. Now, suppose that the rate of interest is greater than or. In such a situation, supply of money will exceed the demand for money. People will purchase more securities. Consequently, its price will rise and interest rate will fall until demand for money becomes equal to the supply of money. On the other hand, if the rate of interest becomes less than or, demand for money will exceed supply of money, people will sell their securities. Price of securities will tumble and rate of interest will rise until we reach point E. Thus, the rate of interest is determined by the monetary variables only.

Limitations:

Even Keynes' liquidity preference theory is not free from criticisms:

Firstly, like the classical and neo-classical theories, Keynes' theory is an indeterminate one. Keynes charged the classical theory on the ground that it assumed the level of employment fixed.

Same criticism applies to the Keynesian theory since it assumes a given level of income. Keynes' theory suggests that D_m and S_M determine the rate of interest. Without knowing the level of income we cannot know the transaction demand for money as well as the speculative demand for money. Obviously, as income changes, liquidity preference schedule changes—leading to a change in the interest rate.

Therefore, one cannot, determine the rate of interest until the level of income is known and the level of income cannot be determined until the rate of interest is known. Hence indeterminacy. Hicks and Hansen solved this problem in their IS-LM analysis by determining simultaneously the rate of interest and the level of income. It is indeed true also that the neo-classical authors or the pro-pounders of the loanable funds theory earlier made attempt to integrate both the real factors and the monetary factors in the interest rate determination but not with great successes. Such defects had been greatly removed by the neo-Keynesian economists—J.R. Hicks and A.H. Hansen.

Secondly, Keynes committed an error in rejecting real factors as the determinants of interest rate determination.

Thirdly, Keynes' theory gives a choice between holding risky bonds and riskless cash. An individual holds either bond or cash and never both. In the real world, it is the uncertainty or risk that induces an individual to hold both. This gap in Keynes' theory has been filled up by James Tobin. In fact, today people make a choice between a varieties of assets.

Conclusion:

Despite these criticisms, Keynes' liquidity preference theory tells a lot on income, output and employment of a country. His basic purpose was to demonstrate that a capitalist economy can never reach full employment due to the existence of liquidity trap. Though the liquidity trap has been overemphasized by Keynes yet he demolished the classical conclusion the goal of full employment. Further, his theory has an important policy implication. A central bank is incapable of reviving a capitalistic economy during depression because of liquidity trap. In other words, monetary policy is useless during depressionary phase of an economy.

2.5.5. HICKS - HANSEN THEORIES OF INTEREST RATE

The two economists after Keynes, J. R. Hicks (1904-1989) and Alvin Hansen (1887-1975), have shown that although both the classical and Keynesian theories of interest are indeterminate, they together may give us a complete and determinate theory of interest. The theory of Hicks and Hansen, made up of these two theories, is known as the Hicks-Hansen theory of interest.

Classical Interest Theory and the IS Curve:

The equations of the classical theory of interest are:

$s = s(r),\ s' > 0$ ..... Equation I

$i = i(r),\ i' < 0$ ..... Equation II

and $s(r) = i(r)$ ..... Equation III

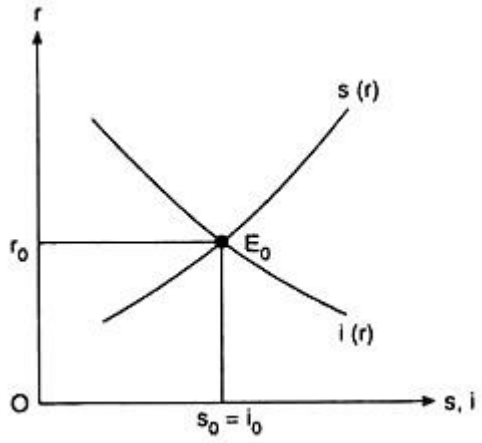


Fig.2.6. Equilibrium in the classical theory of interest

The equilibrium values of r, s and i that can be obtained by solving these three equations may also be obtained from Fig. 2.6 which is the same as Figure. These values are, respectively, r_0, s_0 and i_0. It has been assumed in this theory that saving (s) is a function of the rate of interest (r) only. However, according to Keynes, apart from r, saving is also an increasing function of income (y). Therefore, following Keynes, we have

$s = s(r, y); \partial s/\partial r > 0, \partial s/\partial y > 0$ ..... Equation IV

However, Keynes did not carry this idea to its logical conclusion. He only used it to argue that the classical theory was indeterminate. It was left to Hicks and Hansen to work further on this idea. They said that equation IV was not an s curve only. It was a family of s curves.

According to them, since s = s(r, y), the position of the s (r) curve depends on the value of y. For each particular value of y, we have a separate s(r) curve. For $y = y_1, y_2, y_3$, etc. (.... $y_3 > y_2 > y_1$), the s curves in (r, s) space that we would obtain are $s(r, y_1)$, $s(r, y_2)$, $s(r, y_3)$, etc.

These curves have been shown in Figure. Since $y_2 > y_1$ and s is an increasing function of y, we would have at any r, $s(r, y_2) > s(r, y_1)$, i.e., the $s(r, y_2)$ curve lies to the right of the $s(r, y_1)$ curve. Similarly, since $y_3 > y_2$, the curve $s(r, y_3)$ would lie to the right of the curve $s(r, y_2)$. In other words, as y rises, the s(r, y) curve would shift to the right.

If we now superimpose the i(r) curve on the family of s(r) curves in Fig. 2.7, we would get not a unique equilibrium value of r, but a number of such values one for each s(r, y) curve at the point of intersection of this curve with the i(r) curve. This gives us the indeterminacy of the classical theory. In Fig. 17.10,

we see that, if $y = y_1$, the equilibrium r would be r_1 at the point of intersection of the $s(r, y_1)$ and i(r) curves.

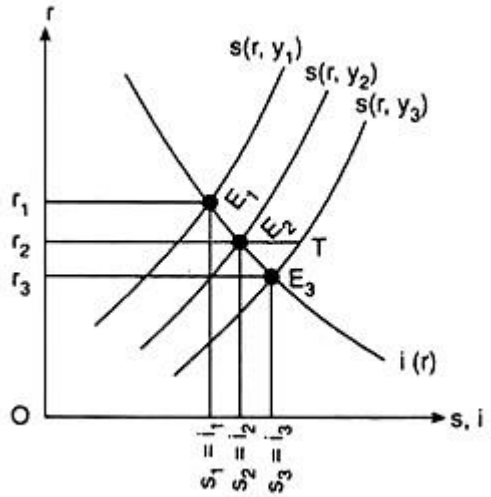


Fig.2.7 Saving is a function of rate of interest and also of income

Similarly, if $y = y_2$ or y_3, the equilibrium values of r would be r_2 or r_3. That is, here we do not obtain any unique value of r; rather, we get different (r, y) combinations, viz., (r_1, y_1), (r_2, y_2), (r_3, y_3), etc. Let us now plot these combinations as points in the (r, y) space of a separate diagram, in Fig. 2.8. Now, the curve that is obtained by joining these points is known as the Hicks-Hansen IS curve. In Fig. 2.8.

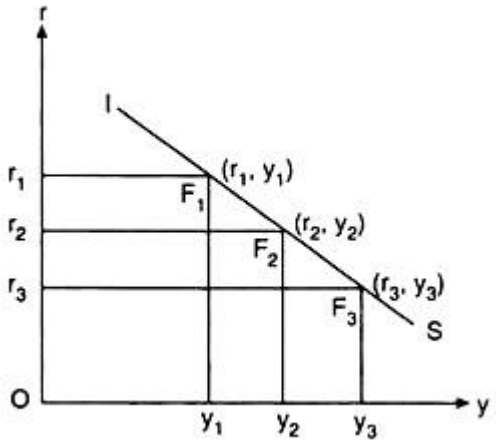


Fig.2.8 IS Curve

We have obtained the IS curve corresponding to the (r, y) equilibrium combinations of Fig. 2.7. At each point or (r, y) combination on the IS curve we have i(r) = s(r, y). That is why the curve is called an IS curve, and that is why the equation of the curve is

$s(r, y) = i(r)$ .....equation IV

Since (equation IV) is an equation in two unknowns, viz., r and y, it cannot be uniquely solved for either r or y; rather, we would obtain different (r, y) combinations as its solution. Let us also note that there is a one-to-one correspondence between the equilibrium points, viz., E_1, E_2, E_3, etc. in Fig. 2.7 and the points on the IS curve, viz., F_1, F_2, F_3, etc., respectively, in Fig. 2.8.

Determination of the Rate of Interest in Hicks-Hansen Theory:

The IS curve passes through the (r, y) combinations that satisfy the condition s(r, y) = i(r). This condition is the equilibrium condition in the capital market as also the equilibrium condition in the goods market. On the other hand, the LM curve passes through the (r, y) combinations that satisfy the condition L(r, y) = M (the money supply in real terms), which is the equilibrium condition in the money market. Therefore, the (r, y) combination that would be obtained at the point of intersection of these two curves (IS and LM), would give us simultaneously the equilibrium in the goods market and that in the money market.

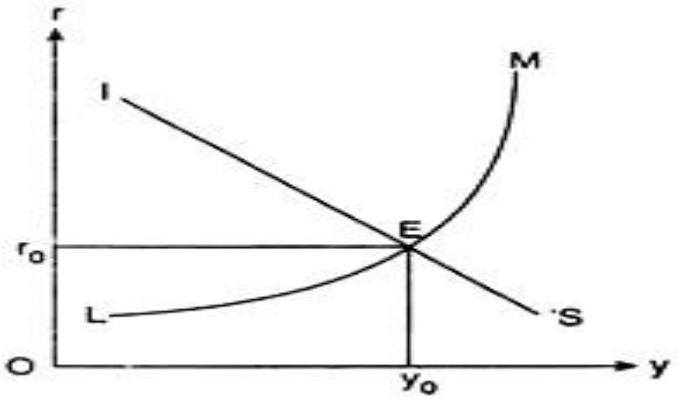


Fig.2.9 Equilibrium in the IS-LM Model

In Fig. 2.9, E is the point of intersection of the IS and LM curves. At the point E, we obtain that if the economy's level of income and the rate of interest be y_0 and r_0, then the goods market and the money market would be in equilibrium simultaneously. Here the equilibrium in the goods market or equilibrium in the level of income cannot be disturbed by the lack of equilibrium in the money market giving rise to a change in the rate of interest and in the level of investment.

Also, the equilibrium in the money market cannot be disturbed by the disequilibrium in the goods market leading to change in the level of income and the rate of interest. Therefore, the Hicks-Hansen IS-LM theory is able to determine a unique equilibrium rate of interest (r_0 in Fig. 2.9) along with a unique equilibrium level of income (y_0 in Fig. 2.9). That is why the IS-LM theory may be considered to be a complete theory of interest rate determination.

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UNIT - III

MONEY AND CAPITAL MARKET

3.1. Introduction

The financial system provides a mechanism where any firm or lender may conveniently make funds available to net borrowers who intend to spend more than their current income. A financial system may be defined as, "a set of institutions, instruments and markets which foster savings and channel them to their most efficient use". The financial system of any country consists of financial markets, financial institutions, financial instruments and financial services. Financial institutions are the firms, which provide financial services to lenders and borrowers. The next important role is being played by financial markets. It is the place where net lenders can lend their funds directly to net borrowers. A financial market is one in which financial assets one created or transferred. Financial markets may be defined as, "A market which is an aggregate of possible buyers a sellers of financial securities, commodities and other fungible items as well as the transaction between them." It simplicities the flow of investment from savings. Financial market bridges the gap between one set of financial intermediaries with another set of players. They are the centres which provide the facility for buying and selling of financial instruments. There are different set of parties included in the transactions of financial markets for example Individuals, financial institutions, government, central bank and other intermediaries. Currently the financial sector of India has reached the Rs 34, 28,475 million mark.

3.2. Role and Functions of Financial Market

Financial market gives strength to the economy by providing finance available at the right place. So these points will give us a brief idea about role of financial markets. 1. Borrowers and lenders 2. Enables price determination 3. Offers liquidity to financial assets 4. Condenses the cost of transaction 5. Mobilizes the savings.

1. Borrowers and Lenders:

Financial markets allow the parties to transfer the funds from one agent to another for either investment purpose or consumption purposes. It helps the borrowers and lenders to come together at same platform.

2. Enables price determination:

The demand and supply of any goods or services determines the prices of the financial assets. Financial market provides tools by which prices for both newly set up financial assets and existing stock of financial assets can be set.

3. Offers liquidity to financial assets:

Financial Markets provides the holders of financial assets with a chance to resell or liquidate the assets at any available time.

4. Condenses the cost of transactions:

As different instruments are issued and used in the market at regular intervals so the transactions costs tend to increase but with the help of regulatory bodies of the market.

5. Mobilization of savings:

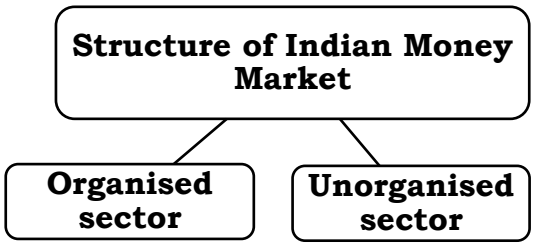
Obtaining funds from the savers or surplus units such as household individuals, business firms, public sector units, central government, state governments, etc. is an important role played by financial markets. In the absence of financial system, the savings would never be mobilised and channelized to productive investments from the unproductive ones.

3.3. MONEY MARKET IN INDIA

The Money Market is a market for lending and borrowing of short-term funds. It deals in funds and financial instruments having a maturity period of one day to one year. It covers money and financial assets that are close substitutes for money. The instruments in the money market are of short term nature and highly liquid. Money market is a market for short-term funds. We define the short-term as a period of 364 days or less. In other words, the borrowing and repayment take place in 364 days or less. The manufacturers need two types of finance: finance to meet daily expenses like purchase of raw material, payment of wages, excise duty, electricity charges etc., and finance to meet capital expenditure like purchase of machinery, installation of pollution control equipment etc.

3.3.1. Structure of Indian Money Market:

The Indian money market consists of two segments, namely organized sector and unorganized sector. The RBI is the most important constituents of Indian money market. The organized sector is within the direct purview of RBI regulation. The unorganized sector comprises of indigenous bankers, money lenders and unregulated non-banking financial institutions. The structure or components of Indian money market is depicted in the chart 3.1.



A). Organised Sector of Indian Money Market:

The organized modern sector of Indian money market comprises:

(i) The Reserve Bank of India;

(ii) The State Bank of India and its associate banks;

(iii) The Indian joint stock commercial banks (scheduled and non-scheduled) of which 20 scheduled banks have been nationalised;

(iv)The exchange banks which mainly finance Indian foreign trade; Cooperative banks;

(v) Other special institutions, such as, Industrial Development Bank of India, State Finance Corporations, National Bank for Agriculture and Rural Development, Export-Import Bank, etc., which operate in the money market indirectly through banks; and

(vi)Quasi-government bodies and large companies also make their funds available to the money market through banks.

The organised sector of Indian money market can be further classified into the following sub-markets:

1. Call and Notice Money Market
2. Treasury Bills Market (T- Bills)
3. Commercial Bills Market

4. Market for certificates of Deposits
5. Market for Commercial Papers
6. Repos Market
7. Money Market Mutual Funds
8. Discount and Finance House of India (DFHI)

1. Call and Notice Money Market: Under call money market, funds are transacted on overnight basis. Under notice money market funds are transacted for the period between 2 days and 14 days. The funds lent in the notice money market do not have a specified repayment date when the deal is made. The lender issues a notice to the borrower 2-3 days before the funds are to be paid. On receipt of this notice, the borrower will have to repay the funds within the given time. Generally, banks rely on the call money market where they raise funds for a single day. The main participants in the call money market are commercial banks (excluding RRBs), co-operative banks and primary dealers. Discount and Finance House of India (DFHI), Non-banking financial institutions such as LIC, GIC, UTI, and NABARD etc. are allowed to participate in the call money market as lenders.

2. Treasury Bills Market (T-Bills): Treasury bills are short-term securities issued by RBI on behalf of Government of India. They are the main instruments of short term borrowing by the Government. They are useful in managing short-term liquidity. At present, the Government of India issues three types of treasury bills through auctions, namely – 91 days, 182-day and 364-day treasury bills. There are no treasury bills issued by state governments. With the introduction of the auction system, interest rates on all types of TBs are being determined by the market forces.

3. Commercial Bills Market: Commercial bill is a short-term, negotiable, and self-liquidating instrument with low risk. They are negotiable instruments drawn by a seller on the buyer for the value of goods delivered by him. Such bills are called trade bills. When trade bills are accepted by commercial banks, they are called commercial bills. If the seller gives some time for payment, the bill is payable at future date. Generally the maturity period is up to 90 days. The banks can rediscount the commercial bills any number of times during the usance period of bill and get money.

4. Certificates of Deposits (CDs): CDs are unsecured, negotiable promissory notes issued at a discount to the face value. They are issued by commercial banks and development financial institutions. CDs are marketable receipts of funds deposited in a bank for a fixed period at a specified rate of interest. CDs were introduced in India in June 1989. The main purpose of the scheme was to enable commercial banks to raise funds from the market through CDs. According to the original scheme, CDs were issued in multiples of Rs.25 lakh subject to minimum size of an issue being Rs.1 crore. They had the maturity period of 3 months to one year. They are freely transferable but only after the lock in period of 45 days after the date of issue.

5. Commercial Papers (CPs): Commercial Paper (CP) is an unsecured money market instrument issued in the form of a promissory note with fixed maturity. They indicate the short-term obligation of an issuer. They are quite safe and highly liquid. They are generally issued by the leading, nationally reputed, highly rates and credit worthy large manufacturing and finance companies is the public as well as private sector. CPs were introduced in India January 1990. CPs were launched in India with a view to enable highly rated corporate borrowers to diversify their sources of short-term borrowings and also to provide an additional instrument to investors. RBI has modified its original scheme in order to widen the market for CPs. Corporates and primary dealers (PDs) and the all India financial institutions can issue CPs. A corporate can issue CPs provided they fulfill the following conditions: (a) the tangible net worth of the company is not less than Rs.4 crore. (b) The company has been sanctioned working capital limit by banks or all India financial institutions, and (c) The borrowed account of the company is classified as a standard asset by the financing institution or bank.

6. Repo Market: A repo or reverse repo is a transaction in which two parties agree to sell and repurchase the same security. Under repo, the seller gets immediate funds by selling specified securities with an agreement to repurchase the same at a mutually decided future date and price. Similarly, the buyer purchases the securities with an agreement to resell the same to the seller at an agreed date and price. The repos in government securities

were first introduced in India since December 1992. Since November 1996, RBI has introduced "Reverse Repos", i.e. to sell government securities through auction.

7. Discount and Finance House of India (DFHI): It was set up by RBI in April 1988 with the objective of deepening and activating money market. It is jointly owned by RBI, public sector banks and all India financial institutions which have contributed to its paid up capital. The DFHI deals in treasury bills, commercial bills, CDs, CPs, short-term deposits, call money market and government securities. The presence of DFHI as an intermediary in the money market has helped the corporate entities, banks, and financial institutions to invest their short-term surpluses in money market instruments.

8. Money Market Mutual Funds (MMMFs): RBI introduced MMMFs in April 1992 to enable small investors to participate in the money market. MMMFs mobilizes savings from small investors and invest them in short-term debt instruments or money market instruments such as call money, repos, treasury bills, CDs and CPs. These instruments are forms of debt that mature in less than a year.

(B) UNORGANIZED SECTOR OF INDIAN MONEY MARKET

The unorganized Indian money market is largely made up of indigenous bankers, money lenders and unregulated non-bank financial intermediaries. They do operate in urban centers but their activities are largely confined to the rural sector. This market is unorganized because its activities are not systematically coordinated by the RBI. The main components of unorganized money market are:

1. Indigenous Bankers: They are financial intermediaries which operate as banks, receive deposits and give loans and deals in hundies. The hundi is a short term credit instrument. It is the indigenous bill of exchange. The rate of interest differs from one market to another and from one bank to another. They do not depend on deposits entirely, they may use their own funds.

2. Money Lenders: They are those whose primary business is money lending. Money lenders predominate in villages. However, they are also found in urban areas. Interest rates are generally high. Large amount of loans are given for

unproductive purposes. The borrowers are generally agricultural labourers, marginal and small farmers, artisans, factory workers, small traders, etc.

3. Unregulated non-bank Financial Intermediaries: They consist of Chit Funds, Nithis, Loan companies and others.

(a) Chit Funds: They are saving institutions. The members make regular contribution to the fund. The collected funds is given to some member based on previously agreed criterion (by bids or by draws). Chit Fund is more famous in Kerala and Tamilnadu.

(b) Nidhis: They deal with members and act as mutual benefit funds. The deposits from the members are the major source of funds and they make loans to members at reasonable rate of interest for the purposes like house construction or repairs. They are highly localized and peculiar to South India. Both chit funds and Nidhis are unregulated.

4. Finance Brokers: They are found in all major urban markets especially in cloth markets, grain markets and commodity markets. They are middlemen between lenders and borrowers.

3.3.2. FEATURES OF INDIAN MONEY MARKET

Several steps were taken in the 1980s and 1990s to reform and develop the Indian money market. Despite these efforts, Indian money market continues to remain lopsided, thin and extremely volatile. Indian money market is relatively underdeveloped when compared to advanced markets like London and New York money markets. Its main defects are explained below:

1. Existence of Unorganized Money Market: This is one of the major defects of Indian money market. It does not distinguish between short term and long term finance, and also between the purposes of finance. Since it is outside the control and supervision of RBI, it limits the RBI's control of over money market.

2. Lack of Integration: The Indian money market is broadly divided into two sectors, the organized money market and the unorganized money market. The organized market constitutes several institutions such as Reserve Bank of India, State Bank of India, commercial banks, cooperative banks and financial institutions. Reserve Bank of India (RBI) as an apex body regulates their working. The unregulated sector is not homogenous in itself. It constitutes

indigenous bankers, loan companies, money lenders, etc. There is no uniformity in their practices and there is multiplicity of functionaries.

3. Multiplicity in Interest Rates: There exists too many rates of interest in the Indian money market such as the borrowing rate of government, deposits and lending rates of cooperative and commercial banks, lending rates of financial institutions, etc. This is due to lack of mobility of funds from one section of the money market to another. The rates differ for funds of same durations lent by different institutions.

4. Inadequate Funds: Generally there is shortage of funds in Indian money market on account of various factors like inadequate banking facilities, low savings, lack of banking habits, existence of parallel economy, etc. However, the banking development particularly branch expansion, has improved the mobilization of funds to some extent in the recent years.

5. Seasonal Stringency of Money: The seasonal stringency of money and high rate of interest during the busy season (November to June) is a striking feature of Indian money market. There are wide fluctuations in the interest rates from one season to another. Reserve Bank of India (RBI) has been taking various measures to avoid such fluctuations in the money market by adding money into the money market during the busy season and withdrawing the funds during the slack season.

6. Absence of Bill Market: A well-organized bill market is necessary for linking up various credit agencies effectively to RBI. The bill market is not yet developed on account of many factors such as the practice of banks keeping a large amount of cash for liquidity purposes, preference for borrowing rather than discounting bills, dependence of indigenous bankers on one another, widespread practice of using cash credit, high stamp duty on usance bill, etc.

7. Inadequate Credit Instruments: The Indian money market did not have adequate short term paper instruments till 1985-86. There were only call money and bill markets. Moreover there were no specialist dealers and brokers dealing in the money market. After 1985-86, RBI has introduced new credit instruments such as 182-day treasury bills, 364-day treasury bills, CDs and CPs. These instruments are still in underdeveloped state in India. The above defects of Indian money market clearly indicate that it is relatively

less developed and has yet to acquire sufficient depth and width. Thus, it cannot be compared with developed money markets such as London and New York money markets.

3.3.3. Reforms of Indian Money Market.

The Committee to Review the Working of Monetary System chaired by S. Chakravarty made several recommendations in 1985 to develop Indian money market. As a follow-up, the RBI set up a Working Group on money market under the chairmanship of N. Vaghul, in 1987. Based on the recommendations of Vaghul Committee, RBI initiated a number of measures to widen and deepen the money market. The main measures are as follows.

1. Deregulation of Interest Rates:

From May 1989, the ceiling on interest rates on the call money, inter-bank short-term deposits, bills rediscounting and inter-bank participation was removed and the rates were permitted to be determined by the market forces. Thus, the system of administered interest rates is being gradually dismantled.

2. Introduction of New Money Market Instruments:

In order to widen and diversify the Indian money market RBI has introduced many new money market instruments such as 182-days treasury bills, 364-day treasury bills, CDs & CPs. Through these instruments the government, commercial banks, financial institutions and corporate can raise funds through the money market. They also provide investors additional instruments for investments. In order to expand the investor base for CDs and CPs the minimum amount of investment and the minimum maturity periods are reduced by RBI.

3. Repurchase Agreements (Repos):

RBI introduced repos in government securities in December 1992 and reverse repos in November 1996. Repos and reverse repos help to even out short-term fluctuations in liquidity in the money market. They also provide a short-term avenue to banks to park their surplus funds. Through changes in repo and reverse repo rates RBI transmits policy objectives to entire money market.

4. Liquidity Adjustment Facility (LAF):

RBI has introduced Liquidity Adjustment Facility from June 2000 as an important tool for adjusting liquidity through repos and reverse repos. Thus, in the recent years RBI is using repos and reverse repos as a policy to adjust liquidity in the money market and therefore, to stabilize the short-term interest rates or call rates. LAF has, therefore, emerged as a major instrument of monetary policy.

5. Money Market Mutual Funds (MMMF):

RBI introduced MMMFs in April 1992 to enable the individual investors to participate in money market. To make the scheme flexible and attractive, RBI has brought about many modifications. The important features of this scheme as of now are: (i) it can be set up by commercial banks, financial institutions and private sector. (ii) Individual investors, corporates and others can invest in MMMFs. (iii) Resources mobilized through this scheme can be invested in money market instruments as well as rated corporate bonds and debentures with a maturity period up to one year. (iv) The minimum lock in period is now 15 days.

6. Discount and Finance House of India (DFHI):

In order to impart liquidity to money market instruments and help the development of secondary market in such instruments, DFHI was set up in 1988 jointly by RBI, public sector banks and financial institutions.

7. Development of Inter-bank Call and Notice Money Market:

The call and notice money market is an inter-bank market the world over and therefore the Narasimham Committee has recommended that we adopt the same in India. However RBI in the past had given permission to non-bank institutions to participate in the call money market as lenders. As per the recommendations of Narasimham Committee RBI in 2001-2002 has underlined the need for transforming the call money market into a pure inter-bank money market.

8. Regulation of NBFCs:

The RBI Act was amended in 1997 to provide for a comprehensive regulation of NBFC sector. According to the amendment, no NBFC can carry

on any business of a financial institution, including acceptance of public deposit, without obtaining a Certificate of Registration (CoR) from RBI.

9. The Clearing Corporation of India Limited (CCIL):

The Clearing Corporation of India Limited was registered on April 30, 2001 under the Companies Act, 1956, with the State Bank of India as the chief promoter. The CCIL clears all transactions in government securities and repos reported on the Negotiated Dealing System (NDS) of RBI.

3.4 CAPITAL MARKET IN INDIA

Capital market is the market for medium and long term funds. It refers to all the facilities and the institutional arrangements for borrowing and lending term funds (medium-term and long-term funds). The demand for long-term funds comes mainly from industry, trade, agriculture and government. The central and state governments invest not only on economic overheads such as transport, irrigation, and power supply but also a basic and consumer goods industries and hence require large sums from capital market. The supply of funds comes largely from individual savers, corporate savings, banks, insurance companies, specialized financial institutions and government.

3.4.1. Significance of Capital Market:

Capital market has a crucial significance to capital formation. Adequate capital formation is indispensable for a speedy economic development. The main function of capital market is the collection of savings and their distribution for industrial development. This stimulates capital formation and hence, accelerates the process of economic development. A sound and efficient capital market facilitates the process of capital formation and thus contributes to economic development. The significance of capital market in economic development is explained below.

1. Mobilisation of Savings:

Capital market is an organized institutional network of financial organizations, which not only mobilizes savings through various instruments but also channelizes them into productive avenues. By making available various types of financial assets, the capital market encourages savings. By

providing liquidity to these financial assets through the secondary markets capital market is able to mobilize large amount of savings from various sections of the people such as individuals, families, and associations. Thus, capital market mobilizes these savings and make the same available for meeting the large capital needs of industry, trade and business.

2. Channelization of Funds into Investments: Capital market plays a crucial role in the economic development by channelizing funds in accordance with development priorities. The financial intermediaries in the capital market are better placed than individuals to channel the funds into investments which are more favourable for economic development.

3. Industrial Development: Capital market contributes to industrial development in the following ways: (a) it provides adequate, cheap and diversified finance to the industrial sector for various purposes. (b) It provides funds for diversified purposes such as for expansion, modernization, up gradation of technology, establishment of new units etc. (c) It provides a variety of services to entrepreneurs such as provision of underwriting facilities, participating in equity capital, credit rating, consultancy services, etc. This helps to stimulate industrial entrepreneurship.

4. Modernization and Rehabilitation of Industries: Capital market can contribute towards modernization, rationalization and rehabilitation of industries. For example, the setting up of development financial institutions in India such as IFCI, ICICI, Industrial Development Bank of India (IDBI) and so on has helped the existing industries in the country to adopt modernization and replacement of obsolete machinery by providing adequate finance.

5. Technical Assistance: An important bottleneck faced by entrepreneurs in developing countries is technical assistance. By offering advisory services relating to the preparation of feasibility reports, identifying growth potential and training entrepreneurs in project management, the financial intermediaries in the capital market play an important role in stimulating industrial entrepreneurship. This helps to stimulate industrial investment and thus promotes economic development.

6. Encourage Investors to invest in Industrial Securities: Secondary market in securities encourage investors to invest in industrial securities by

making them liquid. It provides facilities for continuous, regular and ready buying and selling of securities. Thus, industries are able to raise substantial amount of funds from various segments of the economy.

7. Reliable Guide to Performance: The capital market serves as a reliable guide to the performance and financial position of corporate, and thereby promotes efficiency. It values companies accurately and toes up manager compensation to stock values. This gives incentives to managers to maximize the value of companies. This stimulates efficient resource allocation and growth.

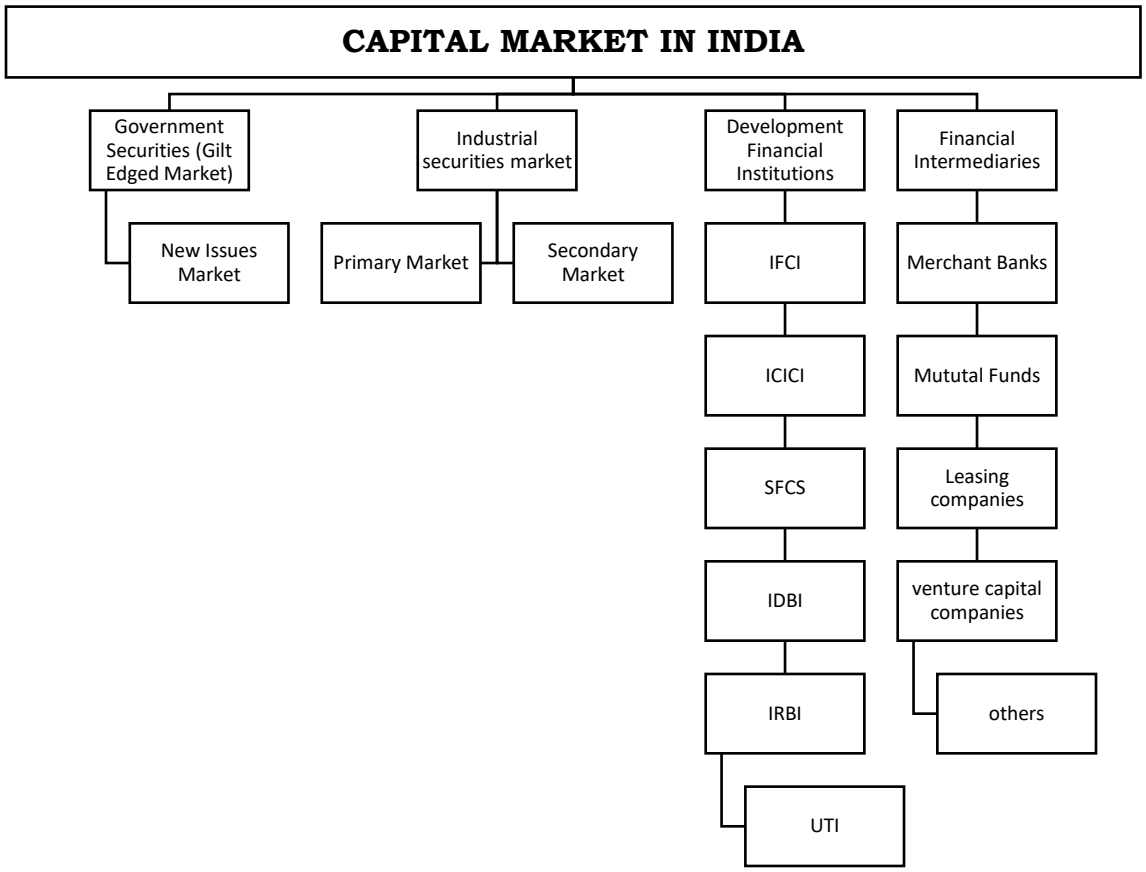
3.4.2. Structure of Capital Market: In the financial market all those institutions and organizations which provide medium term and long-term funds to business enterprises and public authorities, constitute the capital market. In simple words, the market which lends long-term funds is called the capital market. The capital market is composed of those who demand funds and those who supply funds. Thus, the borrowers and lenders in the financial market for medium-term and long-term funds constitute the capital market.

The Indian Capital Market is broadly divided into two categories:

1) The securities market consisting of (a) the gilt-edged market and (b) The industrial securities market; and 2) the financial institutions (Development Financial Institutions) (DFIs).

Thus, the Indian capital market is composed of (a) the gilt-edged market or the market for government securities and industrial securities or corporate securities market. (b) Capital market includes Development Financial Institutions (DFIs) such as Industrial Finance Corporation of India (IFCI), State Financial Corporations (SFC), Life Insurance Corporation (LIC), Industrial Development Bank of India (IDBI), Unit Trust of India (UTI), Industrial Credit and Investment Corporation of India (ICICI), etc. They provide medium-term and long-term funds for business enterprises and public authorities. (c) Apart from the above, there are financial intermediaries in the capital market such as merchant bankers, mutual funds, leasing companies, venture capital companies etc. They help in mobilizing savings

and supplying funds to investors. The capital market in India is shown by chart 3.2.



(1) Gilt- Edged Market: Gilt-edged market is also known as the government securities market. As the securities are risk free, they are known as gilt-edged i.e. the best quality securities. The investors in the gilt-edged market are predominantly institutions. They are required by law to invest a certain portion of their funds in these securities. These institutions include commercial banks, Life Insurance Corporation (LIC), General Insurance Corporation of India (GIC), and the provident funds. The transactions in the government securities market are very large. Each transaction may run into several crores or even hundred crores of rupees. Since June 1992, government securities have been mostly issued sealed bid auctions. RBI plays a dominant role in the gilt-edged market through its open market operations. Thus, government securities are the most liquid debt instruments.

(2) The Industrial Securities Market: It is a market of shares, debentures and bonds which can be bought and sold freely. This market is divided into two categories: a. Primary Market and b. Secondary Market

(A) Primary Market: The new issue market called the primary market and (b) old issue market, commonly known as stock exchange or stock market. It is called the secondary market. The new issue market is concerned with the raising of new capital in the form of shares, bonds and debentures. Many public limited companies often raise capital through the primary market for expanding their business. It may be noted that the new issue market is important because of its impact on economic growth of the country.

(B) Secondary Market: The stock exchange market or the secondary market is a market of the purchase and sale of quoted or listed securities. It is a highly organized market for regulating and controlling business in buying, selling and dealing in securities.

(3) Financial Institutions: We have mentioned that there are special financial institutions which provided long-term capital to the private sector in the capital market. These institutions are called Development Financial Institutions.

(4) Financial Intermediaries: The Indian capital market has shown steady improvement after 1951. During the Five-Year Plans, Capital market has witnessed rapid growth. Both the volume of saving and investment have shown phenomenal improvement. In fact, in the last two decades, the volume of capital market transactions has increased substantially. Besides, its functioning has been diversified indicating the growth of the Indian economy.

3.4.3. CAPITAL MARKET REFORMS IN INDIA

The reforms in the capital market are explained below with respect to primary and secondary market reforms in India.

PRIMARY MARKET REFORMS IN INDIA: A number of measures has been taken in India especially since 1991 to develop primary market in India. These measures are discussed below:

1. **Abolition of Controller of Capital Issues:** The Capital Issues (Control) Act, 1947 governed capital issues in India. The capital issues control was administered by the Controller of Capital Issues (CCI). The Narasimham Committee (1991) had recommended the abolition of controller of capital issues and wanted SEBI to protect investors and take over the regulatory

function of CCI. Thus, government replaced the Capital Issues (Control) Act and abolished the post of CCI. Companies are allowed to approach the capital market without prior government permission subject to getting their offer documents cleared by SEBI.

2. Securities and Exchange Board of India (SEBI): SEBI was set up as a non-statutory body in 1988 and was made a statutory body in January 1992. SEBI has introduced various guidelines for capital issues in the primary market. They are explained below.

3. Disclosure Standards: Companies are required to disclose all material facts and specific risk factors associated with their projects. SEBI has also introduced a code of advertisement for public issues for ensuring fair and truthful disclosures.

4. Freedom of Determine the Par Value of Shares: The requirement to issue shares at a par value of Rs.10 and Rs.100 was withdrawn. SEBI has allowed the companies to determine the par value of shares issued by them. SEBI has allowed issues of IPOs through "book building" process.

5. Underwriting Optional: To reduce the cost of issue, underwriting by the issuer is made optional. It is subject to the condition that if an issue was not underwritten and was not able to collect 90% of the amount offered to the public, the entire amount collected would be refunded to the investors.

6. FIIs Permitted to Operate in the Indian Market: Foreign institutional investors such as mutual funds and pension funds are allowed to invest in equity shares as well as in debt market, including dated government securities and treasury bills.

7. Accessing Global Funds Market: Indian companies are allowed to aces global finance market and benefit from the lower cost of funds. They have been permitted to raise resources through issue of American Depository Receipts (ADRs), Global Depository Receipts (GDRs), Foreign Currency Convertible Bonds (FCCBs) and External Commercial Borrowings (ECBs). Indian companies can list their securities on foreign stock exchanges through American Depository Receipts (ADRs), Global Depository Receipts (GDRs) issues.

8. Intermediaries under the Purview of SEBI: Merchant bankers, and other intermediaries such as mutual funds including UTI, portfolio managers, registrars to an issue, share transfer agents, underwriters, debenture trustees, bankers to an issue, custodian of securities, and venture capital funds have been brought under the purview of SEBI.

9. Credit Rating Agencies: Various credit rating agencies such as Credit Rating Information Services of India Ltd. (CRISIL – 1988), Investment Information and Credit Rating Agency of India Ltd. (ICRA – 1991). Cost Analysis and Research Ltd. (CARE – 1993) and so on were set up to meet the emerging needs of capital market.

SECONDARY MARKET REFORMS

A number of measures have been taken by the government and SEBI for the growth of secondary capital market in India. The important reforms or measures are explained below.

1. Setting up of National Stock Exchange (NSE): NSE was set up in November 1992 and started its operations in 1994. It is sponsored by the IDBI and co-sponsored by other development finance institutions, LIC, GIC, Commercial banks and other financial institutions.

2. Over the Counter Exchange of India (OTCEI): It was set in 1992. It was promoted by a consortium of leading financial institutions of India including UTI, ICICI, IDBI, IFCI, LIC and others. It is an electronic national stock exchange listing an entirely new set of companies which will not be listed on other stock exchanges.

3. Disclosure and Investor Protection (DIP) Guidelines for New Issues: In order to remove inadequacies and systematic deficiencies, to protect the interests of investors and for the orderly growth and development of the securities market, the SEBI has put in place DIP guidelines to govern the new issue activities. Companies issuing capital in the primary market are now required to disclose all material facts and specify risk factors with their projects.

4. Screen Based Trading: The Indian stock exchanges were modernized in the 90s, with Computerised Screen Based Trading System (SBTS). It electronically matches orders on a strict price / time priority. It cuts down

time, cost, risk of error and fraud, and therefore leads to improved operational efficiency.

5. Depository System: A major reform in the Indian Stock Market has been the introduction of depository system and scrip less trading mechanism since 1996. Before this, the trading system was based on physical transfer of securities. A depository is an organization which holds the securities of shareholders in electronic form, transfers securities between account holders, facilitates transfer of ownership without handling securities and facilitates their safekeeping.

6. Rolling Settlement: Rolling settlement is an important measure to enhance the efficiency and integrity of the securities market. Under rolling settlement all trades executed on a trading day are settled after certain days.

7. The National Securities Clearing Corporation Ltd. (NSCL): The NSCL was set up in 1996. It has started guaranteeing all trades in National Security Exchange (NSE) since July 1996. The National Securities Clearing Corporation Limited (NSCL) is responsible for post-trade activities of the NSE. Clearing and settlement of trades and risk management are its central functions.

8. Trading in Central Government Securities: In order to encourage wider participation of all classes of investors, including retail investors, across the country, trading in government securities has been introduced from January 2003. Trading in government securities can be carried out through a nationwide, anonymous, order-driver, screen-based trading system of stock exchanges in the same way in which trading takes place in equities.

9. Mutual Funds: Emergency of diversified mutual funds is one of the most important development of Indian capital market. Their main function is to mobilize the savings of general public and invest them in stock market securities. Mutual funds are an important avenue through which households participate in the securities market.

3.4.4. Significance of Securities Exchange Board of India (SEBI):

SEBI was established as a non-statutory board in 1988 and January 1992, it was accorded statutory status. The regulatory powers of SEBI were increased in January 1995. It has now become a very important constituent

of the financial regulatory framework in India. The SEBI is under the overall control of the Finance Ministry.

1. Promotion and Development of Capital Market: One of the important role of SEBI is the promotion and development of the capital market. It protects the rights and interests of investors, especially the individual investors. It prevents trading malpractices. Its regulatory measures are meant for the healthy development of capital markets.

2. Regulatory Role: Another important role of SEBI is the regulation of the security markets in India. The SEBI can frame or issue rules, regulations, directives, guidelines, norms with respect to primary and secondary markets.

3. Protection of Interest of Investors: An important role of SEBI is the protection interest of investors in securities. Securities Exchange Board of India (SEBI) has introduced various measures to protect the interests of investors. To ensure no malpractice takes place in the allotment of share, a representative of SEBI supervises the allotment process.

4. Investor's Education: Securities Exchange Board of India (SEBI) has a role of educating the investors about the securities market. It issues advertisements from time to time to enlighten the investors on various issues related to the securities market and of their rights and remedies.

5. Investor's Grievances Redressal: Securities Exchange Board of India plays another role of redressing the investor's grievances. SEBI has introduced an automated complaints handling system to deal with investor complaints. The Investor Grievances Redressal and Guidance Division of SEBI assists investors who want to make complaints to SEBI against listed companies.

6. Primary Market Policy: Securities Exchange Board of India (SEBI) looks after all the policy matters and regulatory issues with respect to primary market. It is responsible for vetting of all the prospectuses and letters of offer for public and right issues, for co-ordinating with the primary market policy, for registration, regulation and monitoring of issue related intermediaries.

7. Secondary Market Policy: Securities Exchange Board of India (SEBI) is responsible for all policy and regulatory issues for secondary market and new investment products. It is also responsible for registration and monitoring of

members of stock exchanges, administration of some of the stock exchanges and monitoring of price movements and insider trading.

8. Institutional Investment Policy: SEBI look after institutional investment policy with respect to domestic mutual funds and Foreign Institutional Investors (FIIs). It also looks after registration, regulation and monitoring of FIIs and domestic mutual funds.

9. Facilitates Mobilisation of Resources: The SEBI plays an important role in facilitating an efficient mobilization and allocation of resources through the securities market, stimulating competition and encouraging innovations.

3.5. ROLE OF FINANCIAL INTERMEDIARIES

We learnt about the financial market system and its two components that is money market and capital market. We also learnt about how development of financial market and economic development are inter-linked, various instruments of financial market which are used to channelize funds. In this module, we will learn about the different types of financial intermediaries, services which they offer, their advantages and disadvantages. Along with the basic concept of financial intermediaries, we will also learn about why an emerging market need financial intermediaries and how these financial intermediaries help an emerging market to efficiently allocate its resources. Financial sector growth is the key driver for economic growth of an economy. Corporate Investments (Direct or institutional) facilitates firms to raise capital and finance their upcoming and ongoing projects. The financial sector includes financial intermediaries, financial markets (Stock exchanges). In past few decades, the linkage between economic development and financial sector growth has deepened due to advancement of technology. Technological advancement and advanced understanding in this sector has acted as a catalyst in the transformation. A number of financial institutions have emerged and flourished during this period. The financial intermediaries offer a wide range of facilities ranging from borrowing at a cheaper rate to secured lending to liquid markets etc.

A financial intermediary is an entity that acts as a middleman between two parties (firms or individuals) in a financial transaction. A financial

intermediary could be a bank, building society, insurance company, investment bank or pension fund. Along with offering a number of benefits to the average consumer including safety, liquidity and economies of scale, financial intermediaries also facilitate an individual/ firm to save, lend or borrow money. Financial intermediaries range in terms of size and scale of operation.

3.5.1. Types of Financial Intermediaries

1. Insurance Companies: Many times individuals or firms invest in a project which are risky. By saying risky we mean, actions taken in spite of knowing uncertain outcome. For example: A paper manufacturing firm continues to produce in spite of the fact that there can a fire at the factory which will destroy all of its resources and output. To insure itself against such risk, it goes to an insurance company that offers it insurance by spreading the risk of default among the pool of other insurance seekers. The insurance companies in turn charge a premium from their clients.

2. Financial Advisers: A financial adviser is the one who offers specialist advice on your behalf while choosing a suitable investment for yourself. The specialist advice from the market expert's saves you from understanding all the complexities of the financial markets and spending time looking for best suited investment. The financial advisers or portfolio managers prepare an investment policy statement for each of their client which states the ability and willingness of the investor to bear risk, return objectives, preferences etc. On the basis of these information, the financial advisers construct a portfolio for their clients which comply with their investment policy statements. The financial advisers usually charge a combination of fixed fees and performance based commission for constructing and managing client's portfolio.

3. Credit Union: Credit unions are very common in emerging economies where financial market system is not too strong. These are informal types of banks which provide facilities for lending and depositing within a particular community.

4. Mutual funds/ Investment trusts: Mutual fund investments are getting very popular these days. Individuals with smaller savings and limited knowledge of financial markets are the ones who are benefited the most. A

firm pools the small savings of individuals or firms. The pool is then managed by a team of market experts who have an in depth knowledge of the financial market and its intricacies. The fund manager invests the pool of these small savings into big investment funds which have diversified risks (a portfolio of stocks which have lower correlation between them have lower risks) and the possibility of loss is diminished. The smaller commission rates available on big purchases and expertise management enables the small investors to benefit from being part of a larger investment trust.

5. Commercial Banks: Commercial banks are the primary bank financial intermediaries. People deposit their savings with commercial banks which these banks in turn lend as loans to those who need credit. They are itself a financial intermediary and sometimes they invest deposits in various NBFIs to earn higher returns.

3.5.2. Benefits of Financial Intermediaries

1. Existence of sound financial intermediary reduces search cost. People don't have to look for right lender or borrower as that function is performed by a specialist.
2. The pool of borrowers spreads the risk of default of the lender. As a financial intermediary forms a pool of savings from depositors and lend these out again to a pool of borrowers. Thus the risk of default gets diminished.
3. A giant financial intermediary with vast network operates at a lower average total cost and charges lower commission for each transaction hence enables its customers to enjoy economies of scale.
4. Without the existence of a financial intermediary it would be difficult for a borrower/lender to find right person to lend/ borrow from, the exact sum of money which he is willing to borrow/lend.

3.5.3. Potential Problems of Financial Intermediaries

1. A financial intermediary does not guarantee the spread of risk as there can be the poor management of the collected pool and suitable steps may not be taken while scrutinizing the potential borrower.
2. Asymmetry of information between customers and financial intermediary may cause moral hazard. A financial intermediary does not always share all

the information about the investment with their customers. An investment in high risk bearing corporate or government bonds may result in loss of money. One of the popular example of such situation is 'Lehman Brothers' bankruptcy case. 'Lehman brothers' one of the largest financial intermediary in the world went bankrupt after investing a huge sum of money in mortgage debt bundles. The magnitude of the market capitalization of 'Lehman Brothers' was very large which result in the default of many other financial intermediaries which were directly or indirectly linked with it. The failure of a chain of financial intermediaries pushed the entire world economy into recession.

3. A financial market runs on the liquidity and the confidence of the people. In some economies, to earn more profit, banks keep only 1% of the total deposits with them and lend out the rest. If there is any failure in the confidence among people towards the banking system, they will rush to the banks and ask for their deposits. If such situation happens it will collapse the entire financial market of the economy.

4. Emerging markets: A market is said to be emerging if it is progressing towards becoming advanced and developed measured by some liquidity in local debt and equity markets and a satisfactory level of confidence among citizens towards its financial market system. The existence of strict regulatory body for market exchange deepens the confidence of the citizens and protect their interest. The emerging markets continuously strive to achieve high level of liquidity and confidence in their financial market system. To meet the goal, reforms are executed to gradually increase the market efficiency and strictness in the standards governing financial market transactions and protecting consumer interests. In India, SEBI (Securities and Exchange Board of India) formulates and looks after the stock exchange transactions. Emerging markets attract foreign investors as they usually offer higher rate of return because of the rapid economic development and GDP growth. But this return co-exists with high risk of political instability, poor domestic infrastructure, volatility in currency exchange rate and limited equity opportunities. Also, local stock exchanges do not offer the desired liquidity in the market for outside investors.

5. Financial needs of an emerging economy: An emerging economy faces a large number of challenges while moving towards advancement. They need to finance their investments in domestic infrastructure, defense, research and development projects, healthcare facilities, education, social security of citizens and many more. Unlike the developed and advanced economies, the emerging economies have shortage of funds to finance their development needs. To overcome the situation, a strong financial market system is needed. The role of financial intermediaries, then, become important for these economies to reach advanced level.

3.6. ROLE OF FINANCIAL INTERMEDIARIES

The main role of financial intermediaries is in reducing transactions costs and the problem of asymmetric information in financial markets. Apart from these, financial intermediaries facilitate the transfer of risk and help in providing advisory services thereby making the participation in capital markets easy by simplifying the dealings with a complex maze of assets and instruments. The role of financial intermediaries is explained below:

1. Financial Intermediaries help reduce Poverty levels:

Overtime the role of financial intermediaries has undergone a dramatic transformation. FIs keep themselves involved in finding innovative ways to provide financial services to the poor so that they can improve their productive capacity and quality of life. Most of the poor live in the rural areas and are engaged in agricultural activities with limited access to conventional credit and insurance markets. Most formal financial institutions do not serve the poor because of perceived high risks, high costs involved in small transactions, perceived low profitability, and probable inability to provide the physical collateral required by such institutions. FIs by providing efficient micro-finance to the poor can help in:

- Enabling the poor to smoothen their consumption, manage risks better, gradually build assets, develop micro-enterprises, enhance income earning capacity, and generally enjoy an improved quality of life.
- Improved resource allocation, development of financial markets and system, and ultimately economic growth and development.

- Active participation of vulnerable sections in benefitting from development opportunities.

2. Pension Funds as Financial Intermediaries bring about Financial Smoothening to People: Pension fund is a form of institutional investor, which collects, pools and invests funds contributed by sponsors and beneficiaries to provide for the future pension entitlements of beneficiaries. It provides a means for individuals to accumulate saving over their working life so as to finance their consumption needs in retirement. Pension funds boost the efficiency of the financial system by influencing the structure of securities markets. It helps to generate liquidity. It offers a mechanism for pooling of funds and subdivision of shares as they offer much lower costs of diversification by proportional ownership. Pension funds can also offer the possibility of investing in large denomination and indivisible assets such as property which are unavailable to small investors. Pension funds also provide risk control directly to households via the forms of retirement income insurance they provide. To assist in undertaking this risk control function they diversify assets and also act in securities and derivatives markets to hedge and control risk.

3. Resource Provider: Financial intermediaries have an important role of a temporary resource provider when there is a time lag between the firm's factor payments and receipts from sale proceeds. This role becomes all the more important when the firms do not have enough resources of its own to cover its factor payments. In such a scenario financial intermediaries come in and provide working capital finance.

4. Provide Inducement to Save: Bank and Non-bank financial intermediaries play an important role in promoting savings in the country. Savers need stores of value to safe keep their savings in. These institutions provide a wide range of financial assets as store of value and make available expert financial services to the savers. As stores of value, the financial assets have certain special advantages over the tangible assets (such as, physical capital, inventories of goods, etc.). Financial assets are easily storable, more liquid, more easily divisible, and less risky. In fact, saving- income ratio is

positively related to both financial institutions and financial assets; financial growth induces larger savings out of the same level of real income.

5. Insurance markets as financial intermediaries promote Economic Growth: Insurance market activity, both as financial intermediary and as provider of risk transfer and indemnification, promote economic growth by allowing different risks to be managed more efficiently by encouraging the accumulation of new capital, and by mobilizing domestic savings into productive investments. The insurance activity contribute to economic growth in the following ways: (i) Promote financial stability (ii) Facilitate trade and commerce (the most ancient insurance activity) (iii) Mobilize domestic savings to be channelled in productive investment (iv) Allow different risks to be managed more efficiently encouraging the accumulation of new capital (v) Foster a more efficient allocation of domestic capital, and (vi) Help to reduce or mitigate losses. Insurance market activity may not only contribute to economic growth by itself but also through complementarities with the banking sector and the stock market i.e. the other financial intermediaries.

6. Financial Intermediaries act as Markets for Firm's Assets: Financial intermediaries have a key role in the restructuring and liquidation of firms in distress. They play an active role in the reallocation of displaced capital. Knowing possible interactions among firms, banks can suggest solutions for the efficient reallocation of assets and of corporate control. Financial intermediaries arise as internal, centralized markets where information on machines and buyers is readily available, allowing displaced capital to migrate towards its most productive uses. Financial intermediaries aggregate the information on firms collected in the credit market and then work as matchmakers between savers and firms in the credit market.

3.7. Non-Banking Financial Institutions

The Non-Banking Financial Companies (NBFCs) which are heterogeneous in nature in terms of activity and size are important financial intermediaries and an integral part of the Indian Financial system. A Non-Banking Financial Company (NBFC) is a company registered under the Companies Act, 1956 engaged in the business of loans and advances, acquisition of

shares/stocks/bonds/debentures/securities issued by Government or local authority or other marketable securities of a like nature, leasing, hire-purchase, insurance business, chit business but does not include any institution whose principal business is that of agriculture activity, industrial activity, purchase or sale of any goods (other than securities) or providing any services and sale/purchase/construction of immovable property. A non-banking institution which is a company and has principal business of receiving deposits under any scheme or arrangement in one lump sum or in installments by way of contributions or in any other manner, is also a non-banking financial company (Residuary non-banking company).

3.7.1. Definition of NBFCs:

NBFCs are defined as, Non-Banking Financial Company, which is a loan company or an investment company or a hire purchase company or an equipment leasing company or a mutual benefit finance company.

3.7.2. Types of NBFCs:

The Non-Banking Finance Companies operating in India fall in the following broad categories.

(1) Equipment Leasing Company is a company which carries on as its principal business, the business of leasing of equipment or the financing of such activity. Apart from their Net Owned Funds (NOF), the leasing companies raise finds in the form of deposits from other companies, banks and the financial institutions. Public deposits and inter-corporate deposits account for 74 percent of their total funds. Leasing is a form of rental system. A lease is a contractual arrangement whereby the lessor grants the lessee the right to use an asset in return for periodical lease-rent payments.

There are two types of leases (i) operating lease, and (ii) financial or capital lease. The operating lease is a short-term lease which can be cancelled. Financial lease is a non-concealable contractual commitment.

(2) Hire Purchase Finance Company is a company which carries on as its principle business, hire purchase transactions or the financing of such transactions. The sources of hire-purchase finance are

(i) Hire purchase Finance Companies.

(ii) Retails and Wholesale Traders.

(iii) Bank and Financial Institutions.

Hire-purchase finance or credit is a system under which term loans for purchase of goods, producer goods or consumer goods and services are advanced which have to be liquidated under an installment plan. The period of credit is generally one to three years. The hire purchase credits available for a wide range of products and services. Hire-purchase finance companies are the public or private limited companies or partnership firms engaged in giving credit for acquiring durable goods.

(3) Housing Finance Company is a company which carries on as its principle business, the financing of the acquisition or construction of houses including the acquisition or development of plots of lands for construction of houses. These companies are supervised by National Housing Bank, which refinances housing loans by scheduled commercial banks, co-operative banks, housing finance companies and the apex co-operative housing finance societies.

(4) Investment Company means any company which carries on as its principle business the acquisition of securities. These types of companies are investment holding companies formed by business houses. As such they provide finance mainly to companies associated with these business houses. As compare to open-end investment companies or mutual funds/units trust, these investment companies are close end companies having a fixed amount of share capital. Almost all prominent industrial groups have their own investment companies.

(5) Loan Company is a company which carries on as its principle business, the providing of finance whether by making loans or advances or otherwise for any activity other than its own. These types of companies are generally small partnership concerns which obtain funds in the form of deposits from the public and give loans to wholesale and retail traders, small scale industries and self-employed persons. These companies collect fixed deposits from the public by offering higher rates of interest and give loans to others at relatively higher rates of interest.

(6) Mutual Benefit Finance Company (i.e. Nidhi Company) means any company which is notified by the Central Government under section 620A of the Companies Act, 1956. The main sources of funds for Nidhis are share

capital, deposits from their members and deposits from the public. Nidhis give, loans to their members-for several purposes like marriages, redemption of old debts, construction and etc. The Nidhis normally follow the easy procedures and offer saving schemes and make credits available to those whose credit needs remain unmet by his commercial banks.

(7) Chit Fund Company is a company which collects subscriptions from specified number of subscribers periodically and in turn distributes the same as prizes amongst them. Any other form of chit or kuri is also included in this category. The chit fund companies operations are governed by the Chit Fund Act, 1982, which is administered by State Governments. Their deposit taking activities are regulated by the Reserve Bank. The chit fund companies enter into an agreement with the subscribers that every one of them shall subscribe a certain amount in installments over a definite period and that every one of such subscriber shall in his turn, as determined by lot or by auction or by tender, be entitled to a prize amount.

(8) Residuary Non-Banking Company is a company which receives deposits under any scheme by way of subscriptions/contributions and does not fall in any of the above categories. There are few unhealthy features of the operations of these companies; (i) Negative NOF (Net Owned Fund), (ii) Understatement of their deposit liability, (iii) Forfeiture of deposits, (iv) Levy of service charges on the depositors (v) Payment of high rates of commission, etc.

There are four types of non-banking financial institutions in India. The non-banking institutions are: 1. Industrial Finance Corporation of India 2. Industrial Credit and Investment Corporation of India 3. Industrial Development Bank of India 4. State Financial Corporation's.

1. Industrial Finance Corporation of India (IFCI):

The IFCI is the pioneer among India's financial institutions. It was set-up on July 1, 1948.

The functions of the IFCI are:

(a) Guaranteeing loans raised by industrial concerns which are repayable within a period not exceeding 25 years and are floated in public interest;

(b) Underwriting the issue of stocks, shares, bonds of debentures by guaranteeing loans or advances to or subscribing to debentures of industrial concerns repayable within a period not exceeding 25 years;
(c) Extending guarantees in respect of deferred payments by importers who are able to make such arrangements with foreign manufacturers;
(d) Acting as agent for the Central Government and/or with its approval, from the World Bank in respect of loans sanctioned by them to industrial concerns.
Later on the scope of its operations was widened to include guaranteeing loans raised by industrial concerns from scheduled banks or state co-operative banks; deferred payments due from industrial concerns in connection with their purchase of capital goods, at home or from abroad. The IFCI was empowered to subscribe directly to the stocks or shares of an industrial concern and also to convert, at its option, the loans granted or debentures subscribed by it into stocks or shares of the concern.
The general purpose of IFCI is defined as "one of making medium and long-term credit more readily available to industrial concerns in India, particularly in circumstances where normal banking accommodation is inappropriate or recourse to capital issue methods is impracticable." Its main object is to provide "medium and long-term loans to large industrial concerns in the private sector. However, now the units from the co-operative, joint and public sector also have been made eligible for its assistance. It provides direct rupee and foreign currency loans for setting up new industrial projects and for expansion, diversification, renovation, and modernisation of existing units. It also underwrites and directly subscribes to industrial securities, provides financial guarantees, merchant banking services, and lease finance."

2. Industrial Credit and Investment Corporation of India (ICICI):

It was set up on March 1, 1953 as a joint venture of the World Bank. It advances funds to both private sector and joint sector, i.e., projects jointly owned by private and public sectors. One of the main objectives of ICICI is to meet the long-term needs of private industry for both domestic and foreign capital. For achieving these objectives, ICICI attempts to encourage and promote participation of private capital, both internal and external, in assisted enterprises and projects. ICICI provides finance in the form of long-

or-medium-term loans (maximum period of repayment being 15 years} or equity participation, sponsors and underwrites new issues of shares and securities, guarantees loans from other private sources, and makes funds available for re-investment by revolving investments as quickly as possible. It mainly finances the purchase of capital assets.

Some types of assistance provided are:

(a) Underwriting of issues;

(b) Direct subscriptions;

(c) Rupee Loans;

(d) Loans in foreign currency and

(e) Guarantee of repayments.

The types of assistance and scope of activities of ICICI are more or less similar to those of the IFCI. However, till a few years back, it was the only institution which was providing foreign currency loans. Even now, its foreign currency loan business is conducted on a much larger scale than that of other financial institutions. It has pioneered the development of institutional financial services in various ways. It was one of the earliest organisations to start merchant banking services in India through its merchant banking division; it has developed the field of lease finance and instalment sales: it has played an important role in setting up institutions such as Over-the-Counter Exchange, TDICI, SCICI, CRISIL, and venture capital funds, through which it provides a wide range and variety of financial services

3. Industrial Development Bank of India (IDBI):

Like the IFCI the IDBI was set up in 1964 to provide long-term industrial funds to Indian industries. Two major components of IDBI's assistance are: direct and indirect.

Direct assistance consists of:

(1) Project loans.

(2) Underwritings plus direct subscription to industrial enterprises.

(3) Soft loans for modernisation of selected industries such as cotton textiles, jute, cement, sugar and engineering.

(4) Technical development fund assistance for import of equipment and technical know-how, foreign consultancy services, drawing and designs.

Indirect assistance includes:

(a) Refinancing of loans granted by banks, financial institutions, including IFCI and SFCs;

(b) Rediscounting of bills/promissory notes originating from sales of indigenous manufacturing industries, both in private as well as public sectors, including electricity undertakings, transport corporations and motor vehicles, trucks, jeeps and passenger buses;

(c) Subscription to the shares and bonds of financial institutions, both at the Centre and in States; and

(d) Seed capital assistance to new and deserving units to start new ventures.

The IDBI is now the central or apex institution in the field of industrial finance.

It functions as a development financing agency in its own right, in addition to its work of coordinating, supplementing, and monitoring the operations of other term-lending institutions in the country. Apart from providing direct assistance of the types offered by IFCI and ICICI, it provides indirect assistance in the form of discounting/ rediscounting long-term bills/promissory notes, refinancing of loans given by SFCs, banks and so on, and subscribing to resources of other financial institutions such as SFCs, IFCI, ICICI, and so on. It also takes us various promotional activities such as balanced regional development, entrepreneurship development, technology development and so on. The resources of the IDBI are more or less' similar to those of the IFCI.

4. State Financial Corporation's (SFCs):

SFCs, which are State counterpart of IFCI, also provide finance to industry. At present there are 18 such corporations in India.

A State Finance Corporation can:

(1) Guarantee loans raised by industrial concerns, which are repayable within a period not exceeding 20 years and are floated in the public market, though no such limitation is applicable if the loans are received from scheduled or state cooperative banks;

(2) guarantee such deferred payments of any industrial concern as are in connection with the purchase of capital goods within India;

(3) underwrite the issue of stocks, shares, bonds or debentures by industrial concerns;
(4) Act as an agent of the Central Government, State Government, the IFCI or any other financial institutions for grant of loans or advances, or subscription of debentures by them to an industrial concern; and
(5) Grant loans or advances to an industrial concern, repayable within a period not exceeding 20 years or subscribe to its debentures.

3.7.3. The Gurley-Shaw Theory:

According to Gurley and Shaw, it is the Non-Bank Financial Institutions that provide liquidity and safety to financial assets and help in transferring funds from ultimate lenders to ultimate borrowers for productive purposes. They increase capital formation and consequently lead to economic growth. By buying primary securities from the ultimate borrowers and selling indirect securities to the ultimate lenders, the intermediaries influence the availability of credit and the structure and level of interest rates. They create credit different from commercial banks. But they create new assets and liabilities which tend to influence the supply of money and thus hinder the operation of an effective monetary policy.

According to them, the savings deposits of NBFIs resemble the demand deposits of commercial banks because it is not difficult for NBFIs to convert their savings deposits into cash. These savings deposits, whether of commercial banks or Non-Bank Financial Institutions, are for all practical purposes as liquid as demand deposits. Such savings deposits held by NBFIs are known as near moneys. Since the demand deposits are not controlled by the central bank, it follows that the savings deposits held by NBFIs will hinder the successful operation of a successful monetary policy. If the central bank wishes to control excess liquidity in the economy only through the reduction in money supply, it will not be successful because the savings deposits of NBFIs can be converted into cash. Similarly, if the central bank tries to control lending by commercial banks, it will not be successful if the lending of all other FIs are not under its control, as is the case.

According to Gurley and Shaw, this problem arises especially when the central bank adopts an anti-inflationary monetary policy. Suppose the central bank reduces the money supply in order to control inflation. Among other effects, the interest rates on market securities rise in anticipation of higher yields and profits. NBFIs will raise the interest rates on their savings deposits to attract more funds in order to invest them in higher yielding securities. Persons already holding securities find that their prices have fallen because of the rise in interest rates on present securities. They will, therefore, sell them and deposit their funds with intermediaries in order to earn higher interest rates on savings deposits. In the meantime, attracted by higher interest rates, others holding idle cash balances will also deposit them with intermediaries. So when NBFIs raise the interest rates on their savings deposits, the public reduces its demand for money which, in turn, reduces the market rate of interest. Thus NBFIs make tight monetary policy less successful or effective. Similarly, NBFIs can make an expansionary monetary policy ineffective by reducing liquidity. But unlike the Radcliffe Report, Gurley and Shaw argue that the central bank's control over NBFIs should be extended for an effective monetary policy. This is because the NBFIs create more near-money assets and thereby affect the overall liquidity which, in turn, influences aggregate demand and economic activity.

Criticisms:

The view of Gurley and Shaw has been criticised on the following grounds:

1. Prof. Johnson does not agree with Gurley and Shaw. He observes that there seems to be no empirical case for empowering the central bank to extend its control over financial intermediaries similar to that exercised over the commercial banks. According to him, there is little reason for believing that the central bank's control is weakened by the presence of financial intermediaries. Moreover, so long as the public does not switch easily from bank deposits into indirect securities of intermediaries, the presence of intermediaries may increase the leverage of the central bank on economic activity. It implies that it is not possible for the interest rates to settle back at their old levels even by the operation of non-bank financial intermediaries.

Rather, interest rates would tend to rise further. The money supply will remain tight and its influence on spending would be restrictive.

2. Further, the rapid growth of NBFIs has helped to strengthen the effectiveness of monetary policy rather than weaken it where the NBFIs have been controlled. But Gurley and Shaw do not elaborate how they should be controlled.

Conclusion:

Despite the weaknesses of both Radcliffe Report and Gurley-Shaw views, they highlight the role of NBFIs in creating liquidity which affects aggregate demand and economic activity. They emphasise that the success of monetary policy depends not in controlling the money supply but general liquidity. Thus the liquidity theory of money provides a new and realistic dimension to monetary policy.

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UNIT - IV

BANKING AND ITS FUNCTIONS

4.1. INTRODUCTION

Bank deals in money in the same way as a businessman deals in goods. Banks are business enterprises which deal in money, financial instruments and provide financial services for a price called interest, discount, commission etc.

"Banking is the business of accepting for the purpose of lending or investment, of deposits of money from the public repayable on demand or otherwise and withdraw-able by cheque, draft, and order or otherwise." Indian Banking Regulation Act, 1949.

"A bank is an organisation whose principal operations are concerned with the accumulation of the temporarily idle money of the general public for the purpose of advancing to others for expenditure."-R.P. Kent.

4.2. BANKING FUNCTIONS OF COMMERCIAL BANKS:

A commercial bank is a financial institution which performs the functions of accepting deposits from the general public and giving loans for investment with the aim of earning profit. They generally finance trade and commerce with short-term loans. They charge high rate of interest from the borrowers but pay much less rate of Interest to their depositors with the result that the difference between the two rates of interest becomes the main source of profit of the banks. Most of the Indian joint stock Banks are Commercial Banks such as Punjab National Bank, Allahabad Bank, Canara Bank, Andhra Bank, Bank of Baroda, etc.

Functions of Commercial Banks:

The two most distinctive features of a commercial bank are borrowing and lending, i.e., acceptance of deposits and lending of money to projects to earn Interest (profit). In short, banks borrow to lend. The rate of interest offered by the banks to depositors is called the borrowing rate while the rate at which banks lend out is called lending rate. Functions of commercial banks are classified in to two main categories—(A) Primary functions and (B) Secondary functions.

(A) Primary Functions:

1. It accepts deposits:

A commercial bank accepts deposits in the form of current, savings and fixed deposits. It collects the surplus balances of the Individuals, firms and finances the temporary needs of commercial transactions. The first task is, therefore, the collection of the savings of the public. The bank does this by accepting deposits from its customers. Deposits are the lifeline of banks. Deposits are of three types as under:

(i) Current account deposits:

Such deposits are payable on demand and are, therefore, called demand deposits. These can be withdrawn by the depositors any number of times depending upon the balance in the account. The bank does not pay any Interest on these deposits but provides cheque facilities. These accounts are generally maintained by businessmen and Industrialists who receive and make business payments of large amounts through cheques.

(ii) Fixed deposits (Time deposits):

Fixed deposits have a fixed period of maturity and are referred to as time deposits. These are deposits for a fixed term, i.e., period of time ranging from a few days to a few years. These are neither payable on demand nor they enjoy cheque facilities. They can be withdrawn only after the maturity of the specified fixed period. They carry higher rate of interest. They are not treated as a part of money supply Recurring deposit in which a regular deposit of an agreed sum is made is also a variant of fixed deposits.

(iii) Savings account deposits:

These are deposits whose main objective is to save. Savings account is most suitable for individual households. They combine the features of both current account and fixed deposits. They are payable on demand and also withdraw able by cheque. But bank gives this facility with some restrictions, e.g., a bank may allow four or five cheques in a month. Interest paid on savings account deposits in lesser than that of fixed deposit.

2. Give loans and advances:

The second major function of a commercial bank is to give loans and advances particularly to businessmen and entrepreneurs and thereby earn

interest. This is, in fact, the main source of income of the bank. A bank keeps a certain portion of the deposits with itself as reserve and gives (lends) the balance to the borrowers as loans and advances in the form of cash credit, demand loans, short-run loans, overdraft as explained under.

(i) Cash Credit:

An eligible borrower is first sanctioned a credit limit and within that limit he is allowed to withdraw a certain amount on a given security. The withdrawing power depends upon the borrower's current assets, the stock statement of which is submitted by him to the bank as the basis of security. Interest is charged by the bank on the drawn or utilised portion of credit (loan).

(ii) Demand Loans:

A loan which can be recalled on demand is called demand loan. There is no stated maturity. The entire loan amount is paid in lump sum by crediting it to the loan account of the borrower. Those like security brokers whose credit needs fluctuate generally, take such loans on personal security and financial assets.

(iii) Short-term Loans:

Short-term loans are given against some security as personal loans to finance working capital or as priority sector advances. The entire amount is repaid either in one instalment or in a number of instalments over the period of loan.

(B) Secondary Functions:

Apart from the above-mentioned two primary (major) functions, commercial banks perform the following secondary functions also.

1. Discounting bills of exchange or bundles:

A bill of exchange represents a promise to pay a fixed amount of money at a specific point of time in future. It can also be encashed earlier through discounting process of a commercial bank. Alternatively, a bill of exchange is a document acknowledging an amount of money owed in consideration of goods received. It is a paper asset signed by the debtor and the creditor for a fixed amount payable on a fixed date. It works like this.

Suppose, A buys goods from B, he may not pay B immediately but instead give B a bill of exchange stating the amount of money owed and the time when A will settle the debt. Suppose, B wants the money immediately, he will present the bill of exchange to the bank for discounting. The bank will deduct the commission and pay to B the present value of the bill. When the bill matures after specified period, the bank will get payment from A.

2. Overdraft facility:

An overdraft is an advance given by allowing a customer keeping current account to overdraw his current account up to an agreed limit. It is a facility to a depositor for overdrawing the amount than the balance amount in his account. In other words, depositors of current account make arrangement with the banks that in case a cheque has been drawn by them which are not covered by the deposit, then the bank should grant overdraft and honour the cheque. The security for overdraft is generally financial assets like shares, debentures, life insurance policies of the account holder, etc.

3. Agency functions of the bank:

The bank acts as an agent of its customers and gets commission for performing agency functions as under:

(i) Transfer of funds:

It provides facility for cheap and easy remittance of funds from place-to-place through demand drafts, mail transfers, telegraphic transfers, etc.

(ii) Collection of funds:

It collects funds through cheques, bills, bundles and demand drafts on behalf of its customers.

(iii) Payments of various items:

It makes payment of taxes. Insurance premium, bills, etc. as per the directions of its customers.

(iv) Purchase and sale of shares and securities:

It buys sells and keeps in safe custody securities and shares on behalf of its customers.

(v) Collection of dividends, interest on shares and debentures is made on behalf of its customers.

(iv) Acts as Trustee and Executor of property of its customers on advice of its customers.

(vii) Letters of References:

It gives information about economic position of its customers to traders and provides similar information about other traders to its customers.

4. Performing general utility services:

(i) Traveller's cheques .The banks issue travellers cheques and gift cheques.

(ii) Locker facility. The customers can keep their ornaments and important documents in lockers for safe custody.

(iii) Underwriting securities issued by government, public or private bodies.

(iv) The purchase and sale of foreign exchange currency.

4.3. CREDIT CREATION BY COMMERCIAL BANKS:

RBI produces money while commercial banks increase the supply of money by creating credit which is also treated as money creation. Commercial banks create credit in the form of secondary deposits. Total deposits of a bank is of two types: (i) Primary deposits (initial cash deposits by the public) and (ii) Secondary deposits (deposits that arise due to loans given by the banks which are assumed to be redeposit in the bank.) Money creation by commercial banks is determined by two factors namely (i) Primary deposits i.e. initial cash deposits and (ii) Legal Reserve Ratio (LRR), i.e., minimum ratio of deposits which is legally compulsory for the commercial banks to keep as cash in liquid form. Broadly when a bank receives cash deposits from the public, it keeps a fraction of deposits as cash reserve (LRR) and uses the remaining amount for giving loans. In the process of lending money, banks are able to create credit through secondary deposits many times more than initial deposits (primary deposits).

Process of money (credit) creation:

Suppose a man, say X, deposits Rs 2,000 with a bank and the Legal Reserve Ratio (LRR) is 10%, which means the bank keeps only the minimum required Rs 200 as cash reserve (LRR). The bank can use the

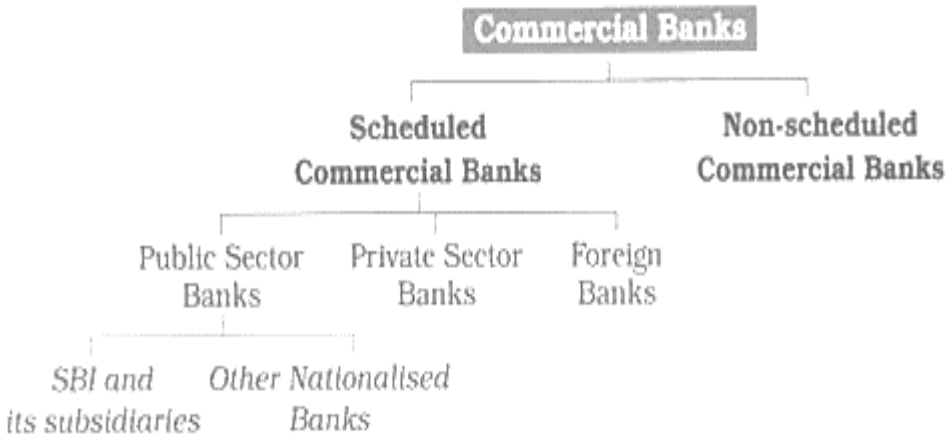
remaining amount Rs 1800 (= 2000 – 200) for giving loan to someone. (Mind, loan is never given in cash but it is redeposit in the bank as demand deposit in favour of borrower.) The bank lends Rs 1800 to, say, Y who is actually not given loan but only demand deposit account is opened in his name and the amount is credited to his account.

This is the first round of credit creation in the form of secondary deposit (Rs 1800), which equals 90% of primary (initial) deposit. Again 10% of Y's deposit (i.e., Rs 180) is kept by the bank as cash reserve (LRR) and the balance Rs 1620 (=1800 – 180) is advanced to, say, Z. The bank gets new demand deposit of Rs 1620. This is second round of credit creation which is 90% of first round of increase of Rs 1800. The third round of credit creation will be 90% of second round of 1620. This is not the end of story. The process of credit creation goes on continuously till derivative deposit (secondary deposit) becomes zero. In the end, volume of total credit created in this way becomes multiple of initial (primary) deposit. The quantitative outcome is called money multiplier. If the bank succeeds in creating total credit of, says Rs 18000, it means bank has created 9 times of primary (initial) deposit of Rs 2000. This is what is meant by credit creation. In short, money (or credit) creation by commercial banks is determined by (i) amount of initial (primary) deposits and (ii) LRR. The multiple is called credit creation or money multiplier. Symbolically:

Total Credit creation = Initial deposits x 1/LPR.

Types of Commercial Banks:

The following chart depicts main types of commercial banks in India.



Commercial banks are classified in two broad categories—scheduled banks and non-scheduled banks.

a. Scheduled banks

Scheduled banks are those banks which are included in Second Schedule of Reserve Bank of India. A scheduled bank must have a paid-up capital and reserves of at least Rs 5 lakh. RBI provides special facilities including credit to scheduled banks. Some of important scheduled banks are State Bank of India and its subsidiary banks, nationalised banks, foreign banks, etc.

b. Non-scheduled Banks:

The banks which are not included in Second Schedule of RBI are known as non-scheduled banks. A non-scheduled bank has a paid-up capital and reserves of less than Rs 5 lakh. Clearly, such banks are small banks and their field of operation is also limited.

A passing reference to some other types of commercial banks will be informative. Industrial Banks provide finance to industrial concerns by subscribing (buying) shares and debentures of companies and also give long-term loans to acquire machinery, plants, etc. Foreign Exchange Banks are commercial banks which are branches of foreign banks and facilitate international financial transactions through buying and selling of foreign bills. Agricultural Banks finance agriculture and provide long-term loans for buying tractors and installing tube-wells. Saving Banks mobilise small savings of the people in savings account, e.g., Post office saving bank. Cooperative Banks are organised by the people for their own collective benefits. They advance loans to their members at fair rate of interest.

Significance of Commercial Banks:

Commercial banks play such an important role in the economic development of a country that modern industrial economy cannot exist without them. They constitute nerve centre of production, trade and industry of a country. In the words of Wick-sell, “Bank is the heart and central point of modern exchange economy”.

The following points highlight the significance of commercial banks:

(i) They promote savings and accelerate the rate of capital formation.
(ii) They are source of finance and credit for trade and industry.
(iii) They promote balanced regional development by opening branches in backward areas.
(iv) Bank credit enables entrepreneurs to innovate and invest which accelerates the process of economic development.
(v) They help in promoting large-scale production and growth of priority sectors such as agriculture, small-scale industry, retail trade and export.
(vi) They create credit in the sense that they are able to give more loans and advances than the cash position of the depositor's permits.
(vii)They help commerce and industry to expand their field of operation.
(viii) Thus, they make optimum utilisation of resources possible.

4.4. ROLE OF RESERVE BANK OF INDIA

In the monetary system of all countries, the central bank occupies an important place. The central bank is an apex institution of the monetary system which seeks to regulate the functioning of the commercial banks of a country. The central bank of India is called the Reverse Bank of India which was set up in 1935. The commercial banks keep only a fraction of their deposits in cash and the rest they lend out to the traders and investors. Therefore, the commercial banking is often known as fractional reserve system. In view of the fact that commercial banks keep only a fraction of their deposits in cash, they will run into difficulties if at a time there is rush of depositors to withdraw their money. This indicates the need for an institution which should come to the rescue of the commercial banks and provide them the money required to meet the excessive demand of the depositors. The central bank fulfills this need. However, in the modern times, the central bank not only provides monetary aid to the commercial banks in time of crisis but performs many other functions. Indeed, the control over cost and availability of credit in the economy and regulation of the growth of money supply are special responsibilities of the central bank.

Principles of Central Banking:

The central bank of a country enjoys a special status in the banking structure of-the country. The principles on which a central bank is run differ from the ordinary banking principles. An ordinary bank is run for profits. A central bank, on the other hand, is primarily meant to promote the financial and economic stability of the country. "The guiding principle of a central bank", says De Kock, "is that it should act only in the public interest and for and welfare of the country and without regard to profit as primary consideration". Earning of profit for a central bank is thus a secondary consideration. The central bank is thus not a profit hunting institution. It does not act as rival of other banks. In fact, it is a monetary authority of the country and has to function in a manner so as to promote economic stability and development. The functions of the central bank especially the Reserve Bank of India have increased enormously in recent years. Not only does the Reserve Bank of India regulate credit and money supply in the country but it promotes economic development and price stability. Guiding principles of the Reserve Bank are to operate its most instruments in a way that serves the objectives of economic policy laid down by the Government and Planning Commission.

Functions of Central Bank:

The following are the main functions of a central bank:

1. It acts as a note issuing agency.
2. It acts as the banker to the state.
3. It acts as the banker's bank.
4. It controls credit.
5. It acts as the lender of the last resort.
6. It manages exchange rate.

The following are some of the major functions normally performed by the Reserve Bank of India:

1. Note Issue:

Being the Central Bank of the country, the RBI is entrusted with the sole authority to issue currency notes after keeping certain minimum reserve

consisting of gold reserve worth Rs. 115 crore and foreign exchange worth Rs. 85 crore. This provision was later amended and simplified.

2. Banker to the Government:

The RBI is working as banker of the government and therefore all funds of both Central and State Governments are kept with it. It acts as an agent of the government and manages its public debt. RBI also offering "ways and means advance" to the government for short periods.

3. Banker's Bank:

The RBI is also working as the banker of other banks working in the country. It regulates the whole banking system of the country, keep certain percentage of their deposits as minimum reserve, works as the lender of the last resort to its scheduled banks and operates clearing houses for all other banks.

4. Credit Control:

The RBI is entrusted with the sole authority to control credit created by the commercial banks by applying both quantitative and qualitative credit control measures like variation in bank rate, open market operation, selective credit controls etc.

5. Custodian of Foreign Exchange Reserves:

The RBI is entrusted with sole authority to determine the exchange rate between rupee and other foreign currencies and also to maintain the reserve of foreign exchange earned by the Government. The RBI also maintains its relation with International Monetary Fund (IMF).

6. Developmental Functions:

The RBI is also working as a development agency by developing various sister organisations like Agricultural Refinance Development Corporation. Industrial Development Bank of India etc. for rendering agricultural credit and industrial credit in the country.

Role of Reserve Bank of India:

The Reserve Bank of India (RBI) has been playing an important role in the economy of the country both in its regulatory and promotional aspects. Since the inception of planning in 1951, the developmental activities are gaining momentum in the country. Accordingly, more and more responsibilities have been entrusted with the RBI both in the regulatory and promotional area.

Now-a-days, the RBI has been performing a wide range of regulatory and promotional functions in the country. The following are some of the regulatory and promotional functions performed by the RBI:

1. Regulating the Volume of Currency:

The RBI is performing the regulatory role in issuing and controlling the entire volume of currency in the country through its Issue Department. While regulating the volume of currency the RBI is giving priority on the demand for currency and the stability of the economy equally.

2. Regulating Credit:

The RBI is also performing the role to control the credit money created by the commercial banks through its qualitative and quantitative methods of credit control and thereby maintains a balance in the money supply of the country.

3. Control over Commercial Banks:

Another regulatory role performed by the RBI is to have control over the functioning of the commercial banks. It also enforces certain prudential norms and rational banking principles to be followed by the commercial banks.

4. Determining the Monetary and Credit Policy:

The RBI has been formulating the monetary and credit policy of the country every year and thereby it controls the Statutory Liquidity Ratio (SLR), Cash Reserve Ratio (CRR), bank rate, interest rate, credit to priority sectors etc.

5. Mobilizing Savings:

The RBI is playing a vital promotional role to mobilize savings through its member commercial banks and other financial institutions. RBI is also guiding the commercial banks to extend their banking network in the unbanked rural and semi-urban areas and also to develop banking habits among the people. All these have led to the attainment of greater degree of monetization of the economy and has been able to reduce the activities of indigenous bankers and private moneylenders.

6. Institutional Credit to Agriculture:

The RBI has been trying to increase the flow of institutional credit to agriculture from the very beginning. Keeping this objective in mind, the RBI set up ARDC in 1963 for meeting the long term credit requirement of rural

areas. Later on in July 1982, the RBI set up NABARD and merged ARDC with it to look after its agricultural credit functions.

7. Specialized Financial Institutions:

The Reserve Bank of India has also been playing an important promotional role for setting specialized financial institutions for meeting the long term credit needs of large and small scale industries and other sectors. Accordingly, the RBI has promoted the development of various financial institutions like, WCI, 1DBI, ICICI, SIDBI, SFCs, Exim Bank etc. which are making a significant contribution to industry and trade of the country.

8. Security to Depositors:

In order to remove the major hindrance to the deposit mobilization arising out of frequent bank failures, the RBI took major initiative to set up the Deposit Insurance Corporation of India in 1962. The most important objective of this corporation is to provide security to the depositors against such failures.

9. Advisory Functions:

The RBI is also providing advisory functions to both the Central and State Governments on both financial matters and also on general economic problems.

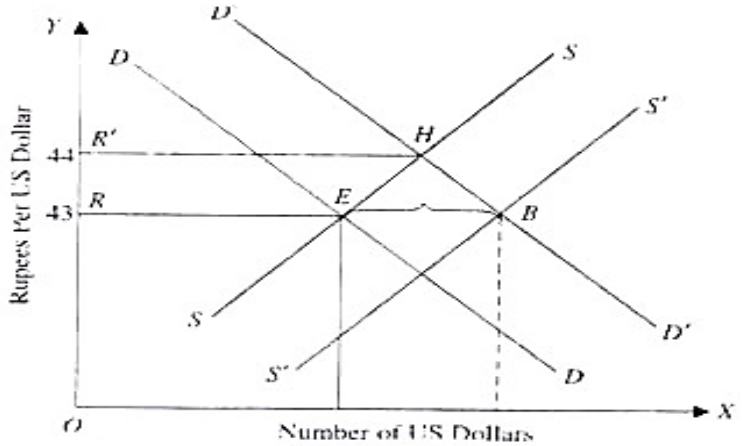
10. Policy Support:

The RBI is also providing active policy support to the government through its investigation research on serious economic problems and issues of the country and thereby helps the Government to formulate its economic policies in a most rational manner. Thus, it is observed that the RBI has been playing a dynamic role in the economic development process of the country through its regulatory and promotional framework.

Managing Exchange Rate of the National Currency:

An important function of a central bank is to maintain the exchange rate of the national currency. For example, the Reserve Bank of India has the responsibility of maintaining the exchange value of the rupee. When a country has adopted flexible exchange rate system under which value of a currency is determined by demand for and supply of a currency, the value of a currency, that is, its exchange rate with other currencies is subject to large fluctuations which are harmful for the economy.

Under these circumstances, it is the duty the central bank to prevent undue depreciation or appreciation of the national currency. Since 1991 when the rupee has been floated, the value of Indian rupee, that is, its exchange rate



4.1. Interventions by central bank to maintain Exchange Rate

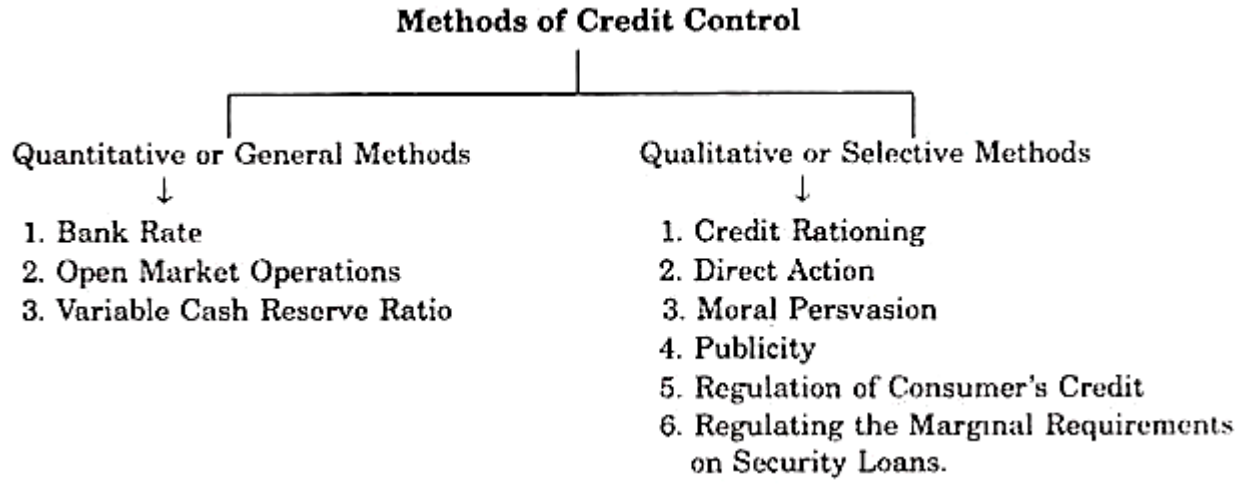
with US dollar and other foreign- currencies has been left to be determined by market forces, RBI has been taking several steps from time to time to stabilise the exchange rate of rupee, especially in terms of US dollar. There are several ways by which RBI can manage or maintain the exchange rate of the rupee. First, if due to speculative activities of foreign exchange operators, the rupee starts depreciating firstly, RBI can intervene in the market.

It can use its reserves of dollars and supply dollars in the market from its own reserves. With the increase in supply of dollars, the rupee will be prevented from depreciation. It may however be noted that the success of this step depends on the amounts of dollar reserves with Reserve Bank of India.

This is illustrated in Fig. 4.1 where we have depicted supply curves of US dollars which intersect at point E and determine exchange value of rupee equal to Rs. 43 per U.S. dollar. Now suppose that demand for dollars by Indian traders, companies and market operators increases so that demand curve for dollar shifts to the right to D'D' position. It will be seen that the intersection of this new demand curve for the US dollars D'D' with the supply curve SS of dollars at point H determines the exchange rate of rupee for the US dollars equal to Rs. 44 per dollar. Thus with increase in demand for dollars rupee has depreciated (and the US dollar appreciated). Now, if RBI intervenes and from its foreign exchange reserves, it supplies extra dollars equal to EB, the supply curve of dollars will shift to the right to the position S'S' which intersects the

higher demand curve D'D' of dollars at point B so that again Rs. 43 becomes the equilibrium exchange rate of rupees for the US dollar. In this way by its intervention and supplying extra dollars from its foreign exchange reserves, RBI can succeed in maintaining the exchange rate of rupee at Rs. 43 per dollar. In actual practice in January 1996 and again in Aug.-Sept. 1998, when rupee was depreciating RBI intervened and succeeded in preventing the fast depreciating rupee against US dollar. Another method by which RBI can manage the exchange rate of rupee is adopting measures which will reduce the demand for dollars. Some importers, foreign investors, foreign exchange operators try to avail of cheap credit facilities of banks and borrow rupee funds from the banks and try to convert them into dollars. This raises the demand for dollars and leads to the depreciation of the Indian rupee. Such a situation occurred in July-September 1998. RBI intervened and raised the Cash Reserve Ratio (CRR) and increased its repurchase rates. This succeeded in mopping up the excess liquidity with the banks and reduced their lending capacity. This led to the reduction in the demand for dollars and helped in preventing the rupee from depreciating. On the contrary, if rupee is appreciating against the US dollar and it is thought desirable to check undue appreciation of the Indian rupee, RBI can intervene to check its further appreciation. For this purpose, it can buy dollars from the market. This will raise the demand for dollars in the foreign exchange market and appreciation of Indian rupee will be checked.

Methods of Credit Control:



There are two categories of methods of credit control by central bank. The two categories are: I. Quantitative credit control II. Qualitative or Selective Methods.

I. Quantitative credit control:

1. Bank Rate Policy: The bank rate is the rate at which the Central Bank of a country is prepared to re-discount the first class securities. It means the bank is prepared to advance loans on approved securities to its member banks. As the Central Bank is only the lender of the last resort the bank rate is normally higher than the market rate. If the Central Bank wants to control credit, it will raise the bank rate. As a result, the market rate and other lending rates in the money-market will go up. Borrowing will be discouraged. The raising of bank rate will lead to contraction of credit. Similarly, a fall in bank rate mil lowers the lending rates in the money market which in turn will stimulate commercial and industrial activity, for which more credit will be required from the banks. Thus, there will be expansion of the volume of bank Credit.

2. Open Market Operations:

This method of credit control is used in two senses:

(i) In the narrow sense, and

(ii) In broad sense.

In narrow sense—the Central Bank starts the purchase and sale of Government securities in the money market. But in the Broad Sense—the Central Bank purchases and sale not only Government securities but also of other proper and eligible securities like bills and securities of private concerns. When the banks and the private individuals purchase these securities they have to make payments for these securities to the Central Bank. This gives result in the fall in the cash reserves of the Commercial Banks, which in turn reduces the ability of create credit. Through this way of working the Central Bank is able to exercise a check on the expansion of credit. Further, if there is deflationary situation and the Commercial Banks are not creating as much credit as is desirable in the interest of the economy. Then in such situation the Central Bank will start purchasing securities in the open market from Commercial Banks and private individuals. With this

activity the cash will now move from the Central Bank to the Commercial Banks. With this increased cash reserves the Commercial Banks will be in a position to create more credit with the result that the volume of bank credit will expand in the economy.

3. Variable Cash Reserve Ratio:

Under this system the Central Bank controls credit by changing the Cash Reserves Ratio. For example—If the Commercial Banks have excessive cash reserves on the basis of which they are creating too much of credit which is harmful for the larger interest of the economy. So it will raise the cash reserve ratio which the Commercial Banks are required to maintain with the Central Bank. This activity of the Central Bank will force the Commercial Banks to curtail the creation of credit in the economy. In this way by raising the cash reserve ratio of the Commercial Banks the Central Bank will be able to put an effective check on the inflationary expansion of credit in the economy. Similarly, when the Central Bank desires that the Commercial Banks should increase the volume of credit in order to bring about an economic revival in the country. The Central Bank will lower down the Cash Reserve ratio with a view to expand the cash reserves of the Commercial Banks. With this, the Commercial Banks will now be in a position to create more credit than what they were doing before. Thus, by varying the cash reserve ratio, the Central Bank can influence the creation of credit. These two methods are not rival, but they are complementary to each other.

II. Qualitative or Selective Method of Credit Control:

The qualitative or the selective methods are directed towards the diversion of credit into particular uses or channels in the economy. Their objective is mainly to control and regulate the flow of credit into particular industries or businesses. The following are the important methods of credit control under selective method:

1. Rationing of Credit.
2. Direct Action.
3. Moral Persuasion.
4. Method of Publicity.
5. Regulation of Consumer's Credit.

6. Regulating the Marginal Requirements on Security Loans.

1. Rationing of Credit:

Under this method the credit is rationed by limiting the amount available to each applicant. The Central Bank puts restrictions on demands for accommodations made upon it during times of monetary stringency. In this the Central Bank discourages the granting of loans to stock exchanges by refusing to re-discount the papers of the bank which have extended liberal loans to the speculators. This is an important method of credit control and this policy has been adopted by a number of countries like Russia and Germany.

2. Direct Action:

Under this method if the Commercial Banks do not follow the policy of the Central Bank, then the Central Bank has the only recourse to direct action. This method can be used to enforce both quantitatively and qualitatively credit controls by the Central Banks. This method is not used in isolation; it is used as a supplement to other methods of credit control.

Direct action may take the form either of a refusal on the part of the Central Bank to re-discount for banks whose credit policy is regarded as being inconsistent with the maintenance of sound credit conditions. Even then the Commercial Banks do not fall in line, the Central Bank has the constitutional power to order for their closure. This method can be successful only when the Central Bank is powerful enough and has cordial relations with the Commercial Banks. Mostly such circumstances are rare when the Central Bank is forced to resist to such measures.

3. Moral Persuasion:

This method is frequently adopted by the Central Bank to exercise control over the Commercial Banks. Under this method Central Bank gives advice, then request and persuasion to the Commercial Banks to co-operate with the Central Bank is implementing its credit policies. If the Commercial Banks do not follow or do not abide by the advice or request of the Central Bank no gross action is taken against them. The Central Bank merely was its moral influence and pressure with the Commercial Banks to prevail upon them to accept and follow the policies.

4. Method of Publicity:

In modern times, Central Bank in order to make their policies successful, take the course of the medium of publicity. A policy can be effectively successful only when an effective public opinion is created in its favour. Its officials through news-papers, journals, conferences and seminar's present a correct picture of the economic conditions of the country before the public and give a prospective economic policies. In developed countries Commercial Banks automatically change their credit creation policy. But in developing countries Commercial Banks being lured by regional gains. Even the Reserve Bank of India follows this policy.

5. Regulation of Consumer's Credit:

Under this method consumers are given credit in a little quantity and this period is fixed for 18 months; consequently credit creation expanded within the limit. This method was originally adopted by the U.S.A. as a protective and defensive measure, there after it has been used and adopted by various other countries.

6. Changes in the Marginal Requirements on Security Loans:

This system is mostly followed in U.S.A. Under this system, the Board of Governors of the Federal Reserve System has been given the power to prescribe margin requirements for the purpose of preventing an excessive use of credit for stock exchange speculation. This system is specially intended to help the Central Bank in controlling the volume of credit used for speculation in securities under the Securities Exchange Act, 1934.

4.5. Narasimham Committee Reports – 1991 and 1998:

Narasimhan Committee India liberalized its economy in 1991, but after that, too, the banks were not performing well. India has a mix of private and public sector banks, and during any economic crisis, the banks must be more competitive and effective. The Narasimhan Committee was consulted twice for banking sector reforms, one in 1991 and the other in 1998. Both times, the committee was under the chairmanship of Maidavolu Narasimham. Maidavolu Narasimham was the 13th Governor of the Reserve Bank of India (RBI) and served from 2 May 1977 to 30 November 1977.

Narasimhan Committee - I

The Narasimhan Committee I was established in 1991 by Finance Minister Manmohan Singh to examine the functioning of banks. In August 1991, a nine-member committee was appointed to suggest reforms to the financial system. The committee submitted its recommendations and the report in December, 1991 to the Parliament. The Report was titled Narasimham Committee Recommendations on the Financial System (1991).

Narasimhan Committee - II

In 1998, the Narasimhan Committee II was formed by the Finance Minister P Chidambaram to intimate on the banking sector reforms. The committee submitted its recommendations to the government in April 1998. The government undertook the report and recommendations as it emphasized more human resource development, technological up gradation, and strengthening of the foundation of the banking system by structure, which was the need of the hour.

Recommendations of Narasimhan Committee - I

The Narasimhan Committee I report presents the following recommendations on the financial system:

- Reduction in SLR and CRR- During 1991, both Statutory Liquidity Ratio (SLR) and Cash Reserve Ratio (CRR) were extremely high. Due to this, bank resources were not available for government use. The committee recommended reducing the SLR and CRR from 38.5 percent to 25 percent and from 15 percent to 3 to 5 percent, respectively.
- Reorganization of the Banking sector- The Narasimhan Committee I recommended reduction in the number of public sector banks. The committee suggested mergers and acquisitions to increase the bank's efficiency. The Committee recommended nationwide the national recognition of 8 to 10 banks.
- Establishment of the ARF Tribunal- During the 1991 economic crisis, banks' bad debts and Non-Performing Assets (NPA) were concerning. The committee recommended setting up an Asset Reconstruction Fund (ARF) to take over the proportion of bad and doubtful debts from banks and financial institutions.

- Removal of Dual Control- At that point, the banking sector in India was regulated by the RBI and the Ministry of Finance. The committee proposed RBI be the sole primary regulator of banking in India.
- Stop the Directed Credit Program- The committee recommended eliminating government interest rate controls as they were not profitable.
- Interest Rate Determination- The committee highlighted that the interest rates should be determined based on market forces and not by the Government, which was earlier the case.
- More Freedom to Banks- To improve the workings of banks, the Narasimhan Committee I recommended that every bank be free and autonomous to carry out its work. Over-regulation and over-administration should be avoided, and the selection of the Chief Executive and board of directors should be made on merit solely.

Narasimhan Committee - II Recommendations:

The Narasimhan Committee II was formed in 1998 and suggested banking sector reforms. The recommendations by the Narasimhan Committee II are as follows:

- Robust Banking System- the Committee recommended merging major public sector banks to boost trade.
- NPAs and the Concept of Narrow Banking - High Non-Performing Assets (NPAs) were a problem back in 1998, so the Committee recommended Narrow Banking Concept where the banks could put their funds in short-term and risk-free assets. The recommendations led to the Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002.
- Role of RBI - Narasimhan Committee II recommended that RBI be the regulator. But at the same time, they should not have ownership in any bank. • Capital Adequacy Ratio - The committee proposed the government should increase the Capital Adequacy Ratio norms.
- Foreign Exchange - The Committee recommended that the foreign exchange open position limits carry 100% risk weight. The Committee

also proposed that the minimum start-up capital for foreign banks should be increased to $25 million from $10 million.

4.6. Raguram Rajan Committee Report – 2007:

The Indian government established the Raghuram Rajan group on financial reforms in 2007. In his "The Hundred Steps" report, Raghuram Rajan advocated financial sector changes on the grounds that incremental, steady steps are preferable to a few large, contentious ones. Eleven informal meetings and nine formal meetings were held by the Rajan Committee. In order to put together a report, the committee members also met with other committee members.

The Terms of Reference

The Raghuram Rajan Committee on Financial Reforms was charged with identifying the new issues that would need to be addressed in order for the financial sector to be better able to meet the financing demands of the Indian economy over the next ten years. Additionally, it aimed to evaluate the financial sector's performance across multiple areas and pinpoint adjustments that would enable it to better serve the demands of the real sector. It was intended to identify modifications in the regulatory and supervisory architecture that can better enable the finance system to perform its duties while making sure that risks were contained and identify the changes in other aspects of the economy, such as the conduct of monetary and fiscal policy, the operation of the legal system, and the operation of the educational system that could help the financial sector function more efficiently.

Rajan Committee Report

As it addressed financial inclusion, as well as domestic financial development, the Raghuram Rajan committee's proposal, was necessary at the time, but this also meant that the report's political obstacles were more significant. This report's overarching topic was the requirement to increase freedom for players while also upgrading the financial and regulatory infrastructure in order to increase inclusion, growth, and stability.

Recommendations of Rajan Committee

- Financial and macroeconomic development.

- Broadening financial accessibility.
- Creating a level playing field.
- Creating markets that are more effective and liquid.
- A framework for regulation that promotes growth.
- Building a solid credit infrastructure.

The macroeconomic frameworks were the most contentious and were probably the most difficult to put into practice. This strategy was extremely different from inflation targeting and floating exchange rates. The market's present strategy is considerably different. The report offers a clear and uncomplicated approach in this regard. It promotes the establishment of financial markets and exchanges between investors and products, stops the formation of investor uncertainty in prohibited markets, and promotes the entrance of the missing markets. By reducing the time required for the approval of new financial products, it also contributed to the development of a more welcoming environment. The paper makes numerous suggestions for improving the coordination, coverage, and quality of the current regulatory architecture. The elimination of micromanagement is the main concept. Structure reform undoubtedly has the potential to improve incentives, but there is a risk of becoming mired down in new institutions or legal changes. Small participants in the financial sector will be better informed, educated, and protected by an upgraded credit framework. Even while none of this will immediately lead to greater financial inclusion, it will mark the start of the modern financial industry. The Raghuram Rajan Report can be seen positively in that these adjustments indicate greater room for reform in the future.

Significance of Raghuram Rajan Committee Report

In the area of finance and economics, Raghuram Rajan made a lot of contributions. The Raghuram Rajan group was given the task of seeking a comprehensive understanding of the financial industry in order to make suggestions and identify connections between essential reforms while providing a unifying conceptual framework. At that time, the real sectors were critical. It concentrated on enhancing the technology sector, consolidating, and placing light constraints on public sector banks in order to increase bank efficiency.

Financial Stability and Development Council

The Financial Stability and Development Council (FSDC) is a top-level organisation established by the Indian government. The Raghuram Rajan Committee first proposed the notion of establishing such a super regulatory organisation in 2008. Finally, in 2010, India's then-finance minister, Pranab Mukherjee, agreed to establish such an independent organisation to handle macro prudential and financial regularities throughout the whole Indian financial sector. Apex-level FSDCs are not statutory organisations. Governments and institutions all around the world are under pressure to regulate their economic assets as a result of the recent global economic crisis. This council is considered as India's effort to improve its readiness to stop similar occurrences in the future. The new organisation plans to institutionalise and reinforce the mechanisms for maintaining financial stability, the growth of the financial sector, inter-regulatory coordination, and monitoring macro-prudential control of the economy. The council receives no special funding for carrying out its activities. On September 3, 2021, Smt. Nirmala Sitharaman, Union Minister for Finance and Corporate Affairs, presided over the 24th meeting of the Financial Stability and Development Council (FSDC).

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UNIT - V

MONETARY POLICIES

5.1. Introduction

Monetary policy is the policy used by the central bank to regulate the supply of money in the economy. The central bank of India that is Reserve bank of India plays the controlling authority here. This is a tool used to control even the inflation and the interest rates to ensure price stability and trust in the currency of a nation. The goals of monetary policy also include the contribution to the economic growth and stability, to lower unemployment rates and to maintain stability in the exchange rates with the currencies of other nations. The best monetary policy is termed as the optimal monetary policy for which optimal inflation rate should be applicable in a nation. Monetary policies are generally of two types: 1) Expansionary Policy - This type of policy increases the total supply of money in the economy. This was traditionally used to remove unemployment during recessionary period by lowering the interest rates having the belief that easy credit will help business expand. 2) Contractionary Policy - This policy increases or expands the money supply but at a pace less even less than the normal and in certain cases even shrinks it. It is intended to slow inflation and to avoid the resulting distortion of asset values.

Monetary Policy uses the following tactical approaches to maintain financial stability:

- Money Supply- This practice involves the money supply by buying and selling government bonds. These are also known as open market operations as the central bank make purchases and sales of government bonds in public markets. These involve generally the short term bonds.
- Money demand- This practice plays on the rule that the demand is dependent on the price. The price is the interest rate to be paid by the borrower. Therefore through this rule the central bank keeps on altering the interest rates to regulate the economy and bring in stability.
- Banking risk- This practice manages the risk within the banking system. In this it specifies the reserve requirements of the banks than those reserves may be with the central bank or with the commercial banks only. They

regulate the economy under this approach through the reserve ratios. To primary tools are Cash reserve ratio and statutory reserve ratio.

The following three approaches namely open market operations, regulating interest rate and reserve ratios are the normal methods used by the reserve bank of India to ensure adequate supply of money in the economy with price stability.

5.2. Meaning and Objectives of Monetary Policy.

Monetary Policy refers to the mechanism through which the monetary authority regulates the supply of money in the economy by using instruments such as that of interest rates to maintain the price stability and achieve better economic growth. This monetary authority is generally the central bank of the country. RBI (Reserve Bank of India) is the central bank of India.

5.3. Objectives of Monetary Policy

Beside price stability monetary policy accomplish the following tasks as well:

1) Full employment - Full employment is a situation favorable for any economy not only because it increases output but also for the credit standing of a nation. Monetary policy helps achieving this target.

2) Price stability - Another main objective of monetary policy is the price stability. Price stability is promoted to reduce the fluctuations in prices as these fluctuations in prices bring uncertainty and instability in the economy. The focus of monetary policy is to facilitate the environment which is favorable to the economic development to run the projects swiftly along with maintaining the stability.

3) Economic Growth - Economic growth is a situation where real GDP of a nation that is the per capita income of the nation increases over a period of time. Monetary policy aims at it.

4) Balance of Payment - This objective of monetary policy tries to achieve the equilibrium between the exports and the imports

5) Expansion of bank credit - One another important function of RBI is the controlled expansion of credit to commercial banks according to their seasonal requirements without affecting the output.

6) Fixed Investment - This objective of RBI focuses on the productivity of investments by having a control on non-essential fixed investment.

7) Promote Efficiency - RBI tries to increase the efficiency in the financial system by regulating and deregulating interest rates, ease operational constraints, introduce money market instruments, etc.

8) Restriction of inventories and stocks -Excess stocking of inventories is not beneficial for any economy as it may make the stock outdated over a period of time and hence may lead to a loss. To avoid this kind of problem the central bank carries out this special function of regulating the economic inventories.

9) Reducing the rigidity – Reserve Bank of India (RBI) bring flexibility in the operations which provide autonomy. It maintains its control on all the areas where prudence is required in the financial system.

5.4. Instruments of Monetary Policy

The instruments of monetary policy are of two types: 1) Quantitative or general or indirect - They are meant to regulate the quantity of credit in the economy through commercial banks. The various instruments used under this are bank ate operations, open market operations and changing reserve requirements. 2) Qualitative or selective or direct - They are meant to regulate the type of credit from the central bank to the commercial banks. They include changing margin requirements and regulation of consumer credit. Both these methods are discussed here forth:

I). Bank rate Policy:

Bank rate is the rate at which the central bank rediscounts the government securities such as that of bills of exchange and other government securities held by the commercial banks. This goes this way when the central bank wants to control the inflationary situation in the economy it raises the bank rate. This way the demand of credit from the commercial banks reduces which reduces the spare money in the hands of general public, which corrects the inflationary pressure. Similarly when deflationary pressure is corrected by reducing the bank rates, economy is brought back to the equilibrium.

II). Open Market Operations:

It refers to sale and purchase of securities from the commercial banks by the central bank to regulate the economy. The reserve bank starts selling the securities held for the same to commercial banks, when the prices starts

rising, this way money is extracted from circulating in the economy and kept with the central bank as reserves. Similarly when recessionary forces start in the economy, the central bank starts purchasing securities from the commercial banks to induce more money in the economy.

III). Changes in Reserve Ratios:

This is suggested by Keynes. This method says that every bank is required to keep certain reserves with them as well as with the central bank from the total deposits in the form of reserve fund. When prices rise, the central bank raise the reserve ratios as well, now as more money is in the form it reduces the money in circulation and hence economy moves towards the equilibrium. In the opposite, when the reserve ratio is lowered, the reserve with the commercial banks is reduced but their lending ratio increases which in turn bring more money in circulation. Equilibrium is achieved.

IV). Selective Credit Controls:

Selective credit controls are used to regulate certain specific types of credit for particular purposes. They can be in the form of margin requirements as if there is specific speculative activity in the economy in particular sector in certain commodities, the RBI raise the margin requirement on them to reduce the investment in that particular commodity. Similarly it reduces the margin on commodities which it wants to encourage investment in.

V). Cash Reserve Ratio (CRR) –

CRR is the minimum cash reserve amount which the commercial banks have to RBI and is certain minimum part of total deposit of customers. There will be lesser availability of funds for bank credit when CRR is increased and when CRR is reduced then more funds will be available for bank credit. As CRR controls money supply in the economy hence it is also known as liquidity ratio. The purpose of CRR is that depositors can get the payments on demand and banks are not out of cash to meet their demands and this is maintained in the form of cash equivalents and cash with RBI or in the vaults of bank. For the money supply in the economy CRR works as brakes.

VI). Statutory Liquidity Ratio (SLR)

In a developing country like India expansion of money supply is needed to accelerate the pace of economic growth. To increase the supply of money in

the economy, RBI issues currency, government borrows from foreign countries and make new provisions in the budget. Excessive money supply in the economy may lead to hyper-inflation. Hence Reserve Bank has the responsibility to manage the money supply so that inflation may not adversely affect the various sections of the society. A variety of credit control procedures are followed by RBI to accomplish this purpose. These control actions may be quantitative controls or qualitative controls.

VII). Repo Rate (Repurchase Rate)

Repo Rate is the rate at which the commercial banks can borrow from RBI. When the banks are in need of funds they can borrow from RBI. When the repo rate is reduced then the banks can borrow the funds from RBI at cheaper rates. Similarly by the increase of repo rate the borrowing funds are available to the banks from RBI at higher cost. Generally RBI lends to the banks against government securities. Liquidity is generated in the banking system by RBI with help of Repo Rate Due to increase in repo rate bank pay more money to central bank i.e. Reserve Bank of India. Hence bank charges higher rate of interest on the loan and industries will be reluctant to take loan from the banks. As a result excess liquidity will be withdrawn from the market. Due to inflation this type of situation arises in the economy.

VIII). Reverse Repo Rate

Reverse Repo Rate is the rate at which central bank may lend money from commercial banks. Reverse repo rate is an instrument to control money supply in the economy. To reduce the money supply the Reverse repo rate is increased, which means the banks are given more incentives when funds are provided to RBI and it may lead to reduced supply of money in the market. The reverse action is taken by RBI when money supply is to be increased in the economy i.e. reverse repo rate is reduced. When the apex bank is under shortage of money then commercial banks are asked to provide loans. The rate at which the banks are said to provide loan funds is called reverse repo rate. Always reverse repo rate is higher than repo rate. Between Repo Rate and reverse Repo Rate a difference of 1% is maintained. It means if the banks provide loans to RBI then their money will not be under risk if comparatively loans are provided to common consumers. Hence excess money with the

banks is lent to RBI. The rate at which liquidity is absorbed by RBI from the banks is known as Reverse Repo Rate.

5.5. Limitations of Monetary Policy

Some of the major limitations of monetary policy in under-developed countries are as follows:

1. Large Non-monetized Sector:

There is a large non-monetized sector which hinders the success of monetary policy in such countries. People mostly live in rural areas where barter is practised. Consequently, monetary policy fails to influence this large segment of the economy.

2. Undeveloped Money and Capital Markets:

The money and capital markets are undeveloped. These markets lack in bills, stocks and shares which limit the success of monetary policy.

3. Large Number of NBFLs:

Non-bank financial intermediaries like the indigenous bankers operate on a large scale in such countries but they are not under the control of the monetary authority. The factor limits the effectiveness of monetary policy in such countries.

4. High Liquidity:

The majority of commercial banks possess high liquidity so that they are not influenced by the credit policy of the central bank. This also makes monetary policy less effective.

5. Foreign Banks:

In almost every underdeveloped country foreign owned commercial banks exist. They also render monetary policy less effective by selling foreign assets and drawing money from their head officers when the central bank of the country is following a tight monetary policy.

6. Small Bank Money:

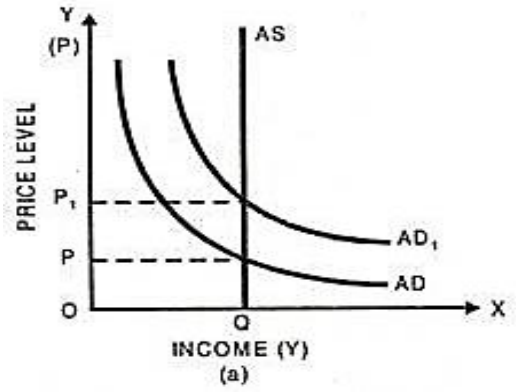
Monetary policy is also not successful in such countries because bank money comprises a small proportion of the total money supply in the country. As a result, the central bank is not in a position to control credit effectively.

7. Money not deposited with Banks

The well-to-do people do not deposit money with banks but use it in buying jewellery, gold, real estate, in speculation, in conspicuous consumption, etc. Such activities encourage inflationary pressures because they lie outside the control of the monetary authority. On account of these limitations of monetary policy in an under-developed country, economists advocate the use of fiscal policy along-with it.

5.6. Monetarism versus Keynesianism

Regarding the working of a money economy, a controversy is persistent among the Keynesian and monetarist groups. The monetarists hold that the aggregate demand is relatively elastic, while the aggregate supply is inelastic in relation to the expansion of money supply and price level. The monetarists draw the aggregate supply as a vertical straight line, implying that the changes in the quantity of money (M) produce no effect on the level of employment or real output. Apparently, at a given level of real income on output (aggregate supply being fixed), a rise in M leads to an increase in the aggregate demand, and a corresponding rise in the price level. This argument is clarified in terms of Fig. 5.1 (a) and (b) given below.



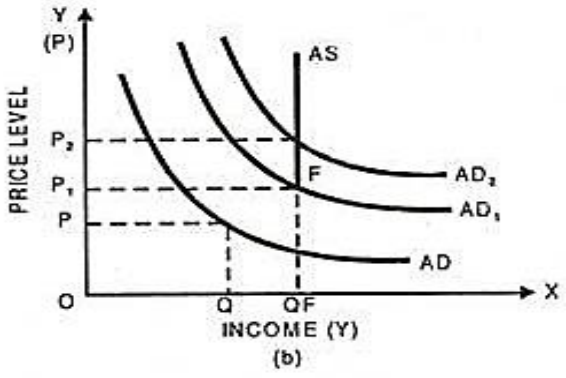


Fig.5.1 (a) Monetarist View **Fig.5.1 (b) Keynesian View**

In Fig.5.1 (a), when the aggregate demand curve (AD) shifts up as AD_X corresponding an increase in M, AS remaining fixed, price level rises from P to P_r The level of real income remains unchanged at OQ. The monetarists opine that variations in money income and expenditure (MV) in the economy are primarily due to variations in the money supply (M). In their opinion, the velocity of circulation (v) and the demand for money remains stable phenomena, as their determinants are slow in variation.

They, thus, hold that "inflation is always and everywhere a monetary phenomenon" which implies that as long as there is a sufficient monetary flow to keep the pace, prices will tend to rise. In their view, an increase in the money supply cannot have any lasting effect on the real working of the economy. It will just cause only prices to rise. They, therefore, suggest that if inflation is to be contained or avoided, the growth of the money supply should be reduced to the minimum. Keynesians, on the other hand, believe that the aggregate supply is relatively more elastic, even greater than the elasticity of the aggregate demand to the price level. Thus, when the money supply (M) or the government spending (G) increases through deficit financing or otherwise, it will produce a healthy effect on the level of employment and output, as unutilised resources would be activated into productive uses till the economy reaches the full employment level. Fig. 5(b) clarifies this argument.

In Fig. 5(b) AS is the aggregate supply curve which becomes a vertical line only at point F. While AD is the aggregate demand curve, which intersects with AS to determine the price level P, real output is OQ. Here, the aggregate real income or output is OQ_1 When the aggregate demand curve shifts to AD_1 on account of a change in M and particularly due to a change in G, the new price level is rising only less proportionately, as there is a simultaneous increase in real income up to OQ_1P. According to Keynesians, this general price rise from P to P_1 is reflation and not inflation. To them, "inflation is a post full employment phenomenon." Thus when the money supply (M) expands further after this point of output, when the AS curve becomes vertical, increase in the aggregate demand AD_2 reflects a proportionate rise in price level from P_1 to P_2.

The following issues have been turned out by this controversy between the Keynesians and the monetarists:

1. According to the monetarists the value of interest rates in affecting expenditure is more significant than in affecting the demand for money. Keynesians hold the opposite view that the role of interest rates in affecting the demand for money is more important than influence on expenditures in the economy.

2. Monetarists, hold that there is no empirical evidence or cause for the volatility of the demand for money. Keynesians, on the other hand, recognise the possibility of the volatility of demand for money.

3. Monetarists also point out those changes in the money supply take place because the monetary authority, the Central Bank, allows them. Hence, they argue that the Central Bank should control the money supply and also set out a plan of long-term targets for monetary growth, as a rule, and avoid a discretionary monetary policy. Keynesians, however, stress the possibility of endogenous changes in the money supply. In short, both the groups of economists agree on the issue that an increase in money supply contains a dual effect, partly on real output, and partly on prices, but they have a difference of opinion about the relative importance of these two effects, and their outcomes in the economy. Keynesians argue that the main effect comes through MV and not just M. Again, there will be growth of output maybe exceeding the rate of increase in prices. Monetarists, on the other hand, believe that the main effect comes through M, and there may be some rise in the output initially, but soon the prices will zoom, leaving production at its original level.

5.7. SUPPLY SIDE POLICIES

Supply-side economics is a relatively new term which came into use in the mid-1970s as a result of the failure of Keynesian demand-side policies in the US economy which led to stagflation. The term is new but its basic principles are to be found in the works of the classical economists. According to J.B. Say, supply creates its own demand. The very act of supplying goods implies a demand for them. If there is an imbalance between demand and supply, it is corrected automatically by changes in prices and wages and the economy always tends toward full employment. The main emphasis of the classical economists was on economic growth for which they advocated non-interference with the market mechanism. It was the “invisible hand” which led to the maximisation of national wealth. They believed that entrepreneurs, investors and producers were the prime movers on which the economy depended. It was the increase in the supplies of capital and labour and increase in their productivities that determined growth. Of course, free trade

and capital movements internationally were instrumental in a faster growth rate of the economy.

Main Features of Supply-Side Economics:

Modern supply-side economics lays emphasis on providing all types of economic incentives to raise aggregate supply in the economy. According to Bethell, "The essential argument of supply-side theory is that adding to supply unlike adding to demand is not a zero-sum task. In order to make something... a producer does not need to be given any money. Instead, he has to be given an incentive." Incentives to producers are essential to invest, produce and employ. Similar incentives are to be given to individuals to work and save more. The government plays a limited role in liberalising markets, reducing taxes and freeing the labour market. The main objectives of supply-side policies are to keep inflation at a low level, achieve and maintain full employment and attain faster economic growth. Supply-side economists suggest the following policy measures in order to achieve these objectives.

1. Tax-induced Change in Aggregate Supply:

Supply-siders regard tax cuts as an effective means of raising the growth rate of the economy. To assess the likely effects of tax reductions, they distinguish between income and substitution effects of a cut in the marginal rate of income tax. The substitution effect of a wage cut induces people to work more and have less leisure, and the income effect causes people to work less and enjoy more leisure. It is only when the substitution effect of a tax cut is larger than the income effect that there will be an incentive to work more, thereby leading to reduction in unemployment. A reduction in personal tax rates increases the incentive of people to work and save more. High savings reduce short-term interest rates and lead to increased investment and thus to an increase in the economy's capital stock. Reduction in marginal tax rates by improving the work effort of the people also increases their productive capacity and the level of output and employment in the economy. Thus supply-side tax cuts by raising work, effort, saving and investment, increase the supplies of labour and capital and shift the aggregate supply curve to the right. The effect of a. supply-side tax cut is illustrated in Fig. 5.2 where AS is the aggregate supply curve and AD is the given demand curve.

Real output or GDP is measured along the horizontal axis and the price level on the vertical axis. AS and AD curves intersect at point T and determine OP price and OQ real output of the economy. Suppose there is a tax cut both on persons and firms. This increases work effort and saving on the part of workers and investment by firms.

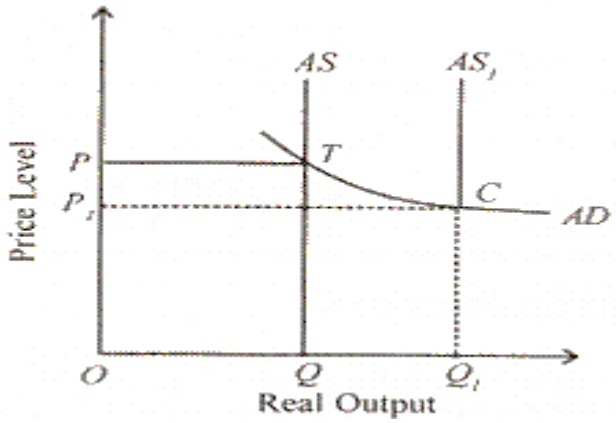


Fig.5.2.

As a result, supplies of labour and capital increase which shift the aggregate supply curve AS to the right as AS_1. Now the AS_1 curve cuts the AD curve at point C. As a result, the price level falls to OP_1 and the real output increases to QQ_1 as a result of a tax cut. Similarly, reduction in corporate tax rates, by giving incentives to the corporate sector in the form of increasing tax credit for larger investment and providing higher depreciation allowance, encourage investment. Higher investment leads to the production of more goods and services per unit of labour and capital. Supply-siders also advocate an additional tax relief for firms employing researchers because R&D help in increasing productivity. They also favour reduced estate taxes for small farmers which will induce them to spend more on inputs so as to increase production. Further, tax cuts reduce diversions to "shelter" (protected) industries and minimise or eliminate the need for accountants, investment consultants and tax-lawyers. Moreover, tax reductions reduce 'underground' (black market) activity where exchange is not recorded in the books and no taxes are paid.

2. Increasing Growth Rate:

According to supply-side economists, tax cuts increase the disposable income of the people who raise additional demand for goods and services. On

the other hand, the faster growth in productivity leads to the production of additional goods and services to match the additional demand. This leads to balanced growth in the economy without shortages. When the economy is moving towards balanced growth, the rate of inflation is low. This, in turn, leads to an increase in the real disposable income of the people which raises consumption, output and employment. Low inflation leads to increase in net exports which strengthen the value of national currency in relation to foreign currencies. The increase in productivity increases the production of more goods for export, thereby further strengthening the country's currency. Thus supply-side economists advocate reduction -in tax rates in order to increase the incentives to work, save and invest and to get more tax revenue by the government. Increase in investment leads to an increase in the economy's capital stock, to increase in productivity, to larger output, low inflation, high level of employment and high growth rate of the economy. These policy prescriptions shift the aggregate supply curve of the economy to the right.

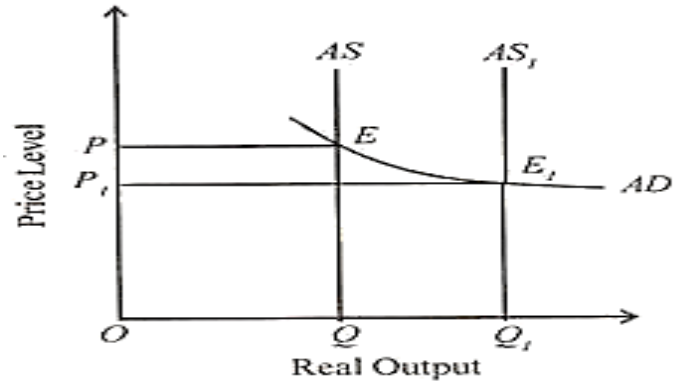


Fig.5.3.

This is illustrated in Fig. 5.3 where AS is the aggregate supply curve and AD is the given aggregate demand curve. They intersect at point E which is the initial equilibrium point of the economy with OP price level and OQ real output Suppose the supply-side policies increase the total supply of factors like labour and capital due to tax policies, incentives, etc. They increase real output and shift the AS curve to the right as AS_1. The new equilibrium is at where the AS_1 curve cuts the AD curve. Now real output increases to OQ_1 and the price level falls to OP_1 thereby increasing the growth rate of the economy.

Policy Prescriptions of Supply-Side Economics:

1. The Laffer curve: Tax Rate vs. Tax Revenue:

The most popular aspect of supply-side economics is the Laffer curve named after its originator Prof. Arthur Laffer. The Laffer curve depicts the relation between tax rate and tax revenue. It is based on the assumption that a cut in the marginal rate of tax will increase the incentives to work, save and invest. This tax cut, in turn, will increase the tax revenue. The Laffer curve shows two extremes of tax rates: A 0% tax rate and a 100% tax rate. Both yield no tax revenue. If the tax rate is 0%, no revenue will be raised. If the tax rate is 100%, people will have no incentive to work, save and invest at all because the whole income will go to the government. Thus the tax revenue will again be zero. As the tax rate increases from 0% to 100%, tax revenue correspondingly rises from zero to some maximum level and then starts declining to zero. Thus the optimum tax rate is somewhere between the two extremes.

Figure 5.4 shows the Laffer curve where the tax rate (0%) is taken on the horizontal axis and the tax revenue on the vertical axis. As the tax rate is raised above zero, the tax revenue starts increasing. The Laffer curve is upward sloping. At the relatively low tax rate, it is upward sloping. At the relatively low tax rate T_1, the tax revenue is R_1.

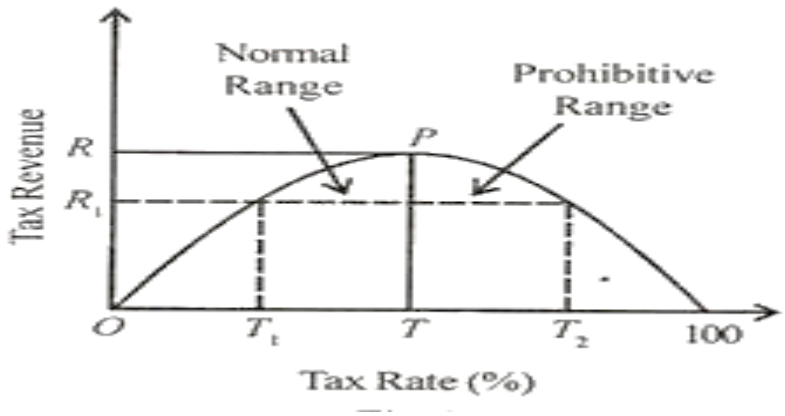


Fig.5.4.

As the tax rate rises to T, the tax revenue continues to increase and the curve reaches the peak, P where the tax revenue R is the maximum. Thereafter, further rise in the tax rate will reduce revenue to the government. Thus T is the optimum rate of tax.

According to Laffer, "Except for the optimum rate, there are always two tax rates that yield the same revenue." In the figure, the revenue R_1 at the high

tax rate T_2 is the same as the revenue collected at the low tax rate T_1. If the government wishes to maximise tax revenue, it will choose the optimum tax rate T. An important feature of the Laffer curve is that it has a normal range and a prohibitive range. The normal range is to the left of the optimum tax rate T and the prohibitive range is to its right. In the normal range, increases in the tax rate bring more revenue to the government.

But in the prohibitive range, when the tax rate becomes high, it reduces the incentives to work, save and invest. Consequently, the fall in output more than offsets the rise in tax rate. When the tax rate reaches 100%, the revenue falls to zero because no one will bother to work. Thus high tax rate stifles economic growth and results in high unemployment. Therefore, a reduction in the tax rate will actually increase revenue by encouraging the incentives to work, save and invest. People not only produce and earn more but also switch money out of low-yielding "tax shelters" and untaxed "underground" economy into more productive and socially desirable investment. The result would be higher employment and economic growth leading to high tax revenue.

2. Reduction in Government Spending:

To achieve full employment, low inflation and high growth rate of the economy, the supply-side economists emphasise reduction in government expenditure accompanied by tax cuts. They are against monetization of budget deficit which the Keynesians advocate.

But the reduction in government expenditure should be more than or equal to tax cuts so that savings increase to finance larger investments. This will increase employment, income and growth rate of the economy.

3. Monetary Policy:

Another plank of supply-side policy is to have restrained monetary expansion in order to keep the inflation rate low.

4. Increased Depreciation:

To encourage more investment, supply-siders suggest increased investment allowance and/or higher depreciation on buildings, machines vehicles, and other capital goods.

5. Reduction in Welfare Benefits:

To reduce unemployment, supply-side economists emphasise reduction in welfare benefits, especially unemployment allowance. This will encourage workers to accept jobs at lower wages, thereby reducing unemployment in the economy.

6. Reducing Trade Union Power:

Supply-siders also advocate reduction in the power of trade unions through legislation which will make the labour market more competitive. Trade unions raise wages above the competitive level which the employers cannot afford. Thus they destroy jobs and increase unemployment. When the government restricts union power, unemployment and cost-inflation are reduced.

7. Deregulation and Privatisation:

Deregulation and privatisation are important supply-side policies. They are used to encourage more competition within the economy. Removal of public sector monopolies and sale of public sector enterprises and transfer of public utilities in private hands lead to increase in productive efficiency, wider consumer choice and lower prices.

8. Free Trade and Capital Movements:

Free trade and free capital movements among countries are another policy measure of supply-siders. The removal of exchange controls and free inflow and outflow of both short- term and long-term capital lead to the maximisation of output and growth by widening markets and checking monopolies.

Criticisms of Supply-side Economics:

The above prescriptions of supply-side economics have been criticised by economists on the following grounds:

1. Laffer Curve Controversial:

The Laffer curve is an interesting but a controversial concept. No one knows with certainty either the location of the optimum point or the exact shape of this curve. The curve may peak at 40% or 90% tax rate, or it may peak in-between these rates. For instance, if we take the curve which peaks at point A in Figure 5.5, the present tax rate-T should be cut to T_1 to maximise revenue. On the other hand, if another curve peaks at point B, the tax rate T should be increased to T_2. Without the knowledge of either the peak or the

shape of the curve, it is not possible to know the effect of reducing (or increasing) the tax rate or tax revenue and economic activity. In fact, nobody knows the exact shape of the Laffer curve or the relationship between tax rate and tax revenue.

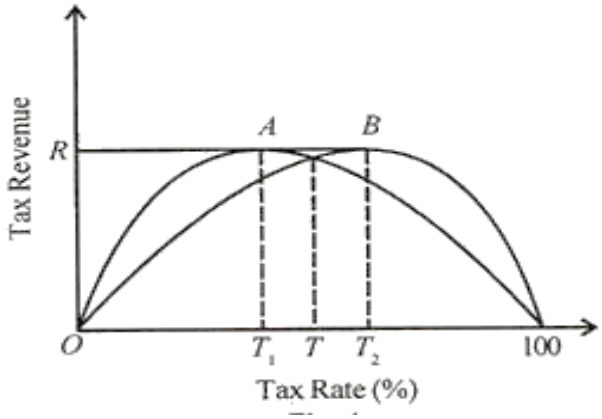


Fig.5.5.

2. Tax Cuts do not bring High Growth Rate:

Economists do not agree that cutting tax rates will lead to high growth rate and more tax revenue. They point out that high growth rate generates higher incomes which, in turn, generate higher tax revenue. Therefore, it is not reduction in tax rates that leads to the high growth rate of the economy.

3. Tax Cuts do not measure Work Effort:

It is not possible to measure work effort specifically as a result of tax cut. No doubt, increased work effort leads to higher incomes and to increase in tax revenue. But the increased tax revenue may not be sufficient to compensate the government for the decrease in revenue due to the lower tax rate. Moreover, it is possible that people may work less when their disposable income increases with the lower tax rate.

4. Tax Cuts do not affect Target Incomes:

Critics argue that some persons have 'target' real income. When taxes are reduced, they will work less and have more leisure to maintain their target income.

5. State Intervention Necessary:

Supply-siders have been criticised for their policy of non-intervention by the state. But there are many contradictions in the working of the capitalist system which cannot sustain balanced growth of the economy. When the

economy reaches full employment, a number of distortions and imbalances develop which fail to maintain full employment. Therefore, state intervention is necessary to remove them.

6. Supply-side Policies fail to bring Social Justice:

Supply-side economists emphasise reduction in social spending, subsidies, grants and budget deficit with reduction in taxes. But such a policy has actually led to huge budget deficits in the United States. Further, the policy of reducing social spending, subsidies and grants adversely affects the poor and unemployed and fails to bring social justice.

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