Manonmaniam Sundaranar University

Directorate of Distance and Continuing Education

Tirunelveli – 627 012. Tamil Nadu.

M.A. Economics

(Second Year)

MONETARY ECONOMICS

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MONETARY ECONOMICS

Course Objectives:

1. To gain sound knowledge in monetary theories and banking practices.
2. To provide a strong knowledge based on India's monetary problems.

UNIT - I Monetary Theories

Concepts – The Role Money in an Economy – Fisher's Quantity Theory - Cambridge Cash Balance Approach - Keynesian Theory - Modern Quantity Theory; Friedman's Approach – Don Patinkin's Theory – Tobin's Portfolio Analysis - Inventory Theory of Money (Baumol)

UNIT – II Theory of Money Supply

Definitions of money supply - High Powered Money – Money Multiplier Process - Determinants of Money Multiplier – Factors affecting H-Reserve Bank Analysis of Money Supply – measures of money supply

UNIT – III Central Banking System

Definition - Role of Central Banks - Development and Promotional Functions - Credit control Methods –RBI: Organisational structure and management - Role, objectives and Functions – RBI and Agricultural and industrial Finance – RBI and Bill market scheme – Exchange control Management by RBI.

UNIT – IV Monetary Policy

Role of Monetary Policy in Economic Development – objectives of Monetary Policy, Trade off and Targets and Indicators of Monetary Policy – instrument of Monetary Policy – Expansionary Monetary Policy – Restrictive Monetary Policy –Lags in monetary Policy – Time Lags.

UNIT – V Banking System and Financial Reforms

Recent Trends Banking System: Social Banking; Innovative Banking; Deposit Insurance Corporation; Defects of Indian Banking System; Suggestions to Improve Working; Narasimhan Committee Report; Recent Banking Reforms. Financial Reforms in India: Banking Sector reforms; Money Market Reforms; Capital Market Reforms.

Table of Content

Unit-I

Monetary Theories

Introduction

Monetary theory posits that a change in money supply is a key driver of economic activity. A simple formula, the equation of exchange, governs monetary theory: MV = PQ. The Federal Reserve has three main levers to control the money supply: the reserve ratio, discount rate, and open market operations. Monetary theory holds that a government can manage the level of economic activity by controlling interest rates and the amount of money in circulation. In general, pumping more money into the economy leads to more buying and selling; shrinking the money supply leads to less economic activity, possibly even a recession. Keynes's theory of monetary policy is composed of three concepts—namely, the investment multiplier, the marginal efficiency of capital and the interest rate. By analyzing how these three concepts interact in the short period, Keynes explains why he is opposed to countercyclical monetary policies.

Monetary theory of business cycle

The monetary theory states that the business cycle is a result of changes in monetary and credit market conditions. Hawtrey, the main supporter of this theory, advocated that business cycles are the continuous phases of inflation and deflation.

Main tools of monetary policy

The Federal Reserve controls the three tools of monetary policy--open market operations, the discount rate, and reserve requirements.

Role of money in the economy

Meaning and definition of money the word 'money' is derived from the Latin word 'Moneta' which was the surname of Roman Goddess of Juno. Money was coined in her Temple at Rome Money is define as anything that is generally acceptable as a means of exchange and that at the same time act as a measure and as a store of value. Money has three important functions ie medium of exchange, a standard value and a store value.

Definition of Monetary Economics

Monetary economics is the branch of economics that studies the different competing theories of money. It provides a framework for analyzing money and considers its functions, and it considers how money can gain acceptance purely because of its convenience as a public good. Money plays an important role in the life of every citizen and in the economic system as a whole. Money removed the difficulties of barter:

1. By serving as a medium of exchange, money removes the need for double coincidence of wants and the inconveniences and difficulties associated with barter.
2. By acting as a unit of account, money becomes comes a common measure of value.
3. Money acts as a standard of deferred payments. Under barter, it was easy to take loans in goats or grains but difficult to make repayments in such perishable articles in the future. Money has simplified both taking and repayment of loans because the unit of account is durable.
4. By acting as a store of value, money removes the problem of storing of commodities under barter.
5. Money removes this difficulty of barter by facilitating the transfer of value from one place to another. A person can transfer his money through draft, bill of exchange, etc. and his assets by selling them for cash at one place and buying them at another place.
6. Money plays an important part in the daily life of a person whether he is a consumer, a producer, a businessman, an academician, a politician or an administrator. Besides, it influences the economy in a number of ways.

Fisher's Quantity Theory of Money:

1. Fisher's Equation of Exchange, 2. Assumptions of Fisher's Quantity Theory, 3. Merits, 4. Implications, 5. Criticisms and 6. Conclusions

1. Fisher's Equation of Exchange:

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.

i. 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.

ii. 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. 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: i. the volume of money in circulation (M); ii. Its velocity of circulation (V), iii. The volume of bank deposits (M'), iv. Its velocity of circulation (V'); and v. 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.

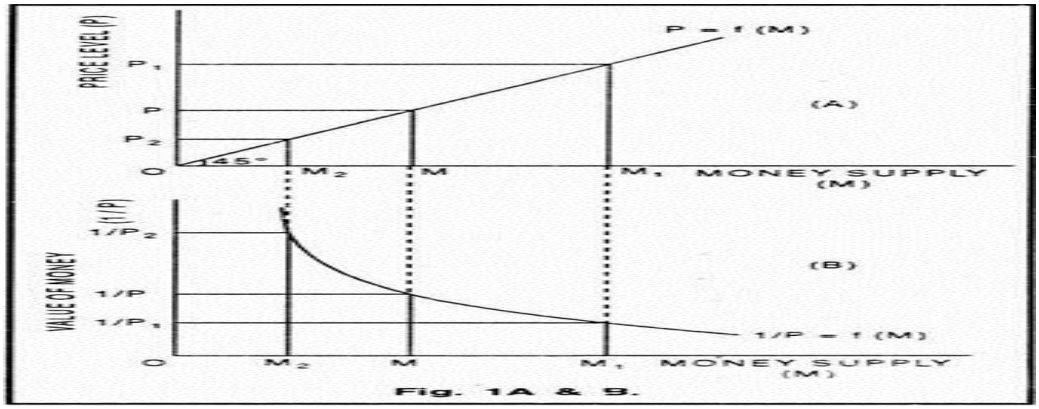


Fig. 1A & B.

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.

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

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

= Re. 1 per good

Value of money (1/P) = 1

If the supply of money is doubled

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

= Rs. 2 per good

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

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.

If the supply of money is halved

$$P = \frac{(500 \times 3) + (250 \times 2)}{4000} = \text{Rs. } 1/2 \text{ per good}$$

Value of money (1/P) = 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. The effects of a change in money supply on the price level and the value of money are graphically shown in Figure 1-A and B respectively:

(i) In Figure 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-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.

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 over time. 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).

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 do 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).

Broad Conclusions of Fisher's Quantity Theory:

1. The general price level in a country is determined by the supply of and the demand for money.
2. Given the demand for money, changes in money supply lead to proportional changes in the price level.
3. Since money is only a medium of exchange, changes in the money supply change absolute (nominal), and not relative (real), prices and thus leave the real variables such as employment and output unaltered. Money is neutral.
4. Under the equilibrium conditions of full employment, the role of monetary (or fiscal) policy is limited.
5. During the temporary disequilibrium period of adjustment, an appropriate monetary policy can stabilise the economy.
6. The monetary authorities, by changing the supply of money, can influence and control the price level and the level of economic activity of the country.

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: The various variables in transactions equation are not independent as assumed by the quantity theorists:

1. 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).

2. 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').
3. 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.
4. 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) are the effect. But, critics maintain that a change in the price level occurs independently and this later on influences money supply.
5. T Influences V – If there is an increase in the volume of trade (T), it will definitely increase the velocity of money (V).
6. T Influences M – During prosperity growing volume of trade (T) may lead to an increase in the money supply (M), without altering the prices.
7. 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, 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 is 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. Crowther's 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".

Merits of Quantity Theory of Money:

Despite many drawbacks, the quantity theory of money has its merits:

1. Correct in Broader Sense:

It is true that in its strict mathematical sense (i.e., a change in money supply causes a direct and proportionate change in prices), the quantity theory may be wrong and has been rejected both theoretically and empirically. But, in the broader sense, the theory provides an important clue to the fluctuations in prices. Nobody can deny the fact that most of the changes in the prices of the commodities are due to changes in the quantity of money.

2. Validity of the Theory:

Till 1930s, the quantity theory of money was used by the economists and policy makers to explain the changes in the general price level and to form the basis of monetary policy. A number of historical instances like hyper- inflation in Germany in 1923-24 and in China in 1947-48 has proved the validity of the theory. In these cases large issues of money pushed up prices.

3. Basis of Monetary Policy:

The theory forms the basis of the monetary policy. Various instruments of credit control, like the bank rate and open market operations, presume that large supply of money leads to higher prices. Cheap money policy is advocated during depression to raise prices.

4. Revival of Quantity Theory:

In the recent times, the monetarists have revived the classical quantity theory of money. Milton Friedman, the leading monetarist, is of the view that the quantity theory was not given full chance to fight the great depression 1929-33; there should have been the expansion of credit or money or both. He believes that the present inflationary rise in prices in most of the countries of the world is because of expansion of money supply much more than the expansion in real income. The proper monetary policy is to allow the money supply to grow in line with the growth in the country's output.

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.

Cambridge Equations in Cash Balance Approach:

The cash balance version of the quantity theory of money, though found in earlier writings of Locke, Petty and Cantillon became popular only in the twentieth century. Following the lead of Alfred Marshall, some Cambridge economists, specially A.C. Pigou, Robertson, J.M. Keynes including R.G. Hawtrey, popularized and adhered to a slightly different version of the quantity theory of money, known as the cash balance approach, on account of its emphasis on cash balance.

According to cash-balance approach, the value of money depends upon the demand for money. But the demand for money arises not on account of transactions but on account of its being a store of value. Money has two characteristics—flatness and roundness—money sitting and money on wings— to serve as a store of value and as a medium of exchange. “In the one use money piles up, in the other it runs round.” Thus, according to the advocates of this theory the real demand for money comes from those who-want to hold it on account of various motives and not from those who simply want to exchange it for goods and services: just as the real demand for houses comes from those who want to live in them and not from those who simply want to construct and sell them.

The cash balance approach relates the process of determination of the value of money to cash the subjective valuations of individuals who are the real force behind all economic activities. Such an approach enables us to throw more light on the somewhat puzzling phenomenon of the velocity of circulation of money, by enquiring more deeply into the nature of the demand for money, as the demand for the money in the cash-balance

approach has reference to the store of value function of money. This type of demand for money arises from the fact that holding of money has great utility, as when it is held (hoarded) it acquires wealth value. Hence, instead of interpreting the 'demand for money' with reference to its 'medium of exchange' function as is done in the transactions approach; it is interpreted with reference to the 'store of value' function of money in the cash balance. It is, thus, the demand for 'money sitting' rather than money 'on wings' that matters.

It may, however, be made clear that in determining the amount of these cash balances the individuals and institutions are guided only by their real value. Thus, an individual is concerned with the extent of his liquid command over real resources. The community's total demand of money balances constitutes a certain proportion of its annual real national income which the community seeks to hold in the form of money (liquid cash). The community's demand for real cash balances in this sense varies from time to time. Thus, given the state of trade (T) and the volume of planned transactions over a period of time, the community's total demand for real money balances can be represented as a certain fraction (K) of the annual real national income (R). The following lines from Marshall explain clearly the substance of the cash-balance version of the quantity theory, "In every state of society there is some fraction of their income which people find it worthwhile to keep in the form of currency; it may be a fifth or a tenth or a twentieth."

Holding of money involves a sacrifice because when we hold (save), we spend less. To have too little holding of money may mean inconvenience, to have too much may mean unnecessary stinting. Somewhere between the two extremes every person, every family, every community fixes the amount of money it will keep. "It is convenient to think of this amount as given proportion of the person's or the family's or the community's annual income." Whatever this proportion may be, it is always the result of a deliberate decision; none of us has the money holding, we have, quite by accident. This is, in the most real sense, the demand for money. Suppose at one time people want to possess cash balances worth one-tenth of the

annual income. Now, they want to have cash balances representing one-seventh of the national income. This means they want to have more cash with them, which is possible only by curtailing expenditure on goods and services, which, in turn, means less demand for them and hence a fall in their prices. Similarly, if they want to have less cash balances, they will spend more and the prices will be pushed up.

Thus, according to cash balance approach, the value of money depends upon the demand for money to be kept as cash. If one puts the problem as one of the amount of money an individual will choose to hold, the framework of this approach that suggests itself is one in which constraints and opportunity costs are the central factors, interacting with individual's tastes. As far as the Cambridge approach is concerned, the principal determinant of people's taste for money holding is the fact that it is a convenient asset to have, being universally acceptable in exchange for goods and services. The more transactions an individual has to undertake the more cash will be he wants to hold.

To this extent the approach is similar to Fisher's, but the emphasis is on want to hold, rather than on have to hold. This is the basic difference between the Cambridge monetary theory and Fisher's framework. The essence of this theory is that the demand for money, in addition to depending on the volume of transactions that an individual might be planning to undertake, will also vary with the level of his wealth, and with the opportunity cost of holding money, the income foregone by not holding other assets.

A.C. Pigou expresses it in the form of an equation:

P = KR/M or (M/KR) where P stands for the value of money or its inverse the price level (M/KR), M represents the supply of Money, R the total national income and K represents that fraction of R for which people wish to keep cash. D.H. Robertson's equation is similar to that of A.C. Pigou's with a little difference. Robertson's equation is: M = PKT or P = M/KT where P is the price level, T is the total amount of goods and services (like R of Pigou), K represents the fraction of T for which people wish to keep cash. Prof. Robertson's equation is considered better than that of Pigou as it is more

comparable with that of Fisher. It is the best of all the Cambridge equations, as it is the easiest.

Superiority of Cash Balances Version:

Cash balances version of the quantity theory of money is superior to Fisher's version of the quantity theory of money on the following grounds:

(i) The cash balances version lays stress on the subjective valuations and human motives which are the basis of all economic activities in sharp contrast to the highly mechanical nature of the concept of velocity in Fisher's equation.

(ii) The Cambridge version of the theory brings to light a new element, namely, the level of income, changes therein and in its velocity. Instead of being concerned with the total transactions it is concerned with the level of income, which, in turn, determines the level of economic development, employment and price level. As a matter of fact, the problem of price level cannot be studied without a reference to changes in income and output. Moreover, it is not the velocity of money which matters but the velocity of circulation of money due to changes in income that matters.

(iii) The cash balances equation brings to light the demand for money to hold. This emphasis on the demand side is in sharp contrast with traditional emphasis on the supply side. Actually, the Cambridge equation was put forward to validate the classical quantity theory of money according to which the supply of money is the sole determinant of the price level.

(iv) The cash balances approach links itself with the general theory of value, since it explains the value to money in terms of the demand for and supply of money. The equation $P = M/KT$ is a more useful device than the transaction equation $P = MV/T$, because it is easier to know how large cash- balances individuals hold than to know how much they spent on various types of transactions.

(v) The cash balances approach has given rise to the famous liquidity preference theory, which has become an integral part of the theory of income, output and employment.

(vi) Cash balances approach brings out the importance of k. An analysis of the factors responsible for fluctuations in k offered scope for the

study of many important problems like uncertainty, expectations, rate of interest etc. which are not considered in the transactions approach. The symbol k reflects the desire for liquidity. A shift in k in the direction of an increased desire for liquidity shows a fall in demand for goods, i.e., a movement away from goods to money resulting in the revision of production plans, curtailment of output and fall of income. Professor Robertson establishes the superiority of cash-balances approach in the words as:

"Broadly speaking, the sitting money exercise is more useful for enabling us to understand the underlying psychological forces determining the value of money; while the money on the wing exercise is more useful for equipping us to watch with understanding the actual processes by which in real life prices of goods and services change for reminding us that the quantity of money and the quantity of goods do not affect the price level by some kind of occult planetary influence, but by modifying the capacity or willingness of human beings to buy or refrain from buying, to sell or refrain from selling. But in any case we have not reached the end of our task'."

Criticism of the Cash Balances Version:

Despite the superiority of the Cambridge version, it suffers from many shortcomings.

I. Although this approach was evolved and popularized by Keynes, the theory does not to take into consideration various motives for holding money. Cambridge approach to the quantity theory ignored the speculative demand for money which turned out to be one of the most important determinants for holding money. Ignoring the speculative demand for money meant that the linkage between the theories of the rate of interest and the level of income through the demand for money was not complete.

II. Although Cambridge equation brought into the picture the level of income, yet it ignored other elements, like productivity, thrift, liquidity preference—all necessary in a comprehensive theory of the value of money.

III. Cambridge approach like Fisher's approach also assumes K and T as given, thus, it becomes subject to those criticisms, which were levelled against Fisher's approach.

III. The Cambridge approach does not furnish an adequate monetary theory which could be utilized to explain and analyse the dynamic behaviour of prices in the economy, as it does not tell us by how much price and output shall change as a result of a given change in money supply in short period.

IV. The cash balances approach fails to assign an explicit role to the rate of interest thereby creating an impression that changes in the supply of money are directly related to the price level. A realistic theory of prices can hardly ignore the vital role of the rate of interest.

V. By assuming that an increased desire for holding cash balance leads, paripassu, to a fall in the price level to the same extent, the theory is assuming the elasticity of demand for money to be unity. Unitary elasticity of demand for money means that a 10 percent increase in the demand for cash balances (money) diminishes the price level by 10 per cent. This is true only when the stock of money and the volume of goods and services remain constant. The volume of goods and services which money buys is bound to change with variations in the money supply. Hence, the elasticity of demand for money cannot be assumed to its unity except in a stationary state.

VI. The theory cannot explain the phenomenon of trade cycle, i.e., why prosperity follows depression and vice versa. Moreover, the theory deals with the purchasing power of money in terms of consumption goods only.

VII. The cash balance theory does not explain the real forces which account for the price level. It ignores such important variables as income, saving and investment. It explains that changes in the demand for money may bring about changes in the value of money, but it does not explain clearly the factors which cause change in the demand for money, which in turn, are very many and more so in a complex dynamic economy.

Quantity Theory of Money

There are two approaches to analyze the Quantity Theory of Money. These are Fisher's Theory and Cash Balance Approach. In this lesson, we will look at both these approaches to understand the Quantity Theory of Money in detail.

Quantity Theory of Money

Fisher's theory explains the relationship between the money supply and price level. According to Fisher, MV = PT, Where, M – The total money supply, V – The velocity of circulation of money. This also means that the average number of times a unit of money exchanges hands during a specific period of time. P is the price level or the average price of the Gross National Product (GNP) and T is the Total National Output. Through this equation, Fisher showed that the relationship between money supply and the price level is direct and proportional. Also, The rate of change in money supply dMM=the rate of change in the price level dPP

Fisher based his theory on three assumptions:

The relationship between M and P is proportional only when there are no changes in the values of V and T. In other words when V and T are constant. 'V' or the velocity of circulation of money depends on the spending habits of people. Since the spending habits of people are more or less stable, V is constant. In a situation of full employment or when all available factors of production are fully employed, 'T' or the Gross National Product is constant. At less than full employment, more money will lead to more output and hence, 'P' stays constant. The demand for money exists for transaction purposes only. Also, people spend their entire income immediately for transactions. Learn more about the Functions of Money and its Demand in detail here.

Criticisms of Fisher's Theory

The Fisher's equation is an abstract and mathematical truism. Also, it does not explain the process through which, 'M' affects 'P'. The assumption the people use up the entire 'M' to immediately buy 'T', is unreal. In real life, no one spends all the money the moment he earns it. Fisher fails to explain the precautionary and speculative uses of money. There is no full

employment. Every country has a natural rate of employment. Even if there is full employment, a country can bring in factors from abroad (the ones that are not available within the economy) and rise the national output. Since the theory assumes that people use the money only for transactions, it is usually called the Cash Transaction Theory.

Quantity Theory of Money – Cash Balance Approach

The Cash Balance Approach states that it is not the total money, but that portion of the cash balance that people spend which influence the price levels. Most people hold a cash balance in their hands rather than spending the entire amount all at once. According to this approach, M = PKT, Where, M – The money supply, P – The price level, T – The total volume of transactions and K is the demand for money that people want to hold as cash balance.

Quantity Theory of Money – Keynes

Keynes reformulated the Quantity Theory of Money. According to him, money does not directly affect the price level. Also, a change in the quantity of money can lead to a change in the rate of interest. Further, with a change in the rate of interest, the volume of investment can change. Also, this change in investment volume can lead to a change in income, output, and employment along with a change in the cost of production. Finally, all these factors will lead to a change in the prices of goods and services. In simple words, the Keynesian version of the Quantity Theory integrates the monetary theory with the general theory of value.

Modern Quantity Theory of Money

Modern Quantity Theory of Money predicts that the demand for money should depend not only on the risk and return offered by money but also on the various assets which the households can hold instead of money. The money demand should depend on the total wealth; the reason being wealth measures the size of the portfolio to be allocated among money and the alternative assets. Thus, Money demand function is essentially a function of wealth (W): Two alternative forms in which wealth can be held are: (i) Bonds.

(ii) Equity (Shares). $(M/P)^d = L\ (r_s, r_b, n^e, W)$ …(1)

Where r_s is the expected real return on stock r_b is the expected real return on bonds IT' is the expected rate of inflation W is real wealth.

M → nominal money demand, P → Price level. Equation (1) shows that Demand for money depends on return on bonds and equity. Inflation affects the amount of wealth held. Therefore, M^d depends on return on bonds and equity. Inflation affects the amount of wealth held. If r_s or r_b increases, money demand reduces, because other assets become more attractive. If FT increases, money demand reduces because money becomes less attractive. If W increases money demand increases because higher wealth means a larger portfolio.

For simplicity, equation 1 can be written as:

$(M/P)^d = L(Y, i)$ …(2) Real income (Y) is used instead of W *i* is the interest rate. It is the return variable which includes nominal interest rate. = $r_b + \Pi^e$ This demand function of money equation (2) is very similar to that derived from the Keynesian approach.

Limitation of the Portfolio theories:

The utility of portfolio theory in studying the demand for money depends on which measure of money supply is used. The portfolio theories of money demand are plausible only if we adopt a broad measure of money supply (M_2): This is because: M_1 is the Narrow Measure of money as it includes only coins and currency with people and demand deposits which earn very low or no interest rate. M_1 = Currency + Demand Deposits. Thus portfolio theories are useful only when we take (M_2) measure of money supply because: $M_2 = M_1$ + Saving accounts + money market mutual funds.

Quantity Theory of Money by Friedman

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:

i. The total wealth to be held in various forms
ii. The price or return from these various assets and
iii. 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". By "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 Demand Function:

On the basis of the above assumptions and formulations, Friedman has derived a demand function for an individual wealth holder. It may be symbolically expressed as

$$M = f\left[p, r_b - \frac{1}{r_b}.\frac{dr_b}{dt}; r_e + \frac{1}{p}.\frac{dp}{dt} - \frac{1}{r_e}\frac{dr_e}{dt}; \frac{1}{p}.\frac{dp}{dt}; w; y; m\right] \quad ...(1)$$

Where M is the total demand for money, P is the general price level, is the market interest rate on bonds, r_e is the market interest rate on equities, 1/p. dp/dt is the nominal return from physical goods, W is the ratio of non-human to human wealth, Y is the money income available to the wealth holder, m is the variables affecting tastes and preferences on the wealth holders. By assuming rb and re to be stable, Friedman replaces the variables representing the return on bonds and equities

$$\left[r_b, \frac{1}{r_b}.\frac{dr_b}{dt}\right] + \left[r_e + \frac{1}{p}.\frac{dp}{dt}\frac{1}{r_b}.\frac{dr_e}{dt}\right]$$

in equation I by simply r_b and r_e. As a result of this replacement, the demand function can be written as

$$M = f\left(P, r_b; r_e; \frac{1}{P}.\frac{dp}{dt} w; y; \mu\right) \quad ...(2)$$

Further Friedman says that when there are changes in price and money income, there will be a proportionate change in the demand for money. This means that equation 2 must be regarded as homogenous of the first degree in P and Y, so that equation 2 becomes as

$$lM = f\left(\lambda P, r_b; r_e; \frac{1}{P}.\frac{dp}{dt} w; \lambda y; \mu\right) \quad ...(3)$$

putting $\lambda = \frac{1}{P}$

equation 3 can be written as

$$\frac{M}{P} = f\left(r_b; r_e \frac{1}{P}.\frac{dp}{dt}; w\frac{\gamma}{P}; \mu\right) \quad ...(4)$$

In this form, the equation 4 expresses the demand for real cash balances as a function of "real" variable.

Putting $\lambda = \frac{1}{Y}$ equation 3 can be written as

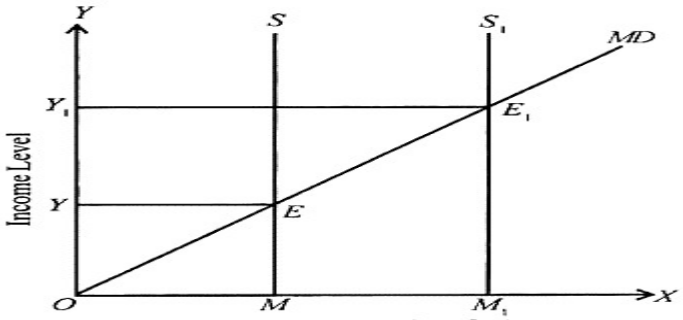
$$\frac{M}{Y} = f\left(r_b; r_e \frac{1}{P}.\frac{dp}{dt}; w; \frac{P}{y}; \mu\right) \quad ...(5)$$

or

$$M = f\left(r_b; r_e \frac{1}{P}.\frac{dp}{dt}; w; \frac{P}{y}; \mu\right) Y \quad ...(6)$$

In Friedman's modern quantity theory of money, the supply of money is independent of demand for money. Due to the actions of the monetary authorities, the supply of money changes, whereas the demand for money remains more or less stable. It means that the amount of money which people want to have as cash or bank deposits is more or less fixed to their permanent income. If the central bank purchases securities, people who sell securities to the central bank receive money and this leads to an increase in their cash holdings. The people will spend this excess money partly on consumer goods and partly by purchasing assets. This spending will reduce their cash balances and at the same time there is a rise in the national income.

On the other hand, when the central bank sells securities, the money holding of the people reduces, in relation to their permanent income. Therefore, they will try to increase their cash partly by reducing their consumption and partly by selling their assets. This will reduce national income. Thus in both cases the demand for money remains stable. If the demand for money is given, it is possible to predict the effects of changes in the supply of money on expenditure and income. If the economy is at less than full employment level, an increase in the supply of money raises the expenditure, output and employment levels. But this is possible only in the short run. Friedman's quantity theory of money can be explained diagrammatically in the following figure (fig.10):



Demand and Supply of Money

Fig. 10.

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 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, and K = f(r,w,u), 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 Fig. 11:

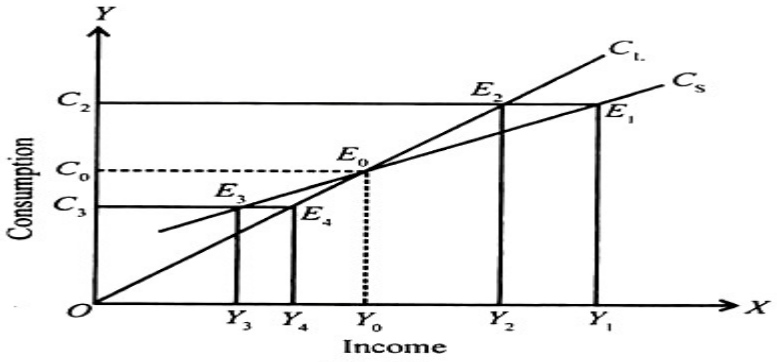


Fig. 11.

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 usages 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. In-spite of all these weaknesses it can be fairly concluded with the words of Micheal Evans "that the evidence supports this theory", and that Friedman's formulation has reshaped and redirected much of the research on the consumption function.

Milton Freidman Hypothesis:

Milton Freidman and L.J. Savage in their well- known article put forward a hypothesis that explains why the same group of people buy insurance and also engage in gambling. In buying insurance they seek to avoid risk and in engaging gambling they take risk. This seemingly

contradictory behaviour on the part of the people could not be explained with Bernoullian Hypothesis of diminishing marginal utility of money. Freidman and Savage abandoned this hypothesis of diminishing marginal utility of money for all ranges of income and instead adopted another hypothesis. According to Freidman-Savage hypothesis, for most people, marginal utility of money income diminishes up to a certain level of money income, it increases from that level to a certain higher level of money income and then beyond that level it again diminishes.

With this hypothesis both types of behaviour of buying insurance to avoid risk and of indulging in gambling and thereby to take risks are explained. Freidman-Savage hypothesis is depicted in the Figure (Fig.12). The curve of marginal utility of money income has three segments over LM, (that is, up to income level OY_1), marginal utility of money income diminishes, segment MN (that is, between income level Y_1 and Y_2) where marginal utility of money income rises and segment NH (that is, income higher than OY_2) where marginal utility of money income again diminishes. Segment LM represents marginal utilities of money income at lower level, range MN represents marginal utilities of money income at middle range and segment NH represents marginal utilities of money income at higher level.

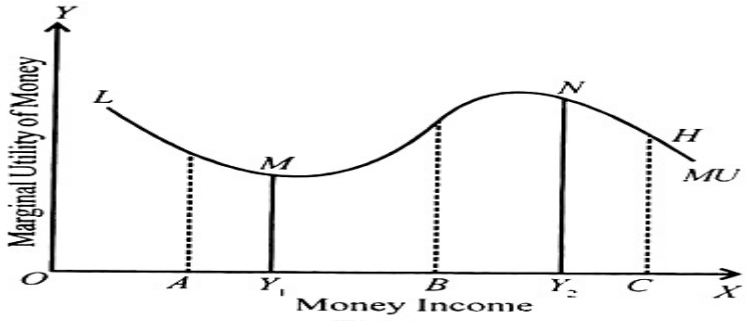


Fig. 12.

Suppose an individual has an income OA which lies in the first segment of diminishing marginal utility of income. Such an individual would be induced to buy insurance and thereby avoid risk, since the payment (insurance premium) is small as compared with the loss of utility he would suffer without insurance.

The loss of utility is very large for the marginal utility of money to the left of A is higher. With such an income individual will be unwilling to take

risks in a gamble or risky investment, since the gain in utility from any income will be smaller than the loss of utility from it. Now suppose the individual's income is OB which lies in the middle income segment MN where the marginal utility of money income is increasing. With OB income, the individual will be willing to buy lottery tickets, indulge in gambling or undertake risky investment since the gain in utility from extra money will be much greater (marginal utility of money income is rising) than the loss of utility from the small payment for a lottery ticket or from equal monetary loss in a gamble.

A person with an income beyond Y_2 in the segment MH enjoys quite high income and therefore marginal utility of money to him is declining. As a result of this he would be unwilling to take risk either in a gamble or in undertaking risky investment except at very favourable odds. Freidman-Savage thinks that the curve of marginal utility of money indicates the behaviour or attitude of people in different socio-economic groups. They of course admit that there are many differences between the persons within a same socio-economic group; some have great preference for gambling and others are unwilling to take any risk at all. Even then Freidman and Savage think the curve described the propensities of broad classes.

The middle group with increasing marginal utility of money is those, they argue, who are eager to take risks to improve themselves. The expectation of more money means much to this group of persons; if their efforts succeed, they will lift themselves up into the next socio-economic class. These persons want not just more consumer goods; they look up in the social scale. They want to rise, to change the pattern of their lives. No wonder that marginal utility of money increases for them.

According to Friedman, the Great Depression of 1930s should be called the 'Great Contraction'. He has analysed the trend between 1928-1933 and explained that the Federal Reserve System bears the main responsibility for the Great Depression. The sharp and unprecedented decline in the stock of money was a consequence of the monetary authority's failure to provide the liquidity that would have enabled the banks which were failing to meet their obligation. Friedman has pointed out that perhaps

the most remarkable feature of the record is the adaptability and flexibility that the private economy has so frequently shown under such extreme provocation.

Friedman along with A J. Schwartz has written a book entitled A Monetary History of the United States, 1867-1960. Here they have analysed the America's economic history. In his another book titled. A Programme for Monetary Stability he points out that for effective and successful operation of a private market economy, a stable monetary framework is essential. Friedman is an uncompromising supporter of the free market mechanism. This world renowned economist has 23 books and 40 papers to his credit.

Don Patinkin's Monetary Model

Introduction:

In 1956 there appeared a monumental work by Don Patinkin which, inter alia, demonstrated the rigid conditions required for the strict proportionality rule of the quantity theory whilst simultaneously launching a severe attack upon the Cambridge analysis. Patinkin's main point of contention was that the advocates of the cash balance approach had failed to understand the true nature of the quantity theory.

Their failure was revealed in the dichotomy which they maintained between the goods market and the money market. Far from integrating the two, as had been claimed, Patinkin held that the neo-classical economists had kept the two rigidly apart. An increase in the stock of money was assumed to generate an increase in the absolute price level but to exercise no real influence upon the market for commodities. One purpose of Patinkin's analysis was that only by exerting an influence upon the market for commodities, via the real balance effect, could the strict quantity theory be maintained.

Part of Patinkin's attack revolved round the nature of the demand curve for money, which according to Patinkin, Cambridge School had generally assumed to be a rectangular hyperbola with constant unit elasticity of the demand for money. As a matter of fact, such a demand curve was implicit in the argument that a doubling of the money stock would induce a doubling of the price level. Patinkin used the 'real balance

effect' to demonstrate that the demand curve for money could not be of the shape of a rectangular hyperbola (i.e., the elasticity of demand for money cannot be assumed to be unity except in a stationary state), and moreover, such a demand curve would contradict the strict quantity theory assertion which the Cambridge quantity theorists were trying to establish Patinkin's main point is that cash balance approach ignored the real balance effect and assumed the absence of money illusion under the assumption of 'homogeneity postulate' and, therefore, failed to bring about a correct relation between the theory of money and the theory of value.

The homogeneity postulate implies that the demand functions in the real sectors are assumed to be insensitive to the changes in the absolute level of money prices (i.e., with changes in the quantity of money there will be equi-proportional changes in all money prices), which indicates absence of money illusion and the real balance effect. But this is valid only in a pure barter economy, where there are no money holdings and as such the concept of absolute price level has no or little meaning. The money economy in reality cannot be without money illusion.

Assumptions:

Patinkin has been able to show the validity and the rehabilitation of the classical quantity theory of money through Keynesian tools with the help of and on the basis of certain basic assumptions: for example, it is assumed that an initial equilibrium exists in the economy, that the system is stable, that there are no destabilizing expectations and finally there are no other factors except those which are specially assumed during the analysis. Again, consumption functions remains stable [the ratio of the flow of consumption expenditure on goods to the stock of money (income velocity) must also be stable. Further, it is assumed that there are no distribution effects, that is, the level and composition of aggregate expenditures are not affected by the way in which the newly injected money is distributed amongst initial recipients and the reaction of creditors and debtors to a changing price level offset each other. It is also assumed that there is no money illusion. Thus, Patinkin has discussed the validity of the quantity theory only under

conditions of full employment, as according to him Keynes questioned its validity even under conditions of full employment.

` In Patinkin's approach we reach the same conclusion as in the old quantity theory of money but we employ modern analytical framework of income-expenditure approach or what is called the Keynesian approach. In other words, Patinkin has rehabilitated the truth contained in the old quantity theory of money with modern Keynesian tools. Let us be clear that Patinkin first criticised the so called classical dichotomy of money and then rehabilitated it through a different route. The classical dichotomy which treated relative prices as being determined by real demands (tastes) and real supplies (production conditions), and the money price level as depending on the quantity of money in relation to the demand for money.

In such classical dichotomy there is a real theory of relative prices and a monetary theory of the level of prices, and these are treated as being separate problems, so that in analysing what determines relative prices one does not have to introduce money; whereas in analysing what determines the level of money prices, one does not have to introduce the theory of relative prices. The problem here is (before Patinkin has been) how these two theories can be reconciled—once this has been done, the other problem is—whether the reconciliation permits one to arrive at the classical proposition that an increase in the quantity of money will increase all prices in the same proportion, so that relative prices are not dependent on the quantity of money. This particular property is described technically as neutrality of money. If money is neutral, an increase in the quantity of money will merely raise the level of money prices without changing relative prices and the rate of interest (which is a particular relative price). In Pigou's terminology, money will be simply a 'veil' covering the underlying operations of the real system.

According to Patinkin this contradiction could be removed and classical theory reconstituted by making the demand and supply functions depend on real cash balances as well as relative prices. While this would eliminate the dichotomy, it would preserve the basic features of the classical monetary theory and particularly the invariance of the real equilibrium of

the economy (relative prices and the rate of interest) with respect to changes in the quantity of money. The real balance effect has been one of the most important innovations in thought concerning the quantity theory of money. This is also called 'Pigou Effect', because it was developed by him but Don Patinkin criticized the narrow sense in which the term real balance effect was used by Pigou and he used it in a wider sense.

Suppose a person holds certain money balances and price level falls, the result will be an increase in the real value of these balances. The person will have a larger stock of money than previously, in real terms, though not in nominal units. Similarly, if the private sector of the economy, taken as a whole, has money balances larger than its net debts, than a fall in the price level will lead to increased spending and the quantity theory of money to that extent stands modified, the important variable to watch is not M, but M/P, that is, real money balances. The real balance effect and the demand for money substitutes go to constitute important modifications of the quantity theory of money. Thus, we find that the solution t o this problem, as Patinkin develops it, is to introduce the stock of real balances held by individuals as an influence on their demand for goods. The real balance effect, therefore, is an essential element of the mechanism which works to produce equilibrium in the money market. Suppose, for example, that for some reason prices fall below their equilibrium level—this will increase the real wealth of the cash-holders—lead them to spend more money—and that in turn will drive prices back towards equilibrium.

Thus, the real balance effect is the force behind the working of the quantity theory. Similarly if there is a chance to increase in the price level, this will reduce people's real balances and therefore lead those to rebuild their balances by spending less, this in turn will force prices back down, so that the presence of real balances as an influence on demands ensures the stability of the price level. Thus, the introduction of the real balance effect disposed of classical dichotomy, that is, it makes it impossible to talk about relative prices without introducing money; but it nevertheless preserve 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.

"Once the real and monetary data of an economy with outside money are specified", says Patinkin, "the equilibrium value of relative prices, the rate of interest, and the absolute price level are simultaneously determined by all the markets of the economy." According to Patinkin, "The dynamic grouping of the absolute price level towards its equilibrium value will—through the real balance effect—react back on the commodity markets and hence the relative prices." Hence, the integration of monetary and value theory through the explicit introduction of real balances as a determinant of the behaviour and the reconstitution of classical monetary theory, is the main theme and contribution of Patinkin's monumentally scholarly work—Money, Interest and Prices.

Keynes criticized the old quantity theory of money on two grounds: that velocity of circulation is not a constant of economic behaviour and that the theory was valid only under highly rigid assumptions. Don Patinkin agrees in his approach to the problem that the Keynesian analysis and economic variables provide more dependable interrelationships than does the velocity of circulation. In other words, a breakdown of expenditure into the sum of C and I is more useful analytical device than the breakdown into the product of the stock of money and the velocity of circulation.

Patinkin assumes full employment and deals with the above-mentioned criticism of Keynes that even under rigid assumptions the quantity theory is not valid unless certain other conditions are also fulfilled. According to Patinkin, these other conditions mentioned by Keynes (besides, full employment) are that the propensity to hoard [that part of the demand for money which depends upon the rate of interest—$M_2(r)$] should always be zero in equilibrium and that the effective demand (AD) should increase in the same proportion as the quantity of money—this will depend on the shapes of LP, MEC, CF functions. Don Patinkin has shown that irrespective of the values of the marginal propensities to consume and invest and the existence of a non-zero propensity to hoard; an increase in the quantity of money must ultimately bring about a proportional increase in prices (leaving

the interest rate unaffected) once the real balance effects are brought into the picture. Thus, Keynes' argument that the above conditions must be fulfilled has been proved incorrect by Patinkin.

Further, with the help of real balance effect Patinkin shows that the quantity theory will hold good even in the extreme Keynesian case where the initial increase in the quantity of money directly affects only the demand for bonds (M_2) and finally Patinkin has shown that a change in the quantity of money does not ultimately affect the rate of interest—even though a change in the rate of interest does affect the amount of money demanded.

Real Balance Effect:

The term 'Real balance effect' was coined by Don Patinkin to denote the influence of changes in the real stock of money on consumption expenditure, that is, a change in consumption expenditure as a result of changes in the real value of the stock of money in circulation. This influence was taken into consideration by Pigou also under what we call 'Pigou Effect', which Patinkin described as a bad terminological choice. Pigou effect was used in a narrow sense to denote the influence on consumption only, but the term real balance effect, has been made more meaningful and useful by including in it all likely influences of changes in the stock of real balances.

In other words it considers the behavioural effects of changes in the real stock of money. The term has been used by Patinkin in a wider sense so as to include the net wealth, effect, portfolio effect, Cambridge effect, as well as any other effect one might think of. Patinkin used the term real balance effect to include all the aspects of real balances in the first edition of his book. It is in the second edition of his book that Patinkin emphasises the net wealth aspect of real balances though he does not completely exclude other aspects as detailed above. Unless the term is used in a wider sense so as to include all the aspects of real balances, its use is likely to be misleading and may fail to describe a generalized theory of people's reactions to changes in the stock of real balances. The use of the term in the wider sense as enunciated above also helps us to resolve the paradox—that income is the main determinant of expenditure on the micro level and wealth is a significant determinant of income on the macro level.

The analysis of the real balance effect listed three motives why people would alter their spending and, therefore, demand for money in response to a change in the aggregate stock of money. First, the demand for money is a function of the level of wealth. The wealthier the people, the more the expenditure on goods; second, they hold money for security as a part of their diversified portfolios; third, just as the demand for every superior good increases with a rise in income, so does the demand for money. Individuals usually desire that their cash balances should bear a given relation to their yearly income. Therefore, other things being equal—wealth, portfolio structure and income determine the demand for money as also the spending decisions. Hence, corresponding to these three motives of the demand for money, there are three different aspects of the real balance effect—each of which may operate either directly on the demand for commodities or may operate indirectly by stimulating the demand for financial assets (securities etc.), raising their prices, lowering the interest rate, stimulating investments, increasing incomes, resulting in a rise in demand for commodities.

Net Wealth Effect:

Net wealth effect is the first and important aspect of the real balance effect. According to this interpretation, an increase in real balances produces an increase in spending because it changes one's net wealth holding, which by definition includes currency, net claims of the private domestic sector on foreigners and net claims of the private sector on the government sector. Hence, consumption is a function of net wealth, rising or falling as real balances increase or decrease. An increase in real balances results in individuals increasing their spending on goods because they are wealthier, or they have come to hold too much money in their portfolios, or because their balances have become too large in relation to their incomes.

Clearly, the direct net wealth aspect has become identified primarily with the term real balance effect. Besides, there is an indirect process also through which changes in real balances affect expenditures—an increase in real balances stimulates initially the demand for financial assets (securities), which in turn, reduces interest rates making investments more attractive, stimulating incomes and expenditures. Some writers simply emphasize the

direct net wealth aspect. They include, G. Ackley, Fellner, Mishan, Collery. These authors primarily associate the term real balance effect with the net wealth aspect, to the exclusion of all others. Other economists point out to the indirect operation of the real balance effect. Harrod and later on Mishan supported the view that there is an indirect effect of real balance phenomenon. Therefore, the real balance effect in its most general sense covers both the direct and indirect methods by which changes in real balances affect consumer spending.

James Tobin is the chief exponent of this view, who is supported by Metzler. According to the portfolio aspect of the real balance effect, a decrease in price level causes investor's portfolios to consist of more money than desired in proportion to the portfolio. Accordingly, they spend more and their effort to restore the actual to the desired amount of money changes the price level until equilibrium is restored. In their attempt to remedy the situation, individuals spend their excess supply of money directly on the physical assets or indirectly in the financial market (for securities etc). Equilibrium is restored when prices change (rise or fall) to such an extent that real balances once again come to bear the desired relation to the value of the portfolios. A distinguishing feature of the portfolio aspect is that people increase or decrease their expenditures in order to restore their stock of money to the optimum level with respect to their asset portfolio.

Cambridge Aspect:

This is the third aspect of the real balance effect. It differs from others in that it views the demand for money primarily as a function of income. According to Cambridge aspect, an increase in the stock of real balances increases real balances relative to income. If previously one held cash balances equal to 1/10th of the yearly income; then after an increase in real balances one would, for example, hold cash balances equal to 1/5th of the yearly income. Finding themselves with more than optimal fraction of income in money terms, people begin to spend more. If they spend for commodities the price level increases in accordance with the direct aspect; if they spend on bonds (securities) the equilibrium will be restored through

indirect process or operation. In other words, equilibrium will be restored, when other things being equal, the price level has risen in proportion to the increase in the money supply. However, let us be clear that spending is influenced by, how wealthy people feel they are their portfolio balance and the relation of cash balances to income. The wealth effect, the portfolio effect and the Cambridge aspect of the real balance effect are all interrelated and it is merely for the sake of convenience that a division amongst the three aspects of the real balance effect is made.

Critical Evaluation:

This is Patinkin's solution to the problem but it has not been accepted. The basic disagreements centre on whether or not it is necessary to retain this real balance effect in the real analysis. Patinkin's model may be considered as an elegant refinement of the traditional quantity theory and its value lies in specifying precisely the necessary conditions for the strict proportionality of the quantity theory to hold and in analysing in detail the mechanism by which the change in the stock of money takes effect—the real balance effect. Although Patinkin's analysis is said to be the formally incomplete because it fails to provide an explanation of full long run equilibrium, yet the integration of product and monetary markets through the real balance effect represented a significant improvement over earlier treatments. For the first time, the nature of the wealth effect is made explicit. What, however, is not analysed is the manner in which the increase in monetary wealth comes about. A doubling of money balances is simply assumed and the analysis rests entirely on the resultant effects.

The Patinkin effect fails to take into account the long-run equilibrium effect as has been pointed out by Archibald and Lipsey and conceded by Patinkin in the second edition of his work. They show that Patinkin's analysis of the real balance effect is inadequate inasmuch as he confines himself to the impact effect of a change in a price and does not work the analysis through to the long-run equilibrium. The result of the debate is that the real balance effect must be considered not as a necessary part of the general equilibrium theory but as a part of the analysis of monetary

stability, in that context it performs the functions of ensuring stability of the price level.

What one needs the real balance effect for is to ensure the stability of the price level; one does not need it to determine the real equilibrium of the system; so long as one confines oneself to equilibrium positions. The equilibrium obtained is no doubt a short-term equilibrium only because further changes will be induced for income recipients in future time periods. Moreover, it is very interesting to point out that if the analysis is extended to an infinite number of periods, general long-run equilibrium is found to be perfectly consistent with – a unit elastic demand curve for money—the real balance effect disappears. Therefore, this again raises a thorny question of whether the quantity theory is a theory of short-run or long-run equilibrium or indeed whether it should be considered a theory of equilibrium at all. Even otherwise, it has been pointed out that if some kind of monetary effect has got to be present, it need not necessarily be a real balance effect as the presence of real balance effect implies that people do not suffer from money illusion—they hold money for what it will buy.

This assumption yields the classical monetary proposition that a doubling of the money supply will lead to a doubling of prices and no change in real equilibrium. But a recent article by Cliff Lloyd has shown that stability of price level can be attained without assuming simply that there is a definite quantity of money which people want to hold. The mere fact that they want to hold money and that the available quantity is fixed will ensure the stability of price level—but it will not produce the neutrality of the money of the classical theory.

Further, G.L.S. Shackle has criticised Patinkin's analysis. He feels that Keynes analysis took account of money and uncertainties, whereas in Patinkin' analysis the objective is to understand the functioning of money economy under perfect interest and price certainty. He accepts that once the 'Pandora Box' of expectations and interest and price uncertainty is opened on the world of economic analysis, anything may happen and this makes all the difference between two approaches. Patinkin's treatment is a long-term equilibrium of pure choice, while Keynes treatment is of short-term

equilibrium of impure choice. J.G. Gurley and E.S. Shaw have also criticised the static assumptions of Patinkin and have enumerated and elucidated the conditions to show under which money will not be neutral. They bring back into the analysis, the overall liquidity of the monetary and financial structure and differing liquidity characteristics of different assets,' which were excluded by the assumptions made in Patinkin's analysis, in which money is not itself a government debt but is issued by the monetary authority against private debt.

They show that money cannot be neutral in a system containing inside and outside money. Outside money is the money which comes from outside the private sector and simply exists. One can think of outside money being gold coins in circulation or paper currency printed by the government. Outside money represents wealth to which there corresponds no debt. Inside money is the money created against private debt. It is typified by the bank deposits created by a private banking system. These writers have shown that if the money supply consists of a combination of inside and outside money, the classical neutrality of money does not hold good as claimed by Patinkin. The main difference between Keynes and Patinkin approaches is that Keynes assumed the price level given does not assume full employment, whereas Patinkin has tried to establish the validity of the quantity theory by assuming full employment but not the price level. Patinkin discussed the validity of the quantity theory under full employment because Keynes questioned its validity even under conditions of full employment.

Patinkin's Monetary Model and Neutrality of Money:

The mechanism of Patinkin's monetary model can be elaborated as follows: Suppose there are four markets in the economy—goods, labour, bonds and money. In each of these markets there is a demand function, there is a supply function and a statement of the equilibrium condition, namely, a statement that prices, wages and interest rate are such that the amount demanded in the market equals the amount supplied. By virtue of what we call 'Walras law', we know that if equilibrium exists in any three of these markets, it must also exist in the fourth. Considering the markets for finished goods Keynes' aggregate demand function would comprise of

consumption plus investment plus government demand. Following Keynes, we assume that the real amount demanded of finished goods (E) varies directly with the level of national income (K), and inversely, with the rate of interest (r).

Assume further that E also depends directly on the real value of cash balances held by the community M_0/P (where Mo is the amount of money in circulation assumed constant, and p is an index of the prices of finished goods). In other words, a decrease in the price level, which increases these real cash balances, is assumed to cause an increase in the aggregate amount of goods demanded and vice versa. Thus, the real aggregate demand function for goods is shown: $E = f(Y, r, M_0/P)$ …… (i) Since, there exists full employment, therefore, the supply function of finished goods can be written as: $Y - Y_0$ …(ii) where, Y_0 is the level of real national product (equal by definition to the level of real national income) corresponding to full employment condition. The statement of equilibrium in the goods market is then that the goods demanded equal the goods supplied that is: E = Y (iii) In the labour market let us assume that the demand for labour (N_d) is equal to the supply of labour (N_s) at the real wage rate (W/p) Therefore, $N_d = g\ (W/p)$ …..(iv), and $N_s = h\ (W/p)$ …(v), Therefore, $N_d = N_s$ …….. (vi).

Thus, the full employment level of real national income Y_0 (in the market for finished goods) is directly related to the full employment level of employment No in the labour market. In the money market, let us assume that the individual is concerned with the real value of cash balances and that he holds or his demand for money is denoted by M_d/P, and assume further as Keynes, that this total demand is divided into transactions and precautionary demand varying with the level of income (Y) and speculative demand varying inversely with the rate of interest (r). Thus,

$$\frac{M_d}{p} = L_1(Y) + L_2(r) \qquad \ldots(vii)$$

or $$\frac{M_d}{p} = L(Y, r) \qquad \ldots(viia)$$

or $M_d = pL(Y, r)$, this the demand for *nominal* (money) cash balances. …(viib)

Since we *assume* that the nominal amount of money in circulation is fixed at the constant level M_0, therefore, the supply function of money is :

$$M_s = M_0 \qquad \ldots(viii)$$

and therefore, in equilibrium $M_d = M_s$ …(ix)

To complete the analysis we must examine the model from the viewpoint of general equilibrium analysis. The above-mentioned nine

equations and nine variables (E, Y, p, N_d, N_s w/p, M_d, M_s, r) can be reduced to the following three equations and three variables p, w and r and we get the following equations for the initial period:

$$f\left(Y_0, r, \frac{M_0}{p}\right) = Y_0 = \text{good market} \quad \ldots(x)$$

$$g\ (w/p) = h\ (w/p) = \text{labour market} \quad \ldots(xi)$$

$$pL\ (Y_0,\ r) = M_0 = \text{money market} \quad \ldots(xii)$$

These are the conditions for equilibrium in the markets for goods, labour market and money market. Further, assume that there exists a price level p_0, a wage level w_0, and interest rate r_0, whose joint existence (at p_0, w_0, r_0), simultaneously satisfies the equilibrium conditions for all the three markets. In other words, the same set of values—P_0, w_0, and r_0, simultaneously cause:

i. The formation of an aggregate function showing that the aggregate amount demanded (AD) is equal to the full employment output,
ii. Equalizes the amount demanded of labour with the supply,
iii. Equates the amount demanded for money with the supply of money. Under certain simple assumptions, the equilibrium position described here must be a stable one.

For example, suppose an excess demand for the goods raises the absolute price level and an excess demand for money raises the rate of interest and the labour market is always in equilibrium (because there is very little lag between money, wages and prices). Also assume that there are no destabilising expectations then, the above assumptions made about the forms and slopes of the various demand and supply functions ensure the stability of the system.

The Effect of an Increase in the Quantity of Money:

The equilibrium position as described above prevails during a certain initial period (t). Now, let us assume that there is a new injection of additional quantity of money into circulation which disturbs the initial equilibrium position. We shall see how a new equilibrium position is established. Suppose the amount of money in circulation increases from M_0 to (1 + t) M_0, where t is a positive constant. It will be seen that a new

equilibrium position will come to exist in which prices and wages have risen in the same proportion as the amount of money and the rate of interest has remained unchanged.

Thus, when the amount of money in circulation was M_0, the equilibrium of the economy was attained by p_0, w_0 and r_0. But when the money increases to (I+t) M_0 the new equilibrium is attained at the price level (I+t) P_0, wage rate (I+t) w_0 and interest rate remaining unchanged at ro. Now, when the prices rise in the same proportion as the amount of money, the real value of cash balances is exactly the same as it was in the beginning or in the initial period t and the rate of interest remains unchanged. Hence, the new aggregate demand (function) must be identical with the aggregate demand of the initial period and as the market for goods was in equilibrium in the initial period it must be in equilibrium now. Similarly, if wages and prices rise in the same proportion then the real wage rate remains the same as it was in the initial period and, therefore, the labour market which was in equilibrium at the initial real wage rate (w_0) must be in equilibrium now.

The position in money market is slightly different. When the amount of money supplied has increased from M_0 to (I+t) M_0, it is clear that the demand function (schedule) for money must also change and if the demand schedule for money does not change and remains in its original position, then it is obvious that the equilibrium cannot be attained at the initial rate of interest ro. We know that the demand schedule for money cannot remain in its original position because the nominal amount of money demanded depends upon the price level and if the price level increases, so must also the demand for money. In other words, in the initial period when the price level is p_0 and the rate of interest is r_0, people wish to hold M_0 (amount of money)—but when the price level has increased from p_0 to (I+t) P_0, people must wish to hold the larger amount of money; say, (I+t) M_0. Hence, when the amount of money in circulation is (I+t) M_0, the money market, too, is or becomes in equilibrium at the price level (I+t) p_0 because the demand for money has gone up to (I+t) M_0 but the rate of interest will remain unchanged at r_0 as shown in the Fig. 29.1.

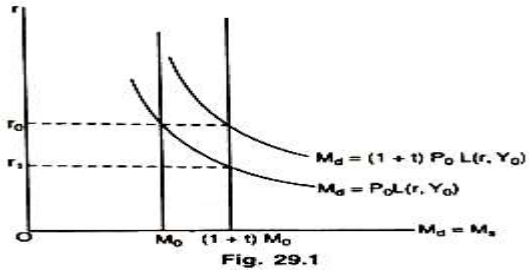


Fig. 29.1

Patinkin has shown that the same kind of equilibrium is possible even when the analysis is dynamic, that is, through different time periods. The typical time paths of the variables would be such as to generate equilibrating forces e.g., the quantity theorists assert that in the initial stages after an increase in the amount of money the rate of interest would decline (from Or_0 to Or_1 in Fig. 29.1); but that when prices begin to rise due to increase in money supply, the interest rate, too, would rise again to its original level (from Or_0 to Or_1). In other words, with an increase in the quantity of money the price level no doubt rises continuously towards the new equilibrium level and the same will be true of the wage rates. Under these circumstances, Patinkin's analysis has shown that the interest rate may decline first but rises once again to its original value.

Equilibrium in the market can be established only at a rate of interest lower than r_0, for only by such reduction could individuals be induced to hold additional money available. But prices, on the other hand, have also changed by now. Since the excess supply in money market shows excess demand in the commodity market, this excess demand must result in raising the prices. This, in turn, reacts back on the money market (through the multiplicative p in the demand for money equation). In particular when the price level has finally doubled, the demand for money must also double, bringing back the original rate of interest r_0. This is the crucial and central point of Patinkin's analysis. It is true that during the process the system may, at limes, 'over-compensate' and the price level and the interest rate may be at some stage rise above their equilibrium values but, it cannot be denied, as claimed by Patinkin that an increase in the quantity of money would raise the price level proportionately at the invariance of the rate of interest.

The whole process is bound to generate equilibrating forces which will lower the values of various variables to their equilibrium positions. Thus, we see that once we keep in mind Patinkin's influence of the real cash balances in mind and an increase in the quantity of money will cause an equi-proportionate increase in price level and money wages while leaving the rate of interest unaffected (thereby maintaining the neutrality of money). Although we have reached this conclusion, as does Patinkin, through modern analytical framework of income-expenditure approach or the Keynesian approach but the result that emerges is that of the traditional quantity theory of money.

Neutrality of Money:

The above analysis of Patinkin's monetary model brings to light very clearly one of the salient features of money or the quantity of money called the 'neutrality of money'. If money is neutral, an increase in the quantity of money will merely raise the level of money prices without changing the relative prices and the interest rate. Patinkin (with the help of Keynesian framework) arrives at the classical conclusion that relative prices and the rate of interest are independent of the quantity of money. The significance of his approach lies mainly in establishing the neutrality of money. However, it is this neutrality of money, which has been the main object of attack by Gurley and Shaw in their—'Money in a Theory of Finance'—the main purpose of this book is to elaborate conditions under which money cannot be neutral. Gurley and Shaw severely criticized this feature of neutrality of money, for establishing which Patinkin had taken so much pain. Gurley and Shaw distinguished between outside money and inside money to show that the money will not be neutral.

Gurley and Shaw with the help of different mathematical and monetary models show that if the money supply consists of a combination of inside and outside money, the classical neutrality of money does not hold good. A money supply consisting of a combination of inside and outside money implies that changes in the quantity of money will not simply produce a movement up or down in the general price level but will also produce changes in relative prices.

This conclusion is easy enough to understand—whenever the public holds a combination of these kinds of money, a change in the quantity of one of them without a change in the other will change the ratios in which people are obliged to hold assets and owe liabilities. If there is a change in the amount of outside money alone without a change in the amount of inside money, there must be a change in the ratios of the debt that backs the inside money to the outside money, so that a change in the quantity of money involves a change in the real variables of the economic system, as a whole.

Consequently, there must be some change somewhere else in the economic system to reconcile people's desires for assets and liabilities with the changed amounts that are available. This analysis takes Gurley and Shaw several hundred pages to develop, but the key to it is, the devising of a situation in which the ratios of assets change. The whole purpose of their analysis is to show that money is not neutral. H.G. Johnson also endorses these views expressed by Gurley and Shaw on the non-neutrality of money.

Lloyd Metzler has also repudiated the neutrality of money theory with the help of general equilibrium model through IS and LM curves as shown in Fig. 29.2. In this diagram, we measure income along OY and rate of interest along vertical Or. The initial equilibrium income and the rate of interest corresponding to full employment are simultaneously determined by the intersection of IS_0 and LM_0 curves at income Y_0 and interest r_0 respectively. Now, if the central bank follows a policy of open market operations and begins purchasing securities and bonds, the nominal stock of money will increase; this, in turn, will cause a shift in the LM function from LM_1 to LM_2 which will determine equilibrium at a lower rate of interest r_1 and the income Y_1 .There is, now, an excess of income over the full employment income.

This excess of income is shown by $Y_0 Y_1$ .This represents the inflationary gap. This will initiate a process of inflation. The real balance effect will now become operative and the LM function will shift to LM_1. The IS function will also shift at the same time from IS_0 to IS_1, on account of a reduction in consumption spending owing to a decline in the value of real

balances. The shifting of the LM curve to LM_1 and IS_0 curve to IS_1 will restore the equilibrium again at full employment income Y_0 but the rate of interest has declined from r_0 to r_2. Hence, the money is not neutral. Unless a few conditions are fulfilled the money cannot be neutral, for example, there must be an absence of money illusion, wage-price flexibility, absence of distribution effects, absence of government borrowing and open market operations and there is no combination of inside-outside money. According to Patinkin, an individual suffering from money illusion reacts to the change in money prices. Money illusion constitutes a friction in the economic system and as such it makes it imperative for the monetary authority to create just the right amount of nominal balances if the neutrality of money is to be achieved. Similarly, flexibility of wages and prices is an important condition of the neutrality of money. Rigidity of wages and prices will prevent the real balance effect from making itself felt and hence it will become difficult to abolish inflationary pressures.

Money will, as a result, be non-neutral. The distribution effects imply the redistribution of real incomes, goods balances and bond amongst the individuals and institutions following changes in prices and stock of money. For example, a price increase may reduce the demand for consumer goods and increase the demand for money and bonds bringing about redistribution against high consuming groups and in favour of high saving and lending groups. Such redistribution will mean a lowering in the rate of interest in case the quantity of money is doubled. Money, under these circumstances (unless distribution effects are absent), cannot be neutral. Again, the government borrowings and central banking open market operations have non-neutral effects on the system. Money will be non-neutral, as already seen, if there is a combination of inside-outside varieties of money.

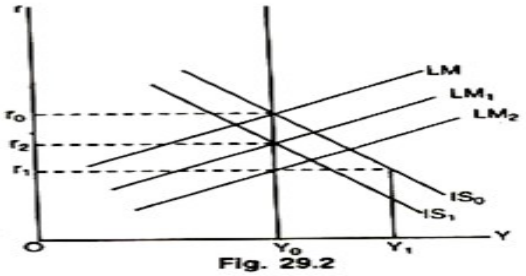


Fig. 29.2

Tobin's Portfolio Balance Approach

The main problem with Keynesian approach to the demand for money is that it suggests that individuals should, at any given time, hold all their liquid assets either in money or in bonds, but not some of each. This is obviously not true in reality. The second approach — Tobin's model of liquidity preference — deals with this problem by showing that if the return on bonds is uncertain, that is, bonds are risky, then the investor worrying about both risk and return is likely to do best by holding both bonds and money. Portfolio theories like the one presented by Tobin emphasises the role of money as a store of value. According to these theories, people hold money as part of their portfolio of assets. The reason for this is that money offers a different combination of risk and return than other assets which are less liquid than money — such as bonds.

To be more specific, money offers a safe (nominal) return, whereas the prices of stocks and bonds may rise or fall. Thus Tobin has suggested that households choose to hold money as part of their optimal portfolio. Portfolio theories predict that the demand for money depends on the risk and return associated with money holding as also on various other assets households can hold instead of money. Furthermore, the demand for money should depend on real wealth, because wealth measures the size of the portfolio to be allocated among money and the alternative assets. For instance, the money demand function may be expressed as: $(M/P)_d = f(r_s, r_b, \pi^e, W)$ where r_s = the expected real return on stock, r_b = the expected real return on bonds, π^e = the expected inflation rate and W= real wealth. An increase in r_s or r_b reduces money demand, because other assets become more attractive. An increase in n^e also reduces money demand, because money becomes less attractive. An increase in W raises money demand, because higher wealth means a larger portfolio. It is against this backdrop that we study the portfolio theory of money demand.

Speculative Demand for Money as Behaviour toward Risk:

Tobin ignored the determination of the transactions demand for money and considered only the demand for money as a store of wealth. The focus is on an individual's portfolio allocation between money-holding and

bondholding, subject to the wealth constraint, i.e., W = M + B, where W is the total fixed wealth, M is money and B is bond. In Tobin's theory there is no such thing as fixed normal level to which interest rates are always expected to return as has been postulated by Keynes. Following Tobin we can assume that the expected capital gain is zero. This is because the individual investor expects capital gains and losses to be equally likely. The best expectation of the return on bonds is simply the prevailing market rate of interest (r). But this is just the expected return on bonds. The actual return also includes some capital gain or loss, since the interest rate does not generally remain fixed. Thus bonds pay an expected return of interest, but they are a risky asset. Their actual return is uncertain due to the fact that the market rate of interest fluctuates even in the short run.

In contrast, money is a safe asset because it yields no return at all. At the same time money is a safe asset since no capital gain or loss is made by holding money. In Tobin's view an individual will hold some proportion of wealth in money for reducing the overall riskiness of his portfolio. If only bonds are held, returns would be maximum no doubt but the risk to which the investor is exposed will also be maximum. A risk- adverse investor would voluntarily sacrifice some return for a reduction in risk. Tobin argues that money as an asset is demanded as an aversion to risk. Tobin's theory is explained in Fig. 19.4. On the vertical axis of the upper quadrant we measure the expected return to the portfolio; on the horizontal axis we measure the riskiness of the portfolio. The expected return on the portfolio is the interest that can be earned on bonds.

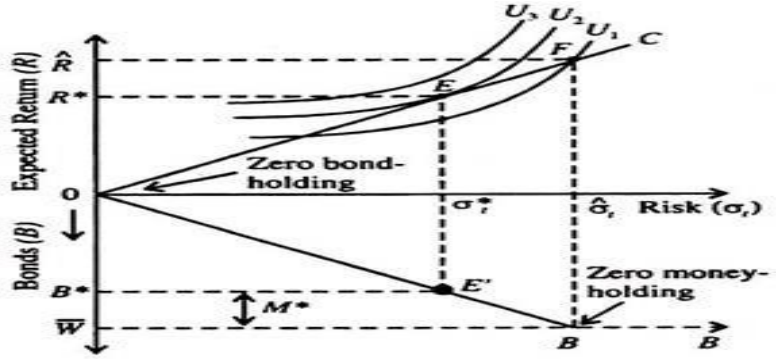


Fig. 19.4 Determination of the Optimal Portfolio

This depends on two things: (i) the interest rate and (ii) the proportion of the portfolio held in bonds. The total risk to which an individual is exposed depends on (i) the uncertainty concerning bond prices — that is, the uncertainty concerning future movements in market rate of interest, and (ii) the proportion of the portfolio held in bonds. Let us denote the expected total return by R and the total risk of the portfolio as a σ_t. If an individual holds all his wealth (W) in money and none in bonds, i.e., W = M + 0, both R and σ_t will be zero, as shown by the origin (point 0) in Fig. 19.4. With an increase in the proportion of bonds, i.e., W = M + B; as M falls and B increases, R and a, will both rise.

The opportunity line C is a locus of points showing the terms on which the individual investor can increase R at the cost of increasing σ_t. A movement along C from left to right shows that the investor increases his bond holding only by reducing his money holding. The lower quadrant of Fig. 19.4 shows alternative portfolio allocations, resulting in different combinations of R and σ_t. The vertical axis measures bond holding. The amount of bonds (B) held in W increases as the investor moves down the vertical axis to a maximum of W. The difference between W and B is the asset demand for money (M). The line OB in the lower part of the diagram shows the relationship between a, and B. As the proportion of B in W increases, σ_t also increases. This means that as the proportion of bonds in the portfolio increases, the total risk of the portfolio increases, too.

Preference of the Investor: Risk-Aversion:

The optimal portfolio allocation depends on the preferences of the investor. Here we assume that the investor is risk-averse. He wants the best of both the worlds — a high return on the portfolio by avoiding risk. He will accept more risk if he is compensated by an increase in expected return. Let us assume that the utility function of the investor is $U = f(R, \sigma_t)$ …(9) where an increase in R increases utility (U) and an increase in σ_T reduces U. In Fig. 19.4 we show three indifference curves of the investor for three levels of utility U_1, U_2 and U_3. Each indifference curve shows the risk-return trade-off, i.e., the terms on which the investor is desirous of taking more risk if

compensated by a higher expected return. All the points on any such indifference curve yield the same fixed level of utility.

Any movement from U_1 to U_2 and from U_2 to U_3 implies higher level of utility, i.e., higher levels of R and the same or even lower levels of σ_t. The indifference curves are upward sloping because the investor is risk-averse. He will take more risk only if compensated by a higher return. Moreover, the curves become steeper as the investor moves to the right, implying increasing risk aversion. If we make this assumption, then the more risk the individual has already taken on, the greater will be the increase in expected return required for the investor to be exposed to a greater degree of risk. We may now determine the optimal portfolio allocation of a risk adverse investor.

Optimal Portfolio Allocation:

A risk-averse investor will move to that point along the line C which enables him to reach the highest attainable indifference curve. At that point he ends up choosing that portfolio which he intends to choose and, thus, maximises his utility. The reason is obvious. At the tangency point E, with R = R* and $\sigma_t = \sigma^*_t$, the terms on which the investor is able to increase expected return on the portfolio by taking more risk, shown by the slope of the line C, is equated to the terms on which he (she) is willing to make the trade-off, as is measured by the slope of the indifference curve. From the lower part we see that this risk-return combination is achieved by holding an amount of bonds equal to B*, and by holding the remainder of wealth ($\bar{W}$ – B* = M*) in the form of money.

The demand for money thus shows the investor's 'behaviour towards risk', i.e., the result of seeking to reduce risk below what it would be if $\bar{W}$ = B and M = 0. In Fig. 19.4 such an all-bonds-portfolio would be associated with risk of σ_t and the expected return of R, as shown by point F in the upper part of the diagram. This portfolio yields a lower level of utility than that represented by bond holdings of B* and money holdings of M*. The reason is that as the investor moves to the right of point E along the line 0C, the additional return expected from the portfolio by holding more bonds (and less money) is not adequate to compensate the investor for the additional

risk (the slope of the line 0C is less than that of the indifference curve U_2). The movement to point F takes the investor to a lower indifference curve, U_1.

Interest Rate Changes and the Speculative Demand for Money:

In Tobin's theory the amount of money held as an asset depends on the level of the interest rate. Fig. 19.5 shows the relationship between interest rate and asset demand for money. An increase in the rate of interest from r_0 to r_1 and then to r_2 will improve the terms on which the expected return on the portfolio can be increased by taking more risk. So the line 0C becomes steeper. It rotates anticlockwise from $C(r_0)$ to $C(r_1)$ and then to $C(r_2)$.

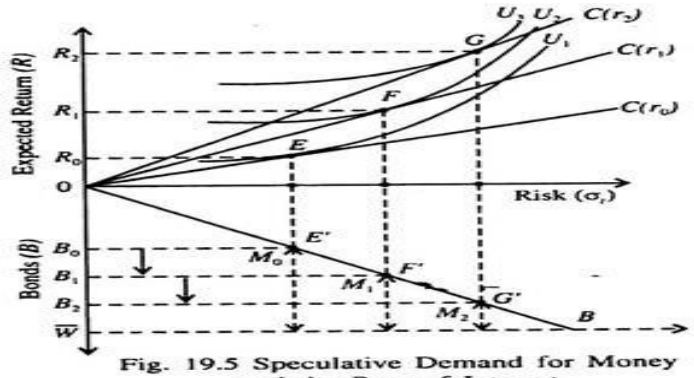


Fig. 19.5 Speculative Demand for Money and the Rate of Interest

The investor responds by taking more risk and earning higher expected returns by moving from E to F and then to G. It may be noted that each point is one of portfolio optimisation. In this case his holdings of bonds (risky asset) increase (from B_0 to B_1, and then to B_2) and money holdings fall (from M_0 to M_1, then M_2). In short, as the interest rate rises, a given increase in risk, which corresponds to a given increase in the amount of bonds in the portfolio, will result in a greater increase in expected return on the portfolio.

Comments:

In Tobin's theory, like that of Keynes, the speculative demand for money varies inversely with the interest rate. The reason is that an increase in the rate of interest implies an increase in the payment received for taking more risk. When the interest rate increases, the investor is eager to put a larger proportion of his portfolio into the risky asset, bonds — and thus a smaller proportion into the safe asset — money. From the portfolio theories, we can look at the money demand function $(M/P)_d = f(Y, i)$ as a useful simplification. First, it uses real income Y as a proxy for wealth' W.

Secondly, the only return variable it includes is the nominal interest rate, which is the sum of the real return on bonds and expected inflation (that is, $i = r_b + \pi^e$). The portfolio theories suggest that the demand function for money should also include the expected returns on other assets as well.

Are portfolio theories really useful for studying the demand for money? It depends on which measure of money we are considering. If we consider any narrow money (M_1), it is to be treated as a dominated asset, in the sense that as a store of value, it exists along with other assets that are always better. Thus, as Mankiw has suggested: "It is not optimal for people to hold money as part of their portfolio, and portfolio theories cannot explain the demand for these dominated forms of money." It may also be added that portfolio theories are more plausible as theories of money demand if we adopt a broad definition of money. Although the portfolio approach to money demand may not be plausible when applied to M_1, it can suggest a clear explanation of the demand for M_2 or M_3.

Tax Rates and Portfolio Choice:

A major portion of the revenues to a successful investment goes to the government as taxes. Since different assets are treated differently by the tax laws, tax considerations are obviously important in choosing a portfolio. After all, rational investors care about after-tax returns, not before-tax returns. Government bonds illustrate this point. These bonds yield a lower return than do corporate bonds (debentures) of comparable risks and liquidity. Still, people buy government bonds because they are generally exempt from income tax and capital gains tax. The higher an investor's income, the more valuable these tax exemptions are, because his tax savings are greater the higher the tax rate. The higher demand for these tax-exempt bonds from high income investors pushes up their price, which reduces the return received on the bonds. We can expect the return to decline to the point where the after-tax return for high income individuals is at most slightly higher than for an ordinary taxable bond of comparable risk.

Loss Offset and the Return to Risk:

No financial investment gives a guaranteed rate of return and an individual who buys equity shares undertakes a risk. No investment is a

safe bet. In other words, to make an investment is to gamble, and the investors should be interested in the gamble only if the value of probable gain outweighs that of probable losses. Since an investor's marginal utility of money income falls, an even-money or a fair bet may not always be acceptable. If a tax on investment income worsens the odds by reducing the expected return, investment will fall. But such a tax may not always reduce the odds. It will reduce the investor's return if he wins.

However if a loss offset is allowed for, it will also reduce his loss if he loses. Given a proportional tax, both are equiprobable events. Both probable gains and probable losses will be reduced at the same rate. The tax may induce an investor either to increase or to reduce his risk-taking depending on circumstances. The possibility of increased risk taking is shown in Fig. 19.6 where the rate of return is measured on the vertical axis and the risk is shown on the horizontal axis. Let us suppose, for the sake of simplicity, that the investor chooses between holding cash (which is completely safe) and a single alternative, say a corporate bond, of given risk. The opportunity line 0A shows the combinations of risk and return available to him by choosing different mixes of cash and bonds. With 100% cash holding, he will stay at point zero where he assumes no risks and receives no return either. If all his funds are invested in bonds he will move to point B, with risk 0C and return 0D. Before tax the investor is at point E_1 at which his opportunity line 0A just touches the highest attainable indifference curve U_2. His risk equals 0F and return is 0G. Here the indifference curve is drawn so as to show the increasing risk aversion.

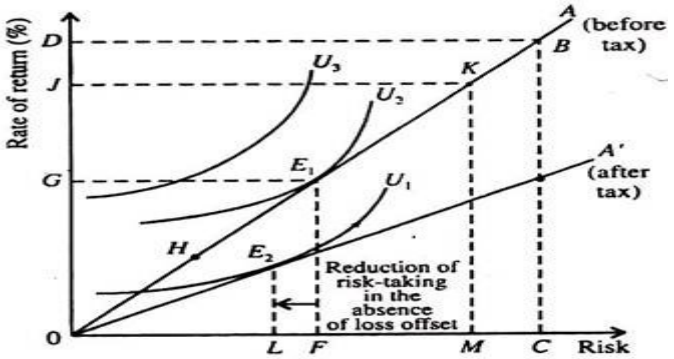


Fig. 19.6 Taxation and Risk Bearing

Successive increases in risk call for rising additions to the rate of return if the investor is to remain equally well-off. This follows from the implicit assumption that the utility of income schedule rises at a decreasing rate as income increases. Now a 50% tax is imposed and we assume that full loss offset is allowed. If the investor does not change his portfolio mix, he will now find himself with half the risk and half the return than he had before, i.e., in a position similar to that provided by portfolio mix H prior to tax.

Since before the imposition of the tax he could have improved his position by moving from point H to tangency point he will now prefer to move from E_1 to K. At K gross risk and return have doubled but his net risk and return are the same (i.e., what they were at U_2 — before the imposition of the tax). No doubt his private risk taking has remained unchanged. But total risk taking, as seen from the point of view of the economy as a whole has increased. The reason is that the government has now become a partner. It now takes half the return and assumes half the risk, too. This outcome is conceivable only if loss offset is permitted. Without loss offset, the tax would rotate the opportunity line from 0A to 0A' and the new equilibrium would be at a tangency point E_2, with risk taking decreased to 0L.

Under certain conditions, a tax with loss offset will increase risk taking. The investment choice is not just one between cash (assumed to be riskless) and one risky asset. Inflation renders cash holdings risky, and choices among alternative risky assets are to be considered. The outcome then depends on the precise nature of the investor's preferences or the shape of his indifference curves. The net result may be either to increase or to reduce risk taking — and no simple generalisation regarding the outcome is possible.

Theories of Demand of Money: Tobin's Portfolio and Baumol's Inventory Approaches

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. 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. 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. 19.1, 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. 19.1.

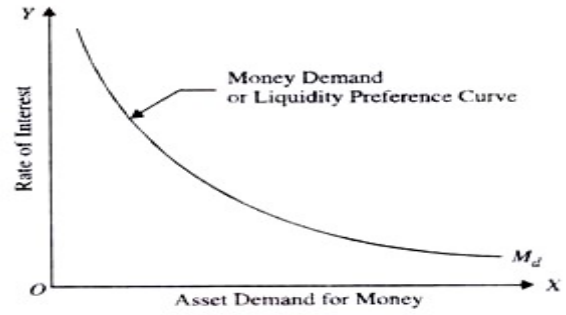


Fig. 19.1. *Tobin's Liquidity Preference Curve*

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.

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. 19.2. 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).

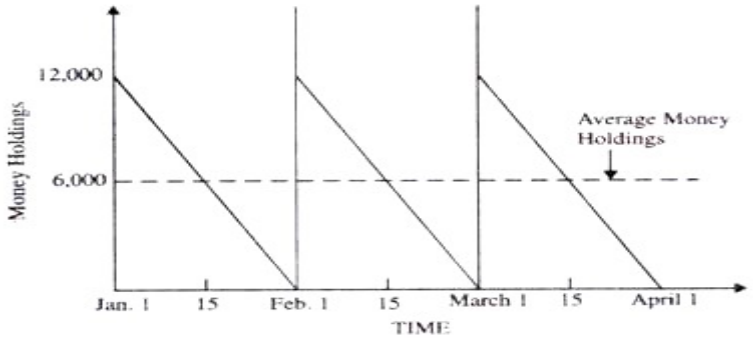


Fig. 19.2. *Stream of Cash Payments and Transactions Demand for Money*

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.

This is illustrated in Fig. 19.3. It will be seen that his money holdings of Rs. 6,000 will be reduced to zero at the end of the 15th day of each month. Now, he can withdraw Rs. 6,000 on the morning of 16th of each month and then spends it gradually, at a steady rate of 400 per day for the next 15 days of a month. This is a better method of managing funds as he will be earning interest on Rs. 6,000 for 15 days in each month. Average money holdings in this money management scheme is Rs. 6000/2 = 3000

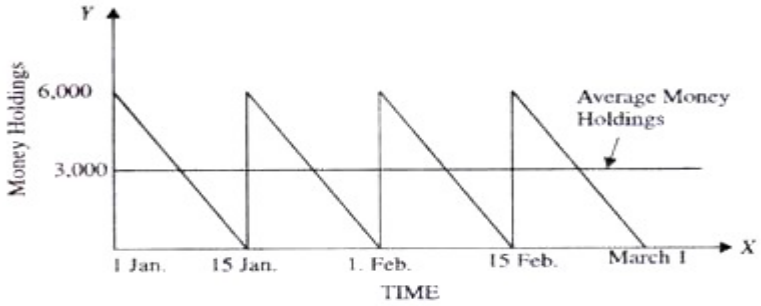


Fig. 19.3. *Transactions Demand for Money and Stream of Cash Payments*

Likewise, the individual may decide to withdraw Rs. 4,000 (i.e., 1/3rd of his salary) on the first day of each month and deposits Rs. 8,000 in the saving deposits. His Rs. 4,000 will be reduced to zero, as he spends his money on transactions, (that is, buying of goods and services) at the end of the 10th day and on the morning of 11th of each month he again withdraws Rs. 4,000 to spend on goods and services till the end of the 20th day and on 21st day of the month he again withdraws Rs. 4,000 to spend steadily till the end of the month. In this scheme on an average he will be holding Rs. 4000/2 = 2000 and will be investing remaining funds in saving deposits and earn interest on them. Thus, in this scheme he will be earning more interest income.

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. 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. However, Baumol and Tobin have shown that transactions demand for money is sensitive to rate of interest.

As explained above, interest represents the opportunity cost of holding money instead of bonds, saving and fixed deposits. The higher the rate of interest, the greater the opportunity cost of holding money. Therefore, at a higher rate of interest people will try to economise the use of money and will demand less money for transactions. At a lower interest rate on bonds, saving and fixed deposits, the opportunity cost of holding money will be less which will prompt people to hold more money for transactions. Therefore, according to Baumol and Tobin, transactions demand curve for money slopes downward as shown in Fig. 19.4. At higher interest rates, bonds, savings and fixed deposits are more attractive relative to money holding for transactions.

Therefore, at higher interest rates people tend to hold less money for transaction purposes. On the other hand, when the rates of interest are low, opportunity cost of holding money will be less and, as a consequence, people will hold more money for transactions. Therefore, the curve of transaction demand for money slopes downward. It will be observed from the square root rule given above that transactions demand for money varies directly with the income (Y) of the individuals. Therefore, the higher the level of income, the greater the transactions demand for money at a given rate of interest.

In Fig. 19.4. the three transactions demand curves for money M_d, M_d‘ and M_d“, for three different income levels, Y_1, Y_2, Y_3 are shown. It will be known from the square root rule that optimum money holding for transactions will increase less than proportionately to the increase in income. Thus, transactions demand for money, according to Baumol and Tobin, is function of both rate of interest and the level of income. $M_{td} = f(r, Y)$, Where M_{td} stands for transactions demand for money, r for rate of interest and Y for the level of income.

3. Friedman’s Theory of Demand for Money:

A noted monetarist economist Friedman put forward demand for money function which plays an important role in his restatement of the

quantity theory of money and prices. Friedman believes that money demand function is most important stable function of macroeconomics. He treats money as one type of asset in which wealth holders can keep a part of their wealth. Business firms view money as a capital good or a factor of production which they combine with the services of other productive assets or labour to produce goods and services.

Thus, according to Friedman, individuals hold money for the services it provides to them. It may be noted that the service rendered by money is that it serves as a general purchasing power so that it can be conveniently used for buying goods and services. His approach to demand for money does not consider any motives for holding money, nor does it distinguishes between speculative and transactions demand for money. Friedman considers the demand for money merely as an application of a general theory of demand for capital assets.

Like other capital assets, money also yields return and provides services. He analyses the various factors that determine the demand for money and from this analysis derives demand for money function. Note that the value of goods and services which money can buy represents the real yield on money. Obviously, this real yield of money in terms of goods and services which it can purchase will depend on the price level of goods and services. Besides money, bonds are another type of asset in which people can hold their wealth. Bonds are securities which yield a stream of interest income, fixed in nominal terms. Yield on bond is the coupon rate of interest and also anticipated capital gain or loss due to expected changes in the market rate of interest.

Equities or Shares are another form of asset in which wealth can be held. The yield from equity is determined by the dividend rate, expected capital gain or loss and expected changes in the price level. The fourth form in which people can hold their wealth is the stock of producer and durable consumer commodities. These commodities also yield a stream of income but in kind rather than in money. Thus, the basic yield from commodities is implicit one. However, Friedman also considers an explicit yield from

commodities in the form of expected rate of change in their price per unit of time.

Friedman's nominal demand function (M_d) for money can be written as Md=f (W, h, r_m, r_b, r_e, P, $\Delta P/P$, U), As demand for real money balances is nominal demand for money divided by the price level, demand for real money balances can be written as M_d/P = f(W, h, r_m, r_b, r_e, P, $\Delta P/P$, U), Where M_d stands for nominal demand for money and M_d/P for demand for real money balances, W stands for wealth of the individuals, h for the proportion of human wealth to the total wealth held by the individuals, r_m for rate of return or interest on money, r_b for rate of interest on bonds, r_e for rate of return on equities, P for the price level, $\Delta P/P$ for the change in price level {i.e. rate of inflation), and U for the institutional factors.

1. Wealth (W):

The major factor determining the demand for money is the wealth of the individual (W) In wealth Friedman includes not only non-human wealth such as bonds, shares, money which yield various rates of return but also human wealth or human capital. By human wealth Friedman means the value of an individual's present and future earnings. Whereas non-human wealth can be easily converted into money, that is, can be made liquid. Such substitution of human wealth is not easily possible. Thus human wealth represents illiquid component of wealth and, therefore, the proportion of human wealth to the non-human wealth has been included in the demand for money function as an independent variable.

Individual's demand for money directly depends on his total wealth. Indeed, the total wealth of an individual represents an upper limit of holding money by an individual and is similar to the budget constraint of the consumer in the theory of demand. The greater the wealth of an individual, the more money he will demand for transactions and other purposes. As a country, becomes richer, its demand for money for transaction and other purposes will increase. Since as compared to non- human wealth, human wealth is much less liquid, Friedman has argued that as the proportion of human wealth in the total wealth increases, there will be a greater demand for money to make up for the illiquidity of human wealth.

2. Rates of Interest or Return (r_m, r_b, r_e):

Friedman considers three rates of interest, namely, r_b, r_e and which determine the demand for money, r_m is the own rate of interest on money. Note that money kept in the form of currency and demand deposits does not earn any interest. But money held as saving deposits and fixed deposits earns certain rates of interest and it is this rate of interest which is designated by r_m in the money demand function. Given the other rates of interest or return, the higher the own rate of interest, the greater the demand for money. In deciding how large a part of his wealth to hold in the form of money the individual will compare the rate of interest on money with rates of interest (or return) on bonds and other assets. As mentioned earlier, the opportunity cost of holding money is the interest or return given up by not holding these other forms of assets. As rates of return on bond (r_b) and equities (r_e) rise, the opportunity cost of holding money will increase which will reduce the demand for money holdings. Thus, the demand for money is negatively related to the rate of interest (or return) on bonds, equities and other such non-money assets.

3. Price Level (P):

Price level also determines the demand for money balances. A higher price level means people will require larger nominal money balances in order to do the same amount of transactions, that is, to purchase the same amount of goods and services. If income (Y) is used as proxy for wealth (W) which, as stated above, is the most important determinant of demand for money, then nominal income is given by Y.P which becomes a crucial determinant of demand for money. Here Y stands for real income and P for price level. As the price level goes up, the demand for money will rise and, on the other hand, if price level falls, the demand for money will decline. As a matter of fact, people adjust the nominal money balances (M) to achieve their desired level of real money balances (M/P).

4. The Expected Rate of Inflation ($\Delta P/P$):

If people expect a higher rate of inflation, they will reduce their demand for money holdings. This is because inflation reduces the value of their money balances in terms of its power to purchase goods and services.

If the rate of inflation exceeds the nominal rate of interest, there will be negative rate of return on money. Therefore, when people expect a higher rate of inflation they will tend to convert their money holdings into goods or other assets which are not affected by inflation. On the other hand, if people expect a fall in the price level, their demand for money holdings will increase.

5. Institutional Factors (U):

Institutional factors such as mode of wage payments and bill payments also affect the demand for money. Several other factors which influence the overall economic environment affect the demand for money. For example, if recession or war is anticipated, the demand for money balances will increase. Besides, instability in capital markets, which erodes the confidence of the people in making profits from investment in bonds and equity shares, will also raise the demand for money. Even political instability in the country influences the demand for money. To account for these institutional factors Friedman includes the variable U in his demand for money function.

Simplifying Friedman's Demand for Money Function:

A major problem faced in using Friedman's demand for money function has been that due to the non-existence of reliable data about the value of wealth (W), it is difficult to estimate the demand for money. To overcome this difficulty Friedman suggested that since the present value of wealth or $W = Y_P/r$ (where Y_p is the permanent income and r is the rate of interest on money.), permanent income Yp can be used as a proxy variable for wealth.

Unit-II

Theory of Money Supply

Introduction

The money supply is the total value of money available in an economy at a point of time. In India, Reserve Bank of India (RBI), measures the money supply and publishes it on a weekly or fortnight basis.

Meaning of Money Supply

In macroeconomics, the money supply refers to the total volume of currency held by the public at a particular point in time. There are several ways to define "money", but standard measures usually include currency in circulation and demand deposits.

Meaning of Monetary Aggregate

Monetary aggregates are the measures of the money supply in a country. Very often, the money supply in the economy is represented using monetary aggregate called 'broad money', also denoted as M3.

There are also different other monetary aggregates.

From 1977 to 1998, RBI used four monetary aggregates – M1, M2, M3 and M4 – to measure money supply. The central bank also used the concept of Reserve Money. However, measuring standards changed in 1998. Now, the nomenclature is M0, M1, M2, and M3. To distinguish new aggregates from old aggregates, RBI sometimes mentions new aggregates as NM0, NM1, NM2, and NM3.

Old Monetary Aggregates

From 1977, RBI has been publishing four monetary aggregates – M1, M2, M3 and M4 – besides the reserve money. In the new system, reserve money is named M0. M2 and M4 that included post office savings banks deposits. However, these are not very widely used now.

New Monetary Aggregates

The RBI has started publishing a set of new monetary aggregates following the recommendations of the Working Group on Money Supply: Analytics and Methodology of Compilation (Chairman: Dr. Y.V. Reddy) which submitted its report in June 1998. The Working Group recommended

compilation of four monetary aggregates on the basis of the balance sheet of the banking sector in conformity with the norms of progressive liquidity:

- NM0 (monetary base)
- NM1 (narrow money)
- NM2
- NM3 (broad money)

NM0 (Monetary Base or Reserve Money)

M0 is the sum of Currency in Circulation, Bankers' Deposits with RBI, and 'Other' Deposits with RBI

Components of M0:

- Currency in Circulation
- Bankers' Deposits with RBI
- 'Other' Deposits with RBI

'Other' deposits with RBI comprise mainly: (i) deposits of quasi-government and other financial institutions including primary dealers, (ii) balances in the accounts of foreign Central banks and Governments, (iii) accounts of international agencies such as the International Monetary Fund, etc.

NM1 (Narrow Money)

M1 is the sum of Currency with the Public, Demand Deposits with the Banking System, and 'Other' Deposits with RBI.

Components of M1:

- Currency with the Public
- Current Deposits with the Banking System
- Demand Liabilities Portion of Savings Deposits with the Banking System
- 'Other' Deposits with RBI

In other words, M1 = Currency with the Public + Demand Deposits with the Banking System + 'Other' Deposits with RBI

Significance of M1: M1 includes currency with the public and non-interest bearing deposits with the banking sector including that of RBI.

NM2: M2 is the sum of Currency with the Public, Current Deposits with the Banking System, Savings Deposits with the Banking System, Certificates of

Deposits issued by Banks, Term Deposits of residents with a contractual maturity up to and including one year with the Banking System, and 'Other' Deposits with RBI.

Components of M2:

- Currency with the Public
- Current Deposits with the Banking System
- Demand Liabilities of Savings Deposits with the Banking System
- 'Other' Deposits with RBI
- Term Deposits of residents with a contractual maturity up to and including one year with the Banking System
- Certificates of Deposits issued by Banks

In other words, M2=M1+ Time Liabilities Portion of Savings Deposits with the Banking System + Certificates of Deposit issued by Banks + Term Deposits of residents with a contractual maturity of up to and including one year with the Banking System.

NM3 (Broad Money)

M3 is the sum of Currency with the Public, Current Deposits with the Banking System, Savings Deposits with the Banking System, Certificates of Deposits issued by Banks, Term Deposits of residents with the Banking System, Call/Term borrowings from 'Non-depository' financial corporation's by the Banking System, and 'Other' Deposits with RBI.

Components of M3:

- Currency with the Public
- Current Deposits with the Banking System
- Savings Deposits with the Banking System
- Certificates of Deposits issued by Banks
- Term Deposits of residents with a contractual maturity up to and including one year with the Banking System
- 'Other' Deposits with RBI
- Term Deposits of residents with a contractual maturity of over one year with the Banking System

- Call/Term borrowings from 'Non-depository' financial corporation's by the Banking System.

M3=M2+ Term Deposits of residents with a contractual maturity of over one year with the Banking System + Call/Term borrowings from 'Non-depository' financial corporation's by the Banking System.

Significance of M3: M3 captures the complete balance sheet of the banking sector.

Liquidity Aggregates – L1, L2, and L3

In addition to the monetary aggregates, the Working Group had recommended compilation of three liquidity aggregates namely, L1, L2 and L3, which include select items of financial liabilities of non-depository financial corporations such as development financial institutions and non-banking financial companies accepting deposits from the public, apart from post office savings banks. L1 – NM3 + All deposits with the post office savings banks (excluding National Savings Certificates). L2 – L1 + +Term deposits with term lending institutions and refinancing institutions (FIs) + Term borrowing by FIs + Certificates of deposit issued by FIs. L3 – L2 + + Public deposits of non-banking financial companies.

Money Supply: Determinants of Money Supply and High-Powered Money and Money

Multiplier

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 sayings 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 M1, 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 M1 plus time deposits of commercial banks in the supply of money. This wider definition is characterised as M2 in America and M3 in Britain and India. It stresses the store of value function of money or what Friedman says, 'a temporary abode of purchasing power'.

The third definition is the broadest and is associated with Gurley and Shaw. They include in the supply of money, M2 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 M1 is a sure medium of exchange. But M1 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 perfect 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, 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 non-bank financial institutions are not included in the definition of money supply.

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 activity which affects 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 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 RR1 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 SLR has the effect of reducing the money supply with commercial banks for lending purposes, and the lowering of the SLR tends in 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-RRr' D. If deposits amount of 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 80-16 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 who 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 fewer amounts 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 relative to deposits 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.

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.

4. 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 neither may nor 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.

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 or 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 C/-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: 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 higher 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. 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 Hi, the equilibrium money supply is OM. If the money supply is larger than this, say OMy 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 69.1 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… (8) Now the relation between the money supply and high - powered money of equation (7) becomes M = mH …..(9)

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 Money Supply 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 69.2. An increase in the supply of high powered money by DH 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 OM1 at the new equilibrium point E1. Further, Figure 2 reveals the operation of the money multiplier. With the increase in the high-powered money DH, the money supply increases by DM. An increase in high-powered money by Re 1 increases by a multiple of Re 1.

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 in interims 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 through changing the high-powered money or the money multiplier.

Measures of Money Supply in India

One of the most important concepts to understand in economics is that of money. It forms the basis of the entire study of the economy. And one important aspect of money is the supply of money in the economy. Let us learn more about the supply of money and measures of money supply in India.

Money Supply

Let us first understand the meaning of money supply or monetary supply. Simply put, the money supply is the total stock of money that is in circulation in an economy on any specific day. This includes all the notes, coins and demand deposits held by the public on such a day. Such as money demand, money supply is also a stock variable One important point to note is that the stock of money kept with the government, central bank, etc. is not taken into account in money supply. This money is not in actual circulation in the economy and hence does not form a part of the monetary supply. Now there are essentially three main sources of money supply in our economy. They are the producers of the money and are responsible for its distribution in the economy.

These are

1. The government who produces all the coins and the one rupee notes
2. The Reserve Bank of India (RBI) which issues all the paper currency
3. And commercial banks as they create the credit as per the demand deposits

Measures of Money Supply in India

Now we come to the next logical question. How can we measure the amount of money in the economy? It certainly isn't an easy or straightforward task. There is no one way to calculate the money supply in our economy. Instead, the Reserve Bank of India has developed four alternative measures of money supply in India. These four alternative measures of money supply are labelled M1, M2, M3 and M4. The RBI will collect data and calculate and publish figures of all the four measures.

M1 (Narrow Money)

M1 includes all the currency notes being held by the public on any given day. It also includes all the demand deposits with all the banks in the country, both savings as well as current account deposits. It also includes all the other deposits of the banks kept with the RBI. So M1 = CC + DD + Other Deposits.

M2

M2, also narrow money, includes all the inclusions of M1 and additionally also includes the saving deposits of the post office banks. So M2 = M1 + Savings Deposits of Post Office Savings

M3 (Broad Money)

M3 consists of all currency notes held by the public, all demand deposits with the bank, deposits of all the banks with the RBI and the net Time Deposits of all the banks in the country. So M3 = M1 + time deposits of banks.

M4

M4 is the widest measure of money supply that the RBI uses. It includes all the aspects of M3 and also includes the savings of the post office banks of the country. It is the least liquid measure of all of them. M4 = M3 + Post office savings.

Unit-III

Central Banking System

The concept of central bank

A central bank is a public institution that manages the currency of a country or group of countries and controls the money supply – literally, the amount of money in circulation. A central bank is a financial institution given privileged control over the production and distribution of money and credit for a nation or a group of nations. In modern economies, the central bank is usually responsible for the formulation of monetary policy and the regulation of member banks.

The Role of Central Bank in a Developing Economy of a Country

The central bank in a developing economy performs both traditional and non-traditional functions. The principal traditional functions performed by it are the monopoly of note issue, banker to the government, bankers' bank, lender of the last resort, controller of credit and maintaining stable exchange rate. But all these functions are related to the foremost function of helping in the economic development of the country.

Role of Central Bank in Economic Development:

The central bank in a developing country aims at the promotion and maintenance of a rising level of production, employment and real income in the country. The central banks in the majority of underdeveloped countries have been given wide powers to promote the growth of such economies. They, therefore, perform the following functions towards this end.

Creation and Expansion of Financial Institutions:

One of the aims of a central bank in an underdeveloped country is to improve its currency and credit system. More banks and financial institutions are required to be set up to provide larger credit facilities and to divert voluntary savings into productive channels. Financial institutions are localised in big cities in underdeveloped countries and provide credit facilities to estates, plantations, big industrial and commercial houses. In order to remedy this, the central bank should extend branch banking to rural areas to make credit available to peasants, small businessmen and traders. In underdeveloped countries, the commercial banks provide only

short-term loans. Credit facilities in rural areas are mostly non-existent. The only source is the village moneylender who charges exorbitant interest rates.

The hold of the village moneylender in rural areas can be slackened if new institutional arrangements are made by the central bank in providing short-term, medium term and long-term credit at lower interest rates to the cultivators. A network of co-operative credit societies with apex banks financed by the central bank can help solve the problem. Similarly, it can help the establishment of lead banks and through them regional rural banks for providing credit facilities to marginal farmers, landless agricultural workers and other weaker sections. With the vast resources at its command, the central bank can also help in establishing industrial banks and financial corporations in order to finance large and small industries.

Proper Adjustment between Demand for and Supply of Money:

The central bank plays an important role in bringing about a proper adjustment between demand for and supply of money. An imbalance between the two is reflected in the price level. A shortage of money supply will inhibit growth while an excess of it will lead to inflation. As the economy develops, the demand for money is likely to go up due to gradual monetization of the non-monetized sector and the increase in agricultural and industrial production and prices.

The demand for money for transactions and speculative motives will also rise. So the increase in money supply will have to be more than proportionate to the increase in the demand for money in order to avoid inflation. There is, however, the likelihood of increased money supply being used for speculative purposes, thereby inhibiting growth and causing inflation. The central bank controls the uses of money and credit by an appropriate monetary policy. Thus in an underdeveloped economy, the central bank should control the supply of money in such a way that the price level is prevented from rising without affecting investment and production adversely.

A Suitable Interest Rate Policy:

In an underdeveloped country the interest rate structure stands at a very high level. There are also vast disparities between long-term and short-

term interest rates and between interest rates in different sectors of the economy. The existence of high interest rates acts as an obstacle to the growth of both private and public investment, in an underdeveloped economy.

A low interest rate is, therefore, essential for encouraging private investment in agriculture and industry. Since in underdeveloped country businessmen have little savings out of undistributed profits, they have to borrow from the banks or from the capital market for purposes of investment and they would borrow only if the interest rate is low. A low interest rate policy is also essential for encouraging public investment. A low interest rate policy is a cheap money policy. It makes public borrowing cheap, keeps the cost of servicing public debt low and thus helps in financing economic development. In order to discourage the flow of resources into speculative borrowing and investment, the central bank should follow a policy of discriminatory interest rates, charging high rates for non-essential and unproductive loans and low rates for productive loans. But this does not imply that savings are interest-elastic in an underdeveloped economy.

Since the level of income is low in such economies, a high rate of interest is not likely to raise the propensity to save. In the context of economic growth, as the economy develops, a progressive rise in the price level is inevitable. The value of money falls and the propensity to save declines further. Money conditions become tight and there is a tendency for the rate of interest to rise automatically. This would result in inflation. In such a situation any effort to control inflation by raising the rate of interest would be disastrous. A stable price level is, therefore, essential for the success of a low interest rate policy which can be maintained by following a judicious monetary policy by the central bank.

Debt Management:

Debt management is one of the important functions of the central bank in an underdeveloped country. It should aim at proper timing and issuing of government bonds, stabilizing their prices and minimizing the cost of servicing public debt. It is the central bank which undertakes the

selling and buying of government bonds and making timely changes in the structure and composition of public debt. In order to strengthen and stabilize the market for government bonds, the policy of low interest rates is essential. For, a low rate of interest raises the price of government bonds, thereby making them more attractive to the public and giving an impetus to the public borrowing programmes of the government. The maintenance of structure of low interest rates is also called for minimizing the cost of servicing the national debt.

Further, it encourages funding of debt by private firms. However, the success of debt management would depend upon the existence of well-developed money and capital markets in which wide range of securities exist both for short and long periods. It is the central bank which can help in the development of these markets.

Credit Control:

Central Bank should also aim at controlling credit in order to influence the patterns of investment and production in a developing economy. Its main objective is to control inflationary pressures arising in the process of development. This requires the use of both quantitative and qualitative methods of credit control. Open market operations are not successful in controlling inflation in underdeveloped countries because the bill market is small and undeveloped. Commercial banks keep an elastic cash-deposit ratio because the central bank's control over them is not complete. They are also reluctant to invest in government securities due to their relatively low interest rates. Moreover, instead of investing in government securities, they prefer to keep their reserves in liquid form such as gold, foreign exchange and cash. Commercial banks are also not in the habit of rediscounting or borrowing from the central bank. The bank rate policy is also not so effective in controlling credit in LDCs due to:

1. the lack of bills of discount;
2. the narrow size of the bill market;
3. a large non-monetised sector where barter transactions take place;
4. the existence of a large unorganised money market;

5. the existence of indigenous banks which do not discount bills with the central banks; and
6. The habit of commercial banks to keep large cash reserves.

The use of variable reserve ratio as method of credit control is more effective than open market operations and bank rate policy in LDCs. Since the market for securities is very small, open market operations are not successful. But a rise or fall in the reserve ratio by the central bank reduces or increases the cash available with the commercial banks without affecting adversely the prices of securities. Again, the commercial banks keep large cash reserves which cannot be reduced by a raise in the bank rate or sale of securities by the central bank. But raising the cash-reserve ratio reduces liquidity with the banks. However, the use of variable reserve ratio has certain limitations in LDCs. First, the non-banking financial intermediaries do not keep deposits with the central bank so they are not affected by it. Second, banks which do not maintain excess liquidity are not affected than those who maintain it.

The qualitative credit control measures are, however, more effective than the quantitative measures in influencing the allocation of credit, and thereby the pattern of investment. In underdeveloped countries, there is a strong tendency to invest in gold, jewellery, inventories, real estate, etc., instead of in alternative productive channels available in agriculture, mining, plantations and industry. The selective credit controls are more appropriate for controlling and limiting credit facilitates for such unproductive purposes. They are beneficial in controlling speculative activities in food-grains and raw materials. They prove more useful in controlling 'sectional inflations' in the economy.

They curtail the demand for imports by making it obligatory on importers to deposit in advance an amount equal to the value of foreign currency. This has also the effect of reducing the reserves of the banks in so far as their deposits are transferred to the central banks in the process. The selective credit control measures may take the form of changing the margin requirements against certain types of collateral, the regulation of consumer credit and the rationing of credit.

Solving the Balance of Payments Problem:

The central bank should also aim at preventing and solving the balance of payments problem in a developing economy. Such economies face serious balance of payments difficulties to fulfil the targets of development plans. An imbalance is created between imports and exports which continue to widen with development. The central bank manages and controls the foreign exchange of the country and also acts as the technical adviser to the government on foreign exchange policy. It is the function of the central bank to avoid fluctuations in the foreign exchange rates and to maintain stability. It does so through exchange controls and variations in the bank rate. For instance, if the value of the national currency continues to fall, it may raise the bank rate and thus encourage the inflow of foreign currencies.

Conclusion:

Thus the central bank plays an important role in achieving economic growth of a developing country through the various measures discussed above. It should promote economic growth with stability, help in attaining full employment of resources, in overcoming balance of payments disequilibrium, and in stabilising exchange rates.

Promotional Functions of Reserve Bank of India

Various promotional functions performed by the Reserve Bank of India are given below.

1. Promotion of Banking Habit

The Reserve Bank of India helps in mobilizing the savings of the people for investment. It expanded banking system throughout the nation by setting up of various institutions like UTI, IDBI, IRCI, NABARD etc. Thereby it promoted banking habit among the people.

2. Providing Refinance for Exports

The Reserve Bank of India is providing refinance for export promotion. The Export Credit and Guarantee Corporation (ECGC) and Export Import Bank were established initially by the Reserve Bank of India to finance the foreign trade of India. They finance foreign trade in the form of insurance cover, long-term finance and foreign currency credit. However, they are now functioning separately.

3. Providing Credit to Agriculture

The Reserve Bank of India makes institutional arrangements for rural or agricultural finance. For example, the bank has set up special agricultural credit cells. It has promoted regional rural banks with the help of commercial banks. It has also promoted NABARD.

4. Providing Credit to Small Scale Industrial Unit

Commercial banks lend loans to small-scale industrial units as per the directives issued by the Reserve Bank of India time to time. The Reserve Bank of India encourages commercial banks to render guarantee services also to small-scale industrial sector. The Reserve Bank of India considers advances given to small-scale sector as priority sector advances. It also directed commercial banks to open specialized branches to provide adequate financial and technical assistance to small-scale industrial branches.

5. Providing indirect finance to Cooperative Sector

The RBI has directed NABARD to give loans to State Cooperative Banks, which in turn lend loans to cooperative sector. Hence, the Reserve Bank of India provides indirect finance to cooperative sector in India.

6. Exercising Control over Monetary and Banking system of the Country

The Reserve Bank of India is vested with enormous and extensive powers regarding supervision and control over commercial banks, cooperative banks and also non-banking institutions receiving deposits. The Banking Regulation Act prescribes extensive requirements as minimum regarding the paid-up capital, reserves, cash reserves and liquid assets. The operation of the bank, the management, amalgamation, reconstruction and liquidation etc. are thoroughly supervised by the officials of the Reserve Bank of India. Every scheduled bank is required to furnish to the Reserve Bank a weekly statement showing the principal items of its liabilities and assets in India.

7. Making Industrial arrangement for Industrial Finance

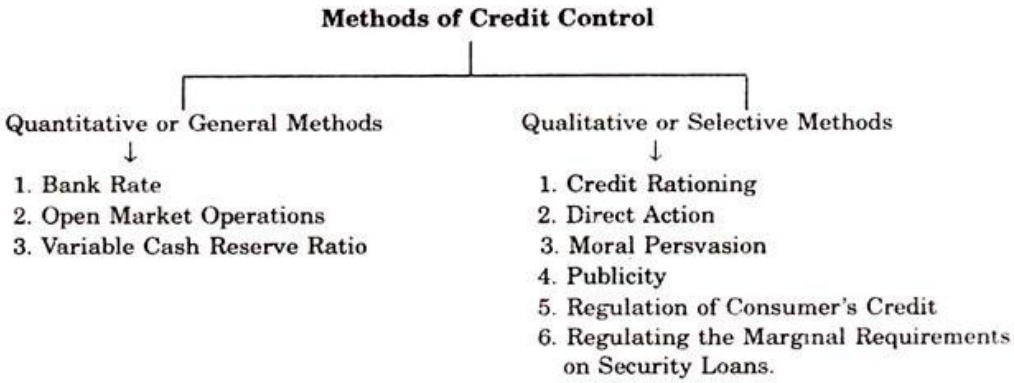
The Reserve Bank of India makes institutional arrangement for industrial finance. For instance, it has brought into existence several development banks such as the Industrial Finance Corporation of India, the

Industrial Development Bank of India, which provide long-term finance to industries.

Methods of Credit Control used by Central Bank

The two categories are:

1. Quantitative or General Methods
2. Qualitative or Selective Methods.



I. Quantitative or General Methods:

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.

For example:

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:

1. In the narrow sense, and
2. 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.

Either variable cash reserve ratio or open market operations:

From the analysis and discussions made above of these two methods of credit, it can be said that the variable cash reserve ratio method is superior to open market operations on the following grounds:

1. Open market operations are time consuming procedure while cash reserves ratio produces immediate effect in the economy.
2. Open market operations can work successfully only where securities market in a country is well organised and well developed.
3. While Cash Reserve Ratio does not require such type of securities market for the successful implementation.
4. Open market operations will be successful where marginal adjustments in cash reserve are required.

But the variable cash reserve ratio method is more effective when the commercial banks happen to have excessive cash reserves with them. 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.

Organizational Structure of the Reserve Bank of India:

The organizational structure of the Central Bank of India, the Reserve Bank, is as follows: The main managing authority of the bank is the Central Board of Directors, which consists of the following 21members–

1. The Governor
2. Four Deputy Governors
3. Fourteen Directors
4. Two Government Officials

Among these, the Governor and the Deputy Governors are appointed by the Central Government for a maximum period of five years, and the fourteen Directors, four of which are nominated from each of the four Local Boards, in accordance with the RBI Act, for a period of maximum four years, but can be re-elected.

The Deputy Governors are responsible for specific operations of the bank.

The RBI also consists of Local Boards responsible for region specific control and monitoring. These are divided into four parts – Northern, Southern, Eastern and Western with headquarters in New Delhi, Chennai, Kolkata and Mumbai respectively. These Local Boards consists of five members with a Chairman.

Central Banking Functions of RBI Regulation of Credit:

Regulation of credit implies control over the credit policy of the commercial banks. Being the Central Bank, the Reserve Bank controls the creation of credit by the Commercial Banks. According to the Reserve Bank of India Act, this bank can adopt several measures to control credit creation, viz, changing the Bank Rate, Open market operations, and change in the Reserve Requirement of the Commercial Banks etc. Reserve Bank also controls the loan policy, interest policy and investment policy of the Commercial banks.

3. Bank of Banks:

Being the Central Bank, Reserve Bank of India is the bank of all the Banks in the country. In this context the Reserve Bank acts as a guide of the Commercial Banks, besides controlling and regulating their affairs. During times of emergency, it is lender of the last resort for the Commercial Banks. That is, it gives loans to the Commercial Banks during times of emergency. Banking Companies Act, (1949), has conferred various rights on the Reserve Bank, such as to issue Licenses to the banks regulate the number and branches of commercial banks, examine the plans and accord sanctions for the merger of banks, obtain reports from the banks, examine the credit policy of the banks and give advice and suggestions.

4. Banker of the Government:

Reserve Bank is the banker of the Central and State Government. All banking functions of the Government are handled by the Reserve Bank of India. Thus,

1. The Reserve Bank keep cash balances of the Central and State Governments and makes payment out of these balances on the advice

of the Government. No interest is paid to the Government on these balances.

2. The bank arranges public loans for the Governments.
3. It sells and purchases 5 Government securities.
4. It also sells Treasury Bills on behalf of the Government by issuing Tenders.
5. The bank also gives loans to the Government. It is called Ways and Means Advances. These loans are returned within 90 days.
6. On the basis of experience of the monetary system, the bank advices the Government on the monetary and economic policies.
7. Reserve Bank also has the right to function on behalf of foreign Governments.
8. The Bank functions for the success of monetary and economic policies of the Government.

5. Regulation of Foreign Exchange:

Being the Central Bank of the Country, Reserve Bank of India also regulates exchange rate of rupee in terms of foreign currencies. It tries to maintain stability of exchange rate. For this, the Reserve Bank deals in foreign exchange only at fixed rates right from the beginning. Earlier, entire business of foreign exchange was done through the medium of sterling. But after India became member of the International Monetary Fund in 1947, Sterling System was given up in favour of the IMF system of exchange. Reserve Bank deals in the currencies of those countries only which are members of IMF.

6. Other Functions:

Besides the above stated specific functions, the Reserve Bank of India performs the following other functions:

1. Export Assistance: Reserve Bank gives loans to the Export industries. These loans are given directly as well as indirectly by refinancing the loans given by other banks.
2. Clearing House Functions: Being Central Bank of the country, the Reserve Bank also functions as Clearing House. Inter-banking obligations are conveniently settled through this house.

3. Change of Currency: The bank changes big notes into small ones and small notes into coins.
4. Transfer of Currency: The bank also facilitates the transfer of currency. It also issues Demand Hundies on its branches.
5. Publication of Statistics and Other Information: Reserve Bank publishes data on various parameters, such as money, credit, finance, agricultural and industrial output. Reports on these data are also periodically published.

Training in Banking: The Reserve Bank has opened various Training Centres to produce talented bankers:

(a) Bankers Training College
(b) College of Agricultural Banking, Pune
(c) Reserve Bank Staff College, Chennai
(d) National Institute of Bank Management
(e) Zonal Training Centres.

7. Supervisory Functions:

The Reserve Bank performs certain non- monetary functions of the nature of supervision of banks and promotion of efficient banking in India. The Reserve Bank has been given wide powers of supervision and control over commercial, co-operative and regional banks. The various aspects of supervisory functions are as follows:

1. No bank can be established in India without obtaining a licence from Reserve Bank.
2. The Reserve bank supervises branch expansion, liquidity of the assets, management, amalgamation and liquidation of the banking institutions in India.
3. An inspection directorate has been established in 1995 to make vigorous inspection of the working of the banking institutions.
4. The nationalised banks and regional rural banks are directly controlled and supervised by the Reserve Bank.

Objectives of SEBI:

The overall objectives of SEBI are to protect the interest of investors and to promote the development of stock exchange and to regulate the activities of stock market.

The objectives of SEBI are:

1. To regulate the activities of stock exchange.
2. To protect the rights of investors and ensuring safety to their investment.
3. To prevent fraudulent and malpractices by having balance between self regulation of business and its statutory regulations.
4. To regulate and develop a code of conduct for intermediaries such as brokers, underwriters, etc.

Functions of SEBI:

The SEBI performs functions to meet its objectives. To meet three objectives SEBI has three important functions.

These are:

i. Protective functions

ii. Developmental functions

iii. Regulatory functions.

1. Protective Functions:

These functions are performed by SEBI to protect the interest of investor and provide safety of investment. As protective functions SEBI performs following functions:

I. It Checks Price Rigging: Price rigging refers to manipulating the prices of securities with the main objective of inflating or depressing the market price of securities. SEBI prohibits such practice because this can defraud and cheat the investors.

II. It Prohibits Insider trading: Insider is any person connected with the company such as directors, promoters etc. These insiders have sensitive information which affects the prices of the securities. This information is not available to people at large but the insiders get this privileged information by working inside the company and if they use this information to make profit, then it is known as insider trading,

e.g., the directors of a company may know that company will issue Bonus shares to its shareholders at the end of year and they purchase shares from market to make profit with bonus issue. This is known as insider trading. SEBI keeps a strict check when insiders are buying securities of the company and takes strict action on insider trading.

III. SEBI prohibits fraudulent and Unfair Trade Practices: SEBI does not allow the companies to make misleading statements which are likely to induce the sale or purchase of securities by any other person.

IV. SEBI undertakes steps to educate investors so that they are able to evaluate the securities of various companies and select the most profitable securities.

SEBI promotes fair practices and code of conduct in security market by taking following steps:

a. SEBI has issued guidelines to protect the interest of debenture-holders wherein companies cannot change terms in midterm.

b. SEBI is empowered to investigate cases of insider trading and has provisions for stiff fine and imprisonment.

c. SEBI has stopped the practice of making preferential allotment of shares unrelated to market prices.

2. Developmental Functions:

These functions are performed by the SEBI to promote and develop activities in stock exchange and increase the business in stock exchange. Under developmental categories following functions are performed by SEBI:

I. SEBI promotes training of intermediaries of the securities market.

II. SEBI tries to promote activities of stock exchange by adopting flexible and adoptable approach in following way:

a. SEBI has permitted internet trading through registered stock brokers.

b. SEBI has made underwriting optional to reduce the cost of issue.

c. Even initial public offer of primary market is permitted through stock exchange.

3. Regulatory Functions:

These functions are performed by SEBI to regulate the business in stock exchange. To regulate the activities of stock exchange following functions are performed:

I. SEBI has framed rules and regulations and a code of conduct to regulate the intermediaries such as merchant bankers, brokers, underwriters, etc.
II. These intermediaries have been brought under the regulatory purview and private placement has been made more restrictive.
III. SEBI registers and regulates the working of stock brokers, sub-brokers, share transfer agents, trustees, merchant bankers and all those who are associated with stock exchange in any manner.
IV. SEBI registers and regulates the working of mutual funds etc.
V. SEBI regulates takeover of the companies.
VI. SEBI conducts inquiries and audit of stock exchanges.

Powers of SEBI

1. To approve by–laws of stock exchanges.
2. To require the stock exchange to amend their by–laws.
3. To inspect the books of accounts and call for periodical returns from recognized stock exchanges.
4. To inspect the books of accounts of financial intermediaries.
5. To compel certain companies to list their shares in one or more stock exchanges.
6. Registration of brokers

Efforts of RBI toward Promoting Agricultural Finance

The Reserve Bank of India in a developing economy like ours may be regarded as an engine of growth. It not only regulates bank finance, but deliberately promotes development finance. It has made special efforts in catering to the growing financial needs of agriculture, industry and export sectors of the country. Agriculture is the king-pin of India's rural economy. Thus, rural credit—agricultural finance—is the prerequisite of agricultural growth and development. Since the inception of planning in our country, the

Reserve Bank of India has been paying specific attention to promoting rural/agricultural finance.

Agricultural Credit Department:

In fact, the Reserve Bank of India Act, 1934 did assign to the Reserve Bank the responsibility of developing an institutional credit system for the agricultural sector in the country. As such, the Agricultural Credit Department of the Bank was constituted along with the establishment of the Reserve Bank in April 1935, whose main task was to develop co-operative credit movement in agricultural finance.

The main functions of the Bank's Agricultural Credit Department were spelt out as under:

a. To maintain expert staff to study all questions of agricultural credit, who shall be available for consultation by the Central Government, State Governments, State Co-operative Banks and other banking organisations;
b. To co-ordinate the operations of the bank in the disbursal of agricultural credit and its relations with state co-operative banks and any other banks or organisations engaged in the business of agricultural credit;
c. To finance the movement of crops and other agricultural operations through state co-operative banks and other suitable agencies of rural credit.

The Agricultural Credit Department of the bank, however, primarily confines itself to research rather than financing of agriculture. Though there was a provision in the Act empowering the Reserve Bank to provide finance for agriculture through state co-operative banks, no significant progress was made by the bank in this direction till the mid-fifties. In 1945-46, the bank provided accommodation to cooperative banks only about Rs. 1 lakh. It, however, increased to Rs. 5.37 crores in 1950-51.

All-India Rural Credit Survey Committee:

The activities of the bank in the sphere of rural finance showed a marked expansion and new vista with the appointment of the All-India Rural Credit Survey Committee in 1951 and the Bank's acceptance of its major

recommendations of its Report (1954). The Committee observed that the non-institutional sources accounted for nearly 93 per cent of the total agricultural credit in 1951-52. It further remarked that "the agricultural credit fell short of the right quantity, was not of the right type, did not serve the right purpose and often failed to go to the right people."

The Committee also observed that the performance of the co-operatives in the realm of agricultural finance was not only insignificant (accounting for just 3 per cent in the total agricultural credit), it was also deficient in more than one way. Nonetheless, the co-operative agency in rural finance is supposed to be the least unsatisfactory channel of credit to cater to the needs of the cultivators. The Committee thus commented that "Co-operation has failed, but co-operation must succeed." To strengthen the co-operative credit movement in the rural sector, the Committee recommended the Integrated Scheme of Rural Credit, with the following main features:

(a) State Partnership:

The scheme envisages State partnership through contribution to the share capital of co-operative credit institutions.

(b) Co-ordination:

The scheme implies full coordination between credit and other economic activities — marketing and processing, in particular.

(c) Administration:

The scheme insists on administration through an adequately trained and efficient staff, responsive to the needs of the rural population.

(d) Production-oriented Loan Policy:

The scheme envisages a crop loan system for granting short-term co-operative credit to the farmers. It, thus, forms a production- oriented loan policy. Under the Integrated Scheme of Rural Credit, the Reserve Bank had to play a crucial role in the following respects:

i. Development of co-operative credit,
ii. Expansion of co-operative economic activity: processing and marketing,
iii. Training of co-operative staff.

The Reserve Bank was further directed to work as an active collaborator in drawing up schemes of development of co-operative credit organisations with the Government of India and the State Governments.

State Bank of India:

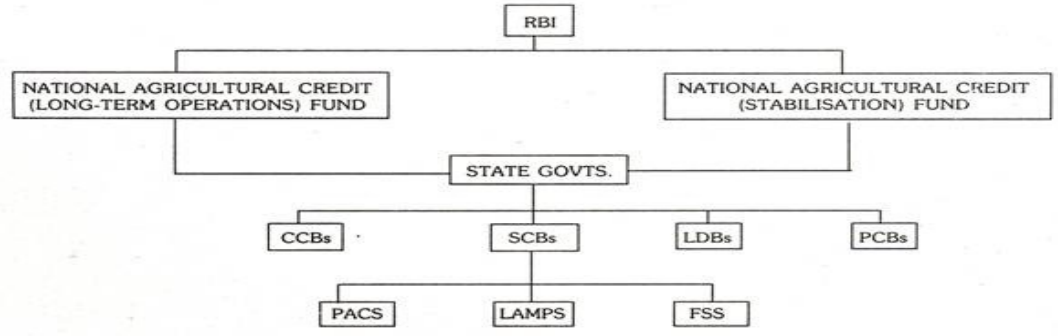
The Reserve Bank of India became the major shareholder of the State Bank of India (SBI) when it was constituted in 1955. The SBI played a crucial role as a rural-oriented commercial bank in providing financial assistance to the co-operative sector in rural areas.

Agricultural Credit Funds:

The Reserve Bank of India then established the National Agricultural Credit (Long-Term Operations) Fund in February 1956, to enable the Bank to provide long-term loans and advances to Land Development Banks and the State Governments for participating in the share capital of co-operative banks and credit societies. Later on, it was renamed as the National Rural Credit (Long-term Operations) Fund, as its finance extended besides agriculture to others in rural areas. Similarly, another Fund called the National Agricultural (Stabilisation) Fund was constituted by the bank in June 1956, for the purpose of granting medium-term loans to State Co-operative Banks (SCBs) when, on account of drought, famines, etc., they are not in a position to repay their short-term debts to the bank.

Another fund, named the National Agricultural Credit (Relief and Guarantee) Fund, was also created by the bank for the purpose of giving grants to co-operative credit institutions through the state governments to enable them to write off their irrecoverable arrears on account of severe famines. Chart 1 below depicts the flow of assistance of the first two major funds of the Reserve Bank.

Chart 1



All-India Rural Credit Review Committee:

In 1966, the Reserve Bank of India appointed a committee, called the All-India Rural Credit Review Committee, to review the developments that had taken place in the field of rural credit since 1954. The committee, in its Report (1969), suggested that extensive and intensive efforts are needed to ease the problem of agricultural credit; hence, besides co-operatives, commercial banks, especially the nationalised banks, should also take a keen interest in the provision of rural finance. The committee also recommended the enlargement of the Reserve Bank's promotional role in building up of the co-operative credit structure and developing a strong co-operative movement in the country.

Agricultural Refinance and Development Corporation:

On July 1, 1963, the Reserve Bank of India setup an institution called the Agricultural Refinance Corporation (ARC), to work as a refinancing agency in providing medium-term and long-term agricultural credit. It was meant to provide refinancing facilities to the SCBs, CLDBs, and scheduled commercial banks. In 1975, this institution was renamed as Agricultural Refinance and Development Corporation (ARDC) with a view to emphasise its developmental and promotional role, besides refinancing activities.

The main aims and objectives of the ARDC have been specified as under:

1. Optimum Utilisation of Resources:

To support the national policies for increasing agricultural output, productivity and employment by efficient utilisation of natural resources such as land and water.

2. Ecological Balance:

To ensure that the ecological balance in the environment is maintained.

3. IRDP:

To support the integrated rural development programme (IRDP) and promote the growth of secondary and tertiary sectors in rural areas.

4. Post-Harvest Technology:

To promote postharvest technology by laying greater stress on marketing and a strong infrastructure.

5. Distributive Justice:

To fit well together justice into growth by providing increased assistance to small farmers and weaker sections.

6. Regional Balance:

To reduce regional imbalances by accelerating the growth rate in backward regions.

7. Institution Building:

To secure and encourage institution building.

8. Technological Development:

To foster appropriate technological development for securing optimum benefits from investments and acquisition of necessary knowhow by farmers and other rural producers.

9. Training:

To strengthen the professional capabilities and competence of the staff in the participating banks and implementing agencies by organising and coordinating training programmes.

10. Research:

To promote action-oriented research for agricultural and rural development. The Corporation, thus, provided refinance covering various activities for promoting the development of agriculture. It has been observed that the Corporation implemented its lending policy, keeping in tune with the national priority order, for granting a major portion of refinance in favour of minor irrigation schemes, followed by farm mechanisation, storage and market yards, plantation and horticulture, IRDP, land development, etc. The ARDC also provided detailed guidelines for project formulation. Further, it pursued the implementation of rehabilitation programmes drawn for PLDBs and SLDBs in certain states.

The Corporation disbursed an increased amount of refinance for the schemes in the less developed areas. The Corporation also made special efforts in solving the problems of small and marginal farmers by assisting

IRDP, Small Farmers' Development Agency, etc. When the NABARD came into existence in July 1982, it has taken over the entire undertaking of the ARDC as well as the Reserve Bank's refinancing functions in relation to the SCBs and RRBs.

Agricultural Credit Board:

Following the recommendation of the All-India Rural Credit Review Committee. The Reserve Bank of India constituted the Agricultural Credit Board in February 1970. The Board is regarded as a high-powered body for the formulation and review of policies in the field of rural finance. It has also to ensure close co-ordination between the activities of the co-operative credit institutions and the policies and operations of the RBI. The Board is empowered to grant refinance facilities to co-operative and commercial banks for agricultural purposes and to co-operative banks for non-agricultural purposes as well. With the establishment of the NABARD, however, the Board has ceased to function.

Financing Functions of the RBI:

It should be noted that the RBI, statutorily, is not allowed to give direct finance to the agriculturists. It, however, provides indirect assistance to the agricultural sector through the co-operative sector, since it maintains a direct relationship with the SCBs, the apex tier of the credit system.

Through the medium of co-operative credit system, the Reserve Bank, thus, provides three types of loans to the agriculturists, as under:

i. Short-term credit,
ii. Medium-term credit, and
iii. Long-term credit.

Short-term and medium-term loans to the agricultural sector are made available through the state co-operative banks. Long-term credit was provided through the State Land Development Banks by purchasing their debentures by the RBI in the past. Now, the Reserve Bank acts only as a coordinator for mobilising institutional support to the ordinary debentures of the LDBs. Moreover, the bank provides short-term working capital finance to cottage and small scale industries in the co-operative sector through the SCBs. The Reserve Bank of India purchases or rediscounts the bills of

exchange of SCBs, thereby providing refinance facilities. The Bank has also made provision of long-term loans to State Governments through the National Agricultural Credit Fund.

Commercial Banks and RRBs:

In the post-nationalisation era, the RBI has initiated several measures to induce commercial banks to increase their share in agricultural financing. The RBI introduced the Small Loans Guarantee Scheme in 1971 for providing guarantee to commercial banks (including the RRBs) against the risk of lending to farmers and agriculturists, among others. Regional Rural Banks are specially confined to rural finance. The RBI Act included them in the Second Schedule and as such, they are entitled to receive refinance assistance from the Reserve Bank. To improve their resource position, the RBI has been providing them with refinance facility up to 50 per cent of their eligible loans and advances at a concessional rate of interest, i.e., 3 per cent lower than the operating bank rate.

In June 1977, the RBI appointed a committee to evaluate the performance of the RRBs regarding fulfillment of their objectives as well as to indicate their precise role in the rural credit structure. The Committee in its Report (1978) made a number of recommendations regarding modifications and reorganisation of the RRBs. It was also suggested that RRBs should be established in areas where the cooperative organisation was not able to adequately serve the credit needs. Following a recommendation of the Committee, the RBI constituted a Steering Committee, in October 1978, which was to look into the matter of establishment, management, loaning policies and other aspects of the RRBs. The Committee had also to identify districts for setting up the RRBs.

Multi-Agency Approach in Agricultural Financing:

In serving the credit needs of the agricultural sector, the RBI has adopted the policy of multi-agency approach. Under this approach, besides co-operatives, other agencies like commercial banks. RRBs and LDBs have been recognised as supporting sources of institutional credit in rural areas. A major weakness of this approach has been that the farmers are required to contact a number of different agencies to meet their various types of

credit needs. For instance, to obtain short-term credit, the farmers have to approach the PACs, commercial banks or the RRBs. For their long term needs, they have to contact the LDBs. Again, there are separate agencies, providing agricultural inputs, farm equipment, marketing facilities etc.

The Reserve Bank appointed the Working Group on Multi-Agency Approach in Agricultural Financing. In its Report (1978), the group stressed that co-operatives should play a dominant role in providing credit for agriculture and allied activities in the rural sector of the economy. This is because only the cooperative possess such organisational potential of dealing with millions of farmers scattered throughout the country. Commercial banks and the RRBs have to play only a supplementary role in the area of rural finance.

Advances of the RBI and NABARD:

In 1970-71, the RBI's short term loan outstanding to SCBs for agricultural operations amounted to Rs. 265.38 crores. This increased to Rs. 447.56 crores in 1980- 81. On this account, in 1986-87, the NABARD's (including RBI's) advances for the purpose of general banking business amounted to Rs. 924.55 crores. In 1970-71, the RBI provided, from its National Rural Credit (Long-term Operations) amounted to Rs. 265.38 crores. This increased to Rs. 447.56 crores in 1980-81. On this account, in 1986-87, the NABARD's (including RBI's) advances for the purpose of general banking business amounted to Rs. 924.55 crores.

In 1970-71, the RBI provided, from its National Rural Credit (Long-term Operations) Fund, medium-term loans to SCBs amounting to Rs. 19.48 crores. This increased to Rs. 34.09 crores in 1980-81. In 1986-87, on this account, the NABARD's (including RBI's) advances for the purpose of general banking business amounted to Rs. 32.26 crores. In 1970-71, the RBI provided long-term loans amounting to Rs. 41.93 crores to state governments for contribution to the share capital of co-operative credit societies. This increased to Rs. 127.54 crores in 1980-81. In 1986- 87, on this account, the NABARD (including RBI's advances for the purposes of general banking business) provided Rs. 95.16 crores.

In 1970-71, the RBI from its National Rural Credit (Long-term Operations) Fund invested in rural debentures of LDBs an amount of Rs. 9.59 crores. In 1980-81, however, it declined to Rs. 5.50 crores. In 1986-87, the NABARD invested just 11 lakhs in rural debentures of LDBs.

Concluding Remarks:

The RBI has played a unique role in the development of institutional finance for the agricultural sector in our country. It has seriously worked for strengthening the co-operative credit structure in this regard. It has also taken steps for the rehabilitation of the weaker cooperatives. In short, the RBI's policies and actions, on the whole, remained pragmatic and rational in the appropriate development of agricultural finance during the course of the planning era.

Efforts of RBI towards Promoting Industrial Finance

Rapid industrialisation is the key to accelerating economic growth and development. Pre-requisites of industrial development are five M's: Men, Materials, Machines, Management and Money. Of these money, is the primary essential. Money in industry comes from industrial finance. Rapid industrial development, thus, necessitates an adequate supply of short-term and long-term finance for the purposes of industry's fixed and working capital.

The industrial sector comprising large and medium scale industries is usually urban-oriented. It relies on institutional sources of finance. It resorts to the money market as well as the capital market to secure the required financial assistance. In the Indian economy, small scale industries also have a strategic role to play. Small scale industry is confined to urban, semi-urban as well as rural areas. Small and large industries have their typical borrowing needs—short-term as well as long-term credit. Commercial banks have been providing short-term credit to the industrial sector; but they did not favour long-term industrial finance. In the pre-independence era, the capital market was also underdeveloped in the country.

This, inadequacy of the supply of industrial finance was inevitably felt with its hampering effect. After independence and during the planning era,

therefore, the Reserve Bank of India assumed the major responsibility of easing the problem of industrial finance.

It is gratifying to note that the Reserve Bank has played a significantly active role in the development of institutional agencies for providing industrial finance in the country. The Reserve Bank of India made commendable efforts for broadening the domestic capital market for providing the medium and long-term finance to the industrial sector. In this regard, it took the initiative in establishing statutory corporations at the all India and regional levels to function as specialised financial agencies purveying term-lending. The Reserve Bank subscribed to a considerable part of their share capital in setting up these special term-lending institutions. Further, the Bank also extends borrowing and refinances facilities to some of these special financial institutions with a view to augment their resource position so that they can smoothly function on a wider scale.

Term-lending Institutions:

The following term-lending institutions have been started with the Reserve Bank's initiative and support:

The Industrial Finance Corporation of India (IFCI), 1948, 20.7 per cent of its total share capital is owned by the RBI. The bank also subscribed to the bonds issued by the IFCI. It has also agreed to forego the dividends accrued on its shares held by it. The IFCI provides medium and long-term credit to public limited companies and co-operative enterprises. In 1971, the RBI provided long-term finance to the IFCI amounting to Rs. 2.2 crores. Its medium-term finance to the IFCI amounted to Rs. 3 crores in 1984.

The State Financial Corporation's (SFCs), 1951- 52. There are 18 such SFCs. The RBI provided technical assistance in organising them and subscribed to 17.5 per cent of their total share capital. The RBI also advises them regarding the investment of their funds. The bank also subscribes to their bonds. It also provides them banking and rediscounting facilities. It also inspects their functioning. In this way, an effective relation is maintained by the RBI with the SFCs.

The Industrial Development Bank of India (IDBI) 1964. The IDBI was started as a wholly-owned subsidiary of the RBI. It is regarded as an apex

institution to coordinate and supplement the operations of other term lending institutions. It also provides direct finance to the industrial concerns, both in public and private sectors. Besides, the IDBI functions as a developmental agency for planning, promoting and developing industries to fill the gaps in the industrial structure of the country. From February 16, 1976, however, the IDBI was delinked from the RBI and given full autonomy in its organisation and operations. In 1971, the RBI provided long-term finance to the IDBI amounting to Rs. 29.8 crores, which increased to Rs. 2,885 crores in 1987. It also gave short-term finance to the tune of Rs. 87.5 crores to the IDBI in 1987.

The Unit Trust of India (UTI) 1964. The RBI played an active role in setting up the Unit Trust of India and subscribed to 50 per cent of its initial capital of Rs. 5 crores. The Bank was also closely associated with the operations of the UTI. It has framed general regulations for the conduct of the affairs of the UTI. Since 1976, however, the shareholding and supervision of the Trust have been transferred from the RBI to the IDBI. The UTI is, however, entitled to borrow loans and advances from the RBI.

Industrial Credit and Investment Corporation of India Ltd. (ICICI), 1955. Though the RBI did not take any initiative in starting this private sector term- lending institution, since May 1980, it has become eligible to borrow loans and advances from the RBI, as per Government Notification under sub-section (4BB) of Section 17 of the Reserve Bank of India Act. In 1987, the ICICI borrowed short-term loans of Rs. 15 crores from the RBI. Refinance Corporation for Industry Ltd. (RCI), 1958. It was set up by the RBI in collaboration with leading commercial banks and the LIC. It provided refinance facilities to the member banks to extend medium-term loans to medium-sized industrial concerns in a private sector. The Governor of the RBI was the Chairman of the Board of Directors of the RCI. The Corporation was, however, taken over to the IDBI in September 1964.

Industrial Reconstruction Corporation of India Ltd. (IRCI), 1971. The RBI provided financial assistance to the Corporation by virtue of the Central Government's Notification under Section 17 (4BB) of the Reserve Bank of India Act.

Industrial Credit Department:

The Reserve Bank of India had established the Industrial Finance (or Credit) Department in 1957. Its main functions were to administer the Credit Guarantee Scheme for small scale industries. With the cancellation of the Credit Guarantee Scheme and emergence of the Deposit Insurance and Credit Guarantee Corporation, the Department has ceased to function since 1981.

Credit Guarantee Schemes:

The R8f has actively participated in implementing a number of Credit Guarantee Schemes devised by the Government of India.

1. Credit Guarantee Scheme for Small Scale Industries:

In order to encourage bank lending to the small industries, the Government of India introduced a Credit Guarantee Scheme in July 1960, which has been administered by the RBI. Under the Scheme, losses against advances made by the banks and other credit institutions to small scale industries have been protected. The scheme ceased to operate after 1981.

2. Credit Guarantee Corporation of India Ltd:

This was promoted by the RBI in 1971 to provide a wide-ranging system of guarantees for loans granted by the credit institutions to small and needy borrowers. It was taken over by the Deposit Insurance Corporation in July 1978.

3. The Small Loans (Small Scale Industries) Guarantee Scheme:

The scheme was introduced in 1981 in succession to the Credit Guarantee Scheme. The RBI administered the Scheme as an agent of the Central Government.

4. Other Guarantee Schemes:

A scheme called the Small Loans (Financial Corporation) Guarantee Scheme was introduced in 1971 to provide guarantees to a substantial extent in respect of small loans to borrowers in the priority and neglected sectors. Another scheme called the Small Loans (Service Co-operative Societies) Guarantee Scheme was introduced in 1971 to provide guarantees to a substantial extent in respect of credit facilities granted to certain co-

operative societies which may be assisting workers, artisans and other self-employed persons engaged in industrial activities.

Credit Authorisation Scheme:

Since November 1965, the RBI has been implementing a Credit Authorisation Scheme (CAS) as an effective instrument of credit regulation in the industrial sector. The CAS enforces financial discipline on the part of large industrial borrowers. Under the scheme, the commercial banks have to obtain the Reserve Bank's prior authorisation for sanctioning any fresh working capital limit of Rs. 3 crores from July 1982 (prior to this, the limit was Rs. 1 crore) to private sector companies. The cut-off limit in the case of medium and long-term loans is fixed at Rs. 25 lakhs for the private sector companies and Rs. 1 crore for the public sector companies. Since 1974, the provisions of the CAS have been extended to the co-operative banks as well.

Concluding Remarks:

The RBI has done its job quite satisfactorily in catering to the needs of industrial finance in the country. In recent years, especially during the Seventh Plan period, due to the liberalisation of policy, industrial expansion has emerged. With the growing industries in new directions and in new dimensions, the demand for industrial credit is likely to intensify in the near future. The RBI has, therefore, to remain alert in dealing with the changing situation. The Bank will have to make extra efforts and also take some innovative steps to extend the dimensions of industrial finance and meet the growing requirements of the emerging and expanding industries in the coming era of electronic revolution and computers.

Bill Market in India:

Bill Market refers to the market for short-term bills generally of three months maturity. A bill is a promise to pay a specified amount by the borrower (drawer) to the creditor (drawee). Bills are of three types- (a) bills of exchange or commercial bills used to finance trade; (b) finance bills or promissory notes; and (c) treasury bills used to meet temporary financial needs to the government. These bills may be bought and sold in the discount market which consists of commercial banks, discount houses and other institutions.

The bill market plays an important role in the banking and monetary system of the country because of the following reasons:

a. It helps to meet the short-term financial requirements of individuals, companies and the government.
b. The commercial banks which have surplus funds can invest them profitably in these bills,
c. The commercial bank can dispose of these bills easily or can get them rediscounted by the Reserve Bank of India whenever they require cash. Keeping in view the usefulness of the bills as instruments of credit to business and banks, their self-liquidating nature and easier regulation of banks' bill finance by the central bank, the Reserve Bank of India has been making efforts to develop a bill market in the country.

Types of Bill Market Scheme:

I. Old Bill Market Scheme:

The bill market scheme was introduced by the Reserve Bank of India in January 1952. Under this scheme, the Reserve Bank undertook to advance loans to commercial banks against their demand promissory notes supported by the security of usance bills of their constituents or customers. Before 1952, the practice was that the banks could secure additional cash from the Reserve Bank only by selling government securities to it.

But, now, according to the bill market scheme, a bank can grant loans to its customers against their promissory notes and can further use the same promissory notes to borrow from the Reserve Bank. All that the bank is required is to convert these promissory notes into usance promissory notes maturing within 90 days. Thus the bill market scheme aimed at widening the loan window of the Reserve Bank for the banks by allowing them to borrow even against their ordinary commercial credit after its conversion into eligible bills. Initially, the bill market scheme was introduced on an experimental basis. It was restricted (a) to the scheduled banks with deposits of Rs. 10 crore and above- (b) for the loans with the minimum limit of Rs. 10 lakh; and (c) against the individual bills, the minimum value of each should be one lakh rupees.

Later on the scope of the scheme was broadened from time to time- (a) by making more banks eligible to borrow under the scheme; (b) by reducing the minimum eligibility value for bills- (c) by reducing the minimum limit of advances; and (d) by extending the scheme to export bills with the minimum usance of 180 days. Soon the bill market scheme became popular. The loans granted under the scheme increased from Rs. 29 crore in 1951-52 to Rs. 228 crore in 1955-56 and to Rs. 1354 crore in 1968-69.

The bill market scheme introduced in 1952 was in fact a pseudo bill market scheme. Its objective was not be develop a genuine bill market, but to provide extended financial accommodation to banks by the Reserve Bank. The scheme was not based upon the genuine trade bills, but on the conversion of loans and advances of the banks into usance bills.

The genuine bill finance imposes a discipline of making payments when due and involves the credit transactions supported with genuine trade transactions. The bill market scheme, on the contrary, evolved the cash credit system of bank lending which the borrowers of the bank found much more convenient elastic and to their liking ; the discipline of the bill finance was absent in such a system. The Dehajia Committee (1968) report brought out the abuses of cash system and suggested the use of bill financing for the supervision of the funds lent by the commercial banks.

II. New Bill Market Scheme:

Dissatisfied with the old bill market scheme, in February 1970, the Reserve Bank of India constituted a Study Group under the chairmanship of Shri Narasimhan to go into the question of enlarging the use of bills of exchange as an instrument of credit and the creation of genuine bill market in India. On the recommendations of the report of the study group, the Reserve Bank introduced the New Bill Market Scheme in November 1970 under Section 17 (2) of the Reserve Bank of India Act.

The main features of the New Bill Market Scheme are:

a. All licensed scheduled commercial banks including the public sector banks will be eligible to offer bills of exchange to the Reserve Bank for rediscounting.

b. The bills covered under the scheme must be genuine trade bills relating to the sale or dispatch of goods.
c. The Reserve Bank rediscounts these bills. That is why the scheme is also called 'Bills Rediscounting Scheme'. The rediscounting facility should be available at the Reserve Bank's offices at Bombay, Calcutta, Madras and New Delhi. To avoid rediscounting of large number of small bills, such bills should be given in bunches.
d. The bill should be drawn on and accepted by the purchaser's bank. If the purchaser's bank is not a licensed scheduled bank, the bill should in addition bear the signatures of a licensed scheduled bank.
e. The bills should have maximum usance of 90 days.
f. The bills should bear at least two good signatures.
g. The scheme does not cover the bills of exchange relating to the sale of goods to the government departments and quasi-government bodies as well as to statutory corporations to the sale of such commodities which are indicated by the Reserve Bank from time to time.
h. According to the modification of the scheme in 1971, the bills of exchange relating to the sale of goods to government departments and quasi government bodies as well as to statutory corporations have also been covered by the scheme.
i. With effect from April 1972, the bills of exchange drawn and accepted by the Industrial Credit and Investment Corporation of India (ICICI) were also made eligible for discount under the scheme.

Advantages of Developed Bill Market:

A developed bill market is useful to the borrowers, creditors and to financial and monetary system as a whole. The bill market scheme will go a long way to develop the bill market in the country.

The following are various advantages of developed bill markets:

a. Bill finance is better than cash credit. Bills are self-liquidating and the date of repayment of a bank's loans through discounting or rediscounting is certain.
b. Bills provide greater liquidity to their holders because they can be shifted to others in the market in case of need for cash.

c. A developed bill market is also useful to the banks is case of emergency. In the absence of such a market, the banks in need of cash have to depend either on call money market or on the Reserve Bank's loan window.
d. The commercial bill rate is much higher than the treasury bill rate. Thus, the commercial banks and other financial institutions with short-term surplus funds find in bills an attractive source of both liquidity as well as profit.
e. A development bill market is also useful for the borrowers. The bills are time-bound, can be sold in the market and carry the additional security in the form of acceptor's signature. Therefore, for the borrowers, the cost of bill finance is lower than that of cash credit.
f. A developed bill market makes the monetary system of the country more elastic. Whenever the economy requires more cash, the banks can get the bills rediscounted from the Reserve Bank and thus can increase the money supply.
g. Development of the bill market will also make the monetary control measures, as adopted by the Reserve Bank, more effective. As pointed out by the Narasimhan Study Group, "the evolution of the bill market will also make the Bank Rate variation by the Reserve Bank a more effective weapon of monetary control as the impact of any such changes could be transmitted through this sensitive market to the rest of the banking system."

Defects of Bill Market Scheme:

The bill market scheme is a right step in the right direction. Over the years, the functioning of the scheme has been quite encouraging. The outstanding level of bills rediscounted under the scheme increased considerably from Rs. 10 crore at the end of June 1971 to Rs. 110 crore at the end of March 1980.

But, the scheme has been subjected to criticism due to its various defects:

a. The scheme has been generally used by the banks and their borrowers to offset the credit control measures of the Reserve bank. Whenever

the Reserve Bank tried to control the bank credit without restricting the bill rediscounting facility, the banks increasingly utilised this facility. This made the Reserve Bank's tight money policy ineffective. As a result, the Reserve Bank was forced first to put restrictions on the bill rediscounting facility, and then to allow the facility wholly on its discretion.

b. The bill market scheme has not been successful in developing a genuine bill market. The main reason is that the borrowers as well as the banks still have preference for cash credit and dislike for bill finance.
c. The scheme is restricted to banks and some selected financial institutions. It has not been able to cover the indigenous bankers and other constituents of unorganised sector of the Indian money market.
d. The scheme has remained mainly concentrated in the fields of industry, trade and commerce. It has not been extended to agricultural sector.

RBI manages and controls foreign exchange

The Reserve Bank issues licences to banks and other institutions to act as Authorised Dealers in the foreign exchange market. In keeping with the move towards liberalisation, the Reserve Bank has undertaken substantial elimination of licensing, quantitative restrictions and other regulatory and discretionary controls. For a long time, foreign exchange in India was treated as a controlled commodity because of its limited availability. The early stages of foreign exchange management in the country focussed on control of foreign exchange by regulating the demand due to its limited supply. Exchange control was introduced in India under the Defence of India Rules on September 3, 1939 on a temporary basis. The statutory power for exchange control was provided by the Foreign Exchange Regulation Act (FERA) of 1947, which was subsequently replaced by a more comprehensive Foreign Exchange Regulation Act, 1973. This Act empowered the Reserve Bank, and in certain cases the Central Government, to control and regulate dealings in foreign exchange payments outside India, export and import of currency notes and bullion, transfer of securities between

residents and non-residents, acquisition of foreign securities, and acquisition of immovable property in and outside India, among other transactions.

Extensive relaxations in the rules governing foreign exchange were initiated, prompted by the liberalisation measures introduced since 1991 and the Act was amended as a new Foreign Exchange Regulation (Amendment) Act 1993. Significant developments in the external sector, such as, substantial increase in foreign exchange reserves, growth in foreign trade, rationalisation of tariffs, current account convertibility, liberalisation of Indian investments abroad, increased access to external commercial borrowings by Indian corporates and participation of foreign institutional investors in Indian stock market, resulted in a changed environment. Keeping in view the changed environment, the Foreign Exchange Management Act (FEMA) was enacted in 1999 to replace FERA. FEMA became effective from June 1, 2000.

Liberalised Approach

The Reserve Bank issues licences to banks and other institutions to act as Authorised Dealers in the foreign exchange market. In keeping with the move towards liberalisation, the Reserve Bank has undertaken substantial elimination of licensing, quantitative restrictions and other regulatory and discretionary controls. Apart from easing restrictions on foreign exchange transactions in terms of processes and procedure, the Reserve Bank has also provided the exchange facility for liberalised travel abroad for purposes, such as, conducting business, attending international conferences, undertaking technical study tours, setting up joint ventures abroad, negotiating foreign collaboration, pursuing higher studies and training, and also for medical treatment. Moreover, the Reserve Bank has permitted residents to hold liberal amount of foreign currency. Residents can now also open foreign currency accounts in India and credit specified foreign exchange receipts into it.

Foreign investment

Foreign investment comes into India in various forms. Following the reforms path, the Reserve Bank has liberalised the provisions relating to

such investments. The Reserve Bank has permitted foreign investment in almost all sectors, with a few exceptions. In many sectors, no prior approval from the Government or the Reserve Bank is required for non-residents investing in India. Foreign institutional investors are allowed to invest in all equity securities traded in the primary and secondary markets. Foreign institutional investors have also been permitted to invest in Government of India treasury bills and dated securities, corporate debt instruments and mutual funds. The NRIs have the flexibility of investing under the options of repatriation and non-repatriation. Similarly, Indian entities can also make investment in an overseas joint venture or in a wholly-owned subsidiary abroad upto a certain limit.

External Commercial Borrowings

Indian companies are allowed to raise external commercial borrowings including commercial-bank loans, buyers' credit, suppliers' credit, and securitised instruments. Foreign Currency Convertible Bonds (FCCBs) and Foreign Currency Exchangeable Bonds (FCEBs) are also governed by the ECB guidelines.

Liberalised Remittance Scheme

As a step towards further simplification and liberalisation of the foreign exchange facilities available to the residents, the Reserve Bank has permitted resident individuals to freely remit abroad up to liberal amount per financial year for any permissible purposes.

Currency Futures

Exchange-traded currency futures are permitted in India. Such trading facilities are currently being offered by the National Stock Exchange, the Bombay Stock Exchange and the MCX-Stock Exchange. As the product is exchange traded, the conduct of currency futures trading facility is being regulated jointly by the Reserve Bank and the Securities and Exchange Board of India.

Exchange Rate Policy

India's exchange rate policy has evolved in tandem with the domestic as well as international developments. The period after independence was marked by a fixed exchange rate regime, which was in line with the Bretton Woods system (1970) prevalent then. The Indian Rupee was pegged to the Pound Sterling on account of historic links with Britain. After the breakdown of Bretton Woods System in the early seventies, most of the countries moved towards a system of flexible/managed exchange rates. With the decline in the share of Britain in India's trade, increased diversification of India's international transactions together with the weaknesses of pegging to a single currency, the Indian Rupee was de-linked from the Pound Sterling in September 1975.

The exchange rate subsequently came to be determined with reference to the daily exchange rate movements of an undisclosed basket of currencies of India's major trading partners. As the basket-linked management of the exchange rate of the Rupee did not capture the market dynamics and the developments in the exchange rates of competing countries fully, the Rupee's external value was allowed to be determined by market forces in a phased manner following the balance of payment difficulties in the nineties.
A significant two-step downward adjustment in the exchange rate of the Rupee was made in 1991. In March 1992, Liberalised Exchange Rate Management System (LERMS) involving the dual exchange rate was instituted. A unified single market-determined exchange rate system based on the demand for and supply of foreign exchange replaced the LERMS effective March 1, 1993.

The Reserve Bank's exchange rate policy focuses on ensuring orderly conditions in the foreign exchange market. For the purpose, it closely monitors the developments in the financial markets at home and abroad. When necessary, it intervenes in the market by buying or selling foreign currencies. The market operations are undertaken either directly or through public sector banks. In addition to the traditional instruments like forward and swap contracts, the Reserve Bank has facilitated increased availability

of derivative instruments in the foreign exchange market. It has allowed trading in Rupee-foreign currency swaps, foreign currency-Rupee options, cross-currency options, interest rate swaps and currency swaps, forward rate agreements and currency futures.

Foreign Exchange Reserves Management

The Reserve Bank of India is the custodian of the country's foreign exchange reserves and is vested with the responsibility of managing their investment. The legal provisions governing management of foreign exchange reserves are laid down in the Reserve Bank of India Act, 1934. The Reserve Bank's reserves management function has in recent years grown both in terms of importance and sophistication for two main reasons. First, the share of foreign currency assets in the balance sheet of the Reserve Bank has substantially increased. Second, with the increased volatility in exchange and interest rates in the global market, the task of preserving the value of reserves and obtaining a reasonable return on them has become challenging. The basic parameters of the Reserve Bank's policies for foreign exchange reserves management are safety, liquidity and returns. The Reserve Bank of India Act permits the Reserve Bank to invest the reserves in the following types of instruments:

a. Deposits with Bank for International Settlements and other central banks
b. Deposits with foreign commercial banks
c. Debt instruments representing sovereign or sovereign-guaranteed liability of not more than 10 years of residual maturity.
d. Other instruments and institutions as approved by the Central Board of the Reserve Bank in accordance with the provisions of the Act.
e. Certain types of derivatives

While safety and liquidity continue to be the twin-pillars of reserves management, return optimisation has become an embedded strategy within this framework. The Reserve Bank has framed policy guidelines stipulating stringent eligibility criteria for issuers, counterparties, and investments to be made with them to enhance the safety and liquidity of reserves. The Reserve Bank, in consultation with the Government, continuously reviews the reserves management strategies.

Unit-IV

Monetary Policy

Introduction

Many economists have given various definitions of monetary policy. Some prominent definitions are as follows. According to Prof. Harry Johnson, "A policy employing the central banks control of the supply of money as an instrument for achieving the objectives of general economic policy is a monetary policy." According to A.G. Hart, "A policy which influences the public stock of money substitute of public demand for such assets of both that is policy which influences public liquidity position is known as a monetary policy." Role of Monetary Policy in Economic Development of a Country Role of monetary policy in the economic development of a country are as follows:

1. 1. Appropriate Adjustment between Demand for and Supply of Money,
2. Price Stability,
3. Credit Control,
4. Creation and Expansion of Financial Institutions,
5. Suitable Interest Rate Structure,
6. Debt Management.

1. Appropriate Adjustment between Demand for and Supply of Money:

Economic development results in rising demand for money because the growth of economy and a corresponding contraction of the subsistence sector greatly increase the transaction demand for money. Besides, the rise in per capita income and increase in population during the development process also increases the demand for money to carry out day-to-day transactions. The continuously rising demand for money makes it imperative for the monetary authority to increase money supply at a rate roughly equal to the rate of increase in real income, so that prices do not fall consequent upon a rise in national output.

A falling price level adversely affects the pace of economic growth by initiating a vicious downward spiral of prices and output. Similarly, if the supply of money is more than needed by the requirements of trade and

industry, it may be used for speculative purposes, thereby inhibiting growth and causing inflation.

The gist of the argument is that a proper control upon the supply of money will prevent economic fluctuations and pave the ground for rapid development. The monetary policy, therefore, can play a vital role in the economic development of underdeveloped countries by minimizing fluctuations in prices and general economic activity by achieving all appropriate balance between the demand for money and the productive capacity of the economy.

2. Price Stability:

Maintenance of stability in the domestic level of prices and exchange rates is an important condition of economic growth. However, economic development leads to inflationary pressures in under-developed countries due to a variety of structural rigidities and imbalances. The inflationary increase in prices adversely affects the propensity to save and diverts invertible resources into speculative and unproductive investments such as real estate, jewellery, gold, stock-piling of goods etc. The monetary authority, therefore, should keep a constant vigil on the movement of prices and so regulate the supply and direction of money and credit that it puts a check on rising prices.

Similarly, inflationary increase in prices leads to the frequent devaluation of the currency. The fluctuating exchange rates adversely affect international trade and the earning of foreign exchange tails, which could help in the development of the country. In short, instability in internal prices and exchange rates impedes the rate of sustained economic growth and consequently monetary policy should aim at preventing excessive increase in prices and maintaining exchange stability at some realistic level. This implies the adopting of such monetary policies that will check inflation and frequent development of the currency.

A developing country generally suffers from balance of payments difficulties because of the high propensity to import and limited capacity to export. In such a situation, the monetary policy should be directed to improving the foreign exchange position. The monetary authority can

employ both traditional weapons of control such as bank rate, open market operations etc., and the direct control over foreign exchange for the correction of adverse balance of payments.

In under-developed economies, governments have to spend on a gigantic scale under the planning process to secure growth rate commensurate with the growth rate of population and also to provide social and economic overheads. But the rate of saving being low, the government has to resort to large scale borrowing and deficit financing to cope with the rising investment. Since there is dearth of complementary resources in such economies and the supply curve of goods is generally inelastic, the abnormal increasing effective demand generated by huge government expenditure paves the way for inflation.

The best remedy for fight inflation is to reduce aggregates pending, encourage savings and discourage hoarding. For this, the Central Bank may raise the bank rate which would reduce the pressure of demand for bank credit by making borrowing costlier than before and this will discourage borrowing for hoarding and speculative purposes. On the other hand, an increase in the rate of interest will stimulate savings. To reduce the credit creating capacity of the banks further, the Central Bank may supplement it with the sale of government and banks securities, raising the serve ratio and by instituting selective credit controls. Thus the Central Bank by relying on both the quantitative and qualitative instruments of credit control can limit inflation and help the process of economic development.

3. Credit Control:

With a view to secure an accelerated rate of economic growth, the monetary authority should press into service its techniques of credit control to influence and shape the character and pattern of investment and production. This will, of course, depend on the range of credit institutions that exist in the economy and also on the forms of credit controls that are employed by the Central Bank. In most of the underdeveloped countries, the banking system is not fully developed.

The commercial banks mainly provide short-term credit requirements of businessmen and traders and are reluctant to provide medium and long-

term credit to meet the financial requirements of industry and for manufacturing in general. The monetary authority should step in to make appropriate guarantees and provide rediscounting facilities with a view to induce and encourage banks to provide medium and long-term loans for productive purposes. Besides joint loans by commercial banks and state owned financial institutions can greatly help in this direction.

Similarly, selective credit controls should be adopted to influence the pattern of investment and production by differentiating between the costs and availability of credit to different sectors and industries. The selective credit control, unlike quantitative credit control makes discrimination between essential and non-essential use of bank credit and helps the funds to flow into desirable channels and uses without affecting the economy as a whole. Thus in an underdeveloped economy, the monetary authority should control the uses of money and credit by an appropriate monetary policy so that investible resources flow into desirable channels without adversely affecting investment and production. This will quicken the pace of development.

4. Creation and Expansion of Financial Institutions:

Monetary policy can speed up the process of economic development by improving the currency and credit system of the country. For this propose more banks and financial institutions need to be established to provide larger credit facilities and to mobilise saving for productive purpose. In under-developed countries there is death of financial institutions and banking facilities are available only to a limited extent. This being the case, the savings of the people cannot be mobilised effectively for economic development and consequently the rate of growth is very slow.

The monetary authority can help in the expansion of financial institutions by granting subsidies and special concessions in the form of free remittance and rediscounting facilities to new institutions and by providing training facilities for their staff. The Central Bank should pay special attention to the problem of rural credit. A network of cooperative credit societies with apex banks finances by the Central Bank can go a long way in providing the credit needs of the ruralises.

Similarly the Central Bank and financial corporations to provide finance to business and industry. This will obviously help increase the rate of economic development. There exists vast non-monetised sector in under-developed economies which is not responsive to changes in the quantity of money and interest rates and such, this sector remains outside the effective control of the Central Bank. This being the case all out efforts must be made by the monetary authority to extend the sphere of the monetised sector to make monetary policy a success. For the attainment of the objective of growth with stability, the monetary authority of developing economies, therefore, has to play a positive role in creation, working and expansion of banking and other financial institutions and extend credit facilities where needed.

5. Suitable Interest Rate Structure:

Economic development requires investment on a gigantic scale both by the public sector and the private sector. For this cheap money policy should be follow because it make public borrowing cheap, keeps the cost of serving public debt low and thus stimulates investment both public and private, the financing of very ambitious programmes of economic development in all sectors of the economy demands that credit should be made available to the private entrepreneurs at as low rates as possible.

Thus a policy of low interest rates serves as an incentive to investment for economic development. As against this it is pointed out that cheap money policy may induce the traders and speculators to borrow more from the banks and utilise these funds for hoarding and stockpiling and for other speculative purposes. But this tendency on the part of private investors can be checked through selective credit control and thereby directing investment into desirable channels.

However, there are economists who suggest a policy of high interest rates on the following considerations:

1. It will serve as an anti-inflationary measure by restricting borrowing from the banks for speculative purposes and undesirable investments;
2. It will stimulate savings and thus increase the supply of investible sources.

3. It would secure the allocation of scarce capital into most productive uses and avoid productive and wasteful use of resources. But these arguments do not carry much weight. The productive and efficient use of investible resources can be better secured by direct controls and control over capital issues.

Further, qualitative methods of credit control can be used effectively to ensure flow of funds into desirable channels. So far a stimulus to savings is concerned, it may be mentioned that the volume of savings is more a function of the level of income rather than the rate of interest. A higher rate of interest may, however, be used as a shock tactic to curb speculation in goods and securities when it gets beyond control and other methods have failed to control it. The developing countries, therefore, should be more pragmatic in their approach and must evolve such a differentiated interest rate policy which should restrain the superfluous spending, contain the inflationary pressures, promote capital formation and sustain the investment activity at a level such that the pace of growth is not slowed down.

6. Debt Management:

In developing economies, the government has to borrow on a large scale to implement the programmes of economic development and hence the responsibility of managing public debt effectively and efficiently so as to serve the requirements of economic growth, lies with monetary authority that is the Central Bank of the country. The primary object of debt management "is to create conditions in which public borrowing can increase from year to year and on a big scale without giving any jolt to the system. And this must be on cheap rates to keep the burden of the debt low."

The policy of low interest rates is desirable for strengthening and stabilising the market for government bonds because a low rate o interest raises the price of government bonds and thus makes them more attractive to the public and ensures the public borrowing programme a success. Besides, a low structure of interest rates minimizes the burden of public debt. Thus for speeding up the process of economic development, the monetary policy should aim at the efficient management of public debt

which implies proper timing of the issuing of government bonds, stabilising their prices and minimising the burden of debt.

Monetary Policy of India: Main Elements and Objectives

Monetary Policy of India is formulated and executed by Reserve Bank of India to achieve specific objectives. It refers to that policy by which central bank of the country controls(i) the supply of money, and (ii) cost of money or the rate of interest, with a view to achieve particular objectives.

In the words of D.C. Rowan, "The monetary policy is defined as discretionary act undertaken by the authorities designed to influence

(a) The supply of money,

(b) Cost of money or rate of interest, and

(c) The availability of money for achieving specific objective.

Thus, monetary policy of India refers to that policy which is concerned with the measures taken to regulate the volume of credit created by the banks. The main objectives of monetary policy are to achieve price stability, financial stability and adequate availability of credit for growth.

Following are the main elements of the monetary policy of India:

1. It regulates the stocks and the growth rate of money supply.
2. It regulates the entire banking system of the economy.
3. It determines the allocation of loans among different sectors.
4. It provides incentives to promote savings and to raise the savings-income ratio.
5. It ensures adequate availability of credit for growth and tries to achieve price stability.

Objectives of Monetary Policy:

According to RBI Governor Dr. D. Subba Rao, "The objectives of monetary policy in India are price stability and growth. These are pursued through ensuring credit availability with stability in the external value of rupee and overall financial stability."

Objectives of monetary policy:

I. To Regulate Money Supply in the Economy:

Money supply includes both money in circulation and credit creation by banks. Monetary policy is farmed to regulate the money supply in the

economy by credit expansion or credit contraction. By credit expansion (giving more loans), the money supply can be expanded. By credit contraction (giving less loans) money supply can be decreased. The main aim of the monetary policy of the Reserve Bank was to control the money supply in such a manner as to expand it to meet the needs of economic growth and at the same time contract it to curb inflation. In other words monetary policy aimed at expanding and contracting money supply according to the needs of the economy.

II. To Attain Price Stability:

Another major objective of monetary policy in India is to maintain price stability in the country. It implies Control over inflation. Price level, is affected by money supply. Monetary policy regulates money supply to maintain price stability.

III. To promote Economic Growth:

An important objective of monetary policy is to make available necessary supply of money and credit for the economic growth of the country. Those sectors which are quite significant for the economic growth are provided with adequate availability of credit.

IV. To Promote saving and Investment:

By regulating the rate of interest and checking inflation, monetary policy promotes saving and investment. Higher rates of interest promote saving and investment.

V. To Control Business Cycles:

Boom and depression are the main phases of business cycle. Monetary policy puts a check on boom and depression. In period of boom, credit is contracted, so as to reduce money supply and thus check inflation. In period of depression, credit is expanded, so as to increase money supply and thus promote aggregate demand in the economy.

VI. To Promote Exports and Substitute Imports:

By providing concessional loans to export oriented and import substitution units, monetary policy encourages such industries and thus help to improve the position of balance of payments.

VII. To Manage Aggregate Demand:

Monetary authority tries to keep the aggregate demand in balance with aggregate supply of goods and services. If aggregate demand is to be increased than credit is expanded and the interest rate is lowered down. Because of low interest rate, more people take loan to buy goods and services and hence aggregate demand increases and vice-verse.

VIII. To ensure more Credit for Priority Sector:

Monetary policy aims at providing more funds to priority sector by lowering interest rates for these sectors. Priority sector includes agriculture, small- scale industry, weaker sections of society, etc.

IX. To Promote Employment:

By providing concessional loans to productive sectors, small and medium entrepreneurs, special loan schemes for unemployed youth, monetary policy promotes employment.

X. To Develop Infrastructure:

Monetary policy aims at developing infrastructure. It provides concessional funds for developing infrastructure.

XI. To Regulate and Expand Banking:

RBI regulates the banking system of the economy. RBI has expanded banking to all parts of the country. Through monetary policy, RBI issues directives to different banks for setting up rural branches for promoting agricultural credit. Besides it, government has also set up cooperative banks and regional rural banks. All this has expanded banking in all parts of the country. A definition of trade-off, in economics, a trade-off is defined as an "opportunity cost." For example, you might take a day off work to go to a concert, gaining the opportunity of seeing your favourite band, while losing a day's wages as the cost for that opportunity.

Targets of Monetary Policy:

The following points highlight the seven main targets of monetary policy. The targets are:

1. A stable price level
2. A gently rising price level
3. A gently falling price level

4. Neutral money
5. Exchange stability
6. Avoidance of cyclical fluctuations
7. Full-employment and economic growth.

1. A stable price level:

One of the most popular views regarding the aim of monetary policy is that the value of money, the price level S wholesale and retail), should be kept stable. A stable price level is advocated because the change in the value of money affects different persons differently and because such changes are likely to have various undesirable effects on the economy. Moreover, as money serves as a measure of value it is necessary that its value should be kept stable. But, past experiences have shown that complete stabilisation of the value of money is neither possible nor desirable. What is needed is mild inflation (at the rate of 2-3% per annum) or a functional rise in prices).

2. A gently rising price level:

Some writers hold the view that monetary policy should aim at maintaining a gently (i.e., slowly) rising price level Thus according to Keynes, in a society having unemployment a gently rising price level may be a better monetary policy than absolute price stability because it provides incentive to the producers, with the result that the volume of employment and income increases. And, as Paul Samuelson has put, "Mild inflation lubricates the wheels of trade and industry". But this policy is inequitable as a rising price level discriminates against the wage- earners, who suffer loss of purchasing power. Moreover, a slowly rising price-level can expand output and employment so long the country has unemployed resources and idle capacity. Once full employment is reached, such a policy loses its scope and effectiveness.

3. A gently falling price level:

An opposite school of thought advocates a slowly falling price level as the aim of monetary policy. Thus, according to Dennis Robertson, in a progressive economy a gently falling price level confers greater benefits upon the fixed income-earners. Moreover it is beneficial to consumers. But, it is also inequitable as it favours the creditors and wage-earners at the cost of

debtors and producers. Moreover falling prices may cause a fall in the marginal efficiency of capital, which leads to a fall in investment, income and output.

4. Neutral money:

It has been suggested that the central bank should establish what is called'neutral money'. It means that money should mere y perform the passive functions of acting as the medium of exchange and the unit of account, without having no dynamic functions which affect the economy. But, the objective of neutral money is not capable of wide practical application.

5. Exchange stability:

It is also suggested that the monetary policy should aim at maintaining stability in rate of exchange, as fluctuating exchange rates introduce uncertainty into foreign trade. But, it has been pointed out that exchange stability in some circumstances may also lead to instability in the domestic price level.

6. Avoidance of cyclical fluctuations:

It is also suggested that the monetary policy should be directed towards the elimination and control of business cycle fluctuations. But, it has been found that monetary policy alone cannot achieve this goal.

7. Full-employment and economic growth:

The most popular and accepted aim of the monetary policy is the realisation of full employment and rapid economic growth. According to Keynes, a cheap monetary policy, coupled with deficit spending through the creation of new money, may promote economic growth Keynes, however, and opines that purely monetary policies cannot achieve this goal. These should be subordinate to a more important policy, viz., fiscal policy which can fight depression and unemployment.

Monetary policy indicators:

Variables that provide information about the stimulus or restraint coming from the central bank's policy. Our earlier discussion of the monetary transmission mechanism suggests two monetary policy indicators, namely, interest rates and exchange rates. The central bank sets nominal

interest rates, which have important effects on asset prices, cash flows, and expenditures. Interest rates are also important to expenditure decisions. Changes in nominal interest rates over time will show how monetary policy has been implemented.

The foreign exchange rate as it affects net exports also provides an indicator of policy stance. Because exchange rates change in part as a result of interest rate differences between countries, changes in the exchange rate provide an indicator of the thrust of domestic monetary policy relative to foreign monetary policy. Although in Canada it is important to recognize that commodity prices also have strong exchange rate effects as illustrated by the recent depreciation of the Canadian dollar. The monetary transmission mechanism works through both interest rates and exchange rates. In setting its interest rates, a central bank in a small open economy needs to consider recent changes in the exchange rate. If economic conditions, or policies in other countries, have caused changes in the foreign exchange rate, those changes will affect expenditures and output in Canada.

The depreciation of the Canadian dollar in 2015 is an important example. The corresponding appreciation of the US dollar raised import prices and increased the profitability of exports. Even without monetary policy, action expenditure and output in Canada would rise. The Bank of Canada had to make a decision. Was the setting of its operating range for the overnight rate still consistent with its inflation target once the exchange rate had risen? Should the Bank count on the stimulus from the exchange rate to offset the effects of lower energy and commodity prices or cut its interest rate to provide some further stimulus? If it were to respond, by how much should it lower interest rates? The Bank of Canada lowered interest rates. In this case the combined effect of interest rates and exchange rates was increased stimulus. However, the Bank could have decided that the exchange rate alone would suffice or even that the exchange rate depreciation gave too much stimulus. Clearly both are very important for designing and judging and monetary policy.

While interest rates and exchange rates provide important indicators of monetary policy, many economists and the Bank also regard the money

supply or the rate of growth of the money supply as a policy indicator. Some suggest a monetary policy rule for money supply, which uses money supply as the central bank's policy instrument. The demand for nominal money balances depends on nominal income. Taking this into account, the difference between the rate of growth of the money supply measure, M1B, and the rate of growth of nominal GDP provides an indicator of the stance of monetary policy. M1B growth that exceeds growth in nominal GDP provides easier financial market conditions and suggests an expansionary policy stance.

The growth rates in the money aggregates M1B+ and real M2+, adjusted for inflation, provide alternative indicators of the effect of monetary policy. In the current policy context, the Bank of Canada sets the interest rates and the growth rates of money supply reflect the demand for money balances at those interest rates. Empirical research at the Bank and by other monetary economists has found that the growth in real M1B+ is a useful indicator of future growth in real GDP. Growth in real M2+ also provides a leading indicator of inflation. From these findings, an observed increase in the growth rates of these money aggregates indicates that the Bank's current policy is adding to aggregate demand. Thus we have a basic set of monetary policy indicators: interest rates, exchange rates, and the growth rate in nominal and real measure of money supply. They come from our understanding of the way changes in monetary variables may affect expenditures, incomes, and prices and from our discussion of how monetary policy is designed and implemented.

Instruments of Monetary Policy and the Reserve Bank of India

The RBI is the main body that controls the monetary policy in India. They control the flow of money into the market through various instruments of monetary policy. This helps the RBI control the inflation and liquidity in the economy. Let us take a look at the instruments of monetary policy the RBI uses.

The Reserve Bank of India

The RBI is the central bank of India. It was established in 1935 under a special act of the parliament. The RBI is the main authority for the monetary

policy of the country. The main functions of the RBI are to maintain financial stability and the required level of liquidity in the economy. The RBI also controls and regulates the currency system of our economy. It is the sole issuer of currency notes in India. The RBI is the central banks that control all the other commercial banks, financial institutes, finance firms etc. It supervises the entire financial sector of the country.

Instruments of Monetary Policy

Monetary policy is a way for the RBI to control the supply of money in the economy. So these credit policies help control the inflation and in turn help with the economic growth and development of the country. So now let us take a look at the various instruments of monetary policy that the RBI has at its disposal.

1] Open Market Operations

Open Market Operations is when the RBI involves itself directly and buys or sells short-term securities in the open market. This is a direct and effective way to increase or decrease the supply of money in the market. It also has a direct effect on the ongoing rate of interest in the market. Let us say the market is in equilibrium. Then the RBI decides to sell short-term securities in the market. The supply of money in the market will reduce. And subsequently, the demand for credit facilities would increase. And so correspondingly the rate of interest would also see a boost. On the other hand, if RBI was purchasing securities from the open market it would have the opposite effect. The supply of money to the market would increase. And so, in turn, the rate of interest would go down since the demand for credit would fall.

2] Bank Rate

One of the most effective instruments of monetary policy is the bank rate. A bank rate is essentially the rate at which the RBI lends money to commercial banks without any security or collateral. It is also the standard rate at which the RBI will buy or discount bills of exchange and other such commercial instruments. So now if the RBI were to increase the bank rate, the commercial banks would also have to increase their lending rates. And this

will help control the supply of money in the market. And the reverse will obviously increase the supply of money in the market.

3] Variable Reserve Requirement

There are two components to this instrument of monetary policy, namely–The Cash Reserve Ratio (CLR) and the Statutory Liquidity Ratio (SLR). Let us understand them both. Cash Reserve Ratio (CRR) is the portion of deposits with the commercial banks that it has to deposit to the RBI. So CRR is the percent of deposits the commercial banks have to keep with the RBI. The RBI will adjust the said percentage to control the supply of money available with the bank. And accordingly, the loans given by the bank will either become cheaper or more expensive. The CRR is a great tool to control inflation. The Statutory Liquidity Ratio (SLR) is the percent of total deposits that the commercial banks have to keep with themselves in form of cash reserves or gold. So increasing the SLR will mean the banks have fewer funds to give as loans thus controlling the supply of money in the economy. And the opposite is true as well.

4] Liquidity Adjustment Facility

The Liquidity Adjustment Facility (LAF) is an indirect instrument for monetary control. It controls the flow of money through repo rates and reverse repo rates. The repo rate is actually the rate at which commercial banks and other institutes obtain short-term loans from the Central Bank. And the reverse repo rate is the rate at which the RBI parks its funds with the commercial banks for short time periods. So the RBI constantly changes these rates to control the flow of money in the market according to the economic situations.

5] Moral Suasion

This is an informal method of monetary control. The RBI is the Central Bank of the country and thus enjoys a supervisory position in the banking system. If there is a need it can urge the banks to exercise credit control at times to maintain the balance of funds in the market. This method is actually quite effective since banks tend to follow the policies set by the RBI.

Expansionary Monetary Policy

An expansionary monetary policy is a type of macroeconomic monetary policy that aims to increase the rate of monetary expansion to stimulate the growth of a domestic economy. The economic growth must be supported by additional money supply. The money injection boosts consumer spending, as well as increases capital investments Capital Expenditures Capital expenditures refer to funds that are used by a company for the purchase, improvement, or maintenance of long-term assets to improve by businesses. An expansionary monetary policy is generally undertaken by a central bank Federal Reserve (The Fed) The Federal Reserve is the central bank of the United States and is the financial authority behind the world's largest free market economy or a similar regulatory authority.

Tools for an Expansionary Monetary Policy

Similar to a contractionary monetary policy, an expansionary monetary policy is primarily implemented through interest rates Interest Rate An interest rate refers to the amount charged by a lender to a borrower for any form of debt given, generally expressed as a percentage of the principal., reserve requirements, and open market operations. The expansionary policy uses the tools in the following way:

1. Lower the short-term interest rates

The adjustments to short-term interest rates are the main monetary policy tool for a central bank. Commercial banks can usually take out short-term loans from the central bank to meet their liquidity shortages. In return for the loans, the central bank charges a short-term interest rate. By decreasing the short-term interest rates, the central bank reduces the cost of borrowing to commercial banks. Subsequently, the banks lower the interest rates they charge their consumers for loans. Therefore, whenever the central bank lowers interest rates, the money supply in the economy increases.

2. Reduce the reserve requirements

Commercial banks are obliged to hold a minimum amount of reserves with a central bank. In order to increase the money supply, the central bank

may reduce reserve requirements. In such a case, commercial banks would have extra funds to be lent out to their clients.

3. Expand open market operations

The central bank may also use open market operations with government-issued securities Treasury Bills (T-Bills)Treasury Bills (or T-Bills for short) are a short-term financial instrument issued by the US Treasury with maturity periods from a few days up to 52 weeks to affect the money supply in the economy. It may decide to buy large amounts of the government-issued securities (e.g., government bonds) from institutional investors to inject additional cash into the domestic economy.

Effects of an Expansionary Monetary Policy

An expansionary monetary policy can bring some fundamental changes to the economy. The following effects are the most common:

1. Stimulation of economic growth
2. An expansionary monetary policy reduces the cost of borrowing. Therefore, consumers tend to spend more while businesses are encouraged to make larger capital investments.
3. Increased inflation

The injection of additional money into the economy increases inflation is an economic concept that refers to increases in the price level of goods over a set period of time. The rise in the price level signifies that the currency in a given economy loses purchasing power. It can be both advantageous and disadvantageous to the economy. The excessive increase in the money supply may result in unsustainable inflation levels. On the other hand, the inflation increase may prevent possible deflation, which can be more damaging than reasonable inflation.

3. Currency devaluation

The higher money supply reduces the value of the local currency. The devaluation is beneficial to the economy's export ability because exports become cheaper and more attractive to foreign countries.

4. Decreased unemployment

The stimulation of capital investments creates additional jobs in the economy. Therefore, an expansionary monetary policy generally

reduces unemployment Structural Unemployment Structural unemployment is a category of unemployment caused by differences between the skills possessed by the unemployed population.

The Expansionary Monetary Policy and Restrictive Monetary Policy

An expansionary monetary policy is used to overcome a recession or a depression or a deflationary gap. When there is a fall in consumer demand for goods and services, and in business demand for investment goods, a deflationary gap emerges. The central bank starts an expansionary monetary policy that eases the credit market conditions and leads to an upward shift in aggregate demand. For this purpose, the central bank purchases government securities in the open market, lowers the reserve requirements of member banks, lowers the discount rate and encourages consumer and business credit through selective credit measures. By such measures, it decreases the cost and availability of credit in the money market, and improves the economy.

The expansionary monetary policy is explained in terms of Figure 76.1 (A) and (B) where the initial recession equilibrium is at R, Y, P and Q. At the interest rate R in Panel (A) of the figure, there is already an excess money supply in the economy. Suppose the central bank credit policy results in an increase in the money supply in the economy. This leads to a rightwards shift of the LM curve to LM_1.

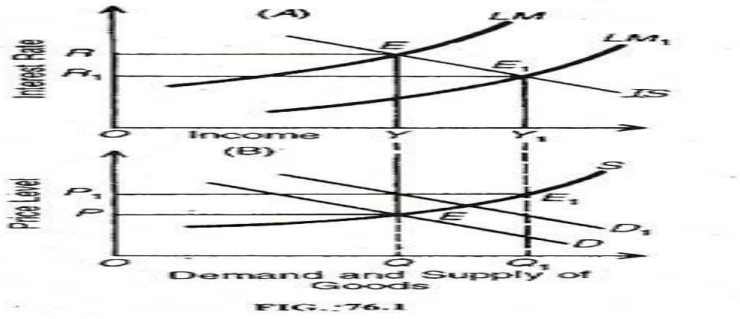


FIG.:76.1

This increases income from OY to OY_1 and aggregate demand expands and the demand curve D shifts upwards to D_1 in panel (B). With the increase in the demand for goods and services, output increases from OQ to OQ_1 at a higher price level P_1. If the expansionary monetary policy operates smoothly, the equilibrium at E_1 can be at the full employment level. But this is not likely to be attained because of the following limitations.

Its Scope and Limitations:

During the 1930s and 1940s, it was believed that the success of monetary policy in stimulating recovery from a depression was severely limited than in controlling a boom and inflation. This view emerged from the experiences of the Great Depression and the appearance of Keynes's General Theory. The monetarists hold that during a depression the central bank can increase the reserves of commercial banks through a cheap money policy. They can do so by buying securities and reducing the interest rate. As a result, their ability to extend credit facilities to borrowers increases. But the experience of the Great Depression tells us that in a serious depression when there is pessimism among businessmen, the success of such a policy is practically nil. In such a situation, banks are helpless in bringing about a revival.

Since business activity is almost at a standstill, businessmen do not have any inclination to borrow to build up inventories even when the rate of interest is very low. Rather, they want to reduce their inventories by repaying loans already drawn from the banks. Moreover, the question of borrowing for long-term capital needs does not arise in a depression when the business activity is already at a very low level. The same is the case with consumers who faced with unemployment and reduced incomes do not like to purchase any durable goods through bank loans. Thus all that the banks can do is to make credit available but they cannot force businessmen and consumers to accept it. In the 1930s, very low interest rates and the piling up of unused reserves with the banks did not have any significant impact on the depressed economies of the world.

"This is not to say that an easy monetary policy in times of severe contraction will be without beneficial effect, its effect will be largely that of preventing a bad situation from getting worse. But a restrictive monetary policy combined with a business downturn would surely aggravate the downturn—the classical example of this was the monetary policy in 1931 that contributed to the deepening of the Great Depression. On the other hand, if credit is readily available on favourable terms, it clearly has a

stabilising effect. By meeting the liquidity requirements of business, it can slow and perhaps reduce the extent of the downturn."

But what led to the decline of monetary policy in the 1930s and 1940s? In addition to the sad and disillusioning experiences during and after the Great Depression, it was Keynes's General Theory that led to a decline in monetary policy as an instrument of economic stabilisation. Keynes pointed out that a highly elastic liquidity preference schedule (liquidity trap) renders monetary policy impotent in time of severe depression.

Restrictive Monetary Policy:

A monetary policy designed to curtail aggregate demand is called restrictive (or dear) monetary policy. It is used to overcome an inflationary gap. The economy experiences inflationary pressures due to rising consumers' demand for goods and services and there is also boom in business investment. The central bank starts a restrictive monetary policy in order to lower aggregate consumption and investment by increasing the cost and availability of bank credit. It might do so by selling government securities in the open market, by rising reserve requirements of member banks, by raising the discount rate, and controlling consumer and business credit through selective measures. By such measures, the central bank increases the cost and availability of credit in the money market and thereby controls inflationary pressures.

The restrictive monetary policy is also explained in terms where the initial recession equilibrium is at R_1 Y_1 P_1 and Q_1. At the interest rate R_x in Panel (A) of the figure, there is already an excess money supply in the economy. Suppose the central bank credit policy results in a decrease in the money supply in the economy. This leads to a leftward shift of the LM_1 curve to LM. This decreases income from OY_1 to OY and aggregate demand falls and the demand curve D_1 shifts downwards to D in panel (B). With the decline in the demand for goods and services, output falls from OQ_1 to OQ at a lower price level P.

Its Scope and Limitations:

But the scope of monetary policy is severely limited in controlling inflation. The following are its limitations.

1. Increase in the Velocity of Money:

One of the important limitations on the effectiveness of monetary policy in controlling inflation is the increase in the velocity of money held by the public. The central bank can control the money supply and the cost of money by a tight monetary policy but it does not possess any power to control the velocity of money. The public can make an effective use of the money supply held by them thereby making a restrictive monetary policy ineffective. This can be done in a number of ways.

(a) Commercial Bank Portfolio Adjustments:

In the face of a restrictive monetary policy, commercial banks meet the borrowers' demand for loans by selling government securities to the central bank. Such a policy simply converts idle deposits held by the banks in the form of securities into active deposits. Government securities tying in the bank's portfolios are substituted for loans. But there is no change in either the total deposits or the money supply with the banks. However, this leads to increase in total spending when the banks lend money to borrowers. Thus the restrictive monetary policy of the central bank becomes ineffective.

Moreover, when the banks sell government securities to the central bank, their prices fall and the interest on them rises in the market. This will raise the general interest rate structure in the market. But the fall in the prices of securities brings capital losses to the banks and they may be reluctant to bear them. This depends upon whether they expect the fall in security prices (or rise in interest rate) to be short-lived or continue overtime. If the fall in security prices is expected to be short-lived, the banks will prefer to keep securities rather than sell them at a capital loss. On the other hand, if they expect it to continue for some time, they will sell securities for giving loans to customers at higher interest rates, thereby recouping the capital loss on the sale of securities through higher interest rates on loans.

But once the demand for loans subsides, the banks can buy back government securities now at prices lower than at which they sold, and again gain in the transaction. Thus the commercial banks' policy of portfolio adjustment raises the velocity of total money supply even in the face of a tight monetary policy thereby making the latter ineffective.

(b) The Role of Non-Bank Financial Intermediaries:

NBFIs act as a restraint on the effectiveness of monetary policy to restrict the money supply in two ways. First, they sell securities for advancing loans, and thus increase velocity in the same manner as commercial banks do, as explained above. Second, as interest rates on securities rise in a tight monetary policy, financial intermediaries raise the interest rates on deposits with them to attract more funds from savers. This induces savers to shift more idle money to the intermediaries which increase their lending power further. In this way, they are able to raise the velocity of money thereby making tight restrictive monetary policy ineffective.

(c) Methods to Make Better Use of Available Money Supply:

The private sector has evolved many ways to make better use of available supply of money which make a restrictive monetary policy ineffective. Some of the methods are the evolvement of improved methods of collecting funds by sales finance companies, borrowing funds by companies from the public at higher rates than offered by commercial banks, etc. By getting funds from sources other than the commercial banks, such institutions are able to increase the velocity of the available supply of money even under restrictive monetary policy.

2. Discriminatory:

A restrictive monetary policy is discriminatory in its effects on particular sectors of the economy. It is argued that firms that depend upon internal source of financing are not affected by a restrictive monetary policy. On the other hand, only those firms are affected that depend for funds on the banking system. In particular, a tight monetary policy "is thought to work against small businessmen, because they are poorer credit risks, and against residential construction and some types of state and local

government spending, because they are most sensitive to changes in credit cost." It may slow down or even halt spending by them.

3. Threat to Credit Market:

If the central bank rigorously tightens the credit market and investors expect continued increases in interest rates, this may lead to the drying up of loanable funds to the credit market. As a result, securities may not be sold and the credit market may cease to function.

4. Threatens Solvency of NBFIs:

A vigorous monetary policy by swiftly raising interest rates may threaten the solvency of such NBFIs as savings banks, and savings and loan associations. This is because unlike the commercial banks, they are not in a position to adjust themselves to rapidly increasing interest rates.

5. Alter Expectations of Borrowers and Lenders:

A very tight monetary policy may alter the expectations of borrowers and lenders. So they bring irreversible changes in credit market conditions. A rapid rise in interest rates may so change expectations that even when this policy is abandoned and an expansionary policy is started, lenders may be reluctant to make long-term loans in anticipation of rise in interest rates again. On the other hand, borrowers may borrow long-term funds even if they do not need them immediately in anticipation of rise in interest rates in the future.

6. Time Lags:

Another important limitation of a tight monetary policy is the existence of time lags which are related to the need of action, its recognition, and the decision and operation of actions in time. As the monetary authority is not able to adopt restrictive monetary measures in time due to these time lags, monetary policy works very slowly and hence it is not very effective in controlling inflation.

The Lags of Monetary Policy

In economics, the inside lag (or inside recognition and decision lag) is the amount of time it takes for a government or a central bank to respond to a shock in the economy. It is the delay in implementation of a fiscal policy or monetary policy.

Types of Lags in the Monetary Policy

The following points highlight the top five types of lags in the Monetary Policy. The Lags are:

1. Data lag
2. Recognition lag
3. Legislative lag
4. 4T. ransmission lag
5. Effectiveness lags.

1. Data Lag:

Prima facie, policy-makers do not know what is going on in the economy exactly when it happens. Typically, an economic change that starts at the beginning of the month becomes evident at the middle of the next month. So the data lag is about 1.5 months.

2. Recognition Lag:

Data for real economic variables are required over time as the government agencies receive more complete information. There is a recognition lag of at least two months because no policymaker pays much attention to reversals in data that occur for only one month.

3. Legislative Lag:

Unlike fiscal policy changes, which occur only once a year, monetary policy changes occur at least twice a year or, in some countries, three to four times a year. So an important advantage of monetary policy is the short legislative lag. Monetary policy changes can be legislated quickly. But the legislative lag is a major weakness.

4. Transmission Lag:

The transmission lag is the time interval between the policy decision and the subsequent change in policy instruments. This is also a more serious obstacle for fiscal policy than for monetary policy. For frequent changes in bank rate there is no transmission lag in case of monetary policy.

5. Effectiveness Lag:

The most important lag of monetary policy concerns the length of time required for an acceleration or deceleration in the money supply to influence

real output. The effectiveness lag is long and variable and makes the value of the multiplier uncertain. In economics we often see a delay between an economic action and a consequence. This is known as a time lag. An impact of time lags is that the effect of policy may be more difficult to quantify because it takes a period of time to actually occur.

Time Lags

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Example of time lags

1. Change in interest rate (macro)
2. Increase in level of investment (macro)
3. Change in price of commodity (micro)
4. Effect of devaluation (macro) (J-Curve effect)

1. Interest rate changes

If we cut interest rates, we would expect a rise in investment and consumer spending. This is because lower interest rates make it cheaper to borrow and also make it less attractive to save. Lower interest rates should lead to higher aggregate demand. However, there may be time lags for a number of reasons.

1. Fixed interest rates for borrowing and saving. Consumers may have a fixed rate mortgage. This means interest payments are fixed for say two years. Therefore, it may be over a year before homeowners actually have to face the higher interest rate.
2. Starting projects. If a firm has started an investment project, they are unlikely to stop just because of an increase in interest rates. Once they have started, they will continue to invest – whatever happens to interest rates. However, over time, the higher interest rates may prevent future investment projects from being undertaken.
3. Knowledge. Consumers don't have perfect knowledge. They may not check interest rates every month, but only become aware after a certain time.

4. Uncertainty People may wait to see if the interest rate change is temporary or permanent.
5. Bank rates Commercial banks may delay passing on the base rate cut onto consumers.
6. Lending rates. This shows after the cut in base rates in 2009, it took a few years for lending rates on loans and SVR to fall by similar amount.

Forward looking monetary policy

Time lags can make policy decisions more difficult. It is estimated interest rate changes take up to 18 months to have the full effect. This means monetary policy needs to try and predict the state of the economy for up to 18 months ahead, but this can be difficult in practise.

Effect of investment

An increase in the level of investment (gross fixed capital formation) will have both short-run and long-run effects. Investment increases long-run aggregate supply. In the short-run, we will see an increase in AD. However, the main effect of investment is an increase in productive capacity. This will lead to an increase in the long-run trend rate of economic growth. A country which increases the share of GDP devoted to investment may see a fall in consumption in short-run because higher investment requires higher saving. However, in the long-run, the investment can enable increased output and higher living standards.

Time lags and elasticity (micro)

If price rises, then in the short-term, demand is often price inelastic. This is because consumers are in the habit of buying the good and are less aware of alternatives. However, if the price rise is permanent, they may start to make more effort to look for alternatives. Therefore, over time, demand often becomes more price elastic.

When the price of petrol tripled in the mid-1970s, demand was initially very price inelastic. People with petrol cars still needed to get to work. However, over time, consumers and producers respond to this change in price by developing more fuel efficient cars or even buying an electric car. Over-time, demand has become more price elastic for petrol. In the short-

term a higher price of oil only causes a small fall in demand (13 to 12). However, over time, demand becomes more price elastic and there is a bigger fall in demand. Short-run, long run and very-long run. If there is a rise in the price of oil in the short run, demand may be quite inelastic.

1. In the long-run, firms can produce more fuel efficient cars and consumers switch to public transport
2. In the very long-run, higher oil prices act as an incentive and signal to encourage new technology which diminishes the need for oil, for example, in recent decades, there has been an improvement in the efficiency of solar panels.

J-Curve effect

The J-Curve effect states that the impact of devaluation will vary as time progress. Devaluation makes exports cheaper. In the short-term demand is inelastic, therefore, we get a fall in the value of exports and the current account deteriorates. However, in the long-term, demand for exports is more price elastic, and we get an improvement in the current account.

Irrational exuberance and time lags

It is argued that financial markets can be subject to irrational exuberance. Suppose house prices rise – rising house prices can encourage more people to enter the market to try and benefit from rising house prices. This fuels the rise in house prices even further. Therefore, if we start with a policy of lower interest rates, this causes a rise in house price, but in the right circumstances, it can lead to a boom in prices. But, at some point the boom comes to an end.

Other examples of time lags

Nearly every issue in economic can be subject to time-lags. For example, if there is a shortage of nurses. This, in theory, should push up wages of nurses. In the very-long run, this may encourage more people to train as a nurse. A shortage of nurses may put pressure on the government to alter its immigration policies.

Unit-V

Banking System and Financial Reforms

Introduction

A banking system is a group or network of institutions that provide financial services for us. These institutions are responsible for operating a payment system, providing loans, taking deposits, and helping with investments. The concept of social banking was to provide banking for the poor population, working for their developmental needs, providing them with easy formal credit, minimal requirements to open accounts, ease of access and friendly staff etc.

Social banking

The term 'social banking' has been around since the 1950s, and traditionally referred to sustainable investment. Now, however, the term is more likely to mean banking through social media, peer-to-peer (P2P) lending or the development of online financial communities. These types of lending are seen as a democratisation of finance, and are often presented as solutions to problems that the traditional banking system can't or won't address.

Banking with benefits

Convenience and communication are central to many social banking offerings. Clever use of technology has meant that borrowing, balance checks and international money transfers have become as easy as sending an email; some firms even provide smart phone-based solutions for on-the-go financial management.

Understanding Social Banking

India lives in villages and they comprise a major portion of the Indian population. Financial inclusion will be complete if banking services are made available at ease to the people who are totally unaware of its benefits and are too poor to start with a minimum balance requirement. The mainstream banking practices in India has marginalised a large section of the poor population of the country. The concept of social banking was to provide banking for the poor population, working for their developmental needs, providing them with easy formal credit, minimal requirements to

open accounts, ease of access and friendly staff etc. Thus, broadly stating, banking system in which banks subsidize the provision of banking services to poor and the orientation is towards serving the masses is known as social banking.

Social banking system has caught the eye of bankers internationally especially after the economic crisis which left many homeless, jobless and without any savings. Financial institutions which were severely hit were the ones which were completely disconnected with the ground realities in society and real sector. Thus, post crisis several jurisdictions introduced legislations and measures for keeping banks relevant to the changing needs and sources of society. Thus, social banking will aim for mass welfare; introduce schemes which will fall in line with the development of society. It also strives to make various banking services and products affordable to the society especially the weaker section by introducing various technological breakthroughs and cutting overhead costs.

They should work towards making society free of poverty and thereby increasing living standards by giving those opportunities to join mainstream banking. India has always worked for the welfare of its poorer sections of society by way for various cooperative societies, cooperative banks, Self-help groups, Regional Rural Banks, etc. Financial inclusion is the main focus of many policies and plans of the Central Government. The Pradhan Mantri Jan Dhan Yojana (2014) is one such massive initiative which focuses on providing bank accounts to the poorest of poor in the country without any hassles or formal requirements. Availability of banking services in any village or remote area will have to include the following:

1. Availability of basic savings bank account with overdraft facility
2. Availability of remittance product for Electronic Benefit Transfer
3. Availability of Pure Savings Product
4. General Credit Card, Kisan Credit Card, etc.

There are many challenges which are faced by banks and other financial institutions to make credit available to the masses in a sustainable and cost-effective manner. Thus, banks have to continuously revise their pricing policies to remain socially viable without making losses. Banking

staff has to be sufficiently sensitive to the needs and wants of the vulnerable sections of society along with being technology- savvy. India has a strong policy framework in place and needs to work on effective implementation channels to improve quality of life for masses and making them a part of mainstream Indian economy.

Meaning of innovative banking

Innovation means something new or something which had not been done before. The same goes for banking section as well. There are many sections in banks which are going through or have gone through innovation in recent past. They are no longer restricted to age-old (traditional) methods. Thus, to increase the business avenues and capture the new market banks are resorting to innovation. This term innovative banking is being in use a lot nowadays. There are many types of banking facilities that the banks have started in recent years. These are the following types of innovative banking used by the banks these days:

Mobile Banking

Mobile banking has been a revolution in the past few years. It has completely changed the way banking systems are working. Thus, it is a system that allows customers to perform many types of financial related services through a smart phone. These include services like ATM locations, bill payment alert, inter or intra bank payments, bill payments, and many more. So, services are available at the fingertips of every person.

Internet Banking

Internet coverage in the last few years has increased drastically. This service is online banking, web banking, or virtual banking. Thus, this banking service allows its users to execute and perform any financial transaction or service with the help of the Internet. The banking facilities are provided traditionally at a local bank outlet. This includes bill payments, a deposit of money, borrowing of money, and other services are all available at one place. This service happens with the use of the Internet facility. In India, ICICI Bank was the first bank to avail its customers the facility of Internet banking.

Retail and Wholesale Banking

Like other businesses, the banking sector to have evolved into retail and wholesale banking and it is also one of the parts of innovative banking. Here, retail banking refers to the banking in which the transactions which are done daily by the banks are executed with consumers. Thus, this is done instead of transactions with other banks or other corporate.

The services under this are:

1. Personal loans
2. Savings accounts
3. Checking accounts
4. Debit card
5. Credit card

Wholesale banking is completely the opposite of retail banking. It refers to the business being conducted with the business and industrial entities. Thus, in wholesale banking, trading houses, domestic companies, and multinational companies are included. So, there are many services which are included in the wholesale banking and these services are:

1. Value-added services
2. Fund based services
3. Non-fund related services
4. Internet banking
5. Multinational and offshore banking

Multinational banking is the banks that are present in more than one country. The main services are available in more than one country in these services. Thus, these banks are also called international banks. The first bank to offer its services outside India was Indian bank in 1946. Currently, Bank of Baroda has the maximum number of the overseas franchise in India. While under offshore banking, the banking activities are performed in the currencies that are different than the currency of the country in which the bank account is opened. The banking services in these banks remain the same though.

Narrow and Universal Banking

Narrow banking includes keeping together the higher part of deposits in risk-free assets like government securities. In India, this is basically in

performance to reduce the size of the NPAs. While commercial, investment, insurance, and many other financial activities combine to form universal banking. Thus, in this practice every product is available.

Deposit Insurance corporation of India

Deposit Insurance and Credit Guarantee Corporation (DICGC) is a wholly-owned subsidiary of the Reserve Bank of India (RBI). It provides deposit insurance that works as a protection cover for bank deposit holders when the bank fails to pay its depositors.

Functions Deposit Insurance Corporation

Deposit insurance, as we know it today, was introduced in India in 1962. India was the second country in the world to introduce such a scheme - the first being the United States in 1933. Banking crises and bank failures in the 19th as well as the early 20th Century (1913-14) had, from time to time, underscored the need for depositor protection in India. After the setting up of the Reserve Bank of India, the issue came to the fore in 1938 when the Travancore National and Quilon Bank, the largest bank in the Travancore region, failed. As a result, interim measures relating to banking legislation and reform were instituted in the early 1940s. The banking crisis in Bengal between 1946 and 1948, once again revived the issue of deposit insurance. It was, however, felt that the measures be held in abeyance till the Banking Companies Act, 1949 came into force and comprehensive arrangements were made for the supervision and inspection of banks by the Reserve Bank.

It was in 1960 that the failure of Laxmi Bank and the subsequent failure of the Palai Central Bank catalyzed the introduction of deposit insurance in India. The Deposit Insurance Corporation (DIC) Bill was introduced in the Parliament on August 21, 1961 and received the assent of the President on December 7, 1961. The Deposit Insurance Corporation commenced functioning on January 1, 1962.

The Deposit Insurance Scheme was initially extended to functioning commercial banks. Deposit insurance was seen as a measure of protection to depositors, particularly small depositors, from the risk of loss of their savings arising from bank failures. The purpose was to avoid panic and to

promote greater stability and growth of the banking system - what in today's argot are termed financial stability concerns. In the 1960s, it was also felt that an additional the purpose of the scheme was to increase the confidence of the depositors in the banking system and facilitate the mobilisation of deposits to catalyst growth and development.

When the DIC commenced operations in the early 1960s, 287 banks registered with it as insured banks. By the end of 1967, this number was reduced to 100, largely as a result of the Reserve Bank of India's policy of the reconstruction and amalgamation of small and financially weak banks so as to make the banking sector more viable. In 1968, the Deposit Insurance Corporation Act was amended to extend deposit insurance to 'eligible co-operative banks'. The process of extension to cooperative banks, however took a while it was necessary for state governments to amend their cooperative laws. The amended laws would enable the Reserve Bank to order the Registrar of Co-operative Societies of a State to wind up a co-operative bank or to supersede its Committee of Management and to require the Registrar not to take any action for winding up, amalgamation or reconstruction of a co-operative bank without prior sanction in writing from the Reserve Bank of India. Enfolding the cooperative banks had implications for the DIC - in 1968 there were over 1000 cooperative banks as against the 83 commercial banks that were in its fold. As a result, the DIC had to expand its operations very considerably.

The 1960s and 1970s were a period of institution building. 1971 witnessed the establishment of another institution, the Credit Guarantee Corporation of India Ltd. (CGCI). While Deposit Insurance had been introduced in India out of concerns to protect depositors, ensure financial stability, instil confidence in the banking system and help mobilise deposits, the establishment of the Credit Guarantee Corporation was essentially in the realm of affirmative action to ensure that the credit needs of the hitherto neglected sectors and weaker sections were met. The essential concern was to persuade banks to make available credit to not so creditworthy clients.

In 1978, the DIC and the CGCI were merged to form the Deposit Insurance and Credit Guarantee Corporation (DICGC). Consequently, the

title of Deposit Insurance Act, 1961 was changed to the Deposit Insurance and Credit Guarantee Corporation Act, 1961. The merger was with a view to integrating the functions of deposit insurance and credit guarantee prompted in no small measure by the financial needs of the erstwhile CGCI. After the merger, the focus of the DICGC had shifted onto credit guarantees. This owed in part to the fact that most large banks were nationalised. With the financial sector reforms undertaken in the 1990s, credit guarantees have been gradually phased out and the focus of the Corporation is veering back to its core function of Deposit Insurance with the objective of averting panics, reducing systemic risk, and ensuring financial stability.

Defects of Indian Banking System:

Despite the tremendous progress made by Indian commercial banks during the last two decades, they are still faced with a number of problems which are as under:

1. Low Profitability:

Banks in India have low profitability. Irregularities and corruption in lending operations, misappropriation, frauds, rising operating costs, etc. have led to decline in their profitability. During 1992-93 and 1993-94, scheduled commercial banks incurred a net loss of Rs. 4,150 crores and Rs. 3,625 crores respectively. But in 2002-03 they earned a net profit of Rs. 17,077 crores.

2. Growing Non-Performing Assets:

The non-performing assets of Indian commercial banks have been growing rapidly. Non-performing assets consist of:

1. Debts recalled,
2. Suit-filed accounts i.e. where legal action or recovery proceedings have been initiated,
3. Decreed debts i.e. where suits have been filed and decrees obtained; and
4. Debts classified as bad and doubtful.

In the case of public sector banks ending March 2003 non-performing assets accounted for 9.36 per cent of their gross advances.

3. Low Capital Base:

The capital base of Indian banks in India was very low and not uniform. In the case of 28 public sector banks, the capital base was the same as at the time of their nationalisation. For Private sector banks, the required capital was linked to their geographical location while foreign banks operating in India were required to have foreign funds equivalent to 3.5 per cent of the deposits deployed in Indian business as at the end of each year. As a measure of capital adequacy, there was no weighted risk-asset ratio system for banks in India till March, 1993. There were 2 commercial banks with a ratio of less than 9% in 2002 – 03.

4. Window-Dressing of Balance Sheets:

Despite compulsory audit of banks, many banks indulge in window-dressing of their balance sheets. They artificially, increase their deposits in the last week of the fiscal year.

5. Favouritism in Advancing Loans:

Some banks favour certain companies in advancing loans. This is not only in the case of public sector banks. Often such loans turn into bad debts, thereby weakening the financial position of the concerned banks.

6. Bad Quality of Loan Portfolios:

The quality of loan portfolios of a number of banks is very bad. Often, they advance loans under extraneous (or political) pressures. They extend letters of credit and guarantee limits as a routine affair without adopting commercial procedure in granting loans.

7. Indulge in Share Speculation:

Many banks indulge in share speculation, thereby mis-utilising public deposits. A number of public sector banks and their subsidiaries in the form of mutual funds have been found to be involved in share speculation. The recent securities scam involving Harsh ad Mehta and other brokers revealed the role of a number of public and private sector banks in the entire episode.

8. Irregularities in Maintaining Accounts:

Many banks resort to large scale irregularities in operating their accounts. Often, bad accounts of one bank have been taken over by the other bank without proper scrutiny.

9. Banks as Sick Units:

As a corollary to the above, many banks operate as sick units. Consequently, they are amalgamated, dissolved or liquidated. During 1985-91, ten banks were amalgamated. As on 30 June, 1991, three banks were dissolved. New Bank of India became so sick that it was merged with Punjab National Bank in 1993. Even during 1999-2000, three nationalised banks were sick.

10. Social Banking Inadequate:

Despite the fact that a number of schemes have been in operation to help the weaker sections of Indian society, banks mainly cater to the needs of the corporate sector. For instance, bank credit to medium and large scale industry was 33.7 per cent in 1999-2000 to agriculture 9.5 per cent, to small scale industries 8.7 per cent and to trade 5.7 per cent.

11. Dual Control:

The Indian banking system suffers from dual control of the Government and Reserve Bank. It is over-regulated and over-administered. The credit decisions in individual cases and matters pertaining to internal management have been subjected to excessive administrative and political pressures and interferences. The investing and lending programmes are directed from above. So are the appointments of chief executives and directors.

Suggestions to Improve Working: Narasimham Committee Report:

From time to time, a number of committees have suggested measures to improve the working of the' Indian banking system. However, we give a summary of the recommendations of the Narasimham Committee of 1991.

- Structure of the banking sector should be revamped so as to have 3 or 4 large banks which could become international in character.
- Eight to ten national banks with a network of branches throughout the country should be engaged in universal banking.
- Local bank operations should be confined to a specific region.
- Rural banks, including RRBs, should operate only in rural areas and their business should be predominantly to engage in financing of

agriculture and allied activities, but based on profitability considerations.

- One or more rural banking subsidiaries by each public sector bank should be set up to take over all its rural branches.
- RRBs should be allowed to engage in all types of banking business.
- Abolition of branch licensing and opening or closing of branches should be left to the individual banks.
- Foreign banks should be permitted to open offices in India as branches or as subsidiaries.
- Foreign banks should be subject to the same requirements as applicable to Indian banks.
- Foreign operations of Indian banks should be rationalised.
- Computerisation of bank operations needs to be stepped up.
- No need to set up a banking commission.
- Individual banks should be permitted to recruit officers.
- Inspection by supervisory staff should be based on the internal audit and internal inspection reports.
- Duality of control over the banking system between the RBI and the Banking Division of the Ministry of Finance should end, and the RBI should be the primary agency for regulation of the banking system.
- To perform supervisory function over the banks and other financial institutions, there should be a separate authority to operate as a quasi-autonomous body under the aegis of the Reserve Bank.
- Appointment of chief executives of the banks and directors should be depoliticised.
- SLR requirements of banks should be brought down to 25 per cent over a period of five years.
- CRR should be progressively reduced.
- Directed credit programmes should be phased out.
- The priority sector should be redefined.
- There should be deregulation of interest rate so as to reflect emerging market trends.

- The commercial banks should achieve a minimum 4 per cent capital adequacy ratio in relation to risk weighted assets by March, 1993.
- Banks should adopt uniform accounting practices
- They should impart transparency to balance sheets and make full disclosure in them.
- Government should set up Special Tribunals to speed up the process of recovery of loans.
- An Assets Reconstruction Fund (ARF) should be established to take over from banks and financial institutions a portion of their bad and doubtful debts at a discount

The recommendations of the Narasimham Committee would have far reaching implications on the working of the banking system. They have not yet been implemented except in the case of reduction of SLR.

Major Recommendations of RBI for Indian Banks

Today, banks play an important role in the payment and settlement system of financial transactions. The introduction of liberalisation measures in the banking sector and the emergence of new private sector and foreign banks equipped with latest technology, led to an increase in competition in the banking sector. Technology up gradation is taking place in public sector banks PSBs in a phased manner. Computerisation is increasingly being applied in day to day deposits and loan operations, but the pace at which it has moved so far, has been somewhat limited. Moreover, there is a need for computerisation in a large number of areas of operations of banks, with customer service as the main focus.

To further upgrade the existing technology in the banking sector and also to suggest measures for implementation, the Reserve Bank appointed a Committee on Technology Up gradation in the Banking Sector. The Committee in its report, submitted in July 1999, recommended a new legislation on electronic-funds- transfer system to facilitate multiple payment systems to be set up by banks and financial institutions.

The major recommendations of the committee are summarised as follows:

1. Communication infrastructure and usage of INFINET:

- The approach that could be considered for improving the effectiveness of VSAT network aim at enhancing the transponder capacity to the extent feasible and the number of out routes as the demand grows.
- For both inter-bank and intra-bank applications, it is necessary to have an application architecture keeping in mind that the INFINET backbone network will be VSAT based.

2. Standardisation and Security:

1. There should be an appropriate institutional arrangement for key management and authentication by way of a certification agency. RBI may consider appointing IDRBT as the certification agency for security management.
2. Banks should adopt widely used standard of cryptography procedures to prevent data tamper during transmission.
3. The technology should be allowed to evolve into standard-based solutions for multi-vendor heterogeneous environment working co-operatively and collectively for EFTPOS, including the debit, credit and smart cards based operations.

3. Computerisation of Government Transactions:

1. There is a need to computerise all branches of banks dealing with government transactions.
2. The computerisation of government departments should be synchronised with the computerisation of bank branches dealing with government transactions.
3. All PAOs/Circle offices should be computerised not later than March 31, 2001 and DDO/Treasury offices before March 31, 2002 in alignment with the computerisation of FPBs and dealing branches.

4. Data Warehousing, Data Mining and Management Information System:

1. A robust MIS founded on data warehousing and data mining at individual bank level is essential for implementing various regulatory guidelines including the latest one on ALM.

2. A Task Force may be set up by IBA to explore feasible methodology for working out a unique identification system for individual customer data bases at banks.

5. Legal Framework for Electronic Banking:

i. The Reserve Bank may promote amendment to the Reserve Bank of India Act, 1934 and assume the regulatory and supervisory powers on payment and settlement systems. Simultaneously, the RBI may promote a new legislation on Electronic Funds Transfer System to facilitate multiple payment system, to be set up for banks and financial institutions.

ii. The RBI and IBA should pursue with the Department of Telecommunications (DoT)/ other competent authorities to permit encryption of data files/messages transmitted through communication channels for facilitating easier access to remotely located branches to the INFINET network.

6. Other Related Issues:

i. Re-engineering:

- Banks may choose the branches and areas of operation where they have already introduced a certain degree of automation and computerisation and review the systems and procedures in these branches/areas to adapt them to the technology that is newly introduced.
- The newly established private banks which have the advantage of starting with the latest technology from the very beginning, should take up the process of re-engineering in right earnest.
- Each bank should chalk out a time-bound programme, synchronising with the level of computerisation being planned by it, stemming from the directions of the top management.

7. Issues Relating to Human Resource Development:

Education of staff on IT should be given due importance. The training establishments of the banks should be strengthened with adequate personnel and other infrastructure facilities, to impart necessary IT training to all levels o staff.

8. Sharing of Experiences on Technology Implementation:

The meetings of CPPD Chiefs should be sufficiently frequent enough to be effective. Meetings by the IBA for this purpose, once in two months would be useful.

Technological Progress in Banks:

Several banks have been positioning themselves as a one-stop shop financial service provider with a fairly exhaustive range of products, including deposit products, loans, credit cards, debit cards, depository (custody services), investment advice, bill payments and various transactional services. These apart, banks have also been entering into the business of selling third-party products such as mutual funds and insurance to the retail customers. To provide their customers greater flexibility and convenience as well as to reduce servicing costs, banks have been investing to computerise their branches and in new delivery channels such as ATMs, phone banking, internet banking and mobile banking.

As on March 31, 2005, public sector banks had incurred an expenditure of Rs. 9,487 crore on computerisation and development of communication networks. Computerisation of banking business has received high importance in recent years. While new private sector banks, foreign banks and a few older private sector banks have already put in place "core banking solutions," public sector banks are adopting similar systems. The directive by the Central Vigilance Commission (CVC) to achieve 100 per cent computerisation has resulted in renewed vigour in these banks towards fulfilment of this requirement which could go a long way to improve customer service.

All PSBs, except eight, had achieved 100 per cent fully/partially computerisation of their branches. As at end-March 2005, more than 90 per cent branches of public sector banks were fully or partially computerised. Out of 27 public sector banks, as many as nine public sector banks had 100 per cent computerised branches. Nineteen banks had more than 50 per cent computerised branches. Total number of ATMs installed in the country was 17,642 at end-March 2005. New private sector banks constituted the largest share of ATMs, followed by the SBI group, nationalised banks, old private

sector banks and foreign banks. While nationalised banks and old private sector banks had more on-site ATMs than off-site ATMs, SBI group, new private sector banks and foreign banks had more off-site ATMs than onsite ATMs.

Although cash continues to be used heavily in retail transactions in India, the use of cheques and several other payment instruments such as credit cards, debit cards and smart cards, on the whole, has been increasing in recent years. The use of payment cards, both in volume and value terms, more than doubled in 2004-05. The use of electronic payments in the form of ECS, EFT and SEFT is also on increase.

Reforms in the Banking Sector

In the context of economic liberalisation and growing trend towards globalisation (external liberalisation), various banking sector reforms have been introduced in India to improve the operation efficiency and upgrade the health and financial soundness of banks so that Indian banks can meet internationally accepted standards of performance.

Reforms in the banking sector were introduced on the basis of the recommendations of different committees:

1. The first Narasimhan Committee (1991),
2. The Verma Committee (1996),
3. The Khan Committee (1997), and
4. The Second Narasimhan Committee (1998).

The First Phase of Reforms:

The banking sector reforms are directed toward improving the policy framework, financial health and the institutional framework:

(a) Change in Policy Framework:

Improvement in policy framework has been undertaken by reducing the Cash Reserve Ratio (CRR) to the initial standard and phasing out Statutory Liquidity Ratio (SLR), deregulation of interest rates, widening the scope of lending to priority sectors and by linking the lending rates to the size of advances.

(b) Improving Financial Health:

Attempts to improve the financial soundness of the banking sector have been made by prescribing prudential norms. Moreover, steps have been taken to re-duct the proportion of Non-Performing Assets (NPAs).

(c) Improvements of Institutional Framework:

Such improvements have been achieved in three ways:

1. Recapitalisation,
2. Creating a competitive environment, and
3. Strengthening the supervisory system.

Second Phase Reforms:

The first phase of the bank sector reforms is completed. The second generation reforms which are underway concentrate on strengthening the very foundation of the banking system in three ways: by reforming the structure of the bank industry, technological upgradation, and humaning resource development.

Prudential Regulation:

There are two types of banking regulations—economic and prudential. In the pre-reform era (before July 1991) the Reserve Bank of India (RBI) regulated banks by imposing constraints on interest rates, tightening entry norms and directed lending to ensure judicious end use of bank credit. However, such economic regulation of banks hampered their productivity and efficiency. Hence, the RBI switched over to prudential regulation which calls for imposing minimum limit on the capital level(s) of banks.

The objective is to maintain the wealth of banks in particular and to ensure the soundness of the financial system in general. It allows much greater scope for the free play of market forces than what is permitted by economic regulations alone. On the basis of recommendations of the Committee on Banking Sector Reforms, April 1998 (the second Narasimhan Committee) the RBI issued prudential norms. The major objective of setting such norms was to ensure financial safety, soundness and solvency of banks. These norms are directed toward ensuring that banks carry on their operations as prudent entities, are free from undue risk-taking, and do not violate banking regulations in pursuit of profit.

The main focus of reforms was in three areas:

- NPAs,
- Capital adequacy, and
- Diversification of operations,

(i) Non-Performing Assets (NPAs):

One serious problem faced by the public sector banks in the 1990s was a high proportion of NPAs. An NPA is an asset from which income is overdue for more than six months. According to the second Narasimhan Committee report (1998), "No other single indicator reflects the quality of assets and their impact on banks' viability than the NPA figures in relation to advances." The gross NPAs of scheduled commercial banks (SCBs) increased over the period March 31, 1998 to March 31,2002 from Rs 50,815 crores to Rs 70,904 crores. Gross NPA of public sector banks (PSBs) were also correspondingly higher. However, the share of PSBs in total NPAs declined from 90% to 80% during the period (1998-2002).

Furthermore, there was a decline in the ratio of gross NPAs and net NPAs, measured as percentage of advances as well as assets. These ratios represent the quality of banks assets and are thus taken as measures of soundness of the banking system. Gross and net NPAs as a proportion of gross advances and total assets of SCBs declined substantially during this period. However, the ratio of gross and net NPAs as a proportion of gross advances and of total assets increased substantially for new private sector banks from 2001-02 due to the merger of strong banks with weak banks. But the root cause of increase in NPAs is the increasing proportion of bad debt. In case of some banks, net NPAs even exceeded their net worth. This means that such banks had negative net worth.

RBI Guidelines:

The RBI offered three options to banks to restructure bad debts:

i. Debt Recovery Tribunals (DRTs);
ii. Settlement Advisory Committees (SACs); and
iii. Recapitalisation from the Government.

Guidelines on SACs were revised in July 2002 to provide a uniform, simplified, non-discriminatory and non-discretionary mechanism for the

recovery of the stock of NPAs of all banks. Altogether, seven DRTs have been set up for speedy recovery of loans. Finally with a view to enhancing the effectiveness of DRTs, the Central government amended the Recovery of Debts due to Banks and Financial Institutions Act in Jan, 2002.

(ii) Capital Adequacy Ratio:

Banking sector reforms were initiated by implementing prudential norms consisting of Capital Adequacy Ratio (CAR). The core of such reforms has been the broadening of prudential norms to the internationally accepted standards. In 1988 the Basle Committee for international banking supervision made an attempt worldwide to reduce the number of bank failures by tying a bank's CAR to the riskiness of the loans it makes. For instance, there is less chance of a loan to a government going bad than a loan to, say, an internet business. So, the bank will not have to hold as much capital in reserve against the first loan as against the second.

Throughout the world, commercial banks are under the legal obligation to maintain minimum capital funds for the sake of safety. The reason is that a bank's capital base is vitally important for its long-term variability. It also acts as a shock absorber in the medium term since it gives the power to absorb shocks and thus avoid the risk of bankruptcy. A bank's capital funds must be equivalent to the prescribed ratio on the aggregate of the risk weighted assets and other exposures. CAR is a measure of the amount of a bank's capital expressed as a percentage of its risk weighted credit exposures. It is related to risk weight assigned to asset acquired by banks in the normal process of conducting business. It is also related to the proportion of capital to be maintained on such aggregate risk weighted assets.

CAR is calculated on the basis of risk weightage on assets in the books of accounts of banks. Any type of business transaction carried out by a bank involves a certain specific type of risk. So, for the sake of safety, a portion of capital has to be set aside to make provision for this risk. This portion acts as a hedge against uncertainty, i.e., a 'secret reserve' to absorb any possible future loss. Higher Capital Adequacy will improve the efficiency of banks in two ways:

(i) By forcing banks to reduce operating costs, and

(ii) By improving long-term viability through risk reduction.

Capital adequacy enables banks to mobilise more capital at reasonable cost. The two important new parameters which are crucial for the growth of banks are asset quality and risk weightage. On the basis of the Basle Committee proposals (1988), two tiers of capital have been prescribed for Indian SCBs: Tier I—capital which can absorb losses without forcing a bank to stop trading, and Tier II—capital which can absorb losses only in the event of a winding up.

Following the recommendations of the first Narasimhan Committee (1991) the RBI directed the banks to maintain a minimum capital of 8% as the risk-weighted assets; the second Narasimhan Committee (1998) suggested raising the ratio further. In March 2002, the capital to risk-weighted asset ratio (CRAR) was raised to 9%. It was subsequently raised to 10% with a view to tightening of the capital adequacy norm further. At the end of March 2002, all SCBs (except five) had CRARs in excess of the stipulated 9%. The capital of PSBs has increased through government capital infusion, equity issues to public, and retained earnings.

(iii) Diversification in Bank Operations:

During the period of economic liberalisation PSBs have diversified their activities considerably. They have moved in new areas such as mutual funds, merchant banking, venture capital funding and other para-banking activities such as leasing (lease financing), hire-purchase, factoring and so on. The main objective has been to make profits by deriving maximum economies of scale and scope, enlarging customer base and providing various types of banking services under one umbrella (both directly as also through subsidiaries). Many banks such as the SBI have become a one-stop financial services centre.

Financial Sector Reforms in India Since 1991

Let us make in-depth study of the importance and types of financial sector reforms in India since 1991.

Importance:

Financial sector reforms refer to the reforms in the banking system and capital market. An efficient banking system and a well-functioning capital market are essential to mobilize savings of the households and channel them to productive uses. The high rate of saving and productive investment is essential for economic growth. Prior to 1991 while the banking system and the capital market had shown impressive growth in the volume of operations, they suffered from many deficiencies with regard to their efficiency and the quality of their operations.

The weakness of the banking system was extensively analyzed by the committee (1991) on financial sector reforms, headed by Narasimham. The committee found that banking system was both over-regulated and under-regulated. Prior to 1991 system of multiple regulated interest rates prevailed. Besides, a large proportion of bank funds were pre-empted by Government through high Statutory Liquidity Ratio (SLR) and a high Cash Reserve Ratio (CRR). As a result, there was a decrease in resources of the banks to provide loans to the private sector for investment.

This pre-emption of bank funds by Government weakened the financial health of the banking system and forced banks to charge high interest rates on their advances to the private sector to meet their needs of credit for investment purposes. Further, the lack of transparency in the accounting practice of the banks and non-application of international norms by the banks meant that their balance sheets did not reflect their underlying financial position.

This was prominently revealed by 1992 scarcity scam triggered by Harshad Mehta. In this situation the quality of investment portfolio of the banks deteriorated and culture of' non-recovery' developed in the public sector banks which led to a severe problem of non-performing assets (NPA) and low profitability of banks. Financial sector reforms aim at removing all these weaknesses of the financial system. Under these reforms, attempts have been made to make the Indian financial system more viable, operationally efficient, more responsive and improve their allocative efficiency. Financial reforms have been undertaken in all the three segments

of the financial system, namely banking, capital market and Government securities market.

Types of Financial Sector Reforms:

We explain below various reforms in these three segments in financial sector initiated since 1991:

1. Reduction in Statutory Liquidity Ratio (SLR) and Cash Reserve Ratio (CRR):

An important financial reform has been the reduction in Statutory Liquidity Ratio (SLR) and Cash Reserve Ratio (CRR) so that more bank credit is made available to the industry, trade and agriculture. The statutory liquidity ratio (SLR) which was as high as 39 per cent of deposits with the banks has been reduced in a phased manner to 25 per cent. It may be noted that under statutory liquidity ratio banks are required to maintain a minimum amount of liquid assets such as government securities and gold reserves of not less than 25 per cent of their total liabilities. In 2008, statutory liquidity ratio was reduced to 24 per cent by RBI. Similarly, cash reserve ratio (CRR) which was 15 per cent was reduced over phases to 4.5 per cent in June 2003. It may be noted that reduction in CRR has been possible with reduction of monetized budget deficit of the government and doing away with the automatic system of financing government's budget deficit through the practice of issuing ad hoc treasury bills to the Central Government.

On the other hand, reduction in Statutory Liquidity Ratio (SLR) has been possible because efforts have been made by government to reduce fiscal deficit and therefore its borrowing requirements. Besides, reduction in SLR has become possible because of a shift to payment of market-related rates of interest on government securities. Since the government securities are free from any risk and now bear market-related interest rates, the banks may themselves feel inclined to invest their surplus funds in these securities, especially when demand for credit by the industry and trade is not adequate.

The reduction in CRR and SLR has made available more lendable resources for industry, trade and agriculture. Reductions in CRR and SLR

also made possible for Reserve Bank of India to use open market operations and changes in bank rate as tools of monetary policy to achieve the objectives of economic growth, price stability and exchange rate stability. Thus, Dr. C. Rangarajan, the former Governor of Reserve Bank of India, says, "As we move away from automatic monetisation of deficits, monetary policy will come into own. The regulation of money and credit will be determined by the overall perception of the Central monetary authority on what appropriate level of expansion of money and credit should be depending on how the real factors in the economy are evolving".

2. End of Administered Interest Rate Regime:

A basic weakness of the Indian financial system was that interest rates were administered by the Reserve Bank/Government. In the case of commercial banks, both deposit rates and lending rates were regulated by Reserve Bank of India. Before 1993, rate of interest on Government Securities could be maintained at low levels through the means of high Statutory Liquidity Ratio (SLR). Under SLR regulation commercial banks and certain other financial institutions were required by law to invest a large proportion of their liabilities in Government securities. The purpose behind the administered interest-rate structure was to enable certain priority sectors to get funds at concessional rates of interest. Thus the system of administered interest rates involved cross subsidization; concessional rates charged from primary sectors were compensated by higher rates charged from other non-concessional borrowers.

The structure of administered rates has been almost totally done away with in a phased manner. RBI no longer prescribes interest rates on fixed or time deposits paid by their banks to their depositors. Banks have also been freed from any prescribed conditions of premature withdrawal by depositors. Individual banks are free to determine their conditions for premature withdrawal. Currently, there is prescribed rate of 3.5 per cent for Savings Bank Accounts. Note that Savings Bank Account are actually used by the individuals as current account even with cheque-book facility. Since the banks' cost of servicing these accounts is high, rate of interest on them is bound to be low. Besides, there is lower interest rate ceilings prescribed for

foreign currency denominated deposits from non-resident Indians (NRI). Such a lower prescribed ceiling is required for managing external capital flows, especially short-term capital flows, till we switch over to liberalisation of capital account.

Lending rates of interest for different categories which were earlier regulated have been gradually deregulated. However, RBI insists upon transparency in this regard. Each bank is required to announce prime lending rates (PLRs) and the maximum spread it charges. Maximum spread refers to the difference between the lending rate and bank's cost of funds.

Interest on smaller loans up to Rs. 2,00,000 are regulated at concessional rates of interest. At present, the interest rate on these smaller loans should not exceed the prime lending rates. Besides, lending interest rates for exports are also prescribed and are linked to the period of an ailment. Changes in prescribed interest rates for exports have been often used as an instrument to influence repatriation of export proceeds. Thus, except prescribed lending rates for exports and small loans up to Rs. 2, 00,000, the lending rates have been freed from control. Banks can now fix their lending rates as per their risk reward perception of borrowers and purposes for which bank loans are sought.

3. Prudential Norms: High Capital Adequacy Ratio:

In order to ensure that financial system operates on sound and competitive basis, prudential norms, especially with regard to capital-adequacy ratio, have been gradually introduced to meet the international standards. Capital adequacy norm refers to the ratio of paid-up capital and reserves to deposits of banks. The capital base of Indian banks has been very much lower by international standards and in fact declined over time. As a part of financial sector reforms, capital adequacy norm of 8 per cent based on risk-weighted asset ratio system has been introduced in India. Indian banks which have branches abroad were required to achieve this capital-adequacy norm by March 31, 1994. Foreign banks operating in India had to achieve this norm by March 31, 1993.

Other Indian banks had to achieve this capital adequacy norm of 8 per cent latest by March 31, 1996. Banks were advised by RBI to review

their existing level of capital funds as compared to the prescribed capital adequacy norm and take steps to increase their capital base in a phased manner to achieve the prescribed norm by the stipulated date. It may be noted that Global Trust Bank (GTB), a private sector bank, whose operations had to be stopped by RBI on July 24, 2004 had a capital adequacy ratio much below the prescribed prudent capital adequacy ratio norm. In this regard, link between capital adequacy and provisioning is worth noting. Capital adequacy norm can be met by the banks after ensuring that adequate capital provisions have been made.

To achieve this capital adequacy norm, Government had come in to provide capital funds to some nationalized banks. Some stronger public sector banks raised funds from the capital market by selling their equity. Law was passed to enable the public sector banks to go to the capital markets for raising funds to enhance their capital base. Banks can also use a part of their annual profits to enhance their capital base (that is, ploughing back of retained earnings into investment).

4. Competitive Financial System:

After nationalization of 14 large banks in 1969, no bank had been allowed to be set up in the private sector. While the importance and role of public sector banks in Indian financial system continued to be emphasised, it was however recognized that there was urgent need for introducing greater competition in the Indian money market which could lead to higher efficiency of the financial system. Accordingly, private sector banks such as HDFC, Corporation Bank, ICICI Bank, UTI Bank, IDBI Bank and some others have been set up. Establishment of these banks has made substantial contribution to housing finance, car loans and retail credit through credit card system. They have made possible the wider use of what is often called plastic money, namely, ITM cards, Debit Cards, and Credit Cards.

In addition to the setting up of private sector Indian banks, competition has also sought to be promoted by permitting liberal entry of branches of foreign banks, therefore, CITI Bank, Standard Chartered Bank, Bank of America, American Express, HSBC Bank have opened more

branches in India, especially in the metropolitan cities. An important recent step is the liberalisation of foreign direct investment in banks. In the budget for 2003-04, the limit of foreign direct investment in banking companies was raised from 49 per cent to the maximum 74 per cent of the paid up capital of the banks. However, this did not apply to the wholly owned subsidiaries of foreign banks.

A foreign bank may operate in India through any one of three channels, namely:

1. As branches of foreign banks,
2. A wholly owned subsidiary of a foreign bank,
3. A subsidiary with aggregate foreign investment up to the maximum of 74 per cent of the paid-up capital.

The above measures are expected to facilitate setting up of subsidiaries by foreign banks. Besides fostering competition among banks they have also increased transparency and disclosure standards to reach the international standards. Banks have to submit to RBI and SEBI, the maturity pattern of their assets and liabilities, movements in the provision account and about non-performing assets (NPA). RBI's annual publication 'Trends and Progress of Banking in India' provides detailed information on individual bank's financial position, that is, their losses, assets, liabilities, NPA etc. which enable public assessment of the working of the banks.

5. Non-Performing Assets (NPA) and Income Recognition Norm:

Non-performing assets of banks have been a big problem of commercial banks. Non-performing assets mean bad loans, that is, loans which are difficult to recover. A large quantity of non-performing assets also lowers the profitability of bank. In this regard, a norm of income recognition introduced by RBI is worth mentioning. According to this, income on assets of a bank is not recognized if it is not received within two quarters after the last date.

In order to improve the performance of commercial banks recovery management has been greatly strengthened in recent years. Measures taken to reduce non-performing assets include restructuring at the bank level, recovery of bad debt through Lok Adalats, Civil Courts, setting up of

Recovery Tribunals and compromise settlements. The recovery of bad debt got a great boost with the enactment of 'Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest' (SARFAESI). Under this Act, Debt Recovery Tribunals have been set up which will facilitate the recovery of bad debts by the banks.

As a result of the above measures gross NPA declined from Rs. 70,861 crores in 2001-02 to Rs. 68, 715 crores in 2002-03. But there are substantial amounts of non-performing assets whose recovery is still to be made. Besides, as a result of introduction of risk-based supervision by RBI, the ratio of gross NPA to gross advances of scheduled commercial banks declined from 12.7 per cent in 1999-2000 to 8.8 per cent in 2002-03.

6. Elimination of Direct Credit Controls:

Another significant financial sector reform is the elimination of direct or selective credit controls. Selective credit controls have been done away with. Under selective credit controls RBI used to control through the system of changes in margin for provision of bank credit to traders against stocks of sensitive commodities and to stock brokers against shares. As a result, there is now greater freedom to both the banks and borrowers in respect of credit. But it is worth mentioning that banks are required to observe the guidelines issued by RBI regarding lending to priority sectors such as small scale industries and agriculture. The advances eligible for priority sectors lending have been increased at deregulated interest rates.

This is in accordance with the recognition that the main problem is more of availability of credit than the cost of credit. In June 2004 UPA Government announced that credit to farmers for agriculture will be available at 2 per cent below PLR of banks. Further, credit for agriculture will be doubled in three years time.

7. Promoting Micro-Finance to Increase Financial Inclusion:

To promote financial inclusion the government has started the scheme of micro finance. RBI provides guidelines to banks for mainstreaming micro-credit providers and enhancing the outreach of micro-credit providers inter alia stipulated that micro-credit extended by banks to individual borrowers directly or through any intermediary would henceforth be reckoned as part

of their priority-sector lending. However, no particular model was prescribed for micro-finance and banks have been extended freedom to formulate their own model(s) or choose any conduit/intermediary for extending micro-credit.

Though there are different models for pursuing micro-finance, the Self-Help Group (SHG)-Bank Linkage Programme has emerged as the major micro-finance programme in the country. It is being implemented by commercial banks, regional rural banks (RRBs), and cooperative banks.

Under the SHG-Bank Linkage Programme, as on 31 March 2012, 79.60 lakh SHG-held savings bank accounts with total savings of? 6,551 crore were in operation. By November 2012 another 2.14 lakh SHGs had come under the ambit of the programme, taking the cumulative number of savings-linked groups to 81.74. As on 31 March 2012, 43.54 lakh SGHs had outstanding bank loans of Rs. 36,340 crore (Table 35.1). During 2012-13 (up to November 2012), 3.67 lakh SHGs were financed with an amount Rs. 6, 664.15 crore.

Table 35.1 : Progress of Micro-finance Programme

Year	*SHGs Financed by Banks during the year**			*Bank Loan Outstanding*		
	No. (lakh)	*Amount (₹ crore)*	*Growth (%)*	*No. (lakh)*	*Amount (₹ crore)*	*Growth (%)*
2007-08	12.28	8849.26	-	36.26	16999.90	-
2008-09	16.09	12256.51	38.50	42.24	22679.85	33.41
2009-10	15.87	14453.30	17.90	48.52	28038.28	23.62
2010-11	11.96	14547.73	0.65	47.87	31221.17	11.35
2011-12	11.48	16534.77	13.66	43.54	36340.00	16.40

Extension of Swabhimaan Scheme:

Under the Swabhimaan financial inclusion campaign, over 74,000 habitations with population in excess of 2,000 had been provided banking facilities by March 2012, using various models and technologies including branchless banking through business correspondents (BCs). The Finance Minister in his Budget Speech of 2012-13 had announced that Swabhimaan would be extended to habitations with population more than 1,000 in the north-eastern and hilly states and population more than 1,600 in the plains areas as per Census 2001. Accordingly, about 45,000 such habitations had been identified for coverage under the extended Swabhimaan campaign. As per the progress received through the conveners of State Level Bankers'

Committee (SLBC), out of the identified habitations, 10,450 have been provided banking facilities by end of December, 2012. This will extend the reach of banks to all habitations above a threshold population.

8. Setting up of Rural Infrastructure Development Fund (RIDF):

The Government of India set up the RIDF in 1995 through contribution from commercial banks to the extent of their shortfall in priority sector lending by banks with the objective of giving low cost fund support to states and state-owned corporations for quick completion of ongoing projects relating to medium and minor irrigation, soil conservation, watershed management, and other forms of rural infrastructure. The Fund has continued, with its corpus being announced every year in the Budget. Over the years, coverage under the RIDF has been made more broad-based in each tranche and, at present, a wide range of 31 activities under various sectors is being financed.

The annual allocation of funds for the RIDF announced in the Union Budget has gradually increased from Rs. 2000 crore in 1995- 96 (RIDF 1) to Rs. 20,000 crore in 2012-13. Further, a separate window was introduced in 2006-07 for funding the rural roads component of the Bharat Nirman Programme with a cumulative allocation of Rs. 18,500 crore till 2009-10. From inception of the RIDF in 1995-6 to March 2012, 462,229 projects have been sanctioned with a sanctioned amount of Rs. 1, 43,230 crore. Of the cumulative RIDF loans sanctioned to state governments, 42 per cent have gone to the agriculture and allied sector, including irrigation and power; 15 per cent to health, education, and rural drinking water supply; while the share of rural roads and bridges has been 31 per cent and 12 per cent, respectively. The annual allocation of funds under the RIDF has gradually increased from Rs. 2,000 crore in 1995-6 (RIDF I) to Rs. 20,000 crore in 2012-13 (RIDF XVIII).

As against the total allocation of Rs. 1, 72,500 crore, encompassing RIDFI to XVIII, sanctions aggregating Rs. 1, 51,154 crore have been accorded to various state governments and an amount of Rs. 1, 00,051 crore disbursed up to the end of November 2012. Nearly 55 per cent of allocation has been made to southern and northern regions. The National Rural Roads

Development Agency (NRRDA) has disbursed the entire amount of Rs. 18,500 crore sanctioned for it (under RIDF XII-XV) by March 2010. During 2012-13 (up to end November 2012), Rs. 5,829 crore was disbursed to the states under the RIDF (Table 35.2).

Table 35.2 : Sanctions and disbursements under the RIDF and Bharat Nirman (Rural Roads Components)

(₹ crore)

Region	2012-13 (up to November 2012)			Bank Loan Outstanding		
	Target	Achievement	Achievement (%)	Sanction	Disbursement*	Disburse-ment as % of Sanction
South	3775	1420	37.6	37899	26529	70.0
West	2170	1134	52.3	22149	15693	70.9
North	4850	1810	37.3	44668	30092	67.4
Central	1480	356	24.1	13080	8078	61.8
East	3800	863	22.7	26600	15625	58.7
NER & Sikkim	725	145	20.0	6758	4034	59.7
Sub total	**16800**	**5728**	34.1	**151154**	**100051**	66.2
Warehousing	-	101	-	2512	1208	48.1
Bharat Nirman	-	-	-	18500	18500	100.0
Grand total	**16800**	**5829**	34.7	**172166**	**119759**	70.0

The Government of India has decided to introduce a Direct Benefit Transfer (DBT) scheme with effect from 1 January 2013. To begin with, benefits under 26 schemes will directly be transferred into the bank accounts of beneficiaries in 43 identified districts across respective states and union territories (UT). Banks will ensure that all beneficiaries in these districts have a bank account. All PSBs and RRBs have made provision so that the data collected by the Departments/Ministries/Implementing agency concerned can be used for seeding the bank account details in the core banking system (CBS) of banks with Aadhaar. All PSBs have also joined the Adhaar Payment Bridge of the National Payment Corporation of India for smooth transfer of benefits.

Termination of Automatic Monetisation of Budget Deficits:

This is significant reforms measure to put a check on the growing fiscal deficit of the Central Government. Before 1997 whenever there was a deficit in Central Government budget this was financed by borrowing from RBI through issuing of ad hoc treasury bills. RBI issued new notes against these treasury bills and delivered them to the Central Government.

Since Government incurred deficits year after year, the question of retiring these ad hoc treasury bills did not arise. In this way there was automatic monetisation of Central Government's budget deficit resulting in the increase in reserve money in the economy. With the operation of money

multiplier, the increase in reserve money led to a manifold increase in money supply in the economy which contributed to inflationary tendencies in the Indian economy. Dr. C. Rangarajan in an important contribution to financial management highlighted the adverse effects of automatic monetisation of Government's budget deficits through ad hoc treasury bills.

Since in the eighties and nineties Government borrowed heavily due to large fiscal deficits, expansionary impact of these deficits had to be countered by RBI by raising CRR and SLR from time to time. Besides, in the context of heavy borrowing by the Central Government the need to counter the impact on the money supply by raising CRR to mop up excess liquidity increased so as to control inflation. In this environment RBI could not use the instrument of open market operations to regulate the money supply and rate of interest. At a time when Government borrowed heavily in the market to meet its large deficit, the use of open market operations (i.e. selling Government securities in the open market from its own reserves by RBI) would have resulted in sharp rise in interest rate.

Dr. Rangarajan succeeded in getting abolished the system of automatic monetisation of ever-rising budget deficits through the issue of ad hoc treasury bills by the Government. In its place the system of Ways and Means Advances (WMA) were introduced from April 1, 1997. Under this new system of Ways and Means Advance (WMA) financial limits are fixed to accommodate temporary mismatches in Government receipts and payments and further that market related interest rate is charged on these advances. The limit for WMA and rate of interest charged on them are mutually agreed between RBI and Government from time to time. Further, after 1999 no overdrafts by the Government are permitted for a period beyond 10 consecutive days. Thus, ways and means advances are in fact loans to the Government given by RBI for a short period of time.

It is important to note that with the abolition of ad hoc treasury bills, the system of 91 days tap treasury Bills has also been discontinued with effect from April 1, 1997. Accordingly, with the introduction of the system of Ways and Means Advances (WMA), the conventional concept of budget deficit and deficit financing have also lost their relevance. Therefore, the

earlier practice of showing budgetary deficit in Government's budget and the extent of deficit financing has been abandoned. Instead, at present the magnitudes of fiscal deficit, revenue deficit and primary deficits are provided in the budget and become key indicators of Government's fiscal position.

It is clear from above that the new system of Ways and Means Advances (WMA) has given more autonomy to RBI for conducting its monetary policy. Another related important financial reform is the enactment of' Fiscal Responsibility and Budget Management (FRBM)' Act, which provides a relationship between Government's fiscal stance and RBI's monetary management. According to FRBM, Central Government will take appropriate measures to reduce fiscal deficit to 2 per cent and to eliminate entirely revenue deficit in a time-bound manner by March 31, 2008. It has been provided in the law that revenue deficit and fiscal deficit may exceed targets specified in the rules only on grounds of national security or natural calamity or such other exceptional circumstances as specified by Central Government. An important provision of the Act is that the Central Government shall not borrow from RBI except by Ways and Means Advances. Further, an important feature of FRBM Act is that RBI will not subscribe to the primary issues of Central Government securities from the year 2006-07.

Pension Reforms:

Since October 2003, a New Pension Scheme (NPS) was introduced by the Central Government for its employees. Later many States have also joined the scheme for their employees. The New Pension Scheme is a contributory retirement scheme. All employees joining Central Government after January 1, 2004 have to join the scheme and contribute to it to obtain pension after their retirement. Later many states have also joined the scheme for their employees. It is now also open to private individuals and eight fund managers manage the scheme. The pension authority was named as Pension Fund Regulatory and Development (PFRDA). Till September 2013, this pension authority has been functioning under executive authority since October 2003. Now in September 2013, the Indian Parliament passed the Pension Fund Regulatory Development Authority Bill, eight years after it

was introduced in March 2005. This bill seeks to empower PFRDA to regulate the pension scheme (NPS).

The corpus of PFRDA has Rs. 34,965 crore. NPS has been there with us for nine years and to manage such a large amount of Rs. 35,000 crore was not good to be managed by a non-statutory authority. It should be managed by a statutory authority. All that this new legislation does is to make the non-statutory authority a statutory authority. The legislation regarding Pension Fund Regulatory and Development Authority passed by the Parliament is an important financial reform that will pave the way for foreign investment in the sector. At present the new pension scheme has about 5.3 million subscribers and the scheme has a corpus of around Rs. 35,000 crore.

The Finance Minister has clarified that foreign investment in the pension sector will be 26% and linked to that in the insurance sector. The government has already approved 49% foreign investment in the insurance sector. “I am confident that the Pension Bill will be passed in Rajya Sabha,” Chidambaram said adding that the government had accepted all but one suggestion of the Standing Committee on Finance that gave its recommendations on the Bill in August 2011. The PFRDA will notify New Pension System schemes that provide minimum assured returns, incorporated after the standing committee suggested some sort of guaranteed returns.

The NPS will also provide for withdrawal for some limited purposes, which was not the case earlier. The reform will go a long way in increasing the coverage of formal pension and social security plans in India, where only about 12% of the active workforce has any formal pension or social security plan. The opening of the pension sector, even at 26%, will encourage foreign investors to put their money, as India has a huge population that needs social security cover. We do not have much pension products now but once there are more players, there will be more products which will help to channelize this pension money into the economy. The Bill will further empower the PFRDA to regulate the NPS and other pension schemes that are not covered under any Act.

Important Banking Sector Reforms and Acts in India

The Banking Sector is an important part of the economy. It monitors and regulates the smooth functioning of the Indian economy. The banking sector reforms and acts are to promote the efficiency and productivity of the banking system in India. They aim to increase growth and development. They also maintain stability and adequacy in the financial market. Let us learn more about Important Banking Sector Reforms and Acts.

History and Development of Banking Sector in India

The modern banking of India came into place in the late 18th century. The Bank of Bombay, Bank of Bengal, and Bank of Madras are the first three banks to function well in India. They later merged and became the Imperial Bank of India. Post-independence it became the State Bank of India in 1955. The Reserve Bank of India entered the system in 1935 and became the monitor and regulator of the Banking System of India in 1949. The Banking Regulation Act of 1949 changed the functioning of the commercial banking sector. Though RBI was regulating the banking economy, most of the banks except SBI were private banks. By the 1960s, the banking sector was contributing a good share to the Indian economy. It became important to regulate and control to maintain the balance in the economy. This led to the introduction of the Nationalization of Banks Act 1964. This act led to the nationalization of 14 major commercial banks in India. Though this process took place in 1969 with the president's approval.

In 1991, P. V. Narasimha Rao introduced Liberalisation, Privatisation, and Globalisation Policy. This led to the addition of Global banks in the country. The foreign direct investment opened up too. This also led to a relaxation in many previous policies of the government. The licensing, taxation, formation process, etc became more flexible for banking companies. In the 1990s, the Government of India formed a high-level committee to improve the functioning of financial institutions in India. They introduced different acts and reforms to strengthen the banking system. India has seen many such committees.

The Banking System of India has important acts and reforms from two phases. The first phase revolves around basic policy and institutional

frameworks. And the second phase revolves around structuring and developing the industry with advancements.

The two committees that shaped the banking system of India are –

1. The Narasimham Committee 1991 – First Phase

It was the first committee of India to suggest acts and reforms for an improved banking system. M. Narasimham was the chairman of this committee, thus justifying the name. This committee was formed right after the economic crisis. It suggested – Autonomy in Banking, Reforms in the role of RBI, Change in CRR and SLR, Recovery of Debts, Freedom of Operation, Local Area Banks, Prudential Norms, and Entry of Foreign Banks.

2. The second Narasimham Committee 1998 – Second Phase

This again was headed by M Narasimhan, the 13th governor of RBI. This committee is an extension of the first one. The idea was to overview the reforms introduced after the first committee. It suggested – Development Finance Institution, Stronger banking system, the idea of Non-performing assets, Capital adequacy and tightening of provisioning norms, and, Rural and Small Industrial Credits. Many other committees followed – The Verma Committee, The Khan Committee, AK Bhuchar Committee, The Urjit Patel Committee, The Vaghul Committee, etc.

Importance of Banking Sector Reforms and Acts

1. These banking reforms aim to remove the external restriction on banks like high-interest rates, reserve requirements (CRR and SLR), and frequent change in interest rates. They want to make the banking system more adaptive and flexible.
2. They are to smoothen the process of bank formation in India. It is to promote healthy competition for better productivity. Foreign direct investment is another area they focus on to improve the economy.
3. The merging of banks across India is their focus again. It is done to improve efficiency and productivity. These reforms have improved the overall functioning of the banking system in the country.

Conclusion

The recommendations of the Narasimham Committee - I (1991) were revolutionary in many ways, and they were opposed by trade unions, the central government's finance ministry, and, of course, the progressive economists who generally supported public sector banks. The government, on the other hand, accepted many of the Narasimham committee's recommendations (1991).

List of Important Banking Sector Reforms and Acts of India

S. No	Banking Acts and Reforms	Year	Description
1	Societies Registration Act	1860	This act allows seven or more people related to any literary, scientific, or charitable purpose to form a society or an association. It is to promote a formal organization in the country.
2	Negotiable Instrument Act	1881	This act defines and amends the law relating to negotiable instruments like – the promissory note, bill of exchange, and cheques.
3	Indian Trusts Act	1882	This act helps to recognize what is a trust and who is legally a trustee by law and gives a proper definition for them.
4	The Bankers' Books Evidence Act	1891	This act allows bankers to use their ledgers and books as evidence to show their clear records.
5	Indian Stamp Act	1899	This act is related to introducing and amending laws related to stamp duty and transaction.
6	Co-operative Societies Act	1912	This act consolidates and amends the law relating to the democratic and smooth functioning of registered co-operative societies.
7	Provident Funds Act	1925	This act makes it mandatory to provide pension or provident funds to employees of different organizations.
8	Indian Partnership Act	1934	This act clarifies the definition of a partnership between two or more persons who share the profits of a business run by all or by one person only.
9	The Reserve Bank of India Act	1934	This act led to the formation of the Reserve Bank of India in 1935.
10	Insurance Act	1938	This act regulates the insurance sector and provides a legal framework to monitor industry framework.
11	Central Excise Act	1944	This act forms and regulates law-related to excise duty on goods and services.
12	Public Debt Act	1944	This act forms and provides a legal framework for the maintenance of government securities.
13	International Monetary Fund and Bank Act	1945	This act led to the formation of the International Monetary Fund.
14	Employees' State Insurance Act	1948	This act allows employees to enjoy certain benefits in case of sickness, maternity, and employment injury.

15	The Industrial Finance Corporation of India Act	1948	This act led to the establishment of the Industrial Finance Corporation of India to provide long term loans and finances to the industrial sector.
16	The Banking Companies (Legal Practitioner Clients' Accounts) Act	1949	This act monitors and restricts banking company's transactions by legal practitioners.
17	The Industrial Disputes Act	1949	This act is to solve industrial disputes related to certain banking and insurance companies.
18	The Banking Regulation Act	1949	This act is responsible for regulating all banking companies in India.
19	Chartered Accountants Act	1949	This is responsible for regulating the profession of Chartered Accountants in India.
20	Contingency Fund of India Act	1950	This act led to the establishment of the Contingency Fund of India.
21	The State Financial Corporations Act	1951	This act led to the establishment of State Financial Corporations.
22	Employees Provident Fund and Miscellaneous Provisions Act	1952	This act makes it mandatory to provide pension funds and deposit-linked insurance funds for employees working in factories and other institutions.
23	The Reserve Bank of India (Amendment and Misc. Provisions) Act	1953	This act provides provisions for certain high denomination banknotes.
24	The Industrial Disputes (Banking Companies) Decision Act	1955	This act is to provide modification to the decision of the Labour Appellate Tribunal.
25	The State Bank of India Act	1955	This act led to the Reserve Bank of India acquiring a controlling interest in the Imperial Bank of India.
26	Life Insurance Corporation Act	1956	This act led to the establishment of the Life Insurance Corporation of India.
27	Companies Act	1956	This act led to the enabling of company formation by registration and sets out the basic duties of companies.
28	Central Sales Tax Act	1956	This act provides provisions for important goods in interstate commerce and lays down tax restrictions on them.
29	The State Bank of India (Subsidiary Banks) Act	1959	This act led to the transfer of eight banks that belonged to princely states into SBI subsidiaries.
30	The Subsidiary Banks General Regulation	1959	This act provides the constitution, management, and control of the subsidiary banks formed in India.

31	The Deposit Insurance and Credit Guarantee Corporation Act	1961	This led to the establishment of a Corporation for providing insurance of deposits and guaranteeing of credit facilities.
32	Customs Act	1962	This act is for the formation and amending the laws related to customs.
33	Unit Trust of India Act	1963	This act led to the formation of the Unit Trust of India as a public sector investment institution.
34	Limitation Act	1963	This act provides a time limit for different lawsuits within, which an individual can approach the court for justice.
35	Nationalization of Banks Act	1964	This act led to the nationalization of 14 major commercial banks in India. Though this process took place in 1969.
36	Banking Laws (Application to Co-operative Societies) Act	1965	This amendment made the Banking Regulation Act, 1949 applicable to cooperative banks as well.
37	Banking Companies (Acquisition and Transfer of Undertaking) Act	1969	This act allows the acquisition and transfer of certain banking companies for national development.
38	The Nationalized Banks Scheme	1970	This amendment provides management and miscellaneous provisions for the functioning of Nationalized Banks.
39	The Regional Rural Banks Act	1976	This act led to the establishment of Regional Rural Banks of India.
40	Foreign Contribution Act	1976	This act regulates and monitors the acceptability and utility of foreign contributions by individuals or associations.
41	The Export-Import Bank of India Act	1981	This act led to the establishment of the Export-Import Bank of India to provide financial benefits and security to the importer and exporters of the country.
42	The National Bank for Agriculture and Rural Development Act	1981	This act led to the establishment of the National Bank for Agriculture and Rural Development to provide and regulate credit facilities for small businesses like agriculture, handicraft, etc.
43	Chit Fund Act	1982	This act is responsible for providing laws and regulations related to chit funds and matters around it.
44	Sick Industrial Companies (Special Provisions)Act	1985	This act allows the detection of nonperforming or potentially sick companies. It helps them to revive, if possible, or their closure.
45	Shipping Development Fund Committee Act	1985	This act led to the abolition of the Shipping Development Fund Committee.
46	Banking Companies Rules	1985	This amendment led to the addition of certain regulations related to Nomination.

47	The National Housing Bank Act	1987	This act led to the establishment of the National Housing Bank to monitor and promote housing finance institutions in India.
48	SIDBI Act	1989	This act led to the establishment of the Small Industries Development Bank of India. The idea is to co-ordinate and support the functioning of this industry.
49	SIDBI General Regulations	1990	This act laid down regulations for the smooth functioning of the Small Industries Development Bank of India.
50	Securities and Exchange Board of India Act	1992	This act is to monitor and regulate the securities market of India.
51	The Special Court Act	1992	This act led to the establishment of a Special Court for transaction-related offenses in securities and matters related to it.
52	The Industrial Finance Corporation Act	1993	This act led to the repealing of The Industrial Finance Corporation as a Statutory Corporation. It made it a public limited company under the Companies Act.
53	Recovery of Debts due to Banks and Financial Institutions Act	1993	This act led to the formation of laws for the ruling and recovery of debts due to banks and financial institutions.
54	Debts Recovery Appellate Tribunal Rules	1994	This led to the introduction of certain provisions for debt recovery called Debts Recovery Tribunals.
55	Industrial Reconstruction Bank Act	1997	This act allows the transfer of the undertakings of particular banking companies to control the economy and its development.
56	Foreign Exchange Management Act	1999	This act provides provisions and amends for foreign exchange management.
57	Insurance Regulatory and Development Authority Act	1999	This act led to the establishment of the Insurance Regulatory and Development Authority of India.
58	Prevention of Money Laundering Act	2002	This act provides provisions to prevent money laundering cases and the consequences of such cases.
59	Fiscal Responsibility and Budget Management Act	2002	This act provides provisions for financial discipline. It aims to reduce the fiscal deficit and improve macroeconomic and fund management by achieving a balanced budget.
60	The Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest Act	2002	This act allows the auction of properties to recover loans by the banks.

61	Industrial Development Bank Act	2003	This act made the Industrial development Bank a company registered under the Companies Act, 1956, and continued its banking business.
62	Credit Information Companies Act	2005	This act provides provisions for the regulation of credit information companies and ensures efficient distribution of credit.
63	Government Securities Act	2006	This act provides provisions for improving the government securities market and its management.
64	The Banking Ombudsman Scheme	2006	This act allows customers to complain if they are not happy with banking services.
64	Factoring Act Rules	2011	This act provides a formal definition to the Factoring Business in India.
66	SARFAESI (Central Registry) Rules	2011	This act made the central registry a part of the SARFAESI Act 2002 to prevent money laundering and other financial frauds.
67	Securities Law (Amendment) Act	2014	This amendment allows the Security and Exchange Board of India to go after fraudulent investment schemes, especially Ponzi schemes.
68	The Regional Rural Banks (Amendment) Act	2014	This amendment allowed the government to authorize and issue the capital of Regional Rural Banks.
69	The Insurance Laws (Amendment) Act	2015	This amendment provides IRDAI with more flexibility in its functioning to work more efficiently.
70	The Companies Act (Amended)	2015	This amendment allows the formation of companies without a minimum paid-up capital.

Indian Money Market: Features, Defects and Reforms

The Indian Money Market: -

1. Features of the Indian Money Market
2. Defects of the Indian Money Market
3. Reforms.

Features of the Indian Money Market:

In money market short term surplus funds with banks, financial institutions and others are bid by borrowers, i.e., individuals, companies and the Government. In the Indian money market RBI occupies the pivotal position. The Indian money market can be divided into two sectors i.e. unorganised and organised. The organised sector comprises of Reserve Bank of India, SBI group and commercial banks-foreign, public sector and private sector. The financial institutions also participate to a limited extent. The unorganised sector consists of indigenous bankers and money lenders. The

organised money market in India has number of sub-markets such as the treasury bills market, the commercial market and inter-bank call money market.

Defects of the Indian Money Market:

1. Existence of Un-organised Money Market:

The most important defect of the Indian money market is the existence of unorganised segment. In this segment of the market the purpose as well period are not clearly demarcated. In fact, this segment thrives on this characteristic. This segment undermines the role of the RBI in the money market. Efforts of RBI to bring indigenous bankers within statutory frame work have not yielded much result.

2. Lack of Integration:

Another important deficiency is the lack of integration of different segments or functionaries. However, with the enactment of the Banking Companies Regulation Act 1949, the position has changed considerably. The RBI is now almost fully effective in this area under various provisions of the RBI Act and the Banking Companies Regulation Act.

3. Disparity in Interest Rates:

There have been too many interest rates prevailing in the market at the same time like borrowings rates of government, the lending rates of commercial banks, the rates of co-operative banks and rates of financial institutions. This was basically due to lack of mobility of funds from one sub- segment to another. However, with changes in financial sector the different rates of interest have been quickly adjusting to changes in the bank rate.

4. Seasonal Diversity of Money Market:

A notable characteristic is the seasonal diversity. There are very wide fluctuations in the rates of interest in the money market from one period to another in the year. November to June is the busy period. During this period crops from rural areas are moved to cities and parts. The wide fluctuations create problems in the money market. The Reserve Bank of India attempts to lessen the seasonal fluctuations in money market.

5. Lack of Proper Bill Market:

Indian Bill market is an underdeveloped one. A well organised bill market or a discount market for short term bills is essential for establishing an effective link between credit agencies and Reserve Bank of India. The reasons for this situation are historical, like preference for cash to bills etc. Reserve Bank of India started making efforts in this direction in 1952. However, a new and proper bill market was introduced in 1970. There has been substantial improvement since then.

6. Lack of a well Organised Banking System:

Till 1969, the branch expansion was very slow. There was tremendous effort in this direction after nationalisation. A well-developed banking system is essential for money market. Even, at present the lack of branches in rural areas hinders the movement of funds. With emphasis on profitability, there may be some problems on this account. In totality it can be said that Indian Money Market is relatively under developed. In no case it can be compared with London Money Market or New York Money Market. There are number of factors responsible for it in addition to the above discussed characteristics. For example, lack of continuous supply of bills, a developed acceptance market, commercial bills market, dealers in short term assets and co-ordination between different sections of the money market.

Reforms in the Indian Money Market:

Since its inception, particularly after independence, the Reserve Bank of India has been making efforts to remove the defects of the Indian money market. The organised sector of the market is relatively well knit and differences between various sectors of the market have been reduced. The bill market scheme was one very important step. But the Indian money market is still centred on the call money market although efforts have been made to develop secondary market in post 1991 period.

Vaghul Committee on Money Market, Sukhmoy Chakravarty Committee on the Review of the working of the Monetary System and Narasimham Committee on the working of Financial System has made important recommendations on the Indian money market. The Reserve Bank

of India has started the process of implementation of these recommendations.

1. Development of Money Market Instruments:

The Reserve Bank of India has played an important role in the introduction of new money market instruments. These new instruments are 182 days treasury bills, longer maturity bills, dated Government securities, certificates of deposits and commercial papers, 3—4 days repos and 1 day repos from 1998-99. Traditionally, the 91 days treasury bills have been the main instrument used by Government of India for raising short term funds. The investments came from commercial banks. In January 1993, the Government of India introduced the system of weekly out time, which has become quite popular. The Government has been raising nearly Rs. 16,000 crores through his measurement. The interest rate variations in these bills have been between 7.15 to 11 per cent. Indian money market is following the unique practice of converting treasury bills into dated securities of 2 years or 5 years, normally carrying interest rate of 12 per cent.

Reintroduction of 182 days treasury bills:

The 182 days bills, which were discontinued in 1992, have been reintroduced from 1998-99. Now Indian money market has 14 days, 91 days, 182 days and 364 days treasury bills. Demand for Treasury bill is no longer exclusively linked with statutory liquidity rates considerations. The secondary market transactions aiming at effective management of short term liquidity are on the increase.

2. Deregulation of Interest Rates:

Deregulation of interest rates helps banks to accustom to better pricing of assets and liabilities and to the need to manage interest rates across their balance sheet. The process of reduction of interest rate regulations started in 1988, when Reserve Bank of India removed the ceiling of 16.5 per cent and fixed a minimum of 16 per cent p.a. In 1989, the ceiling on the interest rates on inter-bank call market, inter-bank short term deposits etc. was also removed and the interest rates got linked to market forces.

In accordance with the recommendations of Narasimham Committee in November 1991, the interest rates were further deregulated. The interest rates have been almost completely deregulated in April 1998.

3. Institutional Development:

The post reforms period saw significant institutional development and procedural reforms aimed at developing a strong secondary market in government securities.

Discount and Finance House of India Ltd:

Has been set up as a part of the package of reforms of the money market. It buys bills and other short term papers from banks and financial institutions. It provides short term investment opportunity to banks. To develop a secondary market in Government securities, it started buying and selling securities to a limited extent in 1992. To enable Discount and Finance House of India Ltd. (DFHI), to deal in Government securities, the Reserve Bank of India provides necessary refinance. The institutional infrastructure in government securities has been strengthened with the system of Primary Dealers (PDs) announced in March 1995 and that of Satellite Dealers (SDs) in December 1996. Similarly, Securities Trading Corporation of India was established in 1994, to provide better market and liquidity for dated securities, and to hold short term money market assets like treasury bills. The National Stock Exchange (NSE), has an exclusive trading floor for transparent and screen based trading in all types of debt instruments

4. Money Market Mutual Funds:

In 1992 setting up of Money Market Mutual Funds was announced to bring it within in the reach of individuals. These funds have been introduced by financial institutions and banks. With these reforms the money market is becoming vibrant. There is further scope of introducing new market players and extending refinance from Reserve Bank of India. Narasimham Committee has also proposed that well managed non-banking financial intermediates and merchant bank should also be allowed to operate in the money market. As and when implemented this will widen the scope of money market.

5. Permission to Foreign Institutional Investors (FII):

FII's are allowed to operate in all dated government securities. The policy for 1998-99 had allowed them to buy treasury Bills' within approved debt ceiling.

Measures Regarding Capital Market Reforms:

The five measures are:

1. Establishment of SEBI,
2. Setting up of Private Mutual Funds,
3. Opening up to Foreign Capital,
4. Access to International Capital Markets, and
5. Banks and Capital Markets.

1. Establishment of SEBI:

An important measure regarding capital market reforms is the setting up of Securities and Exchange Board of India (SEBI) as the regulator of equity market in India.

Regulation of stock markets is important to ensure:

1. That the equity markets operate in a fair and orderly manner,
2. That the brokers and other professionals of the stock markets deal justly with their customers,
3. That the corporate firms who raise funds through the market provide all information about themselves which the investors need to make intelligent investment decisions. Since its inception SEBI has been addressing itself to these tasks.

SEBI has introduced various guidelines and regulations for the functioning of capital markets and assuming and selling of shares in the primary market.

The following important regulatory measures have been introduced by SEBI:

a. SEBI has introduced a code of advertisement for public issues by companies for making fair and truthful disclosures. The companies are now required to disclose all material facts and specific risk factors associated with their projects while making public issues.

b. It has required the stock exchanges to amend their listing agreements to ensure that a listed company furnishes annual statements to them showing variations between financial projections and project utilisation of funds made in the offer documents and actual. This will enable shareholders to make comparisons between performance and promises made by of company.
c. An important reform SEBI has introduced is that it has brought merchant banking also under its regulatory framework. The merchant bankers are required to follow the code of conduct issued by SEBI in respect of pricing and premium fixation of issues of shares companies.
d. The practice of making preferential allotment of shares at prices unrelated to the prevailing price has been stopped by SEBI. Besides, to ensure transparency insider trading has also been banned.
e. As a part of the process of establishing transparent rules for trading in stock exchanges, a notorious BADLA system has been banned and in its place Rolling Settlement System has been introduced.

2. Setting up of Private Mutual Funds:

Another important reform is the permission granted to the private sector firms to start Mutual Funds. Many private sector companies such as Tata, Reliance, Birla have set up their mutual funds through which they raise money from the public. In this way monopoly position of UTI in Mutual Fund business has come to end. Mutual Funds raise money by selling units to the public and the funds so raised are invested in a number of equities and debentures of companies. A mutual fund may be entirely equity-based or debt-based or a balanced one having a particular combination of investment in equities and debentures of a number of companies. Investment in mutual funds enables the investors to reduce risk. Mutual funds have also been allowed to open offshore funds to invest in equities abroad. UTI has also been brought within the regulatory framework of SEBI.

3. Opening up to Foreign Capital:

A significant reform has been that Indian capital market has been opened up for foreign institutional institutions (FII). That is, FII can now buy shares and debentures of private Indian companies in the Indian stock

market and can also invest in government securities. This has been done to attract foreign capital. Foreign Institutional Investors (FII) have been permitted full capital convertibility

4. Access to International Capital Markets:

The Indian corporate sector has been allowed to raise funds in the international capital markets through American Depository Receipts (ADRs), Global Depository Receipts (GDR), Foreign Currency Convertible Bonds (FCCBs) and External Commercial Borrowings (ECBs). Similarly, Overseas Corporate Bodies (OCBs) and Non-resident Indians have been allowed to invest in the equity capital of the Indian companies. FIIs have been allowed to invest in equities of private corporate Indian companies as well as in Government securities.

5. Banks and Capital Markets:

Another important step to strengthen the Indian capital market is that banks have been allowed to lend against various capital market instruments such as corporate shares and debentures to individuals, investment companies, trusts and endowment share and stock brokers, industrial and corporate buyers and SEBI-approved market makers. Lending by banks against various capital market instruments to individuals, share and stock brokers, and market makers is made in accordance with certain norms regarding purpose, capital adequacy, transparent transactions, maximum possible amount or ceiling, or duration of the loan. Bank lending against shares and debentures, according to C. Rangarajan, will "enable partial liquidity to scrip's, to help reduce volatility in price movement, encourage the presence of market makers so as to reduce market concentration and help in widening and deepening of trading in the secondary market."