

**CBSE Class 12 Economics**  
**NCERT Solutions**  
**Chapter-03 (Macroeconomics)**  
**Money and Banking**

**1: What is a barter system? What are its drawbacks?**

**Ans:** Barter system of exchange is a system in which goods are exchanged for goods. Direct exchange of goods against goods without use of money is called barter exchange. Also economic exchanges without the medium of money are referred as barter system. If (as a farmer) you have surplus production of rice, you have to look for a person who needs rice and at the same time the other person should possess (say) cloth, which you need to have. It means 'double coincidence of wants': your demand for cloth must coincide with somebody's demand for rice. You must have surplus of rice and somebody must have surplus of cloth. The economy having the barter system was called 'C-Ceconomy', i.e. commodity is exchanged for commodity.

The various drawbacks of the barter system are as follows:

**1. Difficulty of double coincidence of wants:** Double coincidence of wants is a pre-condition for the barter system of exchange. Double coincidence of wants/requirements implies that goods in possession of two different individuals are needed by each other. But it is always not so simple. It is very difficult to find a person who wants your horse and at the same time possesses a cow that you want to buy. Accordingly, under the barter system, exchange remained extremely limited. 'Simultaneous fulfilments of mutual wants by buyers and sellers are known as double coincidence of wants'. Money as a medium of exchange was invented to overcome the problem of double coincidence of wants/demands.

**2. Lack of common unit/measure of value:** What is the value of your car? You can reply: Rs 5 lakh. Can you give the same answer in a barter system of exchange? Certainly not. Under such system, your car would be valued in terms of horses, cows or buffaloes, simply because there is no money. Evolution of money offered a common unit of value and therefore a system of accounting came into existence. Absence of common denominator in order to express exchange ratios creates many difficulties. Money obviates these difficulties and acts as a convenient unit of value.

**3. Lack of system for future/deferred payments or Contractual payments:** These days you hire a worker and strike a contract to pay him say 5000 per month. What do you do in the barter system? Would you decide to pay him in terms of tables or chairs, in terms of rice or wheat, in terms of drugs or chocolates? It is difficult to engage in contracts which involve future payments due to lack of any satisfactory unit. Contractual payments or future payments would certainly be very difficult under barter system of exchange. Evolution of money was to facilitate this kind of payments.

**4. Lack of system of storage and transfer of value:** You tend to save a part of your present earnings. You save for investment as well as your future security. Because of lack of money in the C-C economy, wealth is stored in terms of goods. But it involves some problems such as high cost of storage and loss of value. Further, what happens if you want to transfer your savings from one place to another? Obviously, you have to transfer goods. This is again a difficult task. Evolution of money made storage and transfer of value much easier.

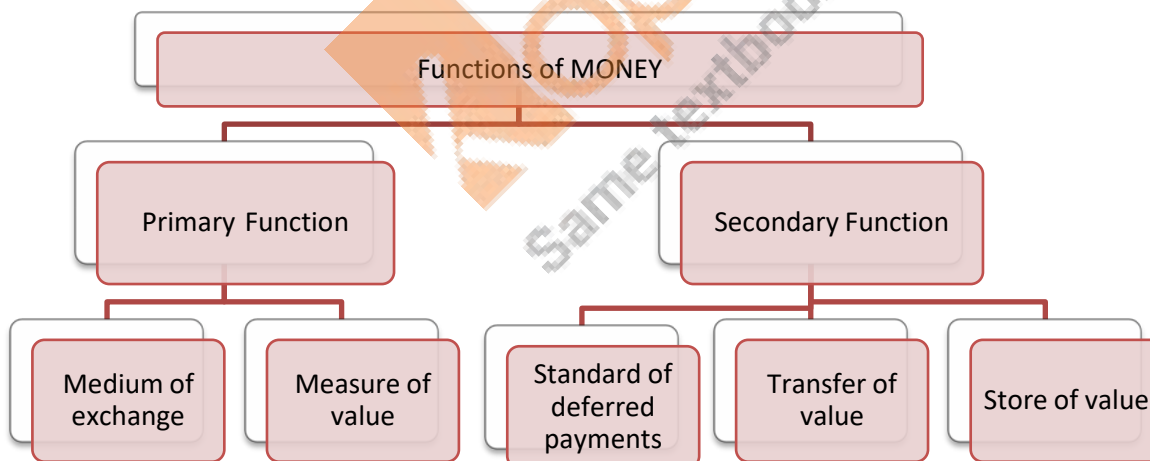
In order to overcome the above mentioned disadvantages of barter system, money was invented and introduced in the society.

**2. What are the main functions of money? How does money overcome the shortcomings of a barter system?**

**Ans:** Money is the most liquid of all assets. It is universally acceptable and hence can be exchanged for other commodities very easily. Money can be defined as “anything which is generally accepted by the people in exchange of goods and services”.

Functions of money are classified into two categories:

1. Primary or Main function
2. Secondary or subsidiary functions.



### Primary or Main functions

Money performs two primary functions, as under:

(i) **Medium of Exchange:** It means that money acts as a medium for the sale and purchase of goods and services. In the absence of money, goods were exchanged for goods. This required double coincidence of wants. Because of that, exchange was difficult and therefore limited.

Introduction of money has separated the acts of sale and purchase. Double coincidence of wants is no longer required. Exchange is now much simpler, and therefore unlimited. This has raised the overall level of economic activity in an economy. Production is now market oriented, rather than subsistence-oriented.

(ii) **Measure of value:** Money serves as a measure of value in terms of a unit of account. Unit of account means that the value of each good or service is measured in the monetary unit.

Measurement of value was very difficult in the barter system where one good was valued in terms of the other. There was no common unit of value. Introduction of money has removed this difficulty. Now, each good is valued in terms of money. Thus the use of money is the basis of specialized production.

### **Secondary functions**

Following three functions are secondary functions of money:

(i) **Standard of deferred payments:** Deferred payments refer to those payments which are made sometimes in the future. Example: Money has made deferred payments much easier than before. When we borrow money from somebody, we have to return both the principal as well as interest amount. It is difficult to make such transactions in terms of goods and services. The use of money as a standard of deferred or delayed payments immensely simplifies borrowing and lending operations as money maintains a constant value through time.

(ii) **Store of value:** Store of value implies store of wealth. Storing of wealth has become considerably easy with the introduction of money. Stored wealth is a source for future investment. It was not convenient to store value in the barter system of exchange, because goods tend to wear out or perish through time.

(iii) **Transfer of value:** Money also serves as a convenient mode of transfer of value. Goods are purchased from far-off places both for consumption as well as investment. You need purchasing power at those places where goods are purchased. You need to transfer purchasing power from the place of your residence. Money performs this function very well. It can be easily transferred from one place to the other.

Money overcomes the shortcomings of barter system in the following manner:

i. Money solves the problem of double coincidence of wants. For example, if a person needs wheat in exchange of tea, then he/she must search for a person who is ready to trade wheat for tea. Money made the need for such redundant search.

ii. In barter system, it was very difficult to measure the value of one good in terms of another. For example, it is difficult to calculate the value of a cow in terms of wheat.

iii. It was very difficult to store goods, especially perishable goods (fruits, meat, etc.) for the purpose of value storage. Money serves this purpose.

iv. The contractual or future payments are much difficult to be made in barter system. For example, a worker working on contract basis could not be paid in terms of rice or chairs.

Money has proved a valuable social instrument to promote economic welfare. In fact, money makes its appearance in every phase of economics. Therefore as per words of Marshall, “Money is the centre around which economic science clusters”

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**3: What is transaction demand for money? How is it related to the value of transactions over a specified period of time?**

**Ans:** Transaction demand for money refers to the demand for conducting/meeting day-to-day transactions. This motive can be understood from the perspective of consumers, who want income to meet their household expenditure (income motive) and also from the perspective of businessmen, who require money to carry their daily business activities (business motive). The transaction motive relates to demand for money to meet the current transactions of individuals and business units. People earn income at different points of time but consume the same throughout the entire period. Hence, people tend to hold money for transactional purpose.

The relationship between the value of transactions and transaction demand for money can be explained as:

The transaction demand for money in an economy ( $M_T^D$ ) can be written as:

$$M_T^D = KT$$

$$\Rightarrow \frac{1}{K} M_T^D = T$$

$$\Rightarrow v M_T^D = T$$

Where,

$v = \frac{1}{K}$ , represents velocity of circulation of money

T = Total value of transactions in the economy over a period of time

K is a positive fraction

$M_T^D$  = Stock of money held by people at a particular point of time.

The transaction demand for money is positively related to the total value of transactions and negatively related to the velocity with which money is circulated.

**4: Suppose a bond promises Rs. 500 at the end of two years with no intermediate return.**

**If the rate of interest is 5 percent per annum, what is the price of the bond?**

**Ans:** Let the price of bond be Rs. P

We know that,

$$A = P \left( 1 + \frac{r}{100} \right)^n$$

It is given that

$$A = \text{Rs. } 500$$

$$r = 5\%$$

$$n = 2 \text{ years}$$

Substituting the values in the formula

$$500 = P \left( 1 + \frac{5}{100} \right)^2$$

$$\Rightarrow 500 = P \left( 1 + \frac{5}{20} \right)^2$$

$$\Rightarrow 500 = P \left( 1 + \frac{21}{20} \right)^2$$

$$\Rightarrow 500 = P \left( \frac{441}{400} \right)$$

$$\Rightarrow P = \frac{200000}{441} = 453.51$$

So, P = Rs 453.51

Therefore, Price of the bond is Rs. 453.51.

**5: Why is speculative demand for money inversely related to the rate of interest?**

**Ans:** Speculative demand for money is inversely related to rate of interest. i.e. higher the rate of interest, smaller will be speculative demand for money and vice versa. Therefore curve of

speculative demand for money is downward sloping to right. There are two situations:

(i) If market rate of interest is very high and expected to fall in future (i.e. rise in price of bond) thereby anticipating capital gain from bond-holding, people will convert their money into bonds. Thus speculative demand for money is low.

(ii) On the contrary if rate of interest is low and people expect it to rise in future (i.e. fall in price of bond) anticipating capital loss from bond-holding, people convert their bonds into money in order to avoid future capital loss. They hold up cash balance thinking that income from non-monetary assets like bond will be low and so the cost of money holding will also be low.

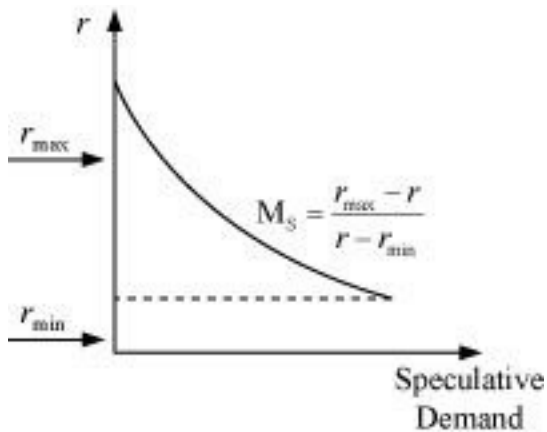
## 6. What is 'liquidity trap'?

**Ans:** Liquidity trap is a situation in which speculative demand function is infinitely elastic; it is explained as follows:

The price of a bond has an inverse relationship with the market interest rate. If the interest rate is very high and people expect it to fall in the future, then the bond prices will rise being inversely related to the interest rate. In order to earn capital gains in future, people will purchase bonds (as bonds are cheaper) and hence the speculative demand for money will become low. On the contrary, if the interest rate is low and people expect it to rise in future, then the bond prices will fall and in order to avoid capital loss, people will sell their bonds and convert their bonds into idle cash balances. Liquidity trap is an extreme case of the latter situation. When the interest rates are very low, then everyone expects interest rates to go up in future. Thus, to avoid capital loss, everybody prefers to maintain cash balance and not bond. Consequently, the speculative demand for money is infinitely elastic. In this situation, if the additional money is pumped into the economy, then, this will only satisfy the thirst for money, without increasing the demand for bonds. Pumping additional money in this situation will further exaggerate the condition as this will further reduce the interest rate below  $r_{min}$ .

The relationship between speculative demand for money and the rate of interest is given as:

$$M_s^d = \frac{r_{max} - r}{r - r_{min}}$$



In the above diagram, interest rate is represented on the vertical axis and speculative demand on the horizontal axis. When  $r = r_{\min}$ , the economy is in liquidity trap, where the speculative demand for money is infinite elastic.

Thus we can understand that liquidity trap is a situation of a low rate of interest in the economy where every economic agent expects the interest rate to rise in future and consequently bond price falls, causing capital loss. Everyone tries to hold wealth in terms of money and thus speculative demand of money becomes infinite.

## 7. What are the alternative definitions of money supply in India?

**Ans:** Money supply refers to total volume of money held by public at a particular point of time in an economy. Features of money supply:

1. It includes 'money held by public only'. The term 'public' signifies the money-using sector, i.e. individuals and business firms. It does not include money-creating sector i.e. Government and banking system as cash balances held by them don't come into actual circulation in the country.
2. It is a 'Stock concept', i.e. it is concerned with a particular point of time.

The various definitions of money supply in India as prescribed by RBI are  $M_1$ ,  $M_2$ ,  $M_3$  and  $M_4$ .

$M_1$ ,  $M_2$ ,  $M_3$  and  $M_4$  are arranged in the descending order of liquidity. In other words,  $M_1$  has the highest liquidity and  $M_4$  has the least liquidity.

So,



$$M_1 = C + DD + OD$$

Where,

C = Currency held by public

DD = Net demand deposits of the bank

OD = other deposits held by RBI

$$M_2 = M_1 + \text{Savings of the people with Post offices}$$

$M_2$  includes the components of  $M_1$  as well as the savings of people with Post office.)

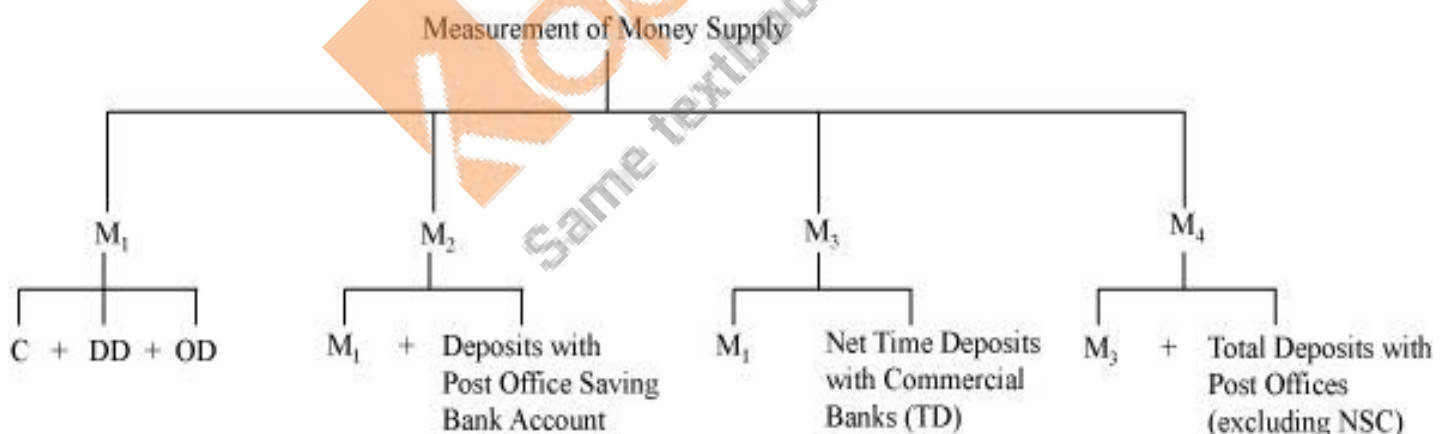
$$M_3 = M_1 + \text{Net time deposits with commercial banks}$$

( $M_3$  is the most commonly used measure of money supply measure of money supply. It includes the components of  $M_1$  commercial banks.)

Fixed deposits is an example of time deposit.

$$M_4 = M_3 + \text{Total deposits with post offices (excluding National Saving certificate)}$$

All these definitions of money supply in India are represented in the flow chart given below.



## 8. What is a 'legal tender'? What is 'fiat money'?

**Ans: Legal Tender Money:** Legal Tender or Legal money means money under the law of land. It is the money issued by monetary authority or the government which cannot be refused by any person in payment for transactions. The Government issues an order describing what money is and that becomes legal tender money. Everybody is bound to accept it in exchange for goods and services and in discharge of debts. No one can refuse to accept it because non-acceptance is an offence.



Currency, paper notes and coins are legal tender money which cannot be refused in payment for transactions or medium of exchange.

**Fiat Money:** Fiat money is money with no intrinsic value. It is that type of paper money which is inconvertible. People have to accept it in exchange for goods and services and in discharge of debt as the nation government has ordered it to be money. It circulates in the country on the fiat (i.e. command) of the state. Fiat Money is generally created and issued by the government at the time of crisis like war or emergency. Since it is issued, without any backing of gold, silver or other reserves, therefore, it is not convertible into anything than itself.

Fiat money is currency that a government has declared to be legal tender, but is not backed by a physical commodity. (e.g. gold /silver.) Example of fiat money is paper money and coins.

## 9. What is High Powered Money?

**Ans:** High Powered Money:

High powered money or monetary base refers to the money produced by R.B.I. and Government of India. Alternatively, total liability of monetary authority of the country, R.B.I. is called monetary base or high powered money. It consists of (i) currency (notes and coins in circulation) with the public (ii) Cash reserve of commercial banks (iii) Other deposits with RBI.

So, to sum up, high powered money is  $H = C + R$

Where

H - High powered money

C - Currency

R - Cash Reserves of commercial banks

## 10. Explain the functions of a commercial bank.

**Ans: Commercial bank** is a financial institution that is authorized by law to receive money from businesses and individuals and lend money to them. Commercial banks are open to the public and serve individuals, institutions, and businesses.

Commercial banks perform various functions that are as follows:

a. **Accepting deposits:** The basic function of commercial banks is to accept deposits of the customers. These deposits are of the following types:

(i) **Saving Accounts:** Saving accounts cater to the needs of those individuals who wish to save a part of their income and earn interest on the amounts saved. Account holders of saving accounts can deposit cheques, drafts, etc. However, there is a limit on withdrawal.

(ii) **Fixed deposit accounts:** As the name suggests, fixed deposit accounts simply deposits which are kept for fixed

periods of time; for example, Rs.500 per month for 5 years. The period has to be decided in advance, while opening the account. Holders of these accounts do not enjoy the cheque facility. Higher the time period, higher will be the interest rate, which is decided by RBI.

(iii) **Current deposits accounts:** Current deposit accounts are also called 'demand deposits' as the depositor can withdraw money at any time through cheques. Businessmen use this account to make many transactions in a single day; however, they do not earn interest on the deposits. Banks provide account statements to the current account holders at regular intervals.

b. **Granting loans and advances:** The second most important function of the commercial banks is to give loans and advances. The rate of interest charged by the banks on loans is higher than the rate of interest paid by the banks on demand deposits and saving deposits. Loans granted by commercial banks are generally for long term and are given against securities. Advances are given by a bank only for a short span of time.

c. **Agency functions:** The commercial banks perform various agency functions with the prime purpose of acceptance of deposits and granting of loans. Their functions include:

(i) **Transfer of funds-** The banks provide easy flow of funds from place to place via mail transfers, demand drafts, etc.

(ii) **Collection of funds-** The banks also collect funds on behalf of their customers through bills, cheques, etc.

(iii) Banks collect insurance premiums, dividends, interest on debentures, etc.

(v) Banks assist in the process of tax payment by the account holders.

(vi) Banks also play the role of trustees or executors.

d. **Discounting bills of exchange:** Commercial Banks provide financial assistance to the business community by discounting bills of exchange. The banks purchase these bills, produced by customers, by deducting interest from the face value of the bill, thus providing easy finance to the business community when required.

e. **Credit creation:** Commercial banks create credit in the economy through demand deposits. Credit creation paves the path for the growth of the economy.

f. **Other functions:**

(i) Providing locker facility

(ii) Purchase and sale of foreign exchange / securities

(iii) Issue of gift cheques

- (iv) Underwriting of shares and debentures
- (v) Providing information and statistical data useful to customers
- (vi) Act as a consultant
- (vii) Transfer of funds

**11. What is money multiplier? How will you determine its value? What ratios play an important role in the determination of the value of the money multiplier?**

**Ans:** Money multiplier is the ratio of the stock of money to the stock of high powered money in an economy

i.e.

$$M_M = \frac{M}{H}$$

Where,  $M_M$  is the money multiplier

M represents stock of money

H represents high powered money

The value of money multiplier is always greater than 1.

The value of money multiplier can be derived as follows:

$$\text{We know that } M = C + DD = (1 + cdr) DD$$

Where,

M = Money supply

C = Currency held by people

cdr = Currency deposit ratio

DD = Demand deposits

Let treasury deposits of government be D

We know, High powered money = Currency + Reserve money

$$\text{Or, } H = C + R$$

$$= cdr D + rdr D$$

$$= D (cdr + rdr) \text{ (Taking D common)}$$

$$\text{Money multiplier} = \frac{M}{H}$$

So, the ratio of money supply to high powered money  $\frac{M}{H}$  becomes

$$\frac{M}{H} = \frac{1 + cdr}{cdr + rdr}$$

But  $rdr < 1$

$$\text{So, } \frac{M}{H} = \frac{1 + cdr}{cdr + rdr} > 1$$

The currency deposit ratio (cdr) and the reserve deposit ratio (rdr) play an important role in determining the money multiplier.

The currency deposit ratio (cdr) is the ratio of the money (currency) held by public to that they hold in bank deposits.

$$\text{That is, } cdr = \frac{C}{DD}$$

The reserve deposit ratio (rdr) is the proportion of the total deposits kept by the commercial banks as reserve.

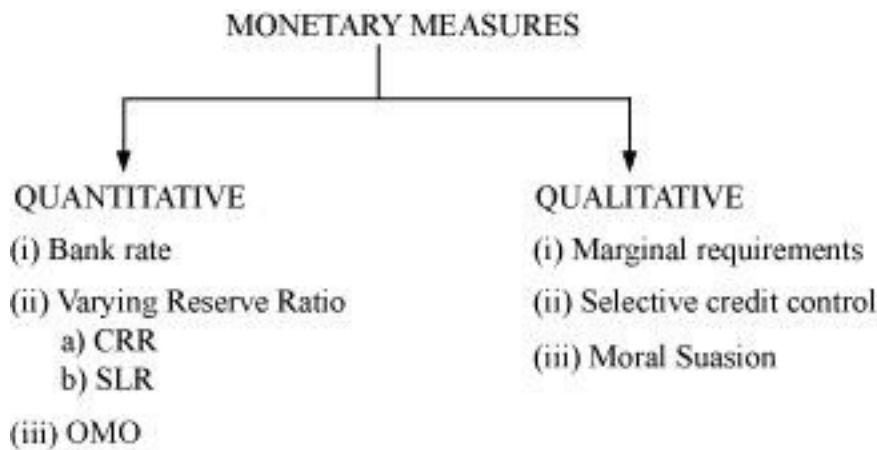
Thus money multiplier measures the amount of money that the banks are able to create in the form of deposits with each unit of money it keeps as reserve.

## 12. What are the instruments of monetary policy of RBI? How does RBI stabilize money supply against exogenous shocks?

**Ans:** Monetary policy refers to the policy of the central bank with regard to the use of monetary instruments under its control to achieve the goals specified in the Act.

The Reserve Bank of India (RBI) is vested with the responsibility of conducting monetary policy. This responsibility is explicitly mandated under the Reserve Bank of India Act, 1934.

The monetary policy (credit policy) of RBI involves the two instruments given in the flow chart below:



**Quantitative Measures:** Quantitative measures refer to those measures that affect the variables, which in turn affect the overall money supply in the economy.

Instruments of quantitative measures:

a. **Bank rate-** The rate at which central bank provides loan to commercial banks is called bank rate. This instrument is a key at the hands of RBI to control the money supply. Increase in the bank rate will make the loans more expensive for the commercial banks; thereby, pressurizing the banks to increase the rate of lending. The public capacity to take credit will gradually fall leading to the fall in the volume of credit demanded. The reverse happens in case of a decrease in the bank rate. The increased lending capacity of banks as well as increased public demand for credit will automatically lead to a rise in the volume of credit.

b. **Varying reserve ratios:** The reserve ratio determines the reserve requirements, wherein banks are liable to maintain reserves with the central bank.

The three main ratios are:

(i) **Cash Reserve Ratio (CRR):** It refers to the minimum amount of funds that a commercial bank has to maintain with the Reserve Bank of India, in the form of deposits. For example, suppose the total assets of a bank are worth Rs.200 crores and the minimum cash reserve ratio is 10%. Then the amount that the commercial bank has to maintain with RBI is Rs.20 crores. If this ratio is set to 20%, then the reserve with RBI increases to Rs.40 crores. Thus, less money will be left with the commercial bank for lending. This will eventually lead to a considerable decrease in the money supply. On the contrary, a fall in CRR will lead to an increase in the money supply.

(ii) **Statutory Liquidity Ratio (SLR):** SLR is concerned with maintaining the minimum reserve of assets with RBI, whereas the cash reserve ratio is concerned with maintaining cash balance (reserve) with RBI. So, SLR is defined as the minimum percentage of assets to be maintained in the form of either fixed or liquid assets with RBI. The flow of credit is reduced by increasing this liquidity ratio and vice-versa. In the previous example, this can be understood as a rise in SLR will restrict

the banks to pump money in the economy, thereby contributing towards decrease in money supply. The reverse case happens if there is a fall in SLR, as it increases the money supply in the economy.

c. **Open Market Operations (OMO):** Open Market operations refer to the buying and selling of securities in an open market, in order to affect the money supply in the economy. The selling of securities by RBI will wipe out the extra cash balance from the economy, thereby limiting the money supply, whereas in the case of buying securities by RBI, additional money is pumped into the economy stimulating the money supply.

### **Qualitative Measures:**

The measures that affect the credit qualitatively are:

1. **Marginal Requirements:** The commercial banks' function to grant loan rests upon the value of security being mortgaged. So, the banks keep a margin, which is the difference between the market value of security and the loan value. For example, a commercial bank grants loan of Rs. 80,000 against security of Rs. 1,00,000. So, the margin is calculated as  $1,00,000 - 80,000 = 20,000$ . When the central bank decides to restrict the flow of money, then the margin requirement of loan is raised and vice-versa in the case of expansionary credit policy.
2. **Selective Credit Control (SCC's):** An instrument of the monetary policy that affects the flow of credit to particular sectors positively and negatively is known as selective credit control. The positive aspect is concerned with the increased flow of credit to the priority sectors. However, the negative aspect is concerned with the measures to restrict credit to a particular sector.
3. **Moral Suasions:** A persuasion technique followed by the central bank to pressurise the commercial banks to abide by the monetary policy is termed as moral suasion. This involves meetings, seminars, speeches and discussions, which explain the present economic scenario and thereby persuading the commercial banks to adapt the changes needed. In other words, this is an unofficial monetary policy that exercises the power of talk.

RBI plays an important role in controlling external shock. Suppose a foreigner decides to invest funds in Indian bonds. The seller of the bond thus exchanges the foreign currency into Indian rupees from a commercial bank. The same commercial bank deposits the currency in RBI which increases the assets and liabilities in balance sheet; on the other hand, commercial bank's total reserves remain unchanged.

In order to overcome this situation, RBI sells the securities in open market or sterilizes the economy against adverse external shocks. This process is known as Sterilization

### 13. Do you consider a commercial bank 'creator of money' in the economy'?

**Ans:** Yes, Commercial banks play the important role of 'money creator' in the economy. They have the capacity to generate credit through demand deposits. These demand deposits make credit more than the initial deposits. Thus, banks create credit by advancing loans.

The process of money creation can be explained by taking an example of a bank XYZ. A depositor deposits Rs. 10,000 in his savings account, which will become the demand deposit of the bank. Based on the assumption that not all customers will turn up at the same day to withdraw their deposits, bank maintains a minimum cash reserve of 10 % of the demand deposits, i.e. Rs. 1000. It lends the remaining amount of Rs. 9000 in the form of credit to other customers. This further creates deposits for the bank XYZ. With the cash reserve of Rs. 1000, the credit creation is worth Rs. 10,000. So, the credit multiplier is given by:

$$\text{Credit multiplier} = 1/\text{CRR} = 1/10\% = 10$$

The money supply in the economy will increase by the amount (times) of credit multiplier.

### 14. What role of RBI is known as 'lender of last resort'?

**Ans:** When commercial banks have exhausted all resources to supplement their funds at times of liquidity crisis, they approach Central Bank or RBI as a last resort. As a lender of last resort Central Bank or monetary authority gives guarantee of solvency and provides financial accommodation to commercial banks

- (i) by counting their eligible securities and bills of exchange and
- (ii) by providing loans against their securities.

This saves banks from possible failure and banking system from a possible breakdown. On the other hand Central Bank, by providing temporary financial accommodation, saves the financial structure of the country from collapse.