CLASS XII
ECONOMICS
MONEY AND BANKING

Money is anything that is generally acceptable as a medium of exchange, measure of value, store of value and as a standard of deferred payments.

Money Supply: It refers to the total **stock** of money **held by public** at a particular point of time in an economy.

- It is a stock concept because it is measured at a particular point of time.

Components of Money Supply: a) Currency (paper notes and coins) held by the public(outside the banks): and b) (Net) Demand deposits of the public with the commercial banks.

Basic Measure of Money Supply – most liquid form

M_1= C (Currency held by the public) + DD (net demand deposits with commercial banks)

- Currency and coins with public : It consists of paper notes and coins held by the public that can be legally used to make payments of debts or other obligations.
- Demand deposits of commercial banks : Demand deposits are the deposits of commercial banks from which money can be withdrawn on demand by the depositor using cheque.

Only in case of India: C+DD+ OD (other deposits with RBI only in case of India)
Other Deposits with RBI: It include deposits held by the RBI on behalf of foreign banks and governments, World Bank, IMF, etc. However, it does not include deposits of the Indian government and commercial banks with RBI.

Other than demand deposits there are time deposits which have a fixed term or maturity period after which they can be withdrawn. E.g: Fixed deposit.

The currency issued by the central bank can be held by the public or by the commercial banks and is called the '**high-powered money**' or '**reserve money'** or '**monetary base'**.
Demand deposits are created by the commercial banks and are called **Bank money**.

BANKING
Central Bank**:** It is an apex body that controls, operates, regulates and directs the entire banking and monetary structure of the country.
Commercial Bank: Commercial bank is an institution which performs the functions of accepting chequeable deposits and providing loans and making investments, with the aim of earning profits and has the power to create money using demand deposits. E.g. Punjab National Bank, Canara Bank etc.

All banks are financial institutions but all financial institutions are not banks. Banks should accept chequeable deposits and give out loans.

Functions of Central Bank
1. Currency Authority (Bank of Issue):
a) Central bank has the sole authority for issue of currency in the country.
In India RBI has the sole right of issuing paper currency notes (except one-rupee note and coins which are issued by Ministry of Finance). Withdrawal and putting currency into circulation is also the responsibility of RBI.
b) All the currency issued by the RBI is its monetary liability, i.e. central bank is obliged to back the currency with assets (which consists of gold coins, gold, foreign securities etc.) of equal value.
c) Advantages of this functions are:
It leads to uniformity in note circulation.
It gives the central bank power to influence money supply and ensures public faith in the currency system.
It enables the government to have supervision and control over the central bank with respect to issue of notes.
It helps in stabilizing the internal and external value of currency.

2. Banker to the government: RBI acts as a banker, agent and financial adviser to the central and the state

government.

- ***As a banker it carries out all banking business of the government.***
  a) Government maintains its cash balances in the current account with RBI.
  b) RBI accepts receipts and make payments on behalf of the government and carries out other banking operations for the government.
  c) The Central Bank also provides short-term credit to the government so that the government can meet any shortfalls in receipts over disbursements. The government carries on short term borrowings by selling ad-hoc treasury bills to the central bank.
- ***As an agent*** the central bank also has the responsibility of managing the public debt. This means that the central bank has to manage all new issues of government loans.
- ***As a financial advisor*** the central bank advises the government from time to time on economic, financial and monetary matters.

3. Banker's bank and supervisor: As a banker to the banks, the central bank functions in three respects:

i) ***Custodian of cash reserves:*** Commercial banks are required to keep a certain percentage of their deposits with the central bank. In this way the central bank acts as a custodian of cash reserves of commercial banks. (The sole aim of these reserves is to enable central bank to provide financial assistance to commercial banks in times of financial emergency).

ii) ***Central bank is the lender of the last resort***: When commercial banks fail to meet their financial requirement from other sources, they approach the central bank to give loans and advances as the lender of last resort. The central bank helps them through discounting approved securities and bills of exchange.

iii)***Clearing house function***: All commercial banks have their accounts with the central bank. Therefore, the central bank can easily settle claims of various commercial banks against each other, by making debit and credit entries in their accounts.

Central bank as a supervisor, supervises regulates and controls the activities of commercial banks. The regulation of banks may be related to their licensing, branch expansion and mergers of banks. The control is exercised by periodic inspection of banks and the returns filed by them.

4. Custodian of foreign exchange reserves: The central bank acts as the custodian of the country's stock of gold and reserves of foreign exchange. This function enables the central bank to exercise a reasonable control on foreign exchange. As all foreign exchange transactions must be routed through RBI. It helps the bank in stabilizing the external value of currency and pursuing a coordinated policy towards the balance of payments situation of the country.

5.Controller of money supply and credit: Central bank controls money supply by using various quantitative and qualitative instruments.

Quantitative instruments aim at controlling the volume of credit and money supply in the economy.

a) ***Bank rate:*** The rate at which the central bank lends money to commercial banks for its long-term needs is known as bank rate.

- An increase in bank rate increases the cost of borrowing from the central bank. As a result, commercial banks will increase the rate of interest at which they lend to public (lending rate) thereby making credit costlier. This discourages the public to borrow from commercial banks, which reduces the flow of credit or money supply in the economy.
- A decrease in bank rate will have the opposite effect.

b) ***Legal reserve requirement:*** Commercial banks are legally required to maintain reserves on two accounts-

i) **Cash Reserve Ratio (CRR):** It refers to the percentage of the net demand and time deposits that commercial banks are legally required to keep as cash reserves with RBI.

- An increase in CRR means that commercial banks have to keep a higher percentage of their deposits as reserves with RBI which reduces the credit availability with them. This decreases their lending capacity which in turn decrease the flow of credit or money supply in the economy.
- A decrease in CRR will have the opposite effect.

ii) **Statutory Liquidity Ratio (SLR):** It is the percentage of net demand and time deposits which commercial banks are legally required to keep in the form of designated liquid assets (such as govt. securities)

with themselves.

- An increase in SLR reduces the ability of banks to give credit and hence reduces lending and the flow of credit or money supply in the economy.
- A decrease in SLR will have the opposite effect.

c) ***Open market operations***: It refers to buying and selling of government securities or bonds by the central banks from or to the commercial banks or public.

- Sale of securities by the central bank will reduce the reserves with commercial banks when the bank gives the central bank a cheque for the securities which will reduce the banks ability to create credit and reduce lending in the economy and therefore decrease the money supply in the economy.
- In order to expand the flow of credit in the economy central bank purchases securities from the commercial banks and in return gives the banks a cheque drawn on itself in payment for the securities. When the cheque clears, the central bank increases the reserves of the bank by the particular amount thereby increasing their ability to create credit and lend more and therefore money supply increases in the economy.

d) ***Repo (Repurchase) rate***: It is the interest rate at which the commercial banks can borrow from the central bank to meet their short-term needs.

- An increase in the repo rate will make borrowings from central bank **costlier,** as a result banks will lend to public at a higher lending rate. Thus, borrowings will be discouraged as credit is costlier leading to decrease in money supply in the economy.
- A decrease in repo rate will have the opposite effect.

e) ***Reverse repo rate***: It is the interest rate which the commercial banks get for depositing their surplus funds with the central bank.

- Raising RRR gives incentives to the commercial banks to park their funds with RBI. This reduces credit availability with the commercial banks and adversely affect their lending capacity leading to decrease in money supply.
- Lowering RRR discourages the commercial banks from parking their funds with the central bank. This will increase credit availability with the commercial banks and their credit creation power leading to increase in money supply.

Qualitative instruments

Margin requirement: It is the difference between the amount of loan and the market value of the security offered by the borrower against the loan.

By changing the margin requirement reserve bank can alter the amount of loans made against securities by the bank.

- To expand money supply in an economy margin requirement is reduced which means more loan is given against the same value of security which encourages borrowing and therefore increases the flow of credit or money supply in the economy.
- To reduce money supply in an economy margin requirement is increased which means less loan is given against the same value of security which discourages borrowing and therefore decreases the flow of credit or money supply in the economy.

Difference between Central Bank and Commercial Bank:

Central Bank	Commercial Bank
It is an apex body that controls, operates, regulates and directs the entire banking and monetary structure of the country.	Commercial bank is an institution which performs the functions of accepting deposits and providing loans and making investments, with the aim of earning profits.
It is owned and governed by the government.	It can be owned and governed by the government or the private sector.
It operates for public welfare without profit motive.	It aims to maximize profits.
It does not do ordinary banking business with general public but only with the government.	It does ordinary banking business with general public.
It has the sole authority of printing new currency.	It has the role of credit creation.
It acts as a banker to the government.	It has no such powers.

Money Multiplier / Credit creation by commercial banks

Credit creation refers to the process of creation of credit by the commercial banks with the help of an initial deposit and given LRR.

Assumptions: a) The amount of initial deposit (assumed to be `1000)
b) The LRR or legal reserve ratio (assumed to be 20%)

Legal Reserve Ratio is the fraction of deposits that the banks have to keep compulsorily in the form of cash with the central bank or designated liquid assets like govt securities with themselves. These may be in the form of CRR or SLR.

Principle: **a) All transactions are routed through the banks.**
b) All banking system is treated as a single 'Bank'

Working:

1) Suppose the initial deposits in the banks are Rs.1000. Since LRR is 20%, it means that the banks can lend out the remaining 80% to the borrowers i.e. Rs 800. It does so by opening an account in the name of the borrower.

2) If the borrowers withdraw the entire amount and make payments using Rs.800. Since all transactions are routed through the banks, the money comes back to the banks in the form of deposits by the receivers of this money. This increases the deposits by Rs.800. Thus, the total credit created now increases to **1000 + 800 = Rs.1800.**

3)The bank then uses the Rs.800 to lend after keeping reserves worth 20% i.e. Rs.160 and lends the remaining Rs.640 as fresh loans to borrowers which again comes back as deposits in the accounts of the receivers of this money. Hence total credit created now equals Rs. **1000 + 800 + 640 = Rs.2440.**

This continues and in each round, the deposit creation is 80% of the previous round. These increases become smaller and smaller and continue till all of the initial deposit equals the total cash reserves.

Total value of deposits created = (1/LRR) initial deposit = (1/20%) 1000 = 5 x 1000 = Rs. 5000.

Thus, the initial deposit get multiplied 5 times and hence the money multiplier is 1/LRR = 5.

Deposit	Loans	Reserves
1000	800	200
800	640	160
640	512	128
---	---	---
5000	4000	1000

Questions

Q1. How do banks create money? Or Explain the concept of credit creation by banks.

Q2. 'The introduction of Jan Dhan Yojana has led to the addition of `1000 crores to the banking system.' If it is believed that on an average LRR is 25%, what will be the extent of money creation?

Q3. What is the value of credit created if LRR is 10% and the initial deposit is `100 crores? Explain with a numerical example.

Q4. Use a numerical example to show that the multiplier is inversely related to LRR. (Take two values of LRR and calculate the value of final deposits created.)

Q5. Is there a limit to money or credit creation by banks? [Yes, CRR and SLR]

Note : Lower is the LRR, higher the money multiplier and more the money creation.

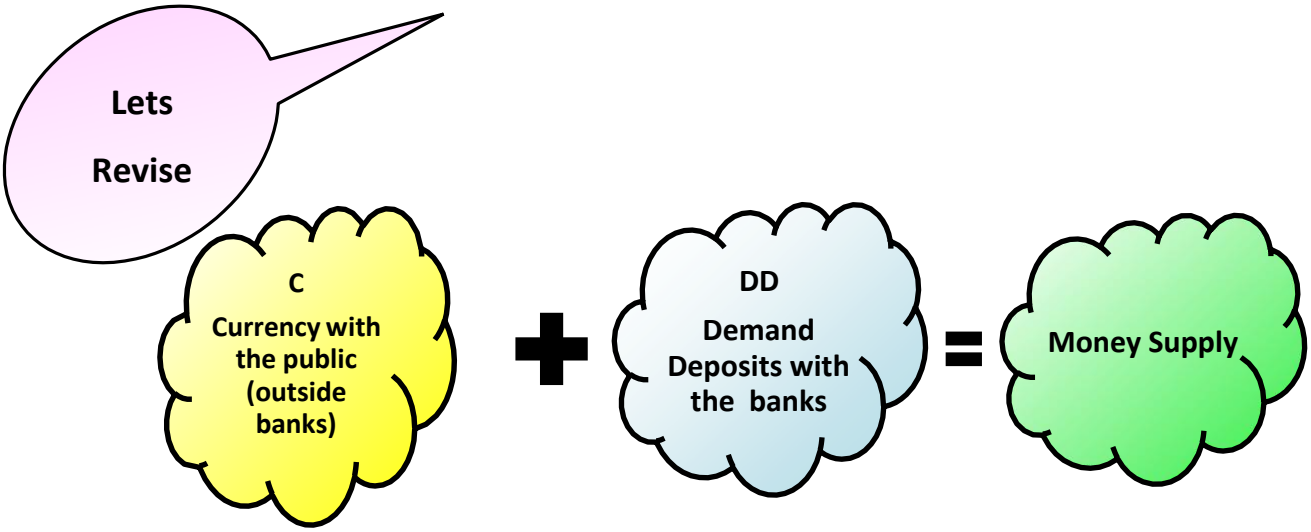
If the LRR = 0.1, the money multiplier is 10 (1/LRR=1/0.1) If the LRR is 0.4, the money multiplier is 2.5 (1/LRR=1/0.4)

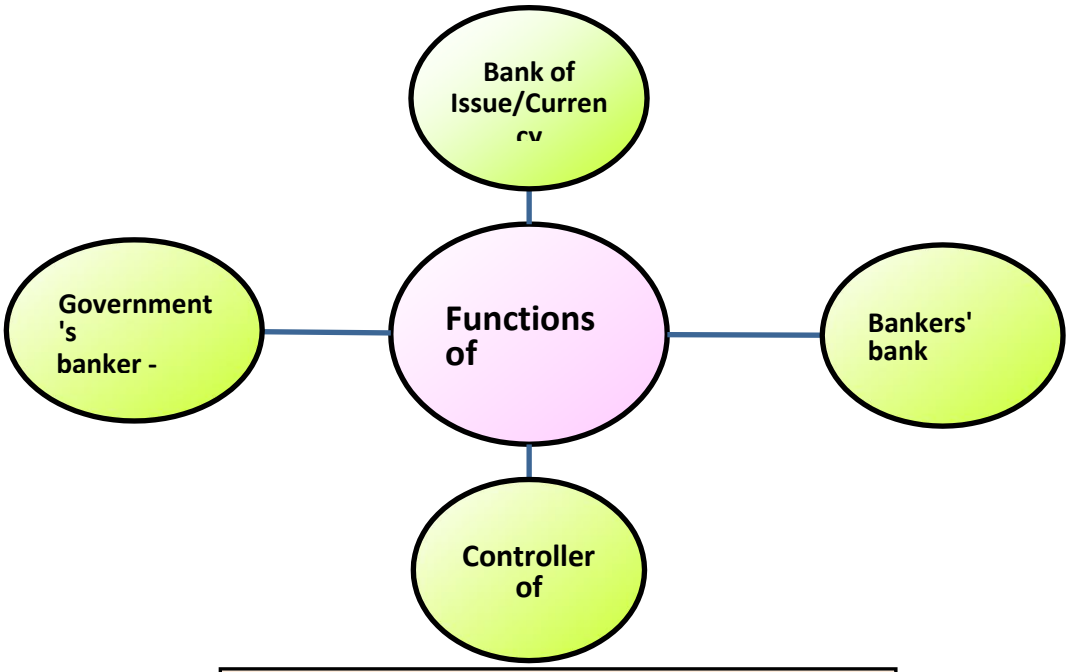
Note on Demonetisation

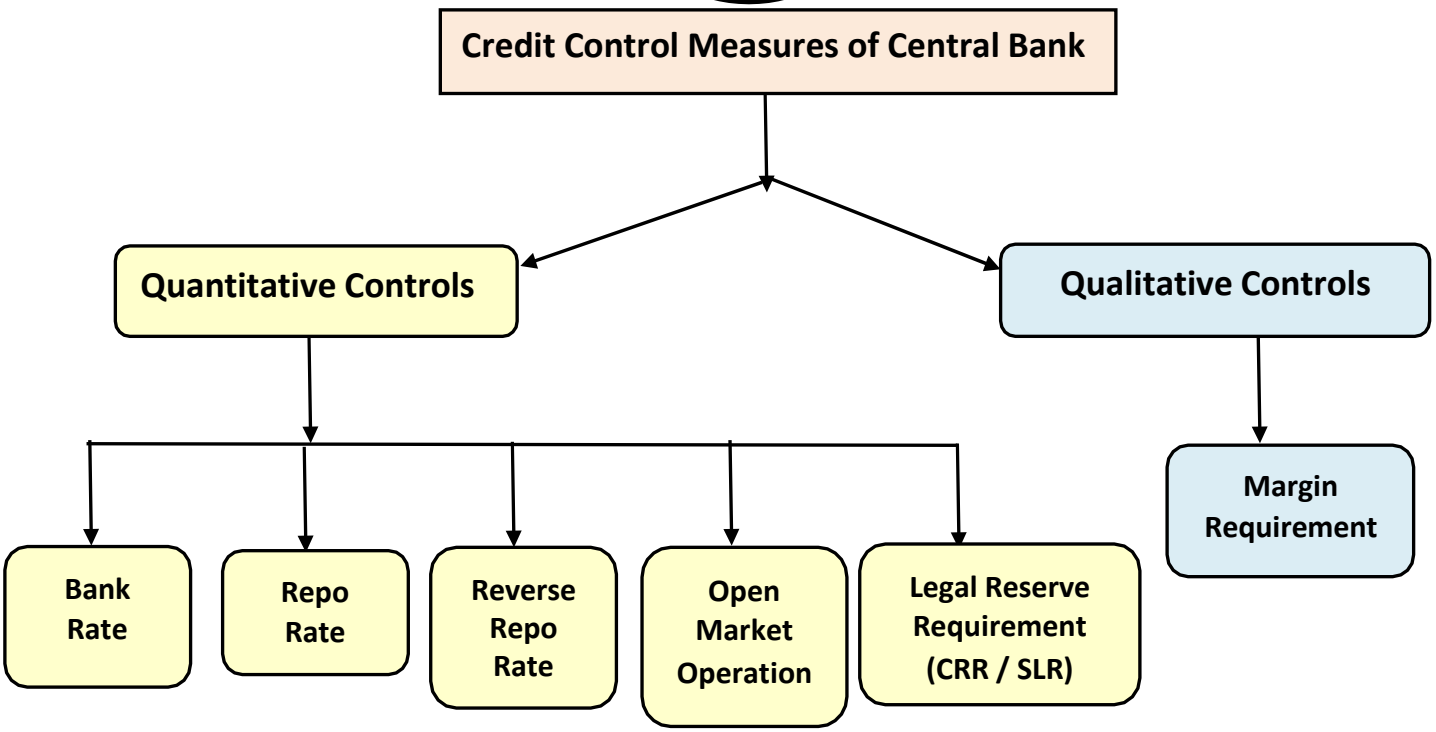
Demonetisation was a new initiative taken by the Government of India in November 2016 to tackle the problem of corruption, black money, terrorism and circulation of fake currency in the economy. Old currency notes of Rs 500 and Rs 1000 were no longer legal tender. New currency notes in the denomination of Rs 500 and Rs 2000 were launched. The public were advised to deposit old currency notes in their bank account till 31 December 2016 without any declaration and upto 31March 2017 with the RBI with declaration.

Legal tender is money declared legal by a government or backed by law of the land. (can be legally used to make payments)

COMPONENTS OF MONEY SUPPLY







Central bank

Central Bank is a very important institution in a modern economy. Almost every country has one central bank. India got its central bank in 1935. Its name is the 'Reserve Bank of India'. Central bank has several important functions. It issues the currency of the country. It controls money supply of the country through various methods, like bank rate, open market operations and variations in reserve ratios. It acts as a banker to the government. It is the custodian of the foreign exchange reserves of the economy. It also acts as a bank to the banking system, which is discussed in detail later.

From the point of view of money supply, we need to focus on its function of issuing currency. This currency issued by the central bank can be held by the public or by the commercial banks, and is called the 'high-powered money' or 'reserve money' or 'monetary base' as it acts as a basis for credit creation.

Commercial Banks

Commercial banks are the other type of institutions which are a part of the money-creating system of the economy. In the following section we look at the commercial banking system in detail. They accept deposits from the public and lend out part of these funds to those who want to borrow. The interest rate paid by the banks to depositors is lower than the rate charged from the borrowers. This difference between these two types of interest rates, called the 'spread' is the profit appropriated by the bank.

3.4 Policy Tools to Control Money Supply

Reserve Bank is the only institution which can issue currency. When commercial banks need more funds in order to be able to create more credit, they may go to market for such funds or go to the Central Bank. Central bank provides them funds through various instruments. This role of RBI, that of being ready to lend to banks at all times is another important function of the central bank, and due to this central bank is said to be the **lender of last resort.**

The RBI controls the money supply in the economy in various ways. The tools used by the Central bank to control money supply can be quantitative or qualitative. Quantitative tools, control the extent of money supply by changing the CRR, or bank rate or open market operations. Qualitative tools include persuasion by the Central bank in order to make commercial banks discourage or encourage lending which is done through moral suasion, margin requirement, etc.

It should be evident by now that if the Central bank changes the reserve ratio, this would lead to changes in lending by the banks which, in turn, would impact the deposits and hence, the money supply. In the previously discussed example, what would the money multiplier be if the RBI increases the reserve ratio to 25 per cent? Notice that in the previous case, Rs 100 in reserves could support deposits of Rs 400. But the banking system would now be able to loan Rs 300 only. It would have to call back some loans to meet the increased reserve requirements. Hence, money supply would fall.

Another important tool by which the RBI also influences money supply is **Open Market Operations**. Open Market Operations refers to buying and selling of bonds issued by the Government in the open market. This purchase and sale is entrusted to the Central bank on behalf of the Government. When RBI buys a Government bond in the open market, it pays for it by giving a cheque. This cheque increases the total amount of reserves in the economy and thus increases the money supply. Selling of a bond by RBI (to private individuals or institutions) leads to reduction in quantity of reserves and hence the money supply.

However, there is another type of operation in which when the central bank buys the security, this agreement of purchase also has specification about date and price of resale of this security. This type of agreement is called a **repurchase agreement** or **repo**. The interest rate at which the money is lent in this way is called the repo rate. Similarly, instead of outright sale of securities the central bank may sell the securities through an agreement which has a specification about the date and price at which it will be repurchased. This type of agreement is called a **reverse repurchase agreement** or **reverse repo.** The rate at which the money is withdrawn in this manner is called the reverse repo rate. The Reserve Bank of India conducts repo and reverse repo operations at various maturities: overnight, 7-day, 14- day, etc. This type of operations have now become the main tool of monetary policy of the Reserve Bank of India.

The RBI can influence money supply by changing the rate at which it gives loans to the commercial banks. This rate is called the **Bank Rate** in India. By increasing the bank rate, loans taken by commercial banks become more expensive; this reduces the reserves held by the commercial bank and hence decreases money supply. A fall in the bank rate can increase the money supply.

Box No. 3.2: Demonetisation

Demonetisation was a new initiative taken by the Government of India in November 2016 to tackle the problem of corruption, black money, terrorism and circulation of fake currency in the economy. Old currency notes of Rs 500, and Rs 1000 were no longer legal tender. New currency notes in the denomination of Rs 500 and Rs 2000 were launched. The public were advised to deposit old currency notes in their bank account till 31 December 2016 without any declaration and upto 31March 2017 with the RBI with declaration

Further to avoid a complete breakdown and cash crunch, notes government had allowed exchange of Rs 4000 old currency the by new currency per person and per day. Further till 12 December 2016, old currency notes were acceptable as legal tender at petrol pumps, government hospitals and for payment of government dues, like taxes, power bills, etc.

This move received both appreciation and criticism. There were long queues outside banks and ATM booths. The shortage of currency in circulation had an adverse impact on the economic activities. However, things improved with time and normalcy returned.

This move has had positive impact also. It improved tax compliance as a large number of people were bought in the tax ambit. The savings of an individual were channelised into the formal financial system. As a result, banks have more resources at their disposal which can be used to provide more loans at lower interest rates. It is a demonstration of State's decision to put a curb on black money, showing that tax evasion will no longer be tolerated. Tax evasion will result in financial penalty and social condemnation. Tax compliance will improve and corruption will decrease. Demonetisation could also help tax administration in another way, by shifting transactions out of the cash economy into the formal payment system. Households and firms have begun to shift from cash to electronic payment technologies.