Money & SUPPLY OF MONEY

Money & BARTER SYSTEM OF EXCHANGE
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Part A: Introductory Macroeconomics
Unit 1 - National Income and Related Aggregates (10 Marks)
What is Macroeconomics?
Basic concepts in macroeconomics: consumption goods, capital goods, final goods, intermediate goods; stocks and flows; gross investment and depreciation.
Circular flow of income (two sector model); Methods of calculating National Income - Value Added or Product method, Expenditure method, Income method.
Aggregates related to National Income:
Gross National Product (GNP), Net National Product (NNP), Gross and Net Domestic Product (GDP and NDP) - at market price, at factor cost; Real and Nominal GDP.
GDP and Welfare

Unit 2 - Money and Banking (6 Marks)
Money - meaning and supply of money - Currency held by the public and net demand deposits held by commercial banks.
Money creation by the commercial banking system.
Central bank and its functions (example of the Reserve Bank of India): Bank of issue, Govt. Bank, Banker's Bank, Control of Credit through Bank Rate, CRR, SLR, Repo Rate and Reverse Repo Rate, Open Market Operations, Margin requirement.
Money: Meaning and Functions of Money

Anything is Money, which is generally acceptable as a medium of exchange, and at the same time it must act as a measure and a store of value.

The only necessary condition is that, it should be universally accepted by people as a medium of exchange.

Definition of Money

According to Crowther,

"Anything that is generally acceptable as a means of exchange and which at the same time acts as a measure and store of value."
Money performs five important functions:

1. **Medium of exchange**: Money acts as a medium of exchange as it's generally accepted. On the payment of money, purchase of goods and services can be made i.e. goods and services are exchanged for money.

2. **Measure of value**: Money is a common measure of value so it is possible to determine the rate of exchange between various goods and services purchased by the people. Exchange value of commodity can be expressed in terms of money. For example, we can say that 10 meters of Cotton Cloth cost 800 rupees.

3. **Store of value**: Money acts as a store of value. Money being generally acceptable and its value being more or less stable, it is ideal for use as a **store of value**. Being non-perishable and also comparatively stable in value, the value of other assets can be stored in the form of money.
4. **Standard or Deferred payment**: Money is also used as the unit in terms of which all future or deferred payments are stated. Future transactions can be carried on in terms of money. The loans, which are taken at present, can be repaid in money in the future.

5. **Transfer of value**: Value of any asset can be transferred from one person to another or to any institution or to any place by transferring money. The transfer of money can take place irrespective of places, time and circumstances.
Barter system of Exchange: Meaning and Limitations of Barter Exchange

The barter system is the *oldest system* of trade which was prevalent or used many centuries back. It refers to that system under which *goods or services were exchanged* directly with other goods and services and there was *no medium of exchange* which is the case in present times where the medium of exchange is money.

An economy, where there is a direct barter of goods and services, is called a ‘Barter Economy’ or ‘C-C Economy’ (where C stands for commodity). For example, when a farmer gives wheat and gets cloth from the weaver in return, it is known as barter exchange.
Advantages of Barter System

1. The first and foremost advantage of barter system is that it’s the simplest system of trade which involves no complications so if you are a wheat seller and you want rice and rice seller wants wheat then both rice and wheat seller will exchange their products without any hassles.

2. Another benefit of barter system is that since no money is involved people will produce and consume only what they want and there is no under or over production and also there is no question of people hoarding the commodities so as to sell them at higher price.

3. Another benefit of barter system is that problem of foreign exchange and international trade does not arise and also there is less possibility of concentration of wealth in the hands of few people.
Limitations of Barter Exchange:

Inconveniences (Problems) of Barter Exchange:

1. Lack of double coincidence of wants:
   Double coincidence of wants means what one person wants to sell and buy must coincide with what some other person wants to buy and sell. ‘Simultaneous fulfillment of mutual wants by buyers and sellers’ is known as double coincidence of wants.

   There is lack of double coincidence in the wants of buyers and sellers in barter exchange. The producer of jute may want shoes in exchange for his jute. But he may find it difficult to get a shoe-maker who is also willing to exchange his shoes for Jute.
2. Lack of common measure of value:
In barter, there is no common measure (unit) of value. Even if buyer and seller of each other commodity happen to meet, the problem arises in what proportion the two goods are to be exchanged. Each article must have as many different values as there are other articles for which it is to be exchanged.
Eg. Car is exchange for horses, cows, and buffaloes.

3. Lack of standard of deferred payment:
There is problem of borrowing and lending. It is difficult to engage in contracts which involve future payments due to lack of any satisfactory unit. As a result, future payments are to be stated in term of specific goods or services. But there could be disagreement about the quality of the good, specific type of the good and change in the value of the good.
4. Difficulty in storing wealth –
It is difficult for the people to store wealth for future use in the form of goods like cattle, wheat, potatoes, etc. Holding of stocks of such goods involves costly storage and deterioration.
Forms of money & supply of money
M1, M2, M3 & M4

By – Gobind Rawat
1. Commodity Money
Commodity money is the simplest and, most likely, the oldest type of money. It builds on scarce natural resources that act as a medium of exchange, store of value, and unit of account. Commodity money is closely related to (and originates from) a barter system, where goods and services are directly exchanged for other goods and services. Examples of commodity money include gold coins, beads, spices, etc.

2. Fiat Money
Fiat money gets its value from a government order. That means, the government declares fiat money to be legal tender, which requires all people and firms within the country to accept it as a means of payment. Examples of fiat money include coins and bills.
3. Fiduciary Money
Fiduciary money depends for its value on the confidence/trust that it will be generally accepted as a medium of exchange. Unlike fiat money, it is not declared legal tender by the government, which means people are not required by law to accept it as a means of payment. Examples of fiduciary money include cheques, banknotes, or drafts.
4. **Full Bodied money**- Any unit of money, whose face value and intrinsic (as a commodity) value are equal, is known as full bodies money,

\[ \text{i.e. money value} = \text{Commodity value}. \]

For example, one rupee coin is made of silver and its value as money was same as its value as a commodity.

5. **Credit Money:**
Credit money refers to the money whose intrinsic value (as a commodity) is much lower than its face value,

\[ \text{i.e. Money Value} > \text{Commodity Value}. \]

For example, face value of Rs 100 note is Rs 100, but we would get a much lower value if we sell the note as a piece of paper. Credit cards, bank deposits are other examples of credit money.
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
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. Let us take a look at how they are calculated.

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.

\[ M1 = CC + DD + OD \]
M2
M2, also narrow money, includes all the inclusions of M1 and additionally also includes the saving deposits of the post office banks.

\[ \text{So } M2 = M1 + \text{Savings Deposits of Post Office Savings} \]

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.

\[ \text{So } M3 = M1 + \text{time deposits of banks.} \]

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.

\[ M4 = M3 + \text{Post office savings} \]
Measure of Money Supply ($M_1$)

- Currency with the Public
- Demand Deposits of the People with the Commercial Banks
- Other Deposits with Reserve Bank
  - (i) Demand Deposits with Reserve Bank of Public Financial Institutions (like NABARD)
  - (ii) Demand Deposits with Reserve Bank of Foreign Central Banks and Governments
  - (iii) Demand Deposits of International Financial Institutions (like IMF and World Bank)
Credit/money creation by commercial banks

Unit-2, Banking system in India

By: Gobind Rawat
Meaning of Commercial Banks:

A commercial bank is a financial institution which performs the functions of accepting deposits from the general public and giving loans for investment with the aim of earning profit.
Credit Creation by Commercial Banks

Credit creation is the most significant function of the commercial banks. Commercial banks accept deposits and lend loans and advances.

In this process they create two types of deposits, namely primary deposits and secondary deposits.

Credit creation based on two assumptions.

1. All banking system is one unit / bank.
2. All transactions(payment & receipt) are made through bank only.(not in cash)
It is minimum proportion of total demand deposit of commercial bank as reserve, it is legally compulsory for the banks to keep reserves which is decided by central bank (RBI)

Legal reserve ratio/ requirement

\[ \text{Legal reserve ratio} = (\text{CRR} + \text{SLR}) \]

1. Primary Deposit - primary deposit is an initial deposit of the people with bank.

2. Secondary deposit - these deposits are created by the way of loans.

3. Demand deposit - any amount that can be withdrawn on demand (by cheque)

\[ \text{DD} = \text{PD} + \text{SD} \]
Primary deposit = 1000  
Reserve ratio = 10%

<table>
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<tr>
<th>Round/Phase</th>
<th>Deposits Rs</th>
<th>Loans Rs</th>
<th>Cash Reserves (LRR = 10%)</th>
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<tr>
<td>1.</td>
<td>1000</td>
<td>900</td>
<td>100</td>
</tr>
<tr>
<td>2.</td>
<td>900</td>
<td>810</td>
<td>90</td>
</tr>
<tr>
<td>3.</td>
<td>810</td>
<td>729</td>
<td>81</td>
</tr>
<tr>
<td>total</td>
<td>DD= 10,000</td>
<td>Loans= 9000</td>
<td>Reserves= 1000</td>
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Money Multiplier:
Money Multiplier or Deposit multiplier measures the amount of money that the Banks are able to create in the form of deposits with every unit of money it keeps as reserves.

It is calculated as:
Money Multiplier = $1/LRR$

In the given example, LRR is 10% or 0.1. So,

Money Multiplier(k) = $1/10\% = 10$

DD = $1000 \times 10 = 10,000$
Let us now understand the process of Money Creation through an example:

1. Suppose, initial deposits in banks is Rs 1,000 and LRR is 10%.

It means, banks are required to keep only Rs 100 as cash reserve and are free to lend Rs 900.
Suppose they lend Rs 900. Banks do not lend this money by giving amount in cash. Rather, they open the accounts in the names of borrowers, who are free to withdraw the amount whenever the like.

2. Suppose borrowers withdraw the entire amount of 900 for making payments. As all the transactions are routed through the banks, the money spent by the borrowers comes back into the banks in the form of deposit accounts of those who have received this payment.
   It will increase the demand deposits of banks by 900.
3. With new deposits of 900, banks keep 10% as cash reserves and lend the balance Rs 810. Borrowers use these loans for making payments, which again comes back into the accounts of those who have received the payments. This time, banks deposits rise by Rs 810.

4. Deposit creation comes to end when total cash reserves become equal to the initial deposit.

Excess Reserve- It is difference between actual reserve and Total required reserve.

\[
\text{ER} = \text{AR} - \text{TRR}
\]

\[
\text{ER} = 1000 - 1000 = 0
\]

Thus, this process of deposits and credit creation continues till the reserves with commercial banks reduce to zero.
Formula of Demand deposit

1. \( DD = \frac{1}{RR} \times PD \)

\[ DD = \frac{1}{10\%} \times 1000 = 10,000 \]

2. \( DD = PD + SD \)

\[ DD = 1000 + 9000 = 10,000 \]
Thus, it can be inferred that lower the CRR, the higher will be the credit creation, whereas higher the CRR, lesser will be the credit creation.

With the help of credit creation process, money multiplies in an economy.
19. Explain the credit creation role of commercial banks with the help of a numerical.
2014; All India 2013)

or

How do commercial banks create deposits? Explain. (Delhi 2013)

Illustrate with the help of a hypothetical numerical example the process of credit creation.

Calculate the value of money multiplier and total deposits created if initial deposits are of Rs. 500 crores and LRR is 10%.

Explain the process of money creation by commercial banks, giving a numerical example.

How do commercial banks create deposits?

Explain the working of money multiplier with the help of a numerical example?
FUNCTIONS OF CENTRAL BANK IN INDIA

Unit-2, Banking system in India

By- Gobind Rawat
Introduction-
The Reserve Bank of India was established on 1st April 1935, on the recommendation of ‘Hilton Young Commission’. RBI has one governor and four deputy governors. Currently Mr. Shakti Kant Das is the governor of RBI.
Major Functions of the Reserve Bank of India

Major functions of the RBI are as follows:

1. Issue of Bank Notes:
The Reserve Bank of India has the sole right to issue currency notes except one rupee notes which are issued by the Ministry of Finance. Currency notes issued by the Reserve Bank.

It issues notes of every denomination, except one-rupee note and coins and small coins, through the Issue Department of the Bank. One-rupee notes and coins and small coins are issued by the Government of India.
2. Banker to the Government:
The RBI acts as the banker to the government of India and State Governments. As such it transacts all banking business of these Governments.

**These are the following:**

- **i. As a banker.**
- **ii. As an agent.**
- **iii. As an adviser.**

As the Government’s banker, the RBI provides short-term credit to the Government of India. RBI provide banking support and facilities to the govt.

RBI act as an agent by sale and purchase of securities on the behalf of govt.

The RBI acts as the adviser of the Government not only on banking and financial matters but also on a wide range of economic issues (like financing patterns, mobilisation of resources, institutional arrangements with regard to banking and credit matters, arrangements with regard to banking and credit matters, international finance) etc.
3. Banker’s Bank:
As bankers’ bank, the RBI holds a part of the cash reserves of commercial banks and lends them funds for short periods. All banks are required to maintain a certain percentage (lying between 3 per cent and 15 per cent) of their total liabilities.

The main objective of changing this cash reserve ratio by the RBI is to control credit. The RBI provides financial assistance to commercial banks and State cooperative banks through rediscounting of bills of exchange.

The RBI has been empowered by law to supervise, regulate and control the activities of commercial and cooperative banks. The RBI periodically inspects banks and asks them for returns and necessary information.
4. **Lender of Last Resort:**
The commercial banks approach the Reserve Bank in times of emergency to tide over financial difficulties, and no other banks are providing them finance then the Reserve bank comes to their rescue though it might charge a higher rate of interest, that rate is called Marginal standard facility (MSF).

5. **Clearing house function**
RBI plays the role of clearing house function by the clearance of cheque through different banks.
Eg. Suppose bank A accepting cheque from Bank B and bank B accepting cheque from bank A Then RBI clear the amount of cheque by seen the details of particular account because all banks are under supervision of RBI.
6. Custodian of Country’s Foreign Currency Reserves:
The Reserve Bank has the custody of the country’s reserves of international currency, and this enables the Reserve Bank to deal with crisis connected with adverse balance of payments position.
RBI is the custodian of foreign exchange, It exercise ‘managed floating’ to stabilize foreign exchange rate in the international market.

The RBI has the authority to enter into foreign exchange transactions both on its own account and on behalf of the Government.
FUNCTIONS OF CENTRAL BANK IN INDIA-2

Unit-2, Banking system in India

By- Gobind Rawat
7. Controller of Credit:
The RBI controls the total supply of money and bank credit in the country’s interest. The RBI controls credit to ensure price and exchange rate stability. To achieve this, the RBI uses all types of credit control instruments, quantitative, qualitative and selective. The most extensively used credit instrument of the RBI is the bank rate.

During inflation- during inflation RBI reduce money supply by increasing Bank rate, Repo rate, CRR, & SLR by adopting ‘Dearer Monetary policy’.

During deflation- during deflation RBI increase money supply by reducing Bank rate, Repo rate, CRR, & SLR by adopting ‘Cheap Monetary policy’.
RBI’s qualitative and quantitative instruments of credit control?

1. Quantitative instruments
   1. Bank rate
   2. Repo rate.
   3. Reverse repo rate.
   4. CRR
   5. SLR
   6. MSF

2. Qualitative instruments
   1. Margin requirements:
   2. Consumer Credit Regulation:
   3. Guidelines:
   4. Rationing of credit:
   5. Moral Suasion:
   6. Direct Action:
repo rate also known as the **benchmark interest rate** is the rate at which the RBI lends money to the banks for a short term.

When the repo rate increases, borrowing from RBI becomes more expensive.

If RBI wants to contraction in money supply then increases the repo rate. if it wants to make it cheaper for banks to borrow money it reduces the repo rate.

Current repo rate is 4% (June-2020)
2. Bank Rate -

This is the long term rate (Repo rate is for short term) at which central bank (RBI) lends money to other banks or financial institutions.

Bank rate is not used by RBI for monetary management now.

It is now same as the MSF rate.

Current bank rate is 4.25%
3. Reverse Repo rate

Reverse Repo rate- is the short term borrowing rate at which RBI borrows money from banks.

The Reserve bank uses this tool when it feels there is too much money floating in the banking system.

In this way surplus fund with commercial bank goes with RBI.

Reverse Repo rate signifies the rate at which the central bank absorbs liquidity from the banks.

Current R.R.R is 3.35%.
4. CRR - Cash Reserve Ratio

CRR - Banks in India are required to hold a certain proportion of their deposits in the form of cash. However, Banks don't hold these as cash with themselves, they deposit such cash with Reserve Bank of India.

Currently CRR is 3%. CRR can vary from 3% to 15%.

5. SLR - Statutory Liquidity Ratio

A minimum proportion of their Net Demand and Time Liabilities as liquid assets in the form of cash, gold and un-encumbered approved securities.

The ratio of liquid assets to demand and time liabilities is known as Statutory Liquidity Ratio (SLR).

Currently SLR is 18.50%.
6. MSF - Marginal Standing facility

It is a special window for banks to borrow from RBI against approved government securities in an emergency situation like an acute cash shortage.

MSF rate is higher than Repo rate.

Current MSF Rate: 4.25%
2. Qualitative instruments

1. Margin requirements

Margin requirements This refers to difference between the securities offered and amount borrowed by the banks. Eg. Commercial bank take loans of 80 cr then bank need keep security worth 100 crores.

2. Consumer Credit Regulation

Consumer Credit Regulation refers to issuing rules regarding down payments and maximum maturities of instalment credit for purchase of goods.

3. RBI Guidelines

RBI Guidelines - RBI issues oral, written statements, appeals, guidelines, warnings etc. to the banks.
Rationing of credit

The RBI controls the Credit granted / allocated by commercial banks.
Liberal policy – during deflation. (RBI Reduce repo rate, bank rate, CRR & SLR)
Dearer policy – during inflation. (RBI Reduce repo rate, bank rate, CRR & SLR)

Moral Suasion

Moral Suasion *Psychological means and informal means* of selective credit control.

The moral suasion develops a more psychological effect as the central bank makes an appeal to the bank’s nationalism spirit.

It is purely informal and involves personal interaction (guidance) between the central bank and the commercial banks.
RBI Repo Rate Cut
The likely scenarios when repo rate is reduced:
• When the central bank wants to signal lower interest rates in the market
• When RBI is reasonably confident that inflation and fiscal deficit are in control and a demand led price surge is unlikely
• When the economy is slowing down and the RBI wants to accelerate growth by signaling an accommodative monetary policy
• When the external balance of payments situation of the country is seen to be stable by the bank

Impact of Repo Rate Hike
• As the new MCLR is linked to Repo Rate, any increase in repo rate will lead to increase in MCLR. This will lead to increase in interest rate for borrowers who have taken floating rate home loan, personal loan and business loan
• As the Repo Rate is increased, the demand for credit facilities (loan) will decrease, due to higher interest rate. This will help RBI and government to control inflation
• Corporate will be able to get cheaper funds for business expansion. This will help in achieving the growth target

RBI Repo Rate increase
The likely scenarios when the RBI is likely to raise repo rate are:
• When the central bank wants to signal higher interest rates in the market
• When RBI sees over heating in the economy and perceives a risk that inflation may surge
• When there may be a risk of asset bubbles being created due to excessive capital formation
• When the RBI wants to reduce speculation in foreign exchange or sees a risk of disorderly depreciation of Indian currency
Aggregate Demand & Aggregate Supply

Unit-3 Determination of income & employment.

By- Gobind Rawat