

Barter System

- Society that did not use money is known as barter society.
- Barter is a **system of exchange** by which goods or services are **directly exchanged** for other goods or services **without using a medium of exchange**, such as money.



- There were various defects in this system.

1. Double Coincidence of Wants:

Exchange can take place between two persons *only if* each possesses the good which is required by the other person at the time of exchange.

e.g., if a weaver needs shoes and he has cloth to offer in exchange he should not only find a cobbler who makes shoes, but find such cobbler who needs cloth and is prepared to give shoes in exchange for it. In this case, it was difficult to find such a person.

2. Absence of Standard Value:

Under barter system there was no measure of value. Even if two persons met together who wanted each other goods, they could not find a satisfactory equilibrium price. Under such condition one party had to suffer.

3. Indivisibility of Commodities:

It was difficult to divide a commodity without loss in its value e.g., a man who wants to purchase cloth equal to half the value of his cow and other commodities for the rest half value of cow; he could not divide his cow.

4. Absence of Store of Value:

Wealth cannot be easily stored for future use in the form of commodities because they perish in the long run.

5. Lack of standards for deferred payments:

This is related to the absence of a common measure of value, although if the debt is denominated in units of the good that will eventually be used in payment, it is not a problem.

What is Money?

- Money can be defined in two ways.

01. Definition

- Money is any **object or record**, that is generally accepted as payment for goods and services and repayment of debts (**generally accepted as a medium of exchange**) in a **given country or socio-economic context**.
- Therefore money is an objective or record that has **100% liquidity** (perfect liquidity) in a given country or socio-economic context.
- In other words without losing any value, money is an asset that can be used as a medium of exchange at any given time.
- Thus, money has 3 key features.
 1. Generally accepted in a given country or socio-economic context
 2. Method of settling the value of goods and services and repayment of debts
 3. Contains 100% liquidity (perfectly liquid asset).

02. Definition

- Money is any objective or a record that it performs functions of money.
- In other words any objective or record that perform following four functions can be considered as money,
 - a. Medium of exchange
 - b. Unit of account
 - c. Store of value
 - d. Standard of differed payment

Functions of Money

01. Medium of exchange

- A medium of exchange is an intermediary medium used to settle payment for goods and services and repayment of debts to avoid the inconveniences of a pure barter system.
- Due to this function money becomes a perfectly liquid asset (100% liquid asset).

Economic consequences of medium of exchange

a. Increase efficiency in economic activities

With the introduction of money as a medium of exchange it decreases transactional cost and remove exchange difficulties as result of negating the weaknesses of pure barter system. This leads to an increase in efficiency in economic activities.

b. Improves division of labour and specialization

With the expansion of economic activities and production, it improves division of labour and specialization. This in return improves economic activities further and creates positive cycle.

Factors those reduces the value of money as a medium of exchange

a. Inflation

With the inflation purchasing power of money fluctuates. Therefore during situations such as hyperinflation (100+% inflation) general public loses its faith in money as a medium of exchange.

b. Self-sufficiency mind set

Some of the traditional economies still believe in self-sufficiency. This mind set avoids then to accept money as a medium of exchange.

Characteristics of “Good Money” (Characteristics required money to perform as an effective medium of exchange)

1. Common Acceptance
2. Portability
3. Divisibility
4. Durability
5. High market value in relation to volume and weight
6. Easy to recognize
7. Resistance to counterfeiting
8. Homogeneity
9. Stability of the value

02. Store of value

- Money acts as a medium of **storing value** or **purchasing power**.
- Due to **three** main reasons money is used as a store of value.
 - a. **Lower risk** – fluctuation of value is minimal
 - b. **Convenience** – Easy to store and portability
 - c. **Liquidity** – can be converted in to medium of exchange at any given time
- Money to perform as a “store of value”, value must be able to be saved and retrieved at a later time, and be predictably useful when retrieved.
- Thus, with this function money act as a “**Medium of storing purchasing power**”
- Even though people can store value using other mediums, money becomes the most convenient and safest method of storing value.

Functions of money as store of value

- a. Money provides a medium that can be reliably saved, stored, and retrieved value that allows **purchasing power to be carried forward to the future**.
- b. **Retain liquidity overtime** (when it is retrieved it can be used as a medium of exchange)
- c. **Value of money must be remain stable over time** (limited fluctuation of value when it is stored as money as against other mediums)

Limitations of money as a store of value

a. Inflation

Due to inflation purchasing power of money declines. Therefore people lose its trust to store value in money and shift to other mediums.

b. Opportunity cost

When value is stored in money there is no incremental return over time. In fact real purchasing power can get deteriorated over time due to inflation. Thus, people tend to store value in other assets such as real estate, gold etc. rather than store in money.

03. Unit of account / Standard of value

- A unit of account is a **standard monetary unit** of measurement of value/cost of goods, services, or assets.
- Money acts as an easy and common measure to give a specific value of the goods and services.
- When value of the good is measured by money, it's known as "**price**".

Functions of money as unit of account

- a. Function as a common measurement to measure the value
- b. Can compare the value of different asset Ex:- Value of a land Vs. Value of a pen
- c. Convenience for accounting & reporting value

04. Standard of deferred payment

- A standard of deferred payment is the accepted way, in a given market, to settle a debt.
- Therefore, money acts as a medium to make transactions at present and settle the payment in future or vice-a-versa without affecting either party.
- For money to act as a standard of deferred payment there are **two pre-conditions**.
 - a. Money should be a medium of exchange
 - b. Money should be a unit of account

Importance of money as standard of deferred payment

- a. Increase economic growth rate
Ex:- investments can be increased by borrowing money.
- b. Improve living standard of consumers
Ex:- Housing loans, Vehicle loans

Evolution of Money

01. Commodity Money

- The goods with an intrinsic/natural value which can be used as a medium of exchange are commodity money.
E.g. gold, silver, bronze, diamonds, cigarettes
- It is objects that have value in themselves as well as for use as money.
- Hence, commodity money is money in which value comes from the commodity out of which it is made. (Intrinsic Value = Face Value)

Limitations of commodity money

- a. It was insecure and difficult in transportation
- b. It was difficult to weigh and measure
- c. Difficult to store

Note:- Up until very recent time world used gold and silver coins as money. These metal coins provided solutions for the limitations of other commodity money. Even when gold and silver coins are used as money intrinsic value (value of the metal used in producing the coin) was equal to face value (value mentioned on the face of the coin). Thus, metal coins were also a part of commodity money those are bit evolved from other commodity money.

02. Representative Money

- Representative money came in to use due to the difficulties of handling precious metals as coins. Especially security in transportation.
- Thus, a system was introduced to obtain special receipt/note by depositing precious metal coins with goldsmiths (banks) to represent the ownership of the amount of precious metals deposited.
- These receipts/notes were known as **representative money**.
- These notes were used in transactions and the new owner can go to goldsmiths (banks) and exchange notes to the valuable metals.
- Value of the representative money was derived from the deposited precious metals.

03. Fiat Money

- The term fiat money is used to mean:

- a. Any money declared by a government to be legal tender. (legal tender is law requires that they be accepted as payment)
 - b. Money without intrinsic value (Face Value > Intrinsic Value)
- Therefore, Fiat money is a token of value that is commonly accepted by the general public since law of land requires (fait/command) that they be accepted as payment.

Ex:- Coins and notes used in modern economies

04. E- Money

- Any plastic cards that are used for settling transactions through internet or digital technology.
- Using E – money people can do their day – to – day transactions easily than other payment methods as it is lower in cost.
- Due to usage of E – money, it may lead to reduce the demand for fiat money (currency notes and coins)

05. Crypto – currency (Virtual money)

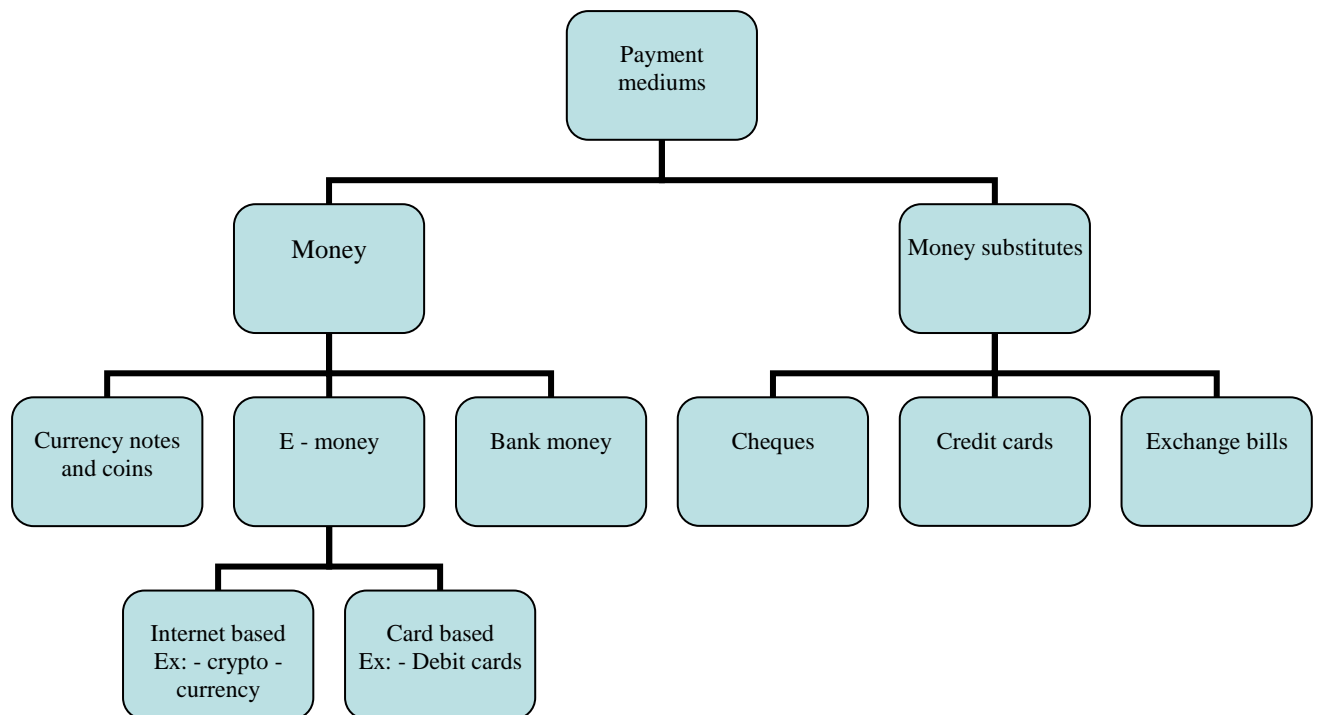
- Crypto – currency is a form of a virtual currency that can found in the cyber space which has no physical existence.
- These currencies are created by solving computer software that includes cryptographic puzzles.
- It is called as crypto – currency is because it uses a strong cryptography (Encryption) to secure financial transactions, creation of additional currency and transferring.
- Crypto – currency has a decentralized control through a distributed digital ledger technology called as a block chain, which serves as a database for financial transactions.

Ex: - Bit coin

- The amount of crypto – currency that can be made is restricted by increasing complexity and difficulty level of cryptographic puzzles and if a person wants to buy crypto – currency without solving puzzles, those can be purchased through the market.

Extra facts

- The person who invented a decentralized crypto – currency; bitcoin is a Japanese scientist known as Satoshi Nakamoto.
- The smallest unit of a bitcoin is called ‘Satoshi’ as an honor to him.

**E – money and the financial policy**

- Due to usage of e – money as the demand for fiat money reduces the requirement for the central bank intervention and issuing of currency reduces.
- Also as crypto – currency has a decentralized control as opposed to central banking system, usage of crypto – currency will heavily impact for central banks' role in issuing money.
- Even as there's no control over a crypto – currency by a particular entity, central banks face difficulties in monitoring and controlling the usage of crypto – currency (Ideally it has no control over crypto - currency).

Value of money

- Value of money is the amount of goods and services that can be purchased from a money unit.
- In other words, it is the purchasing power of a money unit.
- This concept does not refer to the face value of money (value printed on the face of coins and notes) but the real value of money.
- Value of money can be categorized in to two sub concepts.
 - a. Internal value of money
 - b. External value of money

01. Internal value of money

- Internal value of money is the amount of goods and services that can be purchased from a money unit within a particular country.
- In other words, it is the internal purchasing power of a money unit.
- It can be calculated as follows:
 - a. As a value

$$\frac{\text{Money Unit (LKR)}}{\text{Price Index}} \times 100$$

- a. As an Index

$$\frac{\text{Price Index of Base Year}}{\text{Price Index of Current Year}} \times 100$$

02. External value of money

- External value of money is the rate at which one nation's currency exchange to another nation's currency.
- In other words it is the foreign exchange rate

Ex;- 1 USD = 139 LKR

Impact on functions of money by inflation

- To perform its functions effectively money should maintain a stable real value. (Stable purchasing power)
- During inflation real value of money gets reduced. Thereby it creates a negative impact on effective functioning of money.
 1. During a hyper inflationary situation real value of money can get reduced dramatically, thereby general public can lose its faith in money as a medium of exchange.

Ex;- During great depression especially in Germany public lost their faith in money as a medium of exchange due to hyperinflation.
 2. During inflation money is not attractive as a store of value. Therefore, general public tend to migrate to other assets such as real estate, gold etc. to store value during inflation.
 3. During inflation if interest rates do not get adjusted borrowers benefit more than the lenders. Thus, as a standard of deferred payments money become less effective.

Concepts relating to Money

01. Fiat Money

- Fiat money is currency that government has declared as legal tender thereby can be used in settling any payment within a particular country.

Ex;- All coins and notes issued by central bank of Sri Lanka

02. Bank Money

- Bank deposits those can be used in settling payments by issuing cheques.
- In other words, bank money is deposits held in commercial banks current accounts.
- In using bank money medium of exchange is cheques.
- Cheque is not a currency but it is an asset that has very high level of liquidity. In some developed countries cheques have perfect liquidity.

03. Near Money

- Near money is non-cash assets which can readily be converted into cash, thereby assets those do not have perfect liquidity but a very high liquidity.
- Near money has main 3 characteristics:
 - a. it **does not perform** the function of **medium of exchange**
 - b. it **performs** the function of **store of value**
 - c. it can **easily be converted to cash** (medium of exchange)

Ex;- Saving deposits, Treasury bills, Treasury bonds, Debentures

04. Money Substitutes

- These are the mediums those can be used as temporary medium of exchange but cannot be used as store of value.
- Money substitutes have main 2 characteristics:
 - a. it **perform** the function of **medium of exchange on temporary basis**
 - b. it **does not performs** the function of **store of value**

Ex;- Credit cards

Special Note; - Debit cards is not a money substitute since value can be stored in debit cards.

05. Quasi Money

- These are the assets those have some characteristics of money thereby perform some functions of money. However, since they have certain limitations they are considered as quasi-money rather than money.

Ex;- Money orders, Gift vouchers

Special Note: - Even though these assets perform as both medium of exchange and store of value they contain certain limitations. Therefore these are known as quasi money. (Quasi is a term that implies the meaning “apparently but not really”)

06. Black money

- Money balances which have been earned through illegal means that cannot be disclosed are called black money.

Re-cap

| | Medium of exchange | Store of Value | Unit of account | Standard of differed payment |
|--------------------------|--------------------|----------------|-----------------|------------------------------|
| Money | Yes | Yes | Yes | Yes |
| Near Money | No | Yes | No | No |
| Money Substitutes | Yes | No | No | No |

Difference between “credit cards” and “debit cards”

Debit Card

- When someone uses a debit card money will be transferred to vendor's account from the savings account of the card holder on line real time.
- Therefore, using a debit card is as similar as using money.
- Infact debit card represents money deposited in the card holder's savings account.
- Thus, debit card can be considered as a form of money.
- But it has certain limitations compared to coins and notes. Ex:- Vendor should accept debit card as a payment method

Credit Card

- Credit card represents short term credit (loan) obtained by the card holder from a financial company by which the credit card has been issued.
- When a card holder makes a payment through credit card, financial company (by which the credit card has been issued) make that payment to the relevant vendor.

- Within a specific time period that amount has to be paid to the financial company by the card holder.
- Within a certain time period if payment is settled financial company does not charge an interest. However, if the card holder was unable to settle the payment within that period interest will be charged.
- Therefore, credit card represents short term credit facility. Thus, it cannot be considered as money.

Liquidity

- Liquidity is the ability to convert an asset in to a medium of exchange without losing its value, without an extra cost or effort of conversion.
- In other words if an asset can easily be converted in to a medium of exchange without losing its value and without any extra cost or an effort those can be considered as highly liquid assets. Ex:- Coins & Notes
- On the other hand, if an asset cannot be easily converted in to a medium of exchange and the conversion requires an extra cost or effort those can be considered as less liquid assets Ex:- Real estate, Buildings
- Money is the only asset that has perfect liquidity (100% liquidity). This is the main feature that distinguishes money from other assets.

Key Factors to consider when converting other financial assets in to perfect liquidity

(Factors that determine liquidity of near money)

1. Convenience

If there is an efficient financial market, other financial assets such as treasury bills and bonds can easily be converted in to cash. Thereby liquidity improves.

2. Cost

In a financial market if the effort and intermediary charges are low liquidity improves.

3. Confidence on future value

If an investor has a higher confidence as they can easily convert their financial assets such as treasury bills & bonds in to cash without losing its value before its maturity, then liquidity improves.

Money Demand (Liquidity Preference)

- Money demand is preference or desire of the general public to hold financial assets in the form of money (coins and notes) at a specific time.
- In other words, preference or desire to hold perfect liquid financial assets by the general public at a specific time.
- Therefore, money demand is also known as Liquidity preference as well.
- General public create a demand for money not because money contains utility but it can purchase goods and services that contains utility.
- Hence money has a derived demand (Indirect demand)
- Even though general public do not get any income by holding money (perfect liquid asset) due to 3 main motives they desire to hold money.

| | | |
|-------------------------|---|-------------------------------|
| 1. Transaction motive | } | Related to medium of exchange |
| 2. Precautionary motive | | |
| 3. Speculative motive | } | Related to store of value |

01. Transaction Motive

- Due to the fact that income and expenditure do not take place at the same time, general public has to hold money (perfect liquidity) in order to steer their lives without distractions.

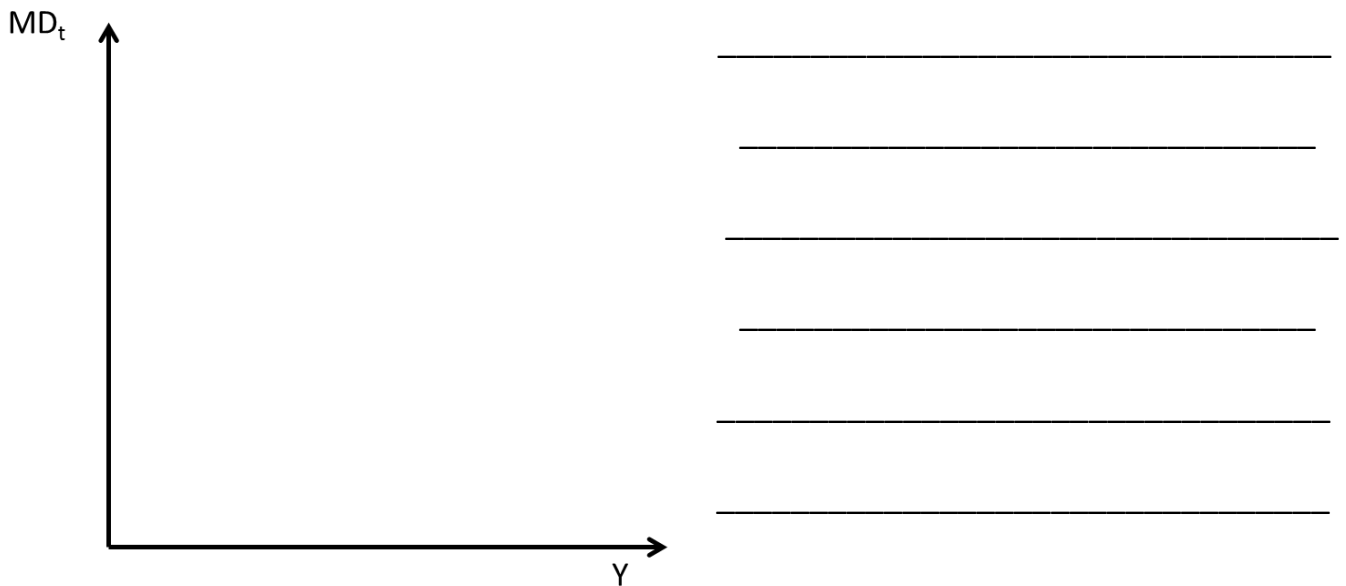
Ex;- Even though income is received either on monthly or weekly basis transactions have to be carried out on daily basis.

- Therefore, general public demand money balances in order to make day today transactions.
- This is the money demand on transaction motive.

Function of transaction demand for money

- Transaction demand for money is mainly depends on consumer income.
- There is a **direct relationship** (positive relationship) between consumer income and transaction demand for money.

$$MD_t = f(Y)$$



02. Precautionary Motive

- Due to the fact that most of the people receive income periodically (monthly, weekly), in order to cope unexpected expenses those could take place in-between income periods, general public has to hold money (perfect liquidity).

Ex:- Family member is getting sick and needs to take medicine

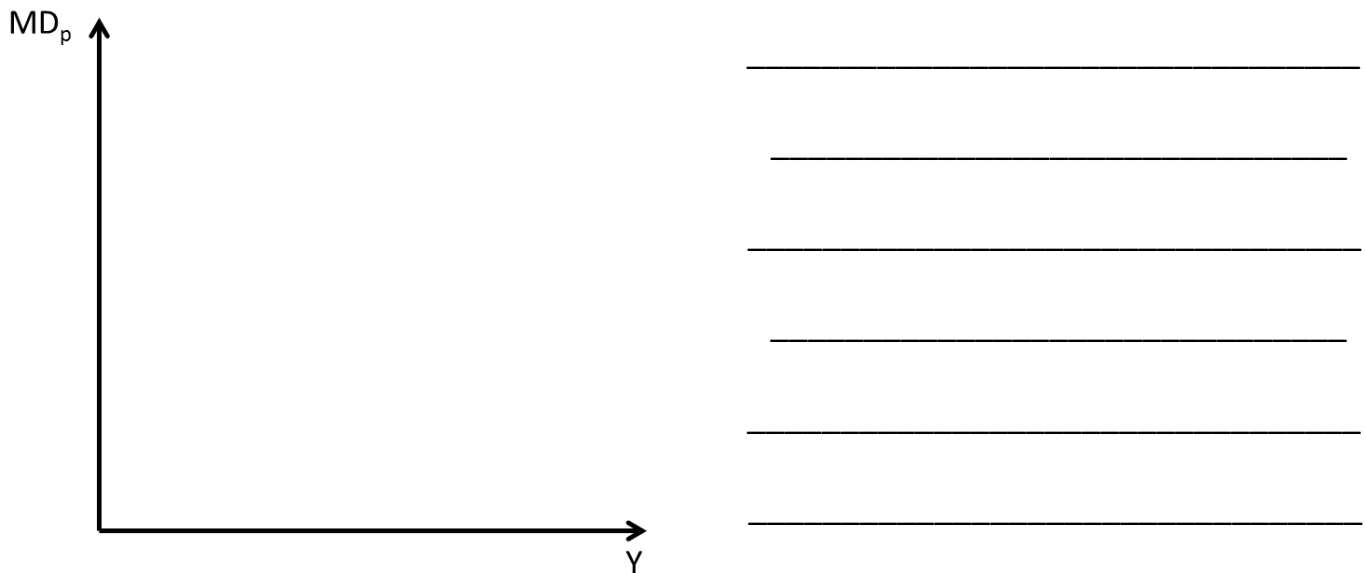
Unexpected vehicle break down

- This is the money demand on precautionary motive.
- Precautionary money demand is different to transactional money demand due the fact that latter is liquidity preference on planned expenditure and former is liquidity preference on precaution for unexpected expenditure.

Function of precautionary demand for money

- Precautionary demand for money is mainly depends on consumer income.
- There is a **direct relationship** (positive relationship) between consumer income and precautionary demand for money.

$$MD_p = f(Y)$$



03. Speculative Motive

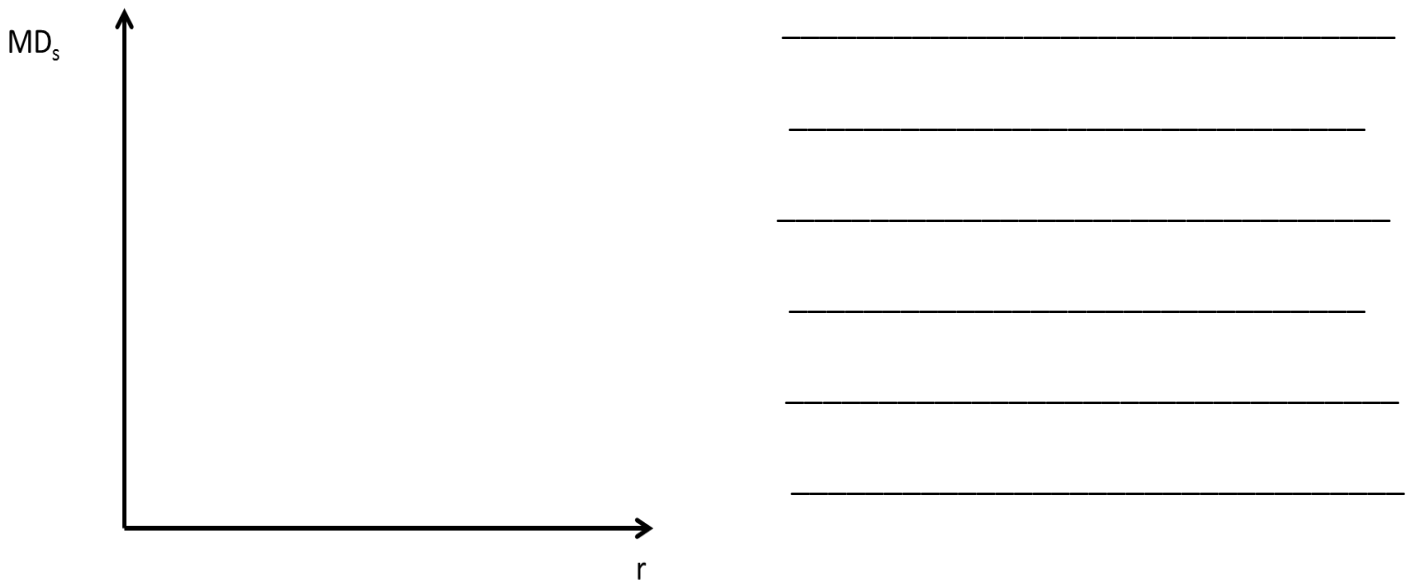
- With the expectation of making an earning in the future or since money is relatively stable than other financial assets as a store of value, general public desire to hold money (coins & notes) balances.
- In other words this is money not held for transaction purposes but in place of other financial assets, usually because they are expected to fall in price
- This is the money demand on speculative motive.

Special note :- *Speculative money demand contains the amount of money desired to be held by general public to reduce the risk of a portfolio of assets by including some money in the portfolio, since the value of money is very stable compared with that of stocks, bonds, or real estate.*

Function of speculative demand for money

- Speculative demand for money is mainly depends on interest rate.
- There is an **inverse relationship** (negative relationship) between interest rate and speculative demand for money.

$$MD_s = f(r)$$



Relationship between interest rate and bond prices

- Price of a bond can be calculated as follows.

$$\text{Price of bonds} = \frac{\text{Yield of bonds}}{\text{Market interest rate}}$$

$$P_b = \frac{Y}{r}$$

- Based on the above equation there is a negative (inverse) relationship between Bond prices (P_b) and interest rates (r)

Explanation

- If we consider Rs. 1000/- worth of bond with a maturity of one year at 10% yield, a person who holds this bond for one year (till maturity) will receive Rs.100/- as yield.

Calculation:-

- If current market interest rate (Savings interest rate) is also 10% p.a face value of the bond (Rs. 1000/-) equals to bond price in the open market (Rs. 1000/-) since for this bond no one pays a higher price than its face value or no one sells at a lower price than its face value in the open market **before maturity.**

Calculation:-

- However imagine current market interest rate (Savings interest rate) is 12.5% p.a. Thus, this bond holder is losing out if he holds on to this bond. Therefore he tries to sell this bond in the open market. However he will not be able to sell this to the face value of Rs.1000/-. Therefore he will have to sell this at a lesser market price than face value of this bond. In the market now this bond only worth Rs. 800/-

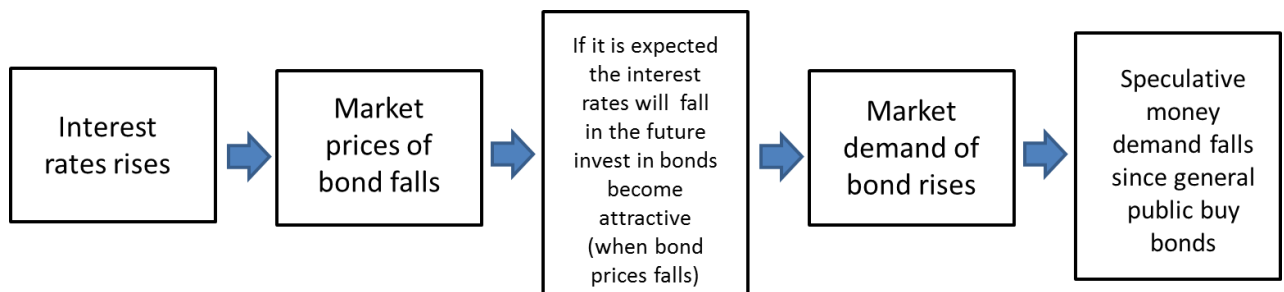
Calculation:-

- Now imagine current market interest rate (Savings interest rate) is 8% p.a. Thus, this bond holder is gaining by holding on to this bond. Therefore he can sell this bond in the open market at a higher price than face value. In the market now this bond worth Rs. 1250/-

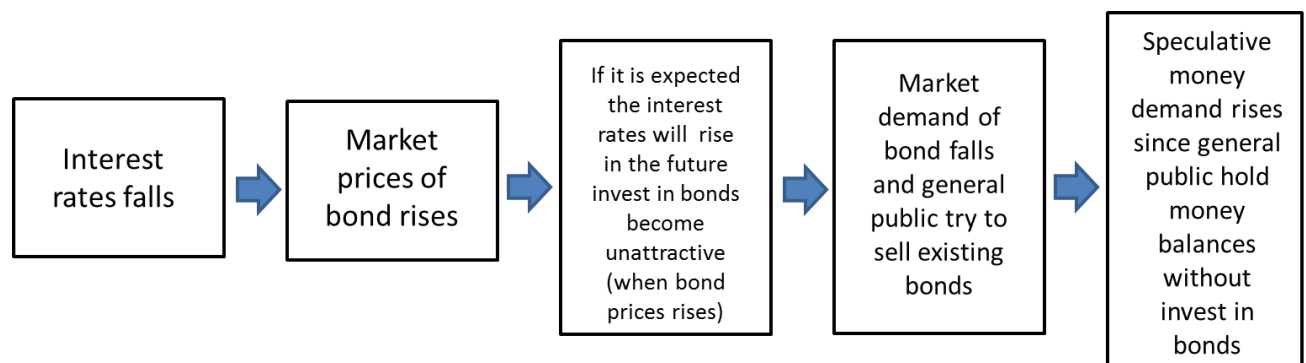
Calculation:-

Explaining the inverse relationship between interest rate and speculative money demand

01. When Interest rate increases speculative money demand falls



02. When Interest rate decreases speculative money demand rises



Alternative method of explaining speculative money demand

- When interest rates are higher, the opportunity cost of keeping money balances is also higher as people can earn an interest income by investing to bonds.
- Thus, as a result of investing, the demand for money falls.
- On the other hand, when interest rates are lower, the opportunity cost of keeping money balances is also lower as now it can receive a lower interest income by investing to bonds.
- Hence, this will lead for more money balances to be with people by increasing the demand for money.

Function of money demand

- Total demand for money is the summation of money demand on transaction motive, precaution motive and speculative motive.

$$MD = MD_t + MD_p + MD_s$$

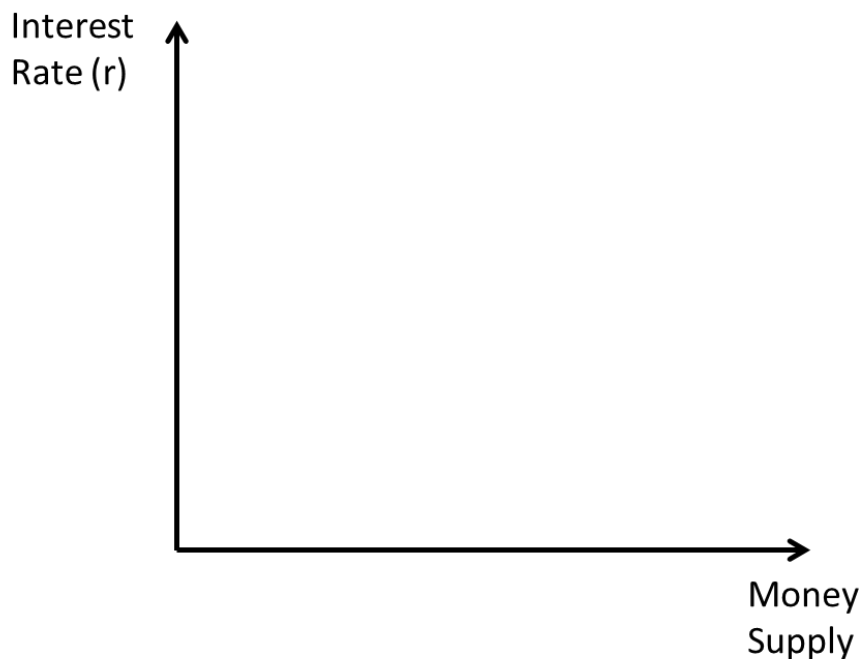
Factors affecting money demand

1. **Level of income** – There is a direct (positive) relationship between money demand and level of income
2. **Interest rate** – There is an inverse (negative) relationship between money demand and interest rate.
3. **General Price level** – when general price level rises (inflation) general public tends to increase their money demand and vice-a-versa. Therefore there is direct (positive) relationship between money demand and general price level.
4. **Technological advancement in financial system** – Due to facilities such as debit cards, credit cards, pay-pal etc. general public demand less money. Hence with the technological advancements there is an inverse (negative) relationship in money demand.
5. **Real GDP** - when real GDP rises, household income rises. Thus, demand for money also rises. Therefore there is a direct (positive) relationship between money demand and real GDP.
6. **Institutional factors** – Factors such as wage levels and the interval between two income periods will impact money demand.

Money Supply (Monitory Aggregate)

- Money supply is the **total money stock held by general public (persons) as at a particular date.**
- In this definition, the term “general public” implies all the other economic agents **except central government, central bank, all commercial banks and any other financial institute considered to be excluded by the monetary act in money supply calculation.**
- Money supply is **the money stock in an economy that is chasing after goods and services.**
- Money supply consists of currency stock and deposit balances held by general public as at a particular date.
- Thus, this is a **stock concept.**

- Specially deciding the national output and general price level every economy needs to calculate money supply. Thus, money supply becomes one of the main tools for policy makers.
- The level of money supply is decided by the central bank of the country. Therefore **as at a particular date money supply become constant.**



- Definition of the money supply (monetary aggregate) changes over time. Ex:- M0, M1, M2, M2b, M4
- There are main 2 reasons for the evaluation of money supply definition.

1. Changes in financial framework of the country

With the introduction of new financial institutions and financial instruments new financial assets are created in the economy. General public deposit their money in these new financial assets. Hence when money supply is defined, definition needs to be broaden over time.

2. Changes in theoretical basis

Central bank of every country decides what financial assets (near money options) need to be considered in the money supply. This will be decided based on the financial habits of general public. This theoretical base can get differed over time or with financial habit of different countries.

Official definition of money supply in Sri Lanka

- According to Monetary Law Act (amended in 2002), money supply definitions are defined by monetary board of Central Bank.
- There are 4 main definitions used in SL;
 - a. Narrow money supply (M1)
 - b. Broad money supply (M2)
 - c. Consolidated broad money supply (M2b)
 - d. Financial Survey (M4)

Narrow Money Supply (M1)

- Narrow money supply is as at a particular date coins and notes (currency) held by persons (general public) and demand deposits held by persons (general public) in commercial banks.

$$M1 = C_p + DD_p$$

C_p - _____

DD_p - _____

Broad Money Supply (M2)

- Broad money supply is as at a particular date narrow money supply (M1) and time and savings deposits held by the general public (persons) with commercial banks (domestic banking units).

$$M2 = M1 + TSD_p$$

$M1$ - _____

TSD_p - _____

Consolidated Broad Money Supply (M2b)

- Consolidated broad money supply is as at a particular date, broad money supply (M2) and total RFC deposits plus 50% of NRFC deposits out of time and savings deposits held by the general public (persons) with commercial banks foreign currency units.

$$M2b = M2 + TSD_{NRFC} + TSD_{RFC}$$

M2 - _____

TSD_{NRFC} - _____

SD_{RFC} - _____

Financial Survey (M4)

- Financial Survey is as at a particular date, consolidated broad money supply (M2b) and time and savings deposits held by the general public (persons) with licensed specialized banks (LSBs) and licensed financial companies (LFCs)

$$M4 = M2b + TSD_{LSB} + TSD_{LFC}$$

OR

$$M4 = M1 + \text{Near Money}$$

M2b - _____

TSD_{LSB} - _____

TSD_{LFC} - _____

Recap:-

What is near money and what are the near money items included in financial survey (M4)

Importance of demand deposits in narrow money supply

- Composition of narrow money supply differ from economy to economy
- In Sri Lanka demand deposits represents **45%** of the narrow money supply.
- In developed economies **70%-80%** of the narrow money is constituted by demand deposits.
- Main reasons for developed economies to have a higher demand deposit percentage in there narrow money supply than in Sri Lanka:
 - a. Habit of settling payments by cheques is low in Sri Lanka compared to developed countries.
 - b. Financial markets are much more developed in developed world than in Sri Lanka.

Importance of the concept of broad money supply

1. As a measurement of total liquid assets in an economy.

When definition of money supply is broader, it captures more near money items. Near money represents most liquid financial assets of the economy. Thus, when most of the near money items are captured in the money supply definition, money supply represents much more accurate measurement about total liquid assets of the economy.

2. Important for policy making in an economy.

When public chases goods and services they use not only narrow money but also near money options. Thus, in economic policy making it is important to consider board money that captures near money items.

Base money (H)

- Base money is the financial assets that provide foundation to money supply of an economy.
- Therefore this is known as **high powered money, reserve money or monetary base**.
- Base money can be explained using two perspectives.
 1. Based on liabilities of Central Bank (Usage basis)
 2. Based on assets of Central Bank (Source basis)

01. Based on liabilities of Central Bank

- In this basis base money is defined based on the liabilities of the central bank.
- In other words, in this basis base money is looked at as **direct liabilities of the central bank to general public and to commercial banks.**
- However, it should be understood that this **does not represent liability of the government.**
- According to this basis base money is comprised of 4 main items.
 - a. Currency held by public (C_p)
 - b. Currency held with commercial banks (C_{kb})
 - c. Commercial banks deposits held by Central Bank (RR)
 - d. Deposits of other institutions held by Central Bank (D_{oi})

$$H = C_p + C_{kb} + RR + D_{oi}$$

Special note:- Even though theoretically deposits of other institutions held by central bank is a part of high powered money practically it always close to zero. Therefore there is no practical impact to based money from the deposits of other institutions held by central bank.

02. Based on assets of Central Bank

- In this basis base money is defined based on assets of the central bank.
- Sole authority of releasing high powered money to economy lies with Central bank. Therefore in the **balance sheet of central bank high powered money is a liability.**
- As per accounting principles if liabilities to be changed it has to be compensated from the assets side of central bank balance sheet and assets become the source that provides the chance to change liabilities.
- In other words, in order to release base money (liabilities of the central bank), it has to be backed by the assets of the central bank.
- Therefore, in this method base money is defined **based on the sources those create base money.**

- There are main **two mechanisms** those are used by central bank to release high powered money to economy.
 - a. Acquisition of net domestic assets
 - b. Acquisition of net foreign assets

a. Acquisition of net domestic assets

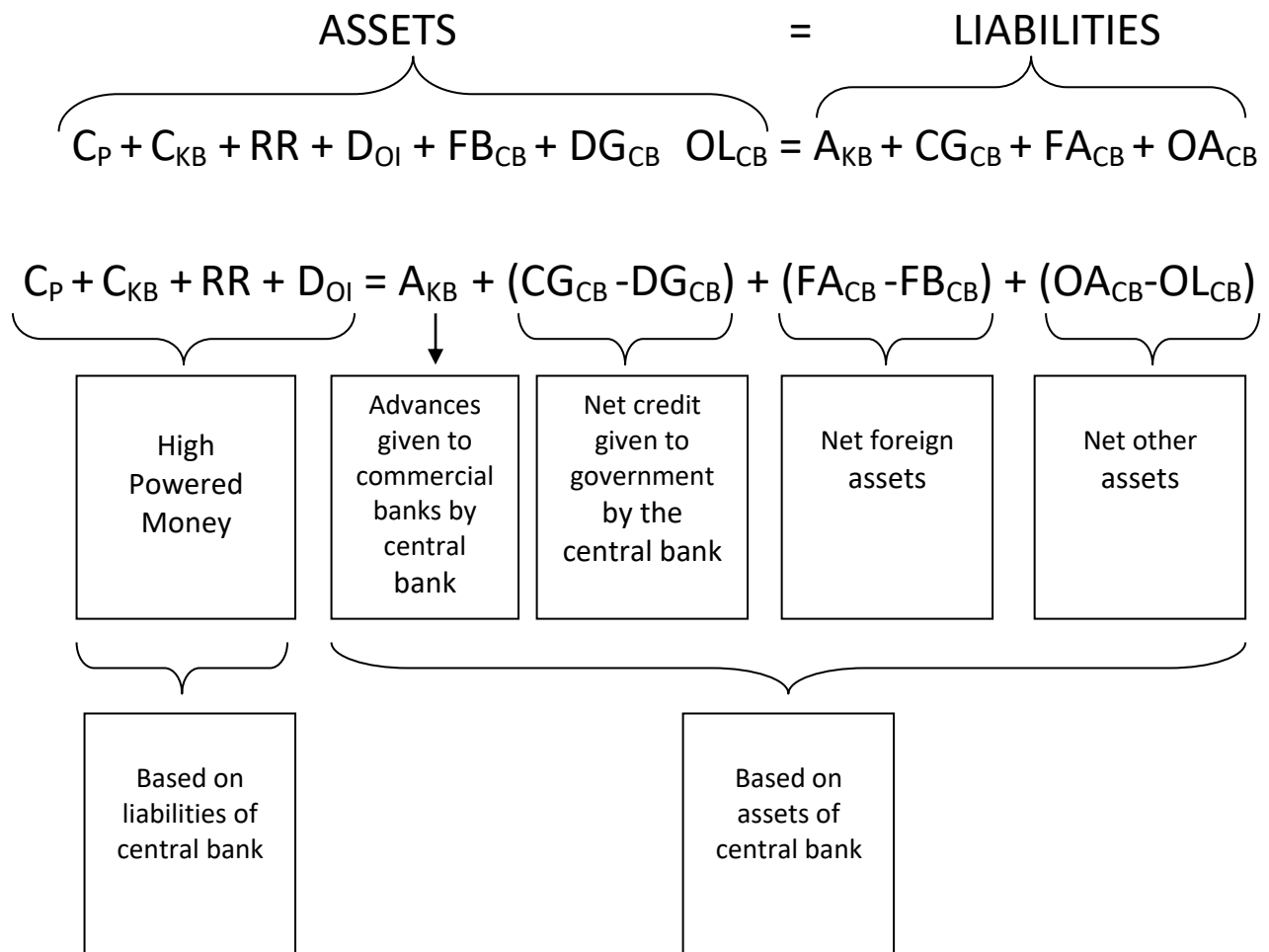
- Central bank uses following methods to acquire net domestic assets.
 - i. Loans given to government by central bank
 - ii. Loans given to commercial banks by central bank
 - iii. Central bank engage in repo and reverse repo agreements with commercial banks
 - iv. Changes of other net domestic assets of central bank
 - v. Transferring profits of central bank to government

b. Acquisition of net foreign assets

- Central bank uses following methods to acquire net foreign assets.
 - i. Operations in the domestic foreign exchange market
 - ii. Purchase foreign currency receipts through foreign currency loans and grant them to government
 - iii. Sells foreign exchange to the government

Understanding two approaches of base money using central bank balance sheet

| Liabilities | | Assets | |
|--------------------------------------|-----------|---------------------------------------|-----------|
| 1. Currency held by public | C_P | 8. Advances given to commercial banks | A_{KB} |
| 2. Currency held by commercial banks | C_{KB} | 9. Credit given to government | CG_{CB} |
| 3. Reserves of commercial banks | RR | 10. Foreign assets | FA_{CB} |
| 4. Deposits of other institutions | DOI | 11. Other assets | OA_{CB} |
| 5. Deposits of Government | DG_{CB} | | |
| 6. Foreign loans | FB_{CB} | | |
| 7. Other liabilities | OL_{CB} | | |
| Total liabilities | TL_{CB} | Total assets | TA_{CB} |



Money Multiplier (k)

- The ratio between based money (high powered money) and money supply is known as money multiplier.
- In other words money multiplier depicts the number of times money supply changes as a response to a particular change in high powered money.
- Or else, Money multiplier can be defined as number of times money supply is relative to high powered money of an economy.
- Normally money multiplier is **more than one**.
- Main reason for the money multiplier to be more than one is money supply **contains credit money created by commercial banks** that makes money supply higher than high powered money.

$$\text{Money Multiplier} = \frac{\text{Money Supply}}{\text{High Powered Money}}$$

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

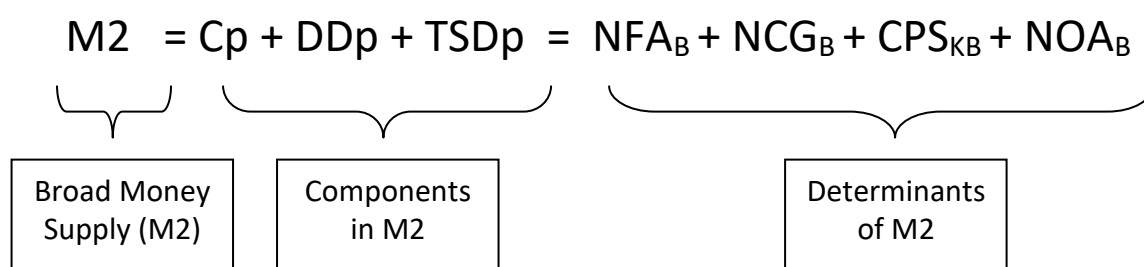
- High powered money is the base of the money supply in an economy.
- Money supply is decided by two important factors.
 - a. Size of the high powered money
 - b. Size of the money multiplier

$$M = H \times k$$

Factors determine money supply

- At any given time there are 4 main factors those determine money supply of an economy.
 1. Net Foreign Assets with the banking system (NFA_B)
 2. Net Credit given to government from banking system (NCG_B)
 3. Credit given to private sector by commercial banks (CPS_{KB})
 4. Other net assets of banking system (NOA_B)
- Factors that determine money supply can be understood by understanding central bank balance sheet and consolidated balance sheet of commercial banks.

Special note:- it is important to understand "base money" and "money supply" are two different concepts. Thus, we cannot find all the components in "base money" when calculating "money supply"



B = Banking system (Central Bank of Sri Lanka + Commercial banks domestic banking units)

KB = commercial banks domestic banking units

01. Net Foreign Assets with the banking system (NF_{AB})

- Net foreign asset is the ***difference between foreign assets and foreign liabilities of the banking system.***
- In other words, difference between foreign assets and liabilities of both central bank and commercial banks.
- Thus, net foreign assets have two main components:
 1. Net foreign assets of Central bank
 2. Net foreign assets of commercial banks
- There is a **positive relationship** between net foreign assets of the banking system and money supply. Therefore when net foreign assets rise, money supply also rises and vice-a-versa.
- When net foreign assets rise, central bank releases high powered money in to the economy which leads to a boost in money supply.

Special note:- Generally when banking system is defined only commercial banks domestic banking units are considered. However, when M2b is considered net foreign assets of both commercial banks domestic banking units and commercial banks foreign banking units are taken in to account.

02. Net Credit given to government from banking system (NCG_B)

- This has main two components:
 - a. Net credit given to government by the central bank
 - b. Loans given to government by commercial banks

- There is a **positive relationship** between net credit given to government from banking system and money supply. Therefore when net credit given to government rise, money supply also rises and vice-a-versa.

a. Net credit given to government by the central bank

- Central bank provides loans to government by releasing new stock of currency (coins & notes) to treasury.
- When treasury uses this money to settle government payments this new currency stock flow in to the hands of general public. As a result money supply increases for the first time.
- General public will deposit some part of this currency stock in commercial banks and thereby deposits of commercial banks rise.
- This will provide a chance for commercial banks to make the credit creation. This increases money supply for the second time.
- Therefore if government borrow from central bank money supply increases in two intervals.

b. Loans given to government by commercial banks

- Commercial banks provide loans to government using demand deposits.
- In other words in the process of giving loans to government commercial banks make credit creation
- Thus, money supply increases when commercial banks give loans to government.

03. Credit given to private sector by commercial banks (CPS_{KB})

- This represents discounting bills, providing over drafts and granting other loans to general public by commercial banks.
- These loans are given through demand deposits.
- Thus, when these loans are credited to the accounts of debtors (current accounts) in commercial banks money supply is increased and when loans are paid back the money supply is decreased.
- Thus, there is a **positive relationship** between credit given to private sector by commercial banks and money supply.

04. Other net assets of banking system (NOA_B)

- Other net assets and liabilities of the banking system which were not included in above 3 headings are included in here.
- In Sri Lanka this is **a negative value**.

- If other net assets are increased money supply increases and when this gets decreased money supply decreases.
- Thus, there is a **positive relationship** between other net assets of banking system and money supply.

Alternative method of presenting factors determine money supply

1. Factors affecting high powered money
 - a. Net credit given by central bank to government
 - b. Advances given by central bank to commercial banks
 - c. Central bank engage in repo and reverse repo agreements with commercial banks
 - d. Changes of other net domestic assets of central bank
 - e. Transferring profits of central bank to government
 - f. Buying and selling foreign exchange by central bank
2. Factors affecting money multiplier
 - desire of general public to use currency or bank money
 - Statutory Reserve ratio
 - Amount of excess reserve in banking system

Velocity of circulation of money

- Velocity of circulation of money is during a particular time period number of times that a unit of money is circulated from hand to hand as a medium of exchange.
- As this shows the number of times that a unit of money has been used for transactions it can be renamed as transaction velocity of circulation as well.
- Generally velocity of money is calculated as a ratio between Gross Domestic Product at current market prices and the money supply. Therefore this is also known as **Income velocity of circulation**.

$$\text{Velocity of Money Circulation} = \frac{\text{GDP at current market prices}}{\text{Money Supply}}$$

- *Velocity of money circulation depicts income generated or value of finished goods created in an economy by a unit of money within a certain time period (a year).*

Alternative method of finding velocity of money circulation

- This can also be explained through an equation called 'Exchange equation'.

$$MV = PY$$

M – Money supply

V – Velocity of money circulation

P – Price level

Y – Number of transactions / Real GDP

$$V = \frac{PY}{M}$$

Importance of calculating velocity of money circulation

- Provides an idea of the average expenditure generated by a unit of currency.
- As there is a negative relationship between demand for money and velocity of circulation, the calculation support to obtain an idea about demand for money (Liquidity preference).
- Since, aggregate demand is influenced by money supply and velocity of circulation, its consideration is important in the economic policy formulation.
- It is important to understand the increase of the velocity of money circulation through decreasing the demand for money in case of a high inflation and high interest rate in the economy.

Commercial banking system

- Commercial banks play a very important and wide role in every country's financial system.
- The main objective of any commercial bank is to earn profits and they earn profit through their main function of financial intermediation.
- Commercial banks directly connects with country's money supply and price level. Thereby commercial banks make a bigger impact to economic system than any other financial intermediary.

- Commercial banks have this special capability due to the fact that they have **ability of creating credit**. (ability to lend more than currency deposit that they hold)
- Therefore when implementing country's monetary policy the influence from commercial bank taken into consideration.
- There are **25** commercial banks operating in Sri Lanka.

Commercial Bank

- A financial institution,
 - a. of which the main function is to accept deposits of general public
 - b. under the promise of returning back whenever depositors demand their deposits
 - c. through a cheque, order or any other accepted way.
- A commercial bank distinguishes from any other financial intermediary due to
 - a. Conducting demand deposits (current a/c)
 - b. Ability to use cheques in transactions.
 - c. Ability to create money (create credit).

Main functions of a commercial bank.

- There are main 4 functions of a commercial bank.
 1. Accepting deposits from general public
 2. Granting loans and advances
 3. Agency and investment banking services
 4. General utility services
- } Financial intermediation

01. Accepting deposits from general public

- Commercial banks accept deposits from general public (surplus units in the economy) in following ways.
 - a. Demand deposits
 - b. Saving accounts
 - c. Fixed deposits/time deposits
 - d. Non-resident foreign currency accounts (NRFC)

- e. Resident foreign currency accounts (RFC)

02. Granting loans and advances

- Commercial banks lend money to deficit units using deposits of surplus units.
 - a. Short term loans
 - I. Bank overdraft
 - II. Short term loans
 - III. Interbank daily rupee loans
 - b. Long term loans
 - I. To acquire capital assets
 - II. To start or to develop businesses
 - c. Discounting bills
 - I. Import and export bills

03. Agency and investment banking services

- a. Collecting dividends and capital gains on behalf of the customers
- b. Buying and selling Treasury bills and bonds
- c. Collecting cheques, exchange bills, promissory notes on behalf of the customer
- d. Act as an agent with other banks and financial institutions on behalf of the customer
- e. Gradient services and Consultancy services
- f. Services provided for initial public offerings

03. General Utility services

- a. Issuing bank draft, letter of credit and travelers cheques
- b. Mortgage services
- c. Issuing debit and credit cards.
- d. Providing assistance in foreign exchange transactions
- e. Security services to protect jewelry, money and other important documents.

Special Note :- During last few years commercial banks of Sri Lanka has given priority to grant commercial loans (Loans for business purposes), consumption loans (personal loans to purchase vehicles etc.) and housing loan.

Commercial bank Balance Sheet

- The report that shows the financial position as at a particular date is the balance sheet. Through this it shows assets and liabilities of the commercial bank as at the balance sheet date.
- Commercial bank balance sheet is consist of two main structures:
 1. Structure of liability
 2. Structure of assets.

01. Structure of liability

- This shows the funds obtained by commercial banks and the amounts of money due to external parties.
- Banks are generating assets by using these funds in business transactions.

1. Paid up capital, reserve funds, and undistributed profits.

2. Demand deposits

- a. Commercial banks
 - i. Domestic
 - ii. Foreign
- b. Government of Sri Lanka
- c. Residents
- d. Non-residents

3. Time and saving deposits

- a. Government of Sri Lanka
- b. Residents
- c. Nonresidents

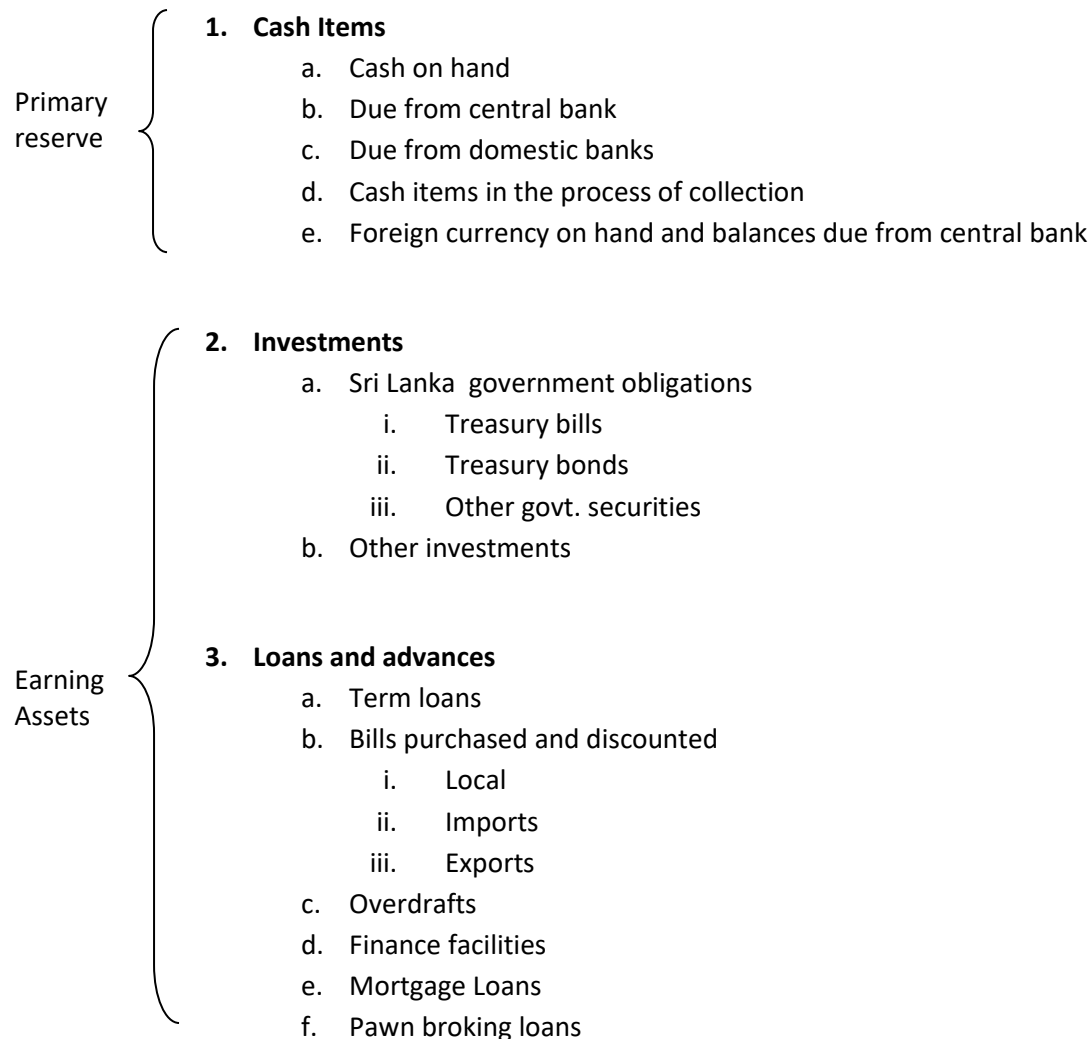
4. Borrowings of commercial banks

- a. Domestic
- b. Foreign

5. Other Liabilities

02. Structure of Assets

- Structure of assets shows as how funds have been employed in various avenues.
- In the balance sheet assets are listed based on liquidity. (most liquid assets to least liquid asset)



4. Fixed and other assets

- Above assets can again divide into **liquid assets** and **non-liquid assets**.
- Under liquid assets all the cash items, treasury bills, treasury bonds (part of investment) can be categorized.
- Cash on hand, due from central bank, due from domestic banks, cash in the process of collection, foreign currency on hand and balances due from bank abroad are known as **primary reserves**.
- Primary reserves are the highest liquid assets. Main task of the primary reserves is to provide **financial security** when reserves (cash on hand and due from central bank) are flowing out from the banking system.

- There are differences in government investments and loans and advances.
- Government investments are high in security, highly liquid and has a lower earning capacity relative to loans and advances.
- Loans and advances are lower in security, low in liquidity but has a higher earning capacity compared to government means of investment.
- Government investments, securities and advances are known as **earning assets**.

Balance Sheet of a commercial bank

| LIABILITIES | | | ASSETS | | |
|--|-----|-----|--|-----|-----|
| 1.Paid up capital, reserve funds and undistributed profits | | xxx | 1.Cash on hand | | Xxx |
| 2.Demand deposits | | xxx | 2.Due from Central bank | | xxx |
| Inter bank | | xxx | 3.Due from Domestic banks | | xxx |
| Domestic | xxx | | 4.Cash items in the process collection | | xxx |
| Foreign | xxx | | 5.Foreign currency on hand and due from banks abroad | | xxx |
| Government of Sri Lanka | | xxx | 6.Government investments | | xxx |
| Resident constituents | | xxx | Sri Lanka government obligations | xxx | |
| Nonresident constituents | | xxx | Treasury bills | xxx | |
| 3.Time and saving deposits | | xxx | Treasury bonds | xxx | |
| Government of Sri Lanka | | xxx | Other govt. securities | xxx | |
| Resident constituents | | xxx | Other investments | | xxx |
| Nonresident constituents | | xxx | 7.Loans and advances | | xxx |
| 4.Borrowings | | xxx | Bills purchased and discounted | xxx | |
| Domestic | | xxx | Local | xxx | |
| Foreign | | xxx | Imports | xxx | |
| | | | Exports | xxx | |
| | | | Overdrafts | | xxx |
| | | | Loans | | xxx |
| | | | 8.Fixed and other assets | | xxx |
| Total liabilities | | XXX | Total assets | | XXX |

Detail Analysis on assets of commercial banks

01. Reserves

- This is the asset portraits that commercial banks have liquidity and does not have any risk of bankruptcy since they can settle demands of depositors.
- Reserves contains main two assets:

- a. Cash on hand – Amount of notes and coins in the vaults of commercial bank
- b. Due from Central Bank – Balances held by central Bank on behalf of commercial bank

Reasons to hold reserves by commercial banks

1. To protect stability of the financial system

- If all deposits are lent there will be no balances in bank vaults.
- Thus, when depositors expect to withdraw their money at any given occasion, bank will not be in a position to honor that request.
- In order to prevent from this situation and to maintain the trustworthiness of customers, bank is keeping certain amount of money as reserves.

2. Use as an instrument to implement monetary policy

- Central bank will change statutory reserve ratio times to times. (percentage of reserves need to be maintained against deposits)
- This directly influence bank interest rates and money supply of the economy.
- Therefore, reserves are used attain objectives of monetary policy.

3. To create a smooth cheque clearance system

02. Foreign currency on hand and balances due from banks abroad

- This implies foreign assets owned by commercial banks.
- Bank keeps part of those assets in bank vaults and they are known as 'foreign currency on hand' which is used for day to day transactions.
- Rest of the foreign assets has been deposited in foreign banks, named as balances due from banks abroad. Foreign assets are highly liquid assets.

03. Due from domestic banks (Call money or Call loans)

- Loans given to other banks with a credit period not exceeding 7 days.
- Most of these loans are inter-bank call money market loans given for a day.

04. Cash items in the process of collection

- Cheques deposited in current accounts but not those who have not yet realized

05. Investments

- a. Government securities
 - i. Treasury bonds
 - ii. Treasury bills
 - iii. Debentures
 - iv. Other securities
- b. Other Investments
 - i. Central bank securities
 - ii. Corporate bonds

06. Bills purchased and discounted

- Purchased and discounted treasury bonds, treasury bills, commercial papers, and import and export bills. These are highly liquid assets.

07. Loans and Advances

- **This is the main source of income for all commercial banks.**
- Compared to other assets these are highly profitable even though these contain a high risk.
- These can be mainly sub divided as loans and advances.

08. Fixed and other assets

- Building, motor vehicles, machinery, equipment owned by a commercial bank.

Objectives of commercial banks and Inter connection of those objectives

- There are 2 main factors considered by commercial banks in arranging their asset structure.
 - 1. **Protect liquidity**
 - 2. **Increase profitability**

- There is an inverse relationship between profitability and liquidity.
- Therefore the main task of a commercial bank would be to select the best possible combination of asset structure between liquidity and profitability.
- When a commercial bank is going to improve its profitability, they have to sacrifice their liquidity.
- In other words when moving to high return assets they may have to reduce liquid assets such as cash on hand, due from Central bank etc. and vice-a-versa.

Fractional Reserve Banking System

- Fractional reserve system is the system that keeps only a fraction (part) as reserves out of total deposits and lends rest of the deposits to people who seek credit.
- Commercial banks lend out deposits at a higher interest rate than interest rate paid out for savings.
- Thus, fractional reserve system provides a chance for commercial banks to earn a profit.
- Further Under fractional reserve banking system, banking system can create credit.
- However it is important to note that credit creation can only be done by commercial banking system but not an individual commercial bank.

Special Note; - 100% perfect reserve banking system is a banking system that holds all of their deposits as reserves. This system does not allow banks to make any profits or banking system to create credit. Such reserve system no longer exists in present day economies.

Concepts relating to credit creation

01. Excess reserves

- Excess reserves are the difference between current reserves and the statutory reserves.

$$\text{Excess reserves} = \text{current reserves} - \text{statutory reserves}$$

- Excess reserves are dependent upon following factors:
 - a. Demand for credit
 - b. Bank's selection between liquidity and profitability
 - c. Central bank monetary policy

Special Note; - Commercial banks create credit by lending these excess reserves.

02. Statutory reserve ratio (required reserve ratio)

- This is the central bank regulation that sets the minimum reserve percentage each commercial bank must hold against customer deposits and notes.
- It would normally be in the form of ,
 - a. currency stored in commercial bank vault (vault cash) or
 - b. with the central bank (commercial bank accounts in central bank)

03. Deposit Multiplier (k)

- This refers to the factor by which an initial bank deposit (primary bank deposit/excess reserves) could grow by lending it over and over again.
- In other words the maximum number of times a commercial banking system can multiply a primary bank deposit or excess reserves by lending it over and over again without holding any excess reserves.
- Lower the required reserve ratio, higher the deposit multiplier.

$$\text{Deposit multiplier} = 1 / \text{statutory reserve ratio}$$

$$K = 1/r$$

Process of credit creation by commercial banks

- By lending out their excess reserves, commercial banks can create deposits more than the worth of excess reserves.
- This is known as **credit creation or multiple deposit expansion**.
- Out of total deposits each commercial bank keeps a percentage as statutory reserves and lend out the balance as loans through demand deposits.
- This process creates multiple times of demand deposits than primary deposits in the banking system.

Special Note; - Credit creation is a group activity. One bank cannot create credit alone. Individual bank can only lend money up to the amount of their excess reserves. If all banks in the system follow that procedure (by lending excess reserves) deposits will expand multiple times.

Further, under 100% SRR system, commercial banking system cannot create credit due to the inability of granting loans.

Factors which affect to the amount of credit that can be create through commercial banking system

- There are main two factors affect credit creations of commercial banking system.
 1. Deposit multiplier
 2. Excess reserves in the banking system.
- At any given situation by using following equation the amount of credit that a banking system can create could be arrived.

| |
|--|
| Additional loans that can be created = Excess reserves X Deposit multiplier |
| D = R * K |

Assumptions based on which credit creation process is explained

- When baking system receives a deposit there is no leakage or injection of money from the banking system until credit creation is over.
- All banks in banking system do not hold any excess reserves.
- All credit holders (people who receive credit) will deposit total amount of their credit in another commercial bank through a cheque.

EXAMPLE

- Assume there is a **commercial banking system** consisting of **Bank X**, **Bank Y** and **Bank Z**. They do not keep any excess reserves and operates under a **Statutory Reserve Ratio of 20%**.
- If Individual A deposited Rs.1000 in the Bank X

Statutory requirement _____

Excess reserves _____

Maximum credit Bank X can create _____

Deposit multiplier _____

Maximum credit banking system can create _____

Understanding the credit creation process

1. Receiving a deposit worth of 1000 from individual 'A'.

- Reserves (assets) will increase by 1000
- Demand deposits (liabilities) will increase by 1000

Balance sheet of bank X

| Liabilities | | Assets | |
|---------------------|------|----------|------|
| Demand deposits (A) | 1000 | Reserves | 1000 |
| | 1000 | | 1000 |

2. Bank 'X' lending excess reserves to individual 'B'

- Loans (assets) will increase by 800
- Demand deposits (liabilities) will increase by 800

Balance sheet of bank X

| Liabilities | | Assets | |
|-----------------------|------|-----------|------|
| Demand deposits (A&B) | 1800 | Reserves | 1000 |
| | | Loans (B) | 800 |
| | 1000 | | 1800 |

➤ The loan borrowed by 'B' gives to individual 'C' who is a customer of Bank 'Y' through a cheque (this transaction will not affect to Bank 'X' and Bank 'Y')

3. 'C' presented his cheque to bank 'Y'. As a result deposits of Bank 'X' will shift to Bank 'Y'

- Reserves (assets) will decrease by 800
- Demand deposit (B) will decrease by 800

Balance sheet of bank X

| Liabilities | | Assets | |
|---------------------|------|-----------|------|
| Demand deposits (A) | 1000 | Reserves | 200 |
| | | Loans (B) | 800 |
| | 1000 | | 1800 |

4. As a result of Bank 'X' last transaction, Bank 'Y' will receive a new deposit worth of 800

- Reserves (assets) will increase by 800
- Demand deposits (liabilities) will increase by 800

Balance sheet of bank Y

| Liabilities | | Assets | |
|---------------------|-----|----------|-----|
| Demand deposits (C) | 800 | Reserves | 800 |
| | 800 | | 800 |

5. Bank 'Y' lending excess reserves to individual 'D'

- Excess reserves = $800 - (800 \times 20\%) = 800 - 160 = 640$
- Loan (asset) will increase by 640
- Deposit (liability) will increase by 640

Balance sheet of bank Y

| Liabilities | | Assets | |
|-----------------------|------|-----------|------|
| Demand deposits (C+D) | 1440 | Reserves | 800 |
| | | Loans (D) | 640 |
| | 1440 | | 1440 |

- The loan borrowed by 'D' is given to individual 'E' who is a customer of Bank 'Z' (this transaction will not affect to Bank 'Y' and Bank 'Z')

6. 'E' presented his cheque to Bank 'Z'. Thus, the deposits of Bank 'Y' will shift to Bank 'Z'

- Reserves (assets) will decrease by 640
- Deposits (liabilities) will decrease by 640

Balance sheet of bank Y

| Liabilities | | Assets | |
|---------------------|-----|-----------|-----|
| Demand deposits (C) | 800 | Reserves | 160 |
| | | Loans (D) | 640 |
| | 800 | | 800 |

7. As a result of Bank 'Y' last transaction, Bank 'Z' will receive a new deposit worth of 640

- Reserves (assets) will increase by 640
- Deposits (liabilities) will increase by 640

Balance sheet of bank Z

| Liabilities | | Assets | |
|---------------------|-----|----------|-----|
| Demand deposits (E) | 640 | Reserves | 640 |
| | 640 | | 640 |

8. Bank 'Z' Lending excess reserves to individual 'F'

- Loan (asset) will increase by 512
- Deposit (liability) will increase by 512
- Excess reserves = $640 - (640 \times 20\%) = 640 - 128 = 512$

Balance sheet of bank Z

| Liabilities | | Assets | |
|-------------------------|------|-----------|------|
| Demand deposits (E + F) | 1152 | Reserves | 640 |
| | | Loans (F) | 512 |
| | 1152 | | 1152 |

- **The loan borrowed by 'F' gives to individual 'G' who is a customer of Bank 'X' (this transaction will not affect to Bank 'X' and Bank 'Z')**

9. **'G' presented his cheque to Bank 'X'. Thus the deposits of Bank 'Z' will shift to Bank 'X'**

- Reserves (assets) will decrease by 512
- Deposits (liabilities) will decrease by 512

Balance sheet of bank Z

| Liabilities | | Assets | |
|---------------------|-----|-----------|-----|
| Demand deposits (E) | 640 | Reserves | 128 |
| | | Loans (F) | 512 |
| | 640 | | 640 |

- This process will continue until excess reserves in the banking system become zero.
- After this process deposits in the banking system will be higher than the initial deposits.

| Bank | Deposit | Statutory requirement | Excess reserves | Excess credit |
|------------------------------------|-------------|-----------------------|-----------------|---------------|
| X | 1000 | 200 | 800 | 800 |
| Y | 800 | 160 | 640 | 640 |
| Z | 640 | 128 | 512 | 512 |
| | | | | |
| | | | | |
| Total of the banking system | 5000 | 1000 | - | 4000 |

- After credit creation process, total deposits of the economy

Initial deposit = _____

Excess credit = _____

Total deposits = _____

- After the credit creation process balance sheet of the banking system can be shown as follows.

Balance sheet of Banking System

| Liabilities | | Assets | |
|-----------------|------|----------|------|
| Demand deposits | 5000 | Reserves | 1000 |
| | | Loans | 4000 |
| | 5000 | | 5000 |

- Therefore due to an initial deposit of Rs.1000 ,Banking system can create Rs. 4000 worth of new deposits, thus total deposits in the economy would be Rs.5000

Summarizing impact of credit creation process to individual bank balance sheet

- When a commercial bank receives a new deposit, 3 main situations affect commercial bank balance sheet.
 1. **Receiving a new deposit**
 - a. Reserves will increase
 - b. Deposits will increase
 2. **Lending excess reserves**
 - a. Loans will increase
 - b. Demand deposits will increase
 3. **People who borrowed loans, will deposit those amounts in another commercial bank or give to customers of another commercial banks**
 - a. Reserves will decrease
 - b. Deposits will decrease

Influence of commercial banks to country's money supply

- Narrow money supply consists with currency held by general public and demand deposits held by the public with commercial banks. ($M_1 = C_p + DD$)
- Commercial banks, by lending their excess reserves create excess credit/deposits, thus this directly affects to country's money supply. ($M_1 \uparrow C_p + DD \uparrow$)
- Therefore when financial authorities make decisions on monetary policies, the function performed by commercial banks are taken in to consideration.
- In order to control commercial bank activities ,Central bank uses following instruments
 1. Statutory reserve requirement ratio
 2. Level of reserves in the commercial banking system.

01. Statutory reserve requirement ratio

- While keeping the level of reserves constant, by changing the statutory requirement ratio, deposit multiplier will change inversely.
- Thus this directly influence to the quantity of deposits and to the money supply

| SRR | Deposit multiplier | Excess credit | Money supply |
|----------|--------------------|---------------|-----------------------|
| Increase | Decrease | Decrease | Contractionary effect |
| Decrease | Increase | Increase | Expansionary effect |

02. Level of reserves in the banking system

- By keeping Statutory reserve ratio constant, level of reserves in the banking system can get changed through following ways
 - a. Buying and selling of financial securities by central bank
 - b. general public changing their demand deposits level

Important: - Buying and selling financial instruments main instrument is the main source used by Central bank to control money supply

| Reserve level | Demand deposits | Money supply |
|---------------|-----------------|--------------|
| Increase | Increase | Expands |
| Decrease | Decrease | Contracts |

Multiple contractions on demand deposits

- This is the exact opposite of deposit multiplier.
- In other words total deposits in the banking system contracts multiple times when cash is withdrawn out from the commercial banking system.
- Multiple contractions on demand deposits can be taken place in following ways.
 1. General public withdraw their demand deposits
 2. Central bank sell securities to commercial banks
 3. Increase statutory reserve ratio

Factors determine actual credit that is created by commercial banking system

- There will be a difference between the level of credit that can be created through deposit multiplier and the actual credit that has been created in the process of credit creation by the banking system.
- In other words practically commercial banking system does not create credit up to the theoretically maximum level.
- The reasons for the above difference are as follows

1. Liquidity preference of general public

Theoretical maximum is calculated based on the assumption that money will not flow out from the commercial banking system until credit creation process is over. However in reality general public withdraw demand deposits (loans) and hold cash balances in hand. Thus, commercial banking system practically will fail to reach theoretical maximum.

2. Banking system keeps excess reserves

In reality commercial banking system can not only hold statutory reserve requirement to maintain trustworthiness. In other words commercial banks has to maintain excess reserves. Therefore banking system is not reaching its theoretical maximum.

3. Reduction in demand in credit

Theoretical maximum assumes that there is enough demand for credit to supply total credit that could be created by the commercial banking system. However in reality there can have fluctuations in credit demand.

4. Money leaking out from the banking sector to non-banking financial sector

Important factors to be considered by commercial banks when deciding their lending policy

- 1) Ability to charge the loan with the interest
- 2) Profitability and liquidity of the bank
- 3) The rules of the central bank and monetary policy of the country

Central Bank

- Central bank /state bank is the centralized financial institution of all independent nations in the world.
- This is the symbol of country's sovereignty.
- However country to country the official name used for the central bank differ.

- a. Sri Lanka – central bank of Sri Lanka
- b. India – Indian reserve Bank
- c. United States – Federal Reserve Bank
- d. United Kingdom – Bank of England
- e. Japan – Bank of Japan
- f. Singapore – Financial Authority

Functions of a Central Bank

1. Banker to the state (Government)
2. Banker to the banks
3. Acting as the lender of last resort
4. Monitoring all financial institutions including commercial banks
5. Issuing legal tender money
6. Administering the monetary policy

Central Bank of Sri Lanka

a. Establishment

- Established under the monetary law act No. 58 of 1949 and operations commenced on 28th August 1950.

b. First governor

- Mr. John Exter, (1950 to 1953) (Economist of the Federal Reserve Bank, New York, US)

c. Before establishing CBSL

- Prior to the establishment of the Central Bank, functions relating to central banking were conducted by the Currency Board System that was set up under the Paper Currency Ordinance No.32 of 1884.
- Currency board was mainly focusing on issuing currency.

d. Monetary board

- This is the board on which legal power is vested to perform all the authorities specified by the monetary act.
- This includes five members including central bank governor and the secretary to the ministry of finance.

e. Electing the governor

- Governor is appointed by the president based on the recommendation of finance minister
- Time of office is 6 years.

Aims of the Central Banks

- The aims of the central bank were streamlined by amending the monetary law act in 2002, to enable it to pursue its core objectives and to free it of the multiple objectives that were originally assigned to it.
 1. Maintaining economic and price stability
 2. Maintaining financial system stability

01. Maintaining economic and price stability

- Maintaining economic and price stability refers to,
Safeguarding the value of the currency with regard to purchases made in local and foreign currency in order to build confidence among households and business unit in making economic decisions.
- In other words, this refers to *maintaining inflation in such a manner that it will not majorly impact economic decisions of households and business units.*
- Experience has shown that economy performs well when inflation is low and is expected to be low.
- Price stability makes the economy free from disruptive effects of high and variable inflation.
- Central bank uses monetary policy measures to control inflation and maintain economic and price stability.

Advantages of price stability for the economy

- a. Low inflation rates allow low interest rates
- b. With the higher confidence among economic agents it improves efficiency in resource allocation.
- c. Growth in long term savings and investments
- d. Foster sustainable economic growth and employment.

02. Maintaining financial system stability

- Maintaining financial system stability refers to creating flexibility and stability in the financial system to avoid and face any economic, financial or political crisis.
- To do that it should closely supervise financial markets and financial institutions and facilitate smooth clearing and settlement system.

- Financial system stability creates investors and depositors' friendly environment and it will enhance the efficiency of financial intermediation and effective functioning of financial markets.
- Hence, financial system stability promotes investment and economic growth and prevents banking, currency and balance of payment crisis.
- Financial stability is caused by bank failures, excessive asset price volatility and collapse of market liquidity.

Financial system stability requires,

- A stable macro-economic environment
- Effective regulatory framework
- Well organized financial markets
- Sound financial institutions
- Safe and robust financial infrastructure

Functions of Central bank of Sri Lanka

1. Administering the monetary policy
2. Maintaining the official foreign reserves of the country
3. Currency issue and management
4. Licensing, regulation and supervision of the banking system and other financial institutions within the financial system.
5. Offering Cheque clearance services and maintaining other payment and settlement systems for licensed commercial banks, licensed specialized banks, primary dealers etc.
6. Providing agency services to the government
 - Employees provident fund management
 - Foreign exchange management
 - Public debt management
 - Regional development (acting as the apex agency in micro finance and rural credit scheme)
 - Expedition financial information
7. Acting as the government's economic and financial advisor, fiscal agent and foreign policy advisor.
8. Central bank is the banker to the state
 1. Maintain government accounts

- a. Central bank maintains the accounts and provides banking facilities to government departments, agencies, institutions and certain statutory boards.
 - b. This account is known as **consolidated fund**.
2. Provide loans to government.
 - a. Central bank lends to the government by giving advances and purchasing treasury bonds and bills
3. Providing settlement and clearing facilities for the government.
4. Assist government to obtain loans from various lending organizations and institutions through loan syndication.
5. Assist government in formulating and implementing macro- economic policies.
6. Represent the government in international financial summits and foreign financial institutions such as International monetary fund (IMF), Asian development bank (ADB), World bank etc.

Central bank is the banker to the banks

1. Maintains accounts of commercial banks
 - a. The central bank is responsible for providing payment and settlement facilities for commercial banks and primary dealers.
 - b. As banker to the banks, the central bank provides current account facilities to these institutions.
 - c. With effect from September 2003, these payment and settlement facilities are operated through real time gross settlement system (RTGS)
2. Lender of the last resort
 - a. In situations of emergency or impending financial panic which directly threatens monetary and banking stability, the central bank may also provides emergency loans to commercial banks that are facing temporary liquid problems.
 - b. This will safeguard the trust worthiness of the financial system among general public.
3. Acting as the clearing agent for commercial banks

Central bank balance sheet

| Liabilities | | | Assets | | | |
|--|-----|-----|--|-----|-----|-----|
| 01. Capital accounts | | xxx | 01. International reserve | | | xxx |
| <i>Capital</i> | xxx | | <i>Cash and bank balance abroad including treasury bills</i> | | xxx | |
| <i>Surplus</i> | xxx | | <i>Foreign government and non-governmental securities</i> | | xxx | |
| 02. Currency issue | | xxx | <i>Special drawing rights</i> | | xxx | |
| <i>Notes in circulation</i> | xxx | | <i>IMF related assets</i> | | xxx | |
| <i>Coins in circulation</i> | xxx | | <i>Receivables</i> | | xxx | |
| 03. Securities outstanding | | xxx | 02. Domestic assets | | | xxx |
| 04. Deposits | | xxx | <i>Loans and advances to</i> | | xxx | |
| <i>Government</i> | xxx | | <i>Government</i> | xxx | | |
| <i>Government agencies and institutions</i> | xxx | | <i>Other</i> | xxx | | |
| <i>Commercial banks</i> | xxx | | <i>Government and government guaranteed securities</i> | | xxx | |
| <i>International , organizations, foreign governments and foreign banking , , institutions</i> | xxx | | 03. Other assets and accounts | | | xxx |
| 05. Others | | xxx | | | | |
| Total liabilities | | xxx | Total assets | | | xxx |

Monetary policy

- Monetary policy is the policy that impacts the relationship between price of funds (interest rate) and the quantity of funds available in the economy (Money supply).
- In other words, monetary policy is the policy by which the **monetary authority** of a country control the **supply of money and interest rate**, often targeting a rate of interest to attain a set of **macro-economic objectives** oriented towards the growth and stability of the economy.

- Monetary policy is formulated and implemented by the Central bank to attain economic and price stability.
- Central bank can implement two types of monetary policy:
 - a. Expansionary monetary policy
 - b. Contractionary monetary policy

Expansionary Monetary policy

- Expansionary monetary policy is expanding money supply of the economy by reducing interest rates.
- This will affect to the total output and general price level of the economy.



Contractionary Monetary policy

- Contractionary monetary policy is contracting money supply of the economy by increasing interest rates.
- This will affect to the total output and general price level of the economy.



Targets of monetary policy

- Operational target – Average weighted call money rate
- Intermediate target – Broad money supply
- Final target – Economic and price stability (inflation rate)

Monetary policy instruments

- Instruments which are used to implement central bank monetary policy objectives are known as monetary instruments.
- By considering prevailing economic climate central bank can select suitable instruments for various economic circumstances.
 - a. Open market operations
 - b. Bank rate
 - c. Statutory reserve ratio
 - d. Foreign exchange operations
 - e. Setting minimum and maximum credit limits
 - f. Changing the credit maturity period
 - g. Refinancing facilities
- Monetary policy Instruments can be sub divided into two main categories:
 - a. Quantitative policy instruments
 - b. Qualitative policy instruments

| Quantitative instruments | Qualitative instruments |
|--------------------------------------|---------------------------------------|
| Bank rate | Changing credit maturity period |
| Statutory reserve ratio | Collateral requirements for loans |
| Standing deposit facility rate - OMO | Setting discriminatory interest rates |
| Standing lending facility rate –OMO | Moral persuasion |

Special note;-

- Currently CBSL using open market operations and statutory reserve ratio as their main instruments
- In recent time CBSL stops using policy instruments such as credit ceiling, selective interest rates, refinancing facilities.

- With the introduction of free float exchange rate in 2001, exchange rate could not be used as a instruments of monetary policy.

Understanding impact of monetary policy instruments

a) Changing Bank interest rate

- This is the rate at which CBSL lends money to commercial banks which have liquidity difficulties (as a lender of last resort)
- When this interest rate is changed subsequently commercial banks adjust change their interest rates (saving interest rates and loan interest rates)
- Therefore, CBSL can use this instrument to control credit created demand of the economy.
- Through which CBSL will be able to control the amount of credit created by the commercial banks.

1. When bank interest rates are increased credit creation falls.

2. When bank interest rates are reduced credit creation rises.

Special note;-

- At present this instrument is not frequently used by CBSL. At the moment this is at 15%.

b) Statutory Reserve Ratio

- This is a central bank regulation that sets the minimum reserve percentage each commercial bank must hold to customer deposits.
- This is the main regulatory tool that is used to control credit created by commercial banks.

1. When statutory reserve ratio is increased credit creation falls.

2. When statutory reserve ratio is reduced credit creation rises.

c) Open market operations

- Open market operations means purchasing and selling of government securities in the open market with the intention of controlling the money supply, level of liquidity, and interest rates within the country.
- In other words, In order to keep targeted level of the base money CBSL purchase or sell treasury bonds, treasury bills and other government securities.
- With repurchase and reverse repurchase agreements central bank make open market operations with commercial banks and primary dealers.

1. If the market liquidity level is high CBSL sell securities to absorb the excess liquidity

2. If the market liquidity level is low CBSL purchase securities to inject liquidity

Central bank policy interest rates

- These are the interest rates used by CBSL in order to implement monetary policy decisions.
- These are used by CBSL in the financial transactions carried out with commercial banks.
- There are 3 central bank policy interest rates.
 1. Bank rate
 2. Standing deposit facility rate (Repurchase Rate)
 3. Standing lending facility rate (Reverse Repurchase Rate)
- These 3 policy interest rates influence to change the structure of the interest rates in the whole economy.
- When above 3 interest rates increases, money market interest rates will also increase, on the other hand when those rates decrease, money market interest rates will decrease as well.

Open market operations in Sri Lanka

- CBSL implement open market operations to absorb excess liquidity or release liquidity to the market in a daily basis.

- The volume of open market transactions is determined by CBSL and the money market interest rates which are decided by market forces through an auctioning system within a certain pre – determined range.
- This is known as active open market operations.
- In order to influence high powered money by controlling money supply this was introduced in February 2003.
- Active open market operations are of 4 categories,
 1. Standing interest rate corridor
 2. Daily treasury bills auction
 3. A standing facility at pre – determined interest rates to absorb or inject liquidity
 4. Outright transactions (Discounting and re- discounting treasury bills)

1. Standing interest rate corridor

- This was introduced by CBSL replacing the repurchase (REPO) rate and reverse repurchase (RE-REPO) rate.
- In a situation where there is too much liquidity in the market, CBSL is ready to accept that excessive money amount as deposits at a minimum interest rate.
- This interest rate is called as ***standing deposit facility rate***.
- In this case, the call money market interest rates would not fall beyond this interest rate fixed by the CBSL.
- On the other hand, if there is a shortage of liquidity in the market, CBSL is ready to release liquidity to the market at a higher interest rate.
- This interest rate is called as ***standing lending facility rate***.
- Hence, the call money market interest rates would not increase beyond this maximum interest rate fixed by the CBSL.
- Therefore, it can be seen that the CBSL is capable of maintaining the call money market interest rate in between these two upper and lower limits creating an interest rate corridor.
- Hence, call money market interest rates will fluctuate only within this corridor created by standing lending facility rate being the upper limit and standing deposit facility rate being the lower limit by creating minimal fluctuations.

2. Daily treasury bills auction

a. Repurchase (REPO) market

- When there is an excess liquidity in the market, CBSL sells treasury bills to commercial banks and other primary dealers, with an agreement to purchase those issued during a pre – agreed period of time at an agreed interest rates.
- The maturity period of a repurchase agreement can range from 1 to 180 days, but the most popular are agreements with a single date maturity.

b. Reverse repurchase (RE-REPO) market

- When there is a shortage of liquidity in the market, CBSL purchases treasury bills to commercial banks and other primary dealers, with an agreement to sell back those purchased at a pre – agreed point of time at an agreed interest rate.
- Mostly commercial banks use this market to fulfill short term liquidity issues.

3. Standing facility

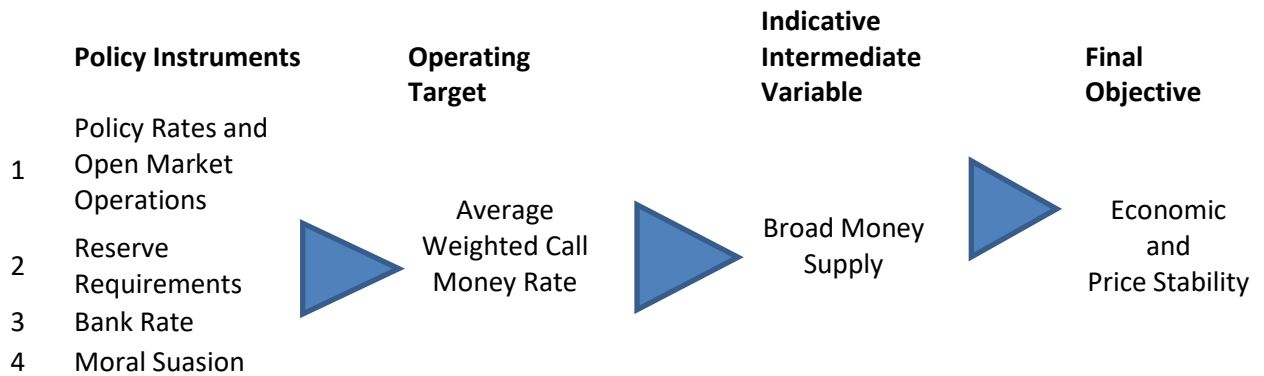
- This is a facility provided by the central bank for the ones who were unable to meet their liquidity requirements in the daily treasury bills auction.
- Hence, in this case even though if a person has excess money or a shortage of liquidity, he can enter to repurchase agreement or reverse repurchase agreement respectively under the standing facility.
- Accordingly, these facilities help to control greater fluctuations in interest rates and the interest rate here is decided by the CBSL.

4. Outright transactions

- In order to meet long term liquidity issues CBSL conducts outright transactions.
- If there is a possible excess liquidity in the market that'll considered to be remain for a long term period, then that can be absorbed by the central bank by selling treasury bills on a long term basis and vice-a-versa.
- Under this facility treasury bills are sold to or purchase from the commercial banks and primary dealers without having an agreement.
- So, absorption or release of liquidity is done on a more permanent basis.

Modifications to Monetary Policy Framework in Sri Lanka

- This move has also been prompted by several weaknesses that have been observed with regard to the MT framework in Sri Lanka, including the **weakening relationship between money supply and inflation.**

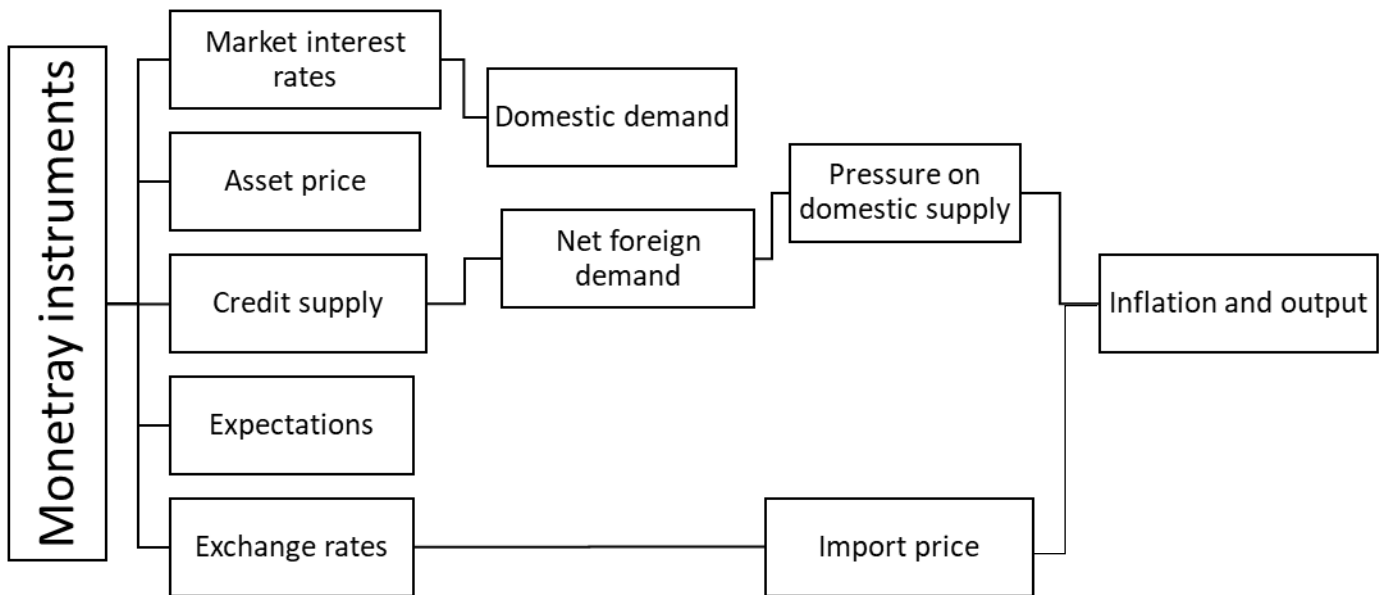


Factors which limit the effectiveness of the monetary policy of CBSL

- Not having a developed money and capital market
- Decision making by investors and customers without being sensitive to interest rates
- Maintaining excess reserves by the commercial banks
- High budget deficit
- External shocks in the economy during the time of implementing the monetary policy

Monetary transmission mechanism

- The monetary transmission mechanism explains how the actions of the Central bank of Sri Lanka (when monetary policy instruments are changed) affect price level and output of the economy.
- It can be explained as a process that takes place through the interconnection among several economic and monetary variables.
- The changes of the monetary policy (taken by CBSL) transmit to price level and output through several mechanisms. These mechanisms are,
 1. Market interest rates
 2. Asset prices
 3. Credit supply
 4. Exchange rate
 5. Expectations
- Out of the above five mechanisms, market interest rates and credit supply is more important to Sri Lanka.
- This can be shown by a diagram as below,



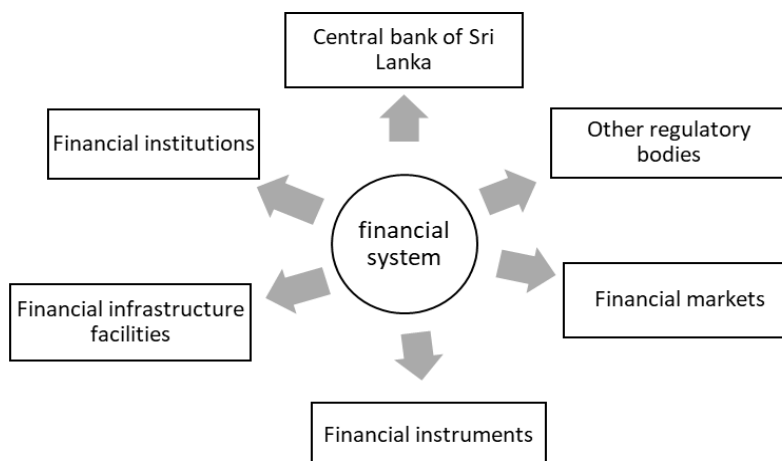
Financial system

- A financial system is a collection of all elements that enrolls with financial decision implementation of the economy.
- One of the main functions of the financial system is financial intermediation.

Main three functions of a financial system

- 1) Facilitating supply money to various people and institutions and facilitating to obtain them back when necessary.
- 2) Providing options for risk management of financial assets obtained by people investing their funds.
- 3) Facilitating various households and institutions to fulfill various transactions.

Main elements of a financial system



- Accordingly, the financial system of a country consists with financial institutions, financial markets, financial instruments and financial infrastructure.

1. Financial institutions

- Entities who engaged in transactions related to financial instruments and other financial services within the financial system.
- Financial institutions can be represented in four categories,

1) Banking sector

- i. Central bank of Sri Lanka
- ii. Licensed commercial banks
- iii. Licensed specialized banks

2) Other deposit taking institutions

- i. Registered finance companies
- ii. Corporative rural banks
- iii. Thrift and credit corporations

3) Special financial institutions

- i. Specialized leasing companies
- ii. Primary dealers
- iii. Stock brokering companies
- iv. Unit trusts
- v. Venture capital companies
- vi. Commercial banks

4) Contractual savings institutions

- i. Insurance companies
- ii. Employee provident fund (EPF)
- iii. Employee trust fund (ETF)
- iv. Approved private provident fund
- v. Public service provident fund

- ❖ There are four major categories of financial institutions that make up the Sri Lanka's financial system.
 - a. Central bank
 - b. Other regulatory institution (Ex: Sri Lanka securities and exchange commission)
 - c. Financial intermediaries (Ex: Banks, finance companies)
 - d. Institutions those provide financial services (Ex: Fund management companies, Financial brokers)

Financial intermediation

- Financial intermediation is the process of mobilizing financial resources from surplus units to deficit units.
- Institutions that are engaged in financial intermediation are known as financial intermediaries.
- Following are the institutions engage in financial intermediation,
 - Licensed commercial banks
 - Licensed specialized banks
 - Registered finance companies
 - Corporative rural bank
 - Insurance companies
 - Thrift and credit co-operatives
 - EPF and ETF
 - Leasing companies
 - Unit trusts

2. Financial instruments

1. Debt instruments issued by government

i. Treasury bills

- Treasury bill is a short term security issued through auctions conducted by Central bank of Sri Lanka on behalf of the government. These are issued with a maturity period of 91 days, 182 days and 364 days. Investment in treasury bills is 100% secure as there is zero risk. As the ownership can be transferred at any time these are called as transferable instruments and those are issued in Scripless form.

ii. Treasury bonds

- Treasury bonds are considered to be medium and long term monetary instruments used by government in order to obtain loans, of which the maturity period ranges from 2 to 20 years. Treasury bonds are issued at a pre – determined fixed rate (Coupon interest) throughout the life period of the bond. Investment in these is 100% secure as there is zero risk. A tradable instrument in the secondary market and issued in Scripless form.

iii. Rupee securities (Rupee loans)

- Rupee securities are tools used to obtain medium and long term loans by the government. In this security value of the loan is equals to the face value of the security and repayment date and the relevant interest rate is mentioned on the face of the certificate. Semi – annual periodic interest payments are paid.

iv. Sri Lanka development bonds

- These bonds are issued to facilitate a development project in Sri Lanka. Bonds are issued in US dollars. Non – residents of Sri Lankans who are foreigners are eligible to purchase. CBSL guarantees the repayment of bonds and it is a sub – section of the capital market.

v. Sovereign bonds

- These bonds are issued by the Government of Sri Lanka (GoSL) to fulfill Balance of Payment expectations and to increase foreign reserves or to solve problems in fiscal policy.

2. Debt instruments issued by companies**i. Commercial papers**

- Commercial paper is a short – term debt instrument issued by highly reputed private corporations in which repayment ability is certified by a reputed financial institution. Most of the time commercial paper is usually issued at a discounted form, face value reflects prevailing market interest rates. However, some of the commercial papers are issued at fixed interest rate.

ii. Corporate bonds

- The market where these are traded are called as corporate bond market. These can be listed and can be traded in share market also.

iii. Debentures

- A debenture is a type of debt instrument unsecured by collateral used by highly reputed corporations (or government) to obtain medium to long term loans. Since, debentures have no collateral backing, debentures must rely on the creditworthiness and reputation of the issuer (corporation who issues the debenture) for support.

3. Debt instruments used by commercial banks**i. Certificate of deposits**

- Certificate deposits are a special form of term deposits issued by commercial banks to obtain medium term funds. They are issued for a specific reference period with a certain amount interest rate. Further, they are issued at a discounted price. In this certificate, name of the certificate holder is not mentioned and thereby it can be transferred to any person. At the end of the maturity, person who produce the certificate can claim the face value of the certificate.

ii. Asset – backed securities

- Commercial banks and other financial institutions issue financial security collateralized by a pool of assets such as personal vehicle loans, student loans, credit card debt etc. commercial bank obtain funds by issuing these securities to financial market.

iii. Leasing or hire purchase facilities

- Lease is a contract by which one party conveys the high value assets to another for a specific time, usually in return for a periodic payment. There are three types of leases, finance lease (capital lease), operational lease and sell and buy back lease. Lease agreements are long term agreements relative to hire purchase agreements.
- It is a one type of an agreement where installments are paid in order to obtain the ownership of the property. These are short term agreements with a relatively high interest rate. It is required to make a down payment in the beginning.

iv. Call money

- Call money is obtaining loans from money market in order to fulfill daily liquidity requirements. Most of these loans are overnight loans or loans that are settled within 7 days and the interest rate applicable is known as inter – bank call money market interest rate.

v. Equities

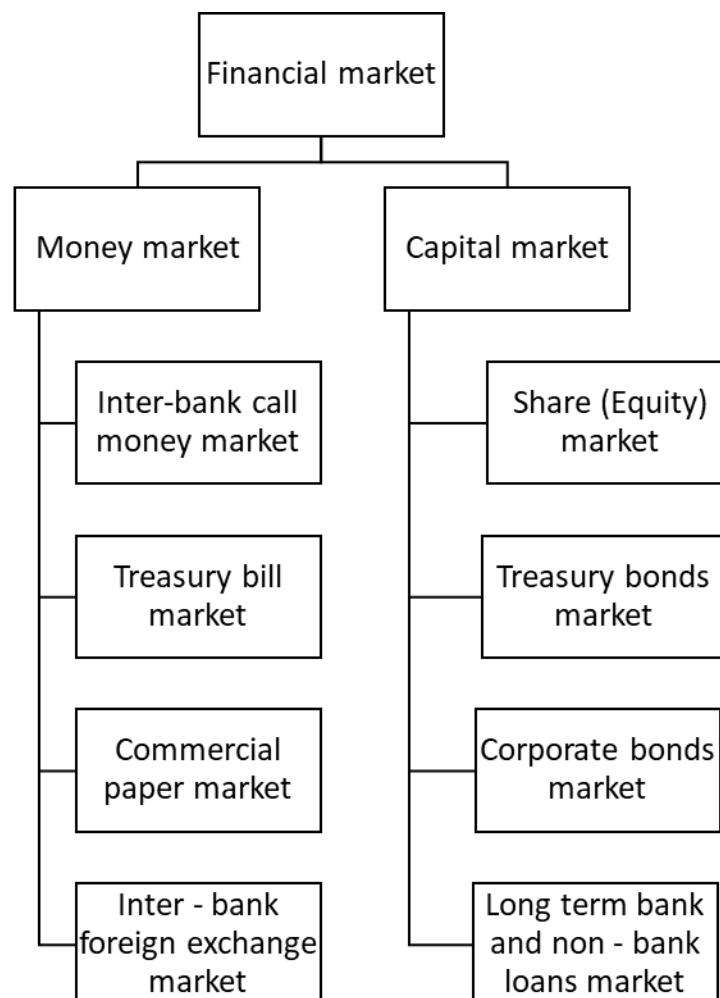
- A main method used by companies to earn equity (Capital) is by issuing shares of the company. A person who owns and invest in shares of a company gets an ownership of the company in an equal way. For the shareholders, companies are paying a part of their profit called as dividends. These, shares can be sold in the share market. In Sri Lanka, shareholders can sell their shares in Colombo Stock Exchange (CSE).

vi. Financial derivatives

- Financial derivatives are contracts that are being formed in order to cover the risk of future losses that may cause due to any changes in value of financial assets at a future date. For example, forward contracts, swaps, interest rate swaps, future contracts and options.

3. Financial market

- A general market where selling or purchasing of financial instruments to finance short term or long term financial requirements is known as financial market.



Money market

- Money market refers to the environment where financial assets of short maturities usually less than one year are traded.
- Main function is to manage liquidity of the market participants.
- Treasury bills, certificate of deposits, commercial bills and exchange bills are traded in this market.

1. Inter-bank call money market

- This is the inter-bank short term borrowing and lending market. Banks which face liquidity problems can get funds from other banks which has excess funds. Normally, these loans are settled within or less than 7 days. This is done through reserve accounts of each bank in the CBSL.

2. Treasury bill market

- This is the market which trade treasury bills issued by CBSL to primary dealers in order to obtain short term funds needed by the government. This market has two categories as primary and secondary treasury bill market.

3. Commercial paper market

- Commercial paper market is similar to the promissory note. It is a promise issued by a limited company without any collateral by agreed to pay a specific amount of money at a specific future date. Money banks and financial institutions purchase them. These are issued at a higher value.

4. Internal foreign exchange market

- Market related to short term borrowings and lending using foreign currency. As well as transactions related to foreign currency in commercial banks such as selling foreign currency by exporters to commercial banks, buying foreign currencies by importers, issuing letter of credit (LC), issuing bank orders.

Capital market

- Securities with long term maturities are traded in capital markets.
- Main function is to provide funds required by government and other business enterprises to meet their long term financial requirements.
- Company shares, debentures and treasury bonds are sold and purchased in this market.

1. Share (Equity) market

- The place where trade of securities such as shares and debentures of listed companies are done. This is the market which facilitates secondary transactions of shares. That is share trading activities among investors.

2. Corporate bonds market

- Corporate bonds are issued by the government corporations and public companies in order to get medium and long term funds. These can be listed and can be traded in share market also.

3. Treasury bonds market

- Treasury bond is a Scripless security issued by CBSL on behalf of the government in order to get middle term and long term funds needed by the government. Maturity will be 2 to 20 years. Treasury bond market also considered with primary and secondary market.

4. Long term bank and non – bank loans market**4. Financial infrastructure facilities**

- Financial infrastructure facilities in Sri Lanka consist with following,
 - A. Lanka settle system
 - a) Real time gross settlement system (RTGS)
 - b) Lanka secure system (LSS)
 - B. Payment and settlement system (PSS)
 - a) Cheque imaging and Truncation system (CIT)
 - b) Sri Lanka interbank payment and settlement system (SLIPS)
 - C. Ordinary shares and debt instruments trading system
 - a) Automated trading system (ATS)
 - b) Debt securities trading system (DEX)

Central bank of Sri Lanka

- CBSL performs three main functions with regard to the payment and settlement system of the country.
 1. Monitoring payment and settlement system
 2. Operating some payment and settlement in the system

3. Formulating a national policy on payments and developing the payment and settlement system

Other regulatory authorities

- The legal framework established by the government to protect the stability of the financial system comes under regulatory authorities.
- Authorities falling under this are,
 - ✓ Central Bank of Sri Lanka (CBSL)
 - ✓ Securities and exchange commission
 - ✓ Insurance board of Sri Lanka
 - ✓ Colombo stock exchange (CSE)

Credit rating

- Credit rating is an assessment of the creditworthiness of any entity – an individual, corporation or a sovereign government that seeks to borrow money.
- Through credit rating, lender can assess ability to pay of the borrower.
- If credit rating is 'AAA - BBB' default rate is very low whereas 'B-D' ratings shows a high risk of default.
- Credit rating is done by credit rating agencies in the world.
- At present there are three popular credit rating agencies,
 1. Moodys
 2. Standard and poors
 3. Fitch ratings

Sovereign credit rating

- Sovereign credit rating is rating the creditworthiness of a government or a nation.
- Through sovereign credit rating it provides an idea about the debt level and the investments towards that nation.
- Thus, sovereign credit rating provides an idea for investors and lenders internationally about a particular nations repayment ability and financial strength.