BHIKHABHAI JIVABHAI VANIJYA MAHAVIDYALAYAVALLABH VIDYANAGAR

CLASS : FY B.Com (SEM:II) **SUB : ECONOMICS – II (M.E.)**

UNIT :2 (Money) **FACULTY : SMRUTI JANI**

1. MONEY

Money is any object or item which is generally accepted as a mode for payment of goods & services and repayment of loans or debts such as taxes, etc., in a particular nation or country. Money was invented to facilitate trade as the barter system was not able to express the value and prices of goods & services. The term money covers all things like currency notes, coins, cheques, etc., to carry out all economic transactions and settle the claims. As a currency, money circulates from country to country and person to person to facilitate trade. Different stages of money are Commodity Money, Metallic Money, Paper Money, Credit Money, and Plastic Money.

According to D.H. Robertson, "Anything which is widely accepted in payment for goods or in discharge of other kinds of business obligation, is called money."

2. Classification of Money

Money is classified on the basis of the relationship between the value of money as a commodity and the value of money as money. It can be broadly classified as:

- Full-bodied Money
- Representative Full-bodied Money
- Credit Money
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1. Full-Bodied Money

Full-bodied money refers to any unit of money, whose intrinsic value and face value are equal, i.e., Commodity Value = Money Value. For example, During the colonial period, 1 rupee coin was made of silver metal and its monetary value was equal to its commodity value.

2. Representative Full-bodied Money

The representative full-bodied money usually refers to money made of paper. The money value of representative full-bodied money is much higher than its commodity value, i.e., Money Value > Commodity Value. Such type of paper money is completely backed by a

metallic reserve of gold or silver and can be redeemed by the holder's choice. For example, for convertible paper receipts, one can exchange the amount mentioned on the paper receipt for an equal value of gold or silver.

Representative Money can be of two types:

(i) Convertible Paper Money: The currency notes that can be freely converted into full-bodied money in the form of gold or silver, at any point of time at the will of the holder is known as Convertible Paper Money. It is not necessary to have 100% backing of gold or silver for the convertible paper money, as the notes in circulation are not presented for conversion at the same time.

(ii) Inconvertible Paper Money: The currency notes or paper money that cannot be converted into full-bodied money at the desire of the holder are known as Inconvertible Paper Money. This kind of representative full-bodied money circulates and commands value. It is because the issue of inconvertible paper money is regulated by the Government. Besides, it does not have any kind of backing of standard coins or bullion. For example, the Indian one-rupee note cannot be converted into full-bodied money and does not have a backing.

3. Credit Money

The money whose intrinsic value or commodity value is much lower than its face value is known as Credit Money, i.e., Commodity Value<Money Value. For example, the face value of a ₹200 note is Rs 200, but if we sell the note as a paper, we would get a much lower amount.

Various types of credit money are:

(i) Token Coins: These are the small coins of various values whose money value is greater than commodity value, i.e., Money Value > Commodity Value. Token coins are issued to facilitate the daily requirements of people. For example, 1, 2, 5, or 10 rupee coins are token coins, as their money value is more than their commodity value.

(ii) Representative Token money: Representative Token Money is the money that is fully backed and redeemable in gold or silver. It is generally in the form of paper whose actual offered market value is less than the value printed on paper notes.

(iii) Circulating Promissory Notes issued by the Central Bank: The currency notes issued by the central bank of India (RBI) are known as Circulating Promissory Notes. These include all currency notes of values, like ₹100, ₹200, ₹500, ₹2000, etc. Each circulating promissory note has the words, "I promise to pay the bearer the sum of " printed on it with the signature of the Governor of India. Its money value is greater than the commodity value.

(iv) Demand Deposits in Bank: Deposits are claims of depositors against a bank. The demand deposits can be withdrawn from the bank or transferred to another person by issuing a cheque. Such deposits do not have any kind of backing (gold or silver). The money value of a cheque is much higher than its commodity value. With demand deposits, the risk of carrying a large amount of cash is removed, which makes the transactions convenient and safe.

3. Functions of money

Functions of money can be broadly categorized into the following two types:

(a) Primary functions (b) Secondary functions

(a) Primary functions

i) Medium of exchange:

- It means that money can be used to make payments for all the transactions of goods and services.
- A buyer can buy goods through money, and a seller can sell goods for money.
- It is an essential function of money.

ii) Measure of value:

- Money serves as a measure of value.
- The value of all goods and services is expressed in terms of money.

(b) Secondary functions

i) Standard of deferred payments:

- It means that money acts as a 'standard' for making future payments.
- It has made deferred payments much easier than before.
- Example: When we borrow money from somebody, we have to return both the principal as well as the interest amount in the future.
- Money is a convenient mode of calculation and payment of interest amount to be paid in the future.
- This function has facilitated borrowing and lending.
- It has also led to the creation of financial institutions.

ii) Store of value:

- A store of value implies a store of wealth.
- Money can be easily stored for future use.
- It is the most convenient and economical means to store earnings and wealth.

iii) Transfer of value:

- Money also serves for transfer of value.
- It facilitates buying and selling of goods not only in the domestic country but also in other parts of the world.

4. Value of money:

The value of money is its purchasing power, i.e., the quantity of goods and services it can purchase. What money can buy depends on the level of prices. When the price level rises, a unit of money can purchase less goods than before.

The value of money is determined by the demand for it, just like the value of goods and services. You can measure the value of money by what people will exchange for it and by how much of it there is.

Formula: VM = 1/P

5. Quantity theory of Money :

1. Fisher's Quantity theory of money:

Fisher's Equation of Exchange:

The transactions version of the quantity theory of money was provided by the American economist Irving Fisher in his book- The Purchasing Power of Money (1911). According to Fisher, "Other things remaining unchanged, as the quantity of money in circulation increases, the price level also increases in direct proportion and the value of money decreases and vice versa".

MV = PT or P = MV/T

Like other commodities, the value of money or the price level is also determined by the demand and supply of money.

i. Supply of Money:

The supply of money consists of the quantity of money in existence (M) multiplied by the number of times this money changes hands, i.e., the velocity of money (V). In Fisher's equation, V is the transactions velocity of money which means the average number of times a unit of money turns over or changes hands to effectuate transactions during a period of time. Thus, MV refers to the total volume of money in circulation during a period of time. Since money is only to be used for transaction purposes, total supply of money also forms the total value of money expenditures in all transactions in the economy during a period of time.

ii. Demand for Money:

Money is demanded not for its own sake (i.e., for hoarding it), but for transaction purposes. The demand for money is equal to the total market value of all goods and services transacted. It is obtained by multiplying total amount of things (T) by average price level (P).

Thus, Fisher's equation of exchange represents equality between the supply of money or the total value of money expenditures in all transactions and the demand for money or the total value of all items transacted.

Supply of money = Demand for Money

Or

Total value of money expenditures in all transactions = Total value of all items transacted

$MV = PT$

or

$P = MV/T$

Where,

M is the quantity of money

V is the transaction velocity

P is the price level.

T is the total goods and services transacted.

The equation of exchange is an identity equation, i.e., MV is identically equal to PT (or MV = PT). It means that in the ex-post or factual sense, the equation must always be true. The equation states the fact that the actual total value of all money expenditures (MV) always equals the actual total value of all items sold (PT).

What is spent for purchases (MV) and what is received for sale (PT) are always equal; what someone spends must be received by someone. In this sense, the equation of exchange is not a theory but rather a truism.

Irving Fisher used the equation of exchange to develop the classical quantity theory of money, i.e., a causal relationship between the money supply and the price level. On the assumptions that, in the long run, under full-employment conditions, total output (T) does not change and the transactions velocity of money (V) is stable, Fisher was able to demonstrate a causal relationship between money supply and price level.

Thus, the equation of exchange becomes:

$$MV + M'V' = PT$$

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

(a) The volume of money in circulation (M);

(b) Its velocity of circulation (V) ;

(c) The volume of bank deposits (M');

(d) Its velocity of circulation (V');

(e) The volume of trade (T).

Example:

Fisher's quantity theory of money can be explained with the help of an example. Suppose M = Rs. 1000. M' = Rs. 500, V = 3, V' = 2, T = 4000 goods.

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

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

= Re. 1 per good

Value of money (1/P) = 1

If the supply of money is doubled

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

= Rs. 2 per good

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

Thus, when money supply in doubled, i.e., increases from Rs. 4000 to 8000, the price level is doubled. i.e., from Re. 1 per good to Rs. 2 per good and the value of money is halved, i.e., from 1 to 1/2.

Assumptions of Fisher's Quantity Theory:

1. Constant Velocity of Money

2. Constant Volume of Trade or Transactions

3. Price Level is a Passive Factor

4. Money is a Medium of Exchange

5. Constant Relation between M and M'

6. Long Period

Criticisms of Quantity Theory of Money:

1. Interdependence of Variables
The various variables in transactions equation are not independent as assumed by the quantity theorists

2. Unrealistic Assumption of Long Period

3. Unrealistic Assumption of full Employment

4. Static Theory

5. Simple Truism

6. Technically Inconsistent

7. Fails to Explain Trade Cycles

8. Ignores Other Determinants of Price Level

9. Fails to Integrate Monetary Theory with Price Theory

10. Money as a Store of Value Ignored

2. Friedman's Modern Quantity Theory of Money:

Building on the work of earlier scholars, including Irving Fisher of Fisher Equation fame, Milton Friedman improved on Keynes's liquidity preference theory by treating money like any other asset. He concluded that economic agents (individuals, firms, governments) want to hold a certain quantity of real, as opposed to nominal, money balances. If inflation erodes the purchasing power of the unit of account, economic agents will want to hold higher nominal balances to compensate, to keep their real money balances constant. The level of those real balances, Friedman argued, was a function of permanent income (the present discounted value

of all expected future income), the relative expected return on bonds and stocks versus money, and expected inflation.

formally,

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

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

where

M_d/P = demand for real money balances (M_d = money demand; P = price level)

f means "function of" (not equal to)

Y_p = permanent income

$r_b - r_m$ = the expected return on bonds minus the expected return on money

$r_s - r_m$ = the expected return on stocks (equities) minus the expected return on money

$\pi^e - r_m$ = expected inflation minus the expected return on money

So the demand for real money balances, according to Friedman, increases when permanent income increases and declines when the expected returns on bonds, stocks, or goods increases versus the expected returns on money, which includes both the interest paid on deposits and the services banks provide to depositors.

This all makes perfectly good sense when you think about it. If people suspect they are permanently more wealthy, they are going to want to hold more money, in real terms, so they can buy caviar and fancy golf clubs and what not. If the return on financial investments decreases vis-à-vis money, they will want to hold more money because its opportunity cost is

lower. If inflation expectations increase, but the return on money doesn't, people will want to hold less money, ceteris paribus, because the relative return on goods (land, gold, turnips) will increase. (In other words, expected inflation here proxies the expected return on nonfinancial goods.)

The modern quantity theory is generally thought superior to Keynes's liquidity preference theory because it is more complex, specifying three types of assets (bonds, equities, goods) instead of just one (bonds). It also does not assume that the return on money is zero, or even a constant. In Friedman's theory, velocity is no longer a constant; instead, it is highly predictable and, as in reality and Keynes's formulation, pro-cyclical, rising during expansions and falling during recessions. *Finally, unlike the liquidity preference theory, Friedman's modern quantity theory predicts that interest rate changes should have little effect on money demand.* The reason for this is that Friedman believed that the return on bonds, stocks, goods, and money would be positively correlated, leading to little change in $r_b - r_m$, $r_s - r_m$, or $\pi^e - r_m$ because both sides would rise or fall about the same amount. That insight essentially reduces the modern quantity theory to $M_d/P = f(Y_p <+>)$.