STUDY MATERIAL FOR NCWEB, HANSRAJ COLLEGE CENTRE

University of Delhi, For 28th March 2020

B.A. (Prog.) IInd Year, Section - A, Room No.- A206 (08:40-09:40)

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PAPER – ECONOMICS

UNIT – 6 MONEY IN A MODERN ECONOMY

QUANTITY THEORY OF MONEY –

b) The Cash Balance Approach -

Cambridge economists like Marshall, Pigou, Robertson and Keynes formulated this approach for the determination of value of money as an alternative to Fisher's quantity theory of money. Cambridge economists were of the view that supply of money remains constant at any particular point of time. This is the money demand component which plays a major role in determining value of money.

1) Marshall's Equation –

Marshall explained value of money in terms of the following equation.

$$\boxed{M = k.PY}$$

Where, M – Supply of money,
k – Proportion of income which people desire to hold as cash and demand deposits,
P – Price level,
Y – Aggregate real income of the community.

Thus, $$\text{Price Level } (P) = \frac{M}{k.Y}$$

or $$\text{Value of Money } \left(\frac{1}{P}\right) = \frac{k.Y}{M}$$

2) Pigou's Equation –

Pigou states that

$$\boxed{P = \frac{k.R}{M}}$$

Where, M – Quantity of money,
R – Real Income,
k – the proportion of real income which people wish to hold as cash balance,
P – Value of money.

People do not hold all their money in currency/legal tender money, they also keep a portion of money in the form of bank deposits. Keeping this fact in view, Pigou modified his equation wherein some portion of k is kept as legal tender and rest as bank deposits. Modified equation of Pigou is –

$$\boxed{P = \frac{k.R}{M}[c + h(1-c)]}$$

Here, c – proportion of real income which people wish to hold in the form of legal tender money,

(1-c) – proportion of real income which people wish to hold in the form of bank deposits,

h – proportion of bank deposits which is hold by banks with them.

3) Robertson's Equation -

To determine the value of money or its reciprocal i.e. the price level, Robertson formulated an equation similar to that of Pigou. The only difference between the two being that Robertson takes volume of total transactions 'T' instead of Pigou's total real income 'R'.

$$\boxed{P = \frac{M}{k \cdot T}}$$

Where, P – Price level,

M – Quantity of money,

k – Proportion of T which people want to keep in cash,

T – Quantity of goods and services purchased during a period of time.

If we take P as value of money instead of price level as in Pigou's equation, then it will be P = k.T/M.

DEMAND FOR MONEY -

The demand for money in an economy is amount of money that people want to hold during a given period of time.

"The amount of wealth that everyone in the economy wishes to hold in the form of money balances is called the demand for money."

- **Lipsey & Chrystal**

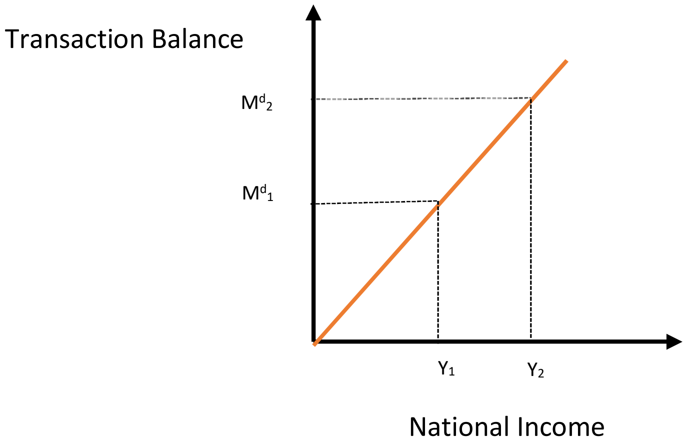
People hold money because it serves as the most liquid asset. Holding money means holding purchasing power that may be used for transacting goods and services. People hold money for other reasons also, such as to earn interest and to provide against unforeseen events. J.M. Keynes in his famous book 'The General Theory' used new term 'Liquidity Preference' for the demand for money. He suggested three motives that push individuals to hold money – Transation Motive, Precautionary Motive and Speculative Motive.

Based on these three motives, there are three types of demand for money –

1) Transaction Demand for Money (M^d_t) –

It relates to the need of money balance by individuals and business firms for their current transactions. Everyone hold money in order to bridge the gap between the receipt of income and expenditure. Many demand for this motive depends on size of individual's income and the interval at which it is received.

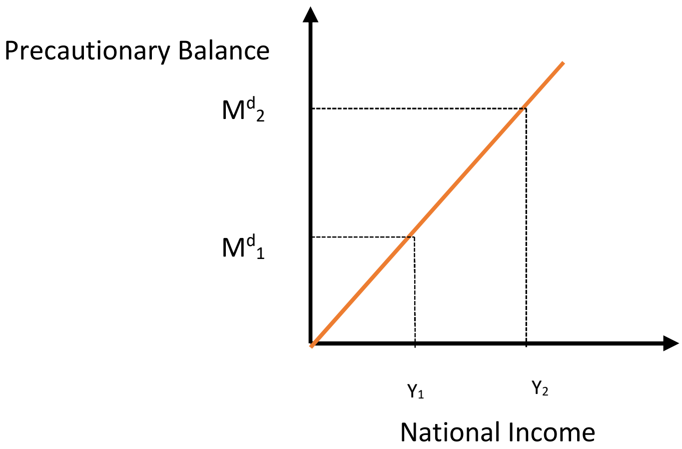
$$M^d_t = f(Y)$$



2) Precautionary Demand for Money (M^d_p) -

Precautionary motive for holding money refers to the desire of individuals and firms to hold money for any unforeseen contingencies. People hold a certain amount of money to provide for unemployment, sickness, accident and other uncertain perils. Precautionary demand also very positively with the level of the income.

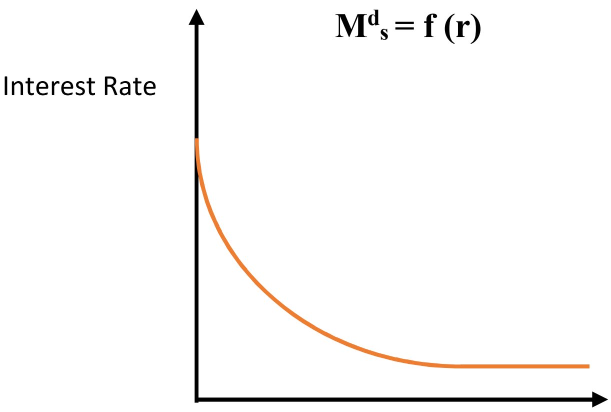
$$M^d_p = f(Y)$$



3) Speculative Demand for Money (M^d_s) –

It refers to the amount of money that people want to hold in liquid form in order to take advantage of market fluctuations regarding future change in either interest rate/bond prices. The cash under this motive is used to make speculative gains by dealing in bonds.

$$M^d_s = f(r)$$



Speculative Balance