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PAPER – ECONOMICS
UNIT – 6 MONEY IN A MODERN ECONOMY

MONEY MULTIPLIER -

Money multiplier is the ratio of change in supply of money to change in high powered money. High powered money is the sum of commercial bank reserves and currency i.e. notes and coins held by the public.

$$\text{Money Multiplier (m)} = \frac{\text{Money Supply (M)}}{\text{High Powered Money (H)}}$$

$$\text{or} \qquad \text{Money Multiplier (m)} = \frac{(C + D)}{(C + RR + ER)}$$

Where   C – Currency
    D – Demand deposits
    RR – Required reserve
    ER – Excess reserve

CREDIT CREATION BY COMMERCIAL BANKS –

In an economy, Banks influence money supply by issuing loans i.e. creating purchasing power in the economy. Banks through their past experience know that not any single day all the customers will come to withdraw their deposits. At the same time banks cannot afford to hold all its deposits idle because banks have to a pay interest on all its deposits.

Let us suppose that person A deposits ₹ 1,000 in a commercial bank which is initial deposit for the bank. Now bank out of this additional reserve created of ₹ 1,000, keeps ₹ 100 as required reserve and offers remaining ₹ 900 as loans to another person B. Now this second person B spends this amount against any purchase by issuing a cheque in favour of the seller who happens to be an account holder in the same bank. Thus bank again receives deposit of ₹ 900 and advances ₹ 810 to another person C after keeping a reserve of ₹ 90. This process of making further loans by the bank will continue till all its excess reserves are exhausted.

<u>Process of Income Propagation through credit creation by banks given CRR as 10%</u>

Depositors	Initial Deposit	Reserve Created	Required Reserve	Excess Reserve
Person A	1000	1000	100	900
		900	90	810
		810	81	729
		'	'	'
		'	'	'
		'	'	'
Total		10,000	1,000	9,000

On the basis of primary deposit of ₹ 1,000 total deposits created by bank is

$= 1000 + 900 + 810 + - - - - - - - - -$

$= 1000 + 1000(9/10)^1 + 1000(9/10)^2 + - - - - - - - - -$

$= 1000 \left[1 + (9/10)^1 + (9/10)^2 + - - - - - - - - - \right]$

We know $1 + r^1 + r^2 + - - - - - - - - - = 1 / (1 - r)$

Thus, $= 1000 \left[1 / 1 – (9/10) \right]$

$= 1000 \left[10 / (10 – 9) \right]$

$= ₹ 10,000$

Thus, with an initial deposit of ₹ 1000 and given required reserve ratio 10 % of deposits, total deposits created by bank is ₹ 10,000 in the economy.

Limitations of Credit Creation –

1) Cash Reserve Ratio – CRR of deposits fixed by the central bank is an important factor which determines the power of banks of creating credit. Higher the CRR lower the power of banks to create credit and vice-versa.

2) Primary Deposits – The credit creation power of banks depends upon the amount primary deposits. There is a direct relation between the two. If the amount of primary deposits is large, credit creation will also be larger and if the amount of primary deposits is small credit creation will also be small, keeping CRR same.

3) Leakages – It is possible that some persons who receives cheques do not deposit them in their bank accounts, but withdraw the money in cash for spending or hoarding at home. The extent to which the amount of cash is withdrawn from the chain of credit expansion, the power of the banking system to credit is limited.

4) Economic Climate – Banks power to create credit also depends upon the economic climate in the country. If there are boom times, investment opportunities increase and traders take more loans from the banks. But in the time of depression business activities remain at low level, so demand for loans are little and not as much credit is created by banks.

5) Banking Habits of the People – Capacity of banks to create credit also depends on people's banking habits. If people transact most of their business through cheques, they require less cash in hand. As a result cash balances with the banks will remain at high level and this will positively affect their capacity to create credit.

QUANTITY THEORY OF MONEY –

This theory is discussed in two versions –

a) The Cash Transaction Approach and b) The Cash Balance Approach

a) The Cash Transaction Approach –

This approach states that quantity of money is the main determinant of the price level or value of money.

"Other things remaining unchanged, as the quantity of money in circulation increases, the price level also increases in direct proportion and value of money decreases and vice versa."

\- **Irving Fisher**

If quantity of money is doubled, the price level will also double and the value of money will be one half. On the other hand, if quantity of money is reduced by one half the price level will also be reduced by one half and value of money will twice.

This theory can also be explained in terms of Fisher's equation of exchange –

$$PT = MV + M`V`$$

Demand for Money = Supply of Money

Where, P – Price level,
 T – Total number of transactions,
 M - Money in Circulation,
 V - Velocity of Circulation of Money,
 M` - Total quantity of credit money,
 V` - Velocity of circulation of credit money.
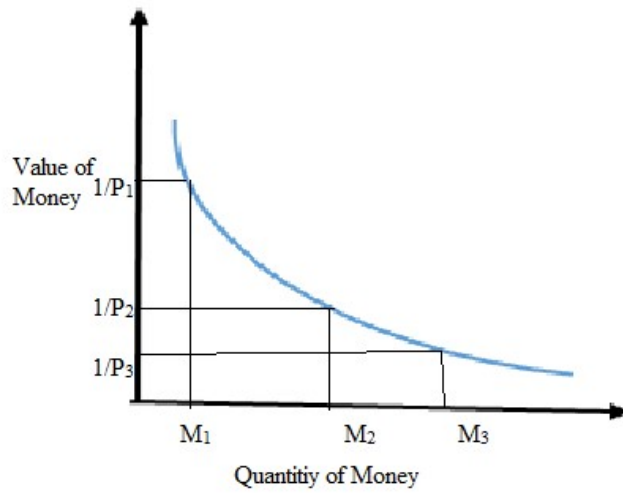
In figure, the inverse relation between quantity of money and value of money is depicted. When quantity of money is M_1 the value of money is $1/P_1$. But with doubling the quantity of money to M_2 the value of money becomes one half $1/P_2$ of what it was before. And with quantity of money increasing by four fold to M_3 the value of money is reduced by $1/P_3$. This inverse relation between the quantity of money and value of money is shown by downward sloping curve.