WEEK 11: MONETARY POLICY

MONEY

'Money', said by Geoffrey Crowther, is a veil thrown over the working of the economic system. Money can be defined as anything, which is acceptable as settlement of a debt. Thus we have a functional definition of money. As Hanson says, 'money is what money does'.

For any asset to be considered as money, it must fulfil the four functions discussed below.

Medium of Exchange

Money facilitates the exchange of goods and services in the economy. Labour accepts money as wages because they know that money can be exchanged for all the different things that they will need. If there were no money, then exchange would have to take place by ***barter***. For barter to be possible there must be a *double coincidence.*

Unit of Account

This function is associated with the use of money as a means of exchange. Money should be able to measure exactly what something is worth. It should provide an agreed standard measure by which the value of different goods and services can be compared. The function of money in the economy would be to establish a common unit of *value measurement* by which the relative values or prices of goods can be established.

Store of Value

Money is a store of value because it can be used to buy goods or services whenever the need arises. Money is a convenient way to hold wealth.

Standard Deferred of Payment

Many contracts involve future payment e.g. hire purchase, mortgages and long-term construction works. Any contract with a time element in it would be very difficult if there were no common agreement on the means of payment. The future being uncertain, creditors know that all their economic needs can be satisfied with money. However, sellers will be reluctant to allow credit to buyers or to agree to a fixed price for long-term contracts when the value of money falls over time (inflation).

We have seen that money fulfils four functions and also that many different things have functioned as money in different times. Here we will consider the attributes or characteristics an asset should have to function as money.

a. **Acceptability** The most important attribute of money is that it is readily acceptable.

b. **Durability** Money should not wear out quickly.

c. **Homogeneity** It is desirable that money should be uniform. Imagine that a country's money stock consisted of £1 gold coins, but that some coins contained 1 gram of gold and others 2 grams. What would happen? People would hoard the 2-gram coins but trade with 1-gram coins. Thus, part of the money supply would disappear.

d. **Divisibility** Another disadvantage of commodity money, such as camels' or pigs' teeth, is that they cannot be divided into smaller units. Modern notes and coins allow us to arrive at almost any permutation of divisibility.

e. **Portability** Commodity money and even coins suffer from disadvantages in that they may be difficult to transport.

f. **Difficult to counterfeit** Once a society uses money which has exchange value, it is essential that the possibilities for fraud and counterfeit be kept to a minimum.

NARROW MONEY AND BROAD MONEY

Narrow money — Consists of all the purchasing power that is immediately available for spending.

Broad money — Includes most of the bank deposits, building society deposits and so on which are not immediately available for spending.

THEORY OF MONEY

There are two broad schools of thought about monetary theory which we need to know about. The two broadly differing views are:

The monetarist view

The monetarist view of money supply and demand, and of the influence of money on interest rates and inflation is derived from the so-called quantity theory of money.

The Keynesian view

Keynes developed a theory of the demand of money in the 1920s known as *liquidity preference theory.*

Monetarist economists stress the significance of the role of money in the working of the economy. If the number of transactions in the economy is fixed and independent of the amount of the money supply, then the total money value of transactions will be **PT.**

P = is the price level of goods and services bought and sold
T= is the number of quantity of transactions

The money needed to pay for that transactions will depend on the velocity circulation. Money changes hand **MV** where **M is** money supply and **V is the** velocity of circulation.

This bring us to the identity of the quantity theory of money:

$$MV = PT$$

We assume that **M** is both the quantity of demand for money and also the money supply. Then:

a. an increase in **M** would reduce **V** or increase either **P** or **T**
b. an increase in **V** would reduce **M** or increase either **P** or **T**
c. an increase in **P** would reduce **T** or increase either **M** or **V**
d. an increase in **T** would reduce **P** or increase either **M** or **V**

KEYNESIAN VIEW ON THE DEMAND FOR MONEY : LIQUIDITY PREFERENCE THEORY

'Liquidity' is gained by keeping notes in the form of cash or 'near cash'. In particular, notes and coins and money in current bank account. Liquidity preference refers to the

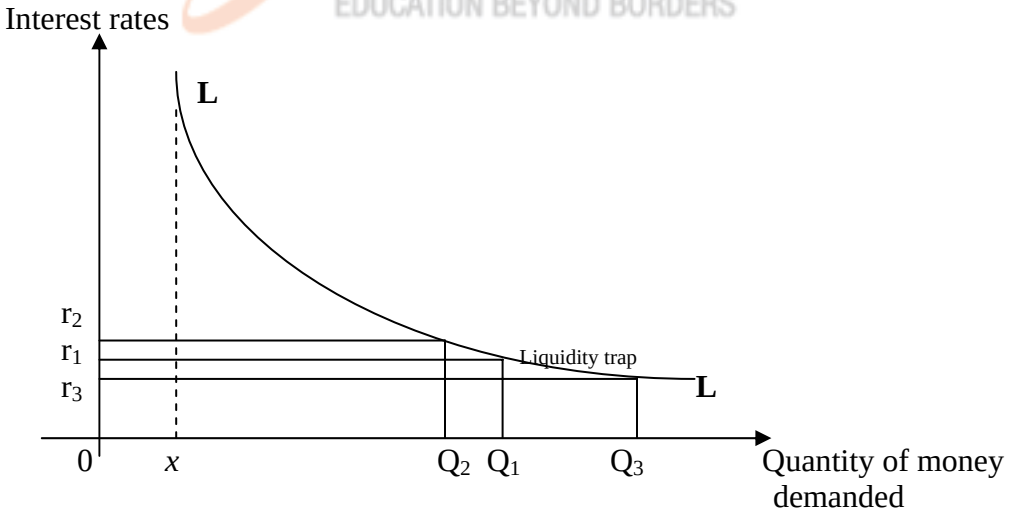
preference of people to hold on to their savings as money (i.e. in liquid form) rather than investing it.

a. **Transaction motive** — Households need money to pay for their day-to-day purchases. The level of transaction demand for money depends on household incomes.

b. **Precautionary motive** — People choose to keep money in hand or in the bank as a precaution for a 'rainy day' when it might suddenly be needed.

c. **Speculative motive** — Some people choose to keep ready money to take advantage of a profitable opportunity to invest in bonds which may arise.

LIQUIDITY PREFERENCE THEORY



Keynes argued further that people will need money to satisfy the transactions motive and precautionary motive regardless of the level of interest rates. This is illustrated in the diagram above. It is the speculative motive which alters the demand for money as a result of interest rates. If interest rates are high, people will lend more money e.g. by buying government stocks, hold little cash, and will have low liquidity preference. If interest

rates are low [people expect them to rise], there is danger that current bond prices will fall when interest rates go up. People will therefore hold money to satisfy speculative motive i.e. they want to invest later in bonds and their liquidity preference will be high.

The conclusion is that the demand for money will be high i.e. liquidity preference will be high when interest rates are low. This is because the speculative demand for money will be high when interest rates are low. Similarly, the demand for money will be low when interest rates are high, because speculative demand for money will be low.

As illustrated in the diagram above, *x* is the minimum quantity of money demanded, regardless of interest rate, to satisfy the minimum demand arising from the transactions and precautionary motives for holding money. Where the liquidity preference curve is elastic (i.e. has a shallow slope), the government will find it difficult to change the rate of interest. If the rate is to be lowered from r_2 to r_1, an increase in the money supply is required (the amount of Q_1 Q_2) and continue to do so if the interest is decreased. Liquidity of preference becomes increasingly elastic at lower interest rates. Liquidity preference could even become infinitely elastic at a particularly low interest rate. *The region of the liquidity preference curve which approaches infinite elasticity (i.e. approaches the horizontal axis) is called 'liquidity trap'.*

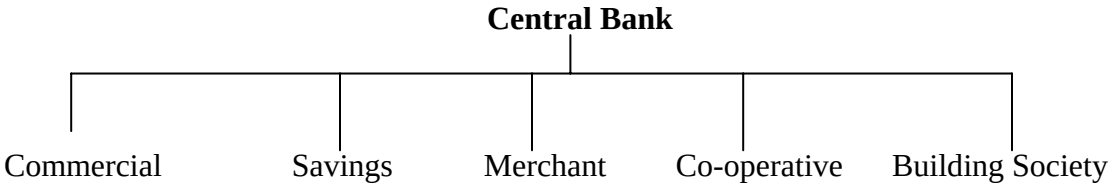
BANK

These are the institutions which channel funds from lenders to borrowers. Among the institutions which are termed financial intermediaries are banks, building societies and so on. It is important to realize that financial intermediaries are more than go-betweens. This situation was summarised by Wilson Committee in 1976 as follows:

When a financial institution intermediates it not only passes funds from lenders to borrowers, it usually changes their terms and conditions. By aggregating small amounts of funds obtained from each of a large number of savers it is able to on-lend in larger packets and often to transform risk and maturity characteristics.

As well as the go-between function of financial intermediation, we now have two others, namely **maturity transformation** and **risk transformation.** To illustrate this let us take an example. People deposit money in their current accounts which the bank promises to repay on demand – it then lends the money to a customer for say, three years. Maturity transformation has taken place. But if you were to lend the money directly to a friend to buy a new car, you would be taking a great risk. However, by taking many such risks and by knowledge of business the bank greatly reduces the risk. This is risk transformation.

TYPES OF BANKS



FUNCTIONS OF BANKS

Commercial Banks

These are profit-motivated banks involved in high street banking activities.

1. **Accept Deposits.** These may be in the form of savings deposits, fixed deposits or current account deposits. Depositors receive interest for keeping their funds in the bank as deposits. Banks also accept credit instrument.

2. **Commercial banks make funds available** to individuals, companies and the government by extending loans. Loans to individuals include housing loans, personal loans, loans for educational purposes, mortgage loans and home improvement loans.

3. **Commercial banks by issuing cheque books provide a convenient means of making payments.** The holder of current account can make a payment by simply writing a cheque. Transactions are more easily effected through the use of cheques than exchange of large sums of cash.

4. **Commercial banks provide safekeeping services** for all kinds of assets besides money. Valuable items may be kept in the safes of the bank, in safe deposit boxes.

5. **Commercial banks also provide a host of other services** such as paying for and collecting shares and bonds on behalf of depositors, issuing traveller's cheques and undertaking acceptance business.

6. **Commercial banks also provide other services** like mortgages, leasing and international banking.

7. **Commercial banks do not sell draft and these banks provide credit cards, telegraphic transfer, credit transfer, foreign exchange, etc. facilities.**

Commercial banks have three different and potentially conflicting aims which they must try to keep in balance. These are:

a. **Profitability** A bank must make profit for its shareholders. The biggest profits come from lending at higher interest rates and *long term lending usually will be at higher rates of interest than short term lending; lending to higher risk customers will be at higher interest rates than lending to low risk customers.*

b. **Liquidity** A bank must have some liquid assets, so that it is able to have enough cash reserves at any time to meet its day-to-day demand for cash.

c. **Security** People deposit their money with banks because banks are regarded as stable and secure institutions. A bank might lend to some high-risk customers, and suffer some bad debts, but on the whole, a bank will be expected to lend wisely and securely, with a strong likelihood that the loans will be repaid in full and with interest.

Savings Banks

Savings banks are specially for savings and they do not provide the facilities of current account e.g. Bank Simpanan Nasional. Originally designed to encourage the small saver, and often non-profit, these banks have become very significant in some countries.

Merchant Banks

They are more like banking brokers putting those with large sums of money to lend in touch with borrowers and by offering a wide range of financial advice to companies and even to governments e.g. Arab Malaysian Merchant Bank

Cooperative Banks / Credit Unions

They are generally small and usually have been established by groups of individuals with a common interest. These types of banks aim to give credit to the members.

Building Societies

They help developers of constructions through loan, advice and so on. On the other hand, they also provide house loans to homebuyers

DEMAND OF MONEY

Demand of money arises as a result of economic activity by the people in the country. When a person consumes a good or service, the person needs to use money in exchange for the good or service provided by the producer. The demand of money depends on the level of activity in a country. The higher the economic activity in a country, the higher will the demand of money be.

SUPPLY OF MONEY

The supply of money consists of the following:

1. Coins

These are insignificant in volume, being issued for the convenience of effecting small everyday transaction

2. Notes

Notes like coins constitute only a small part of total money supplied. They are used for transactions involving small sum of money. Coins are limited legal tender while notes are unlimited legal tender.

3. Bank deposits

Cheques effect about 90 % in value of all transactions. When a person writes a cheque, the bank is instructed to transfer deposits standing in his account to the person to whom money is owed. Bank deposits therefore act as money.

CREDIT CREATION

Bank or credit creation multiplier

D = 1/r x C (*1/r is known as bank / credit creation multiplier)*

D = amount of bank deposits
r = cash ratio / reserve ratio
C = initial deposit

A Single Bank System

Let us imagine that there is only one bank with which everyone in the country does business. This bank has initial deposits of £1,000 in cash. The cash ratio is 10%.

Bank X

Liabilities (Deposits)	£	Loans and Advances £	Cash Retained £
Initial Deposit	10,000	9,000	1,000
1st re-deposit	9,000	8,100	900
2nd re-deposit	8,100	7,290	810
3rd re-deposit	7,290	6,561	729
	.....	.....	.....
	.....	.....	.....
	100,000	90,000	10,000
	======	=====	=====

The bank's balance sheet at the end of the process:

Bank X

	£		£
Initial deposits	10,000	Cash retained	10,000
Created deposits	90,000	Loans and advances	90,000
	100,000		100,000
	=====		=====

A Multi-Bank System

If we consider a system in which there are many banks, credit creation will go on the same manner except that money which is loaned out may find its way into a bank other than the one which makes it. This is illustrated below, where we assume that there are only two banks in the system

Initial deposits = £10,000 (each bank £5,000) r = 10%

Bank X

Liabilities (Deposits)	£	Loans and Advances £	Cash Retained £
Initial Deposit	5,000	4,500	500
1st re-deposit	4,500	4,050	450
2nd re-deposit	4,030	3,645	405
3rd re-deposit	3,645	3,280.50	364.50
	.....	.....	.....
	.....	.....	.....
	50,000	4,500	5,000
	======	=====	=====

Bank Y

Liabilities (Deposits)	£	Loans and Advances £	Cash Retained £
Initial Deposit	5,000	4,500	500
1st re-deposit	4,500	4,050	450
2nd re-deposit	4,030	3,645	405
3rd re-deposit	3,645	3,280.50	364.50
	.....	.....	.....
	.....	.....	.....
	50,000	4,500	5,000
	======	=====	=====

The bank's balance sheet of both banks can be shown as follows:

Bank X

	£		£
Initial deposits	5,000	Cash retained	5,000
Created deposits	45,000	Loans and advances	45,000
	50,000		50,000

Bank Y

	£		£
Initial deposits	5,000	Cash retained	5,000
Created deposits	45,000	Loans and advances	45,000
	50,000		50,000

Factor influencing credit creation

The factor that limits credit creation is the cash ratio, i.e. the higher the cash ratio, the lesser the credit creation.

If the bank wishes to increase its profitability therefore the liquidity preference will decrease. **Profitability ↑ Liquidity ↓**

MONETARY POLICY

Monetary policy is aimed at the control of supply and price of money, to fight inflation. The appropriate monetary policy is to reduce aggregate demand by adopting a tight monetary policy of deflationary policy i.e. to reduce the money supply in the market. This policy can be implemented through:

i. Special Deposit

By requiring special deposits, the Central Bank is effectively making a part of the total profits of the bank illiquid. Thus banks are put in a tight

situation and would need to contract credit and this relatively will lead to a decrease in the money supply in the market and thereby reduce inflation.

ii. Cash ratio

By increasing cash ratio it means that the banks are required to increase their liquidity level. This leads to a decrease in the amount of money that can be lent to the individuals or organizations and the money flows into the market will relatively decrease.

iii. Interest Rate

Inflation can be reduced by increasing the interest rate thereby encouraging savings or discouraging spending.

iv. Special Directives

Only those who meet the standards set by the bank are qualified to receive certain amount of loans.

v. Funding

By converting the Government debts from short run into long run.

vi. Open Market Operation

By selling bonds or bills, this will reduce the volume of money in the market.

vii. Instalment Control / Credit

Down payment higher or % loan lower, repayment period shorter.

viii. Mortgage Control

By increasing the interest rate of loan, decreasing the instalment period or decreasing the amount of loan, these will decrease the volume of money in the market.

Learning Outcomes:

Students should be able to:

- Define money and illustrate its functions
- Discuss the roles of central bank
- Examine money demand and money supply and their determinants
- Analyse the effectiveness of the central bank's policies

Main Reference
Case, K. E., & Fair, R. C. (2007). *Principles of Economics* (8th ed.). Prentice Hall, Chapter 24.

Other Reference
Sloman, J. (1993). *Economics* (3rd ed.). Prentice Hall, Chapter 19.

Review Questions

1. What is monetary policy? How is monetary policy being administered?

2. What are the functions of money?