Study Note - 4

MONEY

This Study Note includes

4.1 Money
4.2 Gresham's Law
4.3 Quantity theory of Money
4.4 Inflation
4.5 Investment & Rate of Interest
4.6 Money Supply
4.7 Liquidity Preference and Marginal Efficiency

4.1 MONEY

Definition

- A medium of exchange.
- With the help of money any exchange of goods and services can take place.
- Money is said to be the most liquid asset among all the assets of a man.
- It has general acceptability as a means of payment and liquid characteristic. Keynes called this liquidity preference.
- Generally money is created by the Central Bank or the Government of a country.
- These are legal tender money as there is legal compulsion for their acceptance.
- They also called as Cash Money.
- Another considerable flow of money is Credit Money — created by the commercial banks by their loan transactions.

Functions of Money

Static functions	Medium of Exchange	• In an exchange economy money has an intermediary role. • The invention of money has made the exchange system smooth and convenient.
	Measure of value	• Things are said to be cheap or expensive on the basis of amount of money required for their possession. • This makes exchange mutually profitable.
	Standard of deferred payment	• It implies the role of money in borrowing and lending. • Money taken as loan is usually repaid after a time gap. • This delayed payment is done through money.
	Store of value	• Purchasing power of money can be stored by keeping a part for future use, called monetary savings. • Current income can be used for current consumption as well as future consumption by savings.

Dynamic Functions		• Money activated idle resources and puts them into productive channels. • It thus, helps in increasing output, employment and income. • It helps in converting savings into investment. • Creation of new money governments of modern economies can spend more than what they can.

Value of Money

- It means Exchange Value.
- It implies how much of goods and services can be obtained in exchange of a unit of money.
- Value of money is inverse of price.
- When price level increases, the value of money decrease and vice versa.

Forms of Money

- The total money supply of a country can broadly be classified into two groups—Cash Money and Credit Money.
- It also includes all other financial assets.
- The degree of moniness varies widely from asset to asset.

The Components of Money Supply —

Paper Money and Coins	• These as Currency are issued by the Central bank or Government. • They have cent per cent acceptability as a means of payment. • Their acceptability is based on a 'promise to pay bearer' gold and foreign exchange in exchange.
Demand deposit	• A bank is legally bound to pay money on demand. • The 'moniness' in currency and demand deposits is highest.
Near Money or money substitute	• The well known near money is bank cheque (savings account). • A bank cheque is a means of payment for transaction. • There is no legal compulsion behind their acceptance.
Term deposit	• It is less liquid than savings bank deposit. • They cannot be used before a fixed period.
Other forms of financial assets	• These are issued by non-bank financial intermediaries. • They are not so much liquid as bank deposits.

4.2 GRESHAM'S LAW

The Law states that bad money drives good money out of circulation. This is true in case of bimetallism where two metal standard (gold and silver) operate side by side. In such a case one metal currency drives the other out of circulation. If also means cheap money drives out dear money. If a country uses both paper money as well as metal money, people will use the paper money and hold the metal money.

4.3 QUANTITY THEORY OF MONEY

Quality theory of Money can be analyzed by two different approaches:

(1) Fisher's Theory

(2) Cash Balance Approach

4.3.1 Fisher's Theory

- The theory explains the relationship between money supply and price level.
- Irving Fisher used an equation [MV = PT]
- M stands for total Money Supply.
- V means velocity of circulation money which implies the average number of times that a unit of money changes hands during a particular period.
- P is Price level i.e. average price of GNP.
- T is Total National output.
- Fisher used the equation to show the relationship between money supply and price level as direct and proportional.
- The rate of change in money supply (dM/M) is equal to rate of change in P (dP/P).
- Graphically the curve showing the relation between M and P will be a 45 degree line passing through the origin.

Fisher's theory is based upon three assumptions

The relation between M and P will be proportional only when there are no changes in the value of V and T i.e. V and T are constant variables.

(a) Velocity of circulation of money depends on the spending habit of people. Spending habit of people is, more or less, stable. Hence V will be constant normally.

(b) T or GNP will be constant in situation of full employment when all the available factors of production are fully employed. At less than full employment, more money will lead to more output by utilizing unused factor. Hence P will not rise.

(c) Fisher's theory assumes that money is demanded for the transaction purposes only. People spend their entire income instantly for transaction.

Criticisms

(a) Fisher's equation is abstract and mathematical truism. It does not explain the process by which M affects P.

(b) It is presumed that entire M is used up in buying T instantly. It is unreal. No one spends all money the moment he earns it. Keynes pointed out that money is demanded for transaction purposes, precautionary purpose and also speculative purpose. Fisher does not explain the last two roles of money.

(c) The concept full employment is myth. There is natural rate of unemployment in every country.

(d) Even with full employment, a country can rise national output by bringing those factors which are not available within economy from abroad.

(e) It is presumed that money is used for transactions only. Hence the theory is often referred to as

Cash Transaction Theory. This ignores the other roles of money.

4.3.2 Cash Balance Approach

- It states that it is not total money but that portion of cash balance people spend that influences price level.
- True people hold cash balance in their hands instead of spending the entire amount all at once.
- The equation is M = PKT.
- Here, M = money supply, P = price level, T = total volume of transaction, K= the demand for money the people want to held in hand.

The Quantity Theory by Keynes

- Keynes reformulated the Quantity Theory of Money.
- In his opinion the quantity of money does not directly affect price level.
- A change in the quantity of money may lead to a change in the rate of interest.
- With a change in the rate of interest the volume of investment is quite likely to change.
- A change in investment will lead to a change in income, output and employment and also a change in cost of production.
- This will lead to the change in prices of goods and services.
- The Keynesian version of the Quantity Theory integrates monetary theory with the general theory of value

4.4 INFLATION

- It arises when price level of an economy goes on rising continuously.
- It is open inflation.
- An economy may also suffer from inflation without any apparent rise in prices.
- This is repressed inflation.
- According to classical writers inflation is a situation when too much money chases too few goods.
- It is an imbalance between money supply and Gross Domestic Product.
- As per Keynes inflation is an imbalance between aggregate demand and aggregate supply.
- In an economy, if the aggregate demand for goods and services exceeds aggregate supply, then prices will go on rising.

4.4.1 Causes

Primary causes:

1. When demand for a commodity in the market exceeds its supply, the excess demand will push up

the price ('demand-pull inflation').

2. When factor prices rise, costs of production rise ('cost-push inflation')

Let us now discuss in detail the various causes that may bring about inflation —

Increase in public spending	• Government's spending is an important part of total spending in any modern economy. • It is an important determinant of aggregate demand. • In less developed economies, Government expenditure has shown an upward trend. • This has created inflationary pressure on the economy.
Deficit financing of Government spending	• Government spending increases beyond what can be financed by taxation. • In order to be able to incur the extra expenditure, the Government resorts to deficit financing. • For instance, it prints money and spends it. This adds to the pressure of inflation.
Increased velocity of circulation	• Total use of money = money supply by the Government × velocity of circulation of money. • In boom phase, people spend money at a faster rate. • The velocity of circulation of money is increases.
Population growth	• It increases total demand in the market. • The pressure of excess demand will create inflation.
Hoarding	• Excess demand is sometimes artificially created by hoarders. • They stockpile commodities • They do not release them to the market. • This leads to excess demand and inflation.
Genuine shortage	• If the factors of production are in short supply, production will be affected. • Supply will be less than demand, prices will rise.
Exports	• If the total output of a commodity is not sufficient to meet both domestic and foreign demand. • Then exports will create inflation in the domestic economy.
Trade unions	• By demanding an increase in the wage rate, they increase the cost of production.
Tax reduction	• Governments sometimes reduce taxes to gain popularity. • This leaves more money in people's hands. • This leads to inflation if there is no corresponding increase in production.
Imposition of indirect taxes	• Government may imposes indirect taxes (such as excise duty, value-added tax etc.) • Then producers or sellers raise the product prices to keep their profits unchanged.
Price-rise in international market	• The imported price of some commodities or factors of production may rise in the world market. • It would lead to inflation in the domestic market.
Non-economic reasons	• For instance, at times of natural calamities (flood) crops are destroyed, reducing the supply of agricultural products. • Prices of these commodities tend to increase.

4.4.2 Forms of Inflation

Inflation may be of different forms, such as —

Demand Pull Inflation

- When in an economy aggregate demand exceeds aggregate supply.
- Aggregate demand may increase due to an increase in money supply, or money income or public expenditure.
- The idea of demand inflation is associated with full employment when supply cannot be altered.

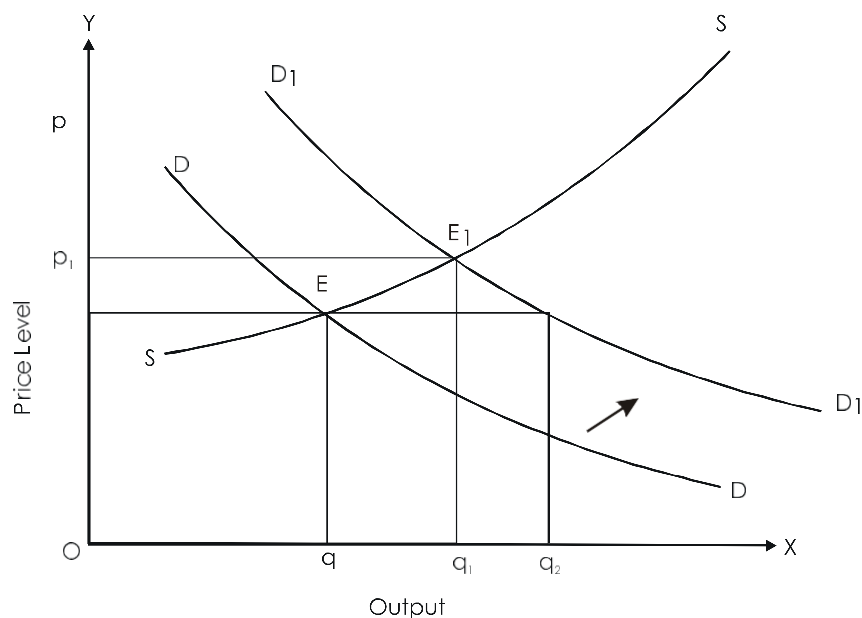

Fig 4.1

- In this graph SS and DD are aggregate supply and demand curves.
- Op and Oq are equilibrium price and equilibrium output.
- Due to exogenous causes demand curves shifts right-wards to D_1 D_1.
- At the current price Op, demand increase by qq_2.
- But supply is Oq.
- Excess demand qq_2 put pressure on price, which gradually rises from Op to Op_1.
- At this price a new equilibrium is achieved where Demand = Supply.
- The excess demand is eliminated by fall in demand and rise in supply arising out of rise in price.

Cost Push Inflation

- Inflation may originate from supply side also.
- Aggregate demand remaining unchanged, a fall in aggregate supply due to exogenous cause,

may lead to increase in price level.

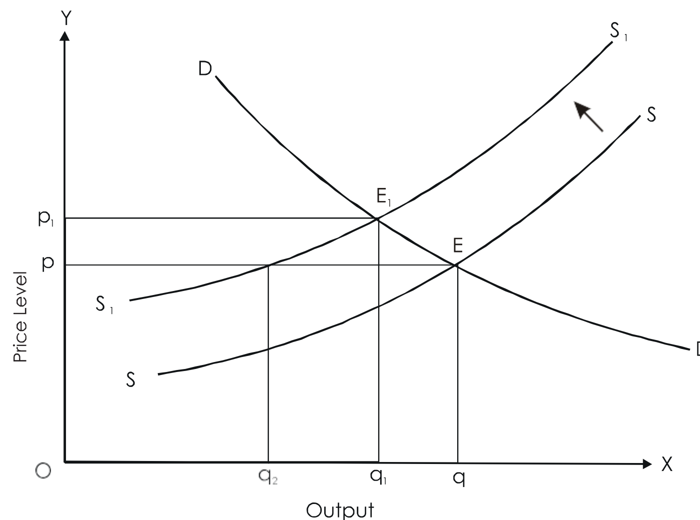

Fig 4.2

- In this graph, the starting point is the equilibrium price (Op) and output (Oq).
- If aggregate supply has fallen, the SS curve shifts left ward to S_1S_1.
- At price Op now supply will be Oq_2 but demand Oq.
- This will push prices high till a new equilibrium is reached at Op_1.
- At the new price there will be no excess demand.
- Inflation is thus a self limiting phenomenon.

Open inflation

- The continuous rise in price level is visible in the naked eye.
- One can see the annual rate of increase in the price level.

Repressed inflation

- There is excess demand.
- The excess demand is prevented from increasing price level by some repressive measures.
- The measures taken by the government like price control, rationing etc.

Hyper inflation

- The price level goes on rising at a very fast rate.
- Often there happens hourly increase in price level.
- It often leads to demonetization.

Creeping inflation

- The price level increases very slowly over a period of time.

Moderate inflation

- The rise in price level is neither too fast nor too slow.

True inflation

- It takes place after full employment of all factor inputs in an economy.
- In a situation of full employment, the National output becomes perfectly inelastic.
- Here more money will lead to higher prices and not more output.

Semi-inflation

- A country may experience inflation arising from bottlenecks, even before full employment.
- There may be inflationary price rise in some sectors of the economy.

4.4.3 Impacts of Inflation

Inflationary pressure in an economy my generate good effects on the economy, particularly in case of 'creeping' or 'walking' inflation.

Favourable impacts :

(a) **Higher profits :** Profits of the producers are generally favourably affected by inflation, because they can sell their products at higher prices.

(b) **Higher investment :** The entrepreneurs and investors get added incentives to invest in productive activities during inflation, since they can earn higher prices.

(c) **Higher production :** If productive investment grows during inflation, it would lead to higher production of various goods and services in the economy.

(d) **Higher employment and income :** Increase in the output of different goods during inflation would also mean increasing demand for various factors of production. So, it is expected that employment and income opportunities will also increase during inflation.

(e) **Possibility of higher income for the shareholders :** During inflationary periods, if the companies earn higher profits, they can declare dividends for their share-holders. Hence, the dividend income of the shareholders may also rise during inflation.

(f) **Gain for the borrowers :** Inflation means a decrease in the value or purchasing power of money. If the rate of interest to be paid by the borrower is less than the inflation rate, the borrower will gain. Because the real value of the money returned by the borrower is actually less than that of the money borrowed earlier.

Unfavourable Impacts :

(a) **Fall in the real income of fixed-income groups :** Real income means purchasing power of money income [Real income = (money income) / (price level).] Given the money income of the fixed-income groups, the real income will fall during inflation. Hence, inflation affects workers, salaried people and pension-earners adversely.

(b) **Inequality in the distribution of income :** The profit incomes of businessmen and entrepreneurs increasing during inflation while the real income of the common salaried people declines. So, inequality in the distribution of income become acute during inflation.

(c) **Upsets the planning process :** When prices of goods, materials, and factor services increase continuously, then more money has to be spent for the completion of any investment project taken up during any planning period. If more financial resources cannot be raised by the Government (through savings or taxation), plan targets are to be curtailed.

(d) **Increase in speculative investment :** If the price level rises at a fast rate, speculative investment (say, purchasing shares, land, gems, etc., just for speculative purposes) may increase in the economy for earning quick profits. These types of investments do not help in the creation of productive capital in the economy.

(e) **Harmful impact on capital accumulation :** If the price-rise becomes chronic, people prefer goods to money (because the real value of money will fall in future). They also prefer immediate consumption to consumption in future. So, their desire to save is reduced. When both ability and willingness to save become less, a smaller amount of fund becomes available for further investment. As a result, it creates a harmful impact on capital accumulation, since capital accumulation in an economy depends on the growth of investment.

(f) **Lenders will lose :** We have already indicated that borrowers will gain during inflation. For this same reason, lenders will lose during inflation. Because, they are actually receiving an amount having lower value (or purchasing power) than before.

(g) **Harmful impact on export income :** If the prices of export items also increase during inflation, their demand in the foreign market may fall. This leads to a fall in the export income of a country.

4.4.4 Control of Inflation

<table>
<tr><td rowspan="2">To control demand-pull inflation</td><td>Monetary measures</td><td>• If the supply of money in the economy can be decreased, prices will fall.
• If the government withdraws paper notes and coins from circulation, the money supply will decrease.
• The lion's share of the total money supply is bank deposits or bank credit.
• If we can reduce the rate of lending by banks, we can reduce the total supply of money significantly.
• The Central bank of a country can reduce the lending of commercial banks by raising the bank rate and reserve requirements of banks, by open market sales of securities, etc</td></tr>
<tr><td>Fiscal policy</td><td>• The policy of changing tax rates or the rate of Government expenditure.
• An inflationary gap arises when aggregate demand exceeds the maximum potential supply in an economy.
• To overcome, the following types of fiscal measures can be undertaken—
  • A decrease in the Government expenditure; or,
  • A decrease in the Government transfer payments; or
  • An increase in taxes imposed by the Government; or,
  • A combination of all these measures.
— These are regarded as contractionary fiscal policies.</td></tr>
<tr><td>To control cost-push inflation</td><td>Direct control</td><td>such measures as wage freeze, putting upper limits on the prices of such important inputs as electricity, coal, steel, etc.</td></tr>
<tr><td colspan="2">Other measures</td><td>These measures are:
• augmenting the supplies of commodities in the domestic market by increasing imports.
• increasing domestic production, etc.</td></tr>
</table>

4.4.5 Effects of Inflation on Production and Distribution of Wealth

Effects on Production:

- Inflation may or may not result in higher output.
- Below the full employment stage, inflation has a favourable effect on production.
- In general, profit is a rising function of the price level.
- An inflationary situation gives an incentive to businessmen to raise prices of their products so as to earn higher doses of profit.
- Such a favourable effect of inflation will be temporary if wages and production costs rise very rapidly.
- Inflationary situation may be associated with the fall in output, particularly if inflation is of the cost-push variety.
- There is no strict relationship between prices and output.
- An increase in aggregate demand will increase both prices and output, but a supply shock will raise prices and lower output.

Effects on Distribution of Wealth:

- During inflation, usually people experience rise in incomes.
- Some people gain during inflation at the expense of others.
- Some individuals gain because their money incomes rise more rapidly than the prices
- Some lose because prices rise more rapidly than their incomes during inflation.
- The following categories of people are affected by inflation differently:

Creditors and debtors	• Borrowers gain and lenders lose during inflation. • When debts are repaid their real value declines by the price level increase and, hence, creditors lose. • The borrower now welcomes inflation since he will have to pay less in real terms than when it was borrowed. • The borrower is given 'dear' rupees, but pays back 'cheap' rupees.
Bond and debentureholders	• Bondholders earn fixed interest income. • These people suffer a reduction in real income when prices rise. • Beneficiaries from life insurance programmes are also hit badly since real value of savings deteriorate.
Investors	• People who put their money in shares during inflation are expected to gain since the possibility of earning business profit brightens. • Higher profit induces owners of firms to distribute profit among investors or shareholders.

Salaried people and wage-earners	• Anyone earning a fixed income is damaged by inflation. • Wage rate increases always lag behind price increases. • Inflation results in a reduction in real purchasing power of fixed income earners. • People earning flexible incomes may gain during inflation.

Profit-earners, speculators and black marketeers	• Profit-earners gain from inflation. • Seeing inflation, businessmen raise the prices of their products. • This results in a bigger profit. • Speculators dealing in business in essential commodities usually stand to gain by inflation. • Black marketeers are also benefited by inflation.

4.5 INVESTMENT AND RATE OF INTEREST

- Investment = a change in the stock of capital over a period of time.
- Investments are undertaken upto the point at which the yield from an asset cover the cost of investment.
- The rate of interest represents the cost side of investment.
- A change in the rate of interest has a direct impact on the return on a sum of money lent.
- An increase in the rate of interest leads to future incomes being discounted more heavily.
- Therefore, some investments are not undertaken, as they fail to cover the cost.
- Some less productive investment are thus abandoned.
- The level of planned investment is inversely related to interest rate, assuming other variables unchanged $(dI/dr) < 0$.

4.6 MONEY SUPPLY

- The total stock of money circulating in an economy is the money supply.
- The circulating money involves the currency, printed notes, money in the deposit accounts and in the form of other liquid assets.
- Monetary policy of a country is concerned with the supply of money.
- Narrow money supply is called M_1.
- It consists of notes and coins in circulation and demand deposits with banks and central bank.
- As they are quickly and easily used for transactions, they are called transactions money.
- Broad money supply, M_2, consists of M_1 plus other deposits (savings deposits, time deposits, etc.).
- There are some differences in the definitions of money supply from country to country.
- To give the best definition of money supply, we like to refer the money supply as currency held by the public, plus deposits.
- Symbolically, $M_s = C_p + D$. [here, M_s = money supply, C_p = currency held by the public and D =

deposits]

- RBI's has referred four measures of money supply—M_1, M_2, M_3, and M_4.
- $M_1 = C_p$ + demand deposits + other deposits with the RBI.
- $M_2 = M_1$ + post office savings bank deposits.
- $M_3 = M_2$ + time deposits with banks.

- $M_4 = M_3$ + total post office deposits (including National Savings Certificate).
- M_1 is considered as the most important measure of money.
- M_1 includes virtually all the money supplied by the RBI, the Government of India, and the commercial banks.

4.7 LIQUIDITY PREFERENCE AND MARGINAL EFFICIENCY

Liquidity preference refers to the demand for money, considered as liquidity. The concept was first developed by Keynes to explain determination of the interest rate by the supply and demand for money.

The marginal efficiency of capital displays the expected rate of return from investment, at a particular given time. The marginal efficiency of capital is compared to the rate of interest. If the marginal efficiency of capital was lower than the interest rate, the firm would be better off not investing, but saving the money.

EXERCISE

1. What is Money? What are its functions? Is bank cheque money?
2. Explain the relation between money supply and price level.
3. Discuss the Quantity Theory of Money. What are its assumptions and limitations?
4. Define Inflation. What are its casuses? How can it be controlled?
5. Distiguish between Cost push Inflation and Demand pull inflation. Consider the effects of inflation upon production, distribution and savings in an economy.