7. EXCHANGE RATES:

Exchange rate shows the rate at which one currency can be exchanged for another and can be regarded as the price of one currency in terms of another currency. For instance, if £1 = $2, this means that the British have to give £1 to obtain or purchase $2. Exchange rates are essential in real life because countries have different currencies, and to make any international trade payments, these rates must be considered.

DEPRECIATION AND APPRECIATION:

Depreciation refers to a fall in the value of one currency in terms of another currency. On the other hand, appreciation refers to a rise in the value of one currency in terms of another. For instance, if the value of £ changes from £1 = $2 to £1 = $1.50, this means that £ has depreciated, while $ has appreciated.

Depreciation causes a reduction in the foreign currency price of exports, thus, making exports to become more competitive (few foreign currencies will be obtained). This in turn will lead to an increase in quantity of exports. On the imports side, depreciation causes an increase in the domestic currency price of imports, making imports to become expensive (need more domestic currencies to buy the same quantity of imports). Hence, this will lead to a fall in the quantity of imports.

On the other hand, appreciation causes a rise in the foreign currency price of exports and a fall in the domestic currency price of imports.

THE PURCHASING POWER PARITY THEORY (PPP THEORY):

The purchasing power parity theory attempts to explain the determination of an exchange rate through the relative price levels in two countries or relative costs of living. It considers that the exchange rate between two currencies is at equilibrium when they have an equal domestic purchasing power. In other words, the theory suggests that the exchange rate would be in equilibrium if a situation exist where the same basket of goods which costs £1 in UK costs $1.60 in USA, then the exchange rate is £1= $1.60.

Suppose there is inflation in UK such that the basket of goods now costs £2. Hence, the new exchange rate according to PPP theory becomes

£2 = $1.60

£1 = $0.80

Compared to the initial situation (£1 = $1.60), £ has depreciated. Hence, inflation leads to a depreciation of the local currency externally.

TRADE-WEIGHTED EXCHANGE RATE:

This rate is an average of the exchange rate between a domestic currency and each of the country's major trading partners, with each rate being weighted by the amount of trade between the country and another country. For instance, a movement in the £ exchange rate with a major trading partner, say USA, has a big effect on the trade-weighted exchange rate, while the equivalent movement with a minor trading partner has a small effect.

EXCHANGE RATE DETERMINATION:

Indeed, there are 3 types of systems which determine the value of the exchange rate, and these are:

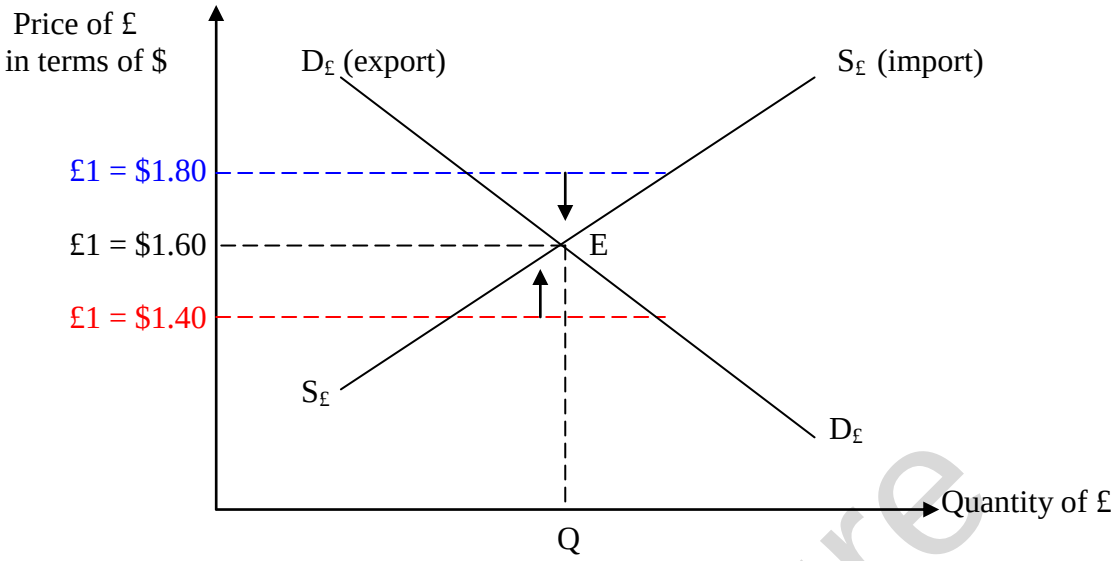
1. Freely floating / flexible exchange rate system.
2. Fixed exchange rate.
3. Managed flexible / Dirty floating exchange rate system.

FLOATING EXCHANGE RATE SYSTEM:

Under the floating exchange rate system, the rate of exchange is determined by the market forces of demand and supply of currency. Thus, the sterling exchange rate is determined by the demand and supply of pounds (£). The government does not intervene to maintain a particular rate.

Assume 2 countries, UK and USA. The demand for £ constitutes demand for UK exports. This is because when US residents wish to purchase UK goods or to invest in UK, they will require £. The lower the dollar price of £, the cheaper it will be for them to obtain UK goods, and hence the more £ they are likely to demand. Thus, demand curve for £ slopes downwards. On the other hand, the supply of £ represents demand for UK imports. This is because when UK importers wish to buy US goods or to invest in US, they will supply £. The higher the exchange rate, the more £ will be supplied since imports become cheaper. Hence, the supply curve of £ slopes upwards.

The equilibrium exchange rate will therefore be where the demand for £ equals the supply of £. This is illustrated as follows:

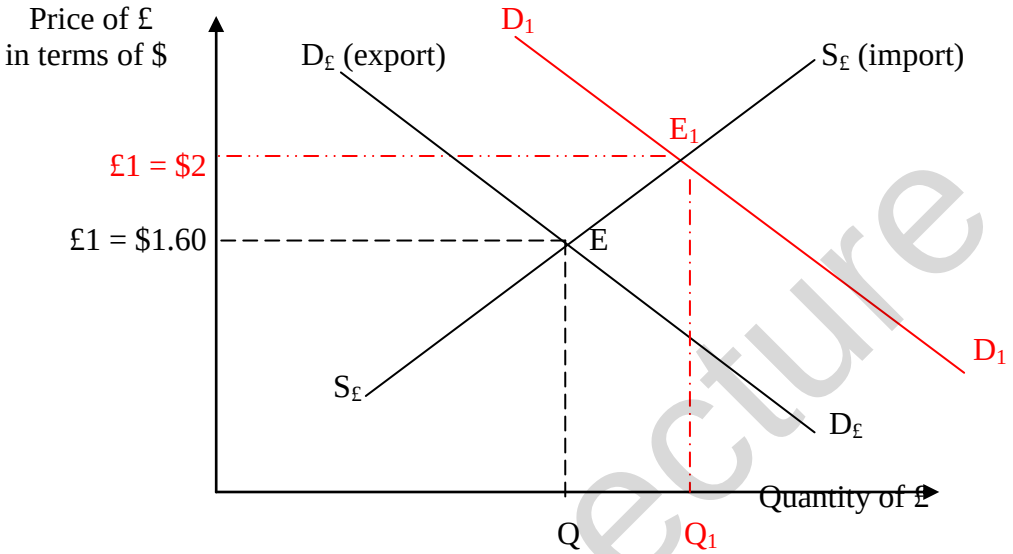


The diagram shows the demand for £, $D_{£}D_{£}$, and the supply of £, $S_{£}S_{£}$, on the foreign exchange market. The market price or the equilibrium price of the £ is fixed where demand equals supply at an exchange rate of £1 = $1.60.

Any exchange rate above the equilibrium, for instance at £1 = $1.80, the supply of £ being offered to the banks exceeds the demand. There would be an excess supply of £. Hence, banks would lower the exchange rate in order to encourage a greater demand for £ and reduce the supply. They would continue lowering the rate until demand equalled supply. Similarly, if the exchange rate were below the equilibrium, say at £1 = $1.40, there would be a shortage of £. Banks would thus raise the exchange rate until demand equalled supply. In practice, the process of reaching equilibrium is extremely rapid.

CHANGES IN VALUE OF EXCHANGE RATE:

Under the floating exchange rate system, any changes in the demand and / or supply conditions of the currency will cause the value of the exchange rate to change. For instance, an increase in the demand for UK exports implies that foreigners are offering more money so that demand for £ increases. Thus, the price of £ is said to have appreciated. This can be illustrated as follows:



An increase in the demand for UK exports shifts the demand curve for £ to the right to D_1D_1, thus, causing an appreciation of £ to £1 = $2. Similarly, a decrease in UK demand for imports causes an appreciation of £ (supply curve of £ shifts to the left). Alternatively, a depreciation of £ could be caused by an increase in UK demand for imports, and a fall in foreign demand for UK exports.

Various factors can attribute to the changes in the value of exchange rate, and these can be discussed as follows:

1. Average rate of inflation:

If a country suffers higher rate of inflation than abroad, its local citizens will have a tendency to purchase more of the relatively cheaper goods form foreign. At the same time its exports will become less competitive. On one hand, exports fall and on the other hand, imports rise. This in turn raises the supply of the domestic currency while reducing the demand for the domestic currency. Such a situation tends to depreciate the value of the domestic currency in the foreign exchange market.

2. Interest rate differential:

If a country's rate of interest rises above the rate in other countries, there will be a large capital inflow into that country. This is because foreign investors will be willing to take advantage of the high rate and will invest more in the country. Hence, this causes an appreciation of the domestic currency. On the other hand, if the country's rate of interest falls, it becomes less competitive for savers and other depositors. More local residents would be likely to deposit their money abroad, causing the supply of domestic currency to rise, and fewer people abroad would deposit their money in the country, leading to a fall in the demand for domestic currency. Hence, the country's currency will tend to depreciate.

3. The economic situation within the country:

If the country is experiencing an economic boom with rising output and consumption, it is expected that its imports will rise since imports depend on the level of national income. Hence, an economic boom encourages greater imports and depreciates the value of the country's currency abroad. On the other hand, an economic depression reduces output and imports such that the supply of domestic currency will fall, thereby, raising the value of the currency.

4. Level of foreign income:

The exports function of a country depends on foreign national income. If the world economy experiences an economic boom, it is obvious that the demand for local goods by foreigners will increase, thereby, causing an appreciation of the domestic currency. Alternatively, a world wide depression is going to reduce foreign national income and discourages exports. Thus, the country is likely to experience a fall in the value of its currency.

5. Relative investment prospects abroad:

If investment prospects become brighter abroad than in a country, perhaps because of better incentives abroad, or worries about an impending recession in the country, the demand for domestic currency will fall and the supply of domestic currency will rise. Eventually, there will be depreciation of the country's currency.

6. Speculation that the exchange rate will change:

If businesses involved in importing and exporting, and also banks and other foreign dealers, think that the exchange rate is about to fall, they will sell the domestic currency now before the rate does fall. The supply of the domestic currency will thus rise, leading to a depreciation of the currency.

7. Trade liberalization:

Imports depend largely on the trade barriers which exist between a country and the rest of the world. If the country adopts a relaxed trade policy with negligible barriers, it is anticipated that imports will be higher, and the value of the country's currency will fall.

ADVANTAGES OF FLOATING EXCHANGE RATE SYSTEM:

1. Surpluses and deficits in a country's BOP cease to be a problem. This is explained by the self-adjusting mechanism of the market forces. For instance, if a country has a deficit in its BOP due to increased imports, this will cause depreciation in its currency. As a result, the country's exports will be cheaper, thus increasing the demand for its exports. On the other hand, imports will become less competitive. Eventually, the BOP will be brought back into equilibrium. Conversely, a BOP surplus will be eliminated by an appreciation of the currency.

2. The freely floating exchange rate system does not affect the policy measures adopted by the government. Proponents of flexible rates have claimed that governments could concentrate their policies on the domestic problems of inflation and unemployment, leaving automatic exchange rate changes to deal with any external imbalances.

3. Governments would no longer need to hold large reserves of currencies. If monetary authorities were not intervening in the foreign exchange market to stabilise rates, reserves would be unnecessary.

4. There is no under or over valuation of the exchange rate under this system. In addition, the freely floating system allows for subsequent changes in demand and supply conditions of the currency reflecting changes in international trade. Thus, this system encourages an efficient allocation of resources without distorting exchange rate.

5. Inflation usually causes an unfavourable BOP. But under this system, inflation leads to a subsequent depreciation of the country's currency which will again create a higher demand for exports and a lower demand for imports, thereby eliminating the deficits.

DISADVANTAGES OF FLOATING EXCHANGE RATE SYSTEM:

1. Uncertainty:

The fact that currencies change in value from day-to-day due to changing demand and supply conditions for exports and imports introduces a large element of uncertainty. Businessmen and customers become doubtful about prices of goods. These uncertainties may affect adversely the volume of foreign transactions. Importers and exporters may be discouraged from trading because of the "exchange rate risk". Besides, the uncertainty may discourage foreign investment.

2. Speculation:

Speculation may occur because certain individuals, being eager to maximise capital gains, will deal with the sales and purchase of currencies in great quantities. This will distort the equilibrium exchange rate. For instance, if speculators think that the exchange rate will fall, then they will sell the currency, and this will cause the exchange rate to fall even further.

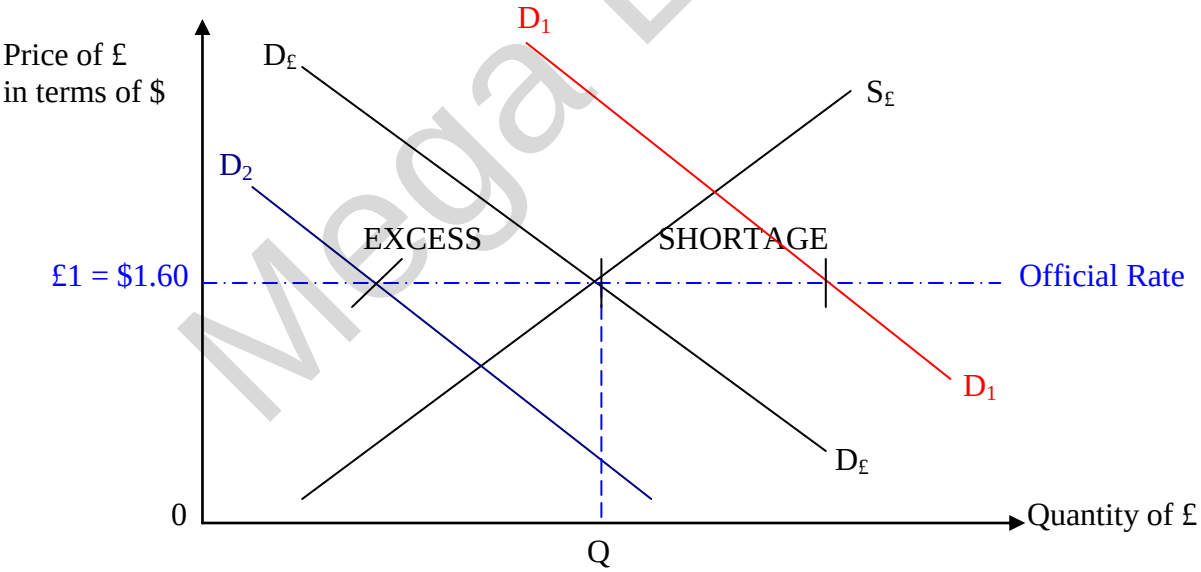
3. It may be inflationary for deficit countries:

A country with a persistent deficit will experience a depreciating currency. As noted, such a depreciation will raise the price of imports and, at the same time, increase the demand for country's exports and imports- substitutes. It may, therefore, exert both cost-push and demand-pull inflationary pressure on the domestic economy.

FIXED EXCHANGE RATE SYSTEM:

Owing to the various drawbacks associated with the freely floating system, it becomes increasingly important to manage the system with government intervention through the country's central bank. This intervention is deemed necessary to prevent uncertainties in international trade and to bring out the necessary stability.

In the fixed exchange rate system, the central bank must stand ready to buy and sell its currency at a fixed price in terms of some other currencies. This fixed rate (official rate) is maintained by constant intervention by the central bank. Given the market demand and supply of domestic currency, the central bank has to make up the excess demand or take up the excess supply. In other words, an excess of domestic currency implies that the central bank intervenes by buying the domestic currency and selling the foreign currency (a downward pressure requires the purchase of the currency through the sale of foreign currencies). On the other hand, if there is a shortage of domestic currency in the foreign exchange market, the central bank must sell domestic currency and buy foreign currency. Hence, in the fixed exchange rate system, the central bank must hold reserves of domestic and foreign currencies to counteract market demand and supply forces. The exchange rate determination under fixed exchange rate system can be illustrated as follows:



The official rate is £1 = $1.60 where the initial demand for £, $D_{£}$, meets the supply of £, $S_{£}$. This rate is maintained in spite of changes in demand and supply conditions. For instance, an increase in UK exports shifts the demand curve for £ to the right to D_1D_1. But at the official rate of £1 = $1.60, there is a shortage of £. Hence, the central bank intervenes by selling £ and buying $. Alternatively, the decreased in exports (D_2D_2) causes a downward pressure in the exchange rate (or an excess of £). To overcome this, the central bank has to buy £ and sell $ in order to maintain the official rate at £1 = $1.60.

ADVANTAGES OF FIXED EXCHANGE RATE SYSTEM:

1. Certainty:

This system initiates certainty and stability in international trade. Businessmen know much more about prices and profits, and buyers are more certain about prices. Thus, it is expected that transactions would not be disturbed and would be carried out smoothly. International trade and investment become much less risky.

2. Little or no speculation:

Provided that the rate is absolutely fixed and people believe that it will remain so, there is no point in speculating.

DISADVANTAGES OF FIXED EXCHANGE RATE SYSTEM:

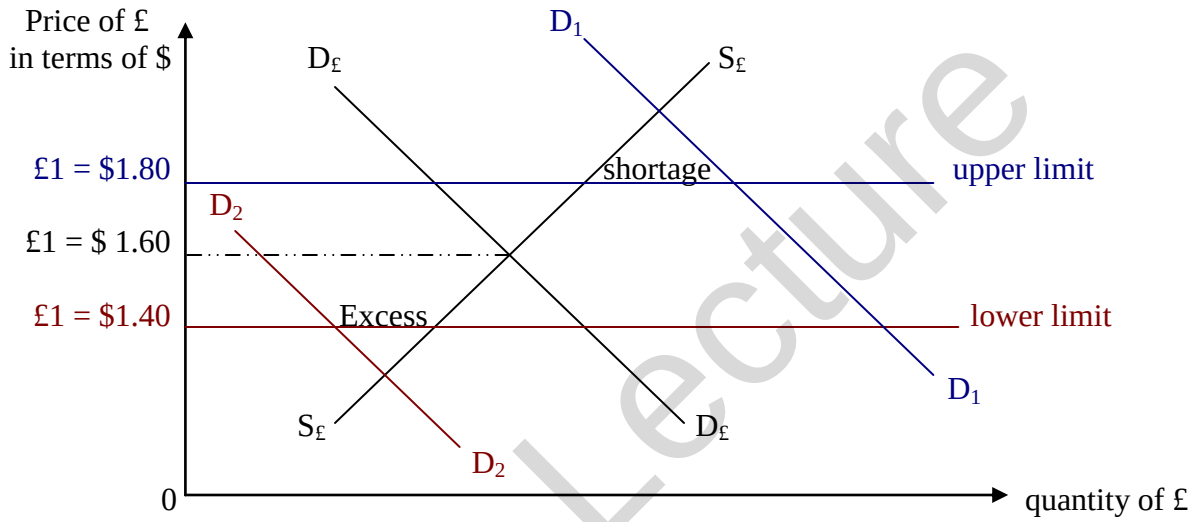
1. The stabilization policy necessitates a stock of foreign and domestic currencies which prevents economic development. Resources, which could have been used productively elsewhere, are tied up in official reserves.

2. So long as the central bank has the necessary reserves, it can intervene in the foreign exchange markets to keep the exchange rate constant. However, if a country persistently runs deficits in the BOP, the central bank eventually will run out of reserves and will be unable to continue its intervention.

3. In spite of the fact that the exchange rate would be stable, a currency may remain over or under valued. This is because the exchange rate does not represent the actual effects of changing demand and supply conditions for exports and imports.

MANAGED FLEXIBLE / DIRTY FLOATING EXCHANGE RATE SYSTEM:

In this system, the exchange rates are determined mainly by the forces of demand and supply, but in which monetary authorities intervene at times to stabilise the rates or influence them in some way. The monetary authority sets a minimum rate and a maximum rate within which the currency is allowed to float. But any excessive downward or upward movements beyond the permissible range, the central bank must react by buying and selling currencies. This can be illustrated as follows:



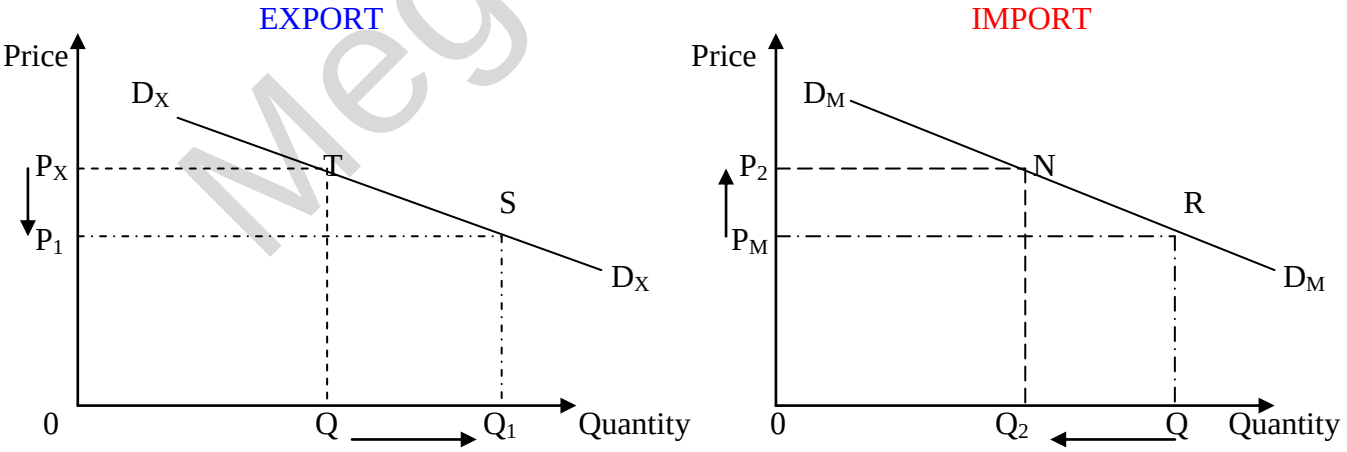
The equilibrium exchange rate is £1 = $1.60, as known as the par value of the currency. There are 2 limits imposed above and below the par value representing the lower limits, £1 = $1.40, and upper limits, £1 = $1.80, within which the exchange rate is allowed to move. However, if demand or supply of currency changes considerably and the exchange rates appreciate or depreciate too rapidly outside the controlled limits, then the central bank must intervene by buying and selling domestic currencies in exchange of foreign currencies. For instance, if demand for £ rises to D_1, the exchange rates will appreciate excessively so much so that it lies outside the upper limit. But there occurs an excess of demand over supply of £ (shortage of £) at the upper limit. Hence, the monetary authority will sell £ and buy $ on the foreign exchange market to smooth out the rise. On the other hand, a decrease in demand for £ to D_2 causes the exchange rate to depreciate too rapidly and falls outside the lower limits. There is an excess of £ at this lower limit, and hence, the authority must buy £ and sell $.

DEVALUATION:

Devaluation is basically a deliberate government decision to reduce the value of its country's currency in terms of another currency, normally in the context of a fixed exchange rate system. For instance, in 1967 the British devalued its currency (£) from £1 = $2.80 to £1 = $2.40. A government might decide to devalue its currency if its economy is experiencing a current account deficit. This will make its exports cheaper in terms of foreign currencies (a reduction in the foreign currency price of exports), and its imports more expensive in terms of domestic currency (an increase in the domestic price of imports). In other words, a devaluation means that foreigners pay less for the devalued currency (exports appear cheaper to foreigners) or that the residents of the devaluing country pay more for foreign currencies (imports appear more expensive to domestic consumers). The intention of the policy-makers is to increase the total value of exports and reduce the total value of imports, thereby eliminating the current account deficit.

THE EFFECTIVENESS OF DEVALUATION (MARSHALL- LERNER CONDITION):

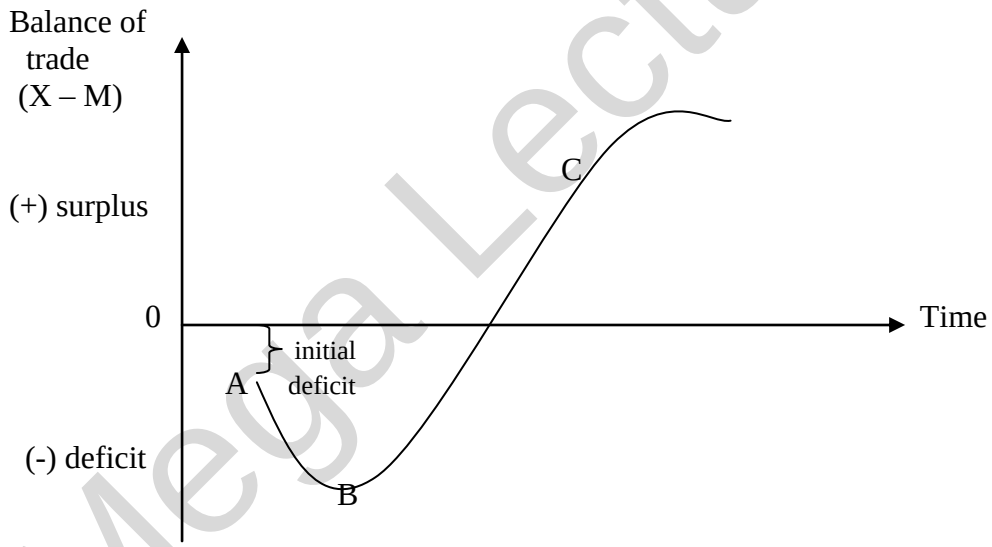
However, devaluation does not necessarily result in an improvement in the current account. The elasticities of the demand for exports and imports must be considered. Thus, for devaluation to be effective, the Marshall-Lerner condition must be satisfied. The condition suggests that devaluation will improve the balance of trade only if the sum of the elasticities of demand for exports and imports is greater than unity. This can be illustrated as follows:



Following the devaluation, the price of exports falls to $0P_1$, while quantity of exports rises to $0Q_1$. On the other hand, the price of imports increases to $0P_2$, but quantity of imports decreases to $0Q_2$. Given an elastic demand for exports and imports, devaluation will raise the total value of exports from $0P_XTQ$ to $0P_1SQ_1$, while the devaluation will reduce the total value of imports from $0P_MRQ$ to $0P_2NQ_2$.

THE J-CURVE:

However, the Marshall-Lerner condition can only be applied in the long-run. But the condition may not be satisfied in the short-run. In other words, it is expected that devaluation leads to an immediate deterioration in the balance of trade followed by a subsequent recovery. This is because in the short run, the price elasticity of demand for exports and imports is very low (inelastic). Local producers may not easily respond to the rising needs of foreigners following the devaluation. There is always a time lag. Besides, in the short run devaluation will cause inflationary pressure since the price of imports in terms of domestic currency rises. Thus, the devalued country is likely to see its total expenditure on imports increase at a faster rate than the increase in its total receipts from exports. Hence, devaluation may at first cause the trade balance to worsen before it improves. This delayed improvement in the trade balance following a devaluation is referred to as the J-curve effect. This is illustrated as follows:



Assuming that the country was initially in a trade deficit at point A. In the short run, devaluation causes the deficit to worsen to point B due to the inelasticities of demand for exports and imports. In the long run, devaluation is expected to move the balance of trade into surplus, say at point C.

MACRO-ECONOMIC IMPACT OF CHANGES IN EXCHANGE RATE:

Variations in exchange rate are a matter of great concern to every government. Changes in the exchange rate will affect the competitiveness of exports and imports, and investment in and out of the country. These, in turn, affect the level of income and employment. In fact, changes in the exchange rate, that is, appreciation and depreciation, have double-edged arguments. Hence, depending upon the country's position and priorities, a government may accept either an appreciation or depreciation of its currency, but at the expense of some other economic consequences. Indeed, it is often argued that exchange rate can be an instrument of government policy to achieve policy goals.

Beneficial outcomes of Appreciation:

An appreciation of a country's currency will tend to increase the price of its exports, making exports more expensive to foreigners but imports become cheaper to domestic customers as the price of imports fall. Hence, in certain circumstances, it is better for the country to face appreciation of its currency.

1. *Downward pressure on inflation (easing inflationary pressure):*

First and foremost, appreciation of a country's currency is likely to inhibit (prevent or moderate) inflation. A higher exchange rate will cause prices of finished imported products to be relatively low. These count in the measure of a country's inflation rate as these imported goods comprise a large proportion in a household basket of goods. The lower price of imported finished goods will also put pressure on domestic firms to keep their prices low in order to remain competitive. Besides, the low price of imported raw materials will keep cost of production down, wages claim may also be modified if prices of some consumer products fall (easing cost-push inflation). Moreover, the higher exchange rate will lead to a fall in aggregate demand due to a fall in exports and a rise in imports. The fall in aggregate demand then leads to a fall in inflation (easing demand-pull inflation). Hence, a currency's appreciation is one of the reasons for a low inflation rate.

2. *Improvement in terms of trade and living standards:*

Furthermore, an appreciation improves the country's terms of trade and living standard. Since export prices rise due to appreciation there is an improvement in the purchasing power of the country's currency. More imports can be purchased for a given quantity of exports the higher the exchange rate rises. For example, assume the initial exchange rate of £ is £1 = $1.5. Given a £10 export earnings, UK residents can only import 3 goods from US costing $5 each. However, if the £ appreciates to £1 = $2, then the UK residents can now import 4 US goods costing $5 each. Hence, the living standard for UK residents improves.

3. Encourage FDI:

All the more, appreciation may boost foreign confidence in the currency, and thus, encourages Foreign Direct Investment in the country. To the extent that appreciation is viewed as a sign of economic strength (consequence of a booming economy), the creditworthiness of the nation improves. Thus, appreciation encourages investor confidence ion the country's economy and as a result, the country can secure foreign investment. Hence, when foreign firms repatriate their profits to their home countries, they will be worth more in their domestic currency.

Drawbacks of the outcomes of Appreciation:

However, appreciation is also regarded as an evil to an economy. Reports are regularly made by some country leaders about their concern that their currencies are appreciating in value too much or too quickly. The drastic economic impacts on various stakeholders explain the sudden outcry against appreciation.

1. Worsen BOT:

The first negative impact of appreciation is that exports are hurt. A rise in exchange rate will lead to lower exports as they become less price competitive in the global markets. The volume of imports is likely to rise leading to higher import values. Assume an elastic price elasticity of demand for exports and imports, the balance of trade is likely to deteriorate.

2. Lower Economic Growth:

Besides, a higher exchange rate which discourages exports and encourages imports may lead to lower domestic investment. As a result, appreciation will dampen output in the short term, leading to a fall in aggregate demand or national income. The fall in national income will in turn cause a worsening in standard of living.

3. Unemployment:

Moreover, a rise in the exchange rate will tend to increase unemployment. This is because appreciation will make domestic firms less price competitive internationally. Domestic exporters will find their orders falling as foreign customers switch to other cheaper sources. In domestic markets, local firms will find that foreign imports are undercutting their prices and gaining market share. In general, firms will witness their profit margins erode as a result of the currency's appreciation. Eventually, these firms will be forced to lay off workers in order to survive, leading to a rise in unemployment.

Beneficial outcomes of Depreciation:

A fall in the exchange rate may have some desirable outcomes in the economy.

1. Improvement in BOT:

Depreciation makes the country's exports relatively less expensive for foreigners and it makes the foreign products relatively more expensive for domestic consumers, thus discouraging imports. This may help to increase the country's exports and decrease imports, and may therefore help to reduce current account deficit. But the outcome of depreciation on BOT depends on the PED of exports and imports.

- Marshall-Lerner + diagram

2. Economic Growth:

A fall in the exchange will lead to rising exports and falling imports. Thus, the trade balance improves causing a net injection of money in the circular flow. This injection, through the multiplier process, causes a more than proportionate increase in national income. The rise in income will in turn cause an improvement in living standard. Hence, depreciation of currency is more conducive to economic growth creating increase in income, consumption, investment and employment.

Drawbacks of the outcomes of Depreciation:

1. Inflationary pressure;

A significant danger is that by increasing the price of imports and stimulating greater demand for domestic products, depreciation can feed through a rise inflation in the economy. Prices of all imported products, both finished goods and raw materials, will cost more expensive. Besides, aggregate demand will rise as exports become more price competitive and imports less price competitive. As a result, the economy is likely to experience inflationary pressure (demand-pull).

2. Discourage FDI:

To the extent that depreciation is viewed as a sign of economic weakness, the creditworthiness of the nation may be jeopardized. Thus, depreciation may dampen investor confidence in the country's economy and hurt the country's ability to secure foreign investment.

3. Unfavourable Terms of Trade:

- Price of exports fall
- Insufficient export earnings
- Will be able to acquire less imports

POLICIES DESIGNED TO INFLUENCE THE EXCHANGE RATE:

Frequent variations in exchange rate might cause uncertainty for businesses which might curtail their trade and investment. If a country's currency is too high or too low, it poses a threat to the economy. Hence, due to the drawbacks of the outcome of appreciation and depreciation, there is a need for intervention in the FOREX market to stabilise the exchange rate. Various policies are designed to influence the value the exchange rate.

1. Exchange rate policy: The policy tends to administered by the central bank of a country which controls exchange rate and its gold and foreign currency reserves. There are two main ways in which central banks influence the value of their currency.

(a) Interest rates: If the value of a country's currency is too weak or is falling too rapidly, the central bank has to do with an interest rate hike campaign. Increasing domestic interest rates is likely to recover the value of the currency reversing the decline. This is because higher interest rates, say, in UK, makes depositing money in UK more attractive. Savings are attracted into the UK from overseas, whilst UK firms and institutions are less attracted to sending their savings abroad. Hence, the demand for £ is likely to increase, shown by a rightward shift in the demand curve for £, whilst the supply decreases, shown by a leftward shift in the supply curve of £. This results in a new higher equilibrium price.

(b) Using reserves: Central banks have traditionally kept gold and foreign currency reserves. These holdings can be used to alter the value of a currency. If, say, the Bank of England wants to increase the value of the £, it would sell some its foreign currency reserves in exchange for £ (buys £). This will increase the demand for £ and hence raise its price. If it wants to reduce the value of the £, it will sell £ for foreign currency, increasing supply and hence reducing the equilibrium price.

2. Borrowing from abroad: The government can negotiate a foreign currency loan from other countries or from other financial institutions such as IMF. It can then use these moneys to buy £ (domestic currency) on the FOREX market, thus again shifting the demand for £ back to the right.

3. Deflationary / Inflationary policy: Assume the country's currency is too weak. The government may resort to a deflationary fiscal or monetary polices or both. Deflationary fiscal policy will involve raising taxes and / or reducing government expenditure. On the other hand, deflationary monetary will involve reducing money supply and raising interest rates. Hence, the government has to curtail aggregate demand in order to raise the value of its currency. The reduction in aggregate demand will work in two ways:

- It will reduce the level of consumer spending. This will directly cuts imports. The supply of domestic currency will thus fall, allowing the currency to gain in value.
- It will reduce the rate of inflation. This will make the domestic goods more competitive abroad, thus increasing the demand for the domestic currency. It will also cut back on imports as local consumers switch to the now more competitive home-produced goods. The supply of domestic currency falls.

4. Supply-side policies: This is where the government attempts to increase the long term competitiveness of the locally manufactured goods by encouraging reductions in the costs of production and / or improvement in the quality of the home-produced goods. For example, the government may attempt to improve the quantity and quality of training and research and development.

5. Controls on imports and / or foreign exchange dealing: This is where the government restricts the outflow of money, either by restricting people's access to foreign exchange, or by the use of tariffs and quotas.

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**********END OF CORE SYLLABUS**********

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