EXCHANGE RATE AND ITS ECONOMIC EFFECTS

Direct Quote → 1$ = ₹83 ↓ Depreciate
[European currency Quotation] 1$ = ₹85 ↓ Export ↑

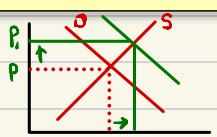
THE EXCHANGE RATE

Exchange rate or Foreign Exchange rate is the rate at which the currency of one country is exchanged for the currency of another country. Indirect Quote → 1₹ = $0.012 [American currency Quot]

■ A foreign currency transaction is a transaction that is denominated in or requires settlement in a foreign currency, including transactions arising when an enterprise either:

(a) buys or sells goods or services whose price is denominated in a foreign currency.
(b) borrows or lends funds when the amounts payable or receivable are denominated in a foreign currency.
(c) becomes a party to an unperformed forward exchange contract; or
(d) otherwise acquires or disposes of assets, or incurs or settles liabilities, denominated in a foreign currency.

THE EXCHANGE RATE REGIMES



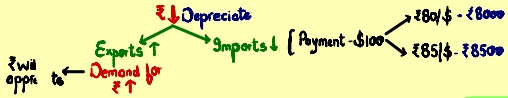
■ An exchange rate regime is the system by which a country manages its currency with respect to foreign currencies. It refers to the method by which the value of the domestic currency in terms of foreign currencies is determined. There are two major types of exchange rate regimes at the extreme ends; namely:

1) Fixed exchange rate regime
(also called a pegged exchanged rate)

2) Floating exchange rate regime
(also called a flexible exchange rate)
Free
Managed

Free-floating exchange rate system

- Governments and central banks do not participate in the market for foreign exchange.
- The relationship between governments and central banks on the one hand and currency markets on the other is much the same as the typical relationship between these institutions and stock markets. Governments may regulate stock markets to prevent fraud, but stock values themselves are left to float in the market.



Advantages

- A free-floating system has the advantage of being self-regulating. There is no need for government intervention if the exchange rate is left to the market.
- Market forces also restrain large swings in demand or supply.

📝Suppose, for example, that a dramatic shift in world preferences led to a sharply increased demand for goods and services produced in Canada.
This would increase the demand for Canadian dollars, raise Canada's exchange rate, and make Canadian goods and services more expensive for foreigners to buy. Some of the impact of the swing in foreign demand would thus be absorbed in a rising exchange rate.

- In effect, a free- floating exchange rate acts as a buffer to insulate an economy from the impact of international events.
- A floating exchange rate has the greatest advantage of allowing a Central bank and/or government to pursue its own independent monetary policy.
- Floating exchange rate regime allows exchange rate to be used as a policy tool: for example, policy-makers can adjust the nominal exchange rate to influence the competitiveness of the tradable goods sector.
- As there is no obligation or necessity to intervene in the currency markets, the central bank is not required to maintain a huge foreign exchange reserves.

👉Basically, the free floating or flexible exchange rate regime is argued to be efficient and highly transparent as the exchange rate is free to fluctuate in response to the supply of and demand for foreign exchange in the market and clears the imbalances in the foreign exchange market without any control of the central bank or the monetary authority

Disadvantages

- The primary difficulty with free-floating exchange rates lies in their unpredictability. Contracts between buyers and sellers in different countries must not only reckon with possible changes in prices and other factors during the lives of those contracts, they must also consider the possibility of exchange rate changes.
- An agreement by an Indian distributor to purchase a certain quantity of US goods each year, for example, will be affected by the possibility that the exchange rate between the Indian rupee and the U.S. dollar will change while the contract is in effect.
- Fluctuating exchange rates make international transactions riskier and thus increase the cost of doing business with other countries.

- The greatest disadvantage of a flexible exchange rate regime is that volatile exchange rates generate a lot of uncertainties in relation to international transactions and add a risk premium to the costs of goods and assets traded across borders.

Buy- ₹ Supply↓ - Price↑ - Currency Appreciate
Sell- ₹Supply↑ - Price↓ - Current Depreciate

Managed Float Systems

Governments and central banks often seek to increase or decrease their exchange rates by buying or selling their own currencies.

Exchange rates are still free to float, but governments try to influence their values.

Government or central bank participation in a floating exchange rate system is called a managed float.

- Countries that have a floating exchange rate system intervene from time to time in the currency market in an effort to raise or lower the price of their own currency.
- Typically, the purpose of such intervention is to prevent sudden large swings in the value of a nation's currency.
- Such intervention is likely to have only a small impact, if any, on exchange rates.

Still, governments or central banks can sometimes influence their exchange rates.

How Government Intervenes?

P↑ → Currency Demand ↑ → Exports↓

- Suppose the price of a country's currency is rising very rapidly.

The country's government or central bank might seek to hold off further increases in order to prevent a major reduction in net exports.

- Fixed

An announcement that a further increase in its exchange rate is unacceptable, followed by sales of that country's currency by the central bank in order to bring its exchange rate down, can sometimes convince other participants in the currency market that the exchange rate will not rise further.

That change in expectations could reduce demand for and increase the supply of the currency, thus achieving the goal of holding the exchange rate down.

Fixed Exchange Rates

■ In a fixed exchange rate system, the exchange rate between two currencies is set by government policy.

Advantages

(i) A fixed exchange rate avoids currency fluctuations and eliminates exchange rate risks and transaction costs that can impede international flow of trade and investments. International trade and investment are less risky under fixed rate regime as profits are not affected by the exchange rate fluctuations.

(ii) A fixed exchange rate can thus, greatly enhance international trade and investment.

(iii) A reduction in speculation on exchange rate movements if everyone believes that exchange rates will not change.

(iv) A fixed exchange rate system imposes discipline on a country's monetary authority and therefore is more likely to generate lower levels of inflation.

(v) The government can encourage greater trade and investment as stability encourages investment.

(vi) Exchange rate peg can also enhance the credibility of the country's monetary-policy.

■ However, in the fixed or managed floating exchange rate regimes (where the market forces are allowed to determine the exchange rate within a band), the central bank is required to stand ready to intervene in the foreign exchange market and, also to maintain an adequate amount of foreign exchange reserves for this purpose.

📌 In short, a fixed rate brings in more currency and monetary stability and credibility; but it lacks flexibility. On the contrary, a floating rate has greater policy flexibility; but less stability.

1$ = ₹80 ⋯⋯→ 1$ = ₹90

↓ Devalue – 1$ = ₹90

NOMINAL VERSUS REAL EXCHANGE RATES

1$ = ₹85 - NER

Nominal exchange rate - refers to the rate at which a person can trade the currency of one country for the currency of another country.

- For any country, there are many nominal exchange rates because its currency can be used to purchase many foreign currencies.
- Nominal Exchange Rates can be used to find the domestic price of foreign goods.
- However, trade flows are affected not by nominal exchange rates, but instead, by real exchange rates. The person or firm buying another currency is interested in what can be bought with it.

$100 x 85 = ₹8500

Real exchange rate is the rate at which a person can trade the goods and services of one country for the goods and services of another.

- It describes 'how many' of a good or service in one country can be traded for 'one' of that good or service in a foreign country.
- A country's real exchange rate is a key determinant of its net exports of goods and services.
- For calculating real exchange rate, in the case of trade in a single good, we must first use the nominal exchange rate to convert the prices into a common currency. The real exchange rate (RER) between two currencies is the product of the nominal exchange rate and the ratio of prices between the two countries. It is calculated as:

$$\text{Real exchange Rate} = (\text{Nominal exchange Rate}) \times \frac{\text{Foreign price}}{\text{Domestic price}}$$

When studying the economy as a whole, we use price indices which measure the price of a basket of goods and services. Real exchange rate will then be:

$$\text{Real exchange Rate} = (\text{Nominal exchange Rate}) \times \frac{\text{Foreign price index}}{\text{Domestic price index}}$$

1$ = ₹85

Watch

India

₹34000

USA

$800

₹68000

2 Watch

1 watch in USA = 2 watches in India

$$RER = NER \times \frac{\text{Foreign price}}{\text{Domestic price}}$$

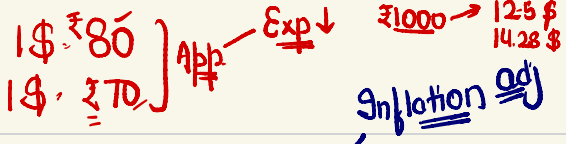
$$RER = 85 \times \frac{800}{34000} \Rightarrow 2$$

₹ appreciates ⇒ 1$ = ₹80

$$RER = 80 \times \frac{800}{34000} = 1.88$$

Inc. in RER

- Exports ↓
- Imports ↑



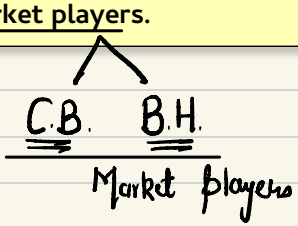
Another exchange rate concept, the Real Effective Exchange Rate (REER) is the nominal effective exchange rate (a measure of the value of a domestic currency against a weighted average of various foreign currencies) divided by a price deflator or index of costs.
An increase in REER implies that exports become more expensive and imports become cheaper; therefore, an increase in REER indicates a loss in trade competitiveness.

THE FOREIGN EXCHANGE MARKET

- Forex market participants mainly are commercial banks executing orders from exporters, importers, investment institutions, insurance and retirement funds, hedgers, and private investors. Commercial banks also perform trading operations in their own interests and at their own expense.

- Brokerage houses are also playing an important role as contractors between large numbers of banks, funds, commission houses, dealing centers, etc.
Commercial Banks and Brokerage Houses do not only execute currency exchange operations at prices set by other active players but come out with their own prices as well, actively influencing the price formation process and the market life.
That is why they are called market makers.

- In contrast to the above passive players cannot set their own quotations and make trades at quotations offered by active market players.



In the foreign exchange market, there are two types of transactions:
(i) current transactions which are carried out in the spot market and the exchange involves immediate delivery, and
(ii) future transactions wherein contracts are agreed upon to buy or sell currencies for future delivery which are carried out in forward and/or futures markets

- Exchange rates prevailing for spot trading (for which settlement by and large takes two days) are called spot exchange rates.
- The exchange rates quoted in foreign exchange transactions that specify a future date are called forward exchange rates.
- The currency forward contracts are quoted just like spot rate; however, the actual delivery of currencies takes place at the specified time in future.
- A forward premium is said to occur when the forward exchange rate is more than a spot exchange rates. 1$ = ₹83 < 1$ = ₹85
- On the contrary, if the forward trade is quoted at a lower rate than the spot rate, then there is a forward discount.

- While a foreign exchange transaction can involve any two currencies, most transactions involve exchanges of foreign currencies for the U.S. dollars even when it is not the national currency of either the importer or the exporter.

On account of its critical role in the forex markets, the dollar is often called a 'vehicle currency'. – US $

DETERMINATION OF NOMINAL EXCHANGE RATE

■ The key framework for analysing prices is the operation of forces of supply and demand in markets.

■ Individuals, institutions and governments participate in the foreign exchange market for a number of reasons.

👉On the demand side, people desire foreign currency to:

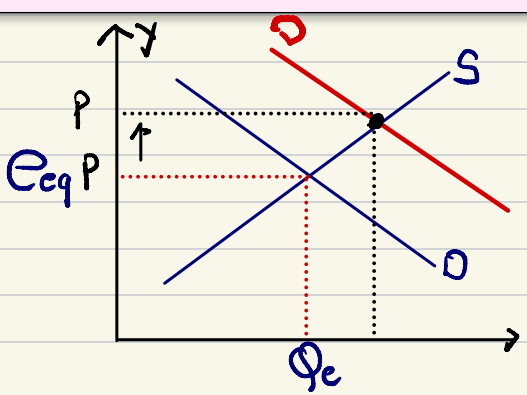
- purchase goods and services from another country
- for unilateral transfers such as gifts, awards, grants, donations or endowments
- to make investment abroad
- to purchase financial assets, stocks or bonds abroad
- to open a foreign bank account
- to acquire direct ownership of real capital, and
- for speculation and hedging activities related to risk-taking or risk-avoidance activity

Tangible Assets

■ The participants on the supply side operate for similar reasons. Thus, the supply of foreign currency to the home country results from:

- purchases of home exports,
- unilateral transfers to home country,
- investment income payments,
- foreign direct investments and portfolio investments,
- placement of bank deposits and speculation.

■ Similar to any standard market, the exchange market also faces a downward-sloping demand curve and an upward- sloping supply curve.



The equilibrium rate of exchange is determined by the interaction of the supply and demand for a particular foreign currency.

CHANGES IN EXCHANGE RATES

- Changes in exchange rates portray depreciation or appreciation of one currency.

- **Currency appreciates** when its value increases with respect to the value of another currency or a basket of other currencies. 1$ - ₹80 → 1$ - ₹70

- On the contrary, **currency depreciates** when its value falls with respect to the value of another currency or a basket of other currencies.

For example, the Rupee dollar exchange rate in the month of January is $1 =Rs. 70. and, we find that in the month of April it is $1 =Rs. 75. What does this indicate?

👉In April, you will have to exchange a greater amount of Indian Rupees (Rs. 75) to get the same 1 unit of US dollar. As such, the value of the Indian Rupee has gone down or Indian Rupee has depreciated in its value. Rupee depreciation here means that the rupee has become less valuable with respect to the U.S. dollar.

👉Simultaneously, if you look at the value of dollar in terms of Rupees, you find that the value of the US dollar has increased in terms of the Indian Rupee. One dollar will now fetch Rs. 75 instead of Rs. 70 earlier. This is called appreciation of the US dollar.

1$ - ₹70 ⟶ 1$ - ₹75

To put it more clearly:

- Home-currency depreciation (which is the same as foreign-currency appreciation) takes place when there is an increase in the home currency price of the foreign currency (or, alternatively, a decrease in the foreign currency price of the home currency). The home currency thus becomes relatively less valuable.

- Home-currency appreciation (or foreign-currency depreciation) takes place when there is a decrease in the home currency price of foreign currency (or alternatively, an increase in the foreign currency price of home currency). The ~~home currency~~ thus becomes relatively more valuable.

1$ - ₹80 ⟶ 1$ - ₹70 Reval.

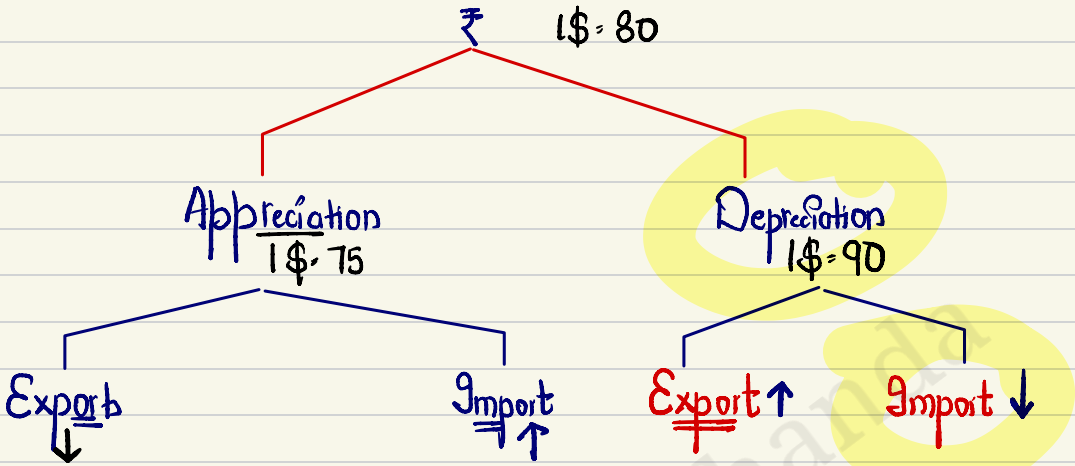
DEVALUATION (REVALUATION) VS DEPRECIATION (APPRECIATION)

- Devaluation is a deliberate downward adjustment in the value of a country's currency relative to another country's currency or group of currencies or standard.
- It is a monetary policy tool used by countries that have a fixed exchange rate or nearly fixed exchange rate regime and involves a discrete official reduction in the otherwise fixed par value of a currency.
- The monetary authority (RBI) formally sets a new fixed rate with respect to a foreign reference currency or currency basket.

👉In contrast, depreciation is a decrease in a currency's value (relative to other major currency benchmarks) due to market forces of demand and supply under a floating exchange rate and not due to any government or central bank policy actions.

- Revaluation is the opposite of devaluation and the term refers to an increase of the otherwise fixed par value of a nation's currency.

👉Appreciation, on the other hand, is an increase in a currency's value (relative to other major currencies) due to market forces of demand and supply under a floating exchange rate and not due to any government or central bank policy interventions.



IMPACTS OF EXCHANGE RATE FLUCTUATIONS ON DOMESTIC ECONOMY

The developments in the foreign exchange markets affect the domestic economy both directly and indirectly. The direct impact of fluctuations in rates is initially felt by economic agents who are directly involved in international trade or international finance.

(i) Fluctuations in the exchange rate have a significant role in determining the nature and extent of a country's trade.

(ii) Fluctuations in the exchange rate affect the economy by changing the relative prices of domestically-produced and foreign-produced goods and services.

👉An appreciation of a country's currency raises the relative price of its exports and lowers the relative price of its imports.

👉Depreciation lowers the relative price of a country's exports and raises the relative price of its imports.

(iii) Exchange rate changes affect economic activity in the domestic economy.
👉A depreciation of domestic currency primarily increases the price of foreign goods relative to goods produced in the home country and diverts spending from foreign goods to domestic goods.

👉Increased demand, both for domestic import-competing goods and for exports, encourages economic activity and creates output expansion.
Overall, the outcome of exchange rate depreciation is an expansionary impact on the economy at an aggregate level.

(iv) For an economy where exports are significantly high, a depreciated currency would mean a lot of gain. In addition, if exports originate from labour-intensive industries, increased export prices will have positive effect on employment and potentially on wages.

(v) Depreciation is also likely to add to consumer price inflation in the short run, directly through its effect on prices of imported consumer goods and also due to increased demand for domestic goods.

👉The impact will be greater if the composition of domestic consumption baskets consists more of imported goods.

👉Indirectly, cost push inflation may result through possible escalation in the cost of imported inputs.

(vi) The fiscal health of a country whose currency depreciates is likely to be affected with rising export earnings and import payments and consequent impact on current account balance. A widening current account deficit is a danger signal as far as growth prospects of the overall economy is concerned. ↳ Payment > Receipt

👉If export earnings rise faster than the imports spending then current account balance will improve.

(viii) Companies that have borrowed in foreign exchange but have been careless and did not sufficiently hedge these loans against foreign exchange risks, would also be negatively impacted as they would require more domestic currency to repay their loans.

👉A depreciated domestic currency would also increase their debt burden and lower their profits and impact their balance sheets adversely.

These would signal investors who will be discouraged from investing in such companies.

(ix) Exchange rate fluctuations make financial forecasting more difficult for firms and larger amounts will have to be earmarked for insuring against exchange rate risks through hedging.

(x) Investors who have purchased a foreign asset, or the corporation which floats a foreign debt, will find themselves facing foreign exchange risk.

👉Exchange rate movements have become the single most important factor affecting the value of investments at international level.

(xi) Foreign investors are likely to be indecisive or highly cautious before investing in a country that has high exchange rate volatility.

AD = C + I + G + (X - M)

An appreciation will have the following consequences on real economy:

(i) An appreciation of currency raises the price of exports and, therefore, the quantity of exports would fall. Since imports become cheaper, we may expect an increase in the quantity of imports. Combining these two effects together, the domestic aggregate demand falls and, therefore, economic growth is likely to be negatively impacted.

(ii) If appreciation sets in during the recessionary phase, the result would be a further fall in aggregate demand and higher levels of unemployment.

👉If the economy is facing a boom, an appreciation of domestic currency would trim down inflationary pressures and soften the rate of growth of the economy.

(iii) An appreciation may cause reduction in the levels of inflation because imports are cheaper. Lower price of imported capital goods, components and raw materials lead to decrease in cost of production which reflects on decrease in prices.

👉Additionally, decrease in aggregate demand tends to lower demand pull inflation. Living standards of people are likely to improve due to availability of cheaper consumer goods.

(iv) With increasing export prices, the competitiveness of domestic industry is adversely affected and therefore, firms have greater incentives to introduce technological innovations and capital-intensive production to cut costs to remain competitive.

(v) Increasing imports and declining exports are liable to cause larger deficits and worsen the current account.

Exp > Rec

👉However, the impact of appreciation on current account depends upon the elasticity of demand for exports and imports.

📌Relatively inelastic demand for imports and exports may lead to an improvement in the current account position.

📌Higher the price elasticity of demand for exports, greater would be the fall in demand and higher will be the fall in the aggregate value of exports. This will adversely affect the current account balance.

(vi) Loss of competitiveness will be insignificant if currency appreciation is because of strong fundamentals of the economy.