

Exchange Rates

An exchange rate is the price of one currency in terms of another. For example, £1 = \$1.15 means £1 can be exchanged for \$1.15.

Exchange rates show the purchasing power of a currency when buying goods and services from abroad.

Currencies are bought and sold on the foreign exchange market (forex). There are three main exchange rate systems: floating, fixed and managed.

Types of Exchange Rate System

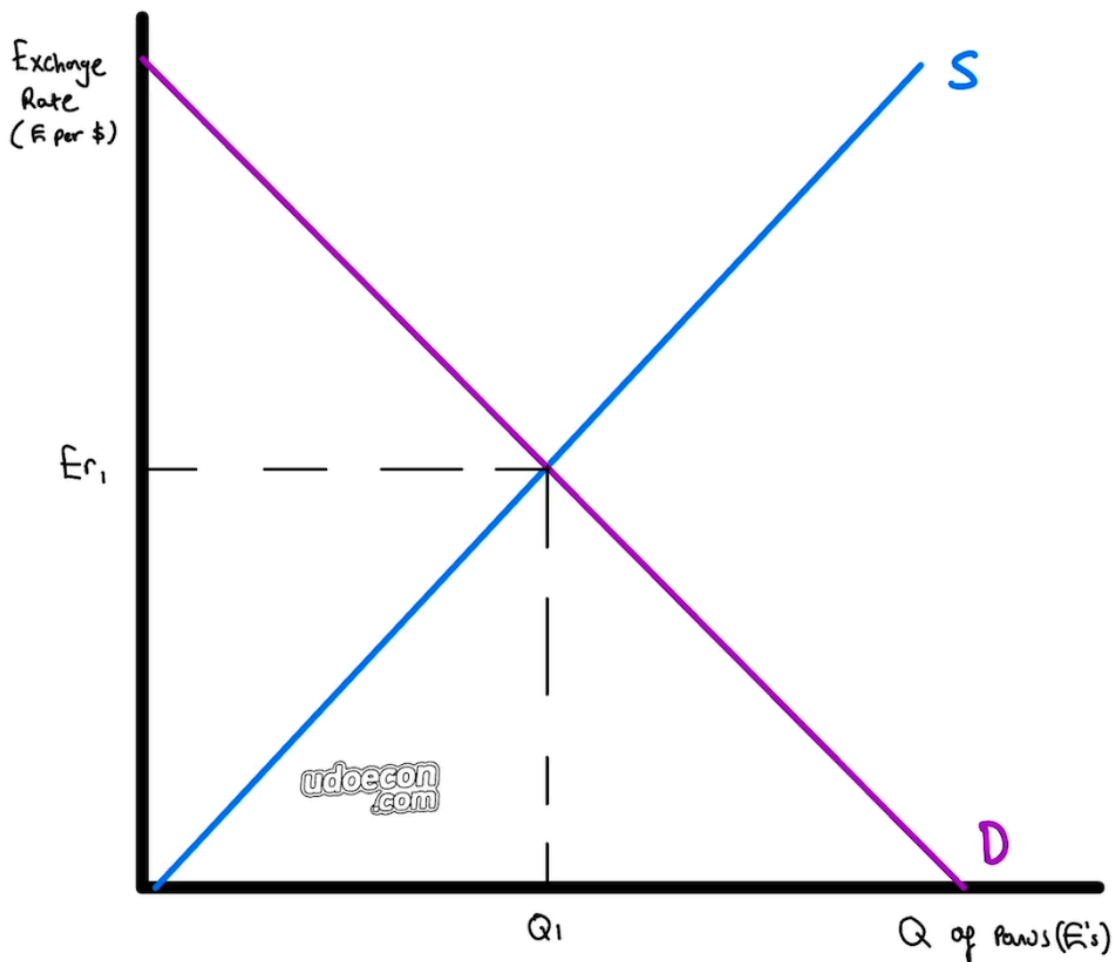
Floating Exchange Rate

A floating exchange rate is determined by the market forces of supply and demand for the currency.

Demand for currency increases → shifts demand of money out → value of the currency rises → currency appreciates.

Supply of currency increases → shifts supply of money out → value of the currency falls → currency depreciates.

The UK and US use floating exchange rate systems.



Fixed Exchange Rate

A fixed exchange rate is where the value of a currency is fixed or pegged against another currency. The government or central bank maintains the currency at the chosen exchange rate.

For example, Hong Kong has pegs its currency to the US dollar.

Under a fixed exchange rate:

- Devaluation → deliberate decrease in the fixed value of the currency.
- Revaluation → deliberate increase in the fixed value of the currency.

Managed Exchange Rate

A managed exchange rate combines features of floating and fixed exchange rates. The currency is allowed to fluctuate according to market forces, but the central bank intervenes to keep it within a desired range.

Currency becomes too weak → central bank buys its own currency using foreign currency reserves → demand for domestic currency increases → currency appreciates.

Currency becomes too strong → central bank sells its own currency → supply of domestic currency increases → currency depreciates.

For example the Singapore dollar is an example of a managed exchange rate

Changes in the Exchange Rate

The terminology used for a change in the value of a currency depends on the exchange rate system.

Floating Exchange Rate

An appreciation is a market driven increase in the value of a currency.

A depreciation is a market driven decrease in the value of a currency.

Both occur because of changes in the supply and demand for the currency.

Fixed Exchange Rate

A revaluation is a deliberate increase in the fixed value of a currency by the government or central bank.

A devaluation is a deliberate decrease in the fixed value of a currency by the government or central bank.

Factors Affecting Exchange Rates

Relative Interest Rates

Interest rates affect international flows of financial capital, particularly hot money.

UK interest rates rise relative to other countries → returns on UK savings and financial assets become more attractive → hot money flows into the UK → foreign investors demand pounds to purchase UK assets → demand for £ increases → £ appreciates.

UK interest rates fall relative to other countries → UK assets become less attractive → hot money flows out of the UK → investors sell pounds for foreign currencies → supply of £ increases → £ depreciates.

The key factor is relative interest rates. If interest rates rise by similar amounts across countries, there may be little change in the relative return available to investors.

Relative Inflation Rates

Higher inflation in the UK relative to other countries makes UK goods and services relatively more expensive.

Higher relative inflation → UK exports become less internationally competitive → demand for UK exports falls → foreigners demand fewer pounds → demand for £ falls → £ depreciates.

Relative inflation matters. High global inflation alone does not necessarily affect the exchange rate if inflation is rising by similar amounts across countries.

Productivity

Higher productivity growth can reduce firms unit costs and improve international competitiveness.

Higher relative productivity → lower production costs → UK exports become more competitive → export demand increases → demand for £ increases → £ appreciates.

Speculation

Speculation occurs when traders buy and sell currencies based on expectations about future exchange rates.

Traders expect £ to appreciate → buy £ now hoping to sell it later for a profit → current demand for £ increases → £ may appreciate.

Therefore, expectations about a future appreciation can contribute to an appreciation today.

Quantitative Easing

Quantitative easing (QE) increases the money supply, with newly created money used to purchase assets such as government bonds.

Foreign investors sell UK government bonds to the central bank → receive pounds → exchange pounds into their domestic currencies → supply of £ on the forex market increases → £ depreciates.

Government Intervention in Currency Markets

Governments and central banks may intervene under fixed or managed exchange rate systems to influence the value of their currency.

There are two main methods of intervention: buying and selling currencies, and changing interest rates.

Buying and Selling Currency

A central bank can use its foreign currency reserves to influence the supply and demand for its currency.

For example China has \$3.4 trillion in foreign exchange reserves (the world's largest) to maintain control over the value of the yuan .

To increase the value of the currency:

For example, imagine **China wants to increase the value of the Chinese yuan (¥) against the US dollar (\$)**.

China's central bank sells some of its US dollar reserves and uses those dollars to buy yuan:

China sells \$ + buys ¥ → demand for ¥ increases → yuan appreciates against the dollar.

If **China wants to decrease the value of the yuan**, it does the opposite. It sells yuan and buys US dollars:

China sells ¥ + buys \$ → supply of ¥ increases on the foreign exchange market → yuan depreciates against the dollar.

Changing Interest Rates

A central bank can also change interest rates to influence international capital flows.

Higher interest rates → higher returns on domestic financial assets → hot money inflows → demand for domestic currency increases → currency appreciates.

Lower interest rates → lower relative returns → hot money outflows → supply of domestic currency increases → currency depreciates.

Effects of a Depreciation or Devaluation

A depreciation or devaluation means the currency becomes weaker.

Weak currency → exports cheaper + imports dearer.

The main understated effect is on living standards. For example China maintains a relatively weak Yuan to keep Chinese exports competitive and cheaper for foreign consumers. . But this disproportionately affects Chinese households as it massively reduces their purchasing power to import , meaning domestic household purchasing power is severely squeezed evidenced by Chinese consumer spending accounting for just **~40% of GDP** compared to the **63% global average**.

Net Exports and the Current Account

A weaker pound makes UK exports cheaper to foreign consumers and imports more expensive to UK consumers.

Depreciation → exports cheaper + imports dearer → export demand increases + import demand decreases → net exports ($X - M$) may increase → AD increases → real GDP increases.

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Marshall–Lerner Condition

The Marshall Lerner condition states that a depreciation will improve the current account if the combined PED of exports (PED_x) and imports (PED_m) is greater than 1.

J-Curve Effect

The J-curve explains why a depreciation may worsen the current account in the short run before improving it in the long run.

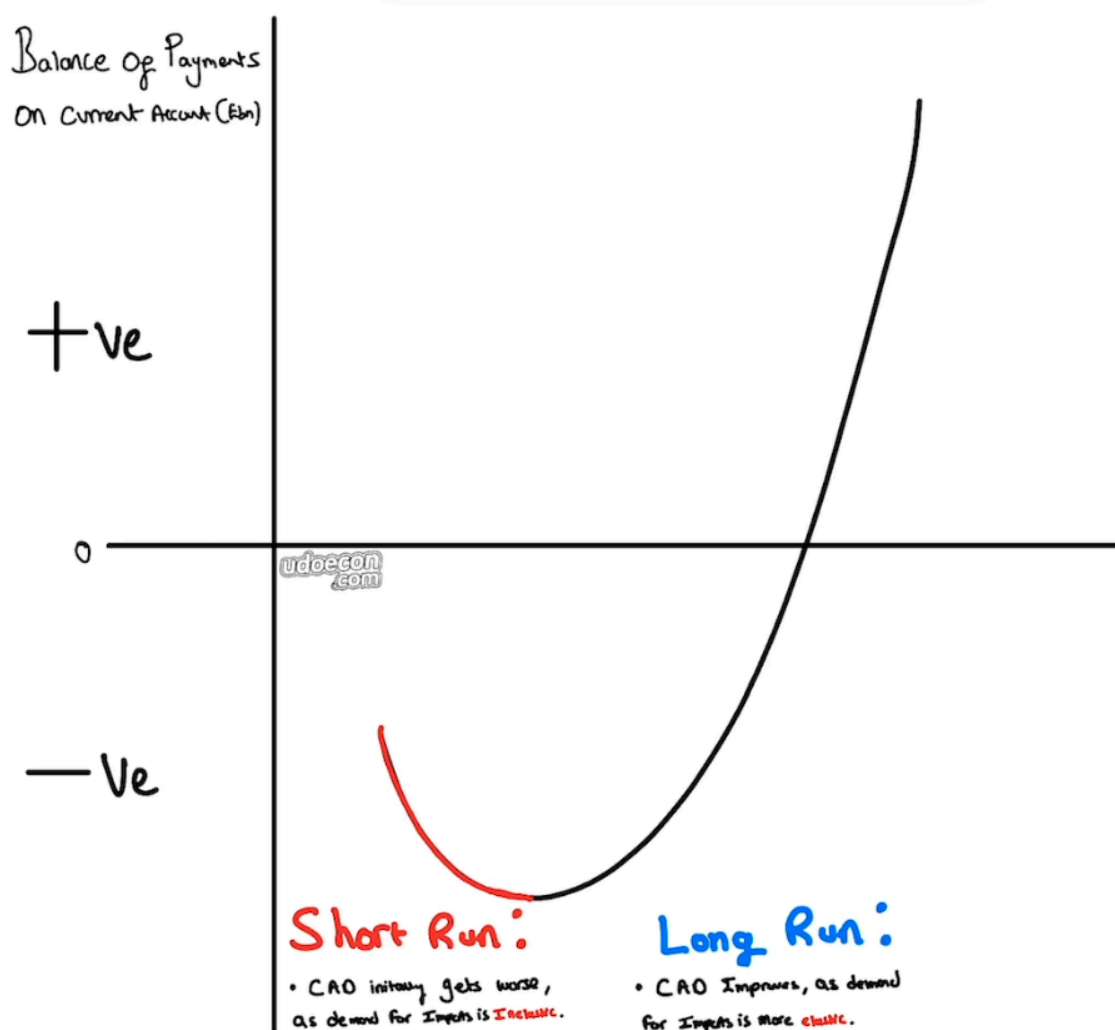
In the short run, consumers and firms may be tied into contracts therefore unable to immediately change suppliers meaning despite imports being more expensive they demand the same quantity thus import expenditure increasing in the short run initially worsening the current account deficit .

Depreciation → imports become more expensive → quantity demanded changes little because demand is initially inelastic → import expenditure rises → current account may worsen.

In the long run, consumers and firms have more time to respond to price changes and find substitutes thus switch from costly imports to cheaper substitutes e.g domestically produced goods thus meaning less import expenditure improving current account deficit .

Depreciation → exports remain relatively cheaper + imports remain relatively expensive → consumers and firms switch towards cheaper alternatives → export volumes rise + import volumes fall → Marshall Lerner condition is satisfied → current account improves.

This creates the J shaped pattern where net trade initially falls following a depreciation before recovering and eventually rising.



Economic Growth

If a depreciation increases net exports, aggregate demand increases.

Depreciation → exports cheaper + imports dearer → net exports increase → AD increases → real GDP increases → economic growth.

Inflation

A depreciation can create both cost push and demand pull inflation.

Depreciation → imported inputs become more expensive → firms' costs of production increase → SRAS shifts left → price level rises → cost-push inflation.

Depreciation → exports cheaper + imports dearer → net exports increase → AD increases → upward pressure on the price level → demand-pull inflation.

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Unemployment

If depreciation increases demand for exports, UK firms may need to increase production.

Depreciation → export demand increases → firms increase output → derived demand for labour increases → unemployment may fall.

Foreign Direct Investment

A depreciation can make domestic assets cheaper for foreign investors.

Depreciation → foreign currencies have greater purchasing power in the UK → cost of investing in UK assets falls for foreign firms → inward FDI may increase.

Higher FDI → investment increases → AD increases in the short run + productive capacity increases → LRAS may increase in the long run.