

OCR Economics A-level

Macroeconomics

Topic 4: The Global Context

4.2 Exchange Rates

Notes

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Definitions and measurement of exchange rates

Nominal exchange rate: This is the weight of one currency relative to another, without being adjusted for inflation.

Real exchange rate: This is when the exchange rate is adjusted for inflation to give a more accurate reflection of purchasing power.

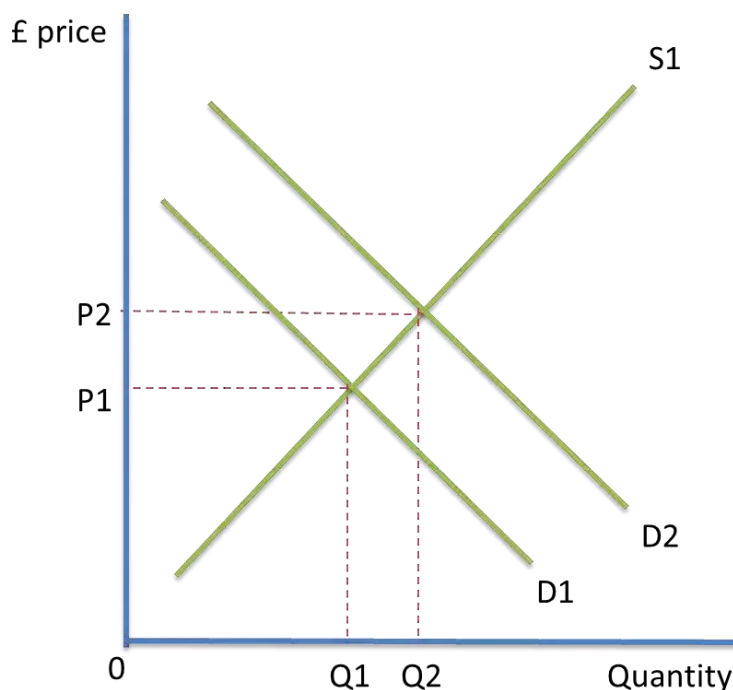
Trade-weighted exchange rate: This is the weighted average of the exchange rate, of the domestic currency relative to foreign currencies, where the weight of each currency is equal to the share in trade. The more the domestic country trades with a foreign country, the greater the weight of the currency.



The determination of exchange rates

Floating:

The value of the exchange rate in a floating system is determined by the forces of supply and demand.

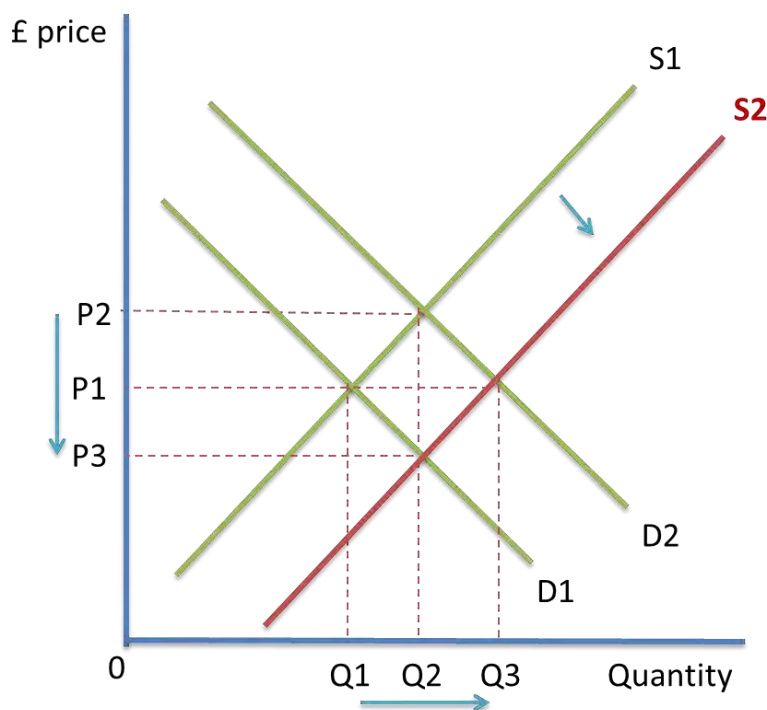


In a floating exchange rate system, the market equilibrium price is at P1. When demand increases from D1 to D2, the exchange rate appreciates to P2.



Fixed:

A fixed exchange rate has a value determined by the government compared to other currencies.



In a fixed exchange rate system, the supply of the currency can be manipulated by the central bank, which can buy or sell the currency to change the price to where they want. In the diagram, the supply has been increased (S1 to S2) by selling the currency so more is on the market (Q1 to Q3). The currency depreciates as a result ($P2 \rightarrow P3$), which makes exports more competitive.

Different measures of exchange rates

- **Bilateral**

The market exchange rate is bilateral, since the value of two currencies is compared to each other. It is the value of one currency expressed in another currency. It does not compare living standards between countries, but it can help holidaymakers see how far their currency goes in their destination country.

- **Effective**

The effective exchange rate describes the strength of one currency to a basket of other currencies using an index.



- **Nominal**

Nominal exchange rates are not adjusted for inflation and are the price of one currency in terms of another currency.

- **Real**

The real exchange rate is adjusted for domestic prices, so it takes inflation into account.

Depreciation and appreciation

Depreciation: when the value of a currency falls relative to another currency, in a floating exchange rate system.

Appreciation: when the value of a currency increases. Each pound will buy more dollars, for example.

Devaluation: This is when the value of a currency is officially lowered in a fixed exchange rate system.

Revaluation: This is when the currency's value is adjusted relative to a baseline, such as the price of gold, another currency or wage rates.



The causes of exchange rate changes

Inflation:

A lower inflation rate means exports are relatively more competitive. This increases demand for the currency. This causes the currency to appreciate.

Interest rates:

An increase in interest rates, relative to other countries, makes it more attractive to invest funds in the country because the rate of return on investment is higher. This increases demand for the currency, causing an appreciation. This is known as **hot money**.

Speculation:

If speculators think a currency will appreciate in the future, demand will increase in the present, since they believe a profit can be made by selling the currency in the future. This can cause an increase in the value of the currency.

Other currencies:

If markets are concerned about major economies, such as the EU, the currency might rise. This happened with the Swiss Franc in 2010 when markets were worried about the EU economy.

Government finances:

A government with a high level of debt is at risk of defaulting, which could cause the currency to depreciate. This is since investors start to lose confidence in the economy, so they sell their holdings of bonds.

Balance of payments:

When the value of imports exceeds exports, there is a current account deficit. Countries which struggle to finance this, such as through attracting capital inflows, have currencies which depreciate as a result.

International competitiveness:

An increase in competitiveness increases demand for exports, which increases demand for the currency. This causes an appreciation of the currency.



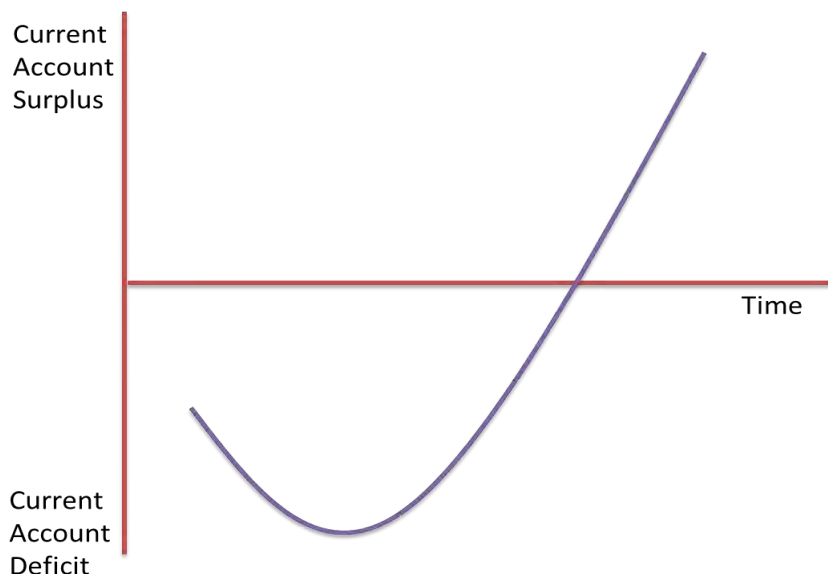
Government intervention

Governments might try and influence their currency, such as by maintaining a fixed exchange rate. For example, China has previously kept the Yuan undervalued by buying US dollar assets to make their exports seem relatively cheaper.

The consequences of exchange rate changes

Marshall-Lerner condition and the J-curve effect

The Marshall-Lerner condition states that a devaluation in a currency only improves the balance of trade if the absolute sum of long run export and import demand elasticities is greater than or equal to 1.



The J-curve effect occurs when a currency is devalued. Since devaluing the currency causes imports to become more expensive, at first the total value of imports increases, which worsens the deficit. Eventually, the value of exports decreases, which leads to a reduction in the trade deficit.

When the currency is devalued, there may be a time lag in changing the volume of exports and imports. This could be due to trade contracts and the price inelasticity of demand for imports in the short run, whilst consumers search for alternatives. In the long run, consumers might start purchasing domestic products, for example, which helps improve the deficit.

The effect of exchange rates on AD

Exchange rate affects AD because they affect the price of exports and imports. If the exchange rate appreciates, AD is likely to fall since imports become cheaper and exports become more expensive.

The effects of exchange rates on imports and exports can be remembered using the acronym SPICED:



Strong
Pound
Imports
Cheap
Exports
Dear

The effect of exchange rates on businesses

A depreciation in the pound means that UK exports become more price competitive. Firms could then reduce the price of the good in the export market to increase sales, or they can keep the price the same to increase their profit margins.

However, if UK goods are relatively price inelastic, a depreciation in the pound will not increase sales in the export market significantly. Moreover, it depends on the rate of economic growth in the export market. The higher the level of consumer and firm confidence, and the more disposable income they have, the more likely they are to purchase UK exports.

If firms are net importers of raw materials, costs of production will increase because imports are relatively more expensive when the pound is weaker. This could make the firm less internationally competitive, and it could mean they make lower profits. However, if firms have fixed contracts for how long they import materials from another country, then changes in the exchange rate will not affect quantity purchased or the price paid. This reduces uncertainty of production costs for firms.

If the pound depreciates, firms might think that they can increase their profit margins by keeping the price the same, without having to increase efficiency or productivity to lower their average costs.

A hybrid exchange rate system

Hybrid exchange rate systems combine the characteristics of fixed and floating exchange rate systems. The currency fluctuates, but it doesn't float on a fully free market. An example of a hybrid exchange rate system is a managed float. This is when the exchange rate floats on the market, but the central bank of the country buys and sells currencies to try and influence their exchange rate.

For example, the Brazilian currency floated freely with some government intervention prior to January 1999.

The Japanese central bank has also attempted to make exports more competitive by manipulating the Yen, even though the Yen floats on the market.



The Indian rupee fluctuates on the market, but the central bank intervenes when it falls outside a set range. This is also a managed float exchange rate system.



The relative merits and drawbacks of different exchange rate systems

	Merits	Drawbacks
Fixed	<p>Allows for firms to plan investment, because they know that they will not be affected by harsh fluctuations in the exchange rate.</p> <p>It gives the monetary policy a focused target to work towards.</p>	<p>The government and the central bank do not necessarily know better than the market where the currency should be.</p> <p>The balance of payments does not automatically adjust to economic shocks.</p> <p>It can be costly and difficult for the government to hold large reserves of foreign currencies.</p>
Floating	<p>The exchange rate automatically adjusts to economic shocks.</p> <p>It gives the monetary policy more freedom to focus on other macroeconomic objectives.</p>	<p>The fluctuations in the price of the exchange rate can be unpredictable, which can make investment planning difficult.</p> <p>It can also affect the exports and imports of a country, which could cause a lot of unemployment if an industry is affected in particular.</p> <p>It could make the exchange rate vulnerable to speculative shocks.</p>
Hybrid	<p>It can make fluctuations in the currency more predictable, so business</p>	<p>The protection against fluctuations is only temporary, and it could</p>



	<p>investment is not hindered significantly with economic shocks. It also makes trading easier.</p> <p>It can bring the benefits of both the fixed and floating exchange rate system together.</p>	<p>make monetary policy inflexible.</p>
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The effectiveness of changing the value of a currency to achieve macroeconomic policy objectives

A reduction in the exchange rate causes exports to become cheaper, which increases exports. This assumes that demand for exports is price elastic. It also causes imports to become relatively expensive. This means the UK current account deficit would improve.

However, this is inflationary due to the increase in the price of imported raw materials. Production costs for firms increase, which causes cost-push inflation.

A depreciation of the pound means imports are more expensive, and exports are cheaper, so the current account trade deficit narrows. Depreciations make the currency relatively more competitive against other currencies. However, it depends on which currency the pound depreciates against. If it is the dollar or euro, it is likely to have a more significant effect, than a currency which is not from one of the UK's major trading partners. Moreover, the demand for UK exports has to be price elastic to lead to an increase in exports. If demand is price inelastic, exports will not increase significantly, and the value of exports will decrease.

Purchasing power parity (PPP) theory

 This is a theory that estimates how much the exchange rate needs adjusting so that an exchange between countries is equivalent, according to each currency's purchasing power. For example, if a car cost £15,000 and the exchange rate between the UK and the US is 1.5 £ per \$, then in the US, the car should cost \$10,000. This means both cars cost the same number of US dollars, and the same number of pounds Sterling.

 This helps to minimise misleading comparisons between countries.

