WJEC (Eduqas) Economics
AS-level
Macroeconomics

Topic 3: Policy Instruments

3.3 Exchange rates and exchange rate policy

Notes

The exchange rate of a currency is the weight of one currency relative to another.

The determination of exchange rates

Floating:

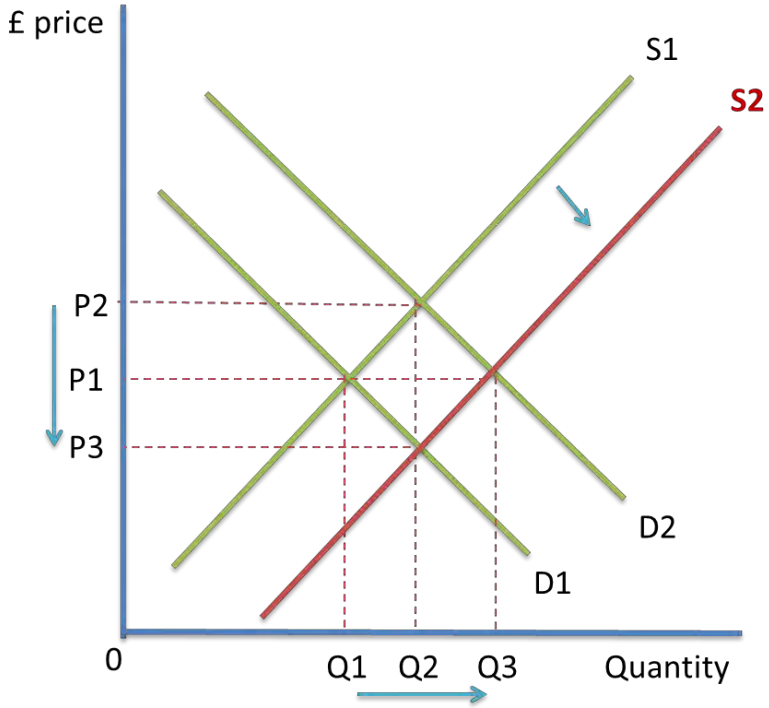
The value of the exchange rate in a floating system is determined by the forces of supply and demand.

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.

The demand for a currency is equal to exports plus capital inflows. The supply of a currency is equal to imports plus capital outflows.

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 → P3), which makes exports more competitive.

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.

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.

Quantitative easing:

This is used by banks to help to stimulate the economy when standard monetary policy is no longer effective. This has inflationary effects since it increases the money supply, and it can reduce the value of the currency.

QE is usually used where inflation is low and it is not possible to lower interest rates further.

QE is a method to pump money directly into the economy. It has been used by the European Central Bank to help stimulate the economy. Since the interest rates are already very low, it is not possible to lower them much more. The bank bought assets in the form of government bonds using the money they have created. This is then used to buy bonds from investors, which increases the amount of cash flowing in the financial system. This encourages more lending to firms and individuals, since it makes the cost of borrowing lower. The theory is that this encourages more investment, more spending, and hopefully higher growth. A possible effect of this is that there could be higher inflation.

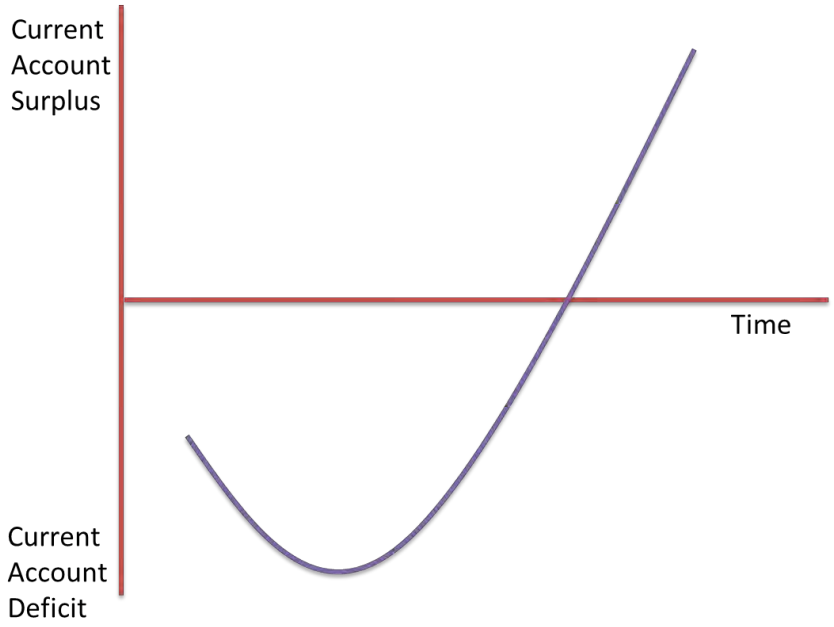
The possible impacts of changes in exchange rates on the policy objectives

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.

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. Households are likely to switch from buying domestically produced goods to imports. However, this depends on the inflation rate. A lower domestic inflation rate, compared to other countries, might mean that consumers still purchase domestic goods. It also depends on the price elasticity of demand for domestic goods and imports. The UK has a high marginal propensity to import, so households are still likely to import goods, even if the pound appreciates.

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 firms

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.

Exchange rate index

This measures how one currency performs against another currency. For example, the US Dollar is measured against 6 other currencies using the US Dollar index. The currencies are weighted according to how much the US trades with the countries.

How monetary authorities can influence the value of an exchange rate: a managed (dirty) float system

Managed float 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. 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.

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.

The advantages and disadvantages of policies which hold exchange rates artificially above or below their free market levels

- When firms know what value the currency is relative to another currency, it allows for them to plan investment, because they know that they will not be affected by harsh fluctuations in the exchange rate.
- It gives the monetary policy a focused target to work towards.
- The government and the central bank do not necessarily know better than the market where the currency should be.
- The balance of payments does not automatically adjust to economic shocks.
- It can be costly and difficult for the government to hold large reserves of foreign currencies.