3.2 Exchange rates

08 March 2011
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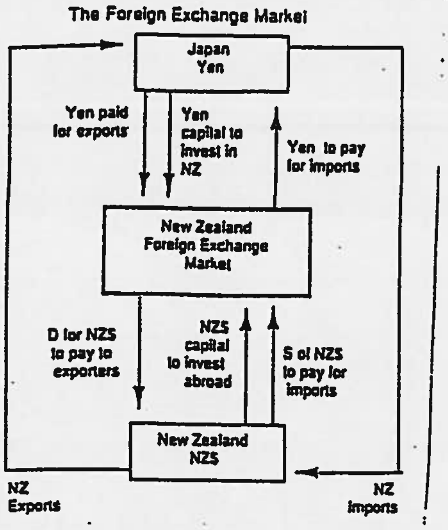
Sub-topic	SL/HL core	HL
Freely floating exchange rates		
Determination of freely floating exchange rates	• Explain that the value of an exchange rate in a floating system is determined by the demand for, and supply of, a currency. • Draw a diagram to show determination of exchange rates in a floating exchange rate system.	• Calculate the value of one currency in terms of another currency. • Calculate the exchange rate for linear demand and supply functions. • Plot demand and supply curves for a currency from linear functions and identify the equilibrium exchange rate. • Using exchange rates, calculate the price of a good in different currencies.
Causes of changes in the exchange rate	• Describe the factors that lead to changes in currency demand and supply, including foreign demand for a country's exports, domestic demand for imports, relative interest rates, relative inflation rates, investment from overseas in a country's firms (foreign direct investment and portfolio investment) and speculation. • Distinguish between a depreciation of the currency and an appreciation of the currency. • Draw diagrams to show changes in the demand for, and supply of, a currency.	• Calculate the changes in the value of a currency from a set of data. [illegible]
The effects of exchange rate changes	• Evaluate the possible economic consequences of a change in the value of a currency, including the effects on a country's inflation rate, employment, economic growth and current account balance.	
Government intervention		
Fixed exchange rates	• Describe a fixed exchange rate system involving commitment to a single fixed rate. • Distinguish between a devaluation of a currency and a revaluation of a currency. • Explain, using a diagram, how a fixed exchange rate is maintained.	
Managed exchange rates (managed float)	• Explain how a managed exchange rate operates, with reference to the fact that there is a periodic government intervention to influence the value of an exchange rate. • Examine the possible consequences of overvalued and undervalued currencies.	
Evaluation of different exchange rate systems	• Compare and contrast a fixed exchange rate system with a floating exchange rate system, with reference to factors including the degree of certainty for stakeholders, ease of adjustment, the role of international reserves in the form of foreign currencies and flexibility offered to policy makers.	

Exchange Rates

Currencies are exchanged in the foreign exchange market



An exchange rate is ______________________________

____

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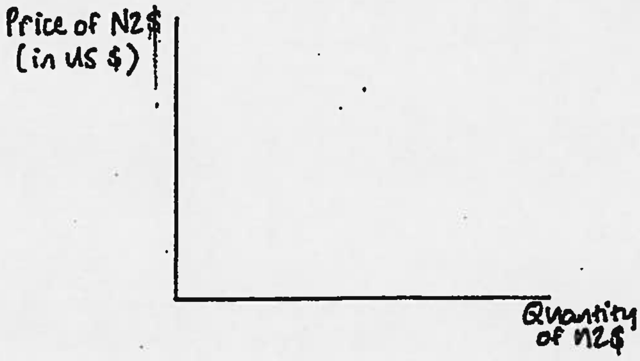
____

e.g. NZ $1 = US $ 0.8356

=> NZ $8000 =

US $ 5000 =

A floating exchange rate is determined by the forces of ______________________________



What would happen if the exchange rate was above equilibrium, e.g. NZ$1 = US$0.87

Currency Demand

Demand for a currency comes from a need to purchase the currency of a particular economy

The main sources of demand are:

*

*

*

*

*

Currency Supply

Supply of a currency comes from economic agents needing to demand overseas currency in exchange for their own

The main sources of supply are:

*

*

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*

*

TASK

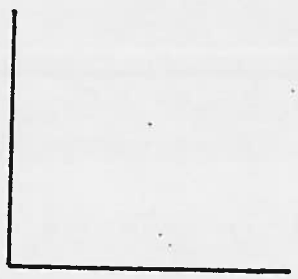
Place the following in the correct column: Inflows of foreign investment, Speculative selling, Imports of goods, Official buying of currency by Central Bank, Exports of services, Imports of services, Speculative demand, Exports of goods, outflows of foreign investment, Official selling of currency by Central Bank

Changes in a floating exchange rate

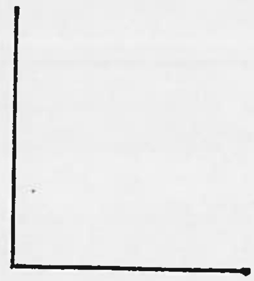
* Appreciation = ______________________________

e.g. price of NZ$1 increases from US$0.83 to US$0.86

From · an increase in demand — or · a decrease in supply



e.g. ↑ demand for NZ exports



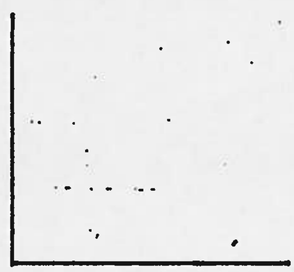
e.g. ↓ demand for imports

* Depreciation = ______________________________

e.g. price of NZ$1 decreases from US$0.83 to US$0.80

From - — or -

e.g.



e.g.

Factors influencing a floating exchange rate

* Change in Incomes / Trade Flows

- domestic incomes rise : ↑ demand for imports ⇒ ↑ Supply of currency ⇒ depreciation

- foreign incomes rise :

* Change in Relative Prices / Inflation

- relatively high domestic inflation:

- relatively low domestic inflation:

* Change in Relative Investment Prospects (capital flows)

- favourable domestic investment prospects :

- favourable foreign investment prospects:

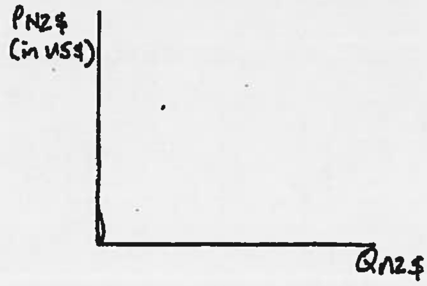
* Change in Relative Interest Rates (capital flows)

- relatively high domestic interest rates:

e.g.

NZ BANK	US BANK
5%	2%

⇒



Investors will take their money from US banks and place in New Zealand banks

⇒ ↑ Demand for NZ $

⇒ appreciation

- relatively low domestic interest rates:

* use of foreign reserves

• explain what is meant by a 'dirty float'

Speculation is the single most important determinant of minute by minute price fluctuatio[ns]
(long term value of a currency is determined by economic fundamentals, ie. level of trade, long term capital movements)

Speculation:

Currency speculators make huge sums dealing in small currency fluctuations

e.g. Current exchange rate is £1 = $1.50

- you expect the value of £ to rise
- you spend $600,000 today and buy £________

Two months later the pound has appreciated so that £1 = $1.60

- you sell the £________ and get $________ in exchange
- profit = $________

⇒ successful currency speculation can lead to significant capital gains

The greater the expected profit, the ________ the speculative demand for sterling, £.

Assuming a generally free-floating exchange rate, a change in the value of a currency can have significant consequences for the country's economy.

Appreciation

Advantages to appreciation

Less expensive imports

The increased value of the currency means that buying imported goods is now relatively less expensive than before. With increased buying power in these terms, a country can enjoy cheaper foreign consumer goods and capital goods. This can help those firms that import raw materials and capital goods, lowering their costs of production. At the same time, increased consumer goods can improve the standard of living and round out the economy in helpful ways. For developing countries, the ability to buy cheaper capital goods and energy resources could be a significant advantage. Where a country relies heavily on imports of any kind, an appreciation of the exchange rate can put downward pressure on inflation.

Competitive pressure on domestic exporters

An indirect effect of the higher exchange rate is that domestic firms exporting to other countries are at a price disadvantage relative to their foreign competitors. As the exchange-rate-adjusted price of their exports rises, they are compelled to seek out new ways of cutting costs and innovating. As a result, the company may find that it is a more robust and energetic competitor should the exchange rate ever return to previous levels.

Disadvantages to appreciation

Export levels reduced

The distinction between competitive pressure and competitive disadvantage is blurred, and companies attempting to export at consistently high exchange rates may come to believe that while their import costs are low, it may not compensate for the challenge of selling at the higher exchange rate. As a result, many export industries may find that their overall sales revenues drop considerably. Significant unemployment in these industries can be a consequence.

Greater imports hurt domestic production

Relatively cheap imports may hurt even non-exporting domestic industries. If those industries cannot match the exchange rate discount now available on imported goods, their share of the market and their sales may drop as well. This could also result in unemployment in those industries.

Effect on major economic goals

To summarize, appreciation reduces inflationary pressure where the demand for imports is relatively inelastic (e.g. energy resources). This may eventually help with economic growth. However, the more immediate impact on growth is to reduce exports and decrease real gross domestic product (GDP). This is likely to reduce employment, especially in exporting industries. Furthermore, the trade balance of exports to imports is likely to move towards a deficit, as exports slow down and cheaper imports increase.

Depreciation

Advantages to depreciation

Expansion of domestic industries

Foreign consumers view exports as relatively cheap, and are likely to import more. This raises revenues in those exporting companies and could increase employment. However, even non-exporting domestic industries benefit because the increase in the relative price of imported goods makes their domestic products seem cheaper. Therefore, non-exporting domestic industries are also more likely to expand and hire more workers, perhaps lowering domestic unemployment rates.

Disadvantages to depreciation

Imported inflation

Where countries need to import significant levels of raw materials or resources, a decrease in the exchange rate can bring on a certain amount of imported inflation. In particular, when the country has a relatively inelastic demand for those goods and therefore cannot adjust its expenditures, imports can be a persistent source of inflation, as long as the exchange rate stays high. Therefore, any decision by interventionist governments to devalue the currency should consider this possible result as a realistic consequence.

Effect on major economic goals

To summarize, appreciation increases inflationary pressure when demand for imports is relatively inelastic (e.g. energy resources). This may slow down economic growth. However, to the degree that a country already offers exports, the reduced price is likely to increase exports and increase real GDP. This should add to employment, especially in export industries. Furthermore, depreciation should improve the trade balance of exports and imports, with increased exports and a decreased demand for relatively more expensive imported goods.

To learn more about exchange rates, visit www.pearsonhotlinks.com, enter the title or ISBN of this book and select weblink 22.2.

22.4 Government intervention

Learning outcomes
- Describe a fixed exchange rate system involving commitment to a single fixed rate.
- Distinguish between a devaluation of a currency and a revaluation of a currency.
- Explain, using a diagram, how a fixed exchange rate is maintained.
- Explain how a managed exchange rate operates, with reference to the fact that there is a periodic government intervention to influence the value of an exchange rate.
- Examine the possible consequences of overvalued and undervalued currencies.

A fixed exchange rate is one that, through government action, is held to a narrow band of possible prices. Managed rates are those that are manipulated to fall within a wide band of prices.

Fixed exchange rates

In a fixed exchange rate system, the value of a currency is locked into (pegged) to the value of another currency. The central bank determines this value and enacts massive and constant intervention to maintain the established rate. This can be done by buying and

BoT: Baht strengthening 'too fast'

Bangkok Post 27 October 2006

The Bank of Thailand yesterday cautioned that the baht had appreciated "too fast" as the unit briefly traded under 37 to the US dollar yesterday. The baht, which is trading at a seven-year high, opened yesterday at 37.01 to the dollar and strengthened to as much as 36.98 before closing at 36.99.

Suchada Kirakul, a central bank senior director for the domestic economy department, said foreign portfolio inflows were helping push the baht stronger against the US dollar.

"You can see that the Stock Exchange of Thailand index has been rising and foreign investors are net buyers of Thai stocks. But the appreciation has been a bit sudden," she said.

Mrs Suchada cautioned that capital flows into the equity market could reverse, affecting currency rates.

For now, the appreciation of the currency has given importers an opportunity to build up their stocks.

Exporters, in contrast, are being urged by bank authorities to hedge their exposure to protect against further strengthening in the baht.

According to the central bank, the baht had a reference rate of 37.01 baht to the dollar on Thursday, representing an increase of 1.38% from the end of September and 10.83% from the end of 2005.

In contrast, the baht has gained 1.89% against the euro over the past month and 4.37% from the end of 2005, while the baht is up 2.2% against the Japanese yen over the past month and 11.4% for the year to date.

Nontaphon Nimsomboon, a director of the Bank of Thailand, said economic growth for the year was projected to range from 4.5% to 4.6%.

But directors yesterday discussed at a board meeting the need to monitor currency flows given recent the appreciation of the baht, which has gained ground in part due to the easing of political tensions following last month's coup.

Khunying Jada Wattanasiritham, the president of Siam Commercial Bank, said exporters could be affected by the stronger baht depending on the relative rate movements of competing nations.

The relative stability in the Chinese yuan against the dollar could affect Thailand the most, she said, as Chinese manufacturers gain an edge against their Thai counterparts in the world market.

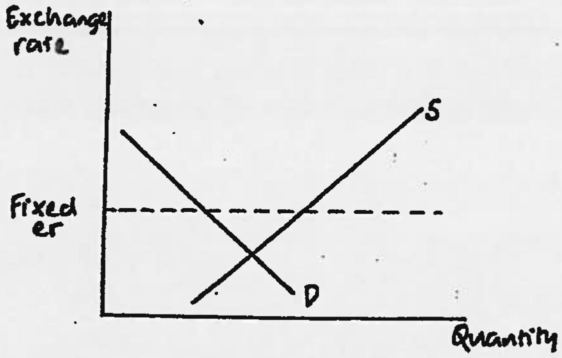
Khunying Jada said SCB was recommending that exporters take out forward cover to lock in their exchange-rate exposure.

But she added that it was understood that the central bank did not want to see the baht too strong against the dollar.

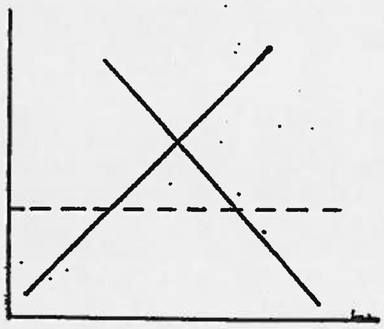
1. "The baht, ..., opened yesterday at 37.01 to the dollar and strengthened to as much as 36.98". Explain this apparent contradiction.
2. Use supply and demand analysis to illustrate the appreciation of the Thai baht.
3. Explain the reasons for the appreciation.
4. How are exporters and importers affected?
5. Why is China seen as a threat?
6. What tool could the central Bank (BoT) use to bring about a depreciation of the Thai baht? Explain.

Government Intervention

* Fixed exchange rate
  - government intervenes to maintain the external value of the currency
  - no fluctuation permitted from central target for the exchange rate (currency peg)



What will the government (via its Central Bank) have to do to maintain the central target? Explain, and show on the above graph.



Label axes, curves

What intervention is necessary in this situation?

Sometimes a country will have to acknowledge that its exchange rate is fundamentally over- or under-valued. In this case it will pull out its peg and set it at a level which can be more realistically maintained:

* revaluation:

* devaluation:

* Semi-fixed (or managed) exchange rate

- use the diagrams below to explain the adjustable peg system

Figure 4:16
Adjustable Peg Exchange Rate System

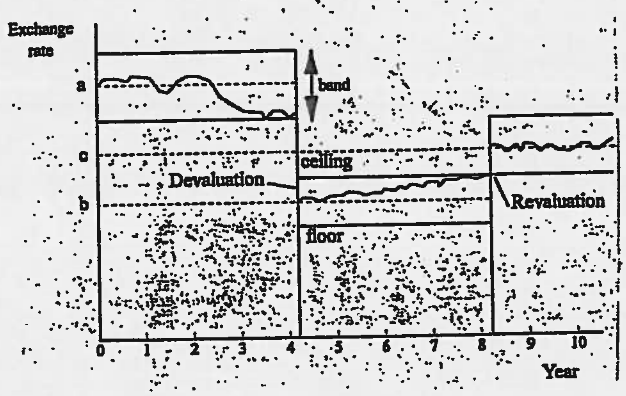


Figure 4:17
Intervention Buying Of Currency In A Managed Exchange System

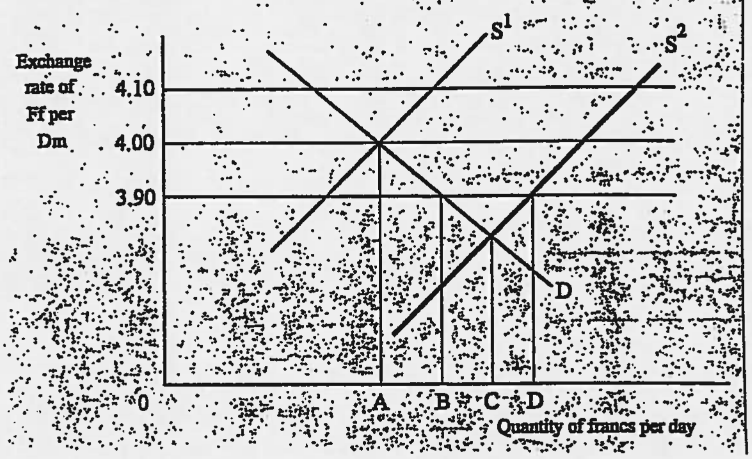
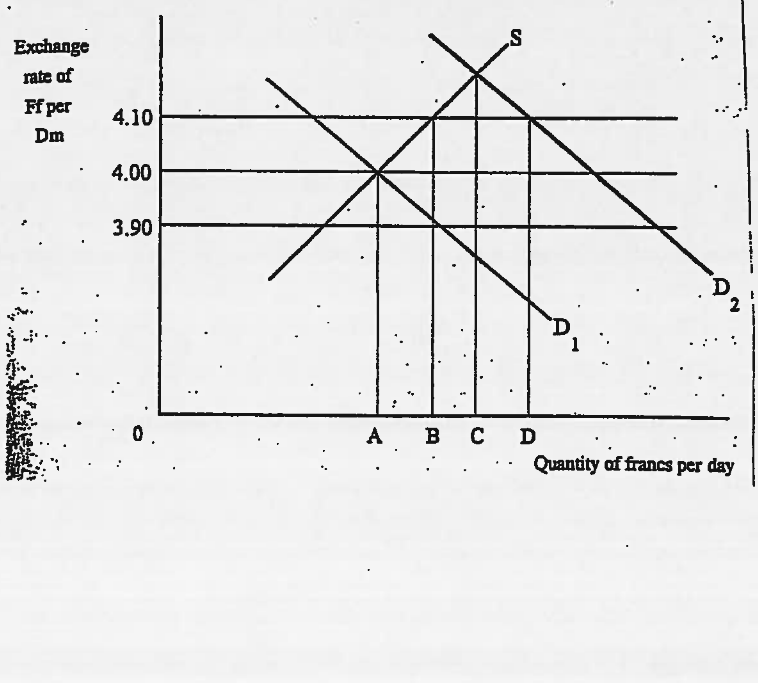


Figure 4:18
Intervention Selling Of Currency In A Managed Exchange System



How could import restrictions help prevent an exchange rate from falling below the exchange rate band?

How could fiscal policy be used to keep the exchange rate within the band?

How does a managed exchange rate differ from a 'dirty float'?

What are the possible consequences of an overvalued currency?

What are the possible consequences of an undervalued currency

May 2003 What impact is a substantial rise in the level of interest rates in a country likely to have on its balance of payments

PLAN YOUR ANSWER:

BBC NEWS

Zimbabwe devalues currency by 45%

Zimbabwe has devalued its currency by 45% in an attempt to raise foreign exchange for food imports.

The country's central bank said one US dollar would now be worth 9,000 Zimbabwe dollars, from 6,200 before.

The widely-expected adjustment remains some way below black market rates, which can command up to 18,000 Zimbabwe dollars per US dollar.

Drought has left the country in need of more than 1.2 million tonnes of food imports, at a cost of up to US$250m.

Economic policies, like the large-scale seizing of white-owned farms, have also contributed to a slump in domestic food production.

However, the central bank's currency auctions have failed to meet demands from importers for foreign exchange.

Soaring inflation

"Devaluation is not the only panacea. Exchange rate management must be carried out in a measured and balanced manner," said central bank governor Gideon Gono, in a televised address.

Zimbabwe's central bank also cut its economic growth forecasts for the current year to 2% to 2.5%, from 3% to 5% previously.

The government in Harare has declared inflation as one of the main economic threats facing the country.

Inflation jumped by an annual rate of 129.1% in April, up slightly from March's figure, but below January 2004's peak of 623%.

The central bank's inflation target for 2005 was raised to between 50% and 60%, from 20% to 35%.

Zimbabwe's economy has been reeling from six years of recession caused, critics say, by the land reform policies of President Robert Mugabe.

But Mr Mugabe, whose Zanu-PF party won a majority of seats in Parliamentary elections in March, says Zimbabwe's economy is being sabotaged by opponents of his policy of seizing white-owned farms for the country's landless black majority.

Story from BBC NEWS:
http://news.bbc.co.uk/go/pr/fr/-/1/hi/business/4563747.stm

Published: 2005/05/19 17:17:54 GMT

Zimbabwe's economy has been reeling from six years of recession and hyperinflation. Inflation in April was 129.1% down from a peak rate of 623% in January 2004. To try to help earn foreign exchange for much-needed food imports the government has devalued the currency by 45%. However, will this have the desired effect? Even after the devaluation, the exchange rate is still well below the black market rate.

Questions

1. Discuss the advantages and disadvantages of a devaluation of the currency.
2. Assess the impact of the devaluation on the rate of inflation in Zimbabwe.
3. Using diagrams as appropriate, illustrate the reasons why the black market exchange rate is still above the official exchange rate.