
Exchange rate systems

Chapter 69 – February, 2017

THE EXCHANGE RATE

- ▶ *exchange rate* or *bilateral exchange rate*: rate at which one currency can be converted into another currency
- ▶ 2 ways of expressing *exchange rates*:
 1. expressed in terms of the value of one single currency against another *single currency*
 2. expressed in terms of the value of one single currency against a *group* or *basket of currencies*
- ▶ the second way is given by the *effective exchange rate* or *trade weighted exchange rate* or *exchange rate index* (see Question 1 p.423 for an illustration on how it is calculated)
- ▶ *spot exchange rate*: exchange rate at the current point in time
- ▶ *forward exchange rate*: rate of exchange for currency to be delivered at a future point in time
- ▶ forward exchange rates are used by firms buying or selling goods in foreign currencies (**reducing exchange rate risk**)

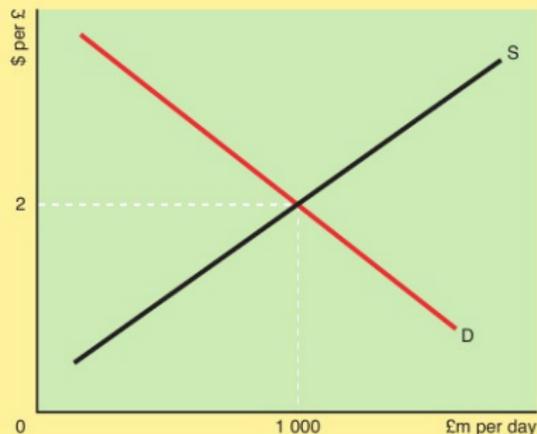
EQUILIBRIUM EXCHANGE RATES

- ▶ *foreign exchange markets*: market where currency is bought and sold
- ▶ *Assumption*: no government intervention *rightarrow* price is defined by demand and supply
- ▶ 3 main reasons to buy/sell foreign exchange:
 1. international trade in goods and services
 2. long-term capital movements
 3. speculation in foreign exchange markets
- ▶ *equilibrium rate*: point where the demand for the currency is equal to its supply
- ▶ *Explain why the demand curve is downward sloping?* (see page 424 for explanation)

SHIFTS IN THE DEMAND AND SUPPLY CURVES FOR A CURRENCY

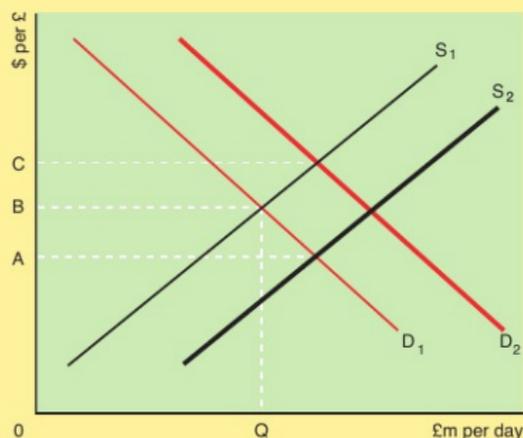
Floating exchange rate systems

In a free exchange rate market, the price of a currency is determined by demand and supply. Equilibrium price is \$2 to the pound whilst equilibrium quantity demanded and supplied is £1 000 million per day.



Changes in exchange rates

The equilibrium value of the pound will change if there is a change in either the demand for or supply of pounds (or both).



SHIFTS IN THE DEMAND AND SUPPLY CURVES FOR A CURRENCY

- ▶ rise in UK exports: increases demand of pounds by foreign companies → shift in the demand curve
- ▶ rise in UK imports: increases supply of pounds by foreign companies → shift in the supply curve
- ▶ rise in UK interest rates: higher interest rates in UK will attract foreign *short-term money* or *hot money* → shift in the demand curve
- ▶ inflow of investment funds: inflow of funds for long-term investment → shift in the demand curve
- ▶ *belief* that the pound is going to fall in value: speculation → shift in the supply curve

SPECULATIVE ACTIVITY

- ▶ in *short-term* the value of currency is mainly determined by **speculative activity**
- ▶ in *long-term* the value is determined by **economic fundamentals** (i.e., exports, imports, long-term capital movements)



THE PURCHASING POWER PARITY THEORY OF EXCHANGE RATES

- ▶ *nominal exchange rate*
- ▶ *real exchange rate*
- ▶ PPP theory of exchange rates: exchange rates in the long-term change in line with inflation rates between economies

FLOATING EXCHANGE RATE SYSTEM

- ▶ *floating exchange rate system*: exchange rates are determined by the *free market forces* of demand and supply
- ▶ no government controls or government intervention in the market

FIXED EXCHANGE RATE SYSTEMS

- ▶ *fixed exchange rate*: currency has a fixed value against another currency or commodity
- ▶ Examples:
 - ▶ *gold standard* (currencies were convertible into gold at a fixed rate with 1 note = 0.257 ounces of gold)
 - ▶ *currency board system*: price of one currency is fixed against another currency, typically the USD or the euro (Vatican, Andorra)
 - ▶ countries that don't issue their own currency (Panama)
 - ▶ countries that are member of a *currency union* (i.e., euro)

MANAGED EXCHANGE RATE SYSTEMS

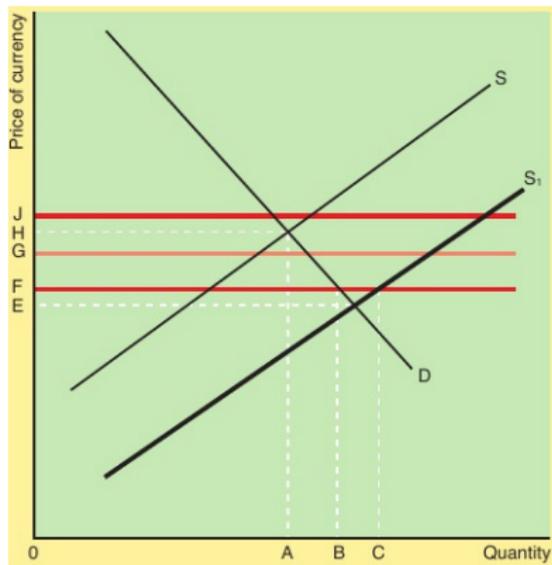
managed exchange rate system (or hybrid or intermediate system): free market forces are *one* determinant, but government intervention will also play a role (i.e., by raising or lowering interest rates that influences the demand/supply of the currency)

- ▶ adjustable peg systems:
- ▶ crawling peg systems
- ▶ managed float or dirty float

MANAGED EXCHANGE RATE SYSTEMS

ADJUSTABLE PEG SYSTEMS

- ▶ in the *short run*, currencies are fixed, whilst in *long run* the value of the currency can be changed (i.e., Bretton Woods system)
- ▶ describe the mechanism!



MANAGED EXCHANGE RATE SYSTEMS

CRAWLING PEG SYSTEMS

- ▶ is a form of adjustable peg system
- ▶ currency is fixed against another currency within a band
- ▶ has a build in system allowing the *band* to rise and fall regularly over time
- ▶ Example: band may be moved every three months

MANAGED EXCHANGE RATE SYSTEMS

MANAGED FLOOT OR DIRTY FLOOT

- ▶ exchange rate is freely floating but government intervenes occasionally to change the value of the currency
- ▶ Central banks can intervene on a day-to-day basis to *reduce the volatility* of the currency
- ▶ Reason of intervention can also be to change the value of the currency (i.e., reduce exchange rate to help exporters)
- ▶ most common type of exchange rate system today!

INFLUENCING THE EXCHANGE RATE UNDER A MANAGED EXCHANGE RATE SYSTEM ★

- ▶ buying and selling currency: Central bank uses gold and foreign currency reserves to do this (Example: Black Wednesday and George Soros)
- ▶ changing the interest rate: Central bank can affect the exchange rate through a change in interest rate (2 channels of transmission if interest rates increase: (i) supply/demand of pound, and (ii) lower consumption/investment/GDP)
- ▶ currency controls: limits on foreign currency that can be bought (may lead to black market and corruption)
- ▶ borrowing from international institutions like the IMF: borrow and buy currency to raise its price (constraints associated with borrowing from IMF)
- ▶ devaluation and revaluation: devaluation \neq depreciation and revaluation \neq appreciation

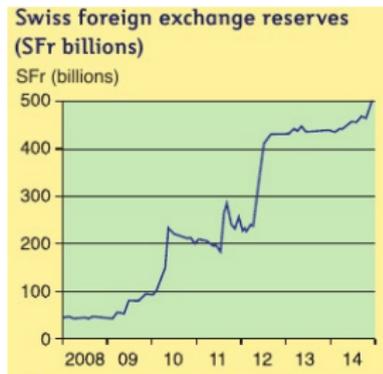
ADVANTAGES AND DISADVANTAGES OF DIFFERENT EXCHANGE RATE SYSTEMS ★

- ▶ volatility:
 - ▶ in *fixed exchange rate system*: no volatility in exchange rate → good for trade and long-term investment
 - ▶ in *pure float*: a lot of volatility in short time → generates exchange rate risk
- ▶ robustness:
 - ▶ market fixes the exchange rate → very robust system unlikely to collapse
 - ▶ fixed exchange rate system is not robust (currency and gold reserves used as tool are limited)
- ▶ economic costs of adjustment
 - ▶ in pure float: any disequilibrium in markets is taken care of by markets
 - ▶ under fixed rate: disequilibrium can persist and will trigger and amplify other mechanisms that can be much more costly
- ▶ financial discipline:

EXTRACT 1: THE BRETTON WOODS SYSTEM



EXTRACT 2: THE SWISS FRANC AND THE DANISH KRONE



KEYTERMS

- ▶ adjustable peg system:
- ▶ appreciation of a currency:
- ▶ bilateral exchange rate:
- ▶ Bretton Woods system:
- ▶ crawling peg system:
- ▶ currency board system:
- ▶ currency or exchange controls:
- ▶ depreciation of a currency:
- ▶ devaluation of a currency:
- ▶ effective exchange rate or trade weighted exchange rate index:
- ▶ exchange rate:
- ▶ exchange rate systems:

KEYTERMS

- ▶ fixed exchange rate system:
- ▶ floating or free exchange rate system:
- ▶ foreign exchange markets:
- ▶ gold and foreign currency reserves:
- ▶ gold standard:
- ▶ managed exchange rate system or hybrid or intermediate system:
- ▶ managed or dirty float:
- ▶ nominal exchange rate:
- ▶ purchasing power parity theory of exchange rates:
- ▶ real exchange rate:
- ▶ revaluation of a currency:

KEYTERMS

REVISION (CHAPTER 11)

- ▶ conditions of supply:
- ▶ long run:
- ▶ price elasticity of supply:
- ▶ producer surplus:
- ▶ short run:
- ▶ supply:

KEYTERMS

REVISION (CHAPTER 12)

- ▶ equilibrium price:
- ▶ excess demand:
- ▶ excess supply:
- ▶ free market forces:
- ▶ market-clearing price:

KEYTERMS

REVISION (CHAPTER 13)

- ▶ incentive function:
- ▶ rationing function:
- ▶ signalling function:

KEYTERMS

REVISION (CHAPTER 14)

- ▶ ad valorem tax:
- ▶ incidence of tax:
- ▶ specific or unit tax:
- ▶ subsidy:

KEYTERMS

REVISION (CHAPTER 16)

- ▶ complete market failure:
- ▶ market failure:
- ▶ missing market:
- ▶ partial market failure: