

Fixed vs Flexible Exchange Rate Regimes

- Review fixed exchange rates and costs vs benefits to devaluations.
- Exchange rate crises.
- Flexible exchange rate regimes:
 - Exchange rate volatility.

Fixed exchange rate regime:

- In the medium run, the real exchange rate is determined by the relative price of foreign to domestic goods, regardless of regime.
- With flexible exchange rates, the nominal exchange rate adjusts to bring the real exchange rate into line.
- With fixed exchange rates, the domestic price level adjusts to bring the real exchange rate into line.

AD with fixed E

- Aggregate demand:

$$Y = C(Y-T) + I(Y,r) + G + NX(Y,Y^*,e)$$

where:

$$r = i - \pi^e \quad \text{and} \quad e = EP^*/P.$$

- Fixed exchange rate:

$$E = \underline{E}, \quad i = i^*$$

- So that:

$$Y = C(Y-T) + I(Y, i^* - \pi^e) + G + NX(Y,Y^*,\underline{E}P^*/P)$$

AD-AS

- With fixed exchange rates, AD curve implies a negative relationship between output and the price level:

$$Y = Y(\underline{E}P^*/P, G, T)$$

+ + -

As P falls, real exchange rate depreciates and net-exports rise. This increase output.

- AS is unchanged by open economy considerations:

$$P = P^e (1 + m) F(1 - Y/L, z)$$

Adjustment

- Suppose $Y=Y_n$ and we have a fiscal expansion: AD shifts out.
- Short-run:
 - Output increases
 - Price level increases.
 - Exchange rate appreciates and net exports fall.
- Adjustment:
 - Output above the natural rate ($Y>Y_n$) we have $P>P^e$
 - P^e rises and AS curve shifts up.
 - Price level continues to rise, real exchange rate appreciates further and net exports continue to fall.
- Medium run:
 - Output unchanged.
 - Price level has risen and exchange rate has fallen (appreciated).
 - Real and nominal interest rates remain unchanged.
- Result: budget deficit leads to trade deficit rather than domestic crowding out.

A word of caution:

- Govt can't run a budget deficit forever.
- A country can't run a trade deficit forever.
- Plausible scenario:
 - Increase in govt. spending through budget deficits today is offset by higher taxes in the future.
 - Increased trade deficit today is offset by trade surpluses in the future.

Recessions and Devaluations:

- If output below natural rate, a country has an incentive to abandon the peg and devalue the currency.
- Expectations of devaluation make things worse in short-run.
- If country expected to devalue then the only way to maintain the peg is to raise short-term nominal interest rates.
- Output contracts even further making the devaluation more likely.

Currency misalignments and devaluations

- Suppose a country fixes its exchange rate.
- If inflation rates between countries differ then the real exchange rate may drift and the nominal exchange rate may be overvalued.
- Given enough time, prices and inflation rates should adjust. In the meantime, net exports are low however.
- An alternative is to devalue the currency.

Post WWI Britain and the Gold Standard

- 1870-1910 Britain on gold standard – equivalent to fixed exchange rate.
- Britain abandons gold standard during war to pay for war debts through money creation.
- Post war:
 - prices have risen in Britain relative to other countries.
 - Govt. insists on returning to gold standard at pre-war parity.
 - This is a large real appreciation.
- Keynes's prediction: adverse economic effects owing to overvalued exchange rate
 - “money wages in Britain are too high at current exchange rate”
- Result: Britain grew slower than rest of Europe during 1920's.

Exchange rate crises:

- Suppose expectations of a devaluation rise.
- Two possibilities
 - Raise interest rates enough that investors are willing to hold currency despite expected devaluation -- this may cause severe damage to the economy.
 - Raise interest rates some but not all the way: in this case, holders of domestic currency still try sell the currency and central bank is forced to buy own currency by selling foreign reserves.
- Self-fulfilling crises:
 - In either case, speculators may test govt. resolve and attack the currency.
 - Even those not inclined to speculate may sell.
 - If foreign reserves are low, peg can't be maintained and currency is devalued anyway.
- Result:
 - Expectations of a devaluation may precipitate the devaluation
 - This is the FX equivalent to a bank-run.

EMS crisis:

- Pre-crisis:
 - European countries fixed exchange rates (with bands) in 1979.
 - Realignments in first few years but only two from 87-92.
 - German reunification put pressure on exchange rates and precipitates a crisis.
- Sept 1992 crisis:
 - Speculators sell currencies in anticipation of devaluation.
 - Scandinavia pushes overnight rates up to 500% on annual basis to defend currency.
 - Britain loses large amount of foreign reserves before abandoning.
- Results:
 - Italy and Britain abandon EMU with exchange rates depreciations on the order of 15%.
 - Other countries (France) maintain peg but suffer high interest rates and large losses in reserves.

Flexible exchange rates

- Exchange rate today determined by expected path of domestic and foreign nominal interest rates and expected future exchange rate.
- Small variations in interest rates today can lead to large fluctuations in exchange rates.
- Changes in expected future trade balances can also have a large effect on current exchange rates.
- Bottom line: under a flexible exchange rate system, exchange rates can be highly volatile and hard to predict.

Benefits to flexible rates:

- Monetary policy can be used to stabilize the economy.
- Given nominal price rigidities, flexible exchange rates help economy adjust more quickly.
- The cost is high volatility of exchange rate
 - Note: import-export quantities not as volatile as prices however.
- In most situations, benefits outweigh costs and flexible rates are more desirable than fixed rates.