5th session

17th October 2017

EXCHANGE RATE REGIMES

Pugel, chap. 20, 23, 25

International Monetary System

Establishes the rules by which countries value and exchange their currencies.

- 1870-1913: Gold Standard working well
- 1914-44: Collapse of the Gold Standard
- 1945-70s: Bretton Woods (dollar standard)
- 1970s-present: post-Bretton Woods

Gold Standard (1870-1913)

- No precise date of origin. Great Britain adopted the gold standard in 1821, Australia in 1852, Canada in 1853, France in 1878, Germany in 1871, the US in 1879.
- The treasury or central bank of each country was required by law to buy and sell gold without limit at the stated price but there were no formal agreements with other nations. No treaty was signed.

Gold Standard (1870-1913)

- A commodity money standard = the value of money is fixed relative to a commodity. The currency can be redeemed any time for the equivalent specie. A gold standard is an example.
- For example, suppose
  - 1 unit of currency A = 0.10 ounce of gold
  - 1 unit of currency B = 0.20 ounce of gold

Then

$S(B/A) = 0.20 \div 0.10 = 2$ = price of currency B in terms of currency A

Collapse of the Gold Standard (1914-44)

- WWI: the gold standard was abandoned by many countries. Expectation that floating exchange rates regime was temporary, and that countries would soon return to the gold standard.
- 1919: US returned to the gold standard

  1925: Britain returned to the gold standard at the parity prevailing before the war, followed by France and Switzerland.

  1930's - Great depression
- A period of competitive devaluations: In trying to stimulate domestic economies by increasing exports, country after country devalued.
- FX controls

Bretton Woods

- After WWII countries wanted to rebuild their economies. Problems: inflation, unemployment, political instability.
- 44 countries in Bretton Woods, New Hampshire in 1944.
- Agreement to renew the gold standard on a modified basis: a **dollar-based gold standard**
  - Only the US commited to redeem its currency for gold at the request of a foreign central bank ($35 an ounce of gold).
  - Other countries pegged the values of currencies to the US dollar. Countries agreed to "support" their exchange rates within + or – 1% of the par values.

- In the 1960's: Dollar seen by the market as "overvalued." Foreigners become concerned about holding overvalued U.S. dollars at a rate of $35 an ounce.

- 1971: dollar convertibility into gold was suspended.
  December 1971: **Smithsonian Agreements**
  - The dollar was devalued against foreign currencies.
  - The dollar price of gold increased from $35 to $38 an ounce.
  - Currencies could fluctuate + or – 2.25% around their new par values.
- New problems. 1973: generalized floating.

Post - Bretton Woods

- Generalized floating for most industrialized countries.
- 1979 - European Monetary System (EMS)
  - Fixed but adjustable Exchange Rates: currency bands
  - ECU: weighted average of participating currencies
- 1989 – Delors Report: 3 stages until European Monetary Union (EMU) and Single Currency.
  - 1st stage started in July 1990.
  - Last stage: 1 January 1999 - Exchange rates between European currencies irrevocably fixed. Euro remained a book currency only.
  - 1 January 2002 – Euro notes and coins started to circulate alongside national notes and coins. These were gradually withdrawn

- Textbooks classify exchange rate regimes in one of two categories: fixed *vs* floating. There are more variations.
- *De facto* regimes may be different from *De jure* regimes.
- Current exchange rate arrangements https://www.imf.org/~/media/Files/Publications/AREAER/AREAER_2016_Overview.ashx
- There is no "perfect foreign exchange regime". It depends on the characteristics of each economy. - Arguments from the theory identifying the recommended regime (fixed or floating) according to certain criteria.

Extreme Fixed with no separate legal tender

- Mone-tary Union
- Dollariza tion/ Euroizati on

Extreme Fixed

- Currency Board

Tradi-tional Peg

Crawl ing Peg

Currency Bands

Floating exchange rates

- Dirty (managed)
- Clean

Fixed Exchange Rates

- How is parity defended?
  - The authorities buy or sell foreign currency in exchange for domestic currency.
  - The authorities impose exchange controls to influence the exchange rate by constricting the demand or supply in the foreign exchange market.
  - The authorities alter domestic interest rates to influence short-term capital flows, and therefore, the foreign exchange rate .

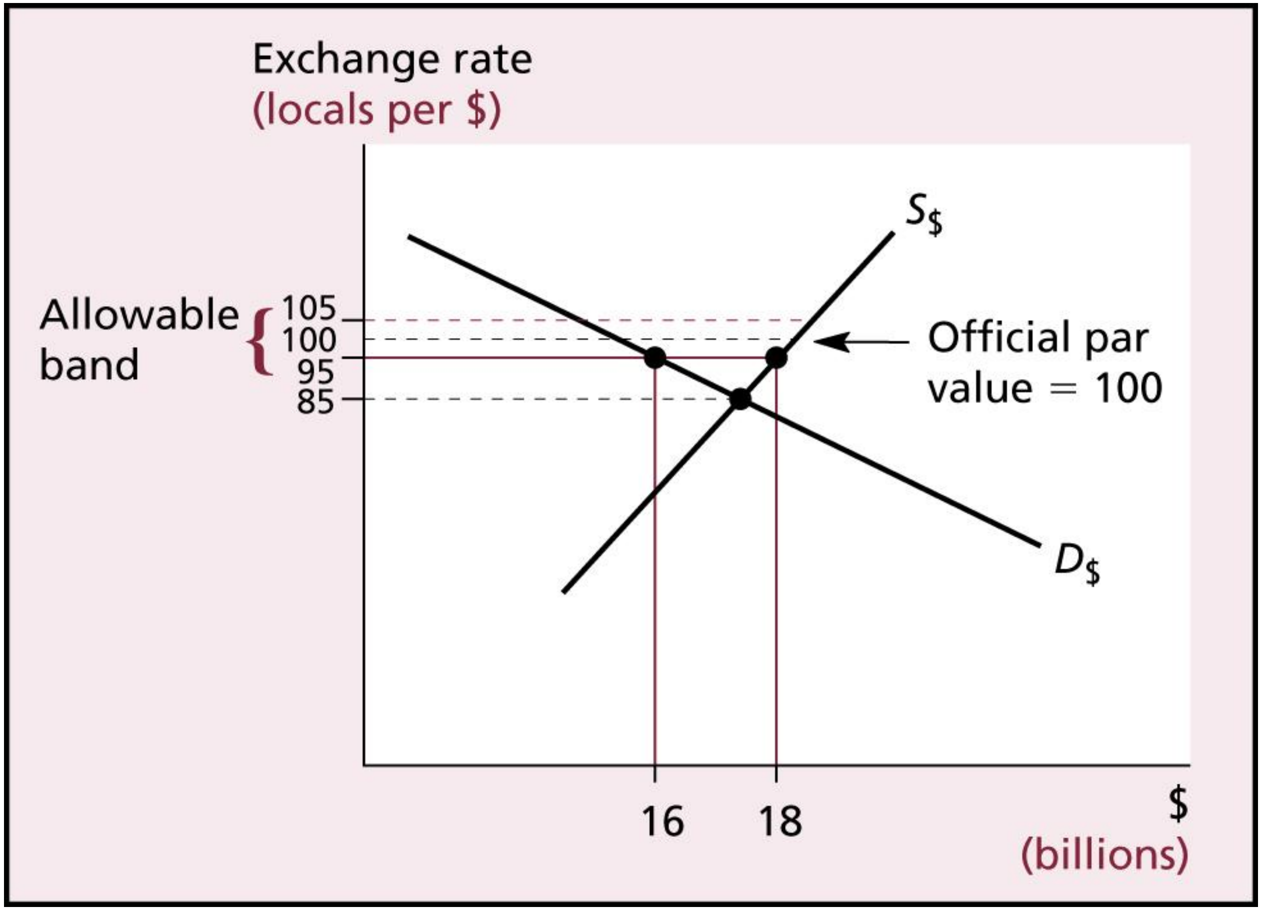
Buying or selling foreign currency

- Defending against depreciation
  - Buy domestic currency/sell foreign currency.
  - Corresponds to the financing of a country's deficit.
  - The sale of foreign currency decreases the stock of official reserves. If it runs out of reserves, it is possible to borrow from abroad.
  - The purchase of domestic currency reduces money in circulation: reduces Money Supply.
- Defending against appreciation: similar, in the opposite direction.

Central bank Balance Sheet (simplified)

Assets	Liabilities
Domestic Assets	**Monetary Base**
Debt securities	Currency in circulation
Loans to Banks	Deposits from banks
International Reserve Assets	
Foreign-Currency Assets	

Money Supply = Currency + Deposits from the public in regular banks

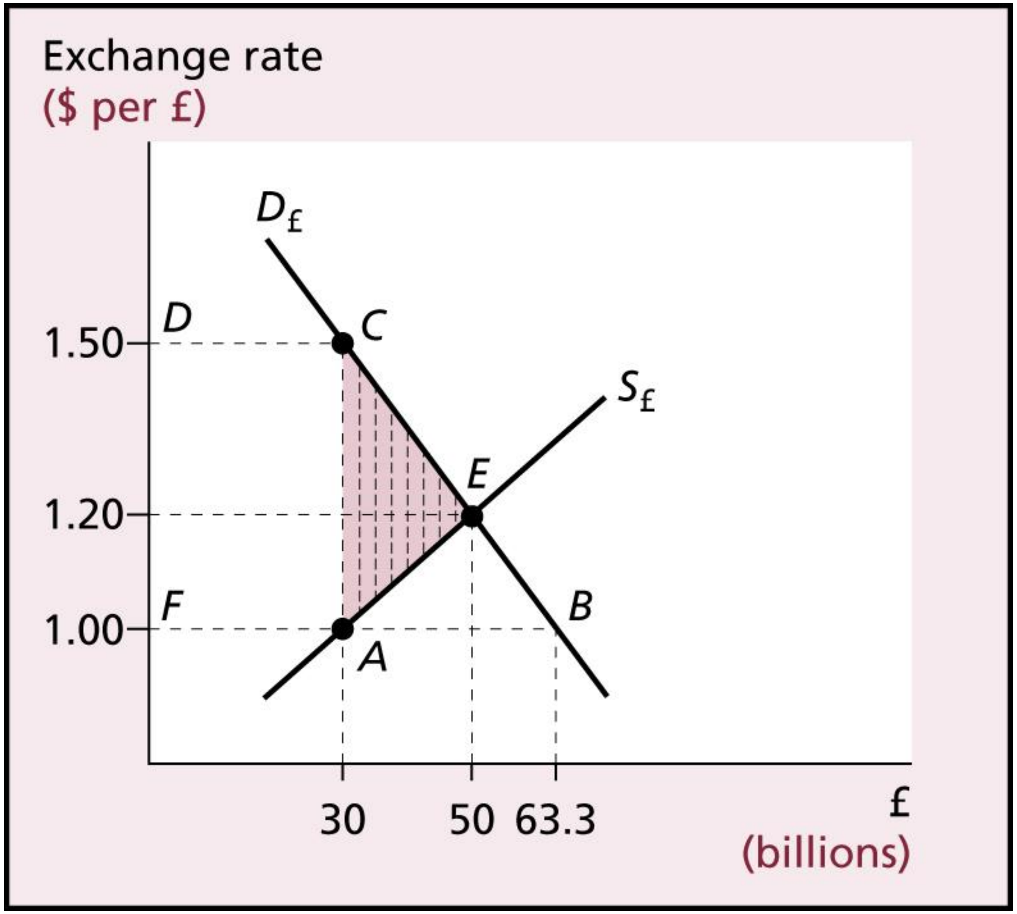


Source: Chap. 20 from Pugel.

- A temporary external imbalance can be overcome in this way. It is not sustainable to defend a permanent disequilibrium. *Costs*

Using capital controls

- Capital controls are quantity restrictions
  - Create inefficiencies,
  - High administrative costs,
  - Create incentives to black markets.
  - Instead of foreign exchange risk concerning the price, there is risk as to the possibility of trading.



Source: Chap. 20 from Pugel.

Changing interest rates

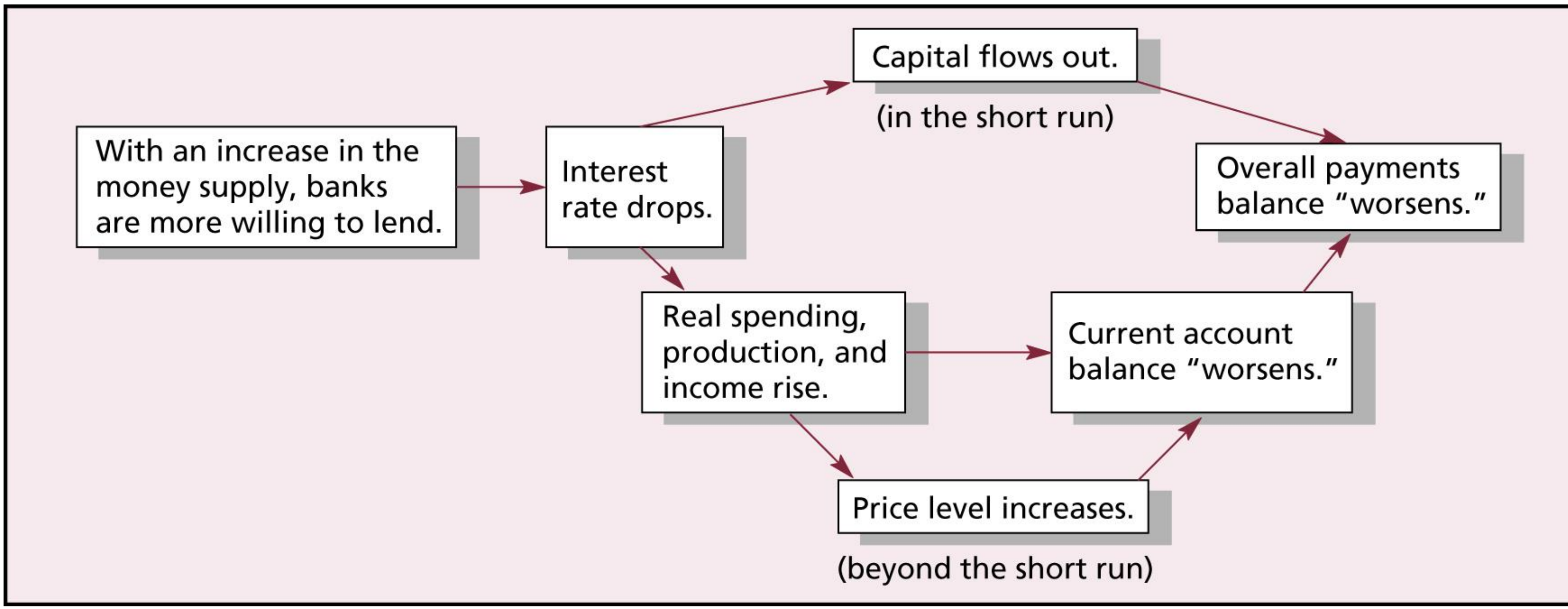
The foreign currency demand and foreign currency supply move.

- Trilemma – (Impossible trinity)

One cannot have simultaneously:

  - Fixed exchange rates
  - Independent monetary policy
  - Free capital movements (no capital controls)

- Effects of the intervention in the FOREX
  - Official intervention alters the central bank's assets and liabilities: the country's official international reserves and also the Money Supply → impossible to have an independent monetary policy.
  - Surplus → appreciation pressure on the national currency → intervention: purchase of the foreign currency/sale of the domestic currency → increase in the Money Supply →



Source: Chap. 23 from Pugel.

- Intervention defending the parity helps the country move back towards external balance.
- …Problem: the effect of the change in the Money Supply on Prices may not be consistent with the internal balance.
- Solution: STERILIZATION.
  - Surplus → appreciation pressure on the domestic currency → intervention: purchase of the foreign currency/sale of the national currency together with open market operations: purchase of national currency/sale of government bonds.
  - Money Supply does not change. The only change is the composition of the Central Bank's assets: more official reserve assets and less domestic assets.

- Deficit: similar rationale, in the opposite direction.

- Limitations:
  - Deficit: difficulties in obtaining foreign currency.
  - Surplus: complaints by other countries about the country's ongoing surplus, unwillingness of the Central Bank to keep on increasing its holdings of official reserve assets.
    - Ongoing surplus: If interest rates and prices do not change, there is no reason to have capital movements and changes in competitiveness.

Absorption of External Shocks

For exemple, reduction in the demand for our exports.

- $\searrow$X – {$\searrow$Y & $\searrow$i; $\searrow$BPaym } – pressure to <u>depreciation</u>
- If Exchange Rate is FIXED: Intervention: {Buy Domestic Currency; Sell Foreign Currency} - $\searrow M^S$ - $\nearrow$ i - $\searrow$Y
- If Exchange Rate is FLOATING : currency <u>depreciates</u> - competitivity increases - $\nearrow$X & $\searrow$Imp - $\nearrow$Y

Conclusion: Floating exchange rates isolate the economy from external shocks. Fixed exchange rates amplify external shocks.

Advantages and Disadvantages of Exchange Rate Regimes

- Clean Free Float

Main Advantages

- Compatible with an independent monetary policy and with different long term preferences about inflation.
- No need for high levels of international reserves.
- Not prone to currency crises.
- Helps absorb external shocks

Main Disadvantages

- Risk of excessive exchange rate volatility - uncertainty.
- Discretion in monetary policy may originate inflation bias.

Advantages and Disadvantages of Exchange Rate Regimes

- Managed Float

Main Advantages

- Compatible with an independent monetary policy and with different long term preferences about inflation.
- No need for high levels of international reserves.
- Helps absorb external schocks.
- Possibility of avoiding excessive volatility,

Main Disadvantages

- Uncertainty, lack of transparency.
- Discretion in monetary policy may originate inflation bias.

Advantages and Disadvantages of Exchange Rate Regimes

- Currency Bands

Main Advantages

- Possible adjustment of the exchange rate in accordance with changes in economic circumstances
- Transparency
- Possibility of avoiding excessive volatility,

Main Disadvantages

- Prone to speculative attacks
- Difficulty in choosing the band width.
- Need of international reserves.
- Limited room for monetary policy.

Advantages and Disadvantages of Exchange Rate Regimes

- Crawling Peg

Main Advantages

- Possible adjustment of the exchange rate in accordance with inflation to keep competitiveness
- Smooth adjustment
- Transparency
- Possibility of avoiding excessive volatility,

Main Disadvantages

- Backward-looking adjustment: inflationary inertia.
- Forward-looking adjustment;: difficulty in the choice of the inflationary target.
- Requirement of international reserves.
- Loss of monetary policy autonomy.

Advantages and Disadvantages of Exchange Rate Regimes

- Traditional Peg

Main Advantages

- Possibility of avoiding excessive volatility,
- Allows high inflation countries to reduce inflation by moderating inflationary expectations.

Main Disadvantages

- Prone to currency crises.
- Requirement of international reserves.
- Loss of monetary policy autonomy

Advantages and Disadvantages of Exchange Rate Regimes

- Extreme Fixed

Main Advantages

- Avoids excessive volatility of exchange rates.
- Allows high inflation countries to import credibility in the reduction of inflation.
- Not prone to currency crises.

Main Disadvantages

- Loss of sovereignty revenue.
- Loss of seigniorage.
- Loss of monetary policy autonomy.