

Global Financial Systems

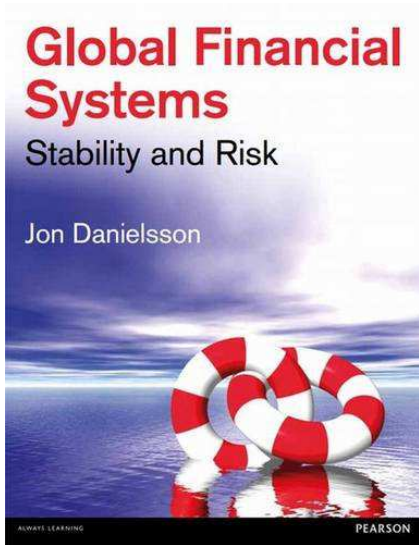
Chapter 11

Currency Markets. Part b

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To accompany
Global Financial Systems: Stability and Risk
<http://www.globalfinancialsystems.org/>
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Book and slides



- The tables and graphs are the same as in the book
- See the book for references to original data sources
- Updated versions of the slides can be downloaded from the book web page www.globalfinancialsystems.org

Overvaluing

Overvaluing

it just happens

- Often because a country is fighting high inflation or has resorted to printing money to finance itself
- Fixing the exchange rate may be a way to fight inflation
- In the short run makes consumers, and hence voters, happy because it makes imported goods artificially cheap
- In the longer run it hurts exporters who are no longer competitive

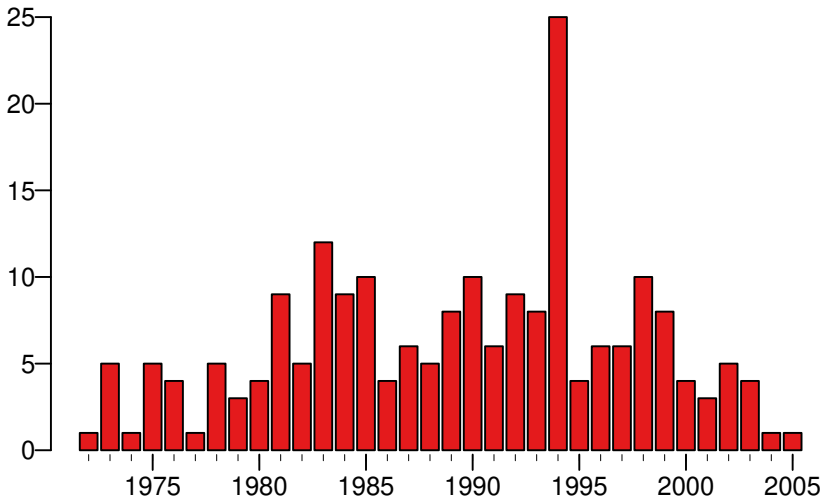
Often ends in speculative attacks

- Speculators, who usually are well connected local companies, observe this and seek to export the domestic currency
- In effect, speculating against the currency regime
- The government may give in or resort to capital controls or multiple exchange rates
- The latter two are often a recipe for corruption because those giving permission to import or buy currencies at cheaper rates will reap artificial profits
- All of this suggests that it is virtually impossible for government to maintain an artificially strong exchange rate for long without resorting to very costly measures

Asian crisis 1998

- Chapter 6 of book
- The then, (now returned) PM of Malaysia blamed foreign speculators for attacking its currency
- Similar said in Korea, Indonesia, Thailand
- But data shows it was the well connected local families who attacked first
- While foreign speculators stuck with currency

Frequency of currency crisis



The aftermath — Currency crises

- 3 years after a currency crisis, the level of GDP is between *2% and 6%* lower than if there had been no crisis
- The losses tend to materialize *before* the currency collapses
- Output growth tends to slow down *prior to* and in the year of the currency crisis
- After the currency collapse, *positive growth rates* seem to be the norm
- The economic costs of a currency collapse do not appear to arise from the collapse of the currency itself but from *negative fundamentals*
- But the government is often thrown out of power

Governments' Undervaluation of Foreign Exchange

Undervaluing — “Beggar thy neighbor”

- Attempt to make other countries subsidize your industry
- “*Beggar thy neighbor*” policies
- Uses domestic money to buy foreign currency
 - a country overvaluing will run out of money
 - a country undervaluing can, at least in theory, intervene indefinitely
- The effects of undervaluing the currency in the short run are to make imports more expensive and exports cheaper
- Subsidy given to exporters and foreign consumers paid for by domestic consumers and foreign competitor industry

Costs of undervaluing

- Makes other countries very unhappy
- Can lead to competitive devaluations, where countries in turn devalue their currencies
- High inflation and huge disruption to domestic industries
- A country not engaging in such practices may end up being the strongest at the end
- Can also lead to restrictions on trade
- This can then spiral out of control

The Great Depression is a cautionary tale

Direct domestic effects

- Because industries are developed in a deliberately low-cost environment
- Companies adjust to this in their strategies, which may hamper their long-term competitiveness
- If a country is forced to revalue its currency it then would be very costly
- It would have been better for industry to develop in an appropriate exchange environment
- Hard to control credit
- Finally, such a policy can create hidden inflation that down the road makes a realignment a necessity

Compatibility of other policies

- Need to consider the compatibility FX policy with other policy areas,
 - monetary policy
 - fiscal policy
 - financial stability
- Japan's dilemma
 - highest sovereign debt in the developed world
 - deflation
 - overvalued currency

Addressing any of those is likely to adversely affect the others (deflation and FX pull the same way)

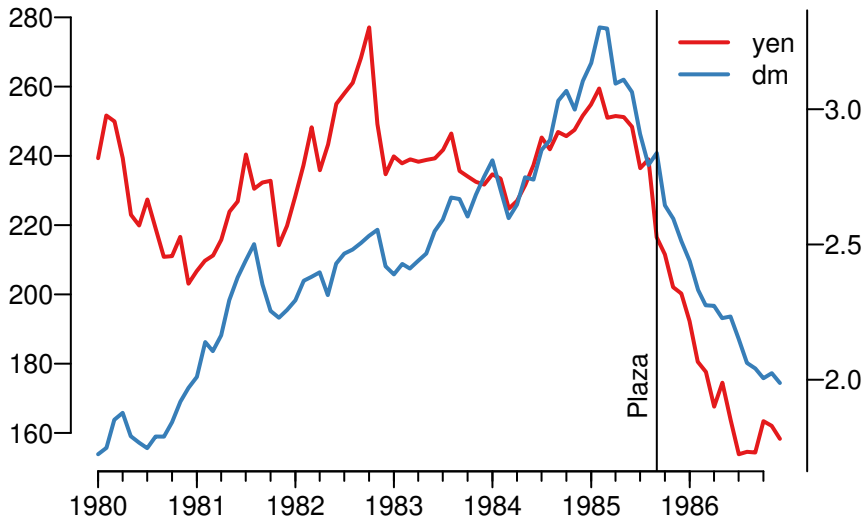
Currency war

- Deliberate policies of manipulating exchange rates downwards to increase domestic competitiveness have recently been given the name “*currency wars*”
- Relates to *reserve currencies*

Plaza Accord

- 1980 to 1985 dollar had appreciated against yen and mark (next slide)
- France, West Germany, Japan, United States, United Kingdom
- Depreciate the dollar to yen and mark
- Signed in 1985 at the Plaza Hotel in NYC

Yen and DM to USD



UK and France in 1920s and 1930s

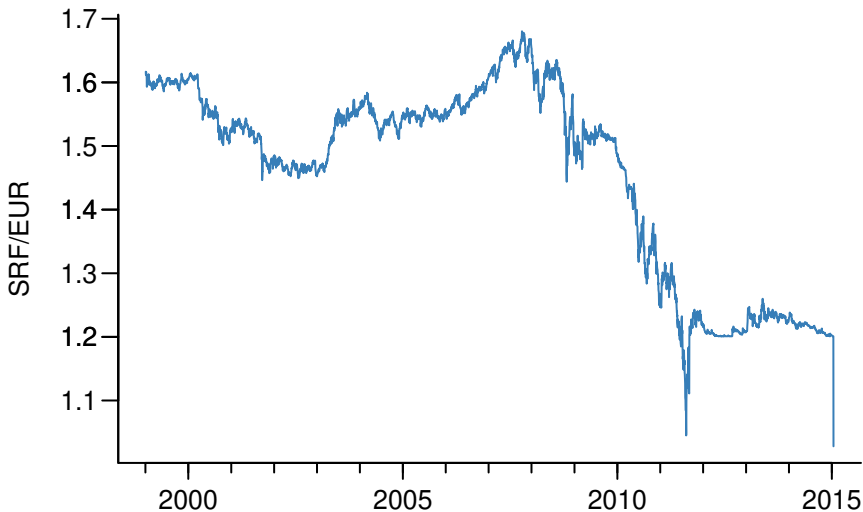
- In 1925, UK went back on the gold standard at pre-war rates
- France restored convertibility in 1926 at a devalued rate — an undervaluation of 15–20%
- France
 - export boom in France
 - gold flowed to France
- UK
 - balance of payments problems
 - recession
- Considerable friction between France and the UK
- France became increasingly uncompetitive, adjusted to a weak currency, found it difficult to re-adjust when over, causing significant political instability

The case of Switzerland

- Until the crisis the € exchange rate was about 1.6
- Then, Switzerland was seen as a safe haven and money flowed in
- Tried to fix the FX in 2011
- Gave in in January 2015

www.voxeu.org/article/what-swiss-fx-shock-says-about-risk-models

CHF/€



Why

- If one considers who owns the Swiss National Bank
- And some factors, perhaps
 - SNB dividend payments
 - Money supply
 - Reserves
 - Government bonds outstanding
- Loss to the SNB about CHF 50 million
- SNB has now \$750 billion in stocks, bonds and cash
- \$2.7 billion in Apple
- The SNB's profit last 2016 was SNB 24.5 billion (3,000 per Swiss resident)

Does it make sense to manipulate?

- The larger the country the less foreign markets matter
- Most consumption is domestic and because part of that is local
- Considerable empirical evidence that FX is not all that important for larger countries
 - Case study Brexit
- For a small country, the pass-through from FX to domestic prices can be very rapid
- Undermining benefits of manipulating FX
- While creating instability

Government can have reserves but private sector be indebted

- Recall the figure on foreign holding of US debt
- A lot of governments hold a large amount of foreign currency reserves
- While their corporates have also borrowed extensively in foreign currency
- The net position of the country might be good
- But unlikely the government will be using its reserves to bail out the corporate
- So the gross position signals imbalances and vulnerability

Where to invest and borrow

- Often best if savers invest in own country and currency
 - Eliminates currency risk (e.g. hot money and sudden stop)
- But at least 3 reasons not to
 1. Diversification for savers
 - why many EMEs simultaneously export and import capital
 2. Cost of borrowing
 3. Amount of credit

Who borrows

- Matters whether borrower is an exporter, earning in foreign currency
- Not advisable for domestically oriented firms or households to borrow abroad
 - whether directly in foreign currency from banks
 - or in domestic currency from domestic banks who borrow abroad
- Think of Asia 1998, and several European countries (e.g. Poland) before 2008
 - households and very small SMEs would borrow in foreign currency
 - caused significant pain for them and their banks in the crisis

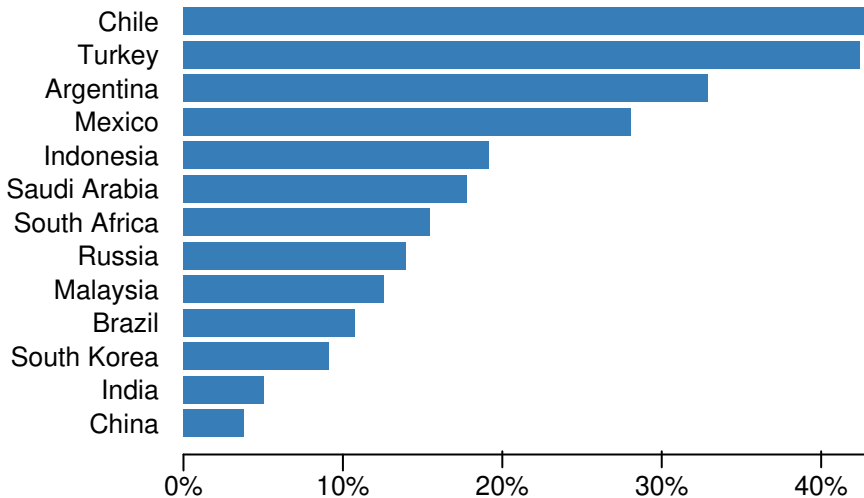
Global bank retrenchment

- The inflow mechanism has changed since the crises
- Before banks were the primary intermediary
 - e.g. NYC banks lending to domestic banks who lent to domestic agents
- But there has been a major retrenchment of global banks
- They have been leaving countries and reducing their operations
- And when not, may be required to establish separately capitalized subsidiaries

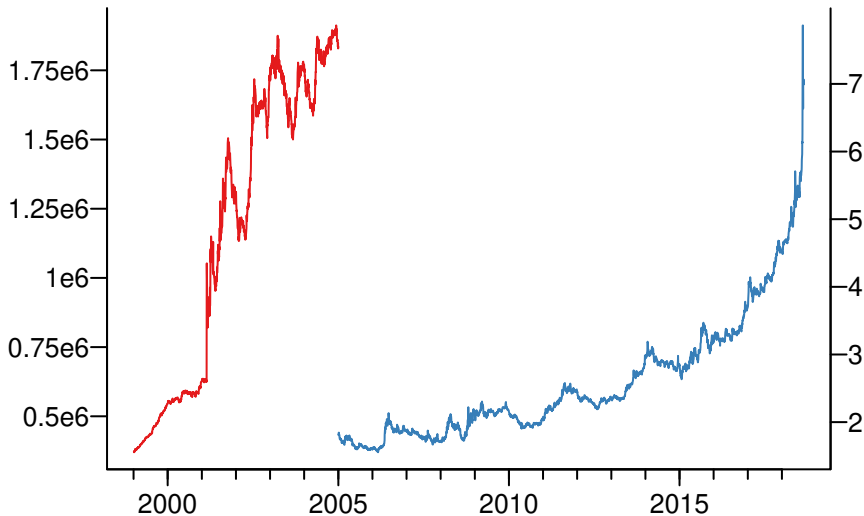
Financing from debt securities issuance

- Borrowers in EMEs have easier access to international capital markets than before
- Consequently, the debt issuance of EME corporate in offshore financial centers (like NYC) has increased rapidly
 1. Lower interest rates
 2. Positive feedback between inflows and FX appreciation
 3. Lower administrative, legal and tax costs
 4. Offshore markets are also more developed for sub-investment grade bonds
 5. Preferential tax system for foreign investors

Foreign currency debt exposure to GDP in 2019



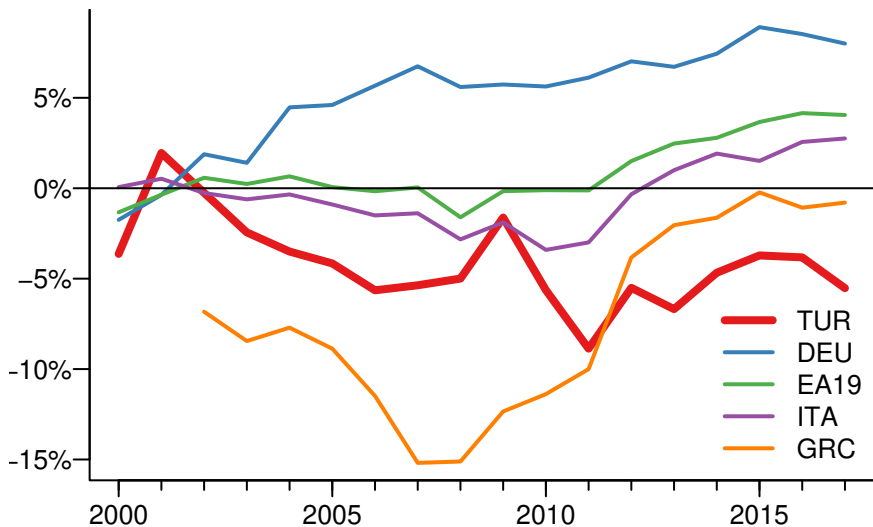
Turkish lira/Euro



Current account balance

- Net trade in goods and services, net earnings on cross-border investments, and net transfer payments
- Positive current account balance: a net lender to the rest of the world
- Negative current account balance: a net borrower from the rest of the world

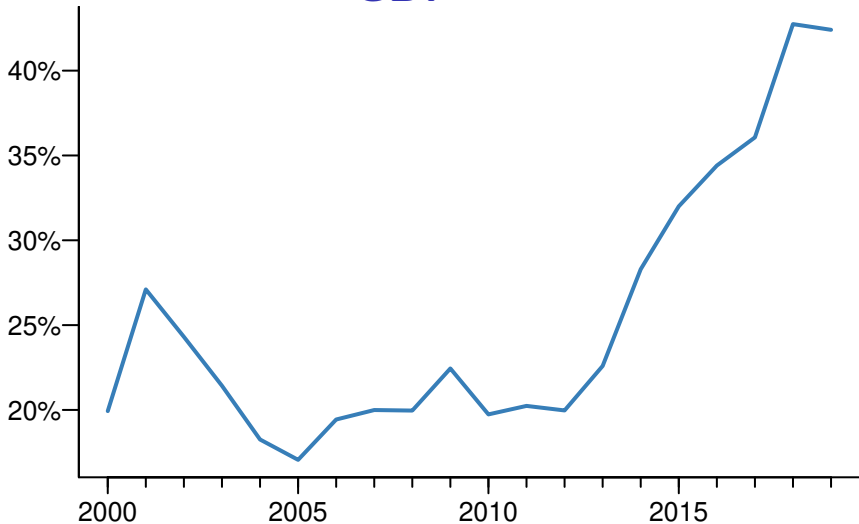
Current account balance/GDP



Recent policies

- Credit is increasingly directed
- Policy rate is very low as believed that high interest rates are inflationary
- Government and financial sector USD exposure rapidly increasing
- Vulnerability to FX

Turkey foreign currency debt exposure to GDP



Reserve currency

- The currency in which global transactions take place
- And the one countries hold as reserves
- Efficiency dictates it must be a single currency
- Was gold and sterling
- Now US dollar
- Will it be Renmimbi, Euro or bitcoin?

Advantages to the owner

- Major products priced in your own currency — eliminating currency risk
- *This does not matter*, contrary to popular belief
- Foreigners hold it as reserves — exchanging real goods for paper
- Firms (now in US) borrow from global markets in local currency
- Global transactions cleared via your systems (next slide)

The power of clearing

- All USD transactions are cleared via NY (Fed)
 - If Iran sells oil to China in USD, funds travel via NYC
- Denial of New York clearing a powerful tool
- Europe and India, amongst others have called for alternatives

What other countries think

- Transfers power to the reserve currency country
- Misbehavior like inflation or QE is tax on other countries' reserves
- But also expect the reserve currency country to behave transparently, credibly and fairly (see next slide)

FX swaps

- The Fed gives FX swap facilities to some of the central banks
- Especially important in crisis when entities in foreign countries clamor for currency — the US dollar
- Helps calm global liquidity crisis
- The US did this without question in 2008 and 2020
- Key credibility test on competing reserve currencies

Dollar as reserve currency

- Is it inevitable to have a single reserve currency, and does it have to be the dollar?
- Interest rates in the US are close to zero, and government debt at historical levels
- Economic growth is anaemic and running a trade deficit
- If the US did not have a reserve currency
 - it would likely experience a sharp depreciation in its currency
 - stimulating exporters and correcting the trade balance

- Because of the reserve status this is not happening
- Foreign countries directly intervene in the FX markets, to build up reserves and maintain the dollar rate of exchange
- So, global imbalances build up, other countries accumulate vast reserves and the dollar remains artificially high
- For the US however there is a way out of this — inflation
 1. depreciating its currency — stimulate exports
 2. reducing the real value of its debt — make the foreigners pay
- No wonder countries like China grumble at QE but there is not much they can do

Power

- Does holding US government debt give the Japanese, Chinese, Brazilian, Russian power over the US?
- No
- The US gets the power
- It can deflate the debt when it wants
- The other countries cannot sell without encouraging very large losses
- Which would not hurt the US much

The Chinese renminbi

- Reserve status of the dollar facilitates the Chinese undervaluation of the renminbi
- China bristles at other countries exercising control over it
- For this reason it is no surprise that the biggest champion of alternative reserve currencies is China
- With China the second largest economy in the world, if it were to surpass the United States, shouldn't the RMB become the next reserve currency?

What prevents that

- Chinese capital controls prevent the widespread global use of renminbi
- It would have to abolish capital controls and currency interventions
- Which would facilitate the transmission of global shocks to China
- It would have to become credible — seen as a fair and unquestioning steward of the reserve currency
- Highly unlikely the renminbi becomes reserve currency any time soon

Euro

- It is the currency of the biggest economic unit in the world
- With the recent difficulties facing the euro, unlikely to happen anytime soon
- Future of the euro no longer certain
- The European authorities have shown themselves to be poor stewards of a currency, and therefore unreliable as the owners of the future reserve currency

Cryptocurrencies

- The characteristics of bitcoin prevents it from becoming a reserve currency
- See later discussion

Math

The nominal exchange rate The price of one currency in terms of another, usually expressed as the domestic price of the foreign currency

$$e = 1.36 \frac{\$}{\text{€}} = 0.735 \frac{\text{€}}{\$}$$

Real exchange rate (RER) The real exchange rate is calculated as the nominal exchange rate adjusted for differences in price levels between countries:

$$\text{RER} = e \frac{P^*}{P}$$

Economist's BigMac analysis

Purchasing power parity (PPP)

Absolute PPP the exchange rate of two currencies results in equal purchasing power

$$e_t = \frac{P_t^*}{P_t}$$

Relative PPP the change in the nominal exchange rate should equal the price level differentials of two countries:

$$\frac{e_t - e_{t-1}}{e_{t-1}} = \frac{\frac{P_t - P_{t-1}}{P_{t-1}} - \frac{P_t^* - P_{t-1}^*}{P_{t-1}^*}}{1 + \frac{P_t^* - P_{t-1}^*}{P_{t-1}^*}}$$

Interest parity

Uncovered interest parity, UIP The expected movement in an exchange rate is equal to the differential between domestic and foreign interest rates

$$\frac{e_t^e - e_{t-1}}{e_{t-1}} = \frac{i_{t-1} - i_{t-1}^*}{1 + i_{t-1}^*}$$

Or approximately:

$$i_t = i_t^* + E_{t-1} \Delta e_t$$