

PubPol/Econ 541

Class 5

Exchange Rates

by

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Outline

- Exchange markets: What they are
- Supply and Demand
- Two Simple Theories
- Pegged Exchange Rates
- Exchange Regimes

Exchange Market

- Exchange rate is
 - Price of one currency in terms of another
 - E.g., \$/£ or £/\$



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Representative Exchange Rates for Selected Currencies

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Representative Exchange Rates		
Currency	Note	Value as of September 14, 2020
Chinese yuan		6.82970000
Euro	(1)	1.18760000
Japanese yen		106.15000000
U.K. pound	(1)	1.28790000
U.S. dollar		1.00000000

Notes:

These representative exchange rates, which are reported to the Fund by the issuing central bank, are expressed in terms of currency units per U.S. dollar, except for those indicated by (1) which are in terms of U.S. dollars per currency unit.

Pause for Discussion

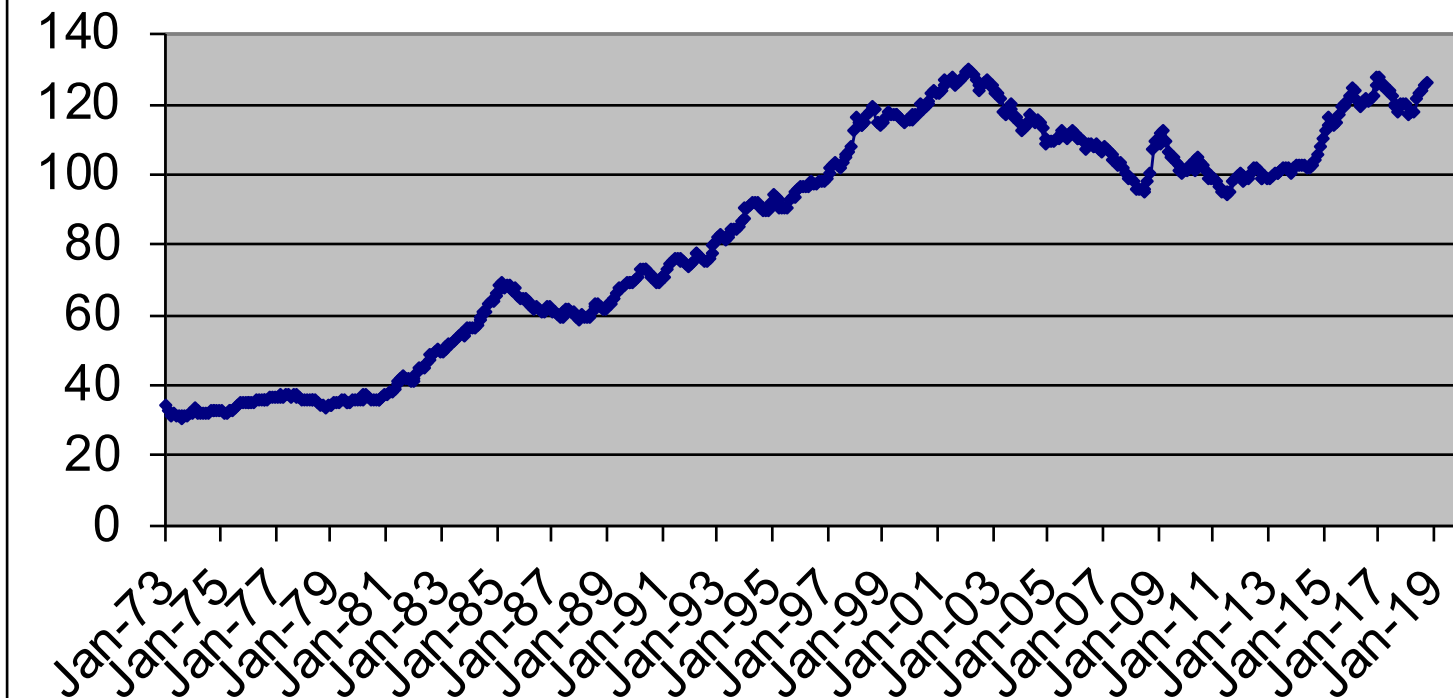
Questions

- Is an exchange rate the price of one country's goods in terms of another's, or the price of one country's assets in terms of another's?
- On what transactions are reported rates based?
- What hours of the day are the exchange markets open?

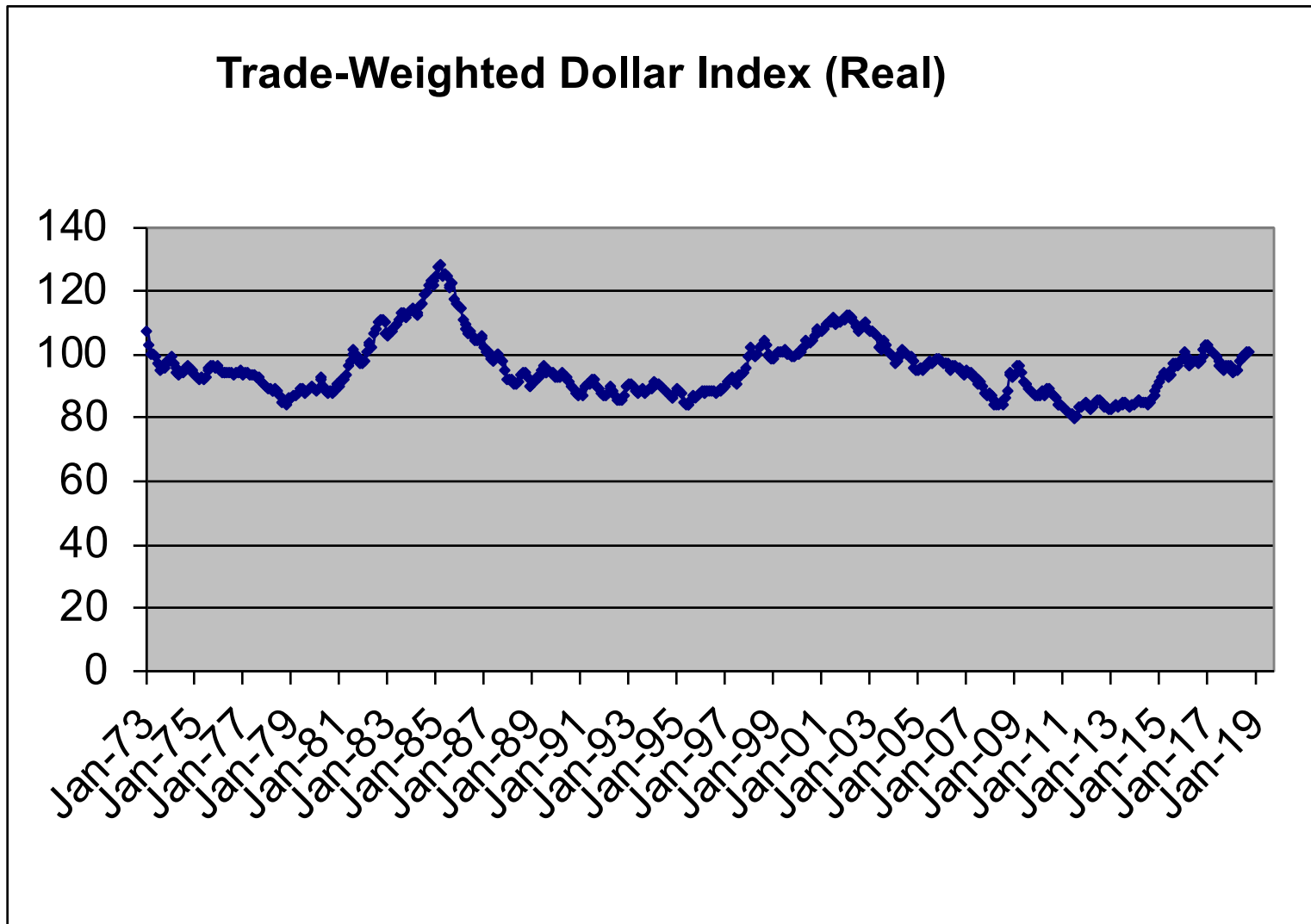
Exchange Market

- Types of exchange rate
 - Spot
 - Forward
 - Bilateral
 - Futures
 - Trade weighted
 - Real

Trade-Weighted Dollar Index (Nominal)



Source: Federal Reserve, "Broad Index" based on a large group of currencies, monthly data



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Exchange Market

- Who uses the exchange market
 - Traders
 - Travelers (but that's trade)
 - International borrowing, lending, and asset trade
 - Speculators
 - Hedgers
 - Arbitragers

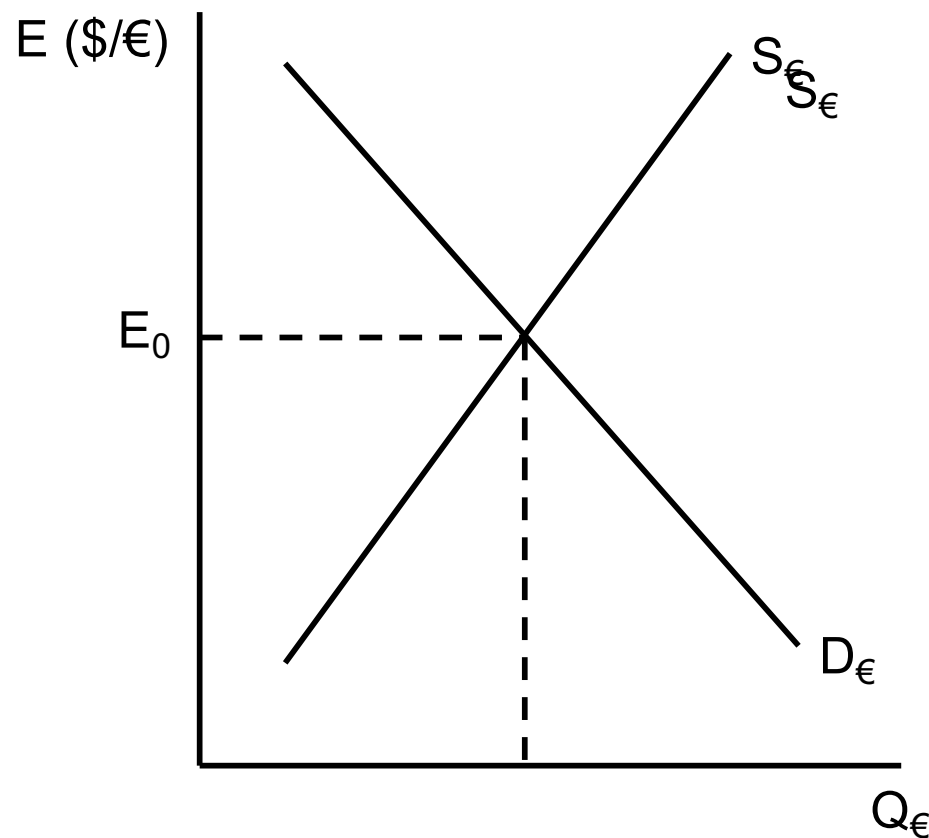
Pause for Discussion

Questions

- What is “arbitrage” in the foreign exchange market?
- What is “hedging” in the foreign exchange market?
- What role does the US dollar play in international finance?

Supply and Demand for Foreign Exchange

- Market Model:



Questions:

- Who demands ϵ ?
- Who supplies ϵ ?

Exchange Market

- Traders respond to
 - Prices of goods
 - Rise in home prices causes currency to fall
- Capital movements respond to
 - Interest rates
 - Rise in home interest rate causes currency to rise
 - Expectations
 - Expectation of any change causes that change

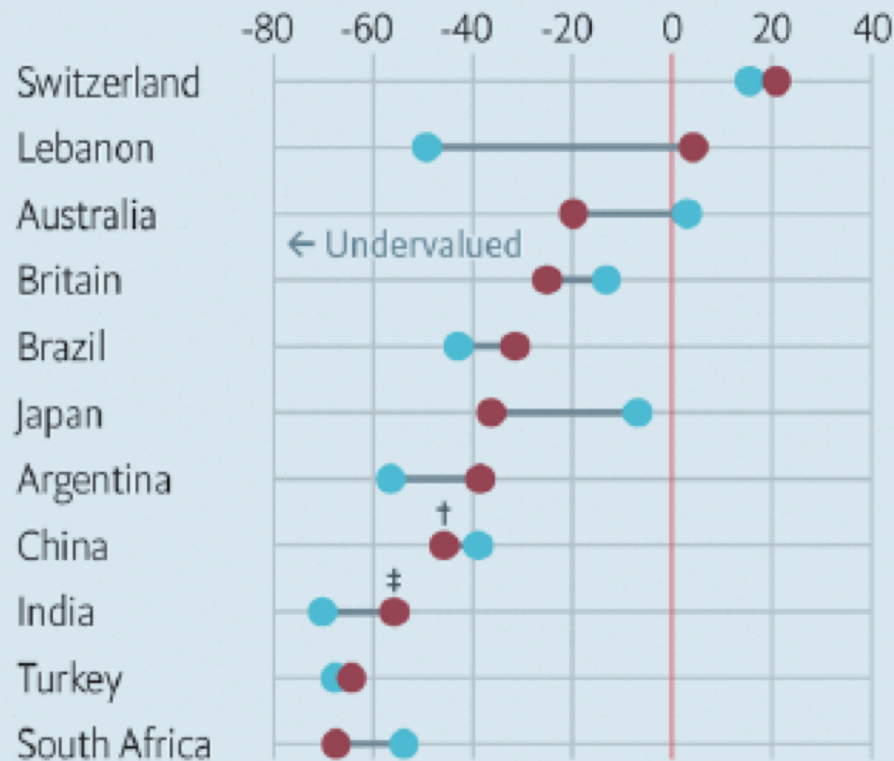
Two Simple Theories

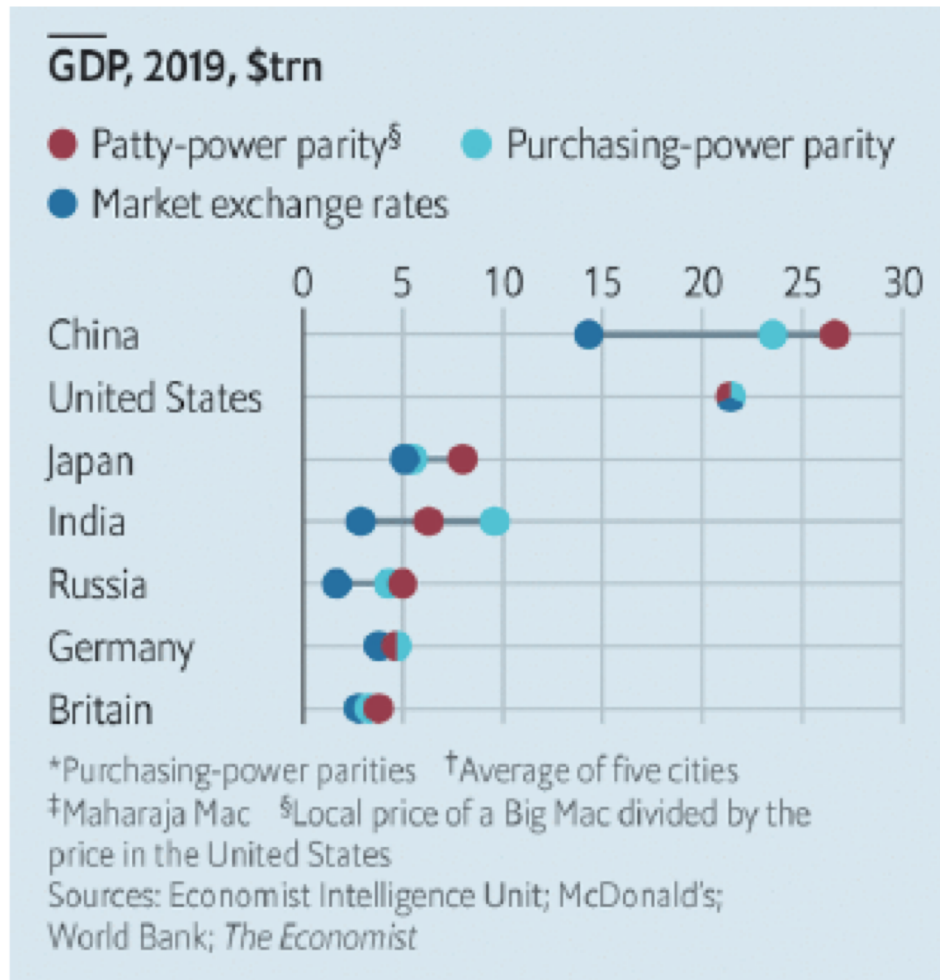
- Asset Theory
 - Simple: E is whatever it is expected to be
 - If it were not, its expected change would drive capital flows that would swamp the market
 - Works best in short run (but not useful)
- PPP = Purchasing Power Parity
 - Exchange rate reflects the prices of goods
 - See Big Mac Index
 - Works best in long run

The Big Mac index

Local currency under(-)/over(+) valuation against the dollar, %

● The Big Mac index July 2020 ● World Bank PPPs* 2019





The Economist

Pause for Discussion

Questions

- How does one know if a currency is over- or under-valued, based on the price of the Big Mac?
- Why is comparing prices across countries hard?
- Is China bigger than the US? Has it ever been?
- What caused Iran's inflation that led to a change?

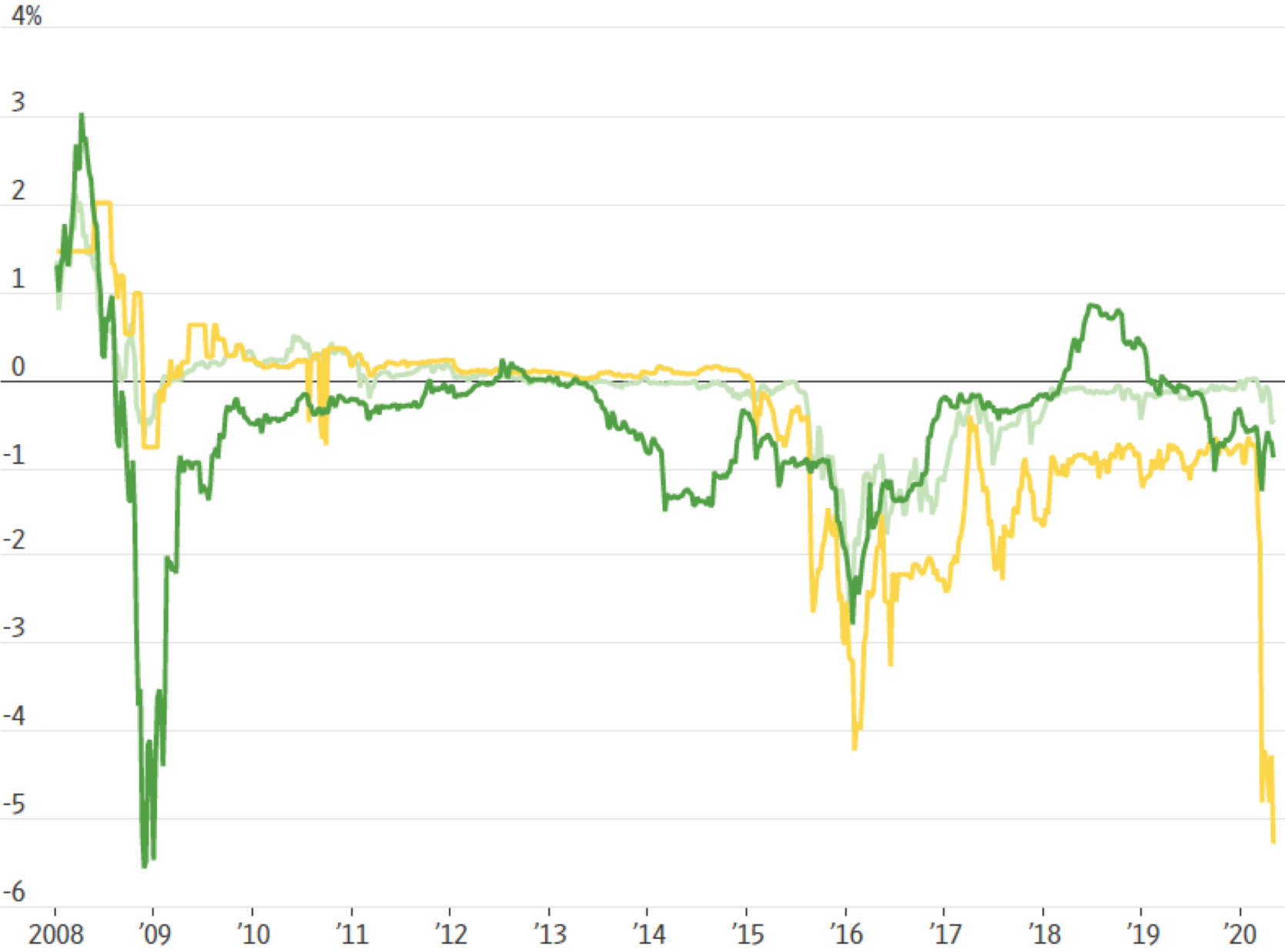
Pegged Exchange Rates

- Bretton-Woods System
 - Successor to the Gold Standard
 - Most currencies pegged to US \$
- How to peg
 - Need “reserves” of foreign currency
 - Use them to buy or sell own currency as needed
- Does it work? Yes and no



Saudi Arabia has pegged its currency, the riyal, to the U.S. dollar for decades.

Implied 12-month change against the dollar, via forward markets

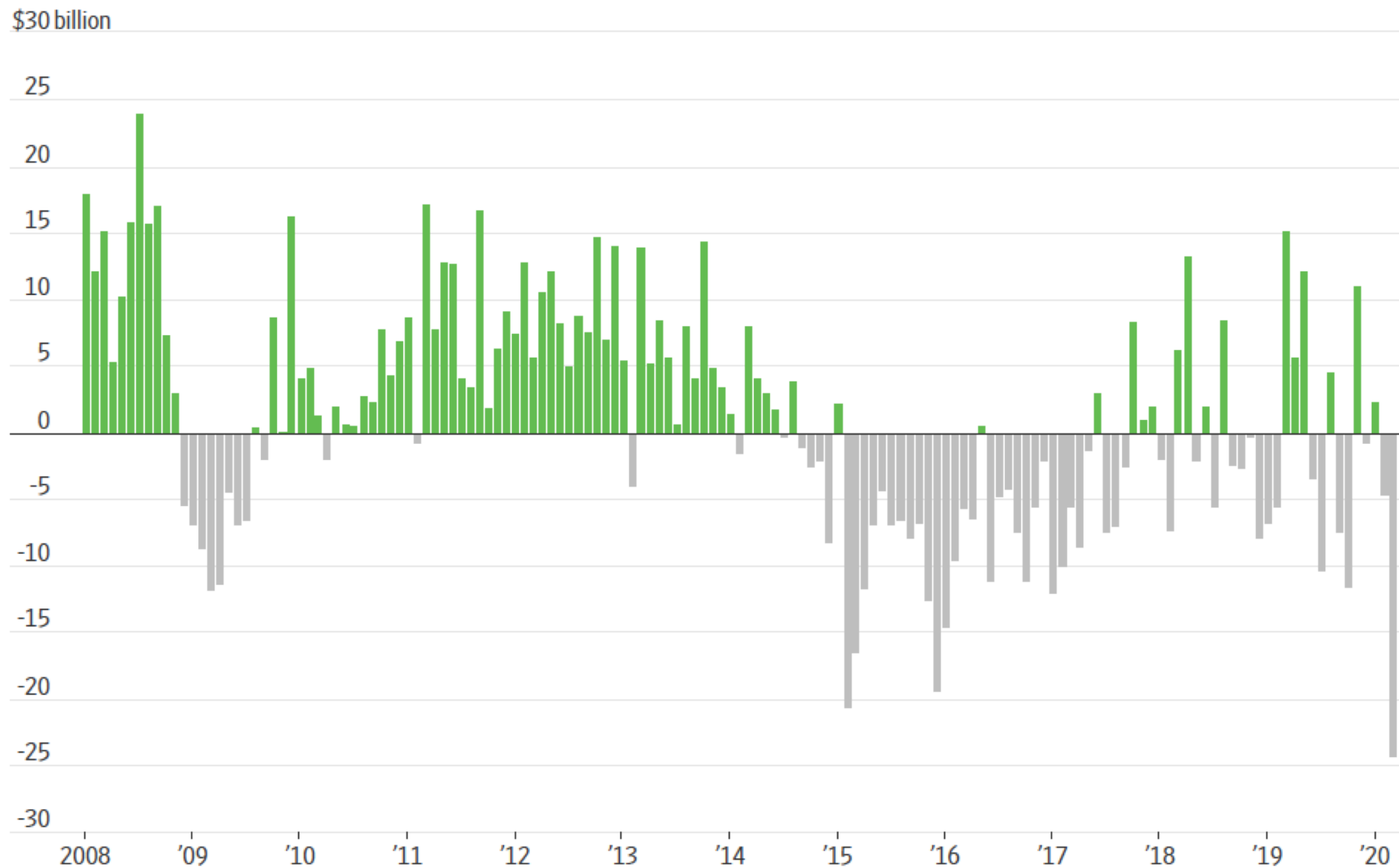


- Saudi riyal
- Kuwaiti dinar
- Omani rial

Source: ING

Screenshot

Change in Saudi Arabia's foreign exchange reserves, monthly



Source: Saudi Arabian Monetary Authority

Screenshot

Trump tariff threat thrusts China's currency back into the spotlight

Renminbi per dollar



Source: Bloomberg
© FT

Pause for Discussion

Questions

- What names and characteristics describe the three international monetary regimes that the *Economist* article describes, the last of which may be coming to an end?
- Why is currency stability so hard to achieve?
- What change is Iran making, and will it be simple?

Questions

- Why are markets expecting the Saudi and other currencies to fall? And how do we know that?
- Why do the countries resist letting their currencies fall?

Questions on Trump v China

- What action did Trump take in response to his claim that China was responsible for the pandemic?
- Why do Trump's threats against China cause its currency to fall?
- Has China been labelled a "currency manipulator"?
- What would China do if it wanted to "export itself out of the coronavirus crisis"?

