UNIVERSIDAD DE CANTABRIA

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International Business: a European Perspective

4. The Foreign Exchange Market

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Contents

Foreign Exchange

- Most countries of the world have their own currencies: Dollar, Euro, British Pound, etc.
- Trade between countries involves the exchange of different currencies.
- When, for example, European firms buy foreign goods, services, Euros must be exchanged for foreign currency.

Foreign Exchange

- **Spot transactions**
- **Forward transactions**
- When a currency increases in value: **appreciation**;
- When it falls in value: **depreciation**.

Foreign Exchange

- The foreign exchange market
  - Market where one buys (or sells) the currency of country A with the currency of country B
- A currency exchange rate
  - ratio of a unit of currency of country A to a unit of the currency of country B
- For example:
- $E_{\$/€}$= amount of US dollars per 1 euro
- $E_{€/\$}$= amount of euros per 1 US dollar
- $E_{£/€}$= amount of British pounds per 1 euro

The Foreign Exchange Market

- Currency conversion in the foreign exchange market
  - To complete transactions across borders
  - Tourism
  - A firm
    - Buys/sells goods and services in the other country's local currency
    - Uses the foreign exchange market to invest excess funds
- Is used to speculate on currency movements

Why Are Exchange Rates Important?

- Exchange rates are important because they affect the relative price of goods.

- The dollar price of Euroepean goods to an American is determined by the interaction of two factors: the price of European goods in euros and the euro/ dollar exchange rate.

Exchange Rates in the Long Run

- Exchange rates are determined by the interaction of supply and demand.
- There are important factors that affect supply and demand.
- Eg. Prices of goods and services.
- But many others.

Prices and Exchange Rates

- The law of one price:
  - Identical products sold in different countries must sell for the same price when their price is expressed in the same currency
- Purchasing Power Parity (PPP):
  - If the law of one price holds for all goods and services, the PPP exchange rate can be found by comparing the prices of identical products in different countries
  - Changes in relative prices will change exchange rates...

Law of one price

$$P^i_{US} = (E_{\$/€}) \times (P^i_E)$$
$$P^i_{US} / P^i_E = E_{\$/€}$$

where: P^i_{US} is the dollar price of good *i* when sold in the U.S.
P^i_E is the corresponding euro price in Europe
$E_{\$/€}$ is the dollar/euro exchange rate

Source: Krugman and Obstfeld (2003)

Theory of Purchasing Power Parity

It compares average prices across countries.

It predicts a dollar/euro exchange rate of:

$$E_{\$/€} = P_{US}/P_{E}$$

where: P_{US} is the dollar price of a reference commodity basket in US

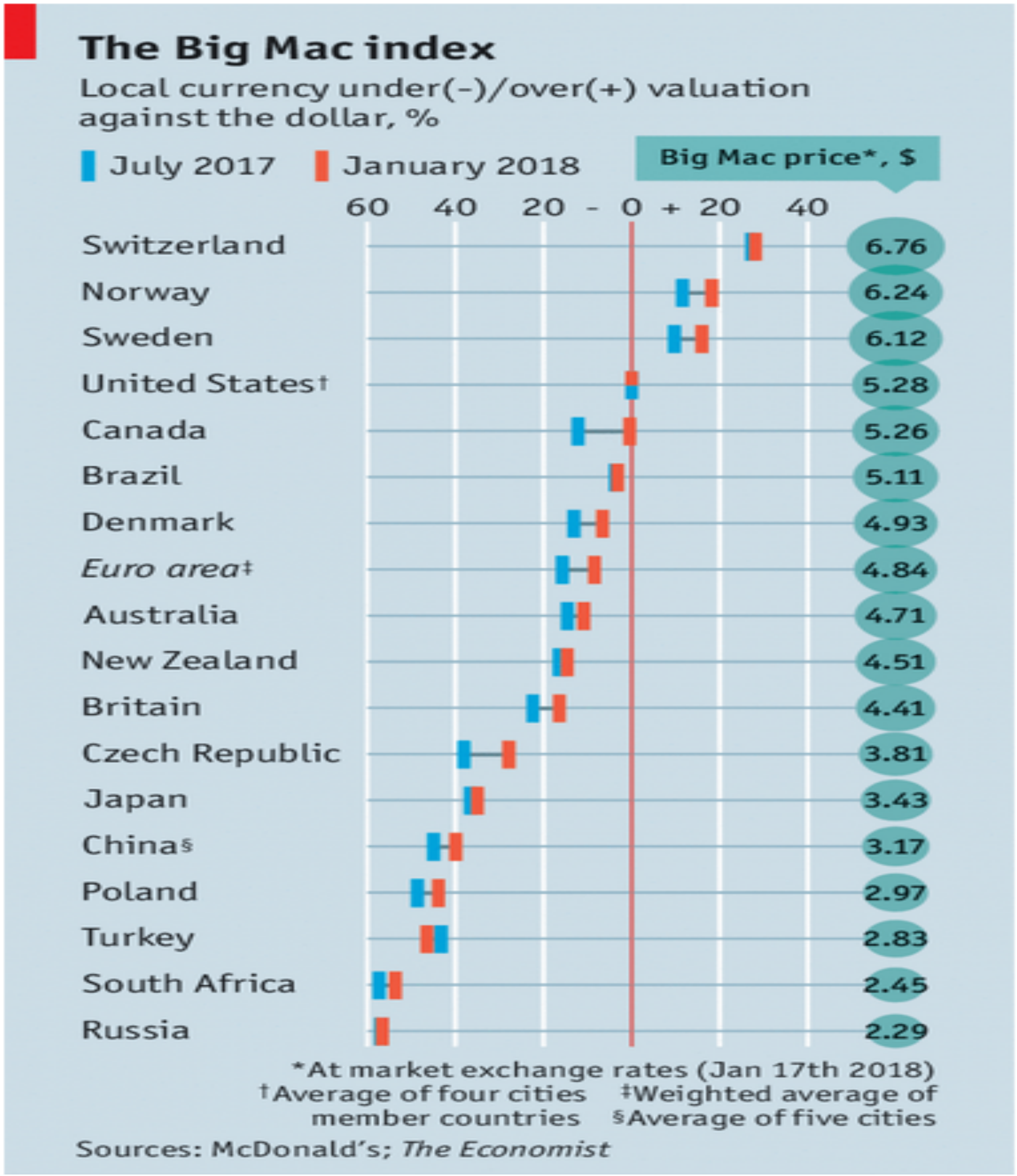
P_E is the euro price of the same basket in Europe

Source: Krugman and Obstfeld (2003)

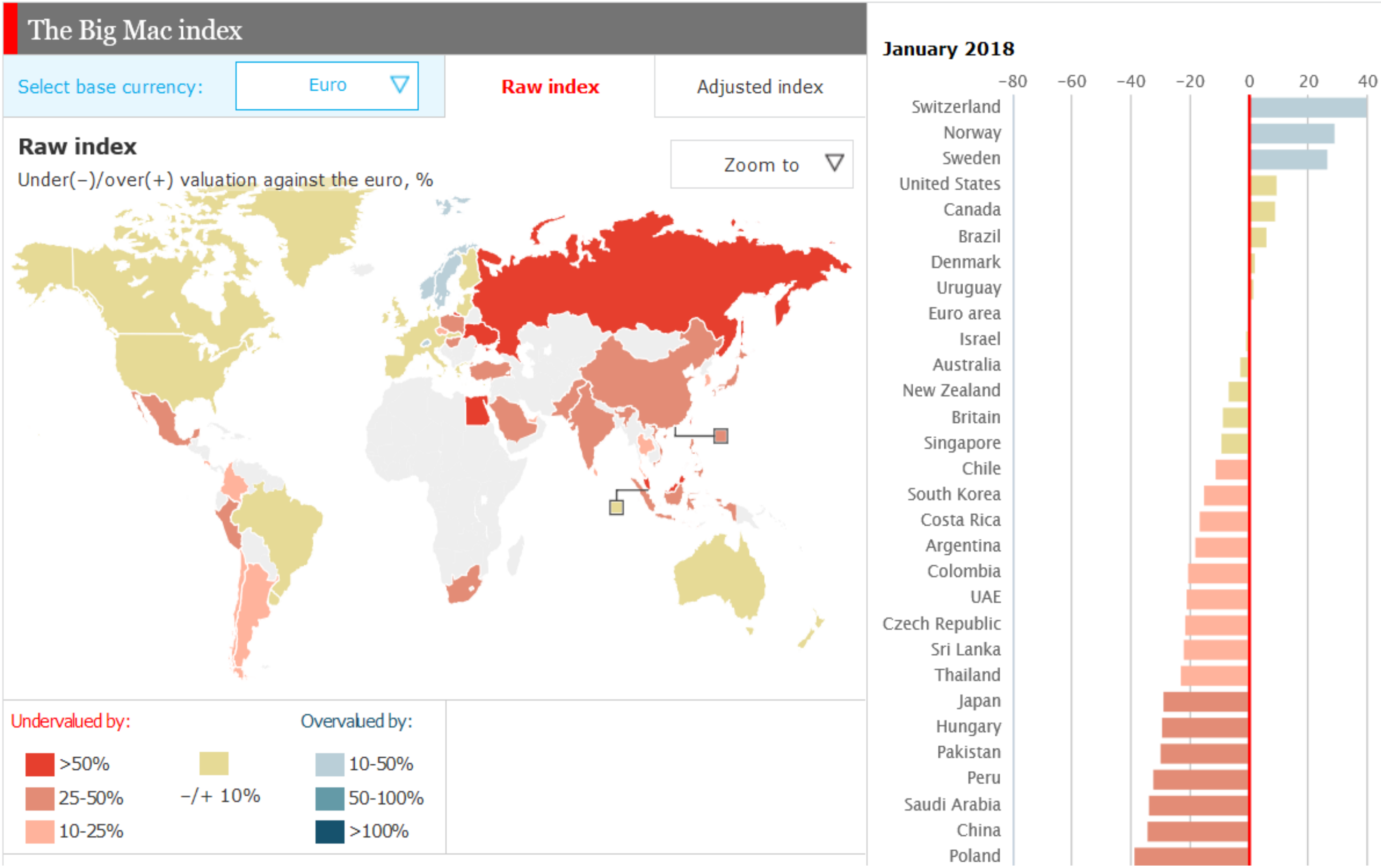
Empirical tests of the PPP theory. The Big Mac index

- The Big Mac index was invented by The Economist in 1986 as a light hearted guide to whether currencies are at their "correct" value.
- https://www.economist.com/content/big-mac-index

It is based on the theory of PPP the notion that in the long run exchange rates should move towards the rate that would equalise the prices of an identical basket of goods and services (in this case, a burger) in any two countries.



Source: The Economist



Source: The Economist

Why the Theory of Purchasing Power Parity Cannot Fully Explain Exchange Rates

- The key assumptions for the PPP to hold is that all goods are identical in both countries and that transportation costs and trade barriers are very low.
- But…are those reasonable assumptions?

Factors That Affect Exchange Rates in the Long Run

- In the long run, four major factors affect the exchange rate: **relative price levels**, **tariffs and quotas**, **preferences for domestic versus foreign goods**, and **productivity**.
- The basic reasoning proceeds along the following lines:
- Anything that increases the demand for domestically produced goods that are traded relative to foreign traded goods tends to appreciate the domestic currency because domestic goods will continue to sell well even when the value of the domestic currency is higher.
- Similarly, anything that increases the demand for foreign goods relative to domestic goods tends to depreciate the domestic currency.

Factors That Affect Exchange Rates in the Long Run

- **A) Relative Price Levels:**
  - In line with PPP theory, when e.g. prices of European goods rise , the demand for European goods falls and the Euro tends to depreciate.
  - By contrast, if prices of Japanese goods rise so that the relative prices of European goods fall, the demand for European goods increases, and the Euro tends to appreciate.

Factors That Affect Exchange Rates in the Long Run

- **B) Trade Barriers to free trade**
  - such as tariffs and quotas can affect the exchange rate.
  - Suppose that the EU increases its tariff on foreign aluminum.
  - This increase in tariffs increase the demand for European aluminum, and the Euro tends to appreciate.
  - Increasing trade barriers causes a country ’s currency to appreciate in the long run.

Factors That Affect Exchange Rates in the Long Run

- **C) Preferences for Domestic Versus Foreign Goods**
  - Increased demand for a country 's exports causes its currency to appreciate in the long run;
  - Increased demand for imports causes the domestic currency to depreciate.

Factors That Affect Exchange Rates in the Long Run

- **C) Productivity**
  - Higher productivity, therefore, is associated with a decline in the price of domestic goods relative to foreign goods.
  - Hence, the demand for traded domestic goods rises, and the domestic currency tends to appreciate.

Factors That Affect Exchange Rates in the Long Run

TABLE 15.1 SUMMARY Summary Factors That Affect Exchange Rates in the Long Run

Factor	Change in Factor	Response of the Exchange Rate, *E*
Domestic price level†	c	T
Trade barriers†	c	c
Import demand	c	T
Export demand	c	c
Productivity†	c	c

†Relative to other countries.
*Units of foreign currency per dollar: c indicates domestic currency appreciation; T, depreciation.

Note: Only increases (c) in the factors are shown; the effects of decreases in the variables on the exchange rate are the opposite of those indicated in the "Response" column.

Source: Hill (2014)

Exchange Rate Forecasting

- The efficient market school
  - Prices reflect all available public information
- The inefficient market school
  - Prices do not reflect all available public information
- Approaches to forecasting future movements
  - Fundamental analysis: econometric models based on economic theory
  - Technical analysis: extrapolation/interpretation of past trends

References

- Krugman, P. R. and Obsfeld (2003). *International economics: Theory and policy*, 6th edition. Pearson Education India.
- Hill, Charles W. L. (2014): *International Business. Competing in the global marketplace, 10th edition*. Emerald Group Publishing Limited.