Lecture 7: Benefits of openness (topics)

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Trinity, 2019

Disclaimer

The views expressed in this presentation, and all errors and omissions, should be regarded as those solely of the authors, and are not necessarily those of the Federal Reserve Bank of San Francisco, the Federal Reserve Board of Governors or the Federal Reserve System.

Another disclaimer

- Due to extra time spent on global financial crisis, we have compacted the last two lectures and emphasized the oil/fracking topics
- We will now touch on some of the benefits of openness (financial and trade)
- Specifically we (briefly) discuss
  - Damage from protectionism (timely...)
  - Diversification and 'home bias'
- It's easy to concentrate on 'crises and bad stuff' when discussing international finance, but there are enormous opportunities that (likely more than) offset these

Damage from protectionism

Recent tensions in trade

- U.S. trade-wars/tensions (especially with China) under Trump
  - Useful list/timeline from the BBC *here*
- Brexit and difficulties with the 'European project'

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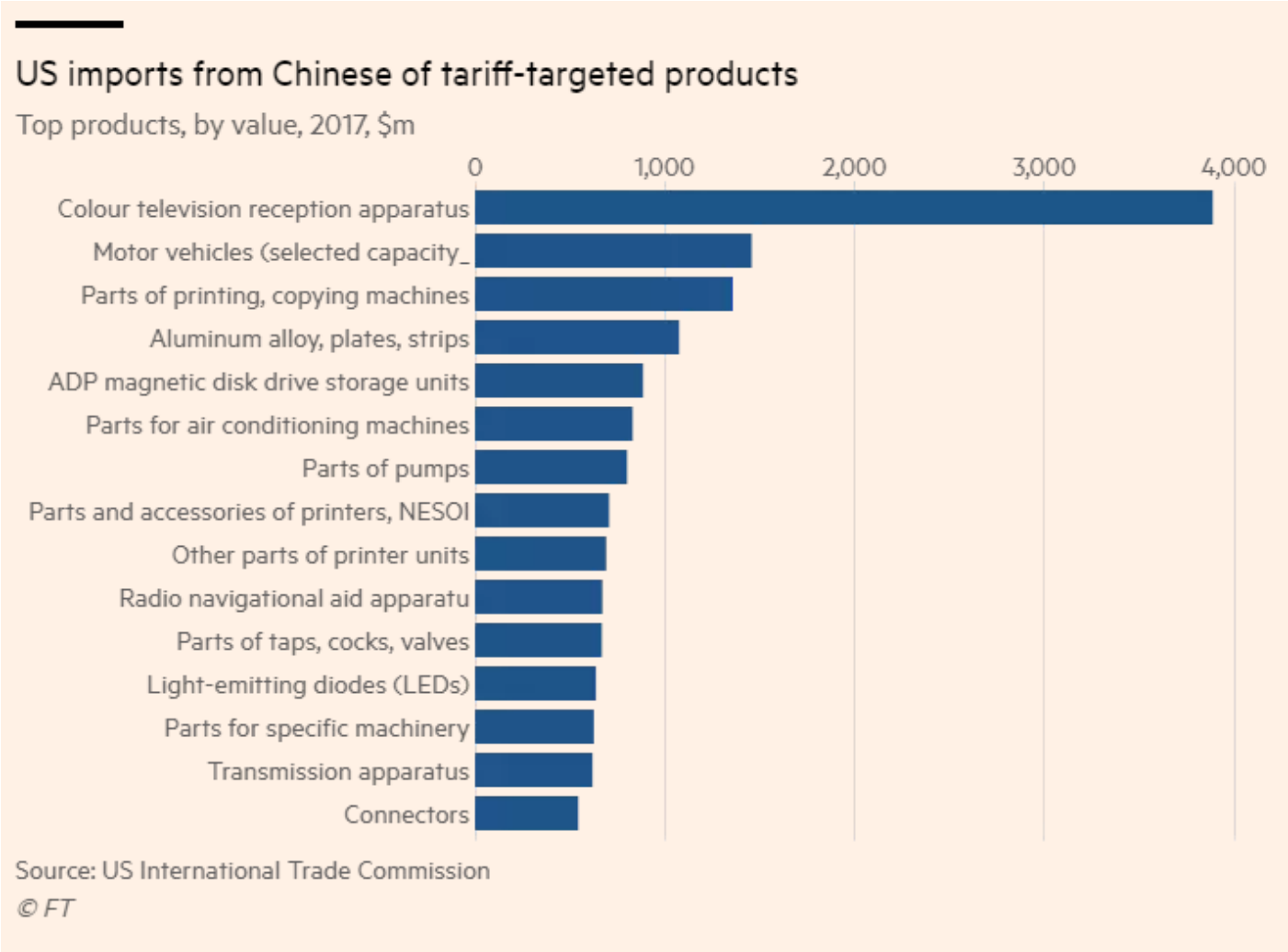
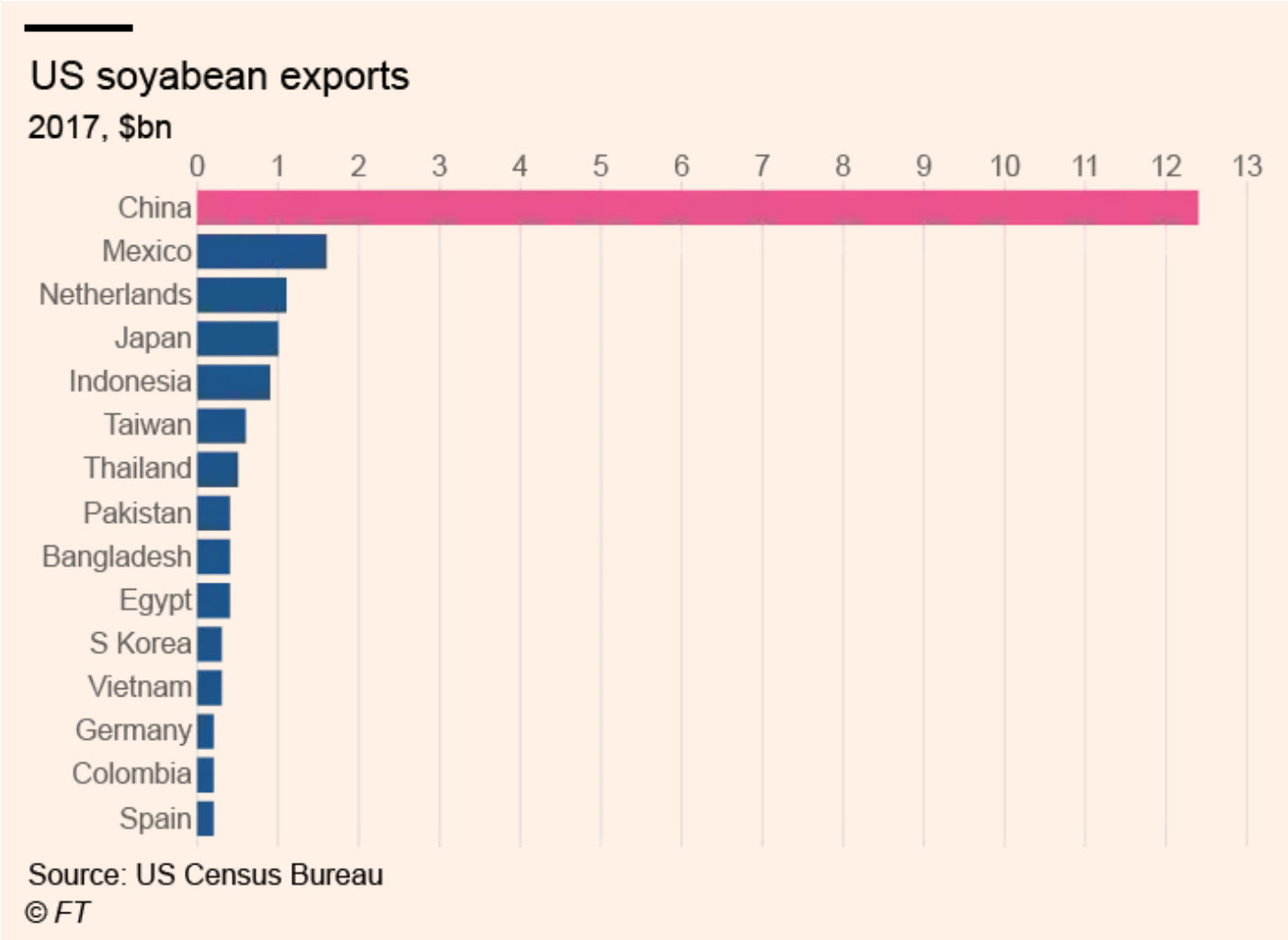
U.S. tariffs on China



(Some) U.S. tariffs imposed on Chinese goods. Source: FT.com (2018) subscriber link `https://on.ft.com/2Hzs47d`

Chinese tariffs on U.S.



Chinese targeting of soybeans reflects their importance as a purchaser of US output. Source: FT.com (2018) subscriber link `https://on.ft.com/2Hzs47d`

Possible concerns...

- General theory on deadweight loss from tariffs, price increases for average person vs. benefits for a politically connected minority
  - See any textbooks
  - See Frankel and Romer (1999), Schmukler and Abraham (2017), Engel and Rogers (1996) on reading list
  - Also see interesting ECB article (here) and Riksbank piece (here)
- Global value chain dispersion across countries means that tariffs on intermediates (e.g. steel) can harm U.S. firms (or U.S. based) importing from abroad
  - See this VOX piece (here) for one take
  - And this OECD brief (here)
- U.S. policy partly stems from (some would say dubious) Chinese behavior regarding intellectual property rights / industrial policy - but also from exchange rate policy and FDI
  - This may be a double edged sword...

Chinese tariffs on U.S.

Home bias

Home bias puzzle

- Abstracting from capital frictions, investors should hold diversified portfolios to the extent that only systemic risks remain and their degree of risk exposure depends on their risk tolerance
- Since foreign equities (and other asset classes) provide substantial diversification benefits (from imperfect or even negative correlation) predicted portfolios have large shares devoted to them
- Historically, however, this has not been observed (French and Poterba, 1981)
- 'Improvement' but still a puzzle (especially in EMEs) *despite enormous recent liberalization*
- In 2007 U.S. investors held $> 80\%$ of portfolio in U.S. equities ($>>$ share of U.S. in world portfolio) - Coeurdacier and Rey (2013)
- CPI survey $\Rightarrow$ proportion in foreign equities - Cooper *et al* (2013)
  - 2010: 22% US, 24% Can, 49% Ger, and 39% UK
  - 1997: 10% US, 11% Can, 18% Ger, and 22% UK

Home bias puzzle

TABLE 1
HOME BIAS IN EQUITIES IN 2008 FOR SELECTED COUNTRIES

Source country	Domestic market in % of world market capitalization (1)	Share of portfolio in domestic equity in % (2)	Degree of equity home bias $= EHB_i$ (3)
Australia	1.8	76.1	0.76
Brazil	1.6	98.6	0.99
China	7.8	99.2	0.99
Canada	2.7	80.2	0.80
Euro Area	13.5	56.7	0.50
Japan	8.9	73.5	0.71
South Africa	1.4	87.8	0.88
South Korea	1.4	88.5	0.88
Sweden	0.7	43.6	0.43
Switzerland	2.3	50.9	0.50
United Kingdom	5.1	54.5	0.52
United States	32.6	77.2	0.66

Note: For Euro Area countries, within Euro Area cross-border equity holdings are considered as Foreign Equity Holdings.

Sources: Authors' calculations. International Financial Statistics, Consumer Portfolio Investment Survey and World Federation of Exchange.

Home bias across countries. Source: Coeurdacier and Rey (2013)

Home bias puzzle

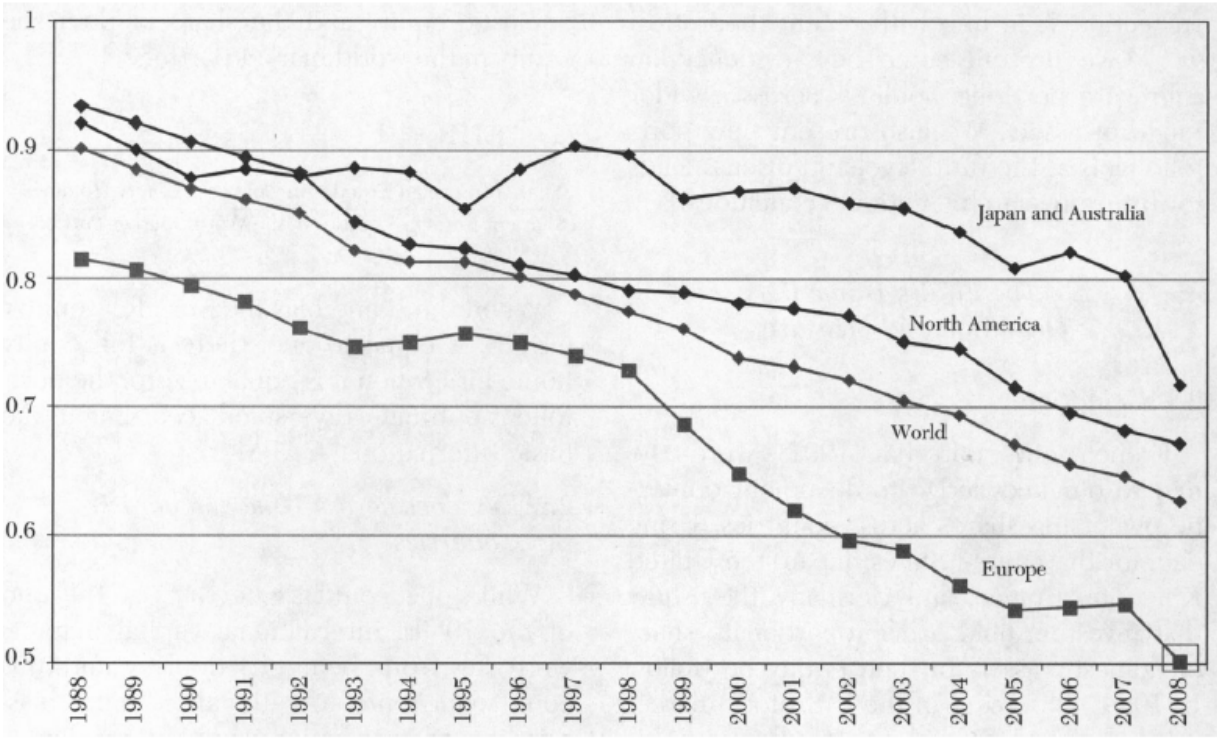


Figure 1. Home Bias in Equities Measures across Developed Countries

Note: The country measure EHB_i is market capitalization-weighted for each region.

Sources: Authors' calculations. International Financial Statistics and World Federation of Exchanges Database. Countries: *Australia and Japan*; *Europe* (Austria, Belgium, Denmark, Finland, France, Germany, Italy, Netherlands, Spain, Sweden, Switzerland, United Kingdom); *North America* (Canada and United States).

Home bias across countries, over time. Source: Coeurdacier and Rey (2013)

Home bias puzzle

- Some debate over measurement (see OR, ch. 5.3)
  - Lessened (slightly) if take account of shares in domestic-located multinationals (Mitra-Stiff, 1995)
  - Direct FDI also likely reduces it (relative to equity holdings) for developed economies (Tesar and Werner, 1995)
  - Bias also smaller for bonds, for various countries (Folkerts-Landau and Goldstein, 1994)
- Nevertheless, still regarded as a puzzle (and Baxter and Jermann (1997) suggest it's worse if one considers human capital investment)

Home bias puzzle - simple example

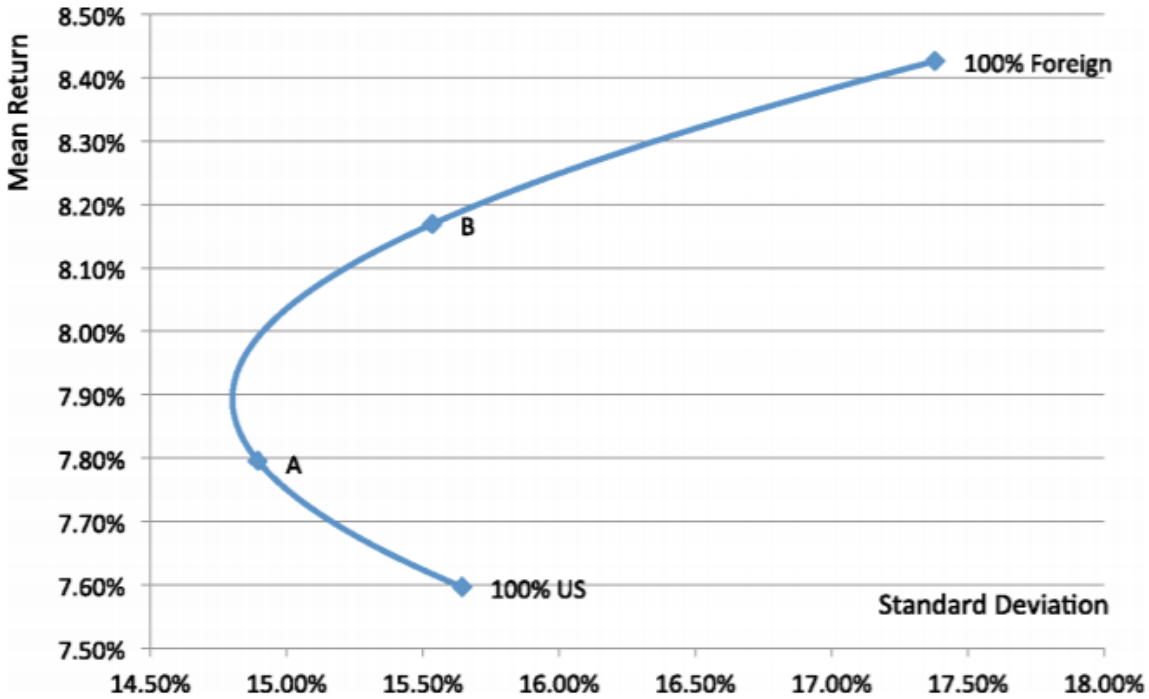


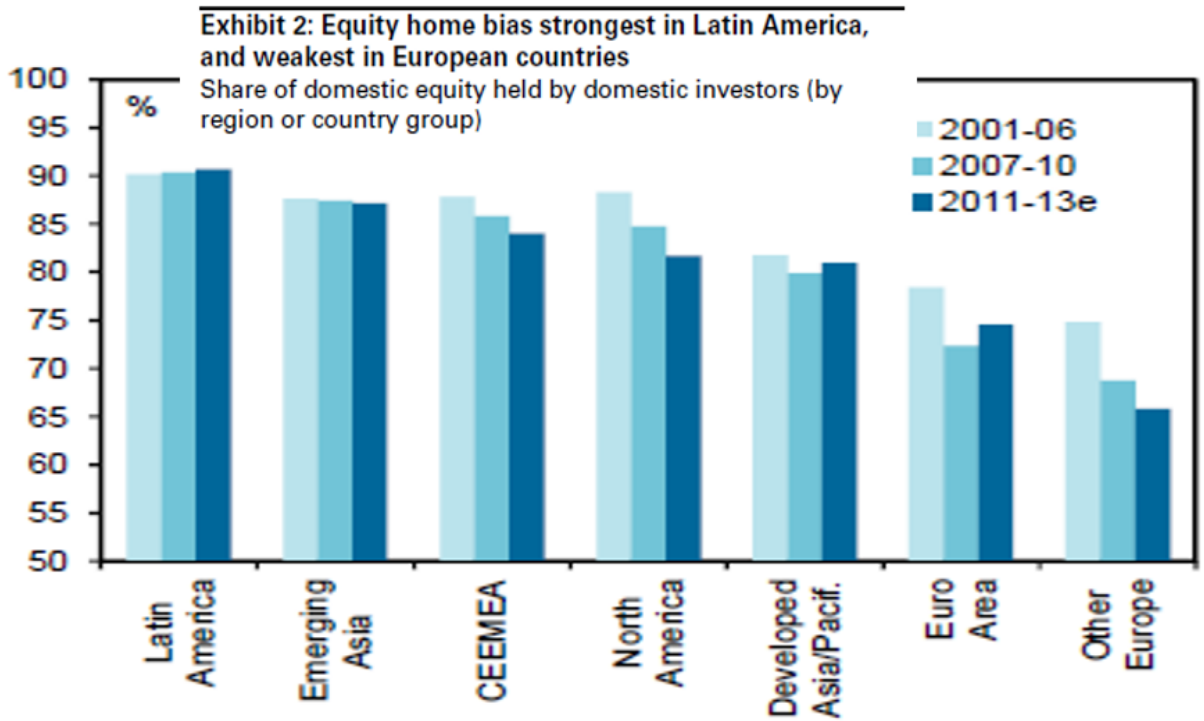
Fig. 1.1 Efficient frontier U.S.–Non-U.S. portfolio.
We plot the mean and standard deviation of annualized monthly returns, estimated over January 1970 to December 2011, for various convex combinations of a purely U.S. portfolio and a purely foreign one. Point A is the U.S.' actually chosen mix. Point B on the curve represents a portfolio that consists of 71% foreign equities and has the same standard deviations as the pure U.S. portfolio.

Mean variance frontier in two portfolio analysis (MSCI US Index and MSCI World ex. US Index). Source: Cooper *et al* (2013)

Home bias puzzle - simple example

- Mixed porfolio, B, pays 161*bp* more than purely U.S. portfolio, for same standard deviation
- Even moving to the (still inefficient) point, A, with 22% foreign improve *both* mean and standard deviation
- Simplified *ex post* analysis with various empirical problems (noted in Cooper *et al*) but gets the point across
- Bearing risk is *costly* - sharing risk away is *welfare improving*, we want minimal variation in marginal utility across time and states, subject to constraints

Home bias puzzle - variation over time and regions



Mean variance frontier in two portfolio analysis (MSCI US Index and MSCI World ex. US Index). Source: Frankel - portfolio balance lecture notes; Goldman Sachs

Home bias puzzle - variation over time and regions

- Emerging Asia/Latin America particularly afflicted
- Notice substantial improvement in Euro area though some reversion post-crisis (recall earlier lecture)
- Improvement in developed economies suggestive of reduce costs through financial liberalization, harmonization and, in Euro area, single currency and associated schemes
- Investments such as globally diversified mutual funds / ETFs likely allowing more retail investors to diversify - also hints at a cost story
- Lack of improvement in emerging economies and still substantial HB in developed, despite cost declines, suggests other factors at play too

Possible causes

- Discussed thoroughly in Coeurdacier and Rey (2013) - on reading list (not time to cover here)
  - Hedging motives
  - Transaction costs
  - Information / unfamiliarity
  - Behavioral
- Most (though maybe not behavioral) can be reduced or eliminated by greater openness/integration

Final note on interesting new research

- Maggiori, Neiman and Schreger (2018) offers a fascinating new perspective
- Four main findings:
  1. Investors' *bond* portfolios exhibit strong home-**currency** bias as they disproportionately invest in bonds denominated in their own country's currency.
     - "In fact, given the currency of denomination of a bond, knowledge of the issuer's nationality – the focus of a large and influential literature on home bias – adds very little information for predicting the investor's nationality."
  2. "In each country, a small number of large firms issue debt denominated in foreign currency and borrow from foreigners. By contrast, a large number of medium or smaller sized firms issue bonds only in the local currency (LC) and do not borrow substantially from foreigners."

Final note on interesting new research

- Maggiori, Neiman and Schreger (2018) offers a fascinating new perspective (cont.)
- Four main findings:
  3. "[T]he United States is the exception to the above patterns, with global investors uniquely willing to hold US dollars. In addition to their own currencies, foreigners invest a substantial portion of their portfolio in dollar-denominated securities, what we dub an international-currency bias, when they invest in all destination countries."
  4. "[W]e uncover a striking shift in the time-series of global portfolios. The US dollar appears today to be the world's only international currency. As recently as ten years ago, however, this was not the case. While the dollar was the currency of denomination for about 45 percent of global cross-border holdings of corporate debt in our data in 2005, the euro also accounted for a substantial amount, about 35 percent. These shares were essentially stable until the global financial crisis of 2008, after which the euro's share rapidly declined to below 20 percent, while the dollar's share rose to above 60 percent."