Interest and E Rates and K-Markets and Flows

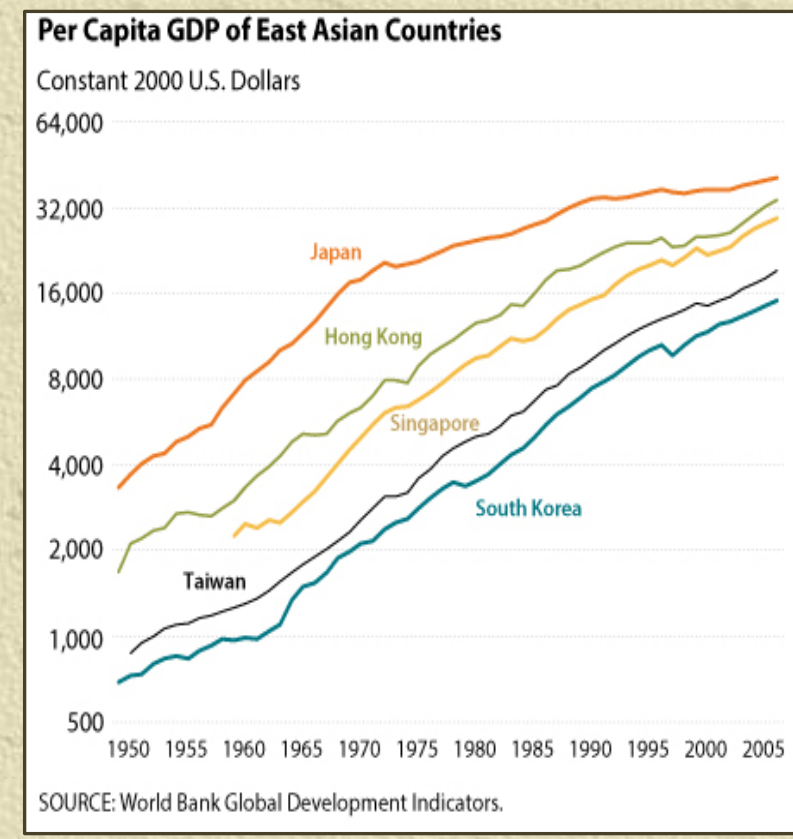
Indicator 2	Theory	Practice
Capital flows * Degree of mobility * Direction of flows * Correlation with %ΔGDP	In a world of perfectly mobile K, capital flows from where it is abundant to where it is scarce and where returns are highest (poor countries). Convergence in returns, factor prices, output and income.	Since 2000, China and Asia, more generally, lent to the US at very low interest rates, while sacrificing consumption at home. K-mobility does not imply convergence.

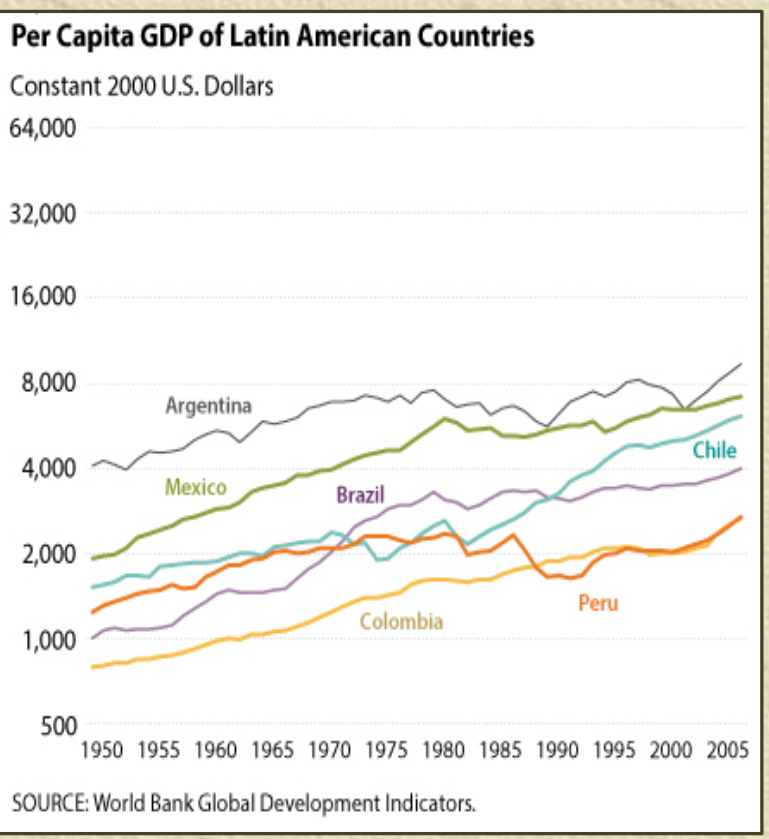
- Lucas paradox of K flows, direction and magnitude (Lucas 1990)
  - Direction of flows
    - FDI flows from developed to developing economies
    - Financial K does not behave as per theory
  - Magnitude of flows
    - K-flows do not always flow to where growth is higher
    - Asset-liability not correlated with GDP growth

IMF, "The Paradox of capital", Finance and Development, Mar 2007 (44:1).

Interest and E Rates and K-Markets and Flows

- Little K-inflow into E Asia between 1950-80 despite fast GDP growth and high K prodvty
- Considerable K flowed into Latin America despite its slower growth and low K prodvty





Federal Reserve Bank of St. Louis, "The direction of capital flows", Economic Synopses, no. 22, Oct 2016.

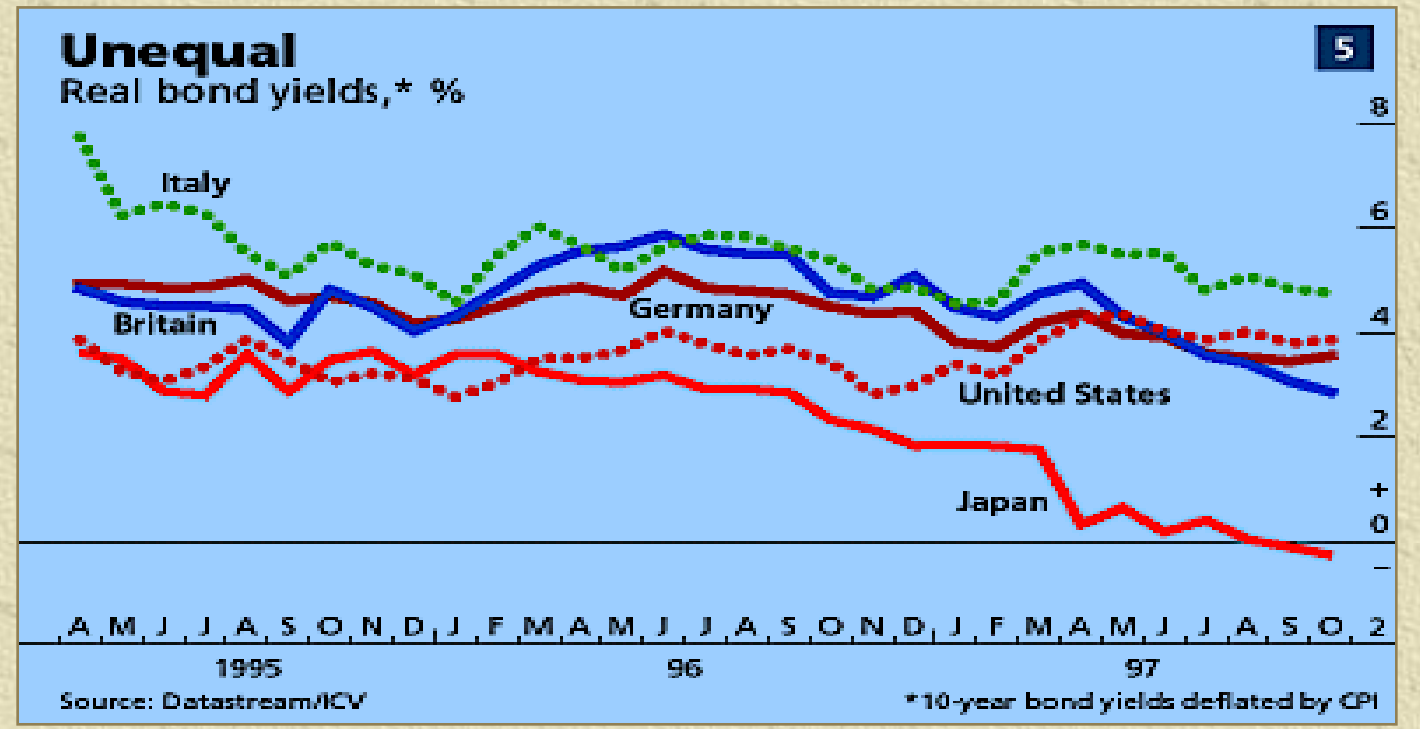
Interest and E Rates and K-Markets and Flows

Indicator 3	Theory	Practice
Covered interest rate arbitrage	Capital markets are integrated such that riskless arbitrage opportunities do not exist.	There are a lack of arbitrage opportunities, but that does not imply that a global capital market exists.

- Covered interest arbitrage holds for bond, not all assets
  - Assets not perfect substitutes
  - Risk differ and expectations matter
  - Tax rates differ; K controls

Interest and E Rates and K-Markets and Flows

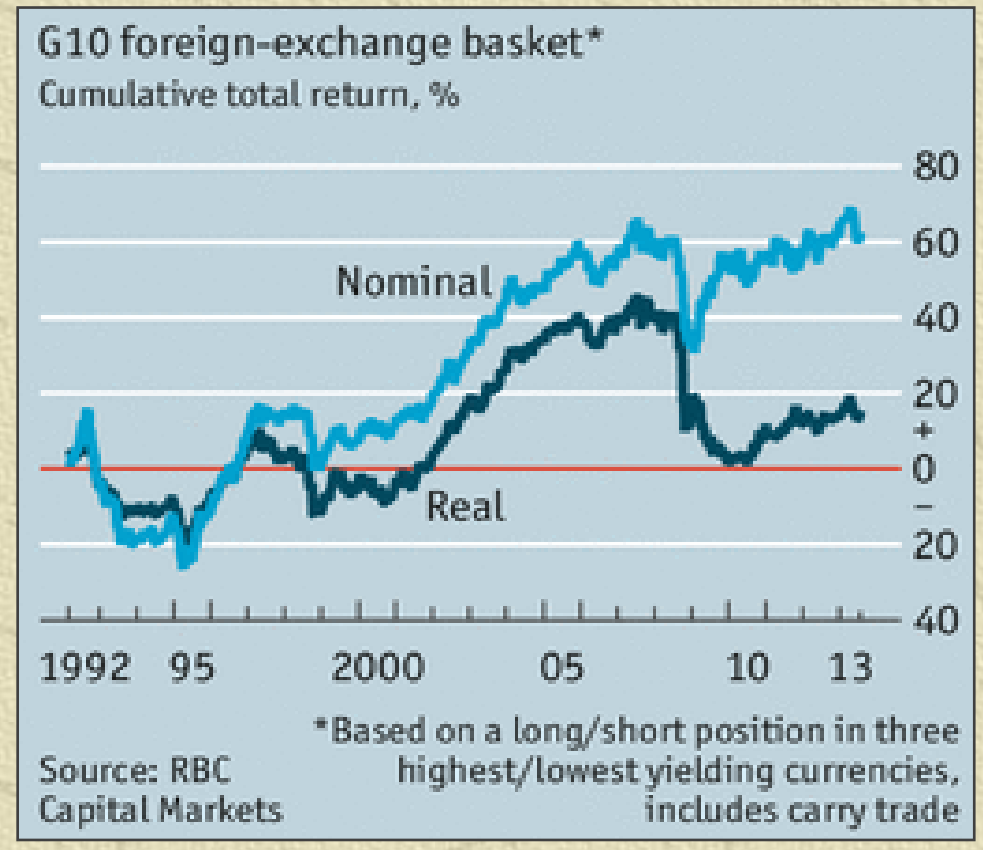
Indicator 4	Theory	Practice
Real interest rate differentials	If assets are perfect substitutes, then expected movements in currencies should equalize the differential in interest rates.	The condition does not always hold even among advanced economies because investors worry about risk of unforeseen exchange rate depreciation (ΔE^e); the rates do tend to move together



Economist, "School's brief: Capital goes global", 23 Oct 1997, p. 99-100.

Interest and E Rates and K-Markets and Flows

Indicator 5	Theory	Practice
Nominal interest rate differentials	Carry trade should not earn profits in a well-functioning international capital market.	The carry trade exploits nominal interest-rate differentials and works, yielding positive profits.



Carry trade: borrowing in low-i mkt to invest in high-i mkt to profit (with risk)

* High i_{Nom} should reflect higher P; lc value must ↓ for parity – strictly holds

* Most profitable strategy since mid-1990s was carry trade. Study of returns with perfect foresight showed that info on nominal rate is more important than real i

* Nominal i-rate easier to target; currency traders are more concerned about the next few weeks than about L-T ΔE.

* E^F is naïve "forecast" of ΔE and a bet on currency with high i is better than E^F

Economist, "Buttonwood: Carry on trading", 10 Aug 2013

Interest rates, E, K-flows and Capital Markets

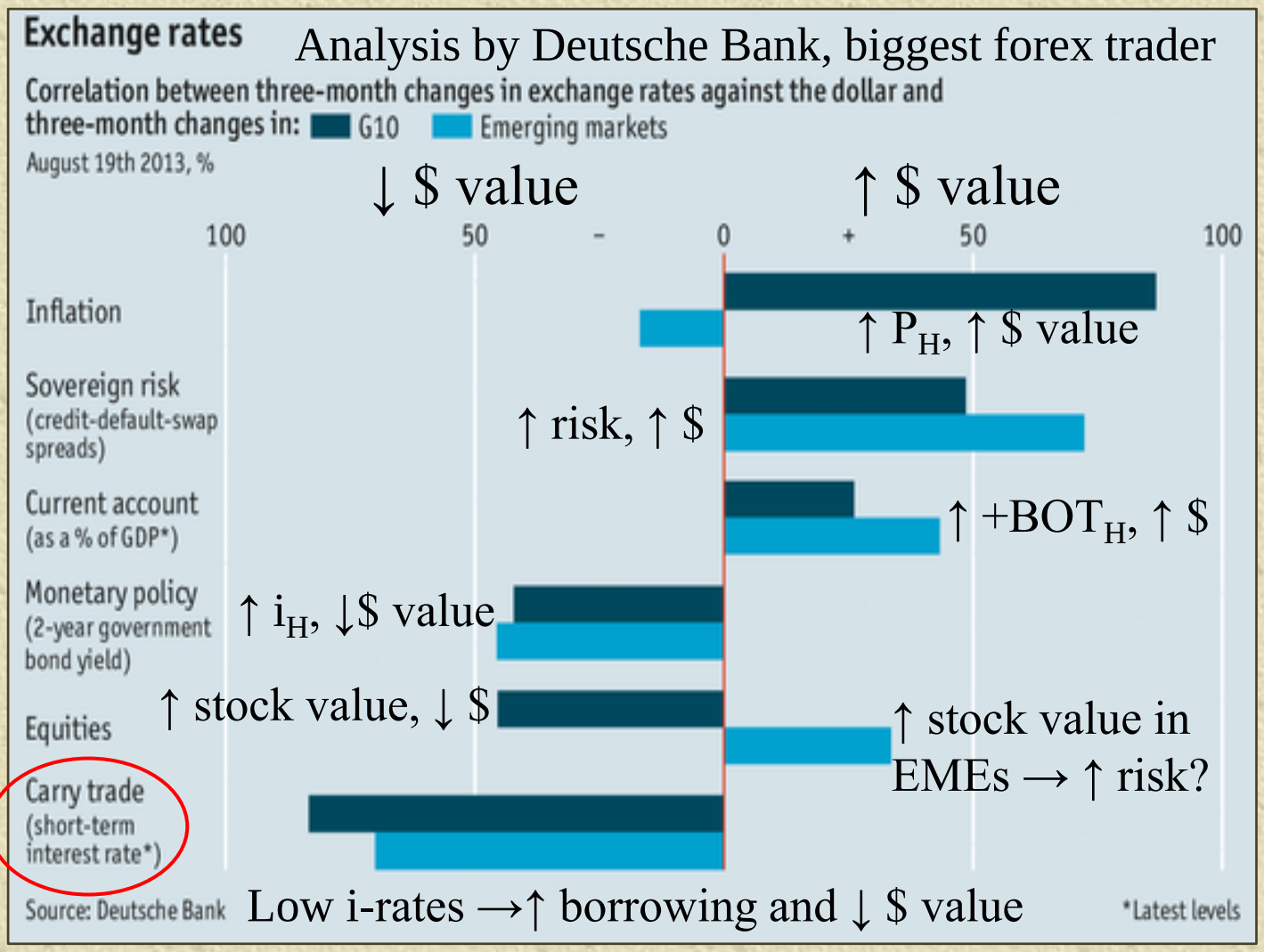
- Correlation of currency movements (against the $)

Strongest + correlation:

* In G10 economies, $\uparrow P_H$ moves with ↑$
* In all mkts, sovereign risk (credit-default-swap spread) moves with ↑$: implies widening CDS spread (↑ risk) and ↑ $ value

Strongest - correlation:

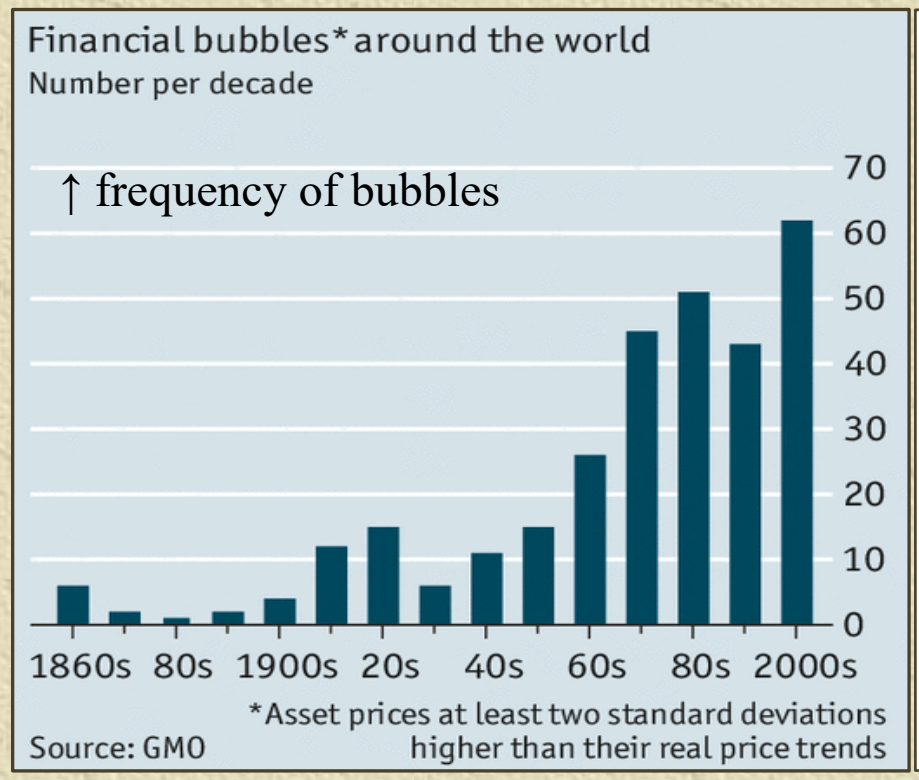
* Low i_H, $-inflow, ↓$
* Currencies negatively correlated with short-term i-rates (proxy for the carry trade)

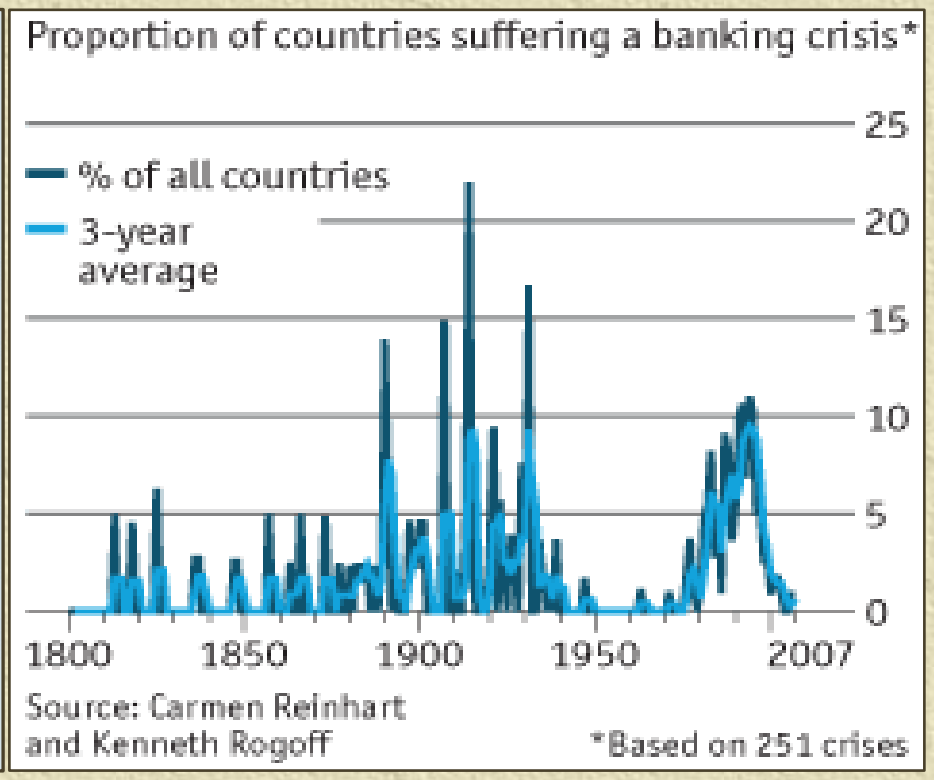


Economist, "Exchange rates", 24 Aug 2013, p. 73

Interest and E Rates and K-Markets and Flows

Indicator 6	Theory	Practice
Occurrence of bubbles and financial crisis	If markets are efficient and well-functioning (and regulated), then the occurrence of bubbles and financial crisis should lessen.	Bubbles contradict efficient mkts





Economist, "Asset prices: Not fully inflated", 7 Dec 2013, p. 68-9.

Interest and E Rates and K-Markets and Flows

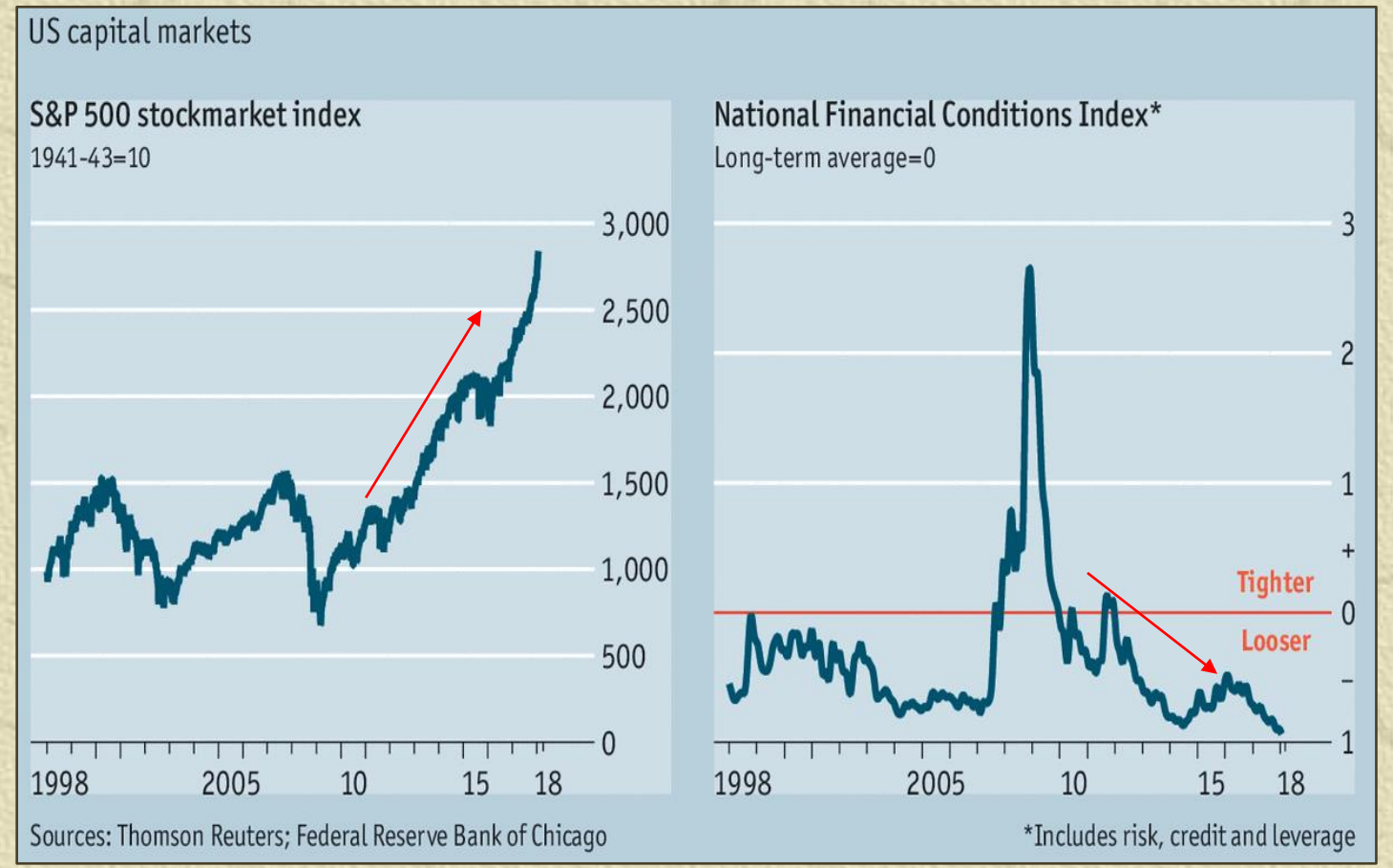
- Questioning benefits of financial integration
  - Finance
    - What is the function of the financial sector?
    - What has happened with finance?

Modern finance: highly leveraged, lightly regulated, market-based system of allocating capital (dereg, tech innovation and mobile K)

  - Recent financial crises
    - Asian financial crisis
    - Dotcom bubble
    - GFC
    - 2023 bank runs (US, Switzerland)

Interest and E Rates and K-Markets and Flows

- Concerns with finance
  - High stock mkt valuations, loose regs (interrupted by GFC response)



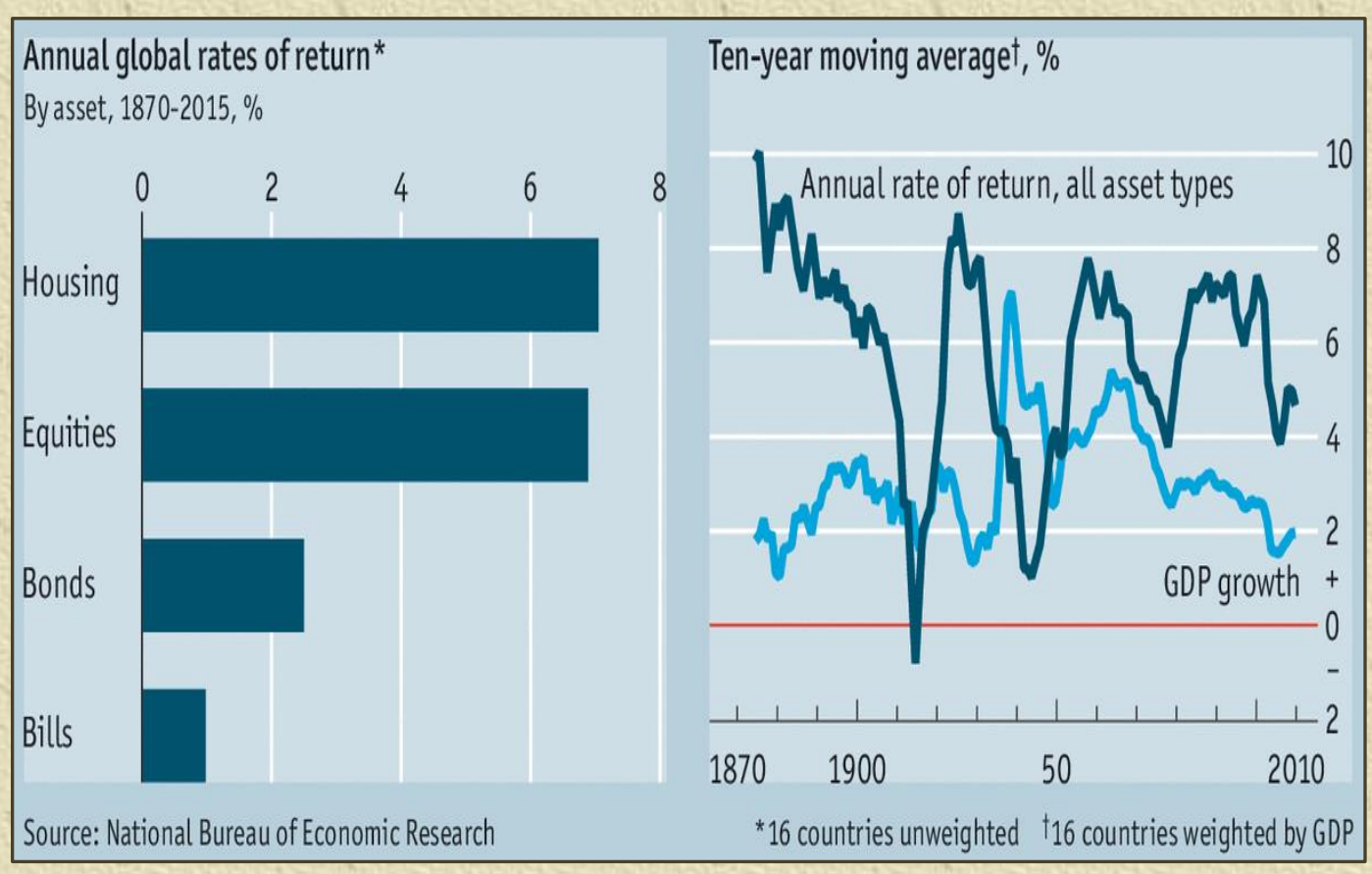
Regulation is often pro-cyclical; 10 years before GFC, the US rolled back Depression-era bank regulations

2018: US began limiting regs on rules to largest banks; ↓ bank capital requirements

Economist, "Free exchange: What could possibly go wrong", 27 Jan 2018, p. 64.

Interest rates, E, K-flows and Capital Markets

- Long-run asset returns



Over the very long run, it is housing, not equities which provide best returns

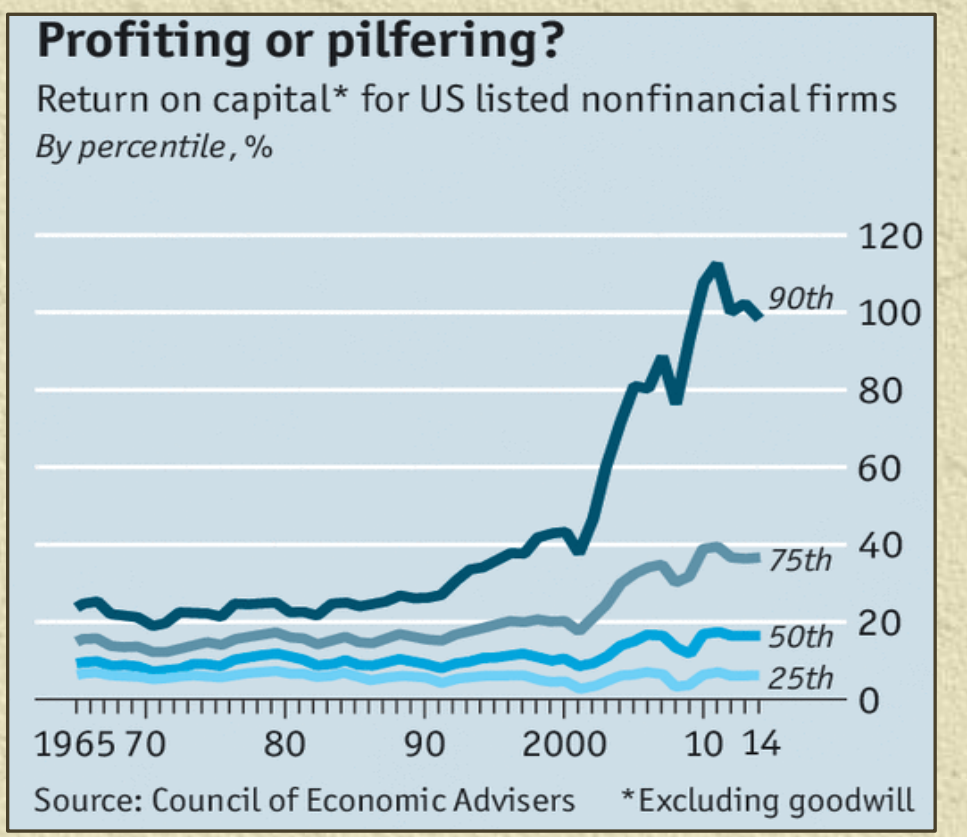
Equity returns are more volatile

Rate of return on assets is faster than GDP growth (r > g: supports Piketty's conclusion related to inequality).

Economist, "Free exchange: Many happy returns", 6 Jan 2018, p. 55.

Interest rates, E, K-flows and Capital Markets

- Comment on i-rate, return on assets (r), and growth (g)
  - (1): r > g real rate and real growth
  - Piketty: 20th century, ↑ Y-inequality



Economist, "Varieties of inequality: The great divergence", 12 Mar 2016, p. 34-5

Tech firms: highest margins, perhaps because of mkt power.

"Rarely in stock market history have so many investors made so much money from so few shares going up for so long. 37% of the rise in the value of all firms in the S&P500 index, 2013-18, was explained by 6 members: Alphabet, Amazon, Apple, Facebook, Microsoft and Netflix". In China Alibaba and Tencent accounted for 28% of the rise in Chinese equities.

Economist, "Schumpeter: The tech sell-off", 3 Nov 2018, p. 64.

Interest rates, E, K-flows and Capital Markets

- (2): i > g nominal i (risk-free r) and GDP
  - Applies to debt (debt explosion)
  - Revenue, wages, tax receipts cannot keep pace with debt payments
  - Case in early 2000s and again 2022-3 (inflation → ↑ i → i>g)

Economist, "Buttonwood: i > g", 27 May 2023, p. 66.

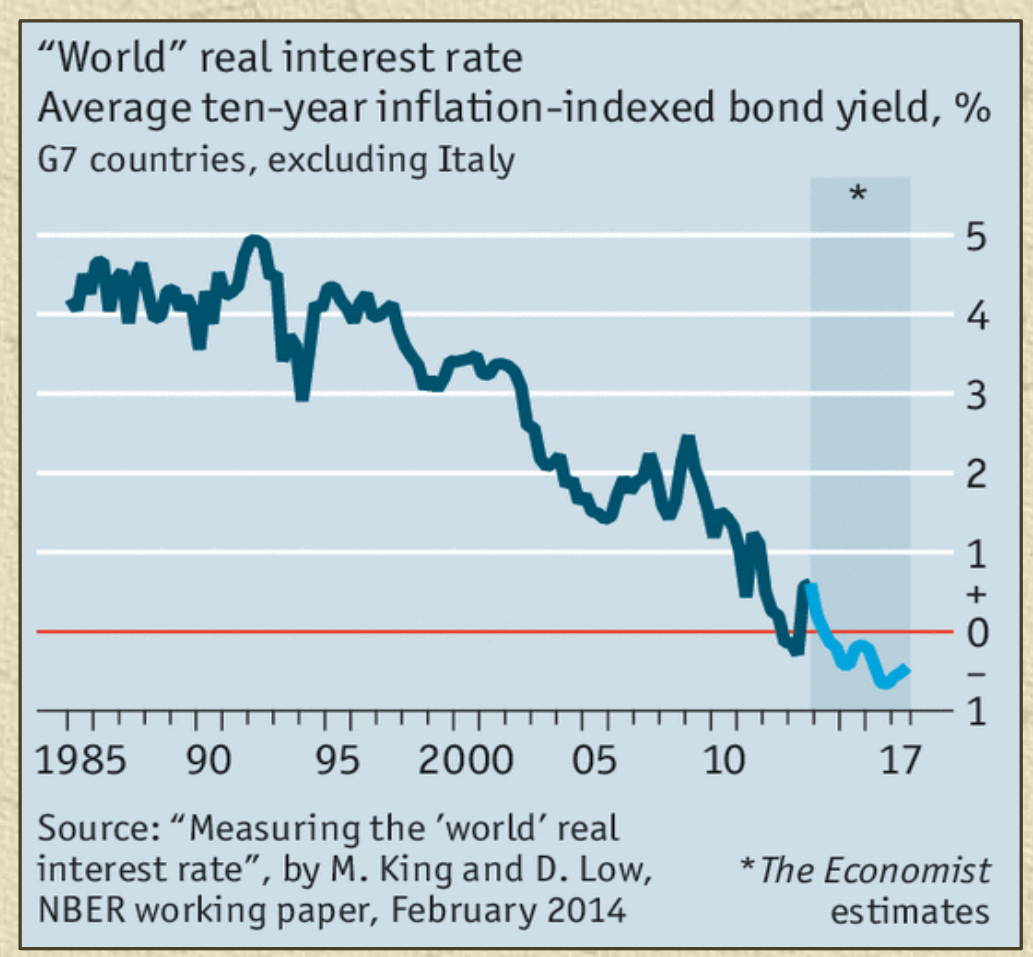
Interest rates, E, K-flows and Capital Markets

- Real vs nominal i
  - Feb 2023: End of tight MP → ↑ stock mkt valuation Why?
  - What matters is real i: $i_{real} = i_{nominal}$ (4,5%) – inflation (6,5%)
    - i_{real} = -2%: signal to ↑ debt
    - i is a forward-looking variable how much is owed at future date
    - Better indicator to compare is expected inflation at same date
    - $[i_{real}]_{t+1}$ (using expected P) = 2%
  - Questions the logic of the stock mkt run-up in value

Economist, "Inflation: The doveish illusion", 4 Feb 2023, p. 65.

Interest rates, E, K-flows and Capital Markets

- Trends in real interest rates



Steadily falling real i-rates esp. in 1990s and at historic lows in 2017.

Reasons are not understood nor agreed upon. 3 potential reasons:

- Increased willingness to save (more supply of saving and lower investment)
- Structural change in economy (Asia's saving behavior and the savings glut), ageing pop
- Actions of central bank lowered real i-rate (and low inflation even as economies began to grow)

Interest rates, E, K-flows and Capital Markets

- Debt
  - Basics on debt
  - Dangers of debt
  - Trends
    - Debt ↑ from 246% of global GDP in 2000 to 286% of GDP in 2015
    - For every $ of new output, the world puts out more than $1 debt

Macro models have given little importance to debt/default even as credit grows faster than GDP

https://www.economist.com/content/global_debt_clock

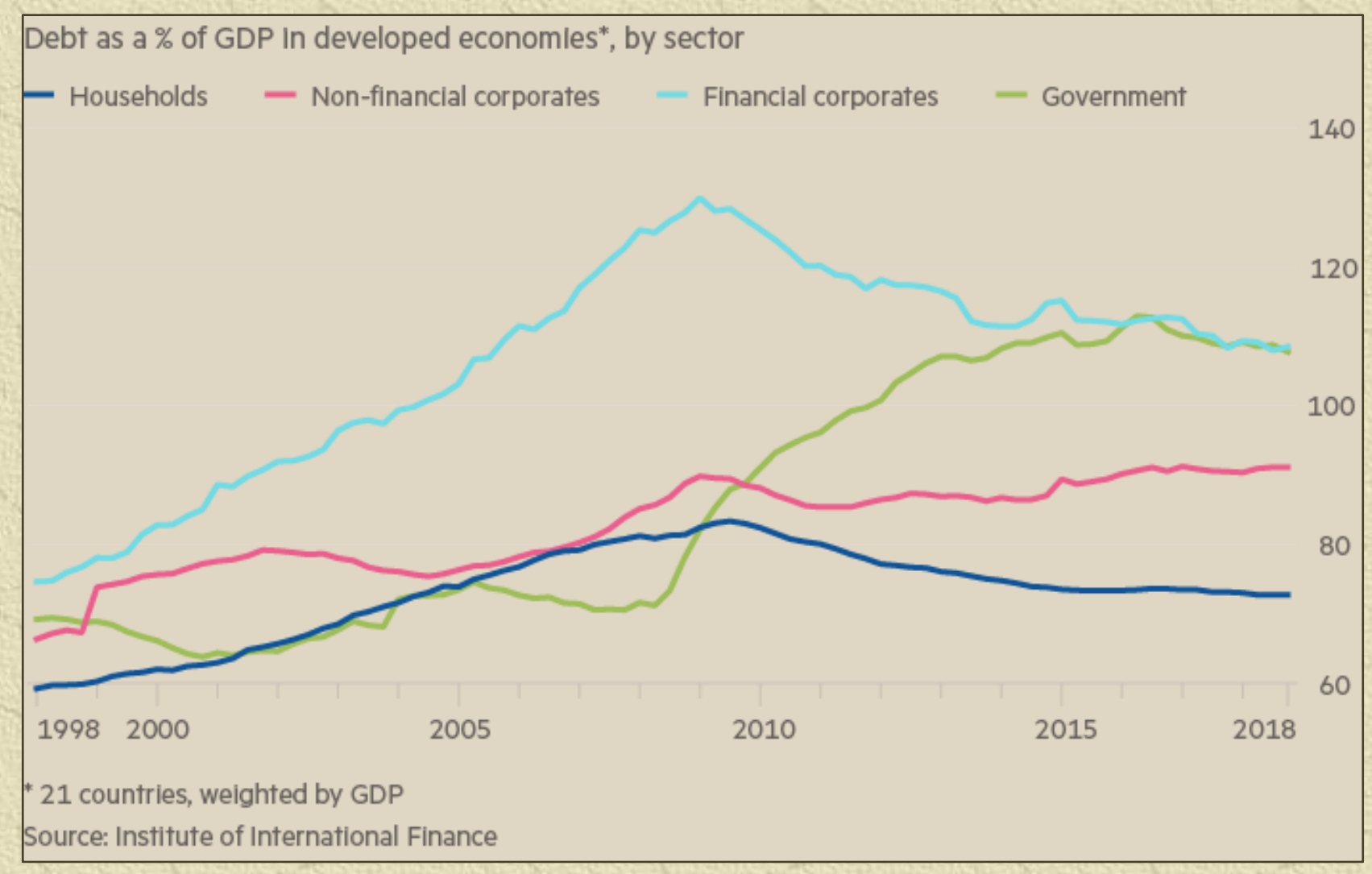
Interest rates, E, K-flows and Capital Markets

- Developed economies, during GFC

Economist, "The dangers of debt: Lending weight", Schools brief, 14 Sep 2013, pp. 66-7.

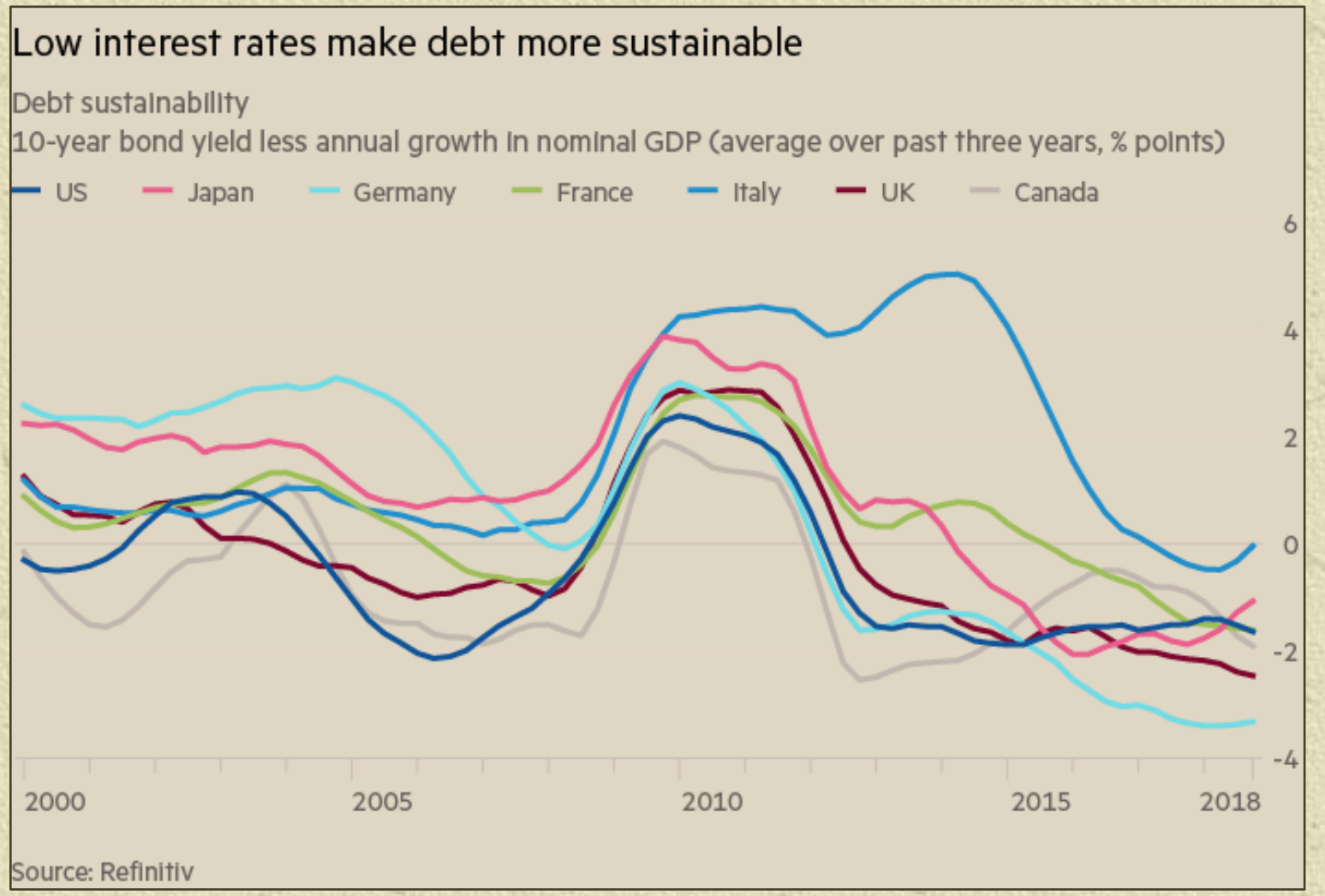
Interest rates, E, K-flows and Capital Markets

- Debt levels, by type



Interest rates, E, K-flows and Capital Markets

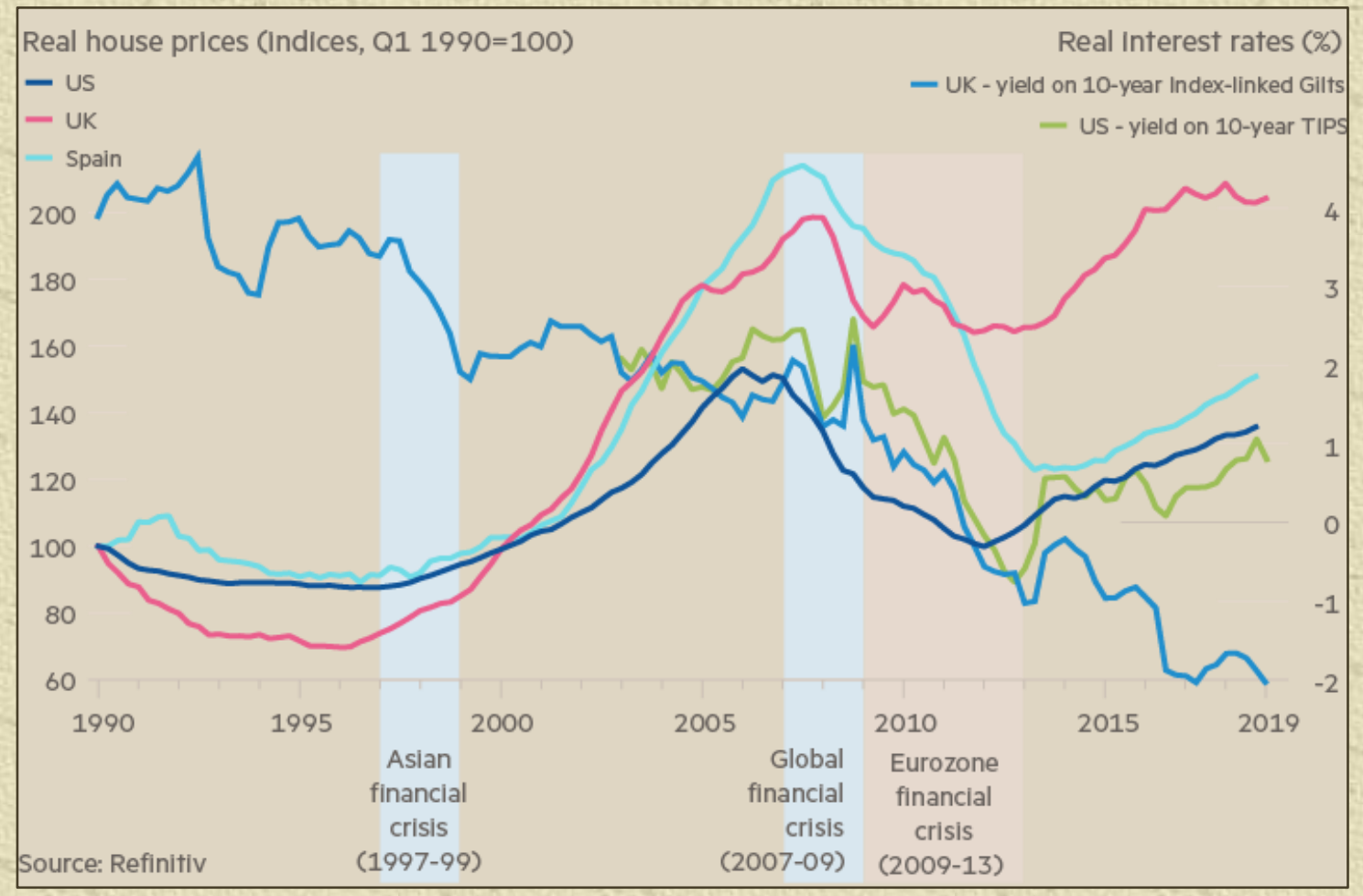
- Debt relative to GDP growth



Financial Times, "How our low inflation world was made", 8 May 2020, p. 9.

Interest rates, E, K-flows and Capital Markets

- Before: falling i-rates, housing property boom, and credit bubble
- After: near zero rates and debt, weak growth, populist politics



Low real i-rate, high real housing prices.

Economist, "How our low inflation world was made", M. Wolf, 8 May 2019, p. 9.

Interest rates, E, K-flows and Capital Markets

Housing prices, i-rates and debt

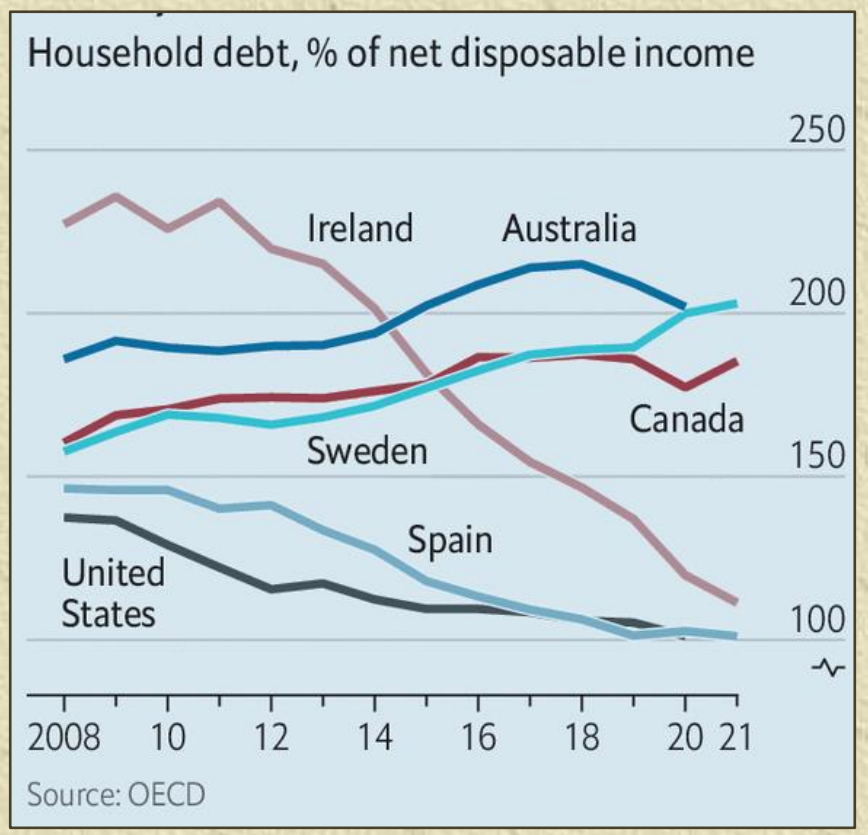
In 2022, house prices started to fall after years of growth. Australian, Canada and Sweden faced the sharpest drops. Mortgage binges fuelled by near zero i-rates left countries with enormous HH debt.

HH debt as % of disposable income was 185% in Canada, 202% in Australia and 203% in Sweden. (Norway peaked at 199% in Jan 2021.)

Debt levels shrunk in countries hurt during the GFC, including the US, Ireland and Spain.

Housing busts and recessions from debt build-up tend to be more severe. Excessive leverage makes people more vulnerable to job losses, i-rate rises, and falling house prices as during the GFC.

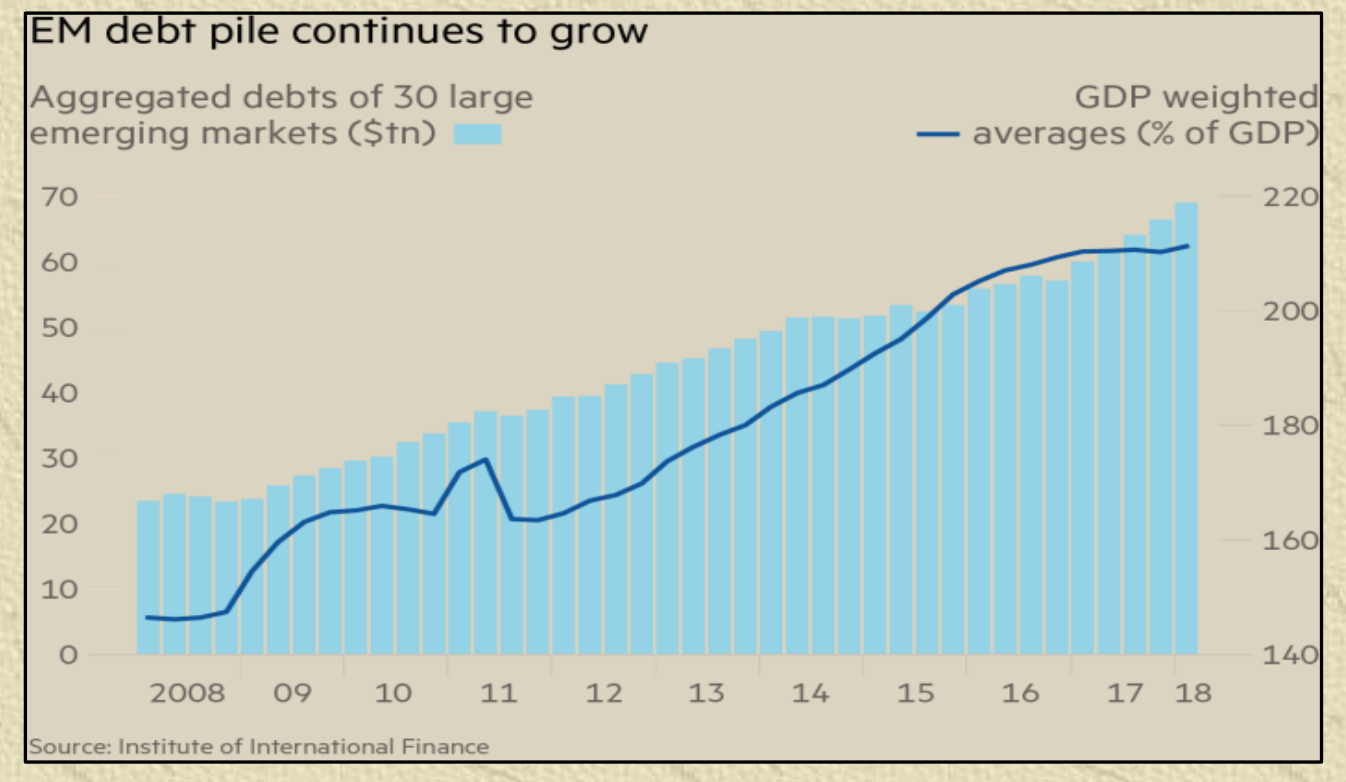
As central banks ↑ rates at the fastest pace in 40+ years, mortgage debt was again exposed.



Economist, "Housing prices: The coming crunch", 26 Nov 2022, p. 65.6.

Interest rates, E, K-flows and Capital Markets

- Emerging market debt



Financial Times, "Investors fear Turkey is harbinger of wider crisis as easy money ends", 14 Aug 2018, p. 19.

Interest rates, E, K-flows and Capital Markets

- China and debt

China's accumulation of physical K underpinned by cheap land (for development), tax breaks and low-cost L.

Role of debt in the strategy:

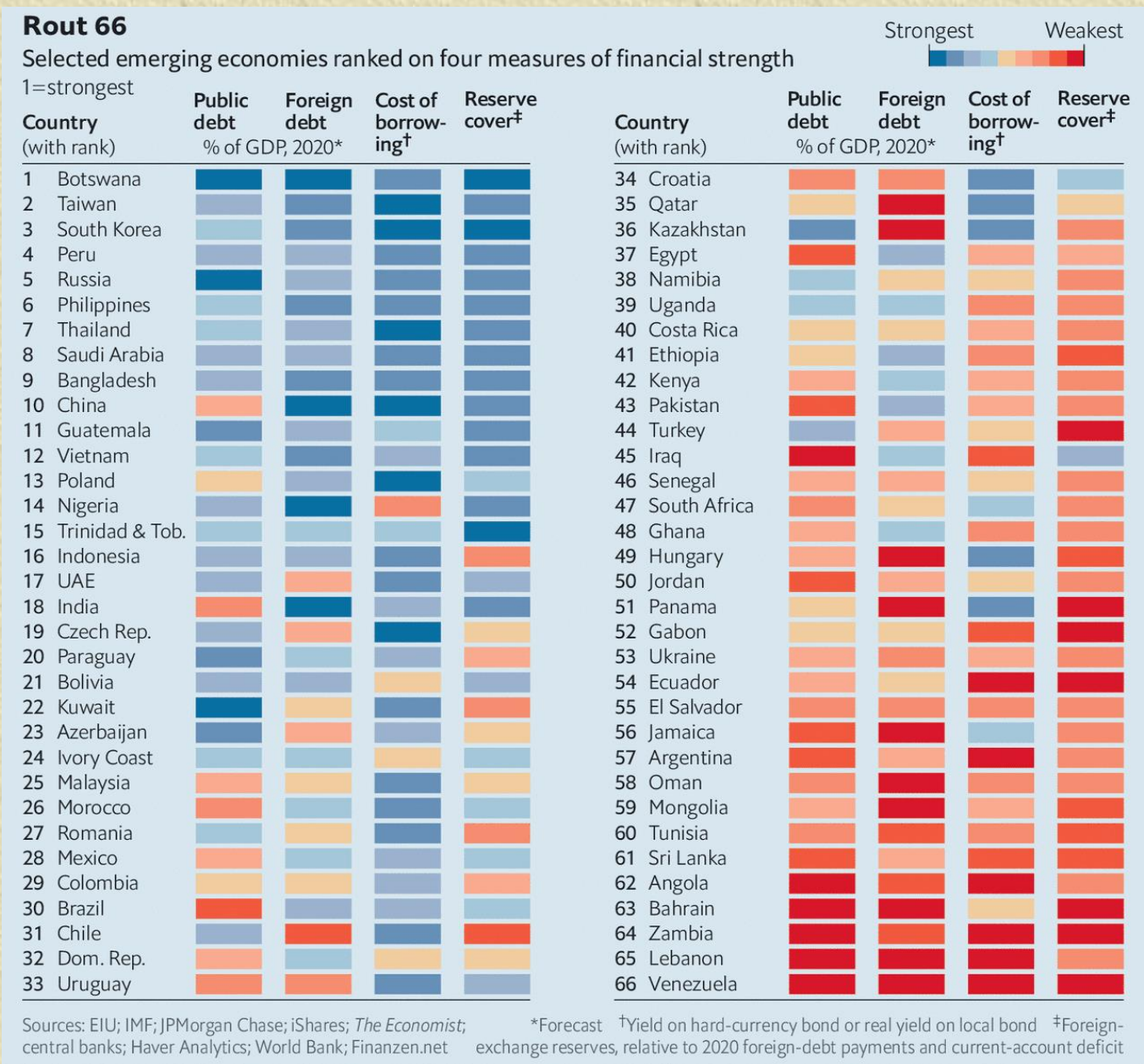
- Preferential access to credit from the beginning (state banks to state firms)
- GFC slowed X-led growth and fiscal stimulus was a response.
  - Local officials ran up debt;
  - Land was seized for development;
  - building boom and infrastructure investment

2008-19: Debt ↑, 150% to 250% of GDP

Economist, "China's future: The global centre", Essay on China, 23 Feb 2019, pp. 43-8.

Interest rates, E, K-flows and Capital Markets

- EME debt

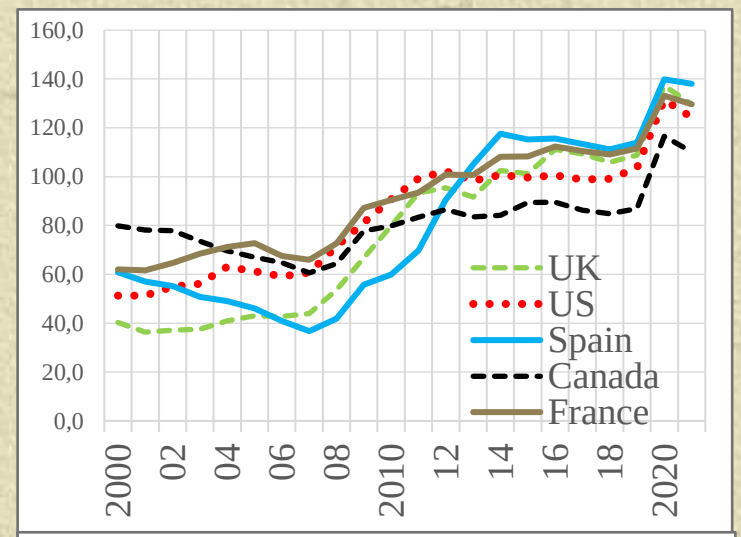


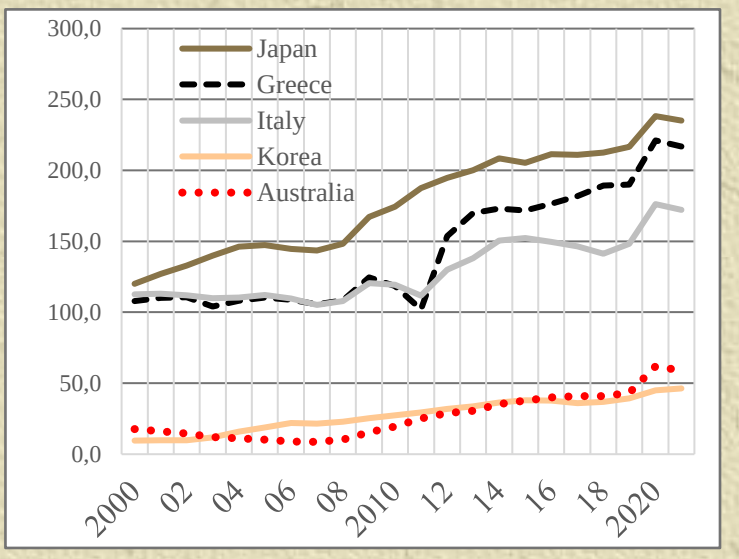
Economist, "Next in Line", Briefing on debt in developing countries, 2 May 2020, 54-55.

Interest rates, E, K-flows and Capital Markets

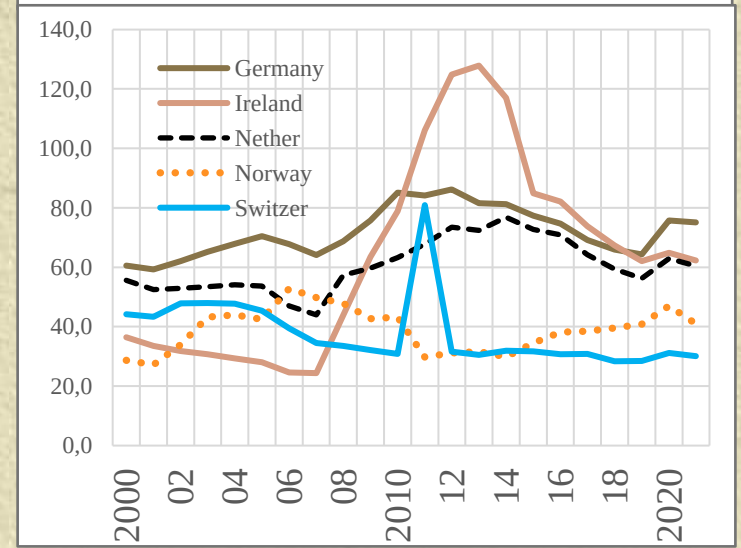
- Comparison of debt
  - Gov't debt as % of GDP

Moderate gov't debt before GFC, spikes with GFC, stabilizes and spikes again with covid response





Moderate gov't debt before / after GFC



Upper countries: high debt before and after GFC

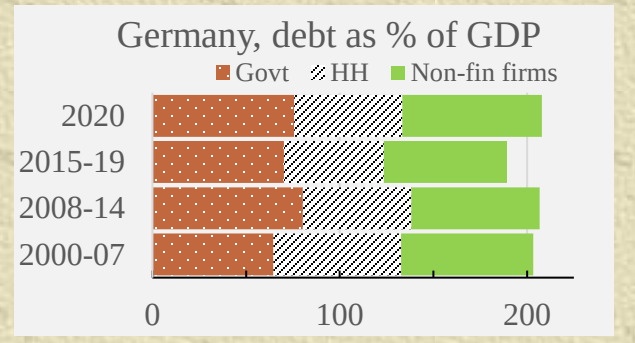
Lower countries: low debt before/after both shocks

Interest rates, E, K-flows and Capital Markets

- Debt comparisons, as % of GDP, by actor across country

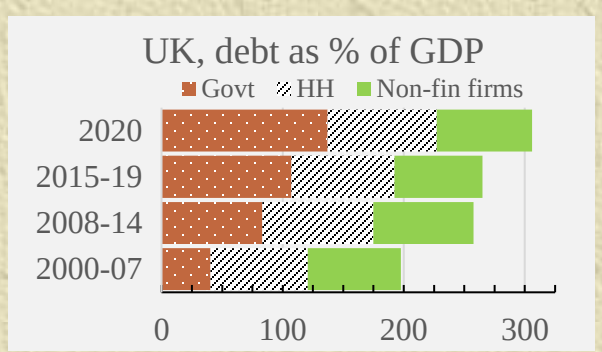
Increasing overall debt; moderate private debt

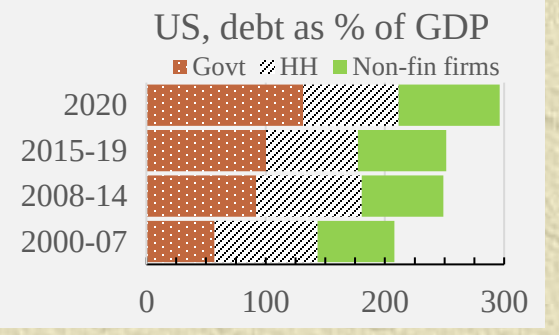
Moderate overall debt

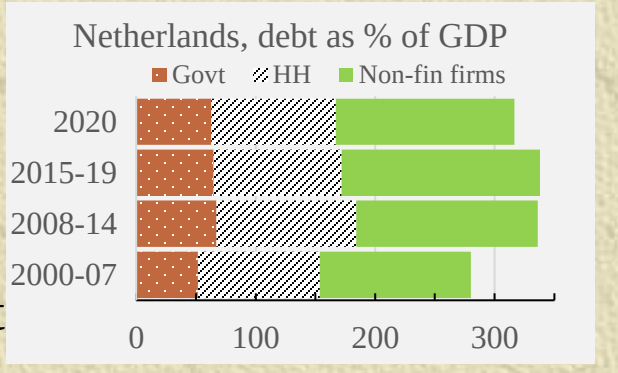


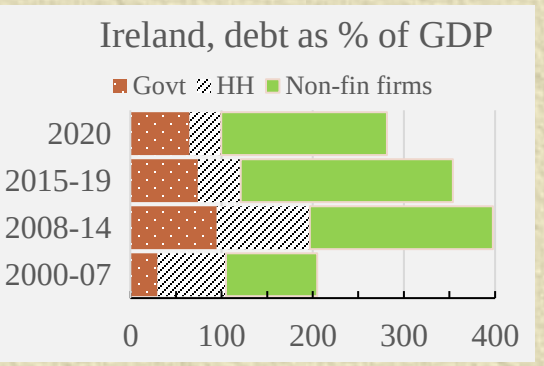
High overall debt; moderate gov't debt

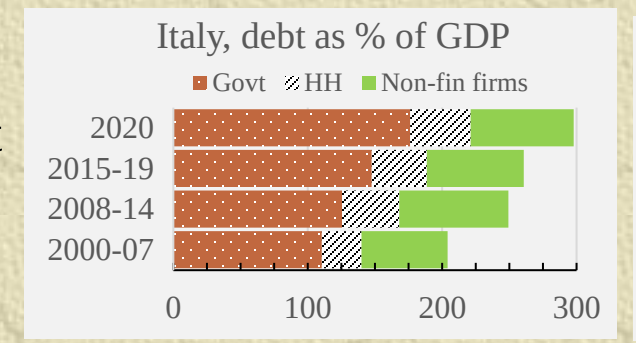
High gov't debt

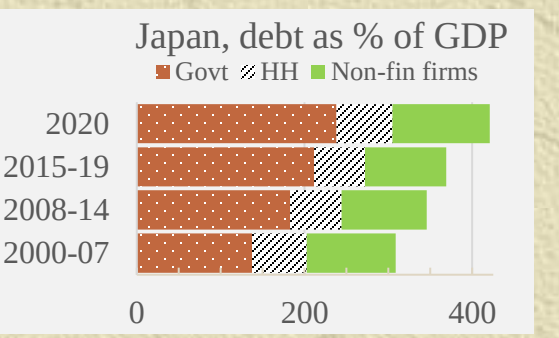






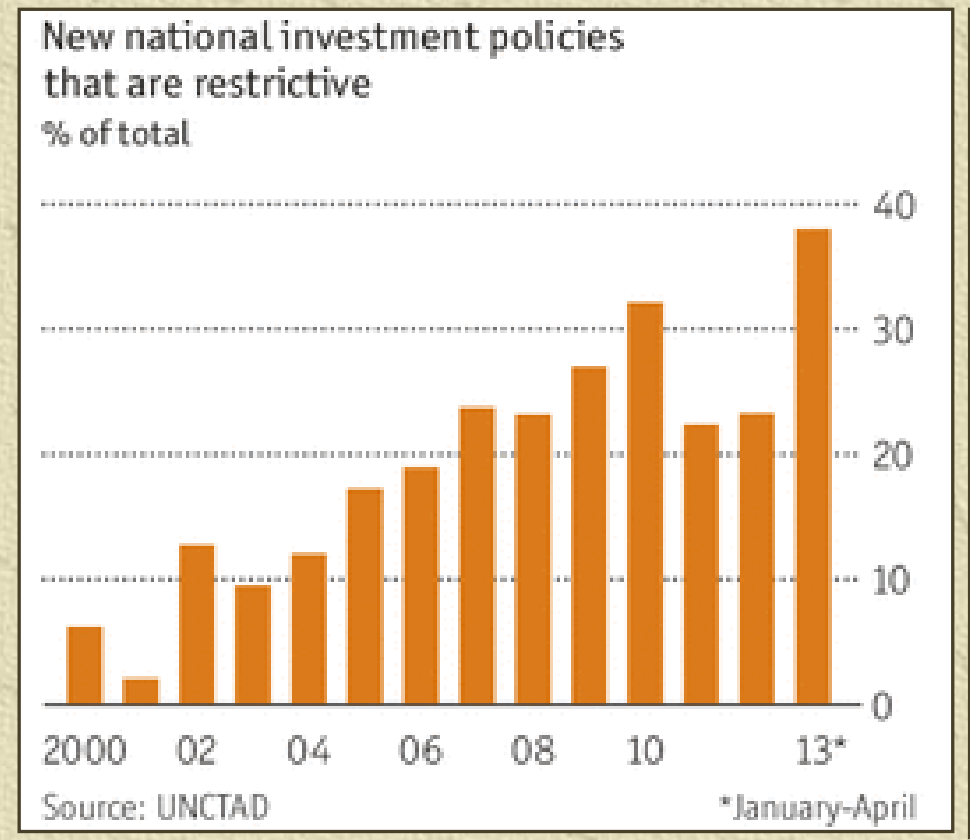






Interest rates, E, K-flows and Capital Markets

- Capital controls
  - Types and objectives
  - Trends in use

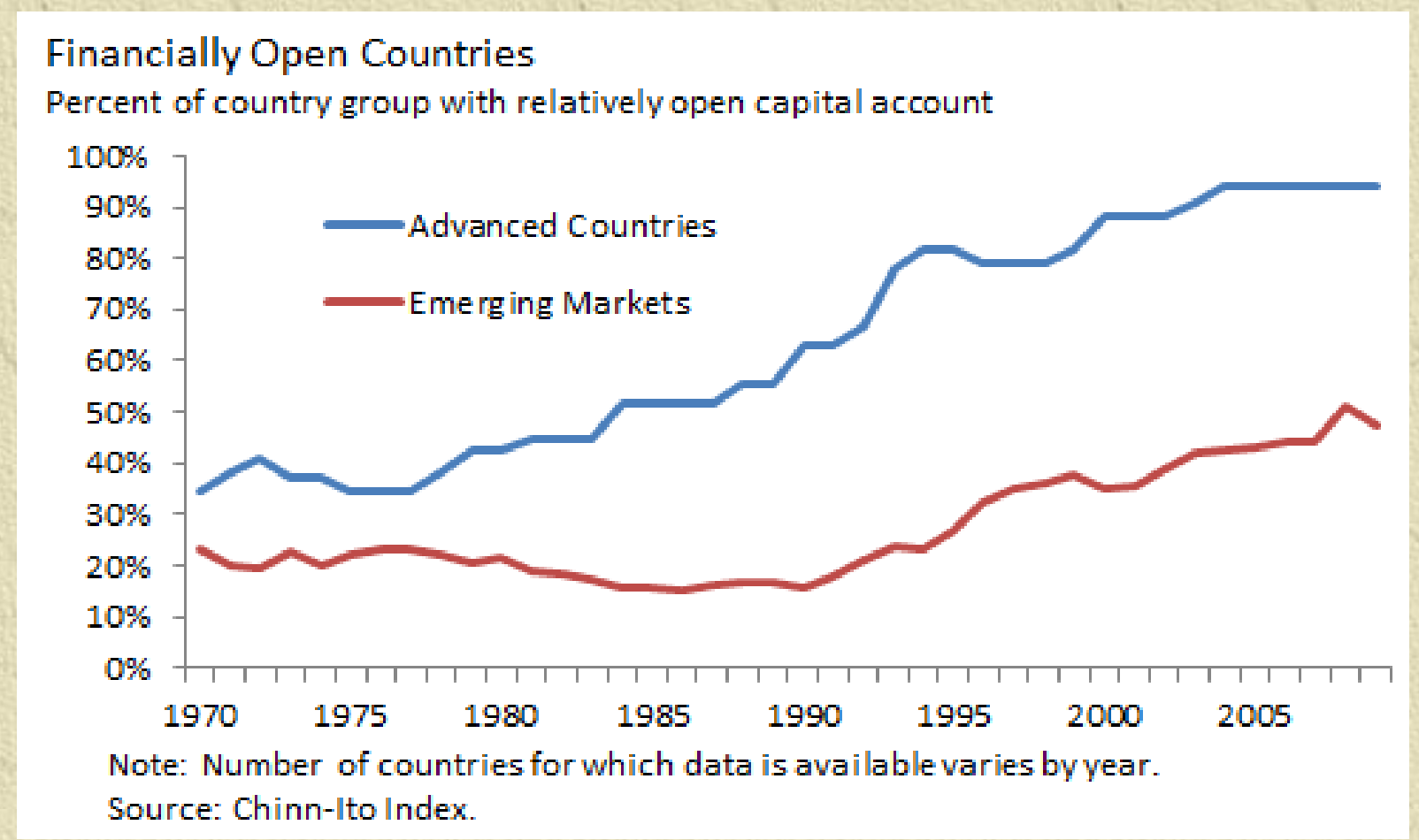


Economist, special report: World Economy, "Political pressures: a question of trust", 12 Oct, 2013

Economist, "Capital controls: cash cowed", 6 Apr 2013, p. 71

Interest rates, E, K-flows and Capital Markets

- Share of countries with no controls on capital



Source: Carnegie Endowment for International Peace
https://carnegieendowment.org/2011/06/09/why-are-capital-controls-so-popular-pub-44490

Interest rates, E, K-flows and Capital Markets

- Capital controls as theory of the 2nd best
  - Case against liberal K mkts
  - Case against K controls
- Effectiveness of controls: Chilean model
  - 1-yr deposit on 30% of non-equity K
    - Deposit K with CB without interest
    - High tax on K-flows other than FDI, esp if short-term K-inflow
  - K-inflows must stay 1 yr – discourage hedge funds
  - Limit int'al borrowing (fc borrowing)