

Demography & International Capital Flows

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Capital flows: current accounts

Largest deficits	Amount (b\$)	Largest surpluses	Amount (b\$)
United States	-470	China	306
Italy	-72	Japan	195
Spain	-63	Germany	176
United Kingdom	-56	Mideast oil	150
France	-53	Switzerland	75
India	-49	Russia	71
Turkey	-49	Netherlands	56
Canada	-49	Norway	53
Brazil	-47	Taiwan	41
Greece	-32	Sweden	30
Australia	-32	Korea	28
Portugal	-23	Malaysia	28
Total deficits	-1183	Total surpluses	1466

Source: IMF, WEO, April 2011 version, data for 2010

Capital inflows: sign of success?

Larry Summers, IMF, October 3, 2004:

There is a standard set of things that finance ministers of countries with significant current account deficits say. Perhaps the sharpest formulation is: "We live in a country that capital is trying to get into. Would you rather live in a country that capital is trying to get out of?"

Capital inflows: portent of peril?

Daniel Gross, *New York Times*, May 8, 2005

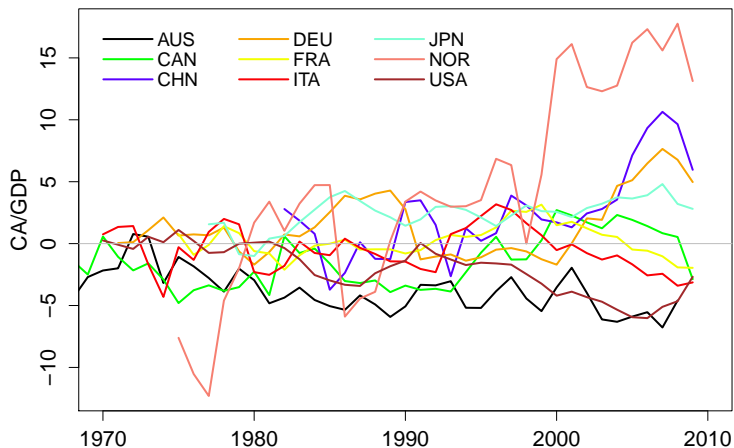
[US] imbalances are eerily reminiscent of recent economic crises. Could we see a perfect storm [for the US economy]? If so, what would it look like?

- ★ *Nouriel Roubini estimates that long-term interest rates in the US could rise sharply and the dollar fall.*
- ★ *Jeffrey Frankel adds: "some of us have been warning of this hard-landing scenario for more than 20 years."*

Øystein Olsen, Norges Bank, March 2011

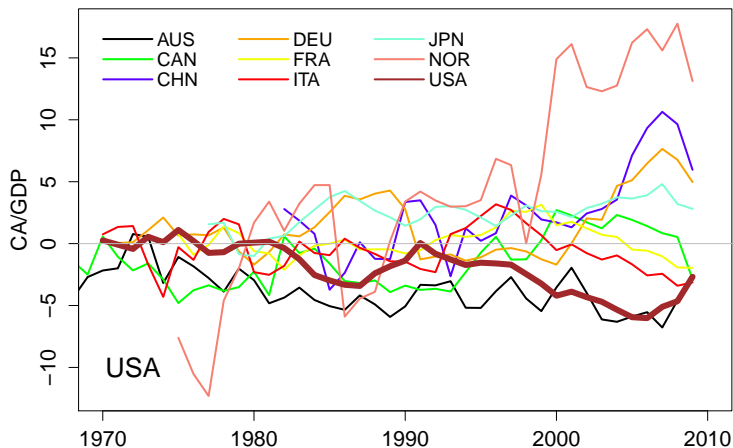
Global trade imbalances have been reduced somewhat over the past two years, but there is a considerable risk that they will persist. They must be corrected.

Evidence: current accounts



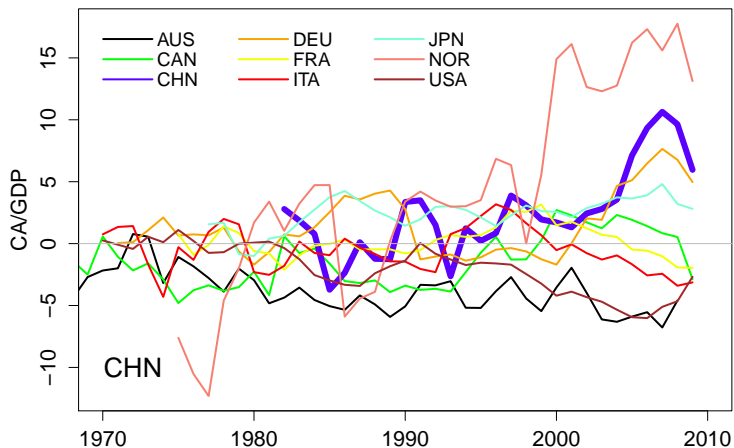
Source: World Bank, World Development Indicators

Evidence: current accounts



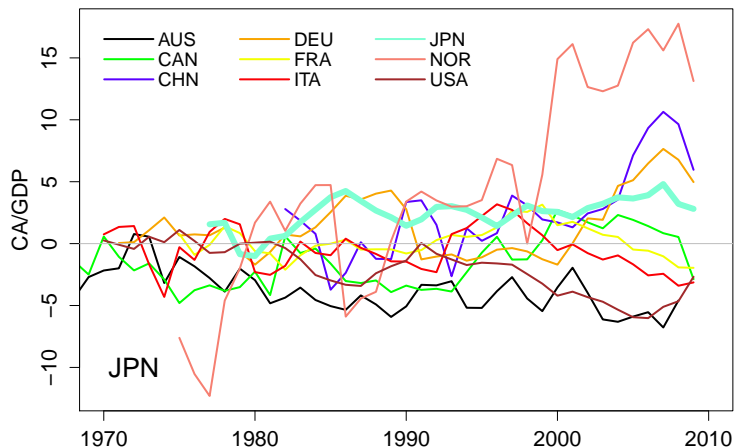
Source: World Bank, World Development Indicators

Evidence: current accounts



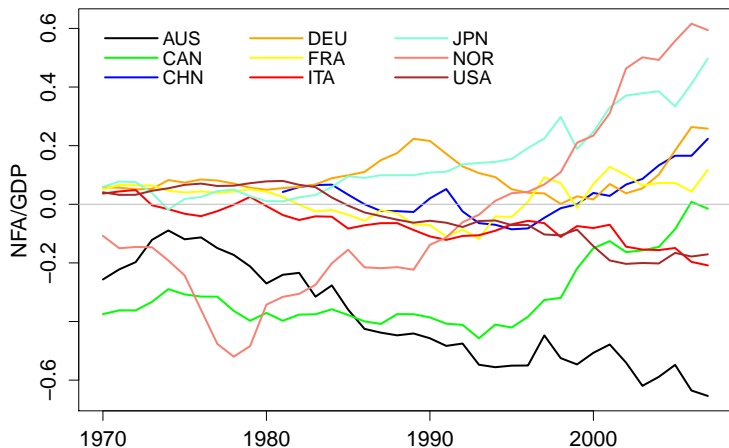
Source: World Bank, World Development Indicators

Evidence: current accounts



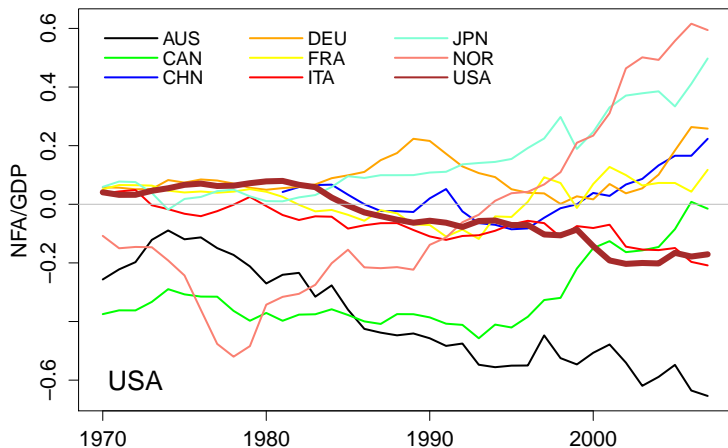
Source: World Bank, World Development Indicators

Evidence: net foreign assets



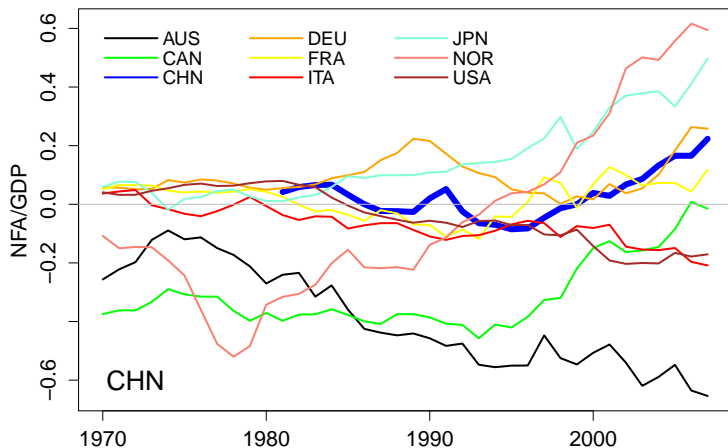
Source: Lane and Milesi-Ferretti

Evidence: net foreign assets



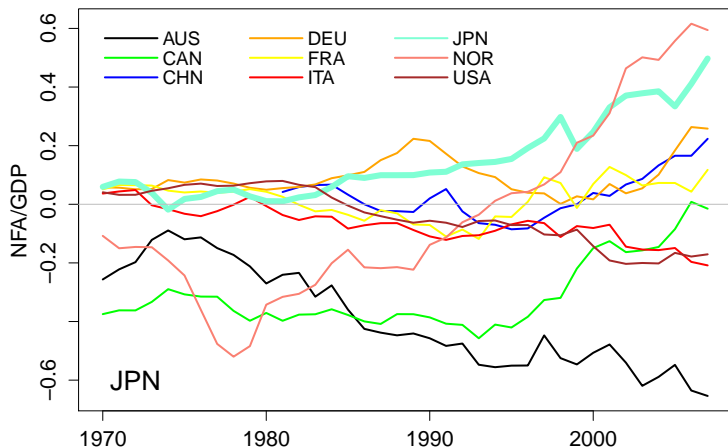
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Evidence: net foreign assets



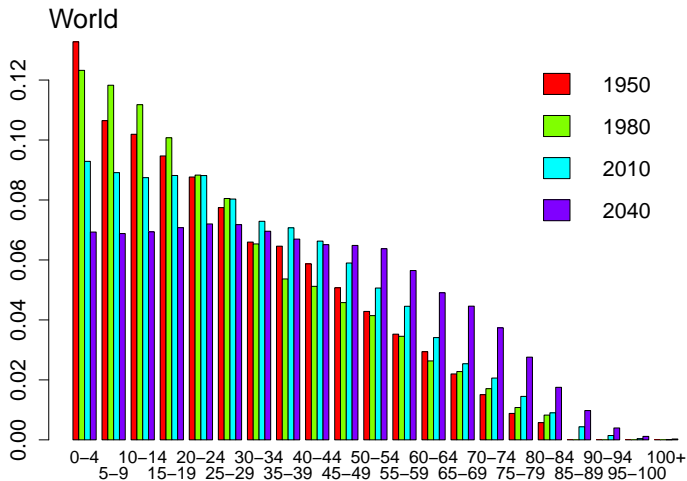
Source: Lane and Milesi-Ferretti

Evidence: net foreign assets



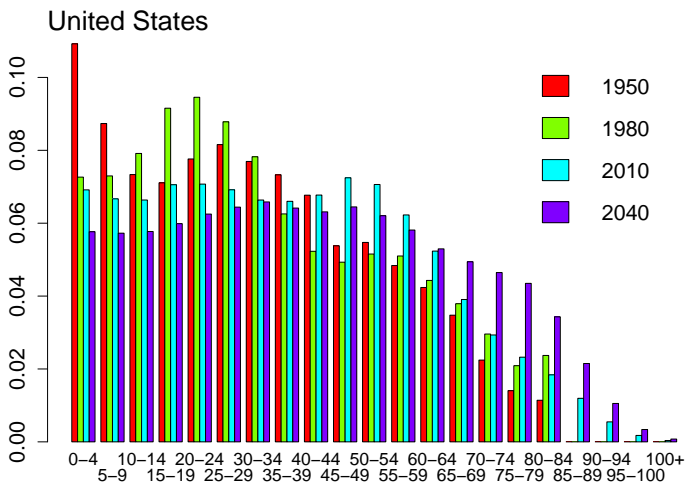
Source: Lane and Milesi-Ferretti

Evidence: demography



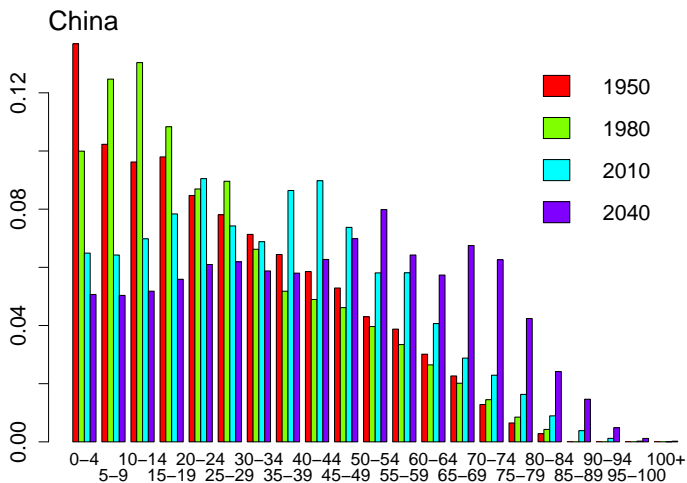
Source: United Nations, Population Estimates and Projections

Evidence: demography



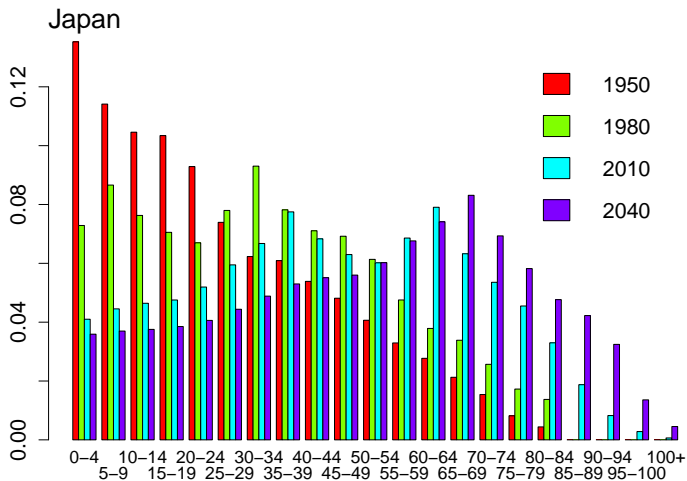
Source: United Nations, Population Estimates and Projections

Evidence: demography



Source: United Nations, Population Estimates and Projections

Evidence: demography



Source: United Nations, Population Estimates and Projections

Evidence: summary

Capital flows are persistent

Ditto net foreign assets

Demography inherently persistent

Sharp differences across countries

Worth exploring a connection?

[Apparently yes: Attanasio-Kitao-Violante, Bloom-Canning, Boersch-Supan-Winter, Brooks, Domeij-Floden, Feroli, Ferrero, Henriksen, Krueger-Ludwig, and others had the same idea]

Model: how it works

NFA is difference between net worth and capital stock

- ▶ Think of each as a function of age
- ▶ Aggregates are sums across age groups

Net worth follows from life-cycle saving

- ▶ Net worth varies by age
- ▶ Aggregate net worth depends on age distribution

Capital allocated to equate marginal products

- ▶ Connected to age distribution via effective labor input
- ▶ Equates K/Y across countries

Model: questions

Individual saving rates differ across countries

- ▶ Not clear why
- ▶ Should we add “wedges” to mimic?

Capital-output ratios differ across countries

- ▶ Ditto

Market value \neq capital stock

- ▶ Ditto

Model: mechanics

One-good deterministic world

Countries: G8 (for now)

Each has OG structure

Power utility, fixed labor supply [+ age-specific adjustments]

Identical production functions, country-specific productivity

Fixed retirement age: 65

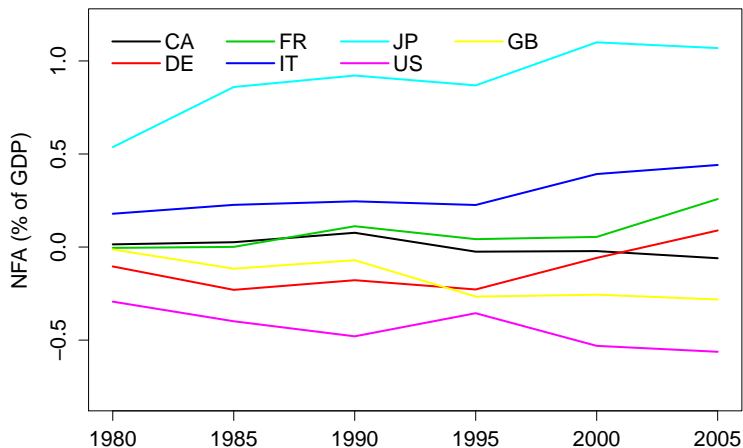
No bequests: perfect insurance for mortality risk

No frictions either within or across countries

Model: parameter values

Time interval	one year
Capital share (α)	1/3
Risk aversion (σ)	4
Discount factor (β)	1/1.025
Depreciation rate (δ)	2.5%
Fertility and mortality	UN data
Cohort sizes	UN data

Model: net foreign assets



Summary and open questions

Model generates

- ▶ Persistent movements in capital flows and NFA
- ▶ Clear connection between NFA and demography in G8

China (work in progress)

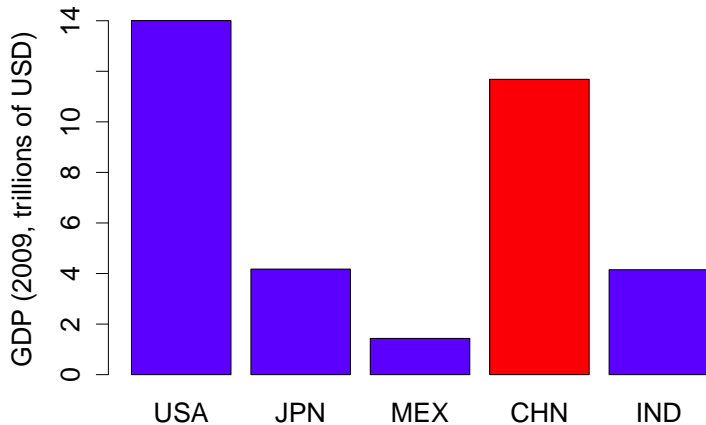
- ▶ Striking demographics generate high saving rate
- ▶ But not as high as we see in the data
- ▶ Internal financial market frictions an issue for inflows?
- ▶ Capital controls an issue for outflows?

China: international investment positions

Category	Assets (tr\$)	Liabilities (tr\$)
Direct investment	0.230	0.997
Portfolio investment	0.243	0.190
Other	0.535	0.451
Official reserves	2.453	—
Total	3.460	1.638
Net foreign assets	1.822	

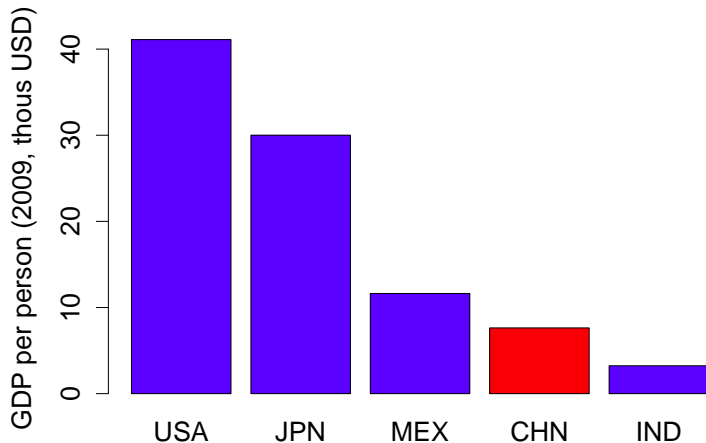
Source: IMF, IFS, May 2011 version, data for 2009

China: GDP



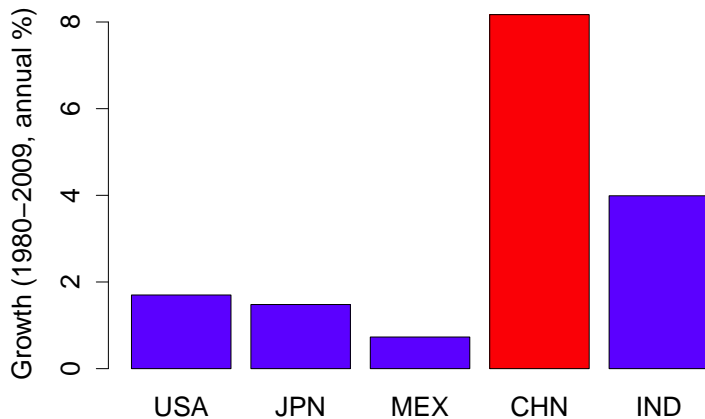
Source: Penn World Table, Version 7.0

China: GDP per person



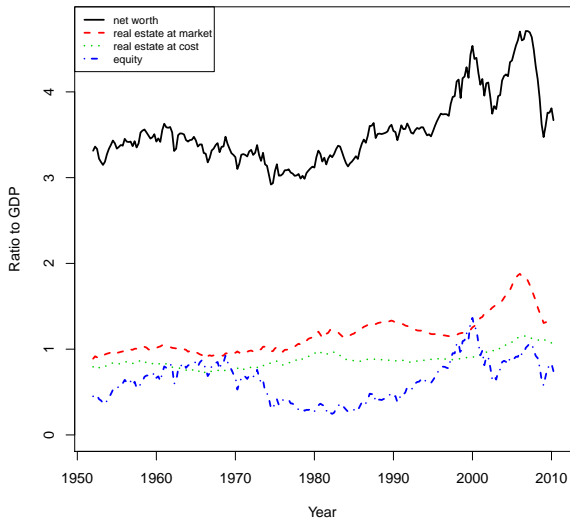
Source: Penn World Table, Version 7.0

China: growth

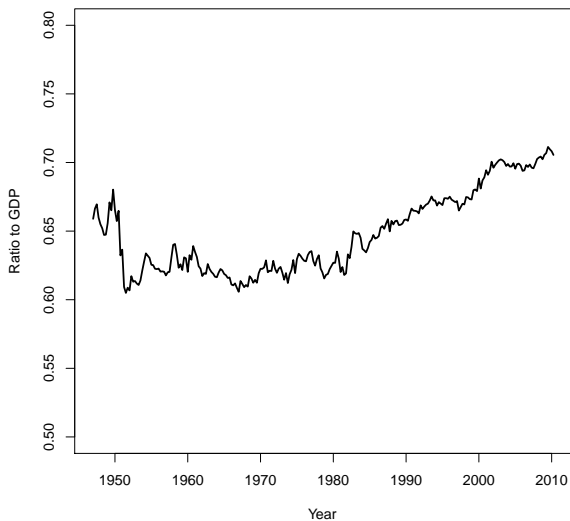


Source: Penn World Table, Version 7.0

US: household net worth



US: personal consumption



Notes for Denoon conference @ NYU

1. Thank you, I'm delighted to be here.
2. This is joint work with Espen and Tom. It's work in progress, and not focused on China, although China plays an important role here as it does elsewhere.
3. The issue is international capital flows. We argue that in the developed world, low-frequency movements are linked to demography.
4. China remains something of a mystery, but I can be more specific about that later.
5. Capital flows have become a contentious issue, in both policy and academic circles. -> quotes
6. We'd prefer to change the language and look at the evidence. Plan of attack: evidence, model, discussion.