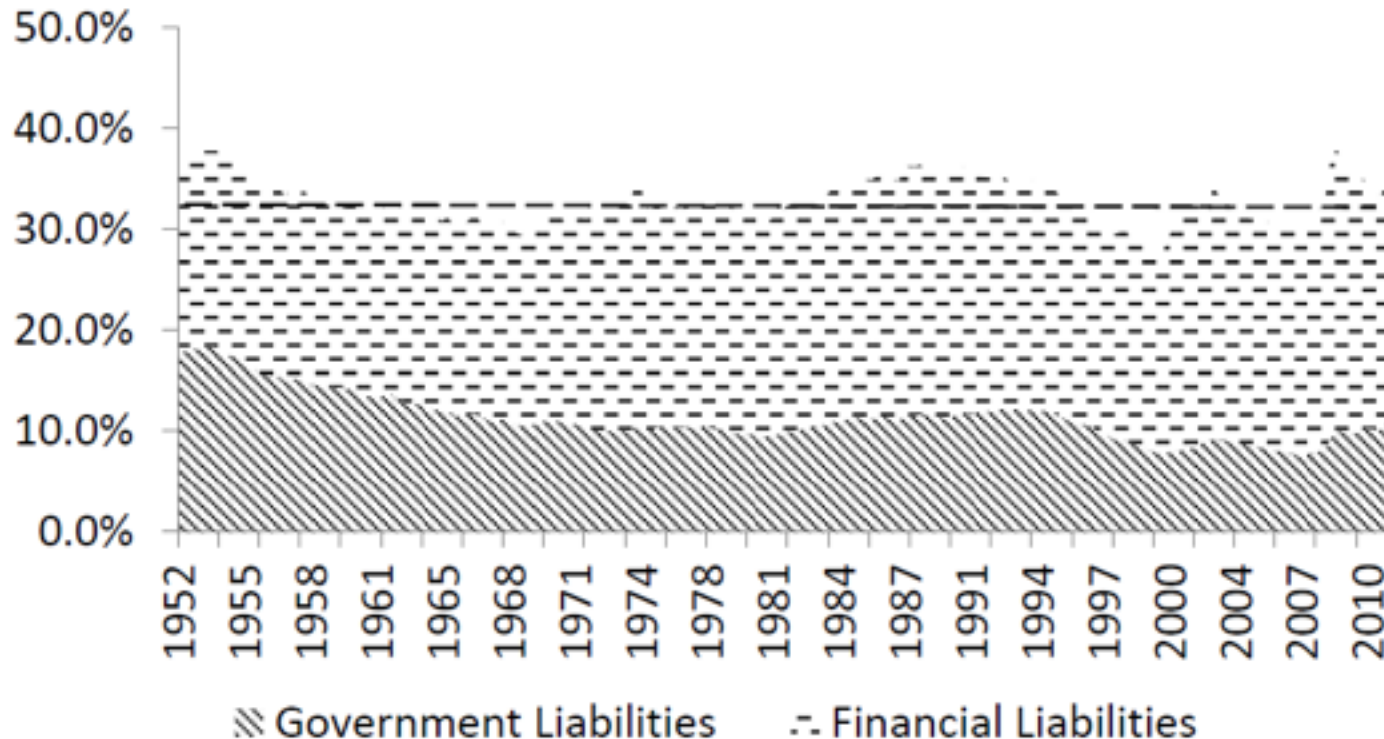


Demand for Safety and Instability

Gorton, Lewellen and Metrick

The Safe-Asset Share

- From 1952 to 2010, total assets in the U.S. have grown from 400% to 1000% of GDP
- Yet share of “safe” assets has remained stable

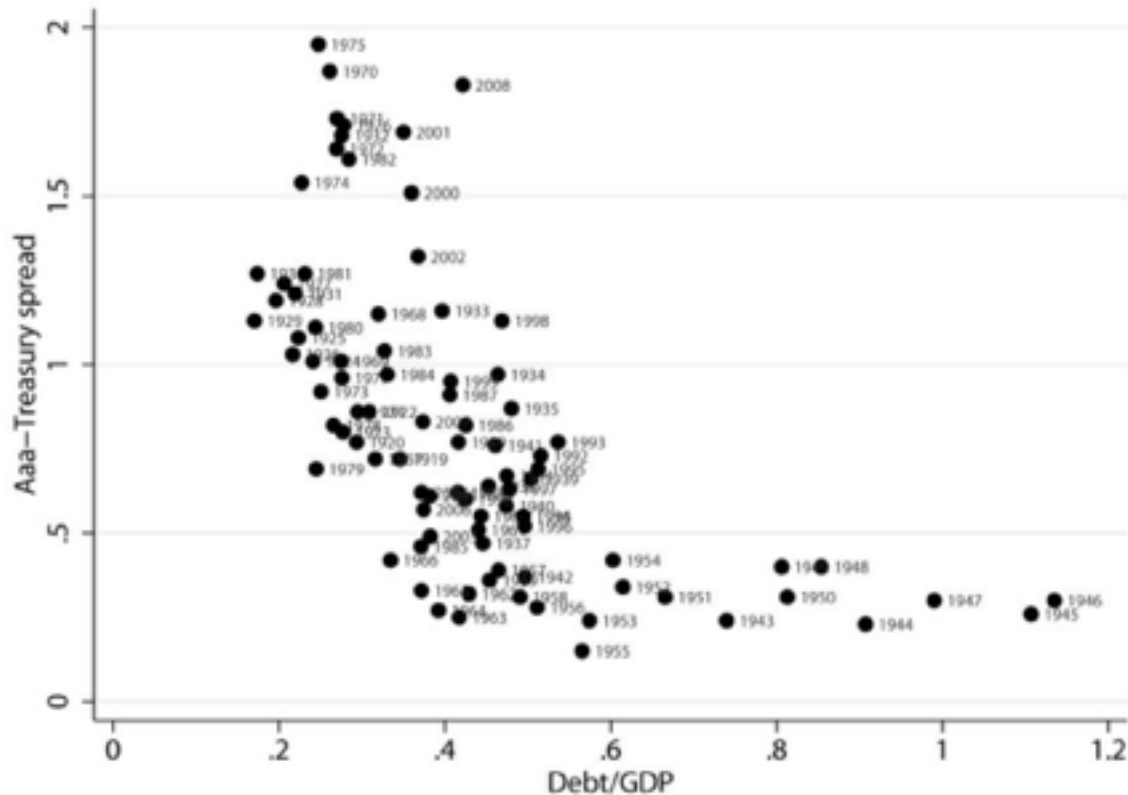


Evolution

- The share supplied by government debt fell
- “Safe” financial debt increased as financial institutions produced substitutes
- Shadow banking liabilities rose
 - Too much.. MBS discredited, MMF dented
- Crisis driven by runs on private quasi-money claims; central banks had to compensate
- In the aftermath, further growth in secured financial credit

Krishnamurthy and Vissing-Jorgensen The Aggregate Demand For Treasury Debt

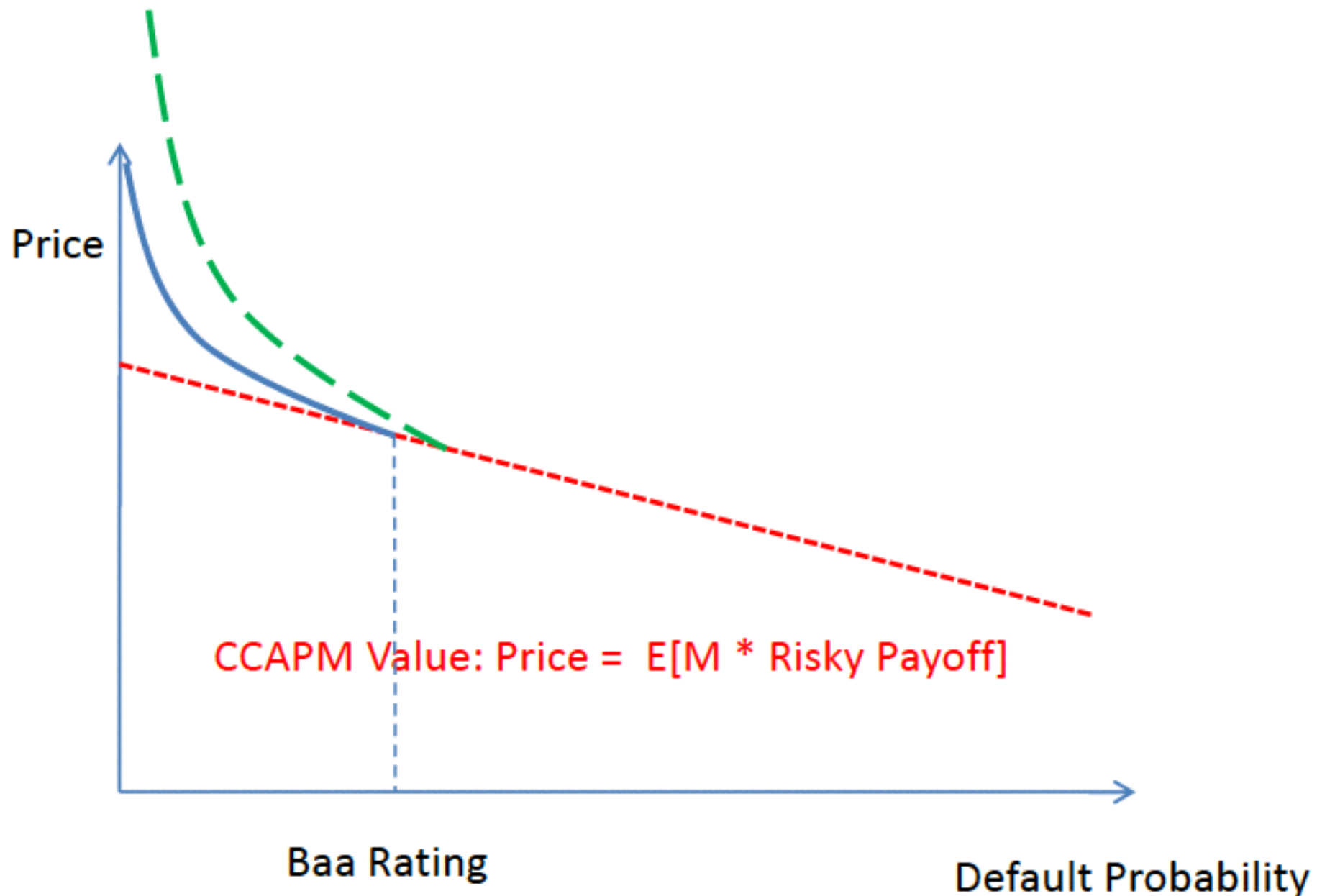
- Investors attach a safety convenience yield to the safety and liquidity attributes of U.S. Treasury debt



Evidence

- A fall in public debt reduces LT and ST spread of Aaa corporate vs Treasury yield
- Changes in public debt supply affects price of safety and liquidity separately
- At least a third of average convenience yield on long-term Treasuries (1926-2008) of 73 b.p driven by safety

Figure 1. Safety Premium on Bonds with Near-Zero Default Risk



Safety and liquidity premia

- Discontinuity of required return at zero risk; segmentation of saving and investment markets
- “Macro” reasons:
 - to back checking accounts and payment flow
- Behavioral reasons:
 - Knightian agents (Caballero Fahri)
 - Salient beliefs (Gennaioli et al)
- Financial reasons:
 - need of financial collateral (for what ?)
 - limited participation (but why ?)

Can safety demand drive
instability ?

Caballero and Farhi

The Safety Trap

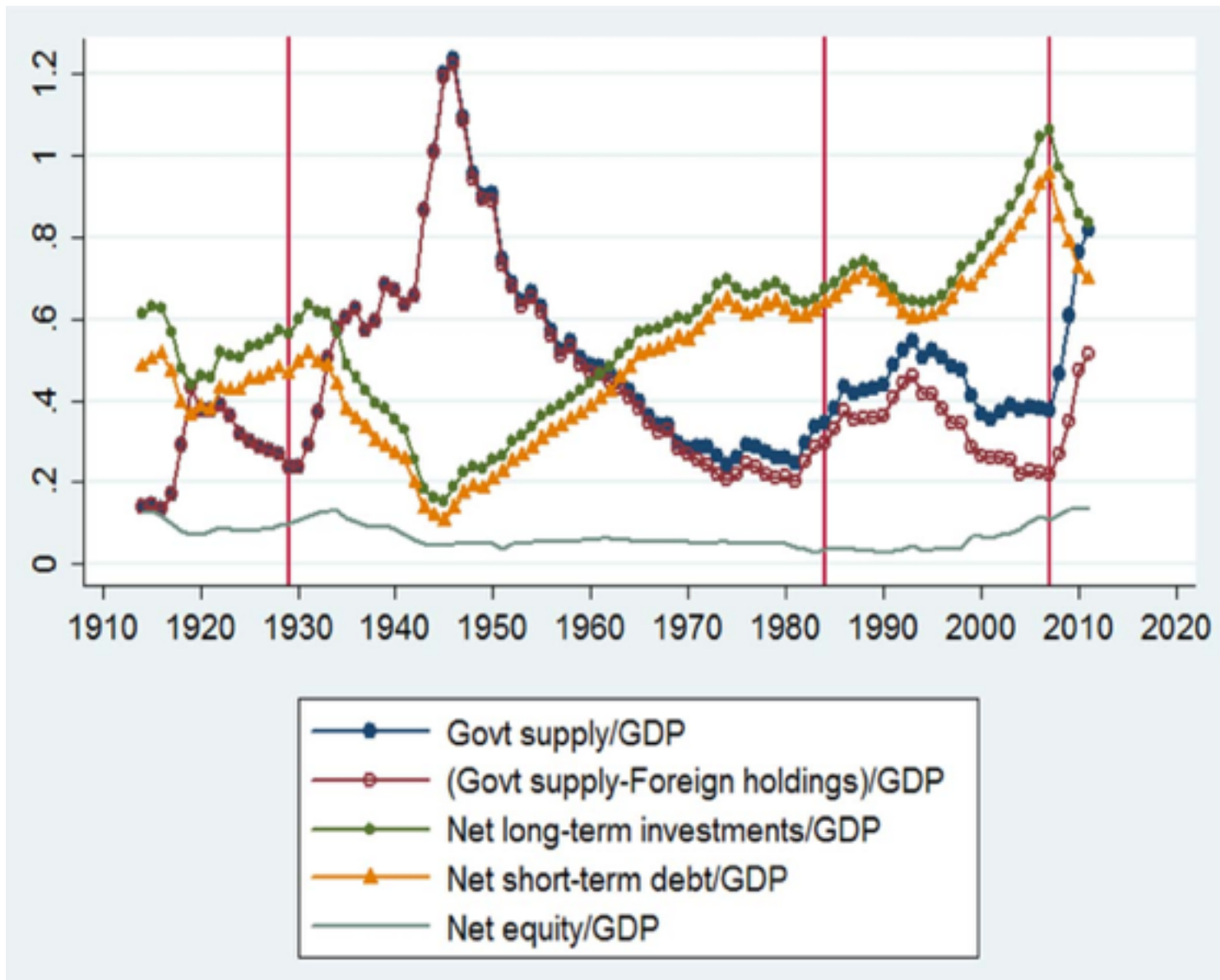
- Safe asset shortages can lead to recession
- Excess demand for safety lead to negative equilibrium rate; impossible
- So only a recession that reduces wealth equalize demand and supply
 - Optimal policy: issue government debt rather than QE or forward guidance on support in the good state
 - Forward guidance in the bad state

Krishnamurthy and Vissing-Jorgensen

Short-term Debt And Financial Crises

- When Treasury supply low, excess safety demand leads financial institutions to expand ST funding as it is cheap
- Lending rise, and so does the cost of a crisis
- Macro view: scale effect of more credit, or via concentration of risky holdings
- is there an effect through more risky assets ?

Evidence



Caballero and Krishnamurthy

Global Imbalances And Financial Fragility

- Foreigners seek safety in US assets
- Lower rates raise domestic US wealth
- Domestic reallocation to riskier assets; increasing concentration of risk
- Foreign funding is more stable by assumption
- Not obvious !

Huge inflows into US during the credit boom

- Forbes (2012) estimates capital inflows in the US of \$7.8 trillion in 2002-07, especially from less developed countries, larger when bond markets are weak (rather than equity markets), suggesting a search for safety.
- 81% of 2007 US external liabilities held the private sector
- Foreign investors appear to receive a lower return than US investors earn abroad, adjusted for exchange rate movements and rough measures of risk (Forbes, 2012).

US BoP, billions of dollars

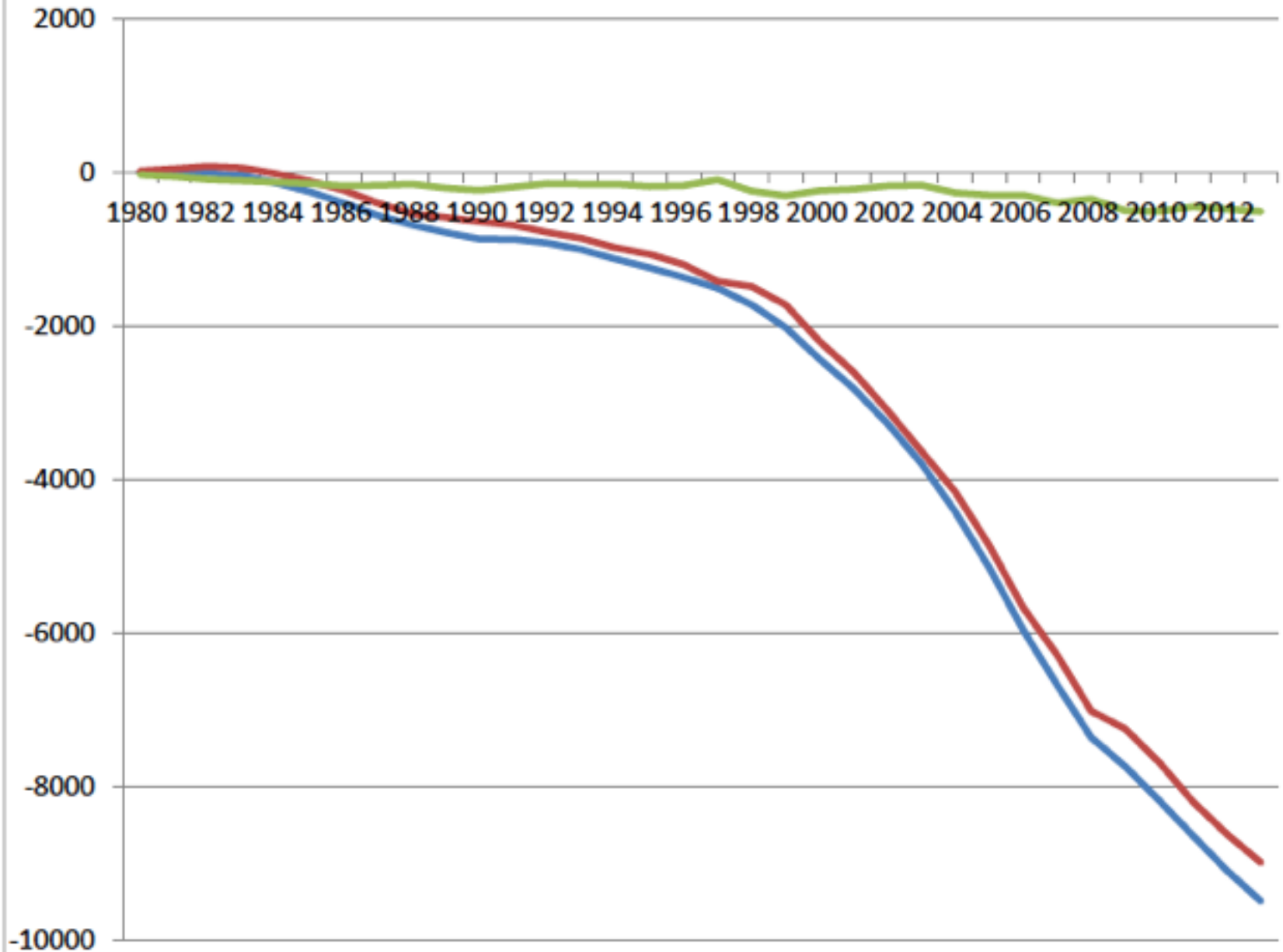
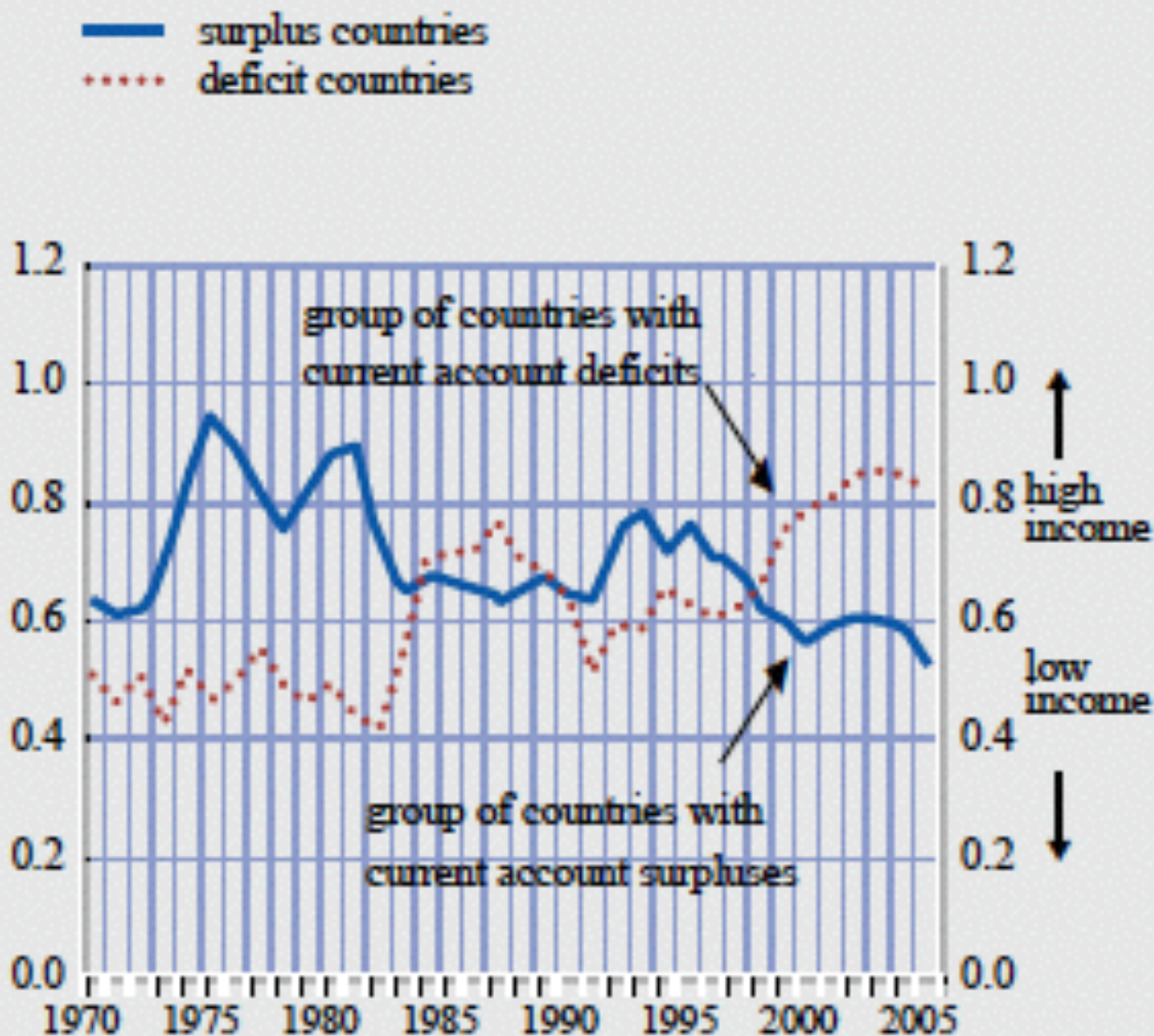


Chart 13 Weighted average of income in surplus and deficit countries



A missing micro link

- Macro literature shows demand for safety may concentrate risk, but not alter it
- Anhert Perotti (2014) shows safety-seeking foreign funding may create endogenous risk.
- Result obtained under optimal contracting and without deposit insurance or bailouts, so intermediaries bear consequences of the risk they create.
- The result is driven by specific features of safety demand by foreigners investing in developed markets.

Micro finance foundation of safety demand (Anhert-Perotti)

Local extreme risk aversion driven by a minimum subsistence level

$$U(C-S) \quad \text{if } C_1+C_2>S$$
$$-\text{infinite} \quad \text{otherwise}$$

- Extreme version of prospect theory
- Similar approach in Caballero-Fahdi; Gennaioli et al

Expropriation in EM countries

- No financial safety in EM because of political risk; agents need to secure S
- Let foreign saver i have access to local (inferior) safe storage, return $SS_i = s_i < 1$
- In contrast, US residents enjoy strong property right protection ($SS_{US}=1$)
- Foreigners need a US intermediary to access US property right protection

Demand and supply for safety

- Foreigners have inferior storage option, so accept low return
- Demand for safety at rate r^* (may be <1) equals the sum of S for all EM investors whose private storage return is dominated ($s_i < r^*$)
- Supply by US intermediaries expands the stock of safe assets beyond public debt

Results

under optimal contracting

1. Foreigners accept only demandable debt to ensure absolute safety
2. Some less risk averse investors (eg US investors who already secured their safety S) supply stable LT funding to offer insurance in bad state
3. As MC funding cost < 1 , excess lending ($NPV < 0$)

What is the implicit cost of cheap foreign funding ?

- First, foreigners choose ST claims and thus enhance maturity transformation
- Second, they are less able to assess information on local asset risk (Brennan-Cao, 1997; Petersen-Rajan, 2002; Stein, 2002).
- Thus there is a trade-off between the **cost** and the **stability** of foreign funding

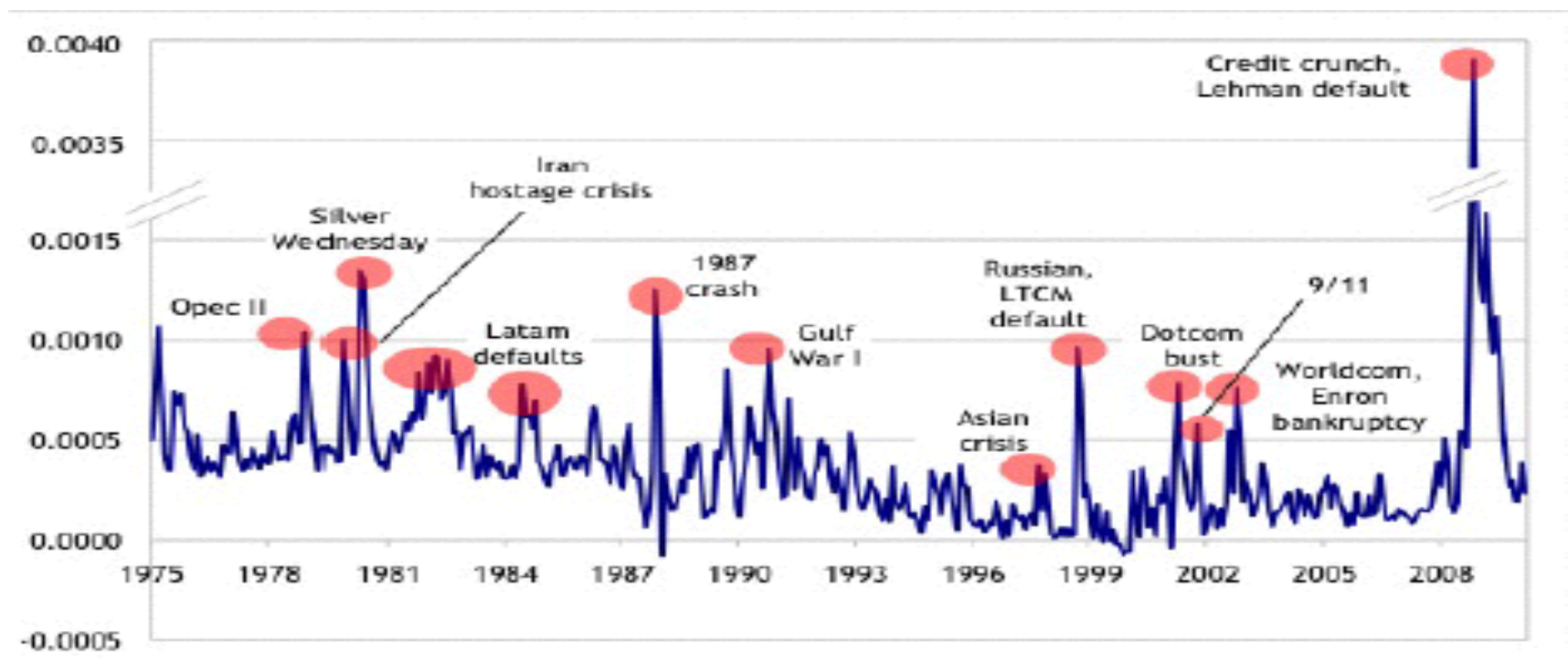
Key conclusions

- Foreigners are **less stable** investors because less informed or less insured
- Result: excess runs in the good state
 - Costly liquidations increase risk
- Note: runs on US banks do not imply a run on the dollar

The U.S. Dollar Safety Premium

Matteo Maggiori

- US dollar earns a safety premium against foreign currencies
- Especially high during crises:



Evidence

- U.S. dollar overshoots during crises
- Unaffected by financial and fiscal conditions in the U.S.
- During crises, investors earn negative expected returns as compensation for holding safe dollars
- U.S. investors who invest abroad take large losses in crises, while earning a positive premium in normal times