Global Safe Assets

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Introduction

- Widespread concern that the global economy is running short of safe assets...

- ...and that this will affect negatively the global financial system

  "*the shrinking set of assets perceived as safe, now limited to mostly high-quality sovereign debt, coupled with growing demand, can have negative implications for global financial stability.*" (IMF GFS 2012).

- This paper analyzes the issue from a global perspective, with a focus on two dimensions:
  - how the financial system reacts to a scarcity of stores of value generally
  - the role of monetary backstops for public debt

- In what follows, we define a 'safe asset' as a liquid debt claim with negligible default risk
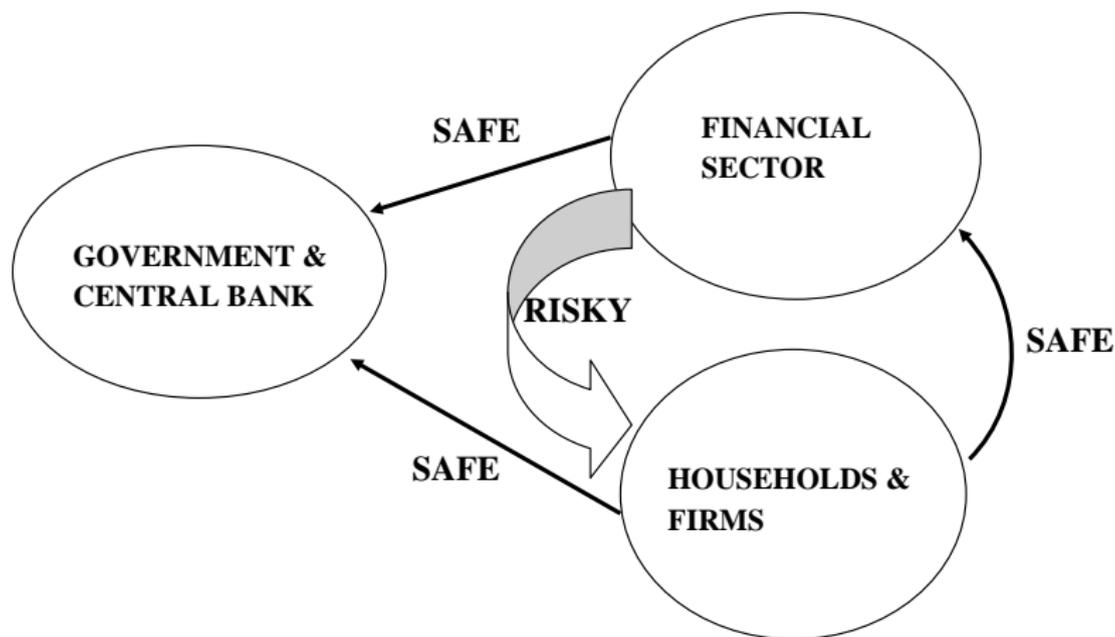
The 'Specialness' of US Treasuries
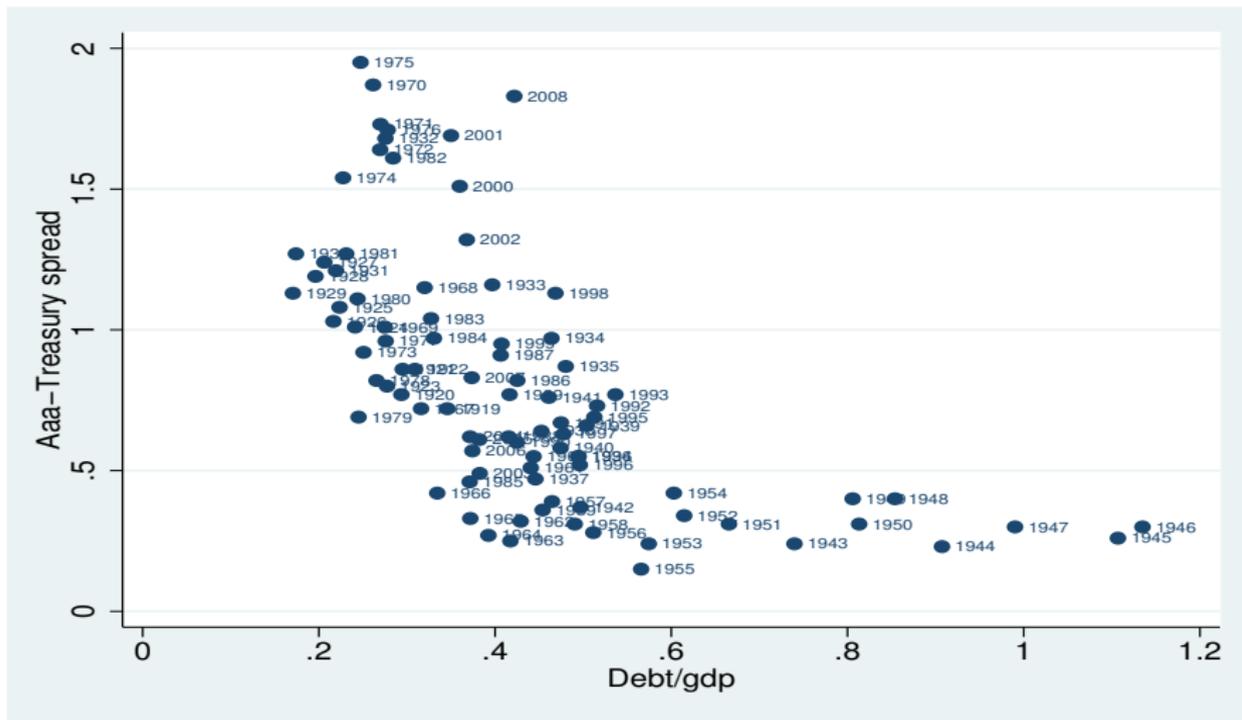
From: Krishnamurthy & Vissing-Jorgensen (2012).

Structure of presentation

- Demand for safe assets
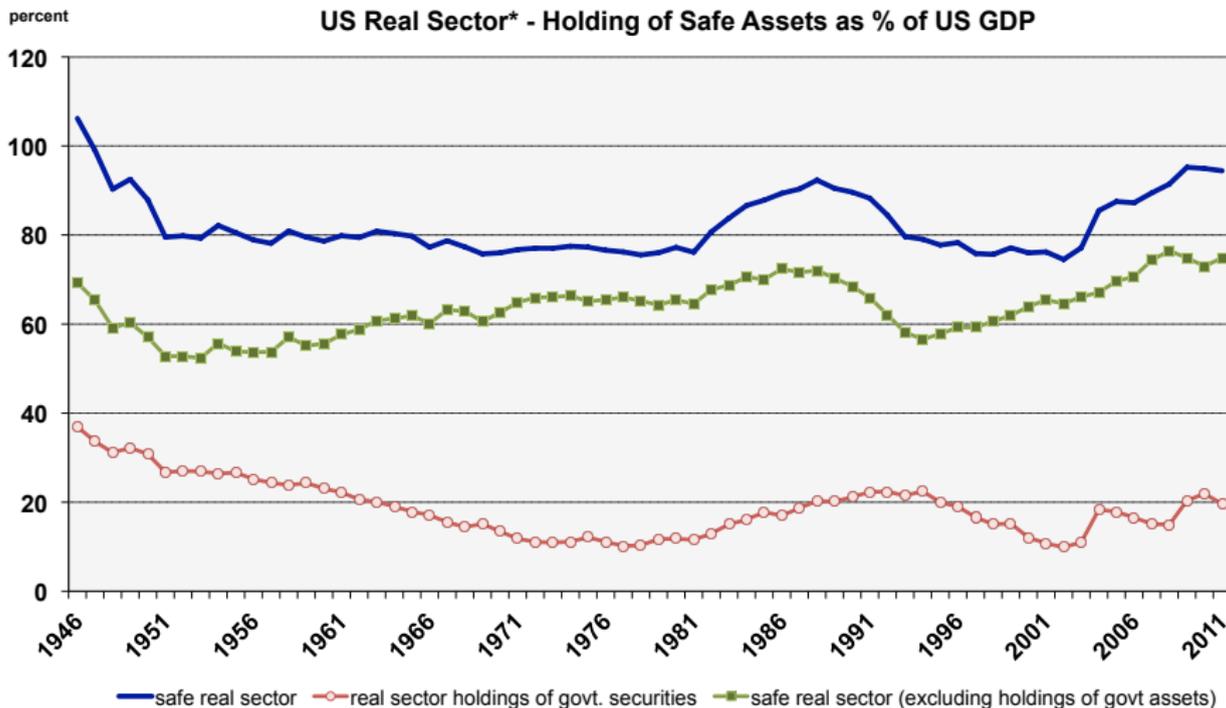
- Supply of safe assets

- Challenges ahead

Demand for safe assets: a sectoral decomposition

Demand for US safe assets: the real nonfinancial sector
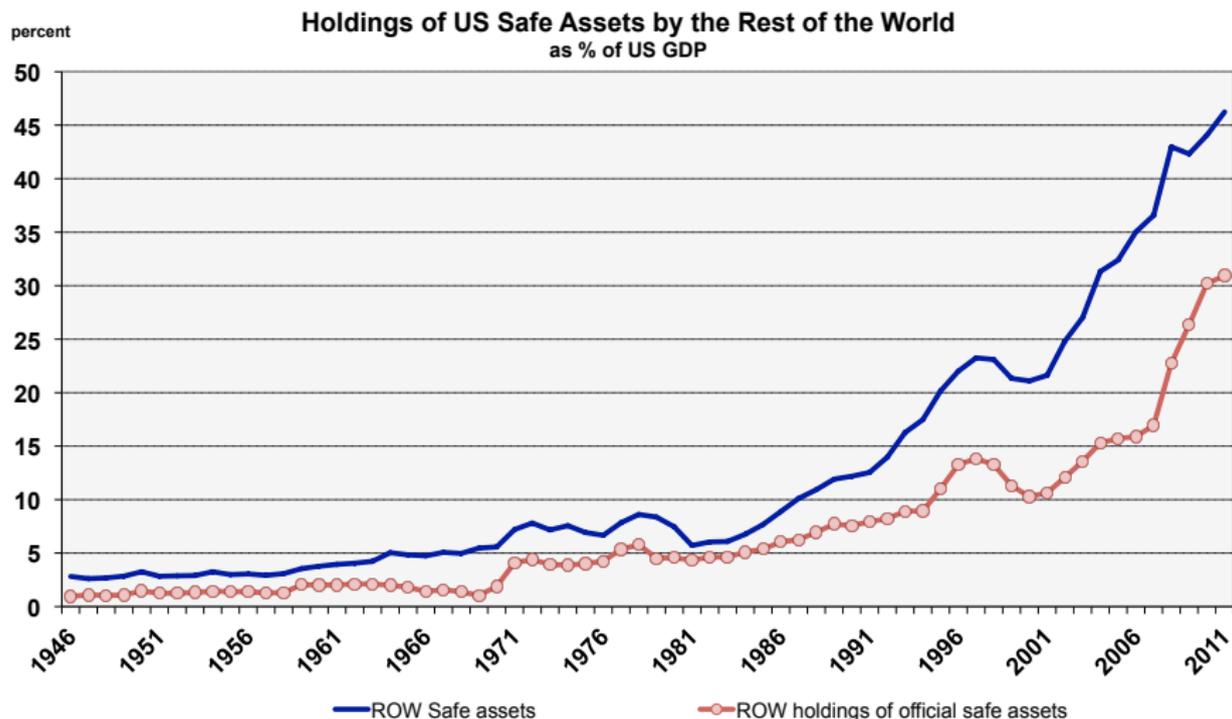
The private real sector's demand for safe assets has been remarkably stable (US) (also true for UK, Germany, France...).

US Real Sector* - Holding of Safe Assets as % of US GDP

percent

Legend: safe real sector — real sector holdings of govt. securities — safe real sector (excluding holdings of govt assets)

*Households and Non-Profit Organizations + Non-financial Corporations

Demand for US safe assets: the rest of the world

The increased demand for safe assets comes from (a) the US financial system and (b) the rest of the world (official and financial)

Holdings of US Safe Assets by the Rest of the World
as % of US GDP

Legend: ROW Safe assets — ROW holdings of official safe assets

Demand for US safe assets: the US financial sector

The US financial sector's demand for government safe assets has been stable from the 1970s to the crisis when inside liquidity was replaced by outside liquidity

US Financial Sector* - Holding of Government Safe Assets, as % of US GDP
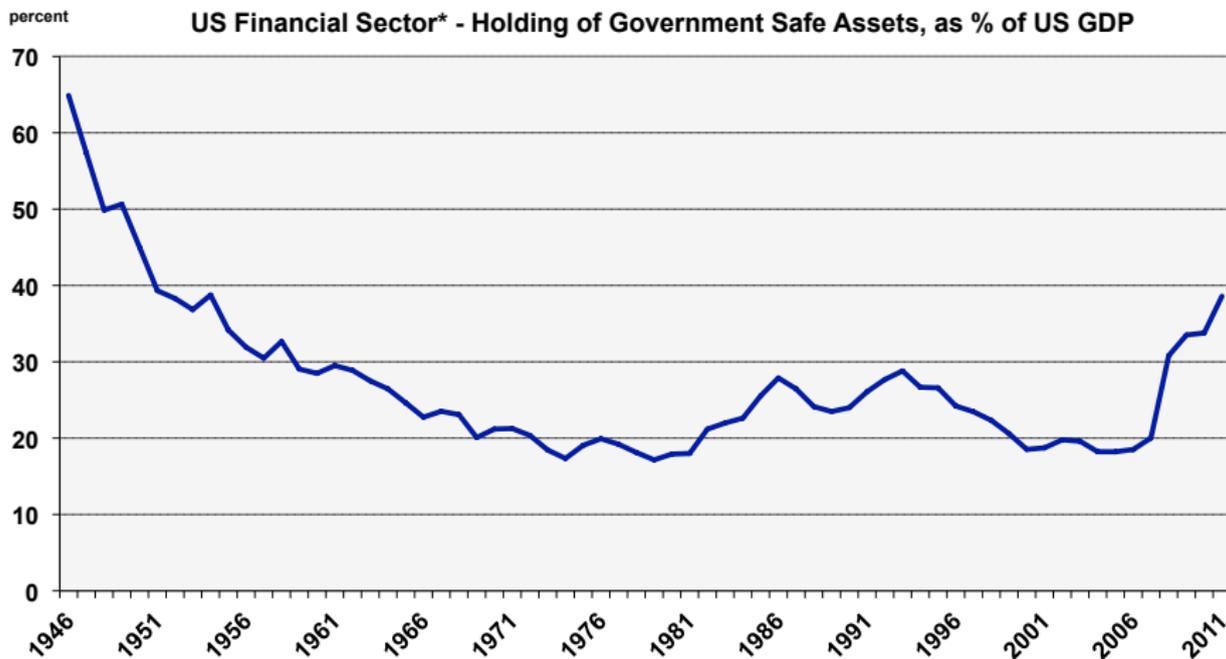
*Financial Business, net of Monetary Authority

Demand for safe assets

The demand for safe assets reflects frictions and inefficiencies

1) Demand from financial sector:

- destruction of inside liquidity
    - in the long run, either inside liquidity should come back, or the demand for outside liquidity should go down (through deleveraging, etc.)

2) Demand from foreign official sector (reserves)

- Precautionary accumulation: lack of international lender of last resort
- Mercantilist accumulation

Should the priority be to increase supply of safe assets or to address the underlying inefficiencies?

Supply of safe assets: the decline may have been exaggerated

- The demand for a store of value creates its own supply (but this supply may be 'fragile')

- Public safe assets can be made safer than private-label safe assets. But this requires a subtle interaction between monetary and fiscal authorities

- The fiscal-monetary nexus.

Supply of safe assets

Analysis based on model of global store of value of Caballero, Farhi and Gourinchas (2008)

- Asset has two characteristics: a fundamental value and a 'fragility'.
    - fundamental value means claim on real resources
    - fragility means creditors can be expropriated (crisis, rollover....)

- If fragility increases, the real interest rate falls so as to keep the value of debt constant
    - endogenous adjustment that tends to make the asset safer

- But pushed too far, the fall in real interest rates can be destabilizing
    - liquidity trap
    - financial instability: 'Gresham law' for bubbles

A model of stores of value

Extension of Caballero, Farhi and Gourinchas (2008)

- endowment economy X_t grows at rage g

- asynchronicity in income/consumption expenditures. arrival rate θ

- asset has two characteristics: a fundamental value and a financial fragility
  - fundamental value = claim on real resources (δ)
  - fragility = creditors can be expropriated (α)

- equilibrium risk free rate:
  $$r = g + \delta\theta - \alpha$$

  if fragility increases, interest rate falls so as to keep value of debt constant

A model of stores of value

- Why does fragility lower interest rates? A low interest rate endogenously expand the market value of the existing stores of value. It also increases the solvency of borrowers

- A financial crisis reduces the supply of stores of value (δ, α). This pushes down the natural rate of interest. In model with nominal rigidities, this requires a similar drop in policy rate. But monetary authorities may be constrained by the zero-lower-bound on nominal rates.

- If interest rates fall too much, there is the possibility of rational bubbles. Specifically, when $r < g$ i.e. $\delta\theta < \alpha$ (dynamic inefficiency).

- We interpret these 'bubbles' as private-label supposedly safe assets

Supply of Safe Assets

The model helps to answer three questions:

- When many risky assets co-exist, will the economy naturally load on the safer one?
  - Answer: not necessarily. Instead, riskier assets are offered a premium and grow faster and saturate the demand for stores of value. 'Gresham Law': riskier assets crowd out safer ones.

- Can safe assets eliminate risky ones?
  - Answer: Yes, if they are sufficiently safe. Specifically, we need:

  $$\delta\theta > \alpha$$

  sufficiently safe assets can immunize the economy against bubbles.

- Why are safe asset public assets?
  - Answer: public assets are intrinsically safer because the government has the ability to tax. But they may be fragile too (i.e. rollover risk). Contrast US, UK, Greece, Spain and Italy....

Supply of safe assets

Three layers of safe assets

1. Central Bank liabilities
2. Government Debt
3. 'Private-label' safe assets (Bernanke et al, 2011)

- The crisis affected layers 3 (US) and 2 (Euro): are safe assets becoming extinct?

- We argue instead that the euro crisis is driven by features specific to the euro, and does not necessarily prefigure similar crises elsewhere

Supply of safe assets

Safe assets and the fiscal monetary nexus

- Whether a debt asset is safe depends on whether it benefits from a "backstop" by the central bank
    - e.g., will the central bank prevent a government debt rollover crisis from turning into a default?

- The backstop can be justified as "lending-in-last-resort" against self-fulfilling liquidity crises
    - but the fear is that it could lead to debt monetization

- Following analysis based on Jeanne (2012)

Supply of safe assets

Three period model $t = 0, 1, 2$. Real riskless interest rate normalized to 0.

- $t = 0$: Government needs to roll over existing debt d_{-1} by issuing d_0
- $t = 1$: no fiscal income so gov. rolls over d_0 by issuing d_1.
- $t = 2$: fiscal income y is realized according to $F(.)$. y, known at $t = 1$

Possibility of a rollover crisis in $t = 1$ if y too low. Two possibilities:

- government defaults (no repayment)
- central bank lets the gov. default with probability μ (monetary dominance)

$$
\begin{aligned}
d_{-1} &= q_0 d_0 \\
d_0 &= m' - m + q_1 d_1 \\
p_2 &= \frac{m'}{m} = \frac{1}{q_1} \\
q_0 &= 1 - \mu F(d_0)
\end{aligned}
$$

Supply of safe assets

Price of debt in period 0 satisfies: $[1 - \mu F(d_0)]\, d_0 = d_{-1}$, increases with monetary dominance μ: a low μ reduces default risk premium, but does not increase inflation premium. For low realization of y:
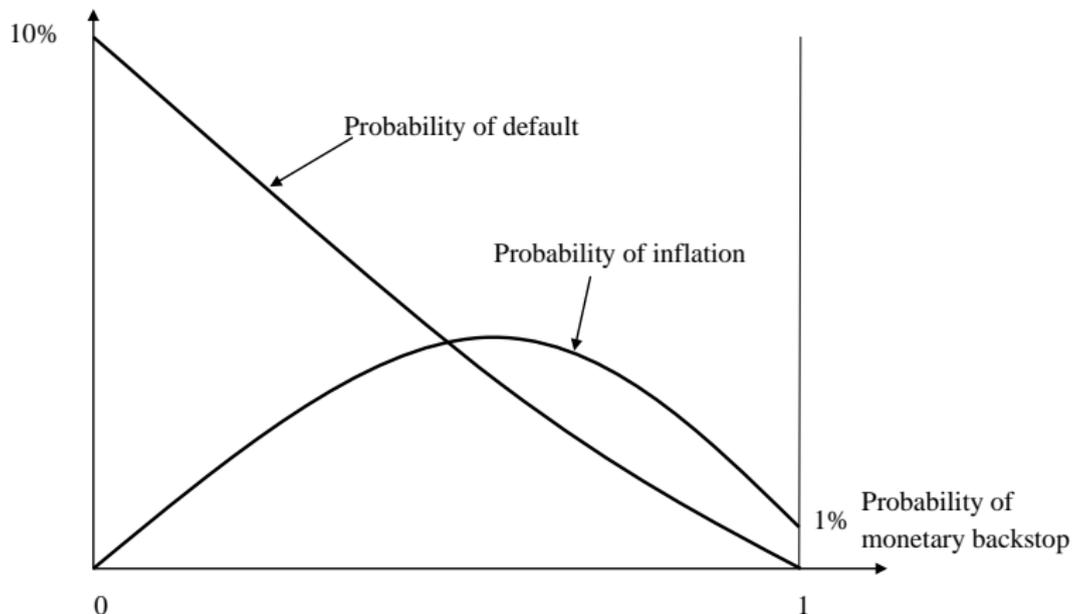
Monetary backstop and fiscal incentives

- Government debt monetization is very costly in most countries, so monetary backstop does not create incentives for fiscal slack

- But free riding a problem in euro area
    - monetizing Greek debt not very costly for Greece

- Creating safe assets is a problem for the euro area
    - and for the ROW through spillovers

- But the euro area debt crisis is euro-specific, not a template of crises to come elsewhere

Challenges Ahead

- Demand for safe assets: not clear that there is a legitimate and durable increase

- Supply of safe assets:
    - based on the US crisis, we would advocate going back to the basics (liabilities of central bank and government)
    - But specific euro problem

- Implications for the International Monetary System:
    - Dollar reinforced as currency of denomination for safe assets (and global banking)
    - But in the long run, is a multipolar safe asset system stable?