



The safe asset meme

Richard Portes*

London Business School and CEPR

RIETI, Tokyo, 8 October 2013

*I am grateful to Li Xinyuan for research assistance.



Road map

- Definitions and uses of safe assets
- The claim: a 'shortage' – now or in future – with undesirable consequences
- The evidence: prices and quantities
- The claim: 'safe asset shortage' is a contemporary version of the Triffin Dilemma, but now within economies as well as in the international financial system
- Triffin Dilemma (TD) – 1960s and now
- The claim: policy implications



We should be scared!

- *FT Alphaville* headline 5 December 2011: 'The decline of "safe" assets', presenting 'the most important chart in the world', titled 'Shrinking universe of "safe" assets in the primary reserve currencies'
- It gets worse:
Financial Times headline 27 March 2013: 'Global pool of triple A status shrinks 60%'
- Caruana (in BIS 2013, pp. xxi-xxii) summarises a wide range of concerns that insufficient safe assets might raise for macroeconomic and financial stability
- Caballero and Farhi (2013) model the 'Safe Asset Mechanism' and claim it is responsible for many macroeconomic dysfunctions



The meme

- "an idea, behavior, or style that spreads from person to person within a culture...memes [are] cultural analogues to genes in that they self-replicate, mutate, and respond to selective pressures.
- coined by Richard Dawkins in *The Selfish Gene* (1976) as a concept for discussion of evolutionary principles in explaining the spread of ideas and cultural phenomena. Examples...included melodies, catch-phrases, fashion...
- ...memes may evolve by natural selection...Memes spread through the behavior that they generate in their hosts. [Some]...may become extinct, while others may survive, spread, and (for better or for worse) mutate... some may replicate effectively even when they prove to be detrimental to the welfare of their hosts."

Wikipedia



Propagation and mutation...

Different claims:

- 'The world has a shortage of financial assets' (Caballero 2006) – now and in future
- DeLong (2012) said 'now': demand for safe assets rose with the crisis (precautionary motive) and supply fell (much 'information-insensitive' debt became information-sensitive, as counterparty risk rose)
- 'In the future, there will be rising demand for safe assets, but fewer of them will be available...' (IMF *Global Financial Stability Report* April 2012)



...to a wide range of definitions

- 'cash (including insured deposits) plus any debt that is tradeable, liquid, and enjoying a top credit rating' (Gourinchas and Jeanne 2012 – their ppt was more succinct: 'liquid debt claim with negligible default risk')
- 'Safe assets meet the criteria of: (1) low credit and market risks, (2) high market liquidity, (3) limited inflation risks, (4) low exchange rate risks, and (5) limited idiosyncratic risks.' *GFSR* 2012
- '...assets that are either directly or indirectly used in an information-insensitive fashion...Key components...include bank deposits, money market mutual fund shares, commercial paper, federal funds and repurchase agreements ("repo"), short-term interbank loans, Treasuries, agency debt, municipal bonds, securitized debt, and high-grade financial-sector corporate debt.' Gorton *et al.* 2012

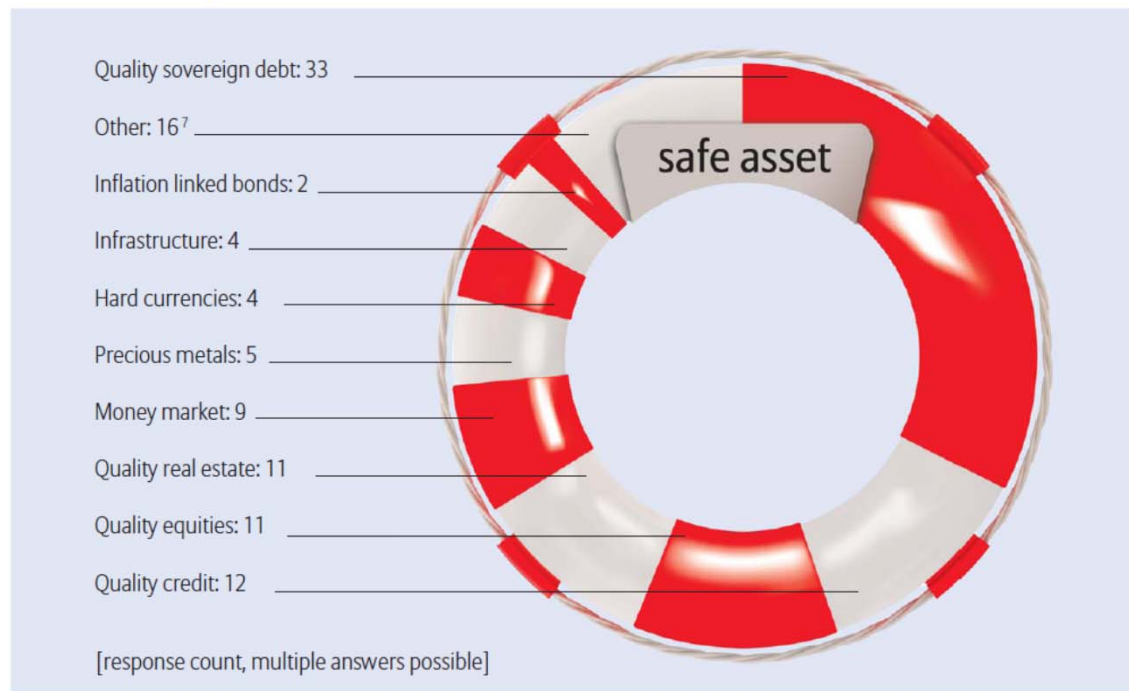


Preliminary question

- Where to draw the line? *No asset is truly safe* :
- not in default risk (CDS spread on US Treasuries 5-yr at 1.1.09 was 67 bps, long before August 2011 debt-limit scare)
- nor liquidity risk (3-month US Treasuries stopped trading for 30 minutes at peak of post-LTCM turmoil, on 5.10.98)
- nor inflation risk (US inflation went well over 10% in 1979-80)
- nor exchange-rate risk (the dollar depreciated 50% against the DM from February 1985 to October 1987)
- There is a *continuum* that requires judgment or reference to the markets - hence difficulties with the data

Market views are diverse

Which assets do you consider as safe in the current environment?



⁷ Other: Covered bonds /agencies, Diversification, Renewables, Insurance policies, Lifecycle product, Arrow-Debreu securities, Long short event driven, Commodities, Swaps, Global businesses, Art.

Survey of institutional portfolio managers, in AllianzGI *Risk Monitor* 2012.
'13 respondents said there is no such thing as a safe asset.'



Safe assets – the issues

- Excess demand for money/near money in a macro context
- Collateral shortages
- Safe asset shortage → low real interest rates → 'search for yield', and more generally, financial instability
- International finance – global imbalances, the TD
- Caballero, co-authors, and many commentators draw strong policy conclusions from the safe asset meme
- Won't discuss
 - safe assets as metric in prudential regulation
 - need for a risk-free rate against which others are benchmarked (key in finance literature)
 - store of value role



Macroeconomics and Mill/Walras

- Start where I accept the meme: in 2008-09, there was excess demand for money and hence, by Walras's Law (DeLong gives Mill precedence), excess supply of goods
- Caballero (2006) had warned that 'forcing a reduction in the value of safe assets [e.g., deflating bubbles] may lead to large excess demand for them with excess supply of goods'
- Policy-makers didn't force it – in the crisis, counterparty risk rose dramatically, and private and inside liquidity evaporated
- Those sympathetic to the 'general disequilibrium' (or 'temporary equilibrium') macroeconomics of the 1970s (see Muellbauer and Portes 1978) will find this interpretation of the slump attractive
- But we are past that stage of the crisis, although this approach to macro is reappearing (Michaillat and Saez 2013)¹⁰



Collateral – a shortage (or ‘scarcity’)?

- See Singh (2013) for the distinction
- *FT Alphaville* 5 December 2011 drew analogy with TD
- The claim: safe assets are essential as collateral, and collateral is essential for financial intermediation
- Hence a fall in safe assets available as collateral, *or* a fall in the velocity (re-use) of collateral, or both, *might reduce lending*
- Is there any empirical work supporting this story??
- Recent collateral squeeze in euro area is not a ‘safe asset shortage’ (Allen and Moessner 2013)
- Krishnamurthy and Vissing-Jorgensen 2012 do provide evidence that an increase in Treasury debt reduces the probability of financial crisis; Gorton and Ordonez 2013 assert this is because Treasuries are superior substitutes for private collateral



But no cause for great concern, says CGFS

'Regulatory reforms and the shift towards central clearing of derivatives transactions will also add to the demand for collateral assets. But there is no evidence or expectation of any lasting or widespread scarcity of such assets in global financial markets.'

BIS Committee on the Global Financial System (2013)



Safe asset shortage, search for yield, and financial instability

- The claim: shortage of safe assets pushed real interest rates down to 'historically low' levels, hence investors needing yield went into excessively risky assets (and it's happening again!)
- Caballero (2006) added global imbalances and asset price bubbles to the list of effects of a supposed shortage of safe assets (Caballero-Farhi-Gourinchas 2008 model the global imbalances story, stressing the inability of emerging market economies to create safe assets and the superiority of US safe assets)
- One explanation of the crisis is that shortage of safe assets led private sector to create 'private label' safe assets that weren't really safe but were certified by the ratings agencies and easily marketed
- Bernanke (2013), Kocherlakota (2013), Gourinchas and Jeanne (2012), and the IMF in *GFSR* 2012 share the concern that safe asset shortages will lead to financial instability (volatility jumps, herding, cliff effects...)



But is there really a global shortage of safe assets?

- We see no global liquidity shortage, no deflationary bias (both important in TD) – inadequate liquidity during crisis was only short-run lack of dollars to finance dollar positions, met by short-duration currency swaps
- Not only US supplies safe assets – Germany, UK, Norway, Switzerland, *even emerging markets* (McCauley 2012)
- ‘U.S. financial assets have not been demonstrably more attractive than those of other industrial economies’ (Gruber and Kamin 2008)
- So are quantities of safe assets really falling? See data below



Effects on interest rates?

- Real interest rates did fall from 1980s and early 1990s to levels that *seemed* historically low in 00s – but *weren't*, because real interest rates were much the same in 1960s and lower in 1970s.
- So was there shortage of safe assets both pre- and post-1971? Not because of petrodollars – no oil money in 1960s, and in 1970s, NY and London banks just funneled petrodollars to Latin America and Eastern Europe in syndicated loans. How could this push down real yields on 10-yr Treasuries and gilts?
- So was it 'financial repression' (Reinhart and Sbrancia 2012)? Doubtful: that would block cross-border transmission, but there was high comovement of advanced economy and emerging market spreads 1960-1980.



Evidence

- Asset price bubbles – really? is there agreement on identifying asset price bubbles before they burst?
- Interest rates and spreads
- Volumes of 'safe' assets – how to identify supply and demand? What is 'safe'?

Rates are 'historically low' from the early 2000s

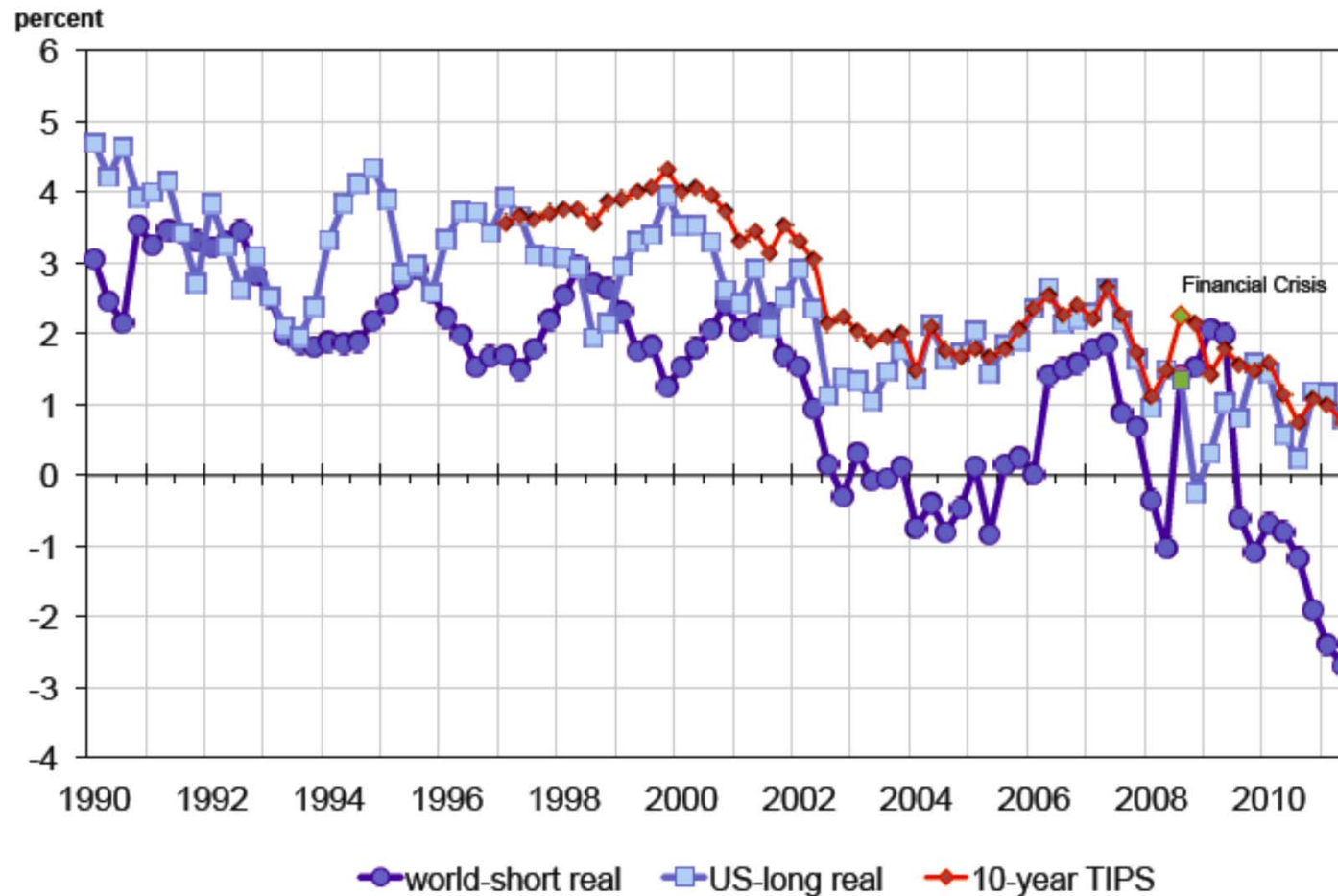
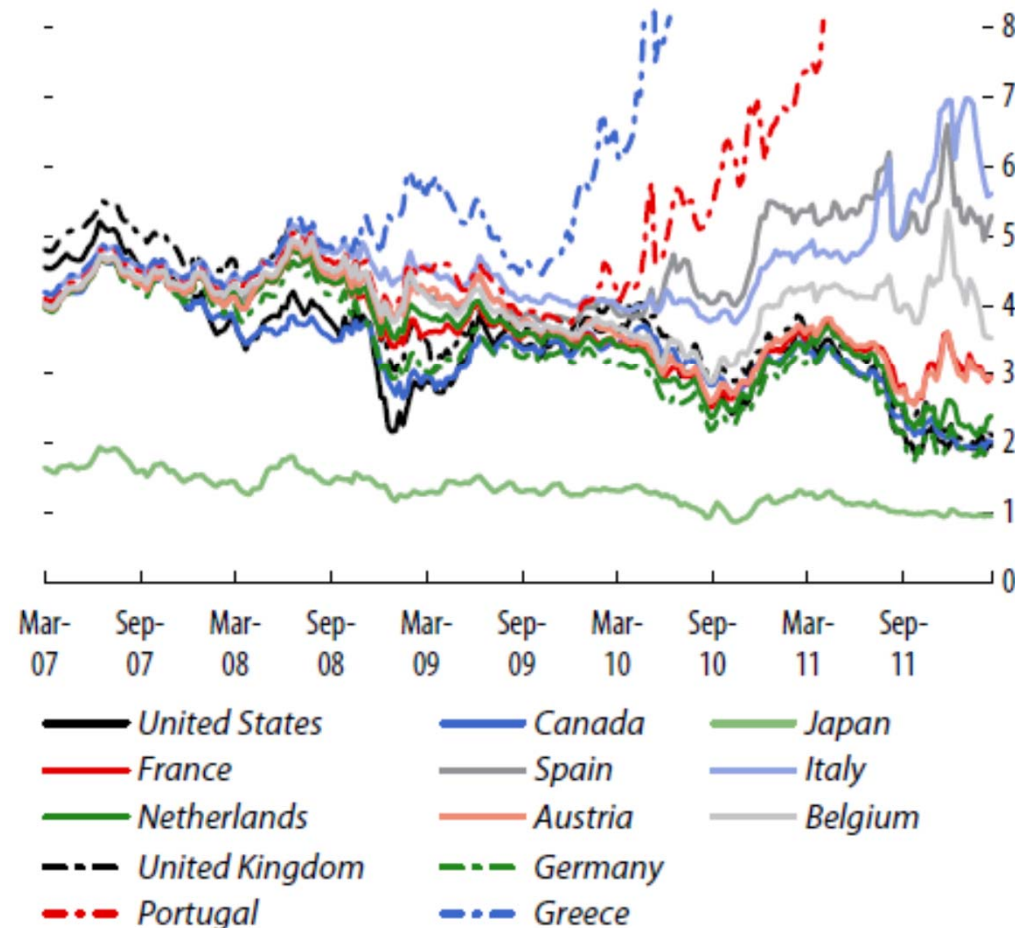


Figure 1: World Real Interest Rates, 1990Q1-2011Q3. Source: Global Financial Database, OECD, International Financial Statistics, Survey of Professional Forecasters.

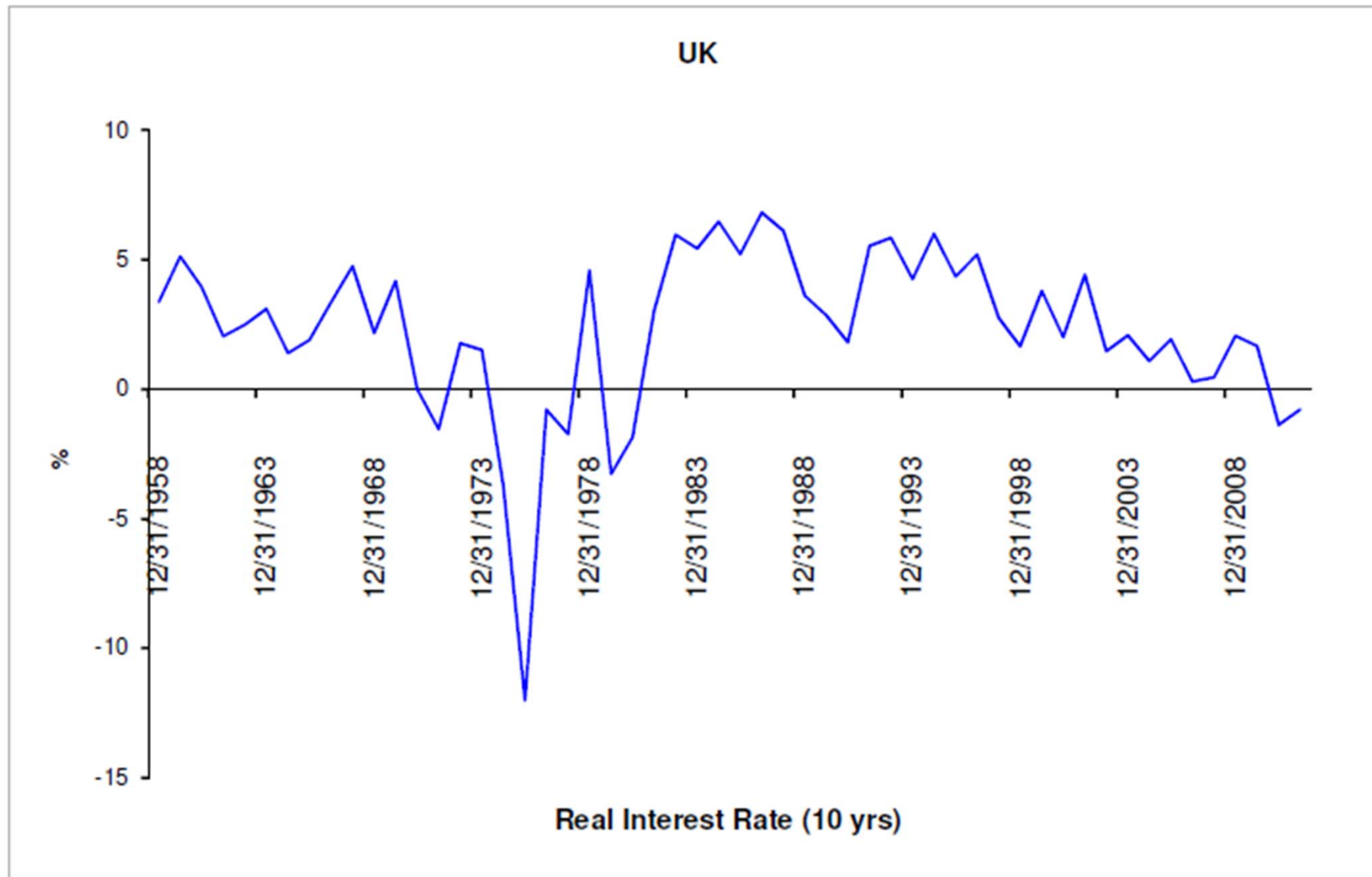
Gourinchas and Jeanne (2012)

According to *GFSR 2012*, 'yields on bonds viewed as safe havens have declined to historical lows' – illustrated by an even shorter version of 'history'

Figure 3.1. Ten-Year Government Bond Yields in Selected Advanced Economies
(In percent)



But the picture changes in a longer historical perspective



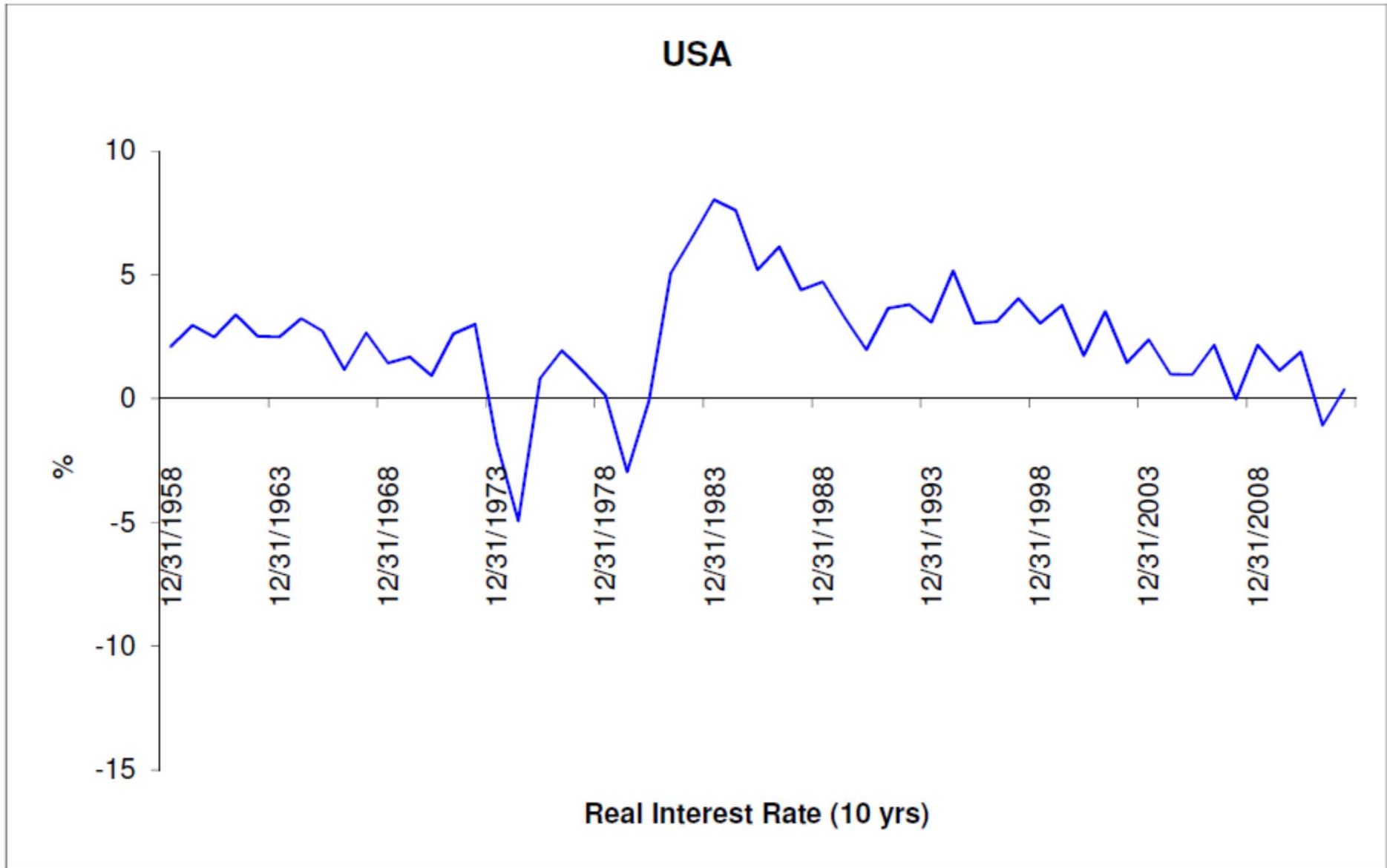
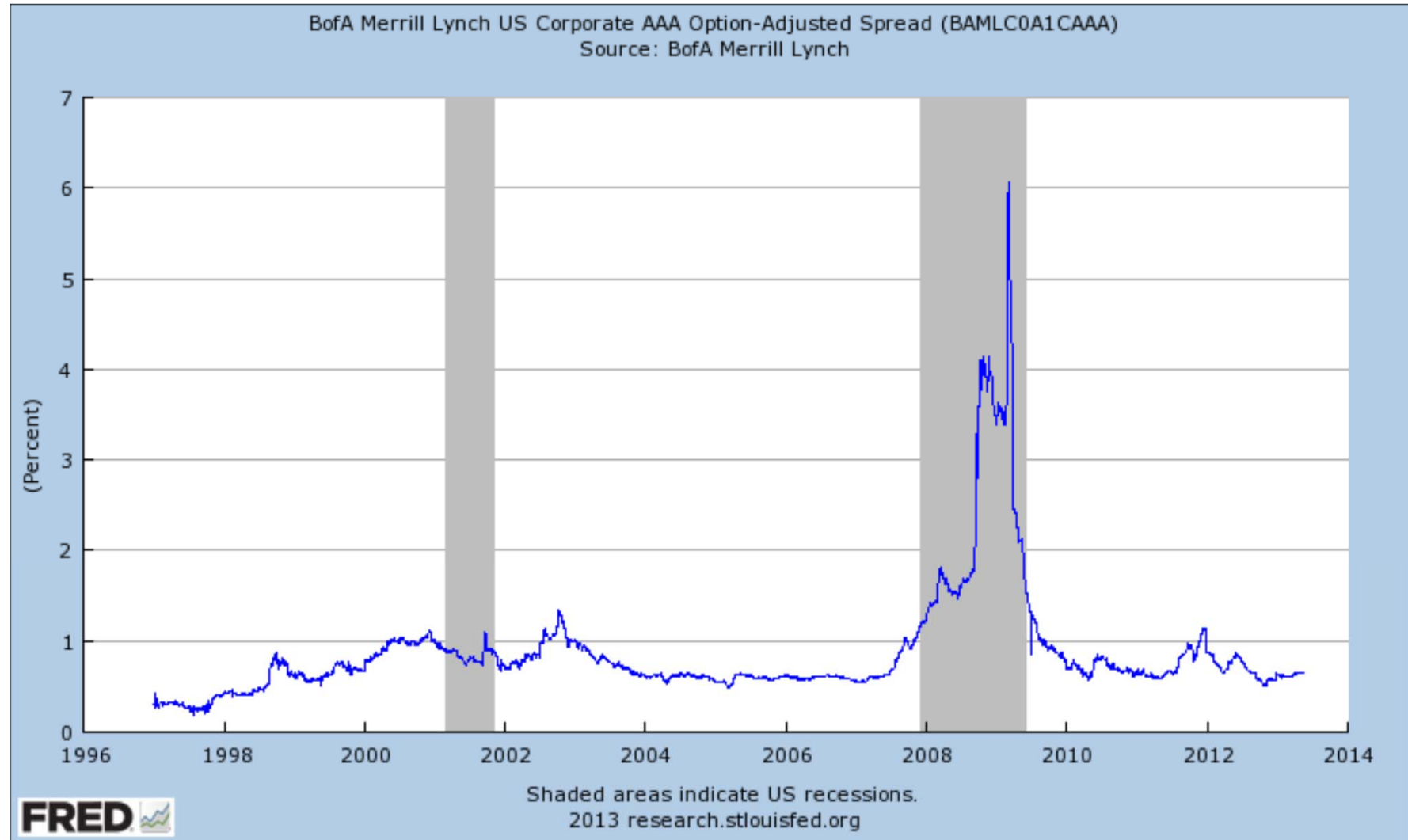


Exhibit 6: US Long-Term Real Interest Rates

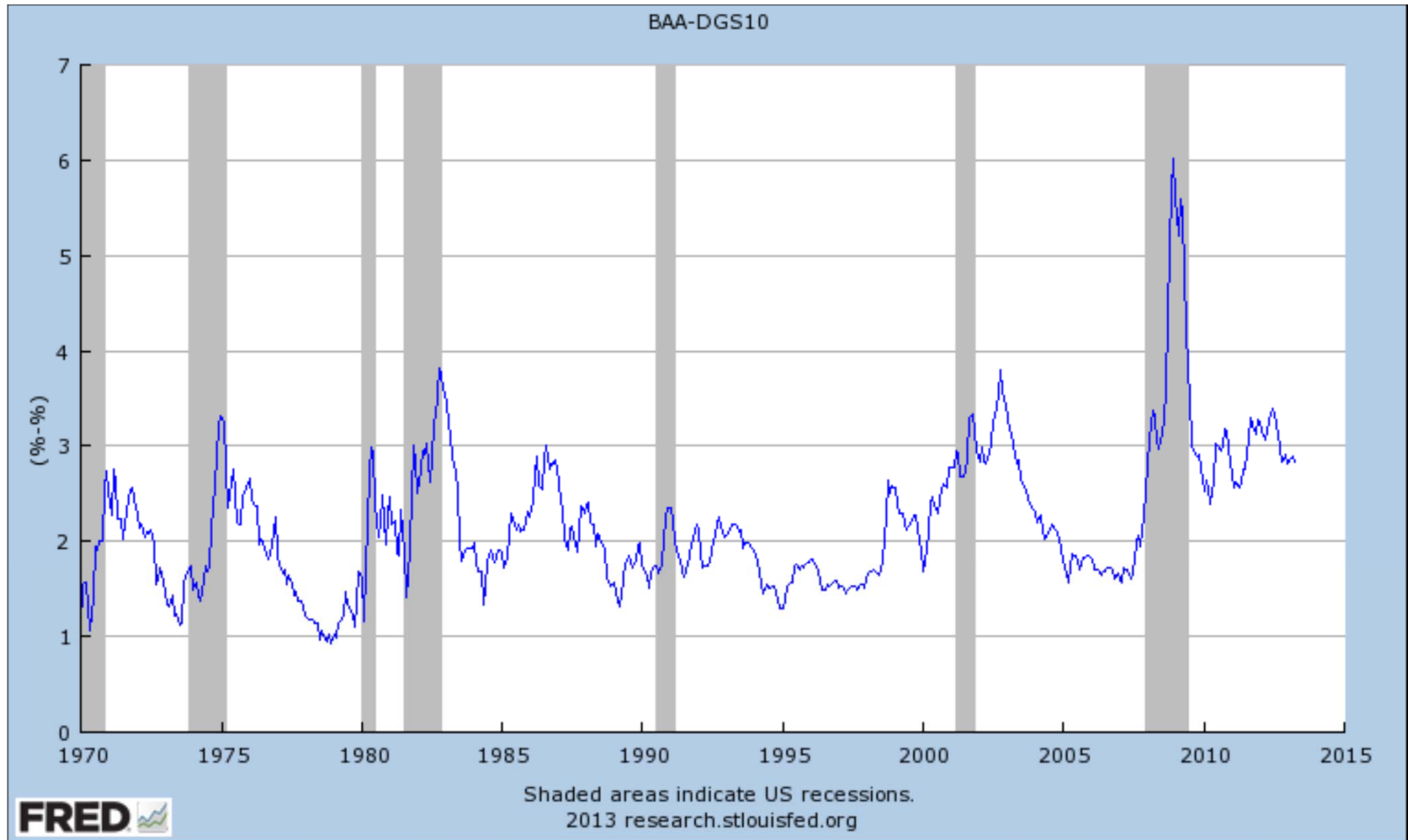


Source: Credit Suisse, *Market Focus*, 'When collateral is king', 15 March 2012

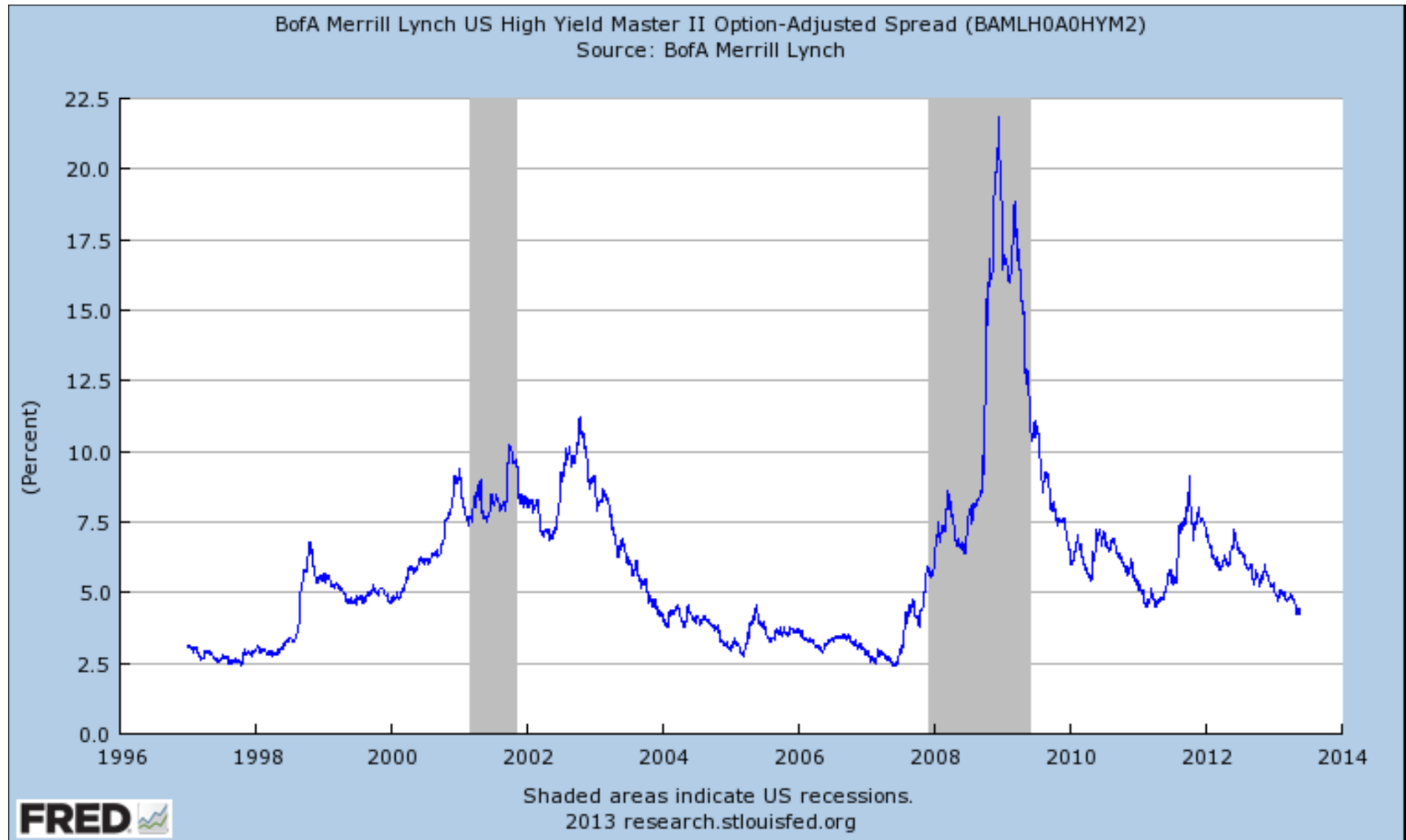
Are spreads especially compressed? Not AAA



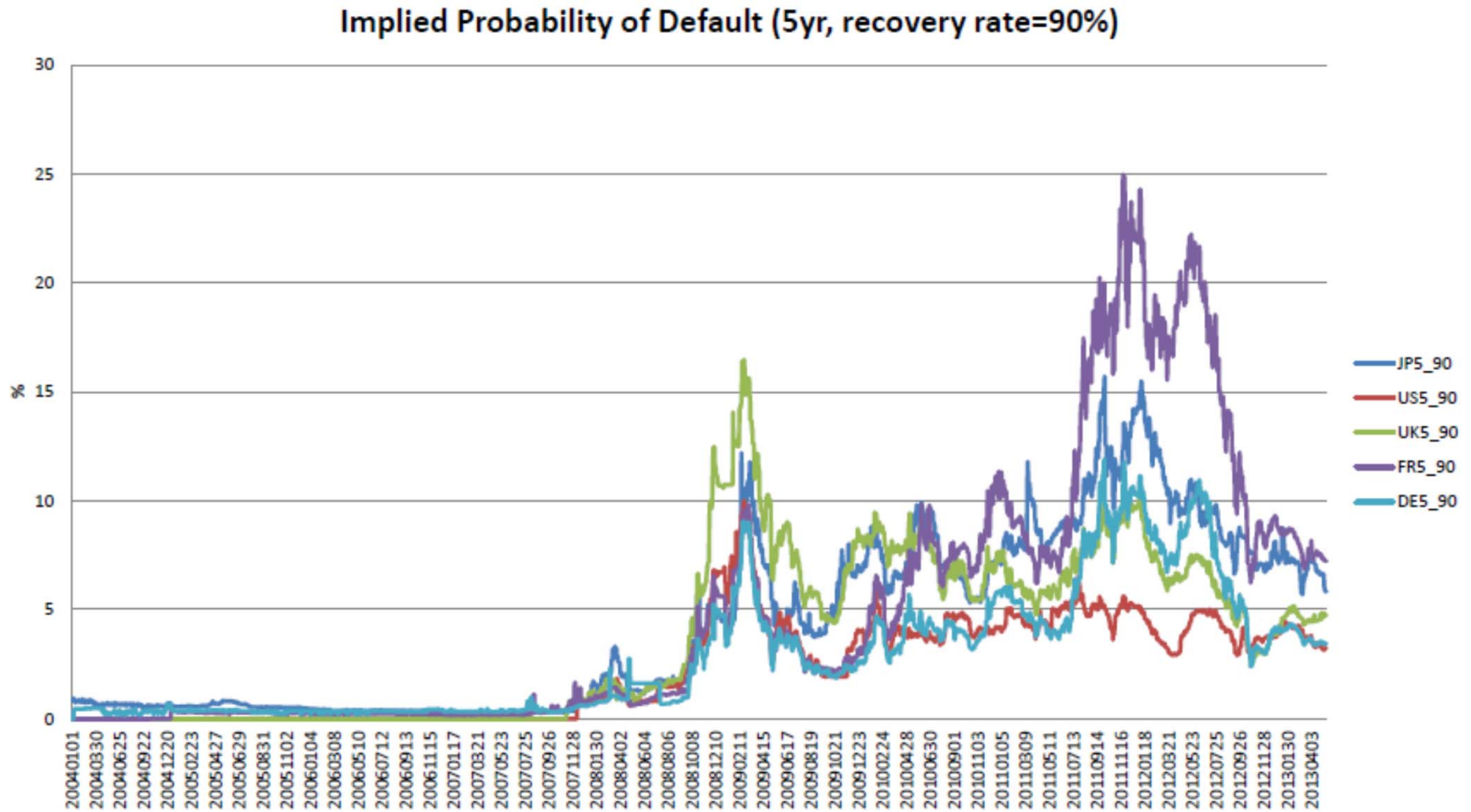
Nor BAA



So where is the search for (high) yield – as in 1998?



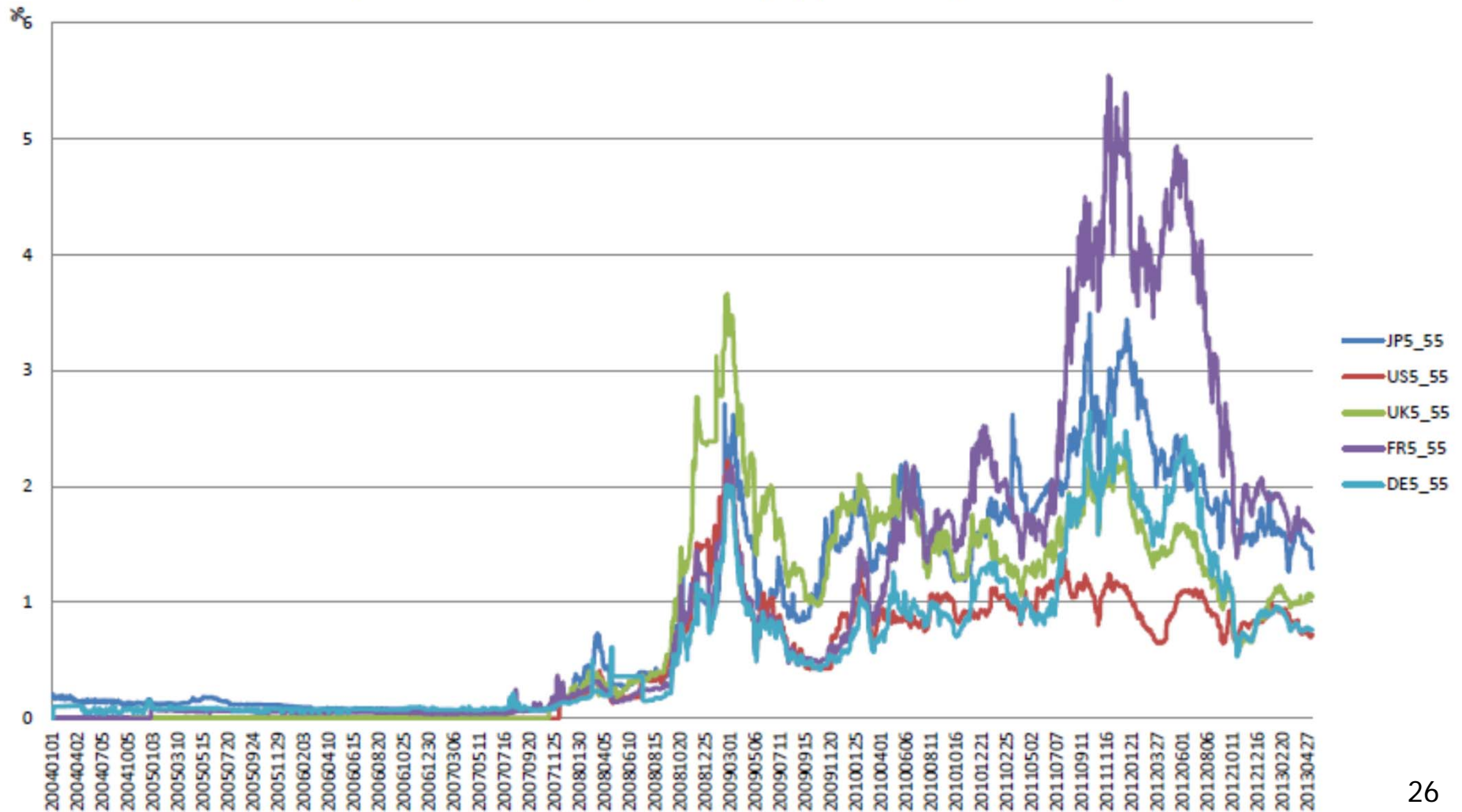
5-yr CDS spreads say even your best friends aren't safe...



Data from CMA, author's calculations

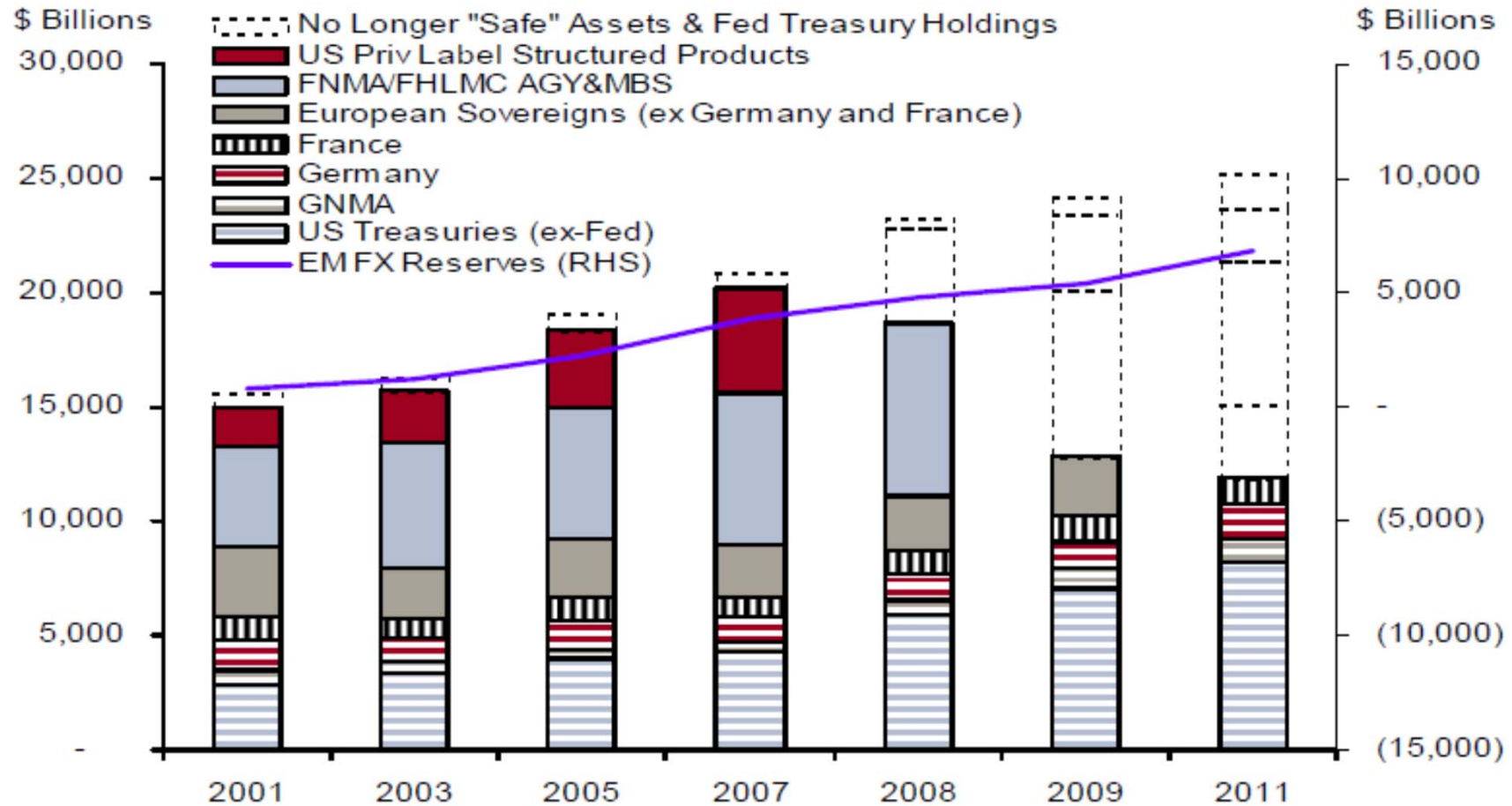
Assume they'll behave badly, with a lower recovery rate:
they look safer, but is 4-5% 'negligible'?

Implied Probability of Default (5yr, recovery rate=55%)



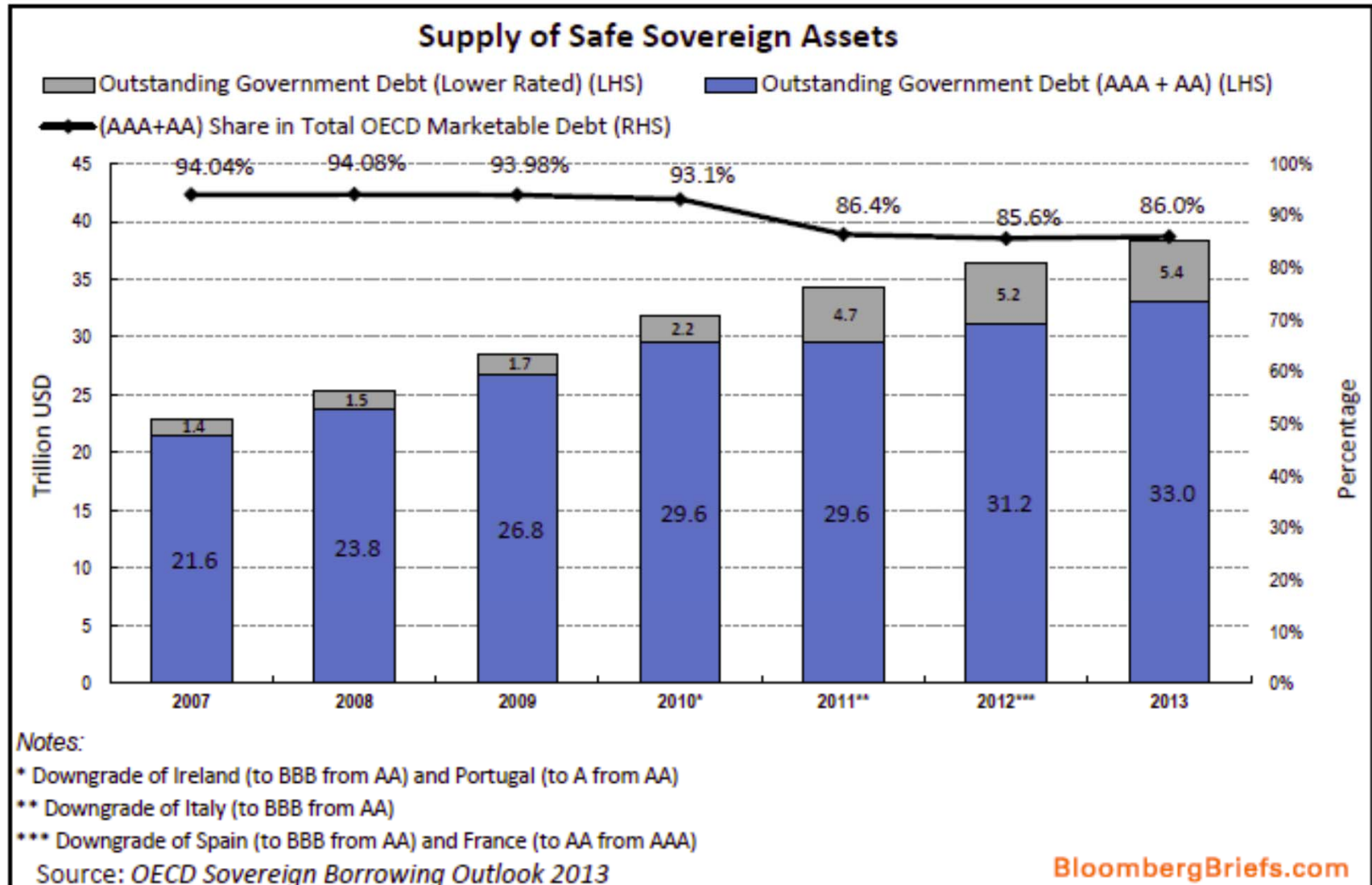
'The most important chart in the world...'

Exhibit 174: Shrinking universe of "safe" assets in the primary reserve currencies (USD and EUR)



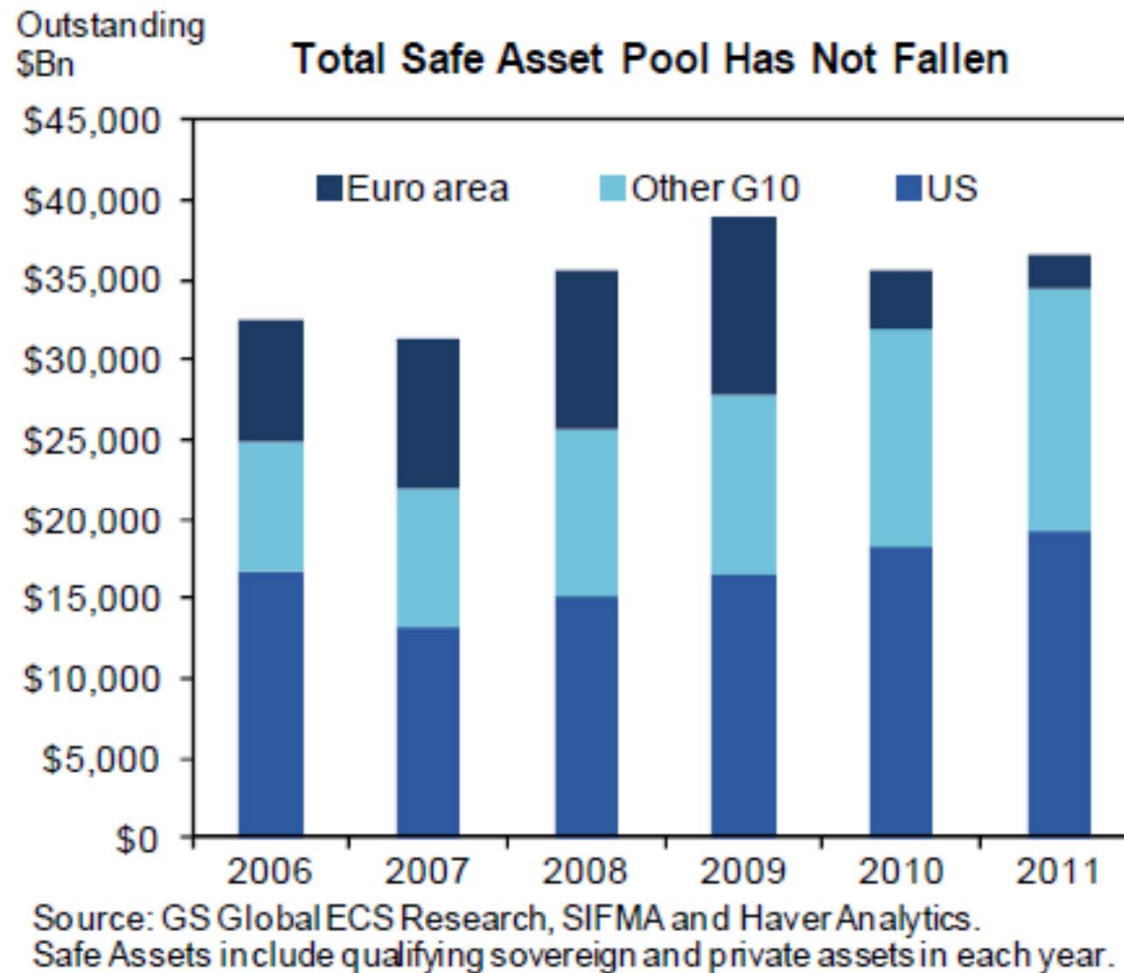
Credit Suisse 2012 *Global Outlook*

...unless it's this one – with a very different message



Nor does Goldman Sachs buy 'shrinkage'...

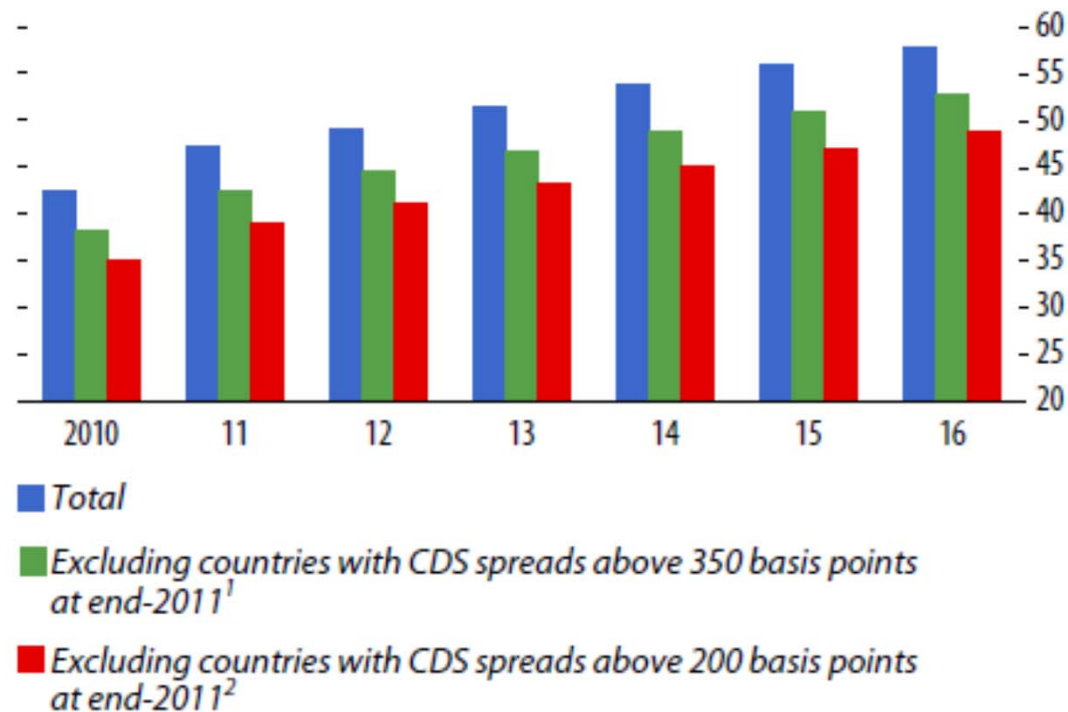
*Global
Economics
Weekly*
27 June 2012



...and they have a nice idea: define 'safe assets' by positive yield correlation with risk appetite. Then US Treasuries, non-Euro area G10, German, Dutch, Finnish, US agencies and AAA-rated covered bonds are still treated as 'safe'²⁹

...and even *GFSR* makes 'optimistic' projections

Figure 3.13. OECD Countries: General Government Gross Debt, 2010–16
(In trillions of U.S. dollars)



Sources: Bloomberg L.P.; and IMF, World Economic Outlook database.

Note: For 2012–16, the data are projections.

¹Greece, Hungary, Ireland, Italy, Portugal, Slovenia, and Spain.

²Belgium, France, Greece, Hungary, Iceland, Ireland, Italy, Poland, Portugal, Slovak Republic, Slovenia, Spain, and Turkey.



So it's hard to find the 'safe asset shortage'

- Hard indeed to define 'safe'
- Role of ratings is dubious at best
- *GFSR* bravely says 'asset safety should not be viewed as being directly linked to credit rating' (fn. 49, p. 105) but does it all the same, like everyone else – yet downgrading of US, UK, France had no effect on 10-year yields
- True, sovereign nominal yields are low
- That's not because of QE (numbers aren't big enough, and no QE for Bunds, but 'twist' doubtless cut US term premium)
- so *either* excess demand for safe assets *or* weak demand for funds from private sector plus extended expectations of ZIRP – *the latter accords with theory*



Triffin Dilemma: a definition

- Increasing demand for reserve assets strains ability of issuer to supply sufficient amounts while still credibly guaranteeing or stabilising the asset's value in terms of an acceptable numeraire (Obstfeld 2011, based on Farhi-Gourinchas-Rey 2011)



TD then (1960s)

- *Either* US wouldn't provide more \$, in which case trade stagnates, deflationary bias in global economy – a global liquidity shortage
- *Or* it would, in which case undermining confidence in international reserve currency
- Some identify the second with current account deficits, but that's wrong conceptually and empirically for period to 1971 (US CA in surplus throughout 1960s)
- Growth of dollar reserves from 1955 onwards actually driven by *foreign demand for money* (recall 'dollar shortage' of late 1940s - early 1950s), so no threat to US liquidity (Obstfeld 1993)



Despres-Kindleberger-Salant (1966)

- US 'deficit' arose from world banker role, borrowing short (riskless assets) and lending long (risky assets) (see also Gourinchas-Rey 2007)
 - Source of dollar balances accumulated abroad was net *capital outflows*, not CA deficits
- 'CAs tell us little about the role a country plays in international borrowing, lending, and financial intermediation' (Borio-Disyatat 2011)
- *External* liquidity not the key issue, rather *internal* (in Europe) – US was supplying financial intermediation that Europe couldn't provide
 - Lack of 'confidence' reflects failure to understand this necessary and beneficial intermediary role
 - Correct policy: integrate/develop foreign capital markets, moderate foreign asset holders' insistence on liquidity



'TD then' reassessed

- Dollar problem of 1960s *wasn't* founded on TD – rather, it was a result of US inability to convince dollar holders that US would maintain a stable value of the dollar with appropriate monetary and fiscal policies
- If US had done that, sustaining 'confidence', foreigners would have had no incentive to demand gold (Obstfeld 1993)...
- ...except perhaps to destroy the 'exorbitant privilege' (which may indeed have been France's main objective)



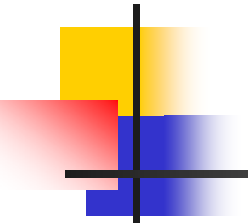
Supposed TD now: where are the 'safe' assets?

- The claim: a severe shortage of reserve ('safe') assets; the evidence: persistently low real interest rates

(Caballero 2006, Farhi-Gourinchas-Rey 2011) – not obvious...

Alternative formulations of the problem (FGR):

1. Excess demand for 'safe' assets is an incentive to create more – but this leads to deterioration of creditworthiness of safe asset pool
2. Supply of truly safe dollar assets (USTs) rest on backing of US 'fiscal capacity'. That grows along with US GDP, which grows slower than world GDP, which determines growth of demand for those assets, hence growing excess demand for safe assets.



3. 'Ability to provide liquidity in times of global economic stress defines issuer of reserve currency' (FGR 2011) – and that ability rests on fiscal capacity

4. Global reserve growth requires ongoing issuance of gross (US) government debt, so either fiscal deficits or issuing debt to buy riskier assets – hence global reserve growth driven by fiscal deficits, not balance of payments deficits, and the resulting government debt will eventually outrun fiscal capacity (see also Caballero and Farhi 2013)



But what is 'fiscal capacity'?

- FGR appear to mean sustainability of government domestic debt or 'solvency' of a government
- But the 'sustainable' debt level is always controversial, whether it applies to domestic or international debt (*e.g.*, Ostry and Mendoza 2008, Alogoskoufis *et al.* 1991) – not easy to make intertemporal budget constraint operational
- Sovereign debt and default literature has long debated 'can't pay' *vs.* 'won't pay', illiquidity *vs.* insolvency – there are no clear dividing lines (Eichengreen and Portes 1995)



An illuminating counterfactual

- Suppose US had maintained fiscal balance of 2000: net supply of USTs stable or falling, but private $(S - I)$ still negative, so CA deficit, rising foreign demand for reserves – what would foreigners have bought?
- The constraint on supply of reserve assets would not have been US fiscal capacity, but rather US fiscal rectitude. No TD.



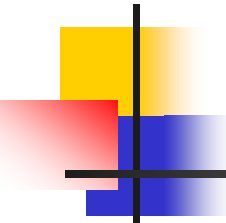
GSG and GI

- All this is related to the 'global savings glut' (Bernanke 2005) hypothesis and the 'global imbalances' controversies – see Portes (2009), Obstfeld-Rogoff (2010), Bernanke *et al.* (2011), Shin (2011), Obstfeld (2012)
- Can't go into that here, but might ask whether there's a 'glut', or alternatively high global risk aversion and a failure of intermediation to deal with it
- Note: not clear that US CA deficits are necessary consequence of rest of world's demand for additional reserves (created by 'glut') – that could be met by net private capital outflows (with net private savings balancing any government deficits, so zero CA – as in 1960s).



The outcome...

- There will be a multipolar reserve system, but *not because of TD and shortage of safe assets*, but because official reserve holders want to diversify their portfolios (Papaioannou *et al.* 2006), especially in light of trend dollar depreciation
- Convince surplus countries that reserve assets aren't as safe as they think, so they will reduce demand for them (China suffered large capital loss pre-crisis) [recall DKS]
- So do the *opposite* of creating more safe assets, deal with asymmetry between surplus and deficit countries by *raising* risk premium (Goodhart 2011)
- And surplus countries switch towards non-dollar assets or riskier assets (sovereign wealth funds)

- 
-
- EM growth will slow
 - EM will develop domestic financial markets, have less need for foreign intermediation (DKS again!)
 - Some EM become ACs and reserve suppliers
 - Reduce demand for self-insurance reserves with various international facilities, most centred on IMF (Farhi-Gourinchas-Rey 2011)
 - All but the last can – and will – happen *without major changes in the governance of the IMS*. And this is just as well, because such changes are unlikely...



Believers in the safe asset meme draw further policy implications – but as above, beware...

- Caballero: don't try to eliminate the (supposed) shortage, the global imbalances, the bubbles, low real rates – they are equilibrium phenomena – so just control the risks
- Caballero also against higher collateral requirements – but is collateral scarcity a problem? Might discourage banks from (dangerous) market funding.
- Gourinchas and Jeanne (2012): don't think you can deal with the problem by encouraging private-label safe assets: 'claims on the private sector are inherently risky and one should say so to limit moral hazard' – of course, many central bankers think that holds for sovereigns too!
- The optimal policy: ***control replication of the meme...***



References

- Allen, W., and R. Moessner, 2013, 'Liquidity consequences of the euro area sovereign debt crisis', BIS WP 390.
- AllianzGI, 2012, *Risk Monitor*, 1/2012.
- Alogoskoufis, G., L. Papademos, and R. Portes, eds., 1991, *External Constraints on Macroeconomic Policy*, Cambridge University Press for CEPR.
- Bank for International Settlements, 2013, *Sovereign Risk: A World without Risk-Free Assets?*, BIS Papers no. 72.
- Bernanke, B., 2005, 'The global saving glut and the US current account deficit'.
- Bernanke, B., 2013, 'Long-term interest rates'.
- Bernanke, B., C. Bertaut, L. DeMarco, and S. Kamin, 2011, 'International Capital flows and the Returns To Safe Assets in the United States 2003-2007', FRB International Finance Discussion Paper 1014.
- Borio, C., and P. Disyatat, 2011, 'Global imbalances and the financial crisis', BIS Working Paper 346

- Caballero, R., 2006, 'On the macroeconomics of asset shortages', NBER Working Paper 12753.
- Caballero, R., and E. Farhi, 2013, 'A model of the safe asset mechanism (SAM): safety traps and economic policy', NBER WP 18737.
- Caballero, R., E. Farhi, and P.-O. Gourinchas, 2008, 'An equilibrium model of global imbalances and low interest rates', *American Economic Review*.
- Committee on the Global Financial System, 2013, 'Asset encumbrance, financial reform and the demand for collateral assets', CGFS Paper 49, May.
- DeLong, J. B., 2012, 'This Time, It Is *Not* Different: The Persistent Concerns of Financial Macroeconomics' .
- Despres, E., C. Kindleberger, and W. Salant, 1966, 'The dollar and world liquidity: a minority view', *The Economist*, February 6.
- Eichengreen, B., and R. Portes, 1995, *Crisis? What Crisis?* , CEPR.
- Farhi, E., P.-O. Gourinchas, and H. Rey, 2011, *Reforming the International Monetary System*, CEPR e-Book, French version published by Conseil d'Analyse Economique.
- Goodhart, C. A. E., 2011, 'Global macroeconomic and financial supervision: where next?', in *Globalization in an Age of Crisis: Multilateral Economic Cooperation in the Twenty-First Century*, ed. by R. C. Feenstra and A. M. Taylor.
- Gorton, G., S. Lewellen, and A. Metrick, 2012, 'The safe-asset share', *AER P&P* .

- Gorton, G., and G. Ordonez, 2013, 'The supply and demand for safe assets', NBER WP 18732.
- Gourinchas, P.-O., and O. Jeanne, 2012, 'Global safe assets'.
- Gourinchas, P.-O., and H. Rey, 2007, 'From world banker to world venture capitalist: the US external adjustment and the exorbitant privilege', in *G7 Current Account Imbalances: Sustainability and Adjustment*, R. Clarida, ed., The University of Chicago Press for NBER.
- Gruber, J., and S. Kamin, 2008, 'Do Differences in Financial Development Explain the Global Pattern of Current Account Imbalances?', IFDP 923, Board of Governors of the Federal Reserve System.
- IMF, 2012, *Global Financial Stability Report*, Ch. 3, April.
- Kocherlakota, N., 2013, 'Low real interest rates'.
- Krishnamurthy, A., and A. Vissing-Jorgensen, 2012, 'Short-term debt and financial crises'.
- McCauley, R., 2012, 'Risk-on/risk-off, capital flows, leverage and safe assets', BIS WP 382.
- Mendoza, E., and J. Ostry, 2008, 'International evidence on fiscal solvency: Is fiscal policy "responsible"?', *Journal of Monetary Economics*.
- Michailat, P., and E. Saez, 2013, 'A theory of aggregate supply and aggregate demand as functions of market tightness with prices as parameters,' NBER WP 18826.
- Muellbauer, J., and R. Portes, 1978, 'Macroeconomic models with quantity rationing', *Economic Journal*.

- Obstfeld, M., 1993, 'The adjustment mechanism', in M. Bordo and B. Eichengreen, eds., *A Retrospective on the Bretton Woods System*, University of Chicago Press for NBER.
- Obstfeld, M., 2011, 'The international monetary system: living with asymmetry', in *Globalization in an Age of Crisis: Multilateral Economic Cooperation in the Twenty-First Century*, ed. by R. C. Feenstra and A. M. Taylor.
- Obstfeld, M., 2012, 'Financial flows, financial crises, and global imbalances', *Journal of International Money and Finance* 31, 469-480.
- Obstfeld, M., and K. Rogoff, 2010, 'Global imbalances and the financial crisis', in Glick, R. and M. Spiegel, eds., *Asia and the Global Financial Crisis*, Federal Reserve Bank of San Francisco.
- Papaioannou, E., R. Portes, and G. Siourounis, 2006, 'Optimal Currency Shares in International Reserves: The Impact of the Euro and the Prospects for the Dollar', *Journal of the Japanese and International Economies* 20, 508-547.
- Portes, R., 2009, 'Global imbalances', in *Macroeconomic Stability and Financial Regulation*, eds. M. Dewatripont, X. Freixas and R. Portes, CEPR.
- Portes, R., 2012, 'A reassessment of the Triffin Dilemma', in J-C Koeune, ed., *In search of a new world monetary order: Proceedings of a conference to celebrate the 100th anniversary of Robert Triffin (1911-1993)*. P.I.E. Peter Lang.

- Portes, R., and H. Rey, 1998, 'The emergence of the euro as an international currency' , *Economic Policy* **26**, 305-343.
- Reinhart, C., and B. Sbrancia, 2011, 'The liquidation of government debt', BIS WP 363.
- Shin, H. S., 2011, 'Global banking glut and loan risk premium', Mundell-Fleming Lecture, IMF.
- Singh, M., 2013, 'The changing collateral space', IMF WP 13/25.
- Triffin, R., 1960, *Gold and the dollar crisis*, Yale University Press