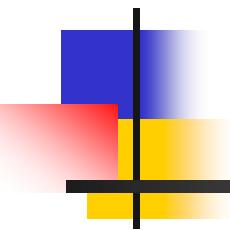


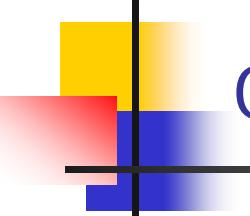
Discussion of

Systemic Sovereign Credit Risk: Lessons from the U.S. and Europe (Ang and Longstaff)



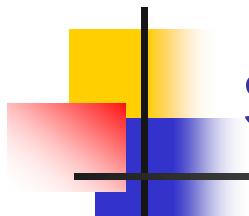
Viral V Acharya

NYU Stern



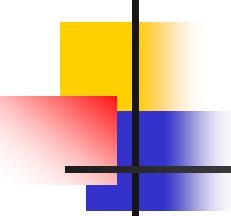
Overview

- The paper conducts an interesting thought experiment
- Is the credit risk of states in the U.S. inter-connected – beyond the common factor exposure to the U.S. economy – as much as appears to be the case for Eurozone countries?
- Answer: NO.
- The U.S. states are also in difficult borrowing conditions, even if not as much as some of the Eurozone countries.
- What drives this ex-post and ex-ante difference?



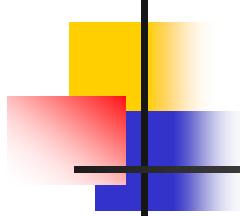
Sustainability of “sovereign” debt

- Lack of bankruptcy code (creditor rights) in case of sovereigns
 - U.S. states are sovereign borrowers since under the U.S. Constitution, they may repudiate their debts without borrowers being able to claim assets in a bankruptcy process.
- What determines the sustainability of sovereign debt?
- Eaton-Gersovitz (1981), Bulow-Rogoff (1989): Fear of exclusion from debt markets
- Yet, sovereigns do re-enter debt markets fairly quickly and in fact not at exorbitant costs (Argentina, Iceland, ...)



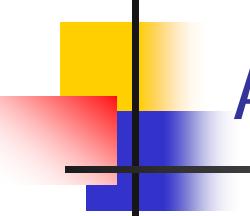
Sustainability of “sovereign” debt (continued)

- Recent literature focuses on a financial-sector channel, namely the “collateral damage” channel
 - Broner-Martin-Ventura (2010), Bolton-Jeanne (2011), Gennaioli-Martin-Rossi (2011), Acharya-Rajan (2011), ...
- Sovereign debt is entangled with operations of financial sector
 - Integrated domestic and foreign markets for sovereign borrowing
 - Liquidity requirements imposed on banks
 - Sovereign bonds used as collateral in inter-bank and repo markets, including central bank operations
- Such entanglement makes it hard for sovereigns to walk away from debt ex post (“willingness to pay”); but ex post if default does become likely (“inability to pay”), financial crisis ensues



Implications of “collateral damage” channel

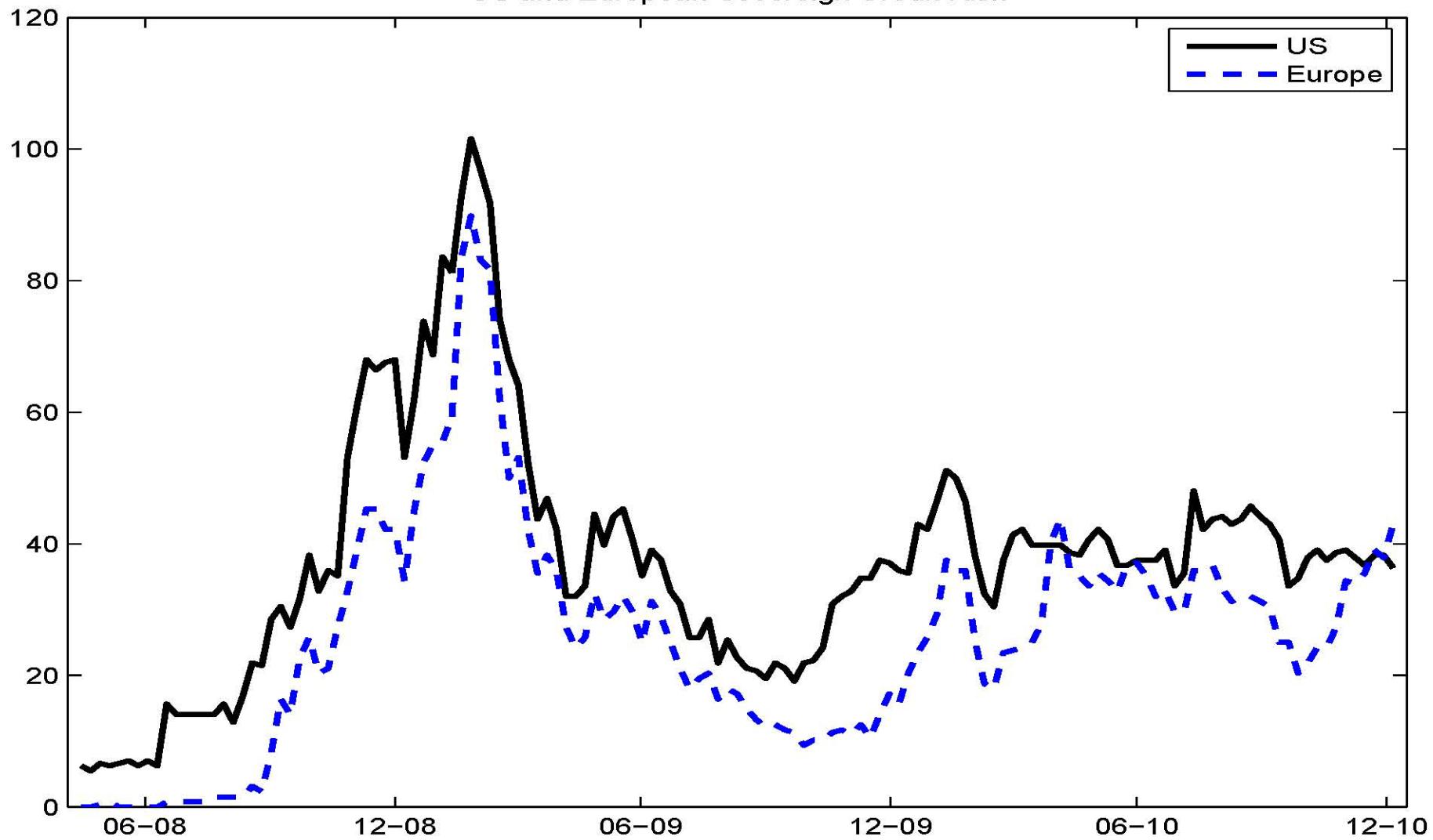
- Sovereign credit risk has the potential to spill over to the financial sector the more entangled the two
- If financial sector is “common” across sovereigns, then the entanglement could be a source of systemic risk across sovereigns, over and above common factor or macro exposures
- Ang and Longstaff setting: Thinking about entanglement of debt of US states with the financial sector – relative to entanglement of debt of Eurozone sovereigns with the financial sector – may help understand whose credit risk is more “systemic”



Ang-Longstaff results consistent with this view

- “Given that states have tighter fiscal, political, and economic linkages that is the case within the Eurozone, we would expect that there is greater systemic risk among U.S. sovereigns.
- We find that the opposite is true:
 - Only 12% of U.S. sovereign credit risk is systemic.
 - In contrast, 31% of Eurozone credit risk is systemic.
 - Correlations of CDS spreads are higher in Europe.
- Results provide evidence against the hypothesis that tighter macroeconomic linkages lead to higher levels of systemic risk.
- ... [Our] results suggest that systemic sovereign risk has its roots in financial markets.”

US and European Sovereign Credit Risk



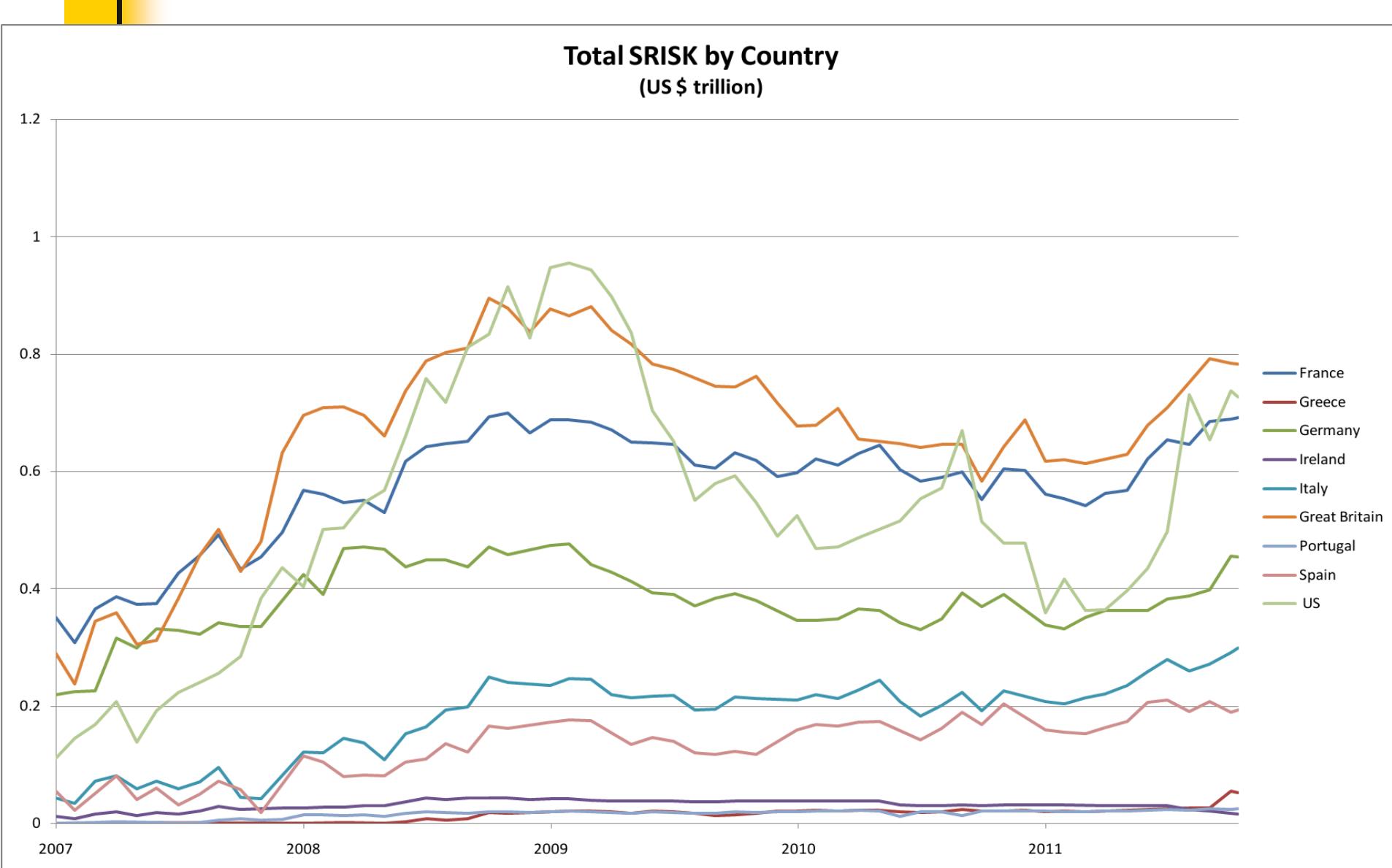
NYU STERN GLOBAL SYSTEMIC RISK RANKINGS

[http://vlab.stern.nyu.edu/analysis/
RISK.WORLDFIN-MR.GMES](http://vlab.stern.nyu.edu/analysis/RISK.WORLDFIN-MR.GMES)

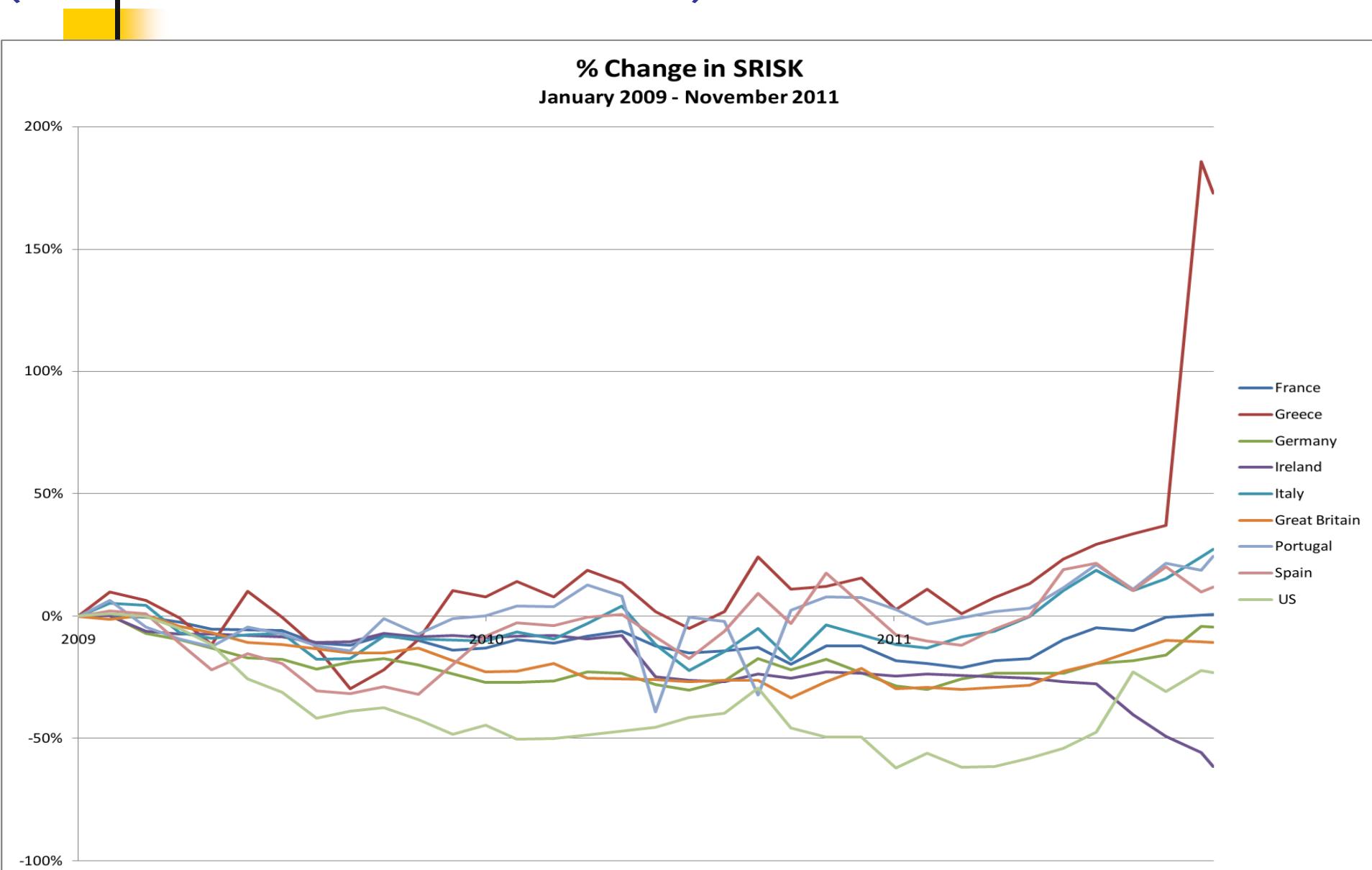
FOR ALMOST 1200 FINANCIAL INSTITUTIONS

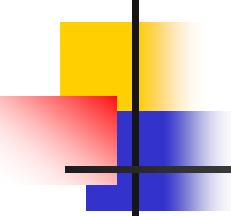
IN COLLABORATION WITH INSTITUTE FOR
GLOBAL FINANCE AT UNSW IN SYDNEY AND
UNIVERSITE DE LAUSANNE IN LAUSANNE

SYSTEM CAPITAL SHORTFALL BY COUNTRY



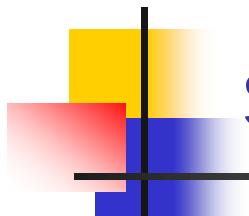
SYSTEM CAPITAL SHORTFALL BY COUNTRY (% CHANGE FROM JAN 2009)





Some brief comments on methodology

- Would a common “market” factor based approach yield the same results as the relatively more complex – even if a fine(!) – Duffie-Singleton framework? What is the additional gain, if any?
- “We find that the systemic credit risk of both the U.S. and the Eurozone is strongly related to financial market factors”
 - Stock market returns, bond market returns, funding cost of financial firms, market volatility, ...
 - BUT, market variables are highly endogenous and reflect the very systemic risk that authors are attempting to identify
 - Is there a problem of regressing y on y ?
- Would it help to isolate “shocks”?
 - US states: housing price “corrections”, interact with debt/gsp ratios
 - Eurozone countries: financial crises affecting domestic institutions



Some brief comments on presentation

- Lay out the institutional differences between US states and Eurozone countries in greater detail
 - Fiscal union and federal tax-transfer capacity imperfect in the Eurozone
 - Regulatory capital requirements on US state debt versus Eurozone sovereign debt
 - Common banking regulatory structure across US states versus national regulation in Eurozone countries (deposit insurance, govt guarantees, ...)
 - Extent of entanglement of US state vs Eurozone debt with financial sector

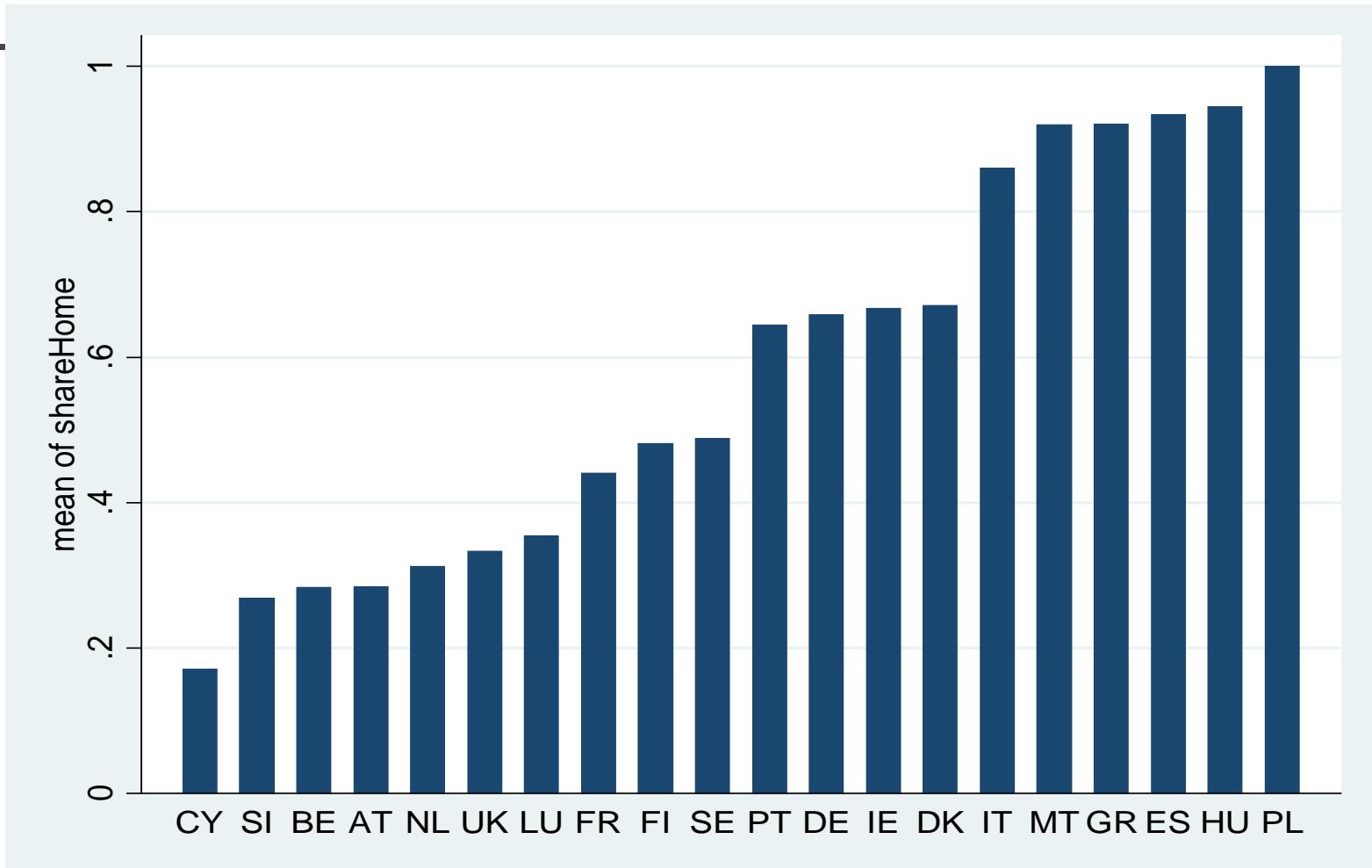
Sovereign bond holdings of European financials quite large

Sovereign Holdings
Euro Bank Stress Tests Sample, March 31, 2010

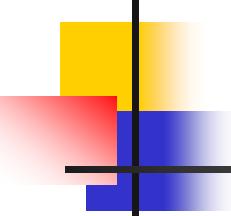
	N (1)	Mean (2)	Std Dev (3)	50th Percentile (4)	5th Percentile (5)	95th Percentile (6)
Bank Characteristics						
Risk-weighted Assets (EUR million)						
	91	126,337	179,130	63,448	3,269	493,307
Tier 1 Capital Ratio (%)	91	10.2	2.4	9.8	7.2	14.4
Sovereign Exposure						
Sovereign Holdings (gross, EUR million)						
	91	20,668	27,948	7,930	10.5	81,765
Sovereign Holdings (net, EUR million)						
	91	19,719	27,329	6,960	10.5	78,959
Home Sovereign Holdings (gross, EUR million)						
	91	11,493	14,422	5,774	18.2	42,800
Home Sovereign Holdings (net, EUR million)						
	91	11,023	13,956	5,348	11.7	42,800
Home Share (%)						
	91	69.4	30.0	81.6	18.9	100
Greek Sovereign Holdings	91	669	2,844	0	0	5,601
Share Banking Book (%)	91	84.9	19.9	92.2	35.4	100.0

Source: Acharya, Drechsler and Schnabl (2011)

“Home bias” in bond holdings of European financial sector



Source: Acharya, Drechsler and Schnabl (2011)

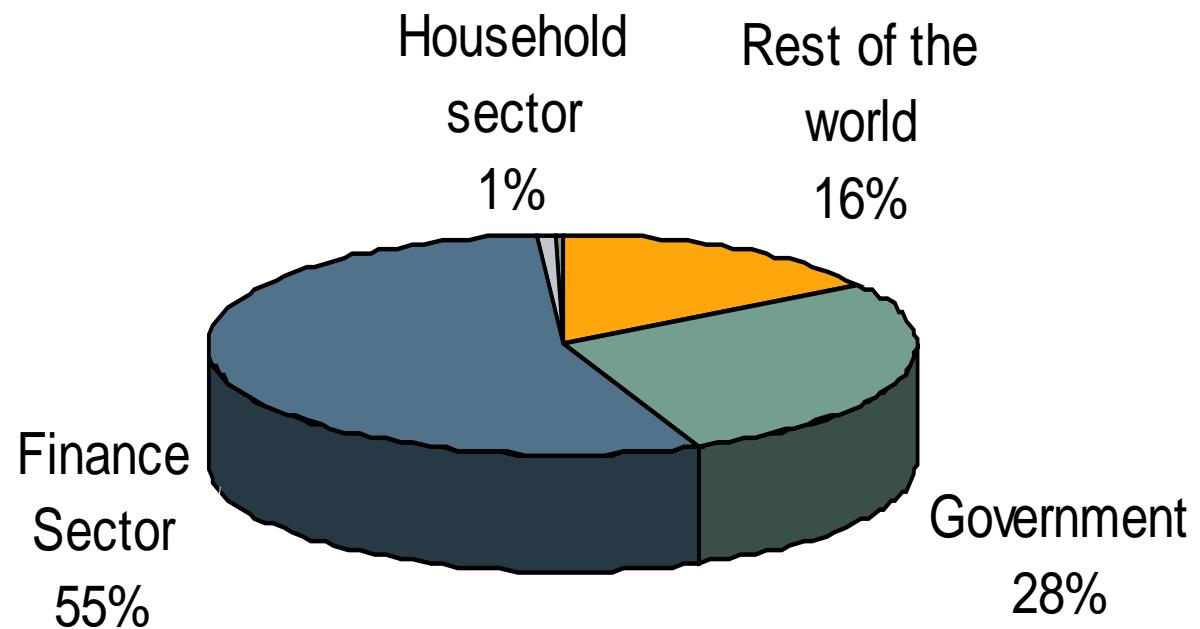


Some brief comments on presentation

- Lay out the institutional differences between US states and Eurozone countries in greater detail
 - Fiscal union and federal tax-transfer capacity imperfect in the Eurozone
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 - Extent of entanglement of US state vs Eurozone debt with financial sector
- GSEs may be an interesting counter-factual for US state
 - GSE debt effectively sovereign due to implicit guarantee
 - Implicit guarantee much less strong for US state-level debt
 - GSE debt heavily entangled with the US financial sector (part of open-market operations, special capital requirements, etc.)

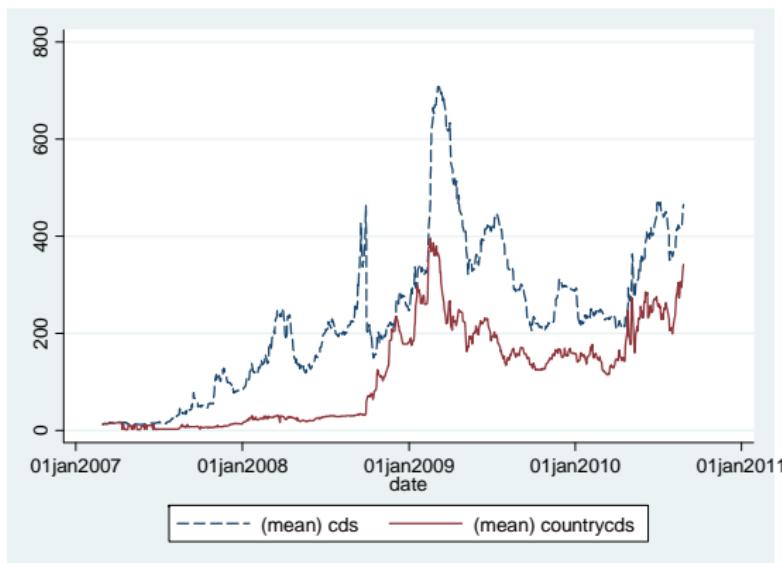
Entanglement of GSE debt

Holders of GSE Debt: 4Q10



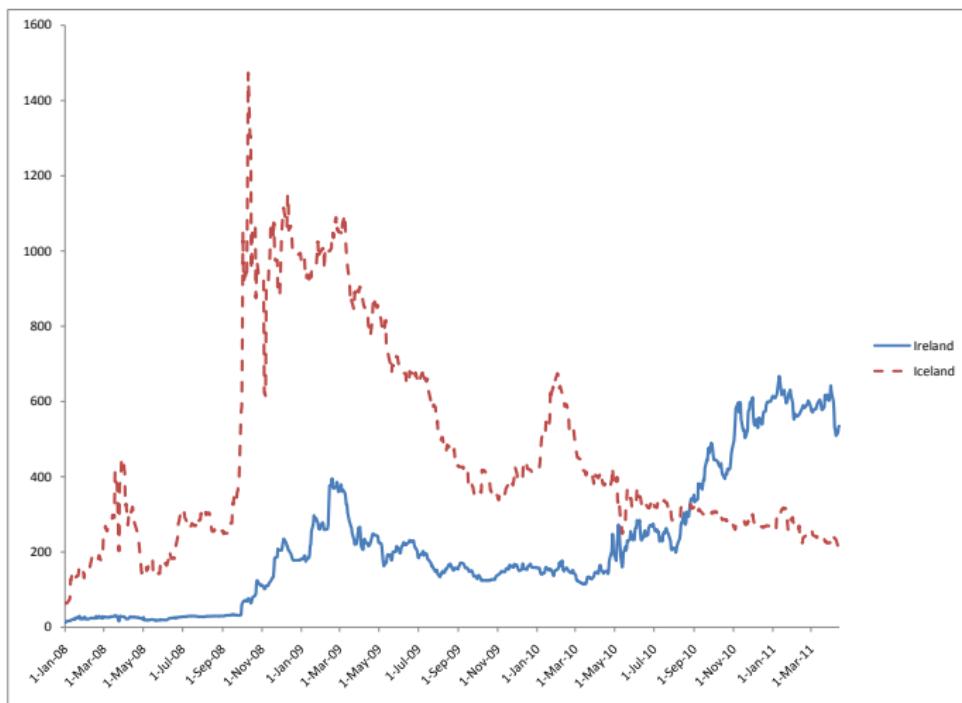
Source: Federal Reserve, Credit Sights

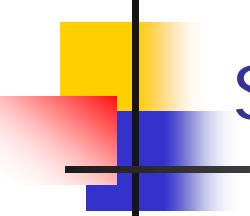
A Motivating Example: The Case of Ireland



- Chart similar across many countries:
 - 1 sovereign CDS close to 0 through first-half 2008
 - 2 post bailout announcement (9/30/2008): sovereign CDS jumps up, bank CDS drops down
 - 3 subsequent positive comovement

Did Ireland have a choice? – Iceland vs. Ireland CDS





Summary

- I love the thought experiment being conducted in the paper
- The results are intuitively appealing and plausible
- Authors may be able to provide stronger evidence supporting the financial-sector and sovereign debt nexus in Eurozone being a source of systemic risk there relative to the US states
- Market variables are highly endogenous and driven by everything, so I would reduce inference based on these
- Highly recommend reading it!