Systemic Risk I: Discussion

The "Greatest" Carry Trade Ever? Understanding Eurozone Bank Risk, **Acharya and Steffen**

The Systemic Risk of European Banks During the Financial and Sovereign Debt Crises, **Black, Correa, Huang, and Zhou**

Information Contagion and Systemic Risk, **Ahnert and Georg**

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Systemic Risk

Hard to define, but generally refers to threats to the ability of the financial system to provide services necessary to the broader economy

Arises and spreads through

1. Networks of direct lending and counterparty risk
2. Common exposures and fire sales
3. Common exposures and concentration
4. Contagion through information and inference about assets

- Acharya-Steffen: In-depth examination of (1) and (3) in Eurozone
- BCHZ: Measure of all combined, applied to European banks
- Ahnert-Georg: Theoretical model of (1) and (4)

Acharya-Steffen

- Extremely thorough investigation and analysis of European bank exposure to GIPSI sovereign debt
  - Primarily through bank stock returns and CDS: reading the market's reading of the banks
  - Evidence of window dressing around stress tests
- Important passing observation on contagion: French government yields went up with French bank exposure to periphery because of bail-out costs
  - Can this contagion effect be quantified and separated from other factors?
- Overall conclusion seems incontrovertible
  - What are the causes and implications?

Questions About Implications

- Would we see similar correlations with GIPSI bond returns if the banks were invested in, e.g., Spanish real estate?
- Carry trade as regulatory arbitrage: zero risk weight for sovereign debt
- But maybe this reflects a broader policy to support sovereigns at the Eurozone periphery
  - Would the alternative of a run be preferable?
  - Does the criticism lie in the use of implicit bank guarantees to implement policy? Can the French connection be used to quantify the cost?
  - What do we see in UK, US, and Japanese banks?
- What other factors drive the returns of the banks studied?
- Hard question: If we could remove the distortions of risk weights and implicit guarantees, what would bank portfolios look like?
- Possible bottom line: Europe needs to shift away from reliance on banks and leave the carry trade to the capital markets

Black-Correa-Huang-Zhou

- DIP: The market price of protection against downside risk in the banking system
  - Combines information about the likelihood of a severe shock to the banking system with perceptions about the broader consequences of the shock (through the risk premium)

- This paper
  - Focuses on European banks and finds shift toward greater risk contributions from Italian and Spanish banks
  - Investigates difference in default probabilities under *P* (Moody's) and *Q* (CDS)
  - Attributes much of the recent increase in Euro-DIP to an increase in the default risk premium
    - [Could be due to increased correlation rather than change in risk aversion]

Systemic Risk Measures

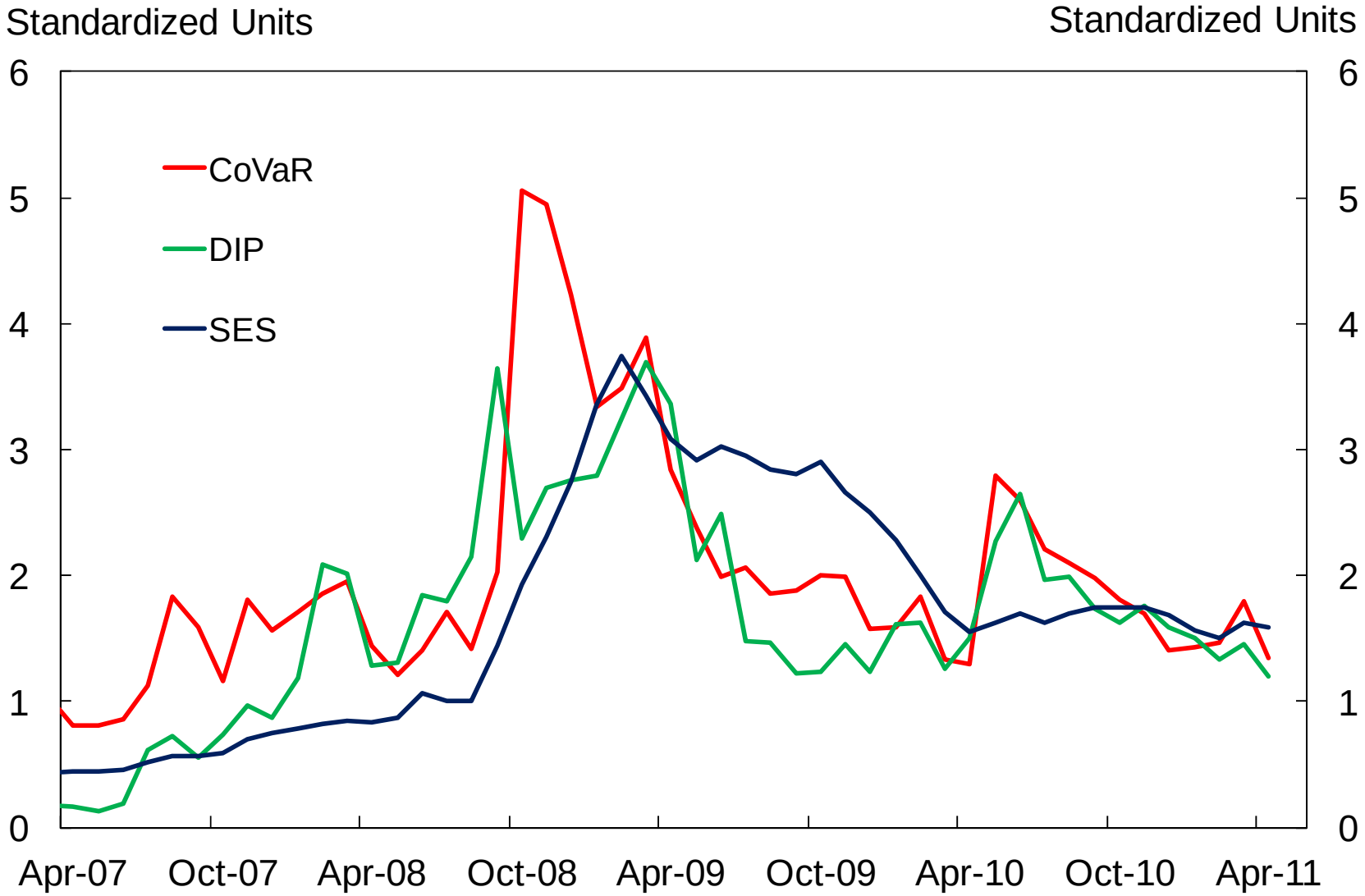
- OFR Working Paper #1 (Bisias, Flood, Lo, Valavanis) discusses 30+ indicators
- By almost any account, DIP draws particular interest

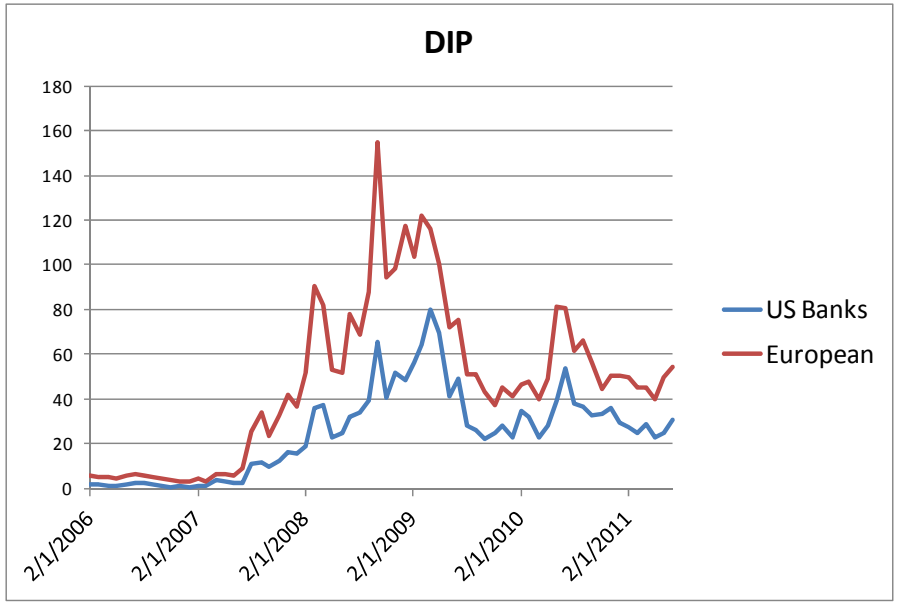
- OFR 2012 Annual Report suggests three roles for systemic risk indicators:
  - Predictive
  - Contemporaneous: point to hot spots as a crisis unfolds
  - Forensic
- The record on "predictive" is not good

- Paper signals increased risk contributions from Italian, Spanish (and UK) banks (and also increased risk premium)
  - What's driving this? What steps should follow?

From FSOC 2011 Report

Average Risk Measures Across Large Banks

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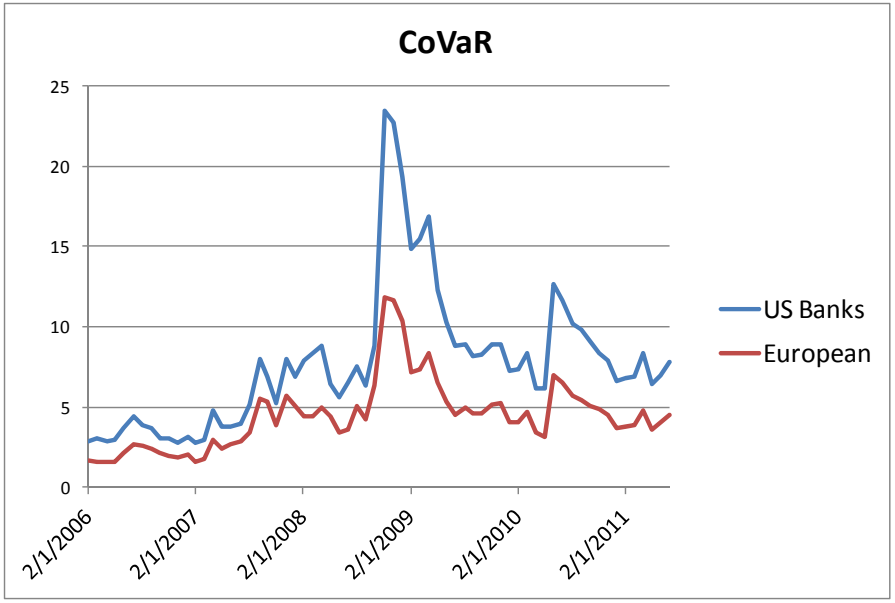
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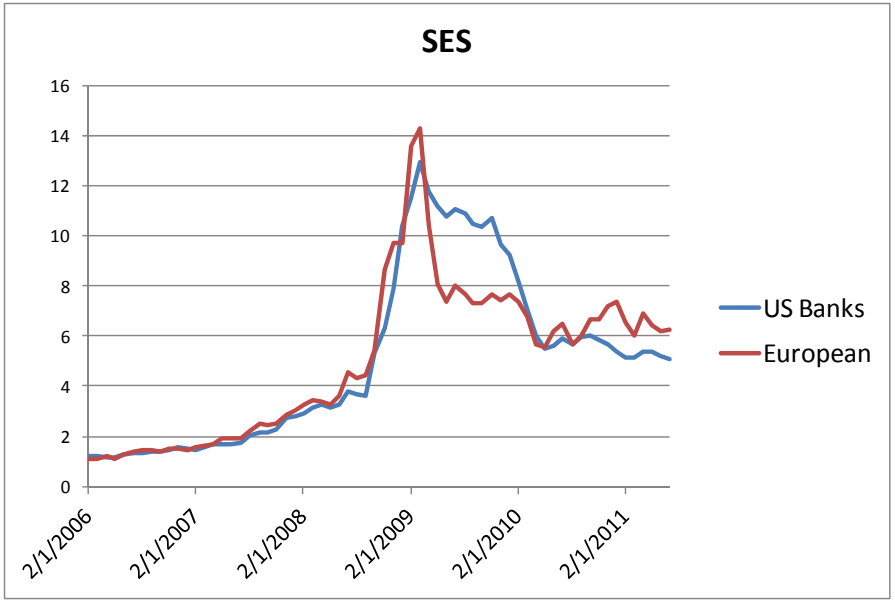
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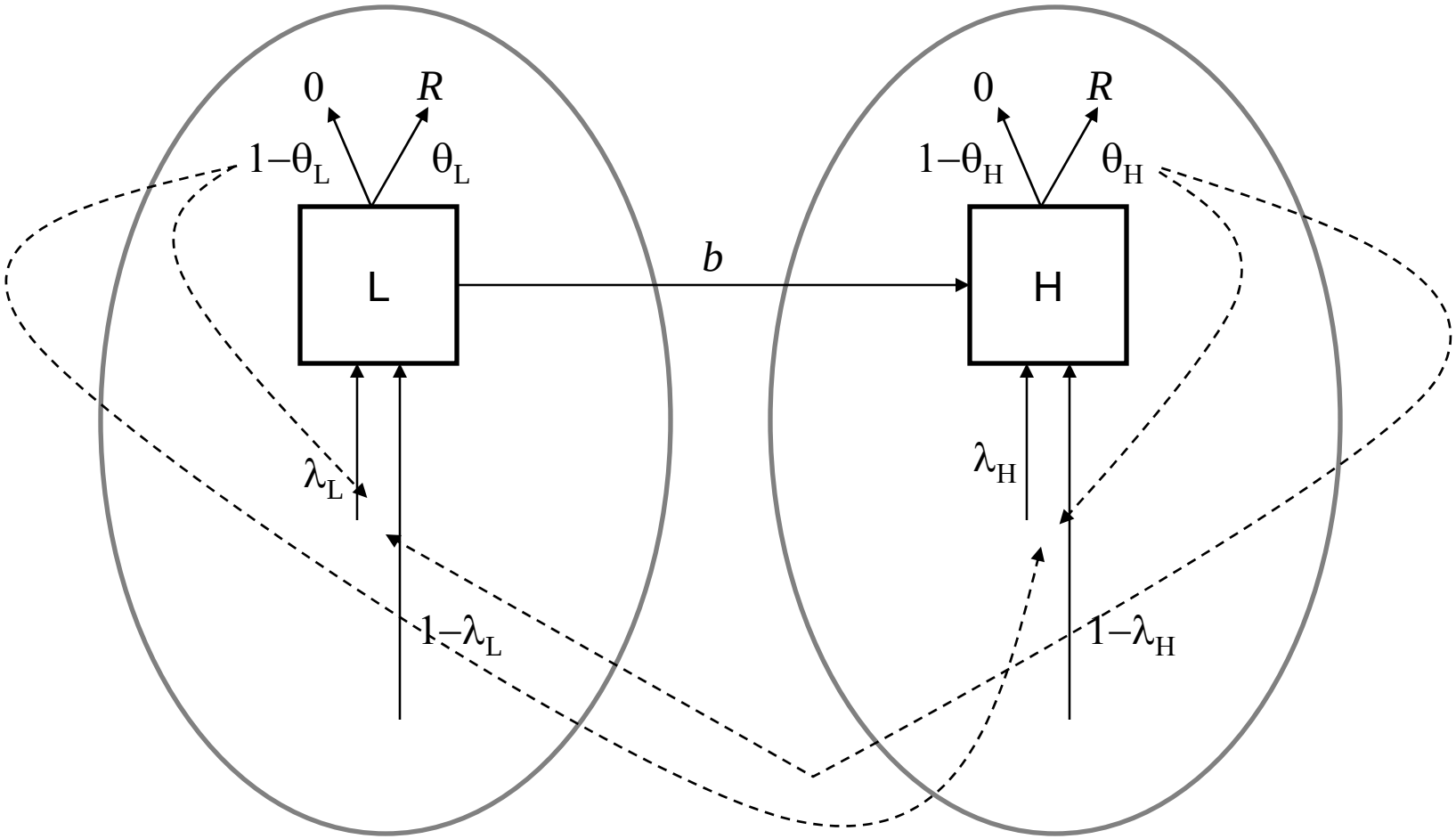
The Ahnert-Georg Model



Ahnert-Georg Model

- Run = Default
- Systemic risk = probability of joint default
- Goal: integrate counterparty risk and information spillovers

Model implications:

- Information about other bank's asset quality increases systemic risk
  - Depositors in low-shock region are more likely to run because of chance that interbank loan won't be repaid (counterparty risk)
- Information about asset quality increases systemic risk when the two banks hold the same asset
  - Combined effect of counterparty risk and common exposure

- Then, how do bank portfolios change when banks anticipate information spillovers

Questions

- Probability of joint default (= systemic risk) is calculated as the product of unconditional probabilities of default for the two banks. Why?
  - In the pure CR case, depositors make *decision* without information about the other bank, but the *consequences* still depend on what happens at the other bank
  - If outcome at *H* doesn't affect *L,* is it really counterparty risk?

- Is the model making a case for opacity in bank portfolios, given potentially harmful effects of information?

- Bank portfolios are chosen to maximize expected utility for depositors (because of free entry)
  - How do results change for banks with equity holders?

Overall, three very interesting and timely papers

The "greatest" carry trade ever? Understanding Eurozone bank risk, Acharya and Steffen

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Information contagion and systemic risk, Ahnert and Georg

Thanks