

Discussion of:

“Systemic Risk in Clearing Houses: Evidence from the European Repo Market,” by Charles Boissel, François Derrien, Evren Örs, and David Thesmar

“Systemic Risk, Bank Capital, and Deposit Insurance around the World,” by Deneza Bostandzic, Matthias Pelster, and Gregor N.F. Weiß

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<sup>1</sup>The views expressed in this discussion are those of the author and do not necessarily reflect the views of the Federal Reserve Bank of Richmond or the Federal Reserve System.

# Systemic Risk

- Both papers about systemic risk
- I don't like this term
- It is imprecise and poorly defined
- Can mean different things

# Better to Ask Specific Questions

## Example 1

- How does financial structure affect economic fluctuations in economy?
- In particular, does it amplify negative shocks?

## Example 2

- Do financial regulations reduce the frequency and severity of economic fluctuations?
- If so, at what cost to long-term growth?

## Example of First Question

Should we move certain transactions towards clearinghouses (CCP)?

Dodd-Frank law does this for derivatives transactions.

Some tradeoffs

- CCP guarantees transactions
- Reduces counterparty risk
- But then have CCP risk

Is it better to reduce the chance of a small failure at the cost of having a big failure when there is one?

# Boissel, Derrien, Örs, Thesmar

Provide some empirical evidence on these size of these tradeoffs

Study European repo transactions on CCPs

- 2008-2011 period
  - Covers US supprime crisis, Euro sovereign debt crisis, until ECB LTRO
- Response of repo rates to sovereign risk

# Data

- One day General Collateral (GC) repo rates
- GC - sovereign debt
- Counterparties anonymous
- Only CCP risk
- Two large repo trading platforms
- Daily volume 50bn Euro

## Strategy

Use arbitrage conditions to back out expected default rate of CCP as repo/euro deposit spread.

Regress spread on sovereign risk as measured by CDS spreads

Break into subperiods and subsets of countries

# Results

## Main Findings

- Repo rates don't move that much in response to moderate sovereign risk
- Repo rates move to sovereign risk at severe point in crisis (2011) and in GIIPS
- Market predicting CCP default in 2011
- Spreads no longer move with sovereign risk when ECB long-term refinancing option offered in Dec 2011. ECB takes sovereign debt as collateral.
  - Not surprising. Bailouts good at removing risk.

## Financial Structure Question

CCP helps with moderate risk, but if sovereign in trouble, doesn't help.

Evidence of implicit sovereign support for a CCP?

Analysis suggests moving derivatives to CCP has some benefits, but not without problems if big aggregate shock.

## Bostandzic, Pelster, and Weiß

Ask the second type of question

How are bank characteristics and financial regulations connected to measures of comovements of bank risk with aggregate financial risk?

## Strategy

Two measures of a bank's exposure to a large global financial shock

- MES - measure of equity return conditional on large aggregate financial shock
- SRISK - measure of capital needed to handle large aggregate financial shock

One measure of a bank's contribution to large aggregate financial shock

- $\Delta\text{CoVaR}$  - measure of correlation of a bank's tail risk with large aggregate financial shock

Regress these measures on bank characteristics, country regulatory characteristics, controls, and fixed effects.

Sample - large international banks, 1999-2012

# Results

## Significant variables

- HHI (concentration) - positive effect on exposure
- Tier 1 capital - negative effect on MES, positive effect on  $\Delta\text{CoVaR}$ 
  - insignificant effect on SRISK
- Moral hazard index (higher means less)
  - positive effect on MES, negative effect on  $\Delta\text{CoVaR}$

## Results (cont.)

Paper well written and clear.

Surprised that more variables aren't significant.

Leverage, debt maturity, interconnectedness, others not significant in most specifications.

Worried that accounting, legal, regulatory, and macroeconomic conditions different enough across countries to make cross-country regression analysis difficult.

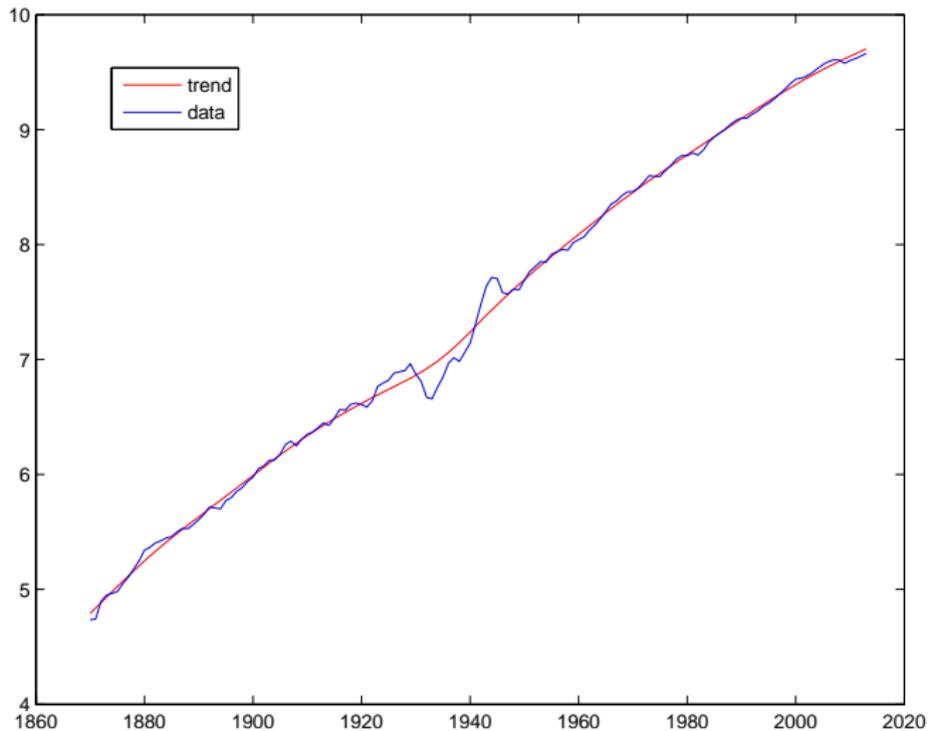
Some other evidence on this question. Show some U.S. data covering different regulatory regimes and compare two countries for an international comparison.

# Long-term U.S. Economic Performance Since 1870

## Key Facts

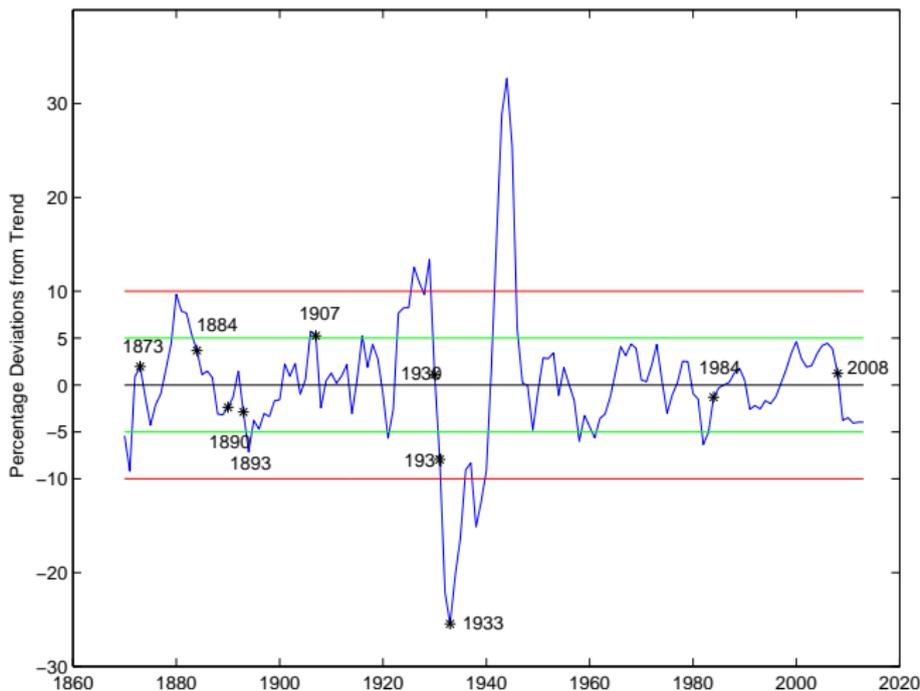
- Trend real growth is 3%
  - 2% per capita
- U.S. industrial leader since early 1900s
- Get good and bad shocks, but U.S. has always returned to trend
- Had a wide variety of financial regulatory regimes
  - National Bank era, Fed under gold standard, Glass-Steagall, post-Glass Steagall

## Log of U.S. Real GDP 1870-2013 (annual, \$2009)



Data Sources: Romer (1870-1929), BEA (1930-2013). Trend: Extracted with an HP filter.

# Deviations from Trend with Dates of Banking Crises



Source: Pre-WW2 banking crises from Wicker (1996,2000), post WW2 from Reinhart and Rogoff (2009)

## Key Facts

- Pre-1929 period only somewhat more volatile than post 1947
- Plenty of banking crises without deep prolonged contractions
- Some financial crises can barely see on graph
  - 1987 stock market crash
  - 2000 tech crash
- Plenty of contractions without banking crises
- Great Depression is special

## An International Comparison: Chile and Mexico

### **Both had big shocks in 1981-1982**

- World interest rates rise, prices of commodities drop
- Chile exports lots of copper
- Mexico exports lots of oil
- Both have weaknesses in banking systems
- Shock causes a financial crisis in each country

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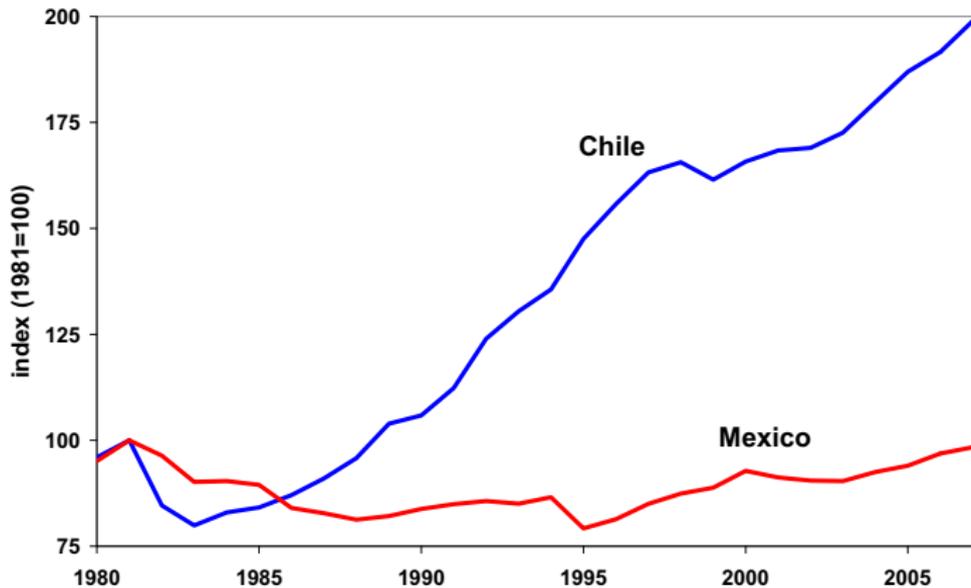
## **Chile's response**

- Takes control of weak banks
- Liquidates insolvent, privatizes solvent
- New regulatory scheme
- Markets allowed to allocate credit and set interest rates

## **Mexico's response**

- Takes control of all banks
- Nationalizes them until early 1990s
- Government allocates credit

## Real GDP per working age person in Chile and Mexico



Graph is from Cordoba and Kehoe (2009)

# Summary

## The U.S. evidence

- Financial regulatory regimes affect frequency of banking crises
  - But, recoveries often rapid
- Growth good in all the regulatory regimes
- National Bank era not so bad

## The Chile/Mexico comparison

- Long-term growth is the first-order effect

## For cross-regime comparisons

- Can't separate financial effects from macroeconomic effects
- Need to analyze together to assess financial regulatory regimes