"Inspecting the mechanism: Leverage and the Great Recession in Europe" by Philippe Martin and Thomas Philippon

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ESSIM, May 27, 2014

The issue

Interesting and thought-provoking paper on challenging issue

Boom-bust cycle in some euro area countries

- Pre-2008: "excessive" borrowing by private and public sector
- Post-2008: reduction of private debt

Paper aims at quantifying the contribution of

i.) Fiscal policy

ii.) Sudden stop

Analysis proceeds in three steps

1. Model
   - Small open economy (member of currency union)
   - Patient and impatient households

2. Reduced-form simulations
   - Feed *exogenous* variables into model: private debt (limit), spread, government spending, foreign demand
   - Model predicts actual outcomes fairly well

3. Structural experiments: outcome under counterfactual
   - Uses innovative (if not fully convincing) mix of model-based/model-free tools

1. Model

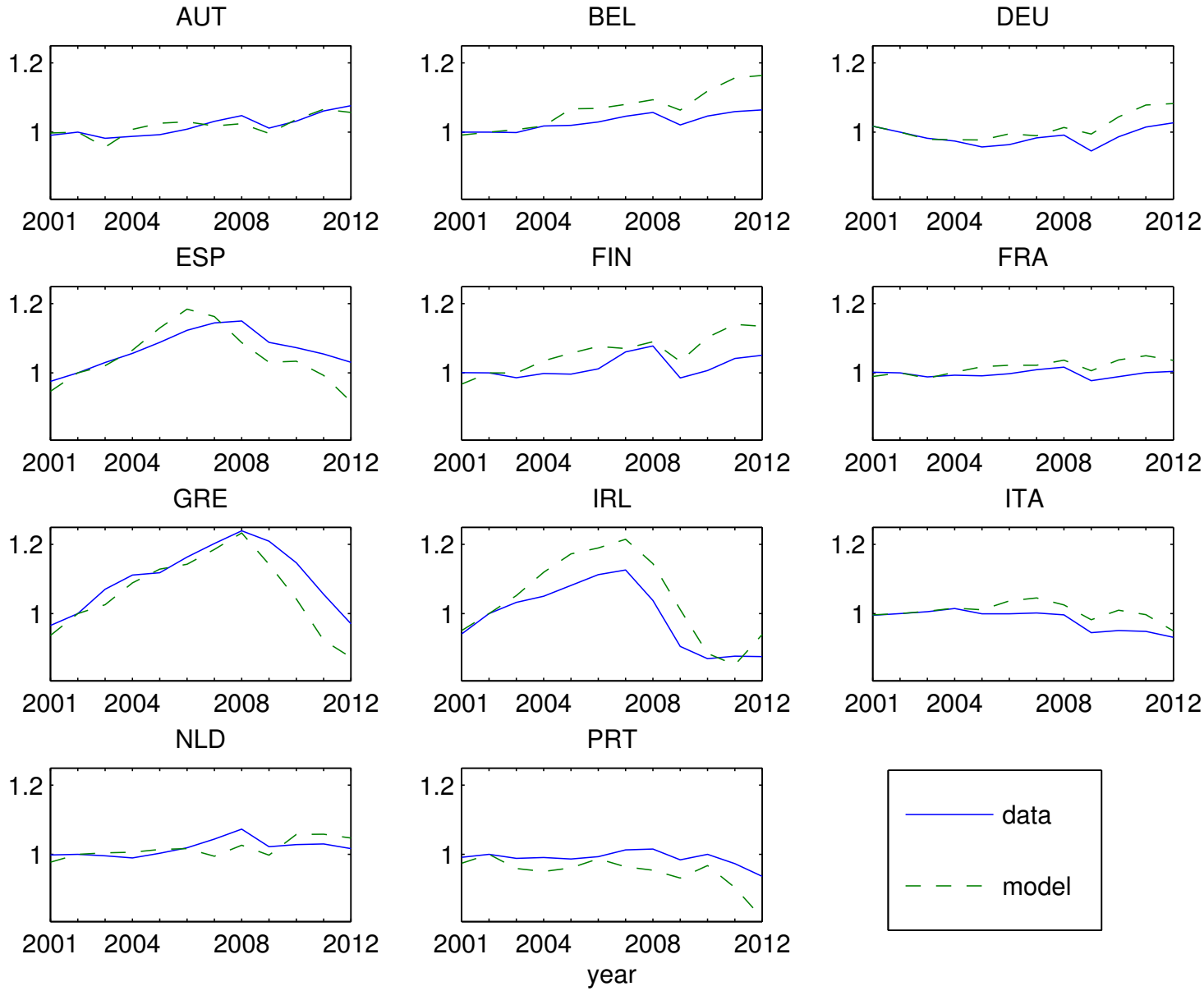
Deliberately simple

- Some closed-form results (e.g. patient households do not respond to demand shocks)
- Still: main results numerical ("inspecting the mechanism"?)

Key feature: impatient agents sit at exogenous borrowing constraint

- Model maps exogenous changes of borrowing constraint into output and employment

2. Reduced-form simulations: E.g. nominal GDP



3. Structural experiments

i.) Compute outcome under alternative fiscal policies

- Alternative debt rule

ii.) Explore role of sudden stop

- Develeraging effectively exogenous in baseline model
- Decompose it into "normal" component and sudden-stop component

Fiscal policy: actual vs counterfactual

Actual policy in baseline model

- Temporary deficits (recessions, government spending shocks): transfers adjust to *stabilize debt at new level*

Counterfactual

- Reduce public debt whenever private debt expands and/or spreads rise
- Built-up of public debt prior to crisis much reduced

Comments

- Good description of actual policies? Some evidence for *stabilization of debt in absolute terms* (Galí, Perotti 2003)
- Debt policy rather blunt instrument for macropudentical policy

Sudden stop in the euro area: actual vs counterfactual

Assess contribution of sudden stop by postulating "structural equation" for private leverage (private debt becomes endogenous)

$$b^h_{j,t} = \lambda^{bh} \underbrace{\hat{b}^h_{j,t}}_{\text{No sudden stop}} + \lambda^{\rho h} \underbrace{\rho_{j,t}(b^g_t, b^h_t)}_{\text{spread}}$$

Problems with sudden-stop equation

a.) US developments do not provide a good benchmark for $\hat{b}^h_{j,t}$

b.) Distinct feature of euro-area sudden stop missing not accounted for

c.) $\rho_{j,t}(b^g_t, b^h_t)$ not correctly measured

Sudden-stop equation a.) $\hat{b}^h_{j,t}$: US *not* a good benchmark for private deleveraging without sudden stops...

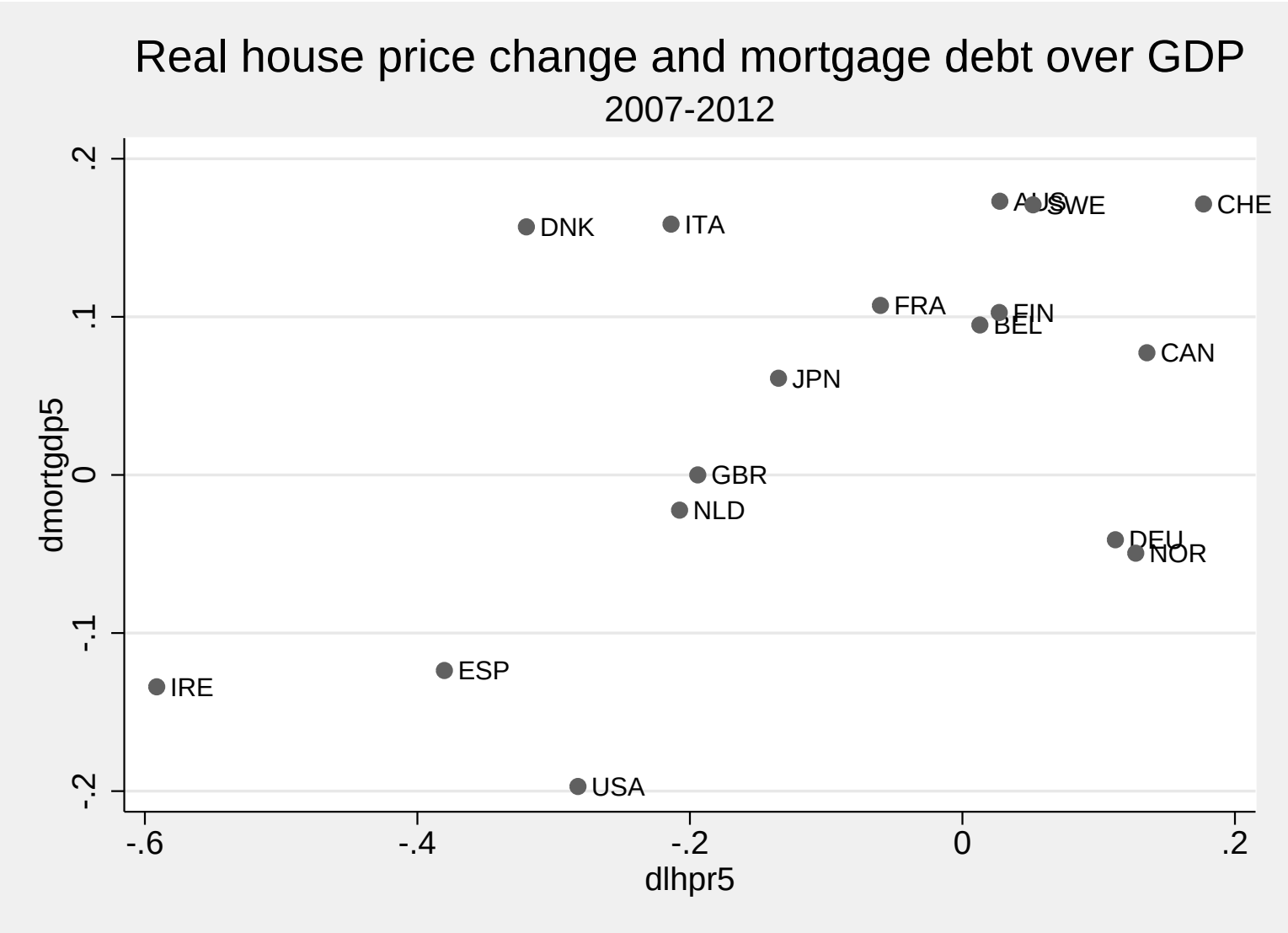
US closer to optimum currency area than euro area

- E.g. higher labor mobility
- All else equal (for instance, no sudden stop), expect deleveraging to differ in response to a common shock (such as, e.g., the financial crisis)

Moreover, need to put actual deleveraging into perspective

- Look at deleveraging relative to change of homeowners' net worth
- For instance, relative to house price decline, *less* deleveraging euro area than in the US

Limited deleveraging in the euro area?



Jorda, Schularick, Taylor 2014

Sudden-stop equation b.) Distinct feature of euro-area sudden stop

Paper focuses on bust period 2008–2012

- Private capital leaves crisis countries
- Replaced by public funds (e.g. TARGET2)
- Current account adjustment only very gradual

Model ignores this

- Understates the extent of private capital flight
- Overstates its effect

Figure 2: Total and private capital inflows, selected southern euro-area countries, 2002-11 (% 2007 GDP)

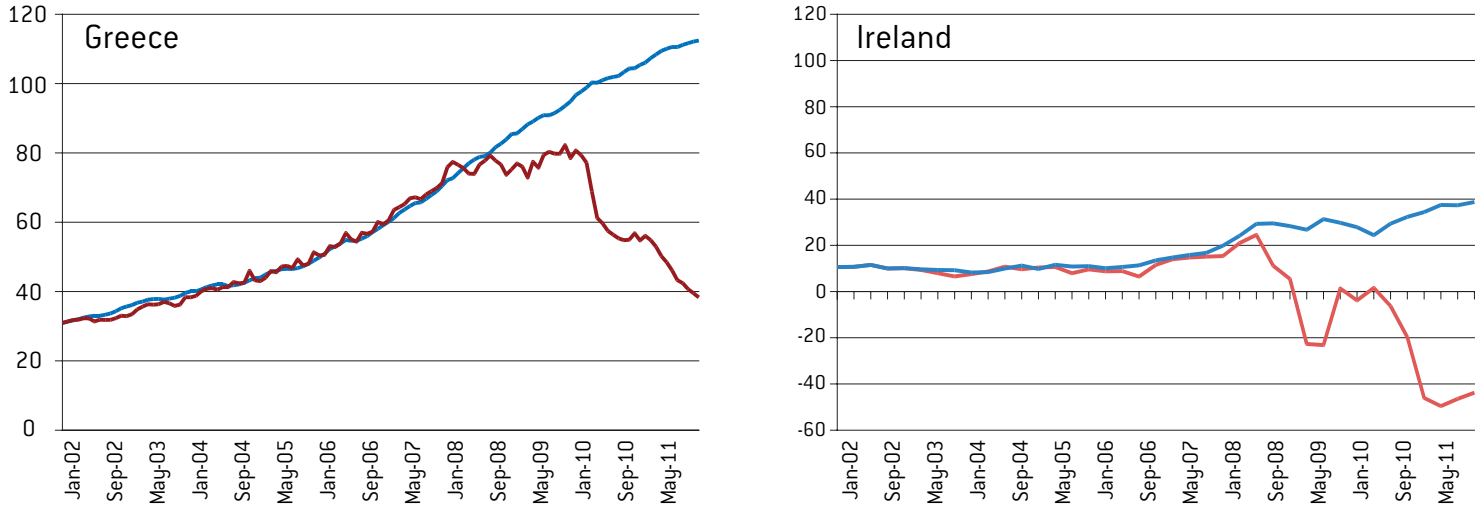
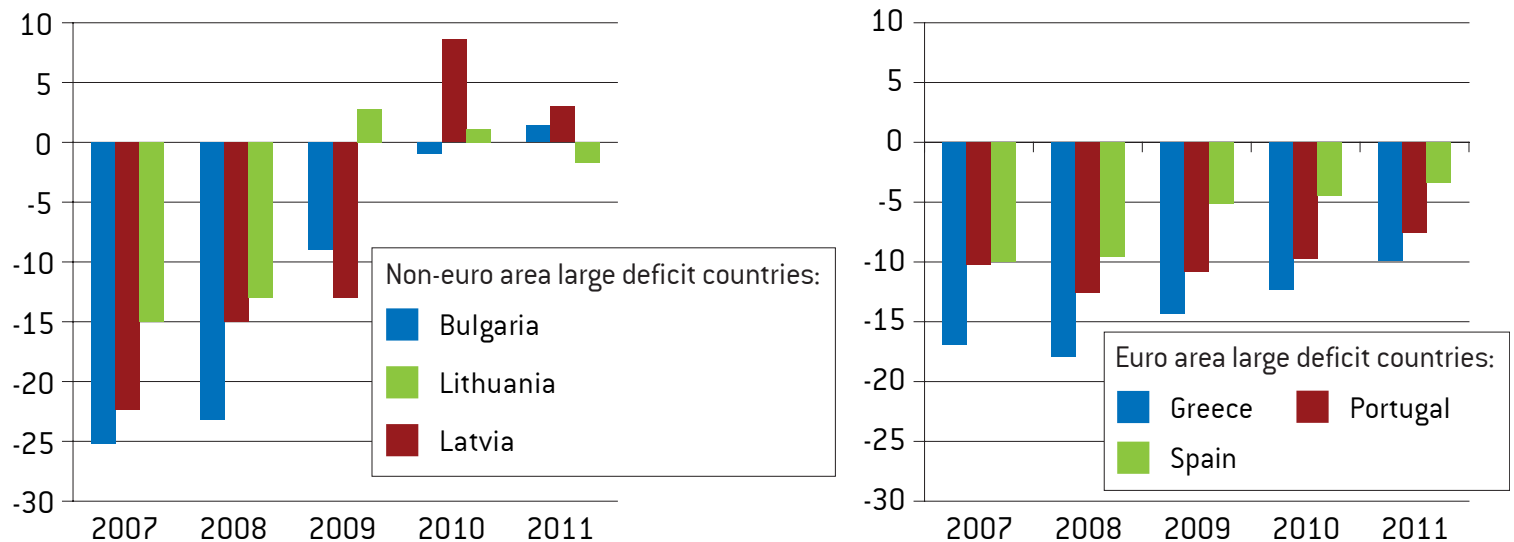


Figure 1: A tale of two adjustments: current accounts outside and within the euro area



Merler, Pisani-Ferry 2012

Sudden-stop equation c.) How to measure $\rho_{j,t}(b_t^g, b_t^h)$?

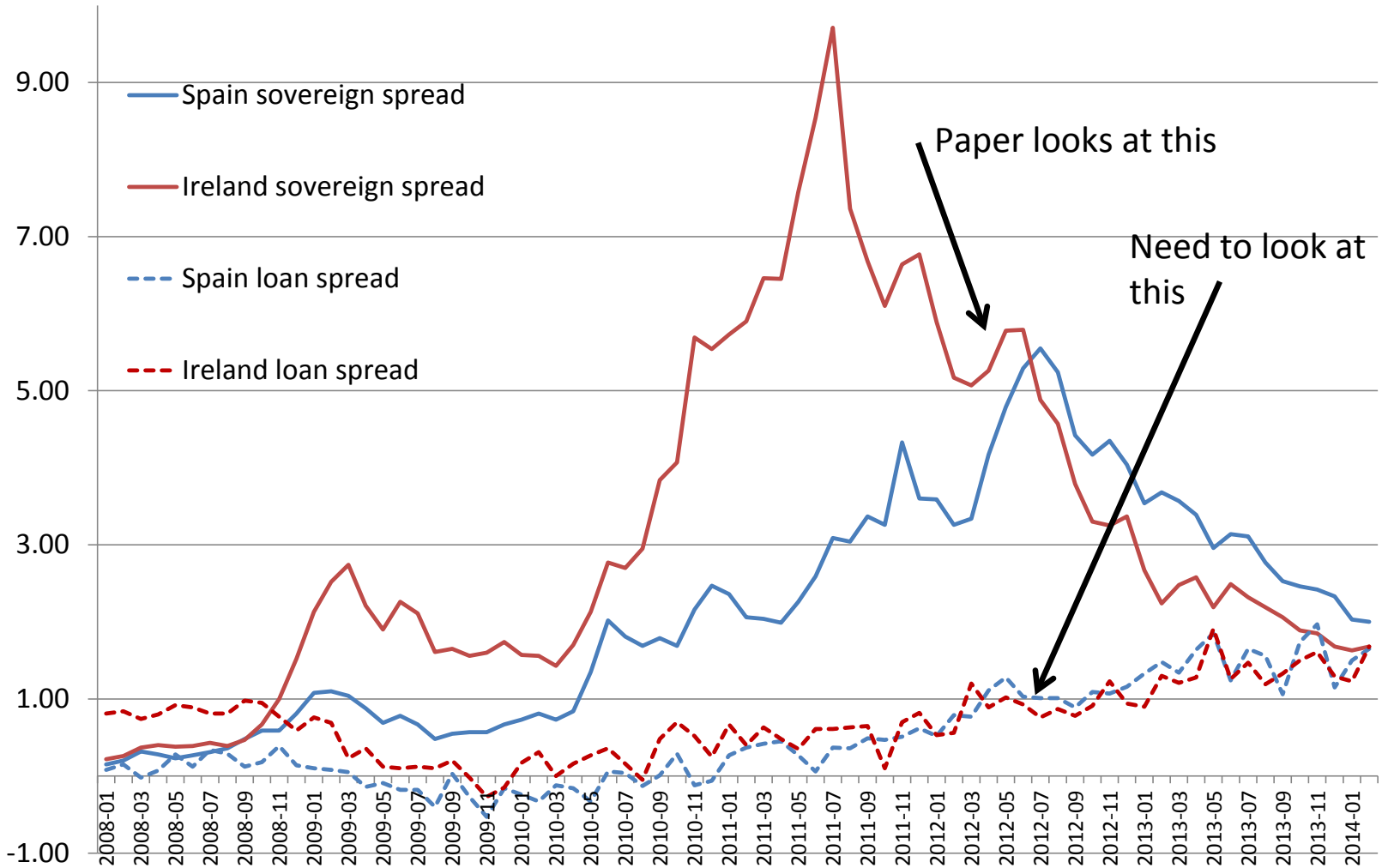
Spread explains "excess" deleveraging

- Meant to reflect higher funding costs/fear of exit from euro, also "risk shifting, adverse selection, runs, etc..."
- Measured as the difference of *sovereign yields* relative to euro area median

Need to look at *private loan rate spreads*

- Reflect raising funding costs relevant for deleveraging
- Imperfectly proxied by sovereign yield spreads

Sovereign and private spreads vis-à-vis Germany
10year bond yields vs loans rates (new loans, MFI to NFC)



Source: ECB