Discussion on: "Optimal Domestic (and External) Sovereign Default"

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Outline

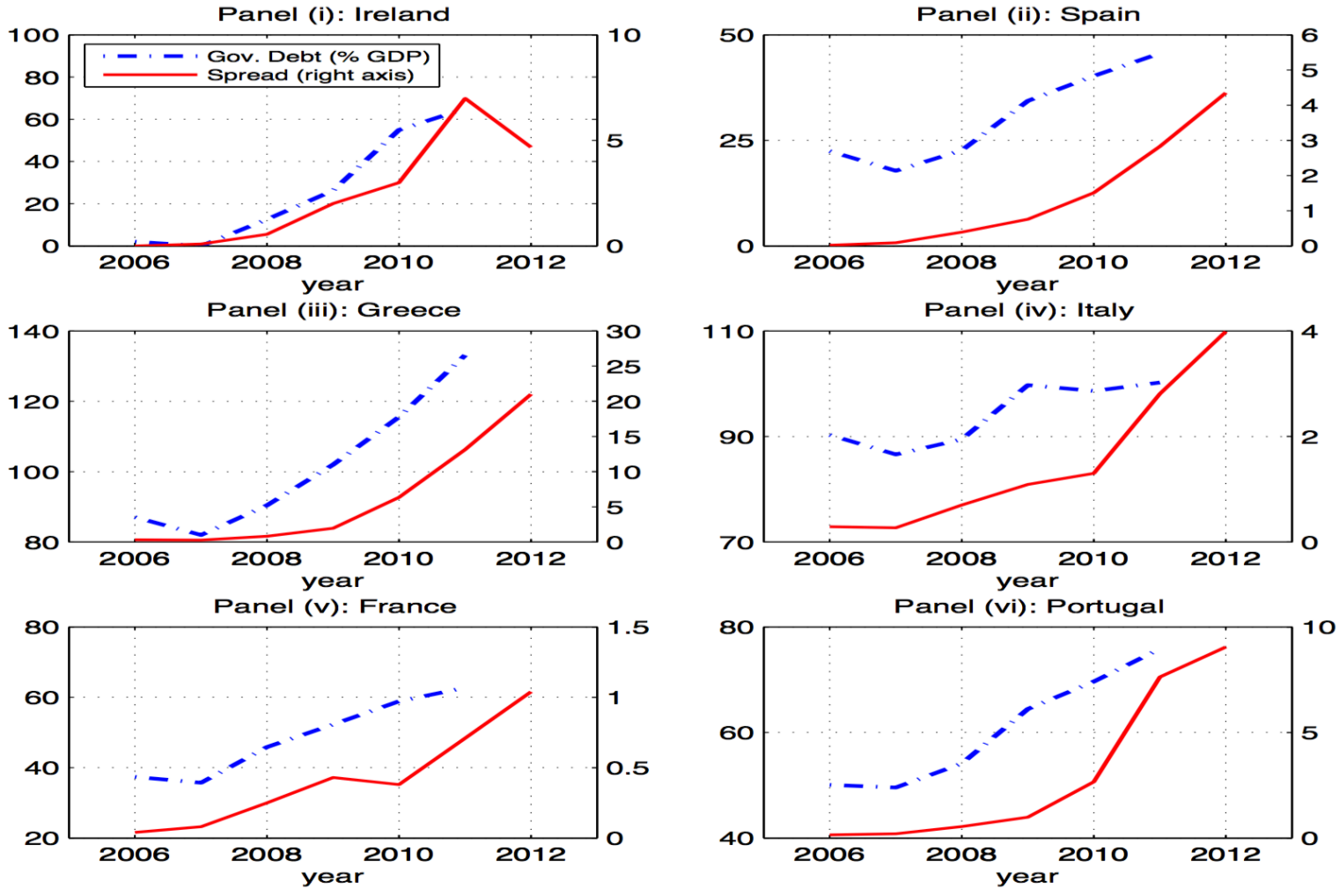
1. Motivating facts and goal
2. Model and intuition
3. Results
4. My comments

Motivating facts and goal

1. Reinhart and Rogoff's "Forgotten History of Domestic Debt
   - 68 outright domestic defaults since 1750
   - Domestic debt is a large fraction of total debt (especially for advanced countries).

2. Eurozone Debt Crisis can be understood as a Domestic Debt Crisis.
   - Debt held mostly by other European "agents"
   - No inflation allowed (at the country level)
   - Distributional implications of default by one member.

Motivating facts and goal



Motivating facts and goal

Goal – answer the following questions:

Q1. Can distributional incentives and the social value of debt support equil. w/ debt featuring sovereign risk and defaults?
- YES

Q2. Are the model's time series properties in line with the data?
- YES

Model

- Bewley-Huggett-Aiyagari model of het. agents, incomplete asset markets with idiosyncratic and agg. risks.
- Sovereign debt held by domestic and foreign lenders. Subject to default risk.
- Default incentives driven by distributional concerns and endog. costs of default.
- Debt is good for:
  - self-insurance
  - liquidity
  - risk sharing
- Default incentives (and events) mess up the 3 roles.

Model

- **Households.** Budget constraint under repay is:

$$c_t + q_t b_{t+1} = y_t(1 - \tau^y) + b_t + \tau_t$$

Budget constraint under default:

$$c_t = y_t(1 - \tau^y) - \phi(g_t) + \tau_t$$

- **Government.** GBC under repay

$$\tau_t^{d=0} = \tau^y Y - g_t - B_t + q_t B_{t+1}$$

GBC under default

$$\tau_t^{d=1} = \tau^y Y - g_t$$

- **Foreign lenders.** Risk-neutral, deep-pockets.

Model

Two key assumptions:

1. Foreign lenders are the marginal buyers of sovereign debt. Implies pricing equation:

$$q(B', g) = \frac{1 - p_t}{1 + \bar{r}}$$

2. Government aggregates indiv. utilities according to:

$$\omega(b, y) = \sum_{y_i \leq y} \pi^*(y_i) \left(1 - e^{\frac{-b}{\bar{\omega}}}\right)$$

Together they imply that the wealth distribution, $\Gamma(b, y)$, is **not** a state variable.

Intuition

- **Liquidity.** Define $\tilde{b} = b - B$ to get:

$$c = y + \tilde{b} - q(B', g)\tilde{b}' - \tau^y(y - Y) - g$$

$$\tilde{b}' \geq -B'$$

  B' relaxes the borrowing constraint $\rightarrow$ provides liquidity.

- **Self-insurance.** Agents w/ high income use debt to accumulate wealth, agents w/ low income use accumulated debt to consume.

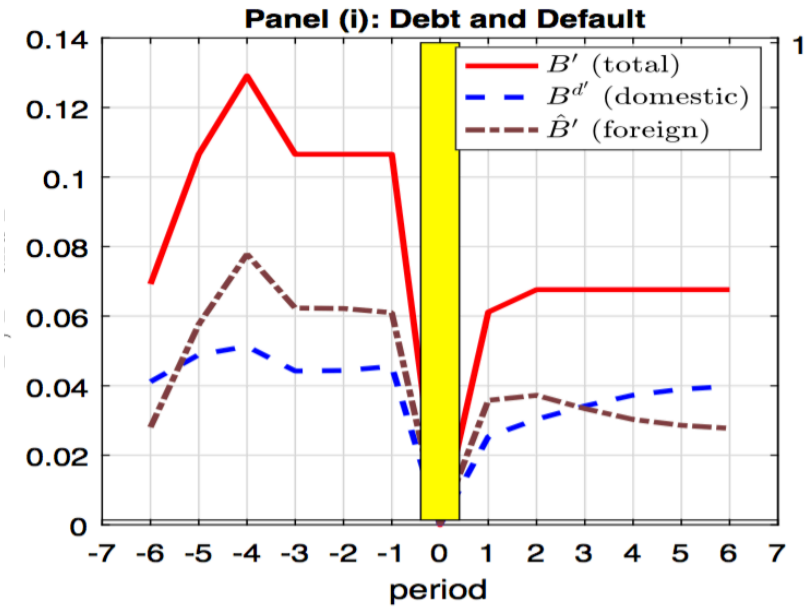
- **Redistribution.** Repayment of B implies *regressive redistribution.* New borrowing causes *progressive redistribution.*

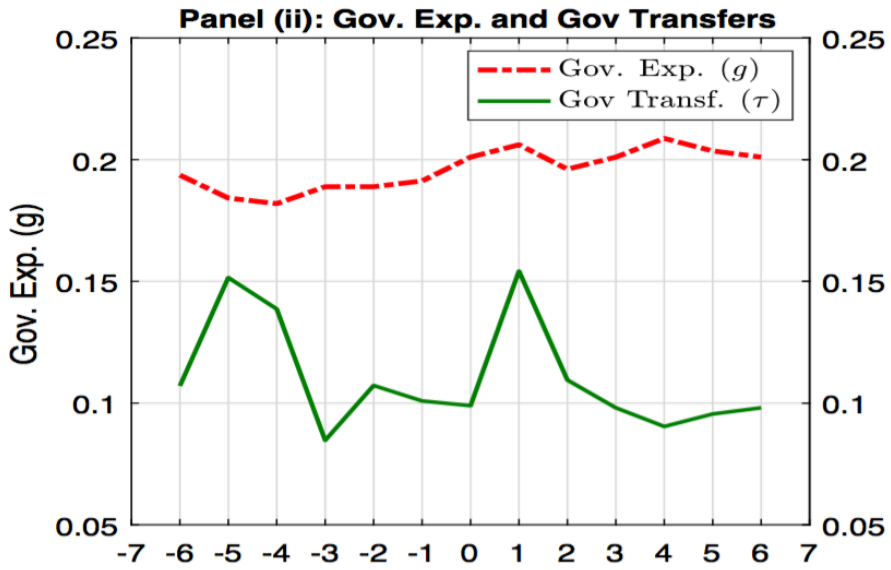
  The 2 types of redistribution are connected intertemporally and default incentives mess up the link.

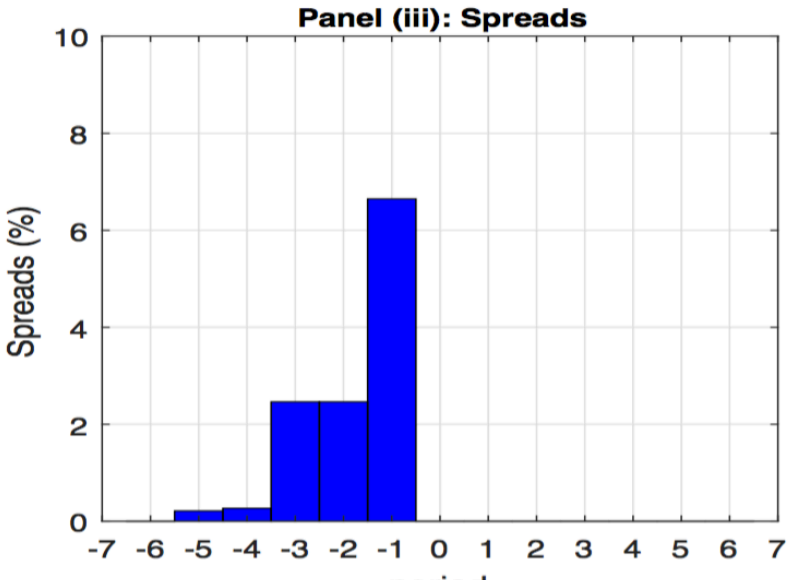
Results

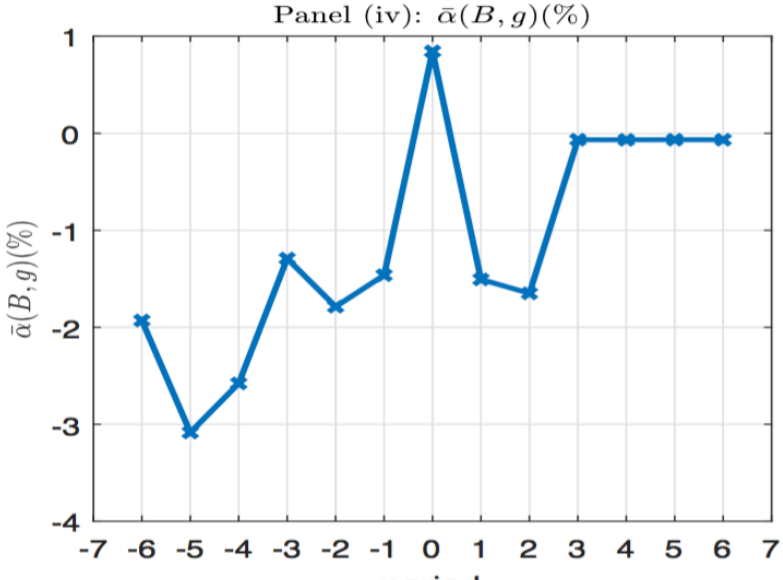
	Data		Model	
Moment (%)	Avg.	Peak Crisis	Average	Prior Default
Gov. Debt B	7.45*	10.94	7.87	10.82
Domestic Debt B^d	4.14	5.92	4.37	4.87
Foreign Debt $\widehat{B}$	3.31	5.02	3.50	5.95
Ratio B^d/B	55.53*	54.15	55.47	44.97
Tax Revenues $\tau^y Y$	30.01*	29.20	30.01	30.01
Gov. Expenditure g	19.98*	21.34	19.99	19.15
Transfers τ	8.15	16.78	9.90	10.35
Spread (%)	0.92*	3.34	1.22	9.53

Results


Panel (i): Debt and Default
B' (total)
$B^{d'}$ (domestic)
$\hat{B}'$ (foreign)
period


Panel (ii): Gov. Exp. and Gov Transfers
Gov. Exp. (g)
Gov Transf. (τ)
Gov. Exp. (g)


Panel (iii): Spreads
Spreads (%)


Panel (iv): $\bar{\alpha}(B,g)(\%)$
$\bar{\alpha}(B,g)(\%)$

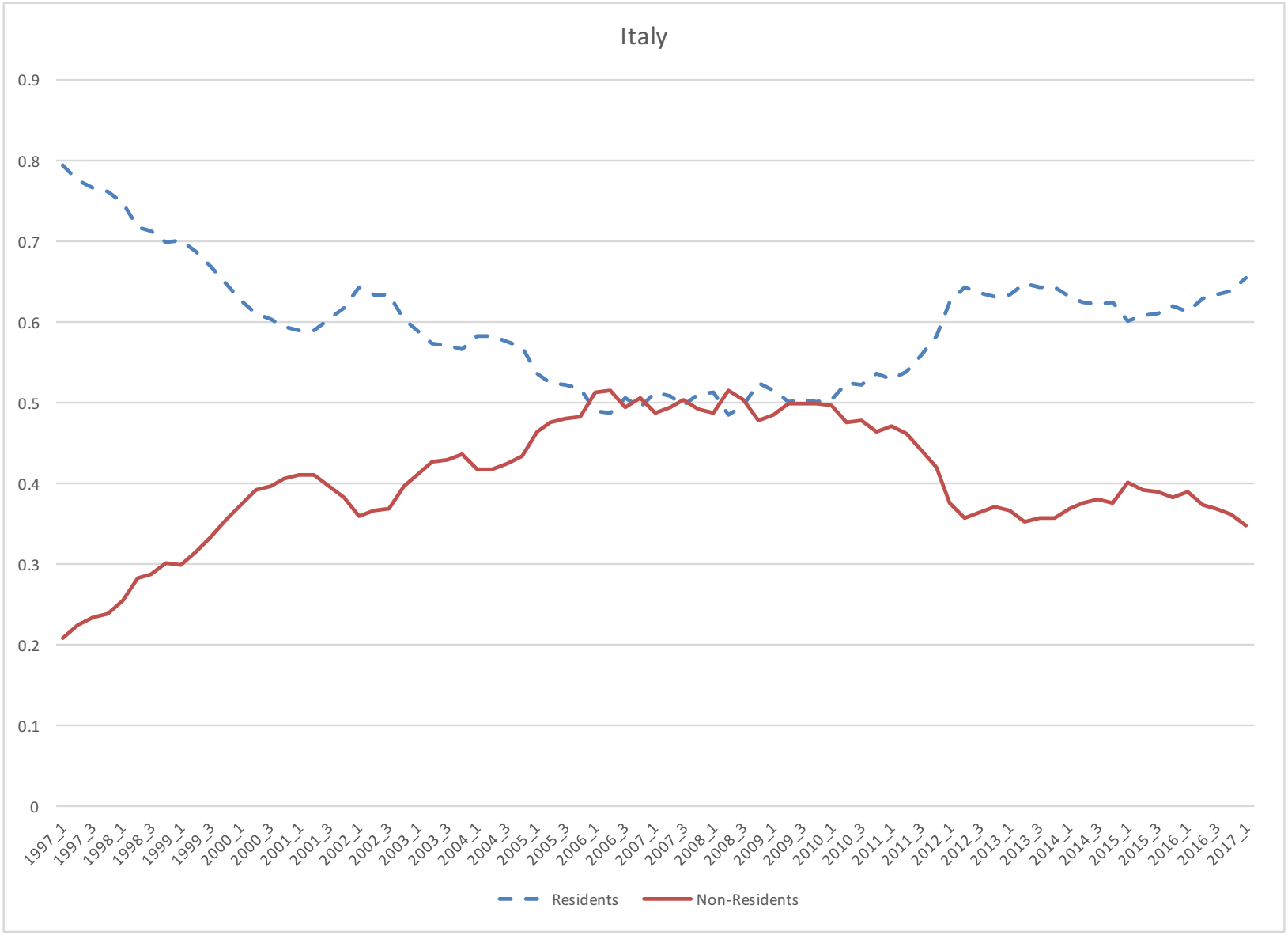
My comments

1. Who holds the debt? Does it matter?

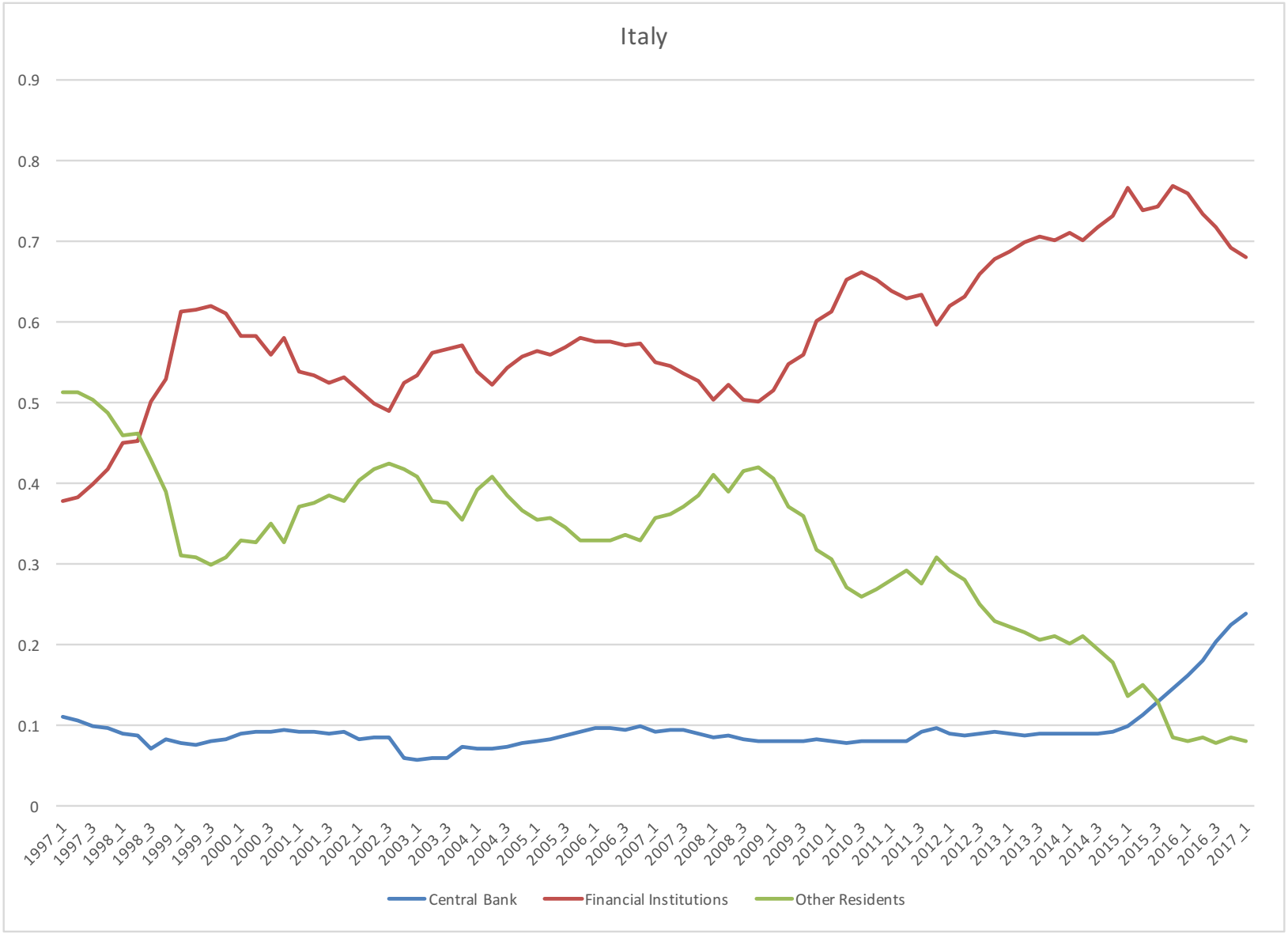
2. Other tools for redistribution, other roles for debt.

3. $Corr(Spreads, g)$

My comments – Who holds the debt?



My comments – Who holds the debt?



My comments – Who holds the debt? Does it matter?

- Most of the debt is in the banks.
- Similar pattern for other European countries.

- Does it matter?
  - Who owns the banks?
  - Banks are leveraged institutions, and so can amplify the "shock" considerably
  - Does it matter for redistribution? May make it worse: poor hh's don't hold debt but surely use "banking services".
  - Does it matter for debt capacity? For sure!

My comments – Redistribution and other roles of debt

- **Other tools for redistribution.**
  - Distortionary taxes, subsidies, Safety nets, bailouts.
  - This (and every other) model has a limit. Not asking to include any of these.
    The question is about quantitative relevance.

- **Other roles for debt.**
  - Particularly relevant for this paper: the use of defaultable debt to intertemporally smooth distortions.
  - Issue more debt to postpone dist. taxes, issue less debt (and tax more today) to avoid higher spreads.
  - Karantounias (2017).

  - Can we think of this trade-off with this paper?

to conclusion

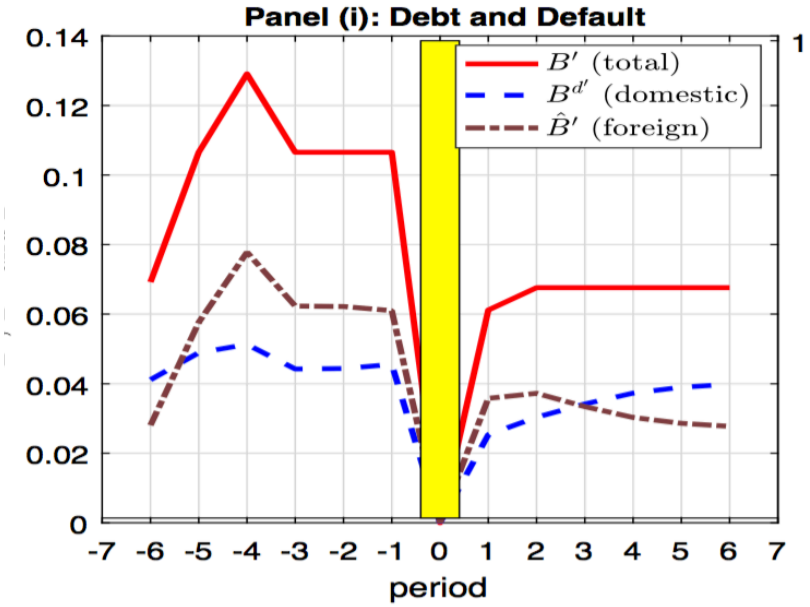
My comments – $corr(Spreads, g)$

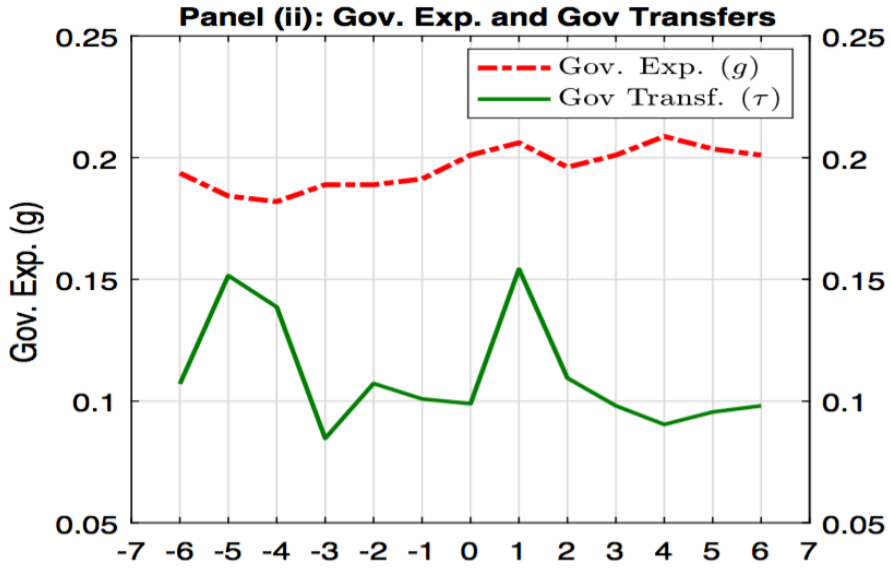
- More than a comment, this is a question.
- I am a bit confused about the result: $corr(spreads, g) < 0$.

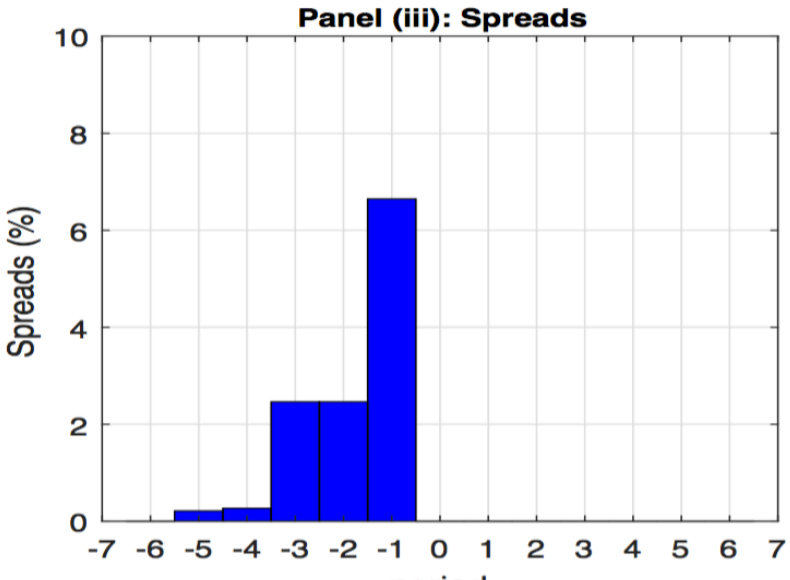
- Low g periods are "good times" $\rightarrow$ higher repayment incentives.
- High g periods are "bad times" $\rightarrow$ higher default incentives (from the non-holders).

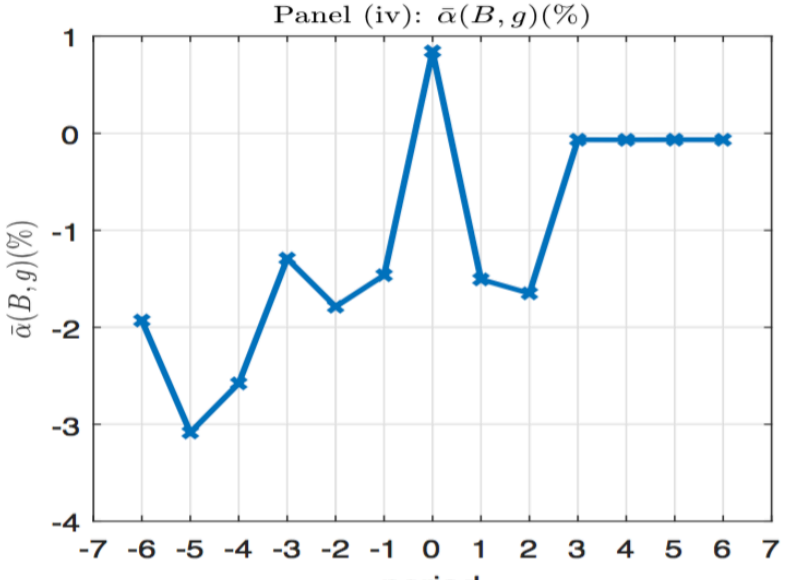
- What am I missing?

My comments – $corr(Spreads, g)$

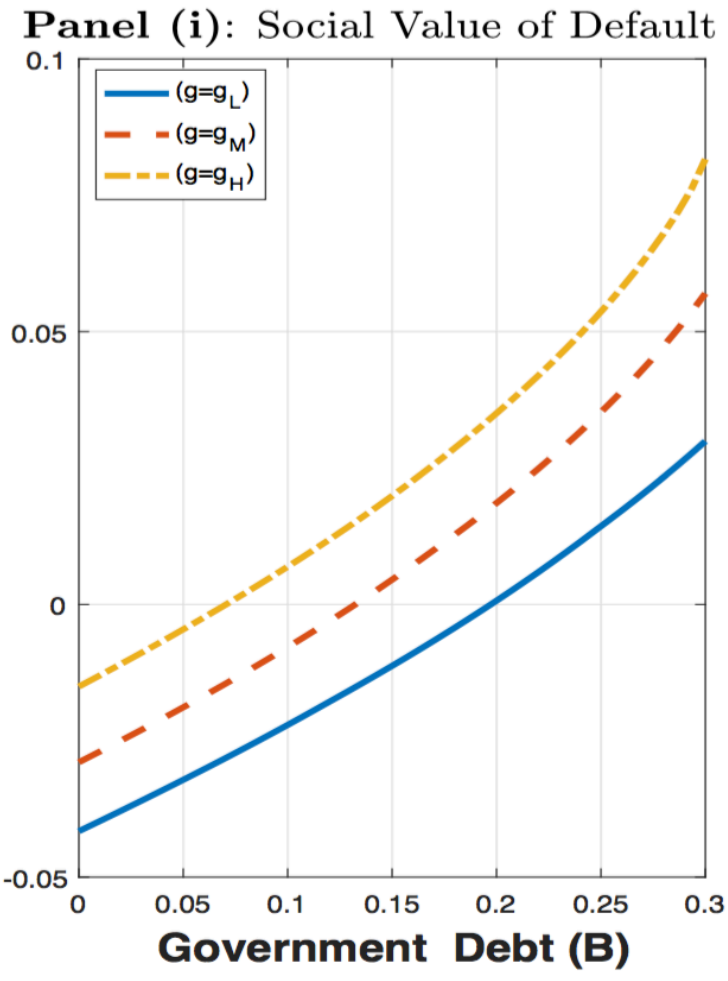


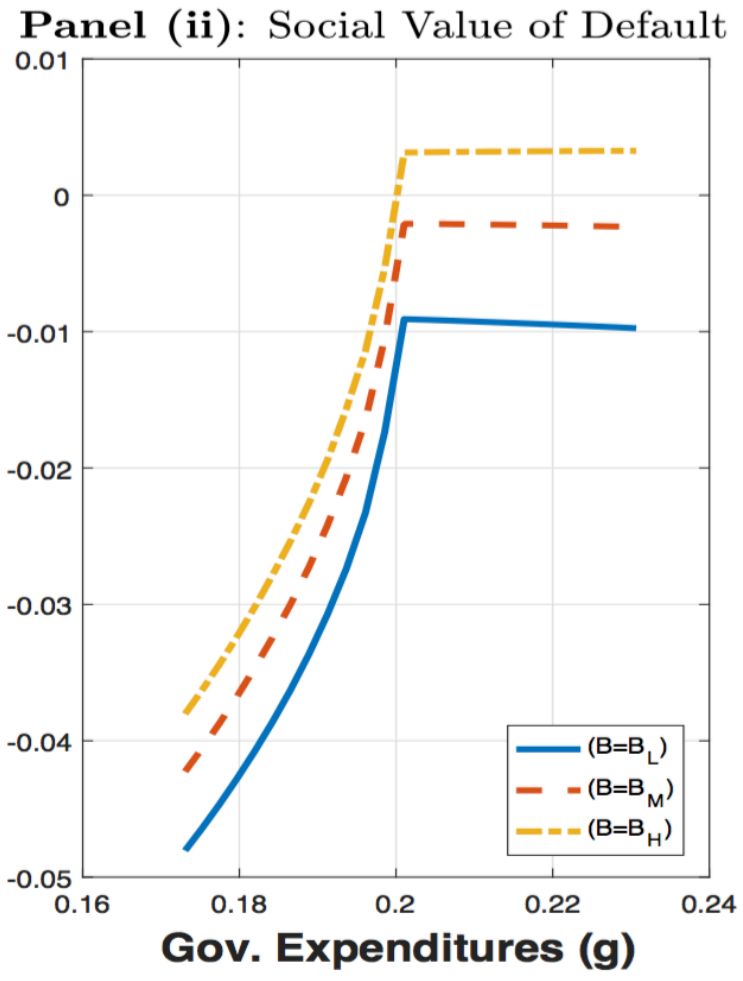






My comments – $corr(Spreads, g)$





Conclusions

- Really really liked the paper. I enjoyed reading it. I learned from it.
- Policy relevant topic and clear, quantitatively relevant mechanism.
- I wish I had written it :)

Thanks!