Official Sector Lending Strategies During the Euro Area Crisis

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Official creditors during the euro debt crisis

- Official loan conditions changed significantly between 2010-2013:
  - 2010: **interest rates** of 3-5.5%; **maturities** 3-7.5 years
  - 2013: **interest rates** of 0.7-3%; **maturities** 4-30 years
- In this paper:
  - detailed description of bailout programs (diff bw IMF and ESM; private sector involvement; bank recapitalization; etc.)
  - event analysis (Portugal and Ireland):
    - programs with **maturity extension and interest rate reduction** leads to a **decrease of 3-5% in 3yr** gov yields and **1-2% in 10yr** gov yields
    - similar results for **increase in liquidity** (bid ask spreads)
- Potential mechanisms:
  - longer maturities reduce current debt burden thus increasing resilience of sovereign (Chatterjee and Eyigungor 2012)
  - lower default probability increases demand for market bonds thus increasing liquidity (Chaumont 2018)

Stylized model of government debt default

- Impatient government with *iid* income Y_t; restructured debt D^{res} with fix repayments ϕ_t; access to debt fix amounts of debt D_2 and D_3, maturing at $t = 2$ and $t = 3$ at market prices for foreign lenders with zero discount
- consumption under no-default:

$$\begin{aligned} C_1 &= Y_1 - (1 - \phi_2 - \phi_3) D^{res} + q_{1,2} D_2 + q_{1,3} D_3 \\ C_2 &= Y_2 - \phi_2 D^{res} - D_2 \\ C_3 &= Y_3 - \phi_3 D^{res} - D_3 \end{aligned}$$

- debt prices:

$$\begin{aligned} q_{1,2} &= Prb\left[Y > Y^{def} + \phi_2 D^{res} + D_2\right] \\ q_{1,3} &= Prb\left[Y > Y^{def} + \phi_3 D^{res} + D_3\right] \end{aligned}$$

Backloading debt repayments

- Reducing debt payments at period $t = 1$, by increasing ϕ_2 and ϕ_3 should improve debt sustainability today...
  - but at the cost of debt sustainability tomorrow
- Backloading debt repayments by increasing ϕ_3 and offsetting ϕ_2 should reduce the yield of the short-term bond
  - but at the cost of increasing the yield of the long-term bond
- The result should be a flattening of yield curve
  - consistent with the findings in the paper

Comments

1. Event analysis compares the yield curve for maturities 3yr, 5yr, 10yr before and after maturity extension in 2011 to 15 years
   - maybe should also compare yields of market bonds of maturities longer than 10yrs to evaluate if there's a negative yield effect
2. The paper finds that official lending reduction in interest rates generates substantial savings thus making debt more sustainable
   - this may confound the effect associated with the reduction in government yields induced by changes in official lending
3. Evidence also suggests that the private sector benefited with lower securities yields and larger volumes after the program changes:
   - corporate bond market represents a small fraction of total credit. Do we have similar evidence for other forms of private debt?
4. Event study regressions include controls for uncertainty (VIX)
   - perhaps better to include country specific economic policy uncertainty (Baker, Bloom, and Davis).
5. Lessons from the 2012 Greek debt restructuring program?
   - incomplete bank bailout in Greece or potential contagion to Cyprus

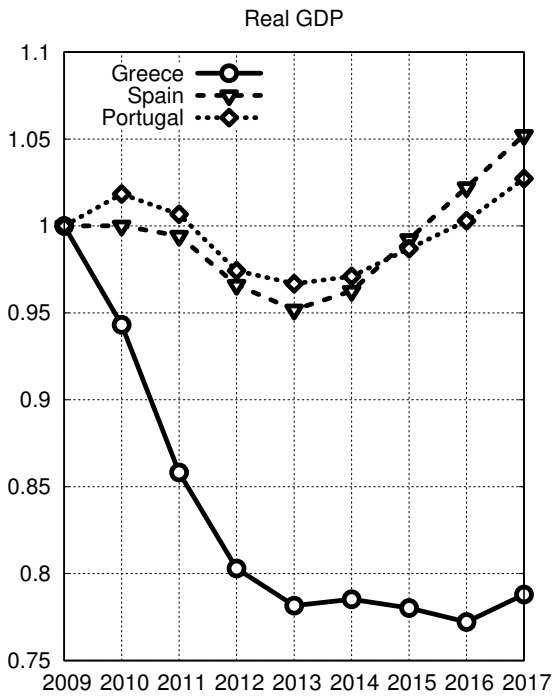
The Greek banking crisis

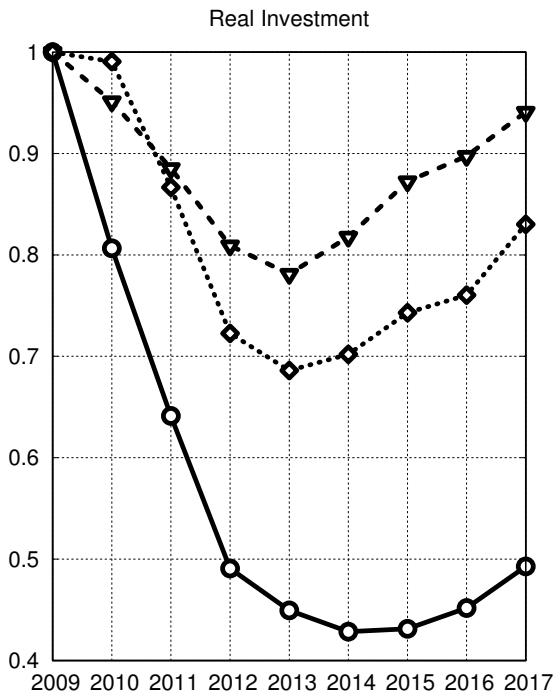
- In 2012, Greek debt was deemed unsustainable generating a debt restructuring with losses for private owners
  - the "Private Sector Involvement" during the default wiped €38b of banks capital and triggered a bailout
  - was this bailout enough to recapitalize the banks? In 2015 a bank run led into another round of recapitalizations
  - Greek PSI may have triggered the crisis in Cyprus by undercapitalizing domestic banks
- An incomplete bank recapitalization may prolong a crisis and undermine the sustainability of an official lending program
  - excess leverage may input misallocation and reduce output

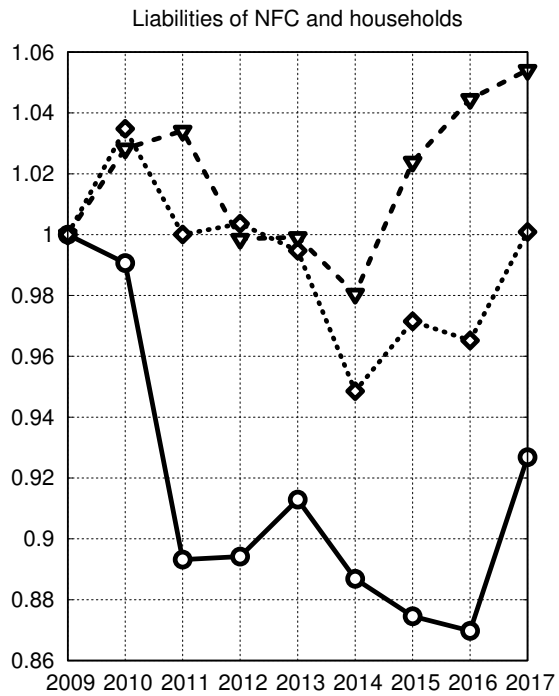
$$C_1 = Y_1(1-\lambda) - (1-\phi_2-\phi_3)\, D^{res} + q_{1,2} D_2 + q_{1,3} D_3$$

  - Caballero, Hoshi, and Kashyap (2008); Kalemli-Ozcan, Laeven, and Moreno (2018); Blattner, Farinha, Rebelo (2019);

Output, investment, and private sector liabilities



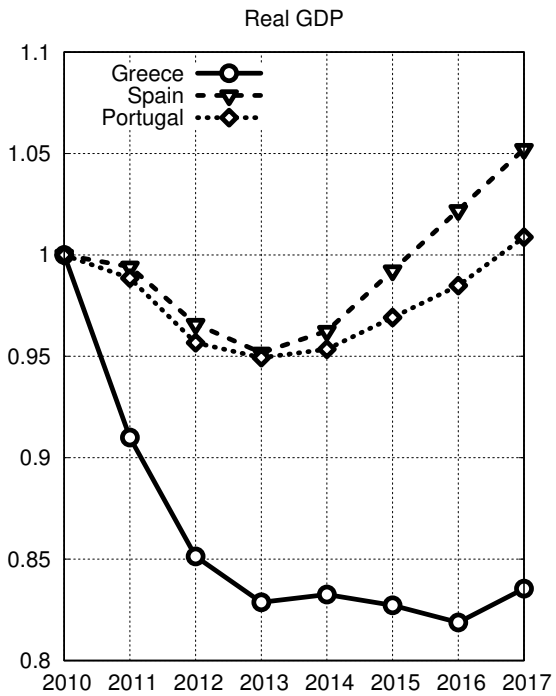


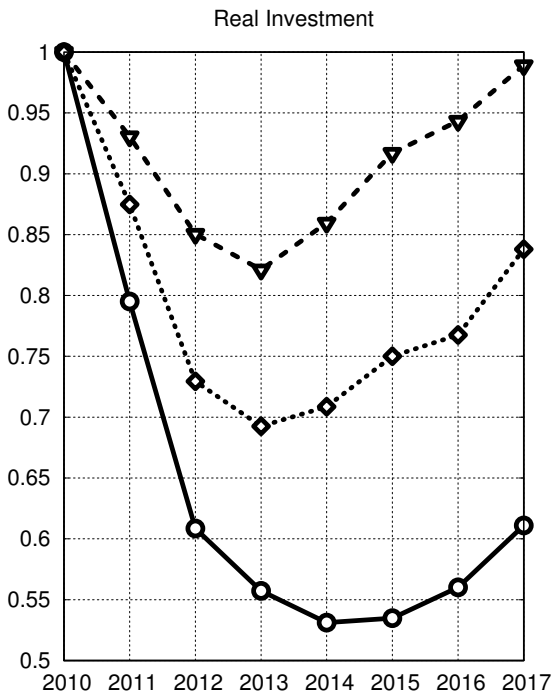


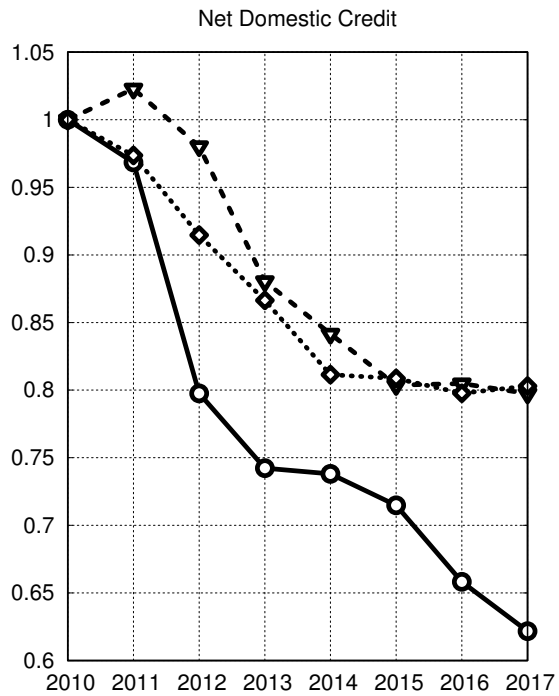
(data: Eurostat; World Bank)

◂ net domestic credit

Summary statistics - production







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