

# Monetary-Fiscal Interactions and the Euro Area's Malaise

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National Bank of Ukraine, May 20, 2016

The views expressed here are solely those of the authors and do not necessarily reflect the views of the ECB

## Motivation

- What is the relation between how monetary and fiscal policy interact in the euro area and the macroeconomic outcomes?
  - Real GDP per capita in 2015 was 2 percent lower than in 2008.
  - Inflation has been very low and the ECB's policy rates have been close to the lower bound.
  - Government bond spreads, about zero until 2009, increased sharply and then decreased to low levels.
- What kind of interaction between monetary and fiscal policy in the euro area would have improved the macroeconomic outcomes?

## **This paper**

- The current configuration of monetary and fiscal policy in the euro area has been central to the recent outcomes.
  - We solve a simple, non-linear general equilibrium model with sticky prices.
  - The model reproduces the main features of the recent euro area data.
- An alternative configuration of monetary and fiscal policy, with a non-defaultable eurobond, could have led to much improved outcomes.

## Model: lower bound and defaultable public debt

- A single economy, homogenous households and firms, each household pays lump-sum taxes to  $N$  fiscal authorities.
- The monetary authority follows a Taylor rule subject to the lower bound.
- Fiscal authority  $n$  issues one-period nominal bonds, follows a standard rule for the primary surplus with feedback from output.
  - Defaults if debt exceeds an upper bound, the upper bound is an i.i.d. random variable.

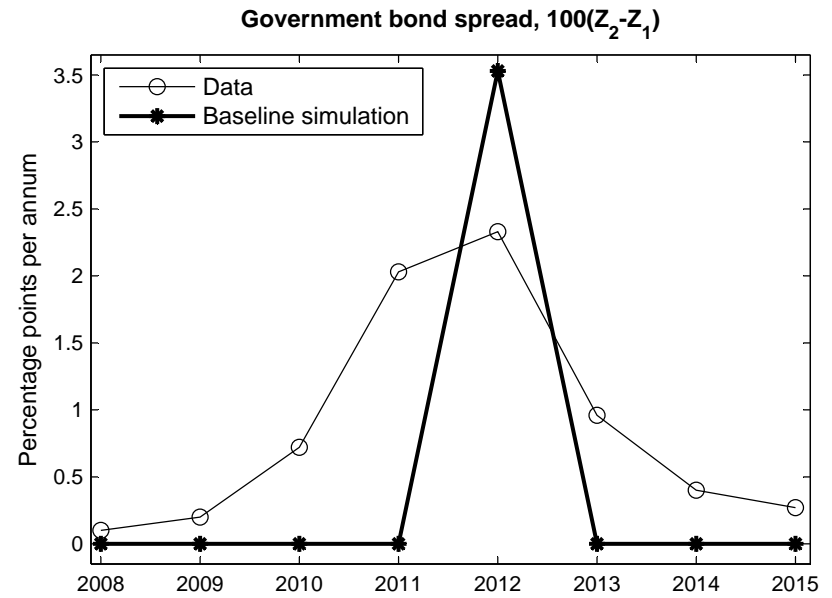
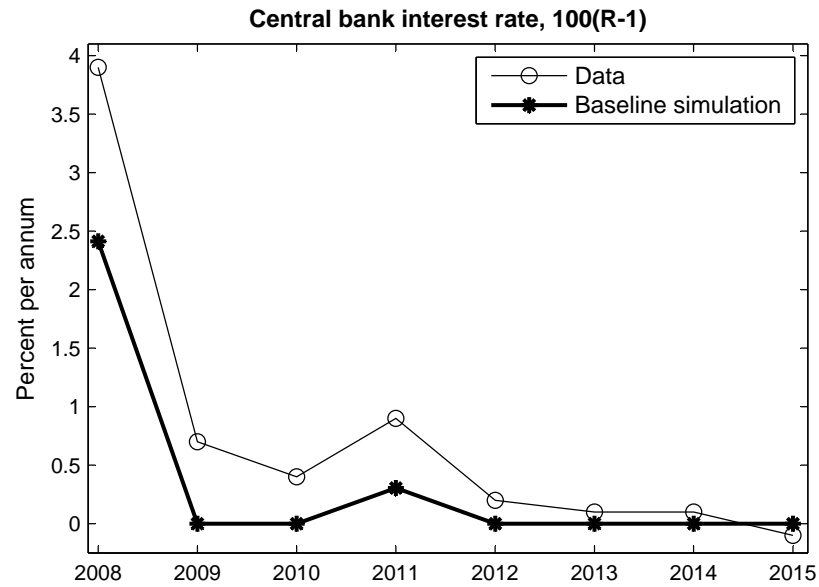
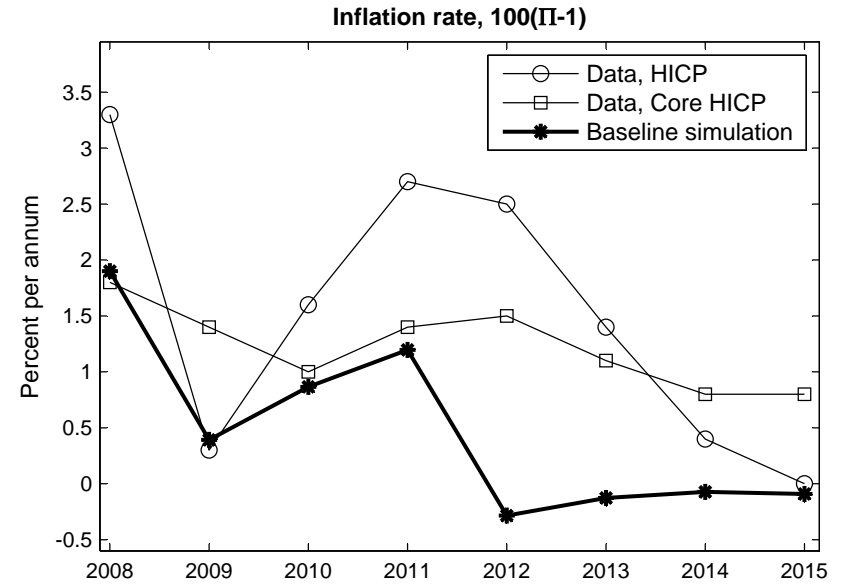
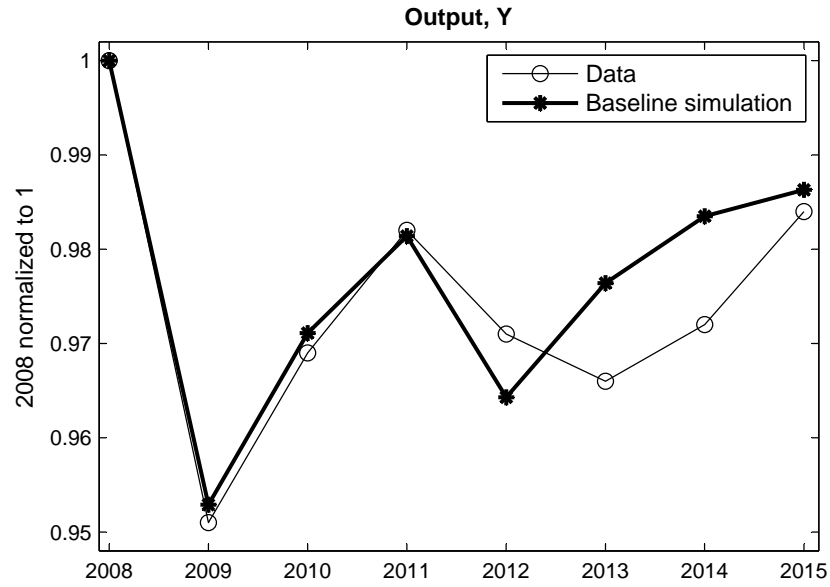
## Indeterminacy

- The model has two steady states: “intended” and “unintended” (Benhabib et al., 2001).
- After a disturbance that raises the value of future consumption there are multiple solutions for  $\{Y_t, \Pi_t, R_t\}_{t=1}^{t=\infty}$ .
- There are multiple solutions for the interest rate on debt of fiscal authority  $n$ .

## Baseline simulation

- A “confidence-about-inflation” sunspot shock can occur with probability  $p$  each year so long as the shock has not occurred.
  - After the shock has occurred, the economy converges to the unintended steady state.
- A “confidence-about-debt” sunspot shock picks a solution for the interest rate on debt of fiscal authority  $n$ .
- Fiscal authorities: “North” is GER, FRA, NED, “South” is ITA, SPA.

Figure 3: The baseline simulation versus the data



## Policy experiment: motivation

- The market value of public debt is equal to the present value of primary surpluses.
- The primary surplus tends to fall in a recession. If debt is defaultable, the present value of primary surpluses must be unchanged or the probability of default rises.
- If debt is denominated in a fiat currency, monetary and fiscal policy can coordinate to make debt non-defaultable. Then the present value of primary surpluses can be lowered to produce an expansionary wealth effect.



## Policy experiment: a fund issuing non-defaultable eurobonds

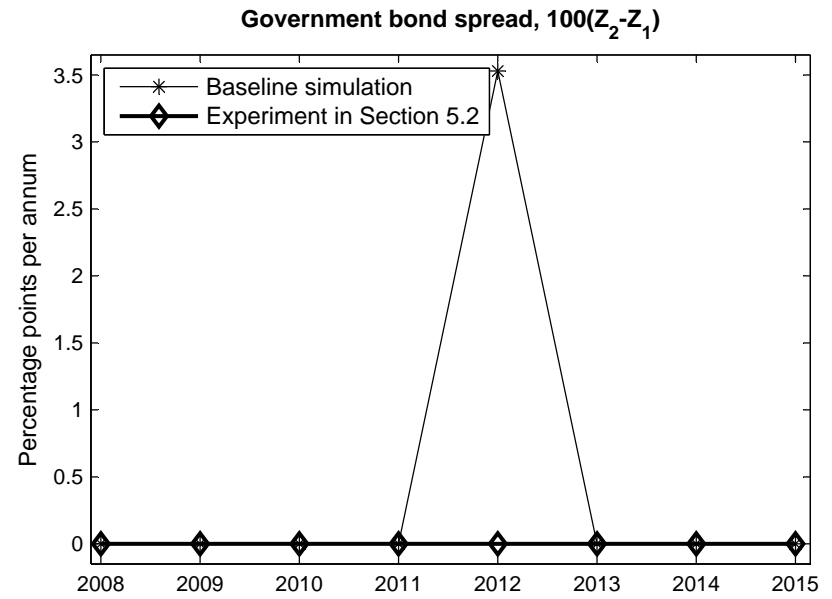
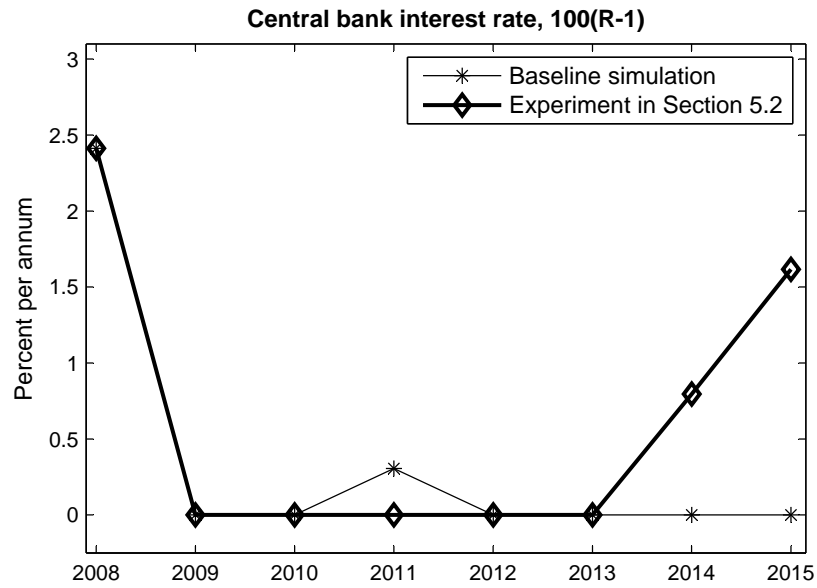
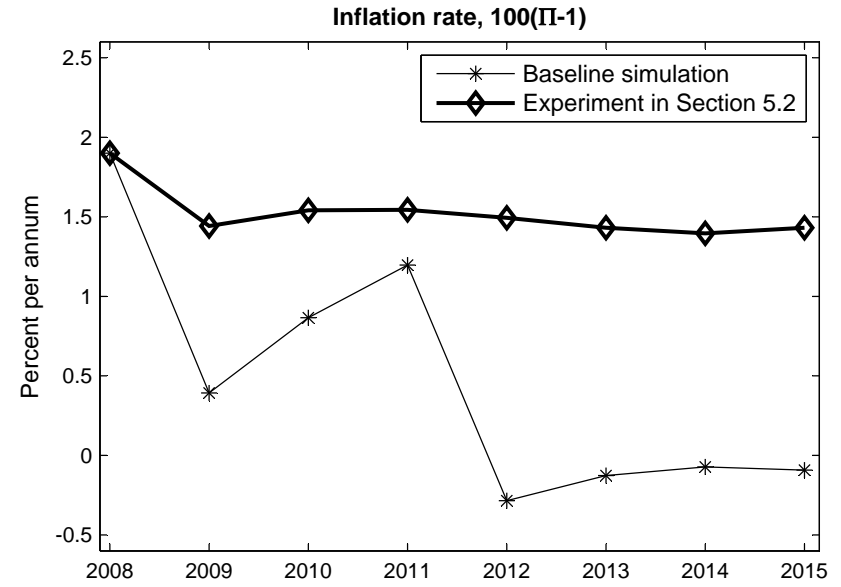
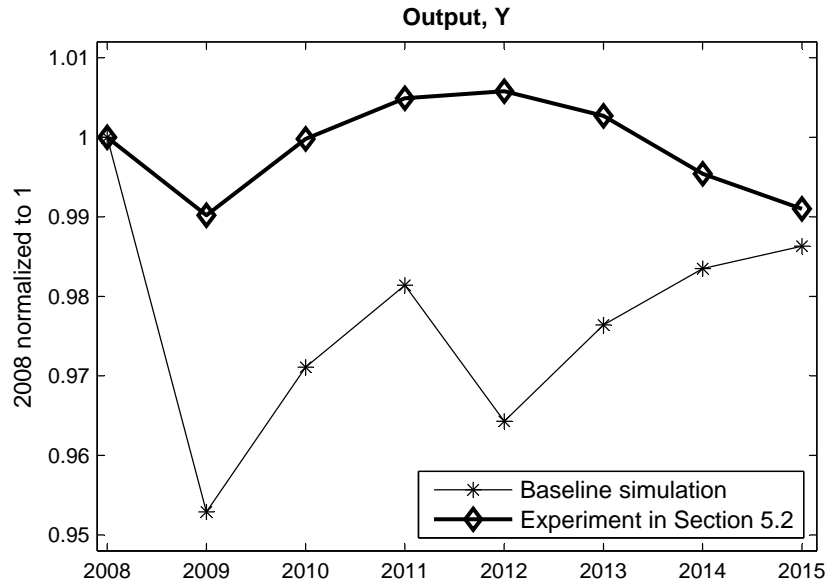
- Ready to purchase debt of fiscal authority  $n$  so long as that authority follows a prescribed rule.
- If  $R_t = 1$ , fiscal authority  $n$  switches to setting

$$S_{nt} = \psi_n + \psi_B \left[ B_{n,t-1} - \theta_n \left( \sum_n B_{n,t-1} \right) \right] + \psi_{Yn} Y_t$$

where  $\sum_n \theta_n = 1$  (Sims, 1997).

- The monetary authority switches to setting an exogenous path for  $R_t$  converging to the intended steady state.

Figure 4: The policy experiment in Section 5.2 vs. the baseline simulation



## Debt restructuring by a national fiscal authority

- If fiscal authority  $n$  deviates from the prescribed rule, the fund refuses to purchase its debt and the authority can, as a last resort, restructure debt.
- We use the model to assess the consequences of debt restructuring by South.
- Extra inflation results, but the magnitude is modest (e.g., with a recovery rate of 60%, inflation jumps to 2.8%), and extra inflation can be eliminated if the fund can tax.

## Conclusions

- The current configuration of monetary and fiscal policy in the euro area has been central to the recent macroeconomic outcomes.
- An alternative configuration could have led to much improved outcomes.
- The ability to issue non-defaultable public debt is valuable when the central bank's policy rates are at the lower bound.

## More lessons for the euro area

- The status quo is very suboptimal.
- A quid pro quo in which each member state loses some sovereignty in selected areas while gaining it in others might be politically acceptable.
- The ECB can issue non-defaultable debt, but the ECB does not have the ability to tax or the democratic legitimacy to make decisions about fiscal policy.