

Monetary-Fiscal Interactions and the Euro Area's Malaise

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

Research questions

- What is the relation between how monetary and fiscal policy interact in the euro area and the macroeconomic outcomes?
 - Real GDP per capita at the end of 2015 was 2 percent lower than in 2008.
 - Inflation has been low and the ECB's policy rates have been close to the lower bound.
 - Government bond spreads, about zero until 2009, increased sharply and subsequently decreased to low levels.
- What kind of interaction between monetary and fiscal policy in the euro area would improve 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 mimics the recent euro area data.
- An alternative configuration of monetary and fiscal policy, with a non-defaultable Eurobond, can lead to much improved outcomes.

Model

- A single economy, homogenous households and firms, households pay lump-sum taxes to N fiscal authorities.
- The monetary authority follows an active rule subject to the lower bound.
- Fiscal authority n issues one-period nominal bonds, follows a passive rule that includes feedback from output.
 - Defaults if debt exceeds an upper bound, the upper bound is an i.i.d. random variable.

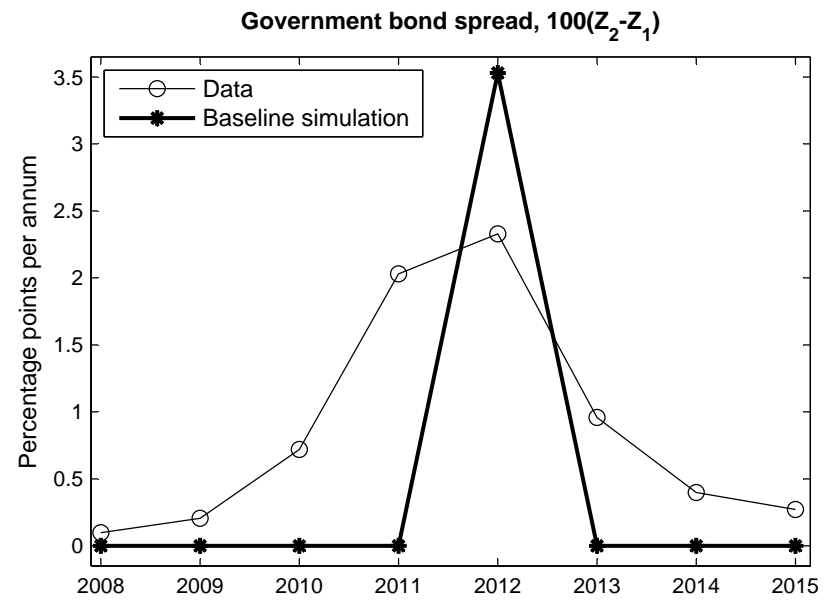
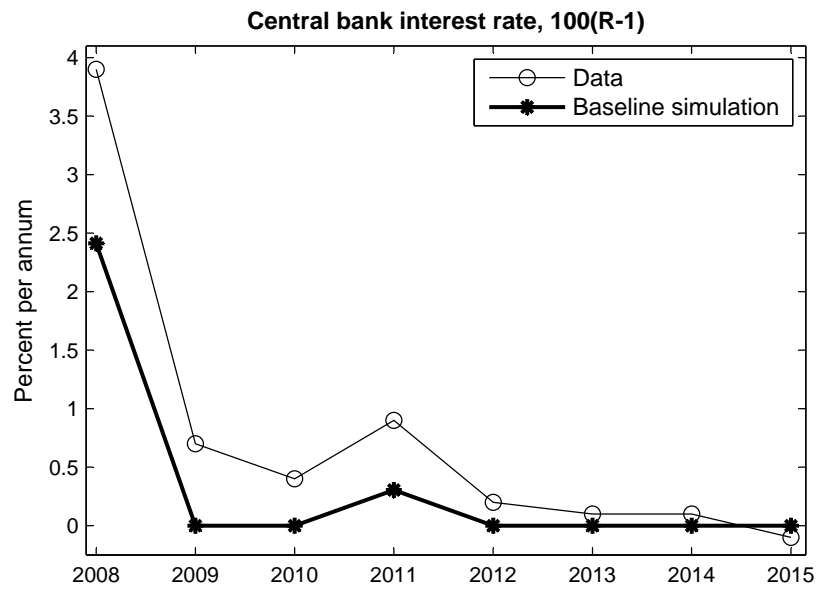
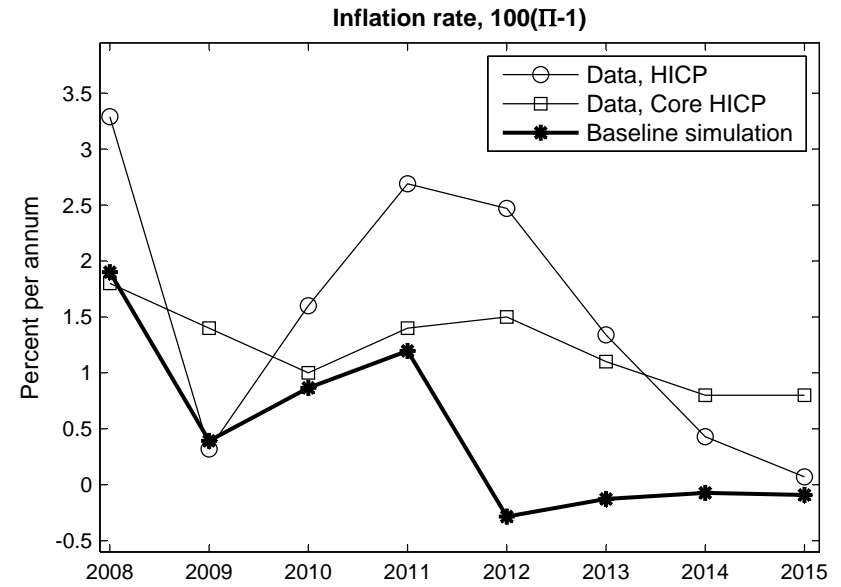
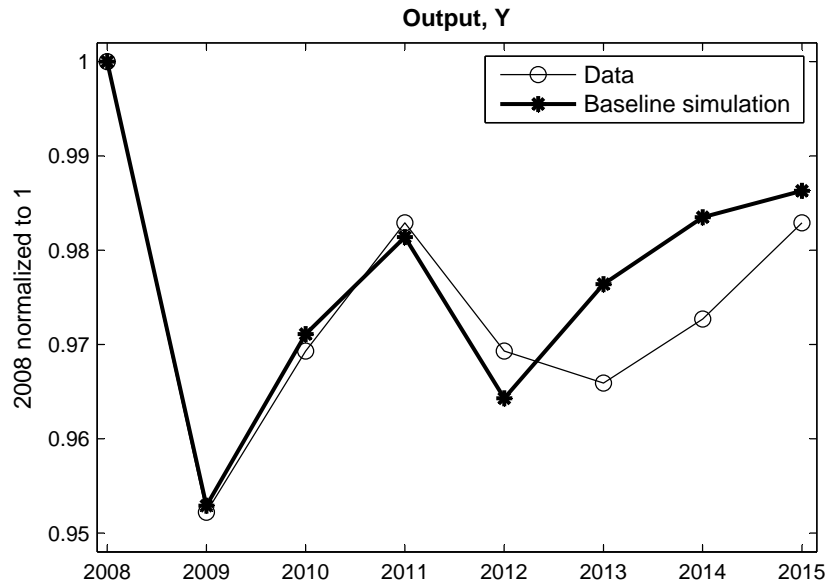
Indeterminacy

- The model has two steady states: “intended” and “unintended” (Benhabib et al., 2001).
- After a disturbance that decreases the value of current 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 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 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



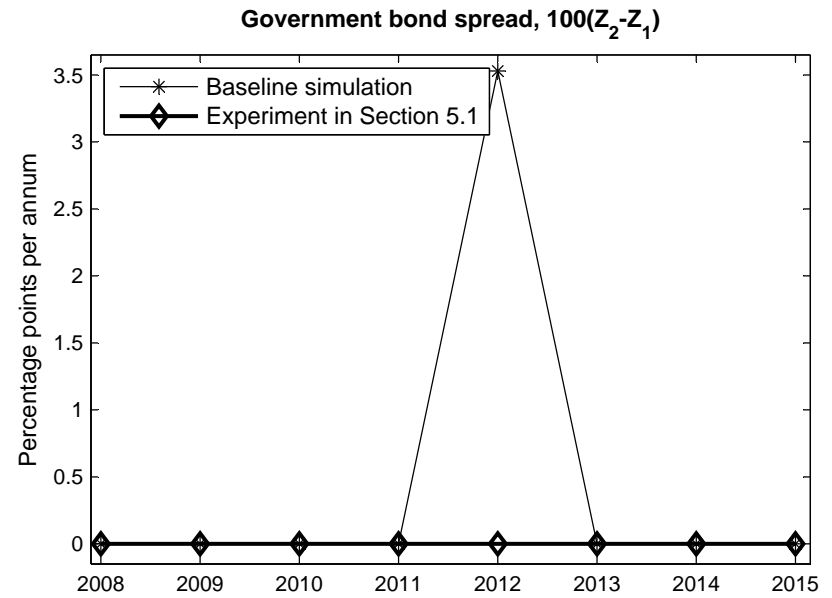
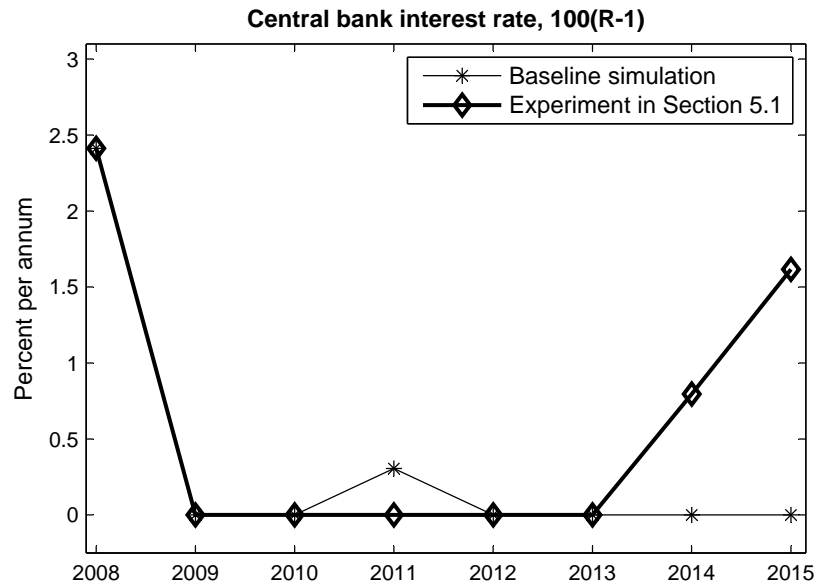
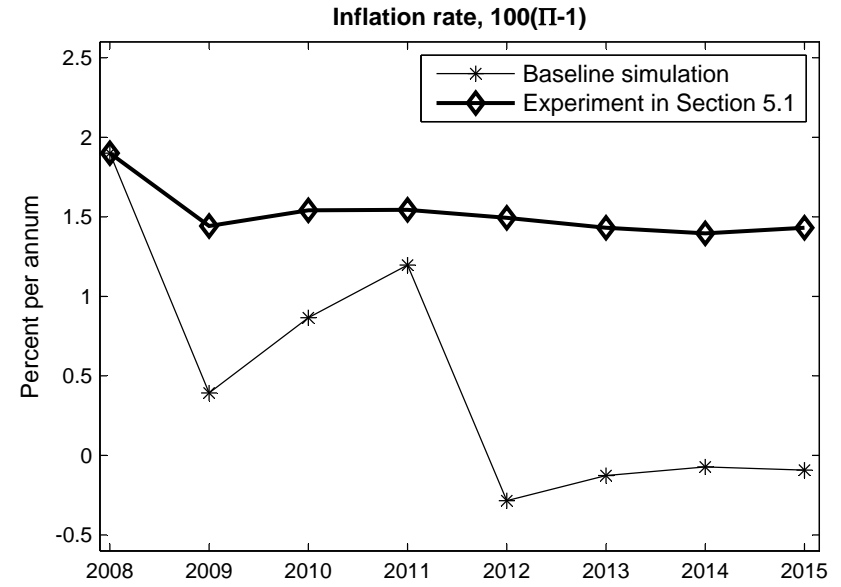
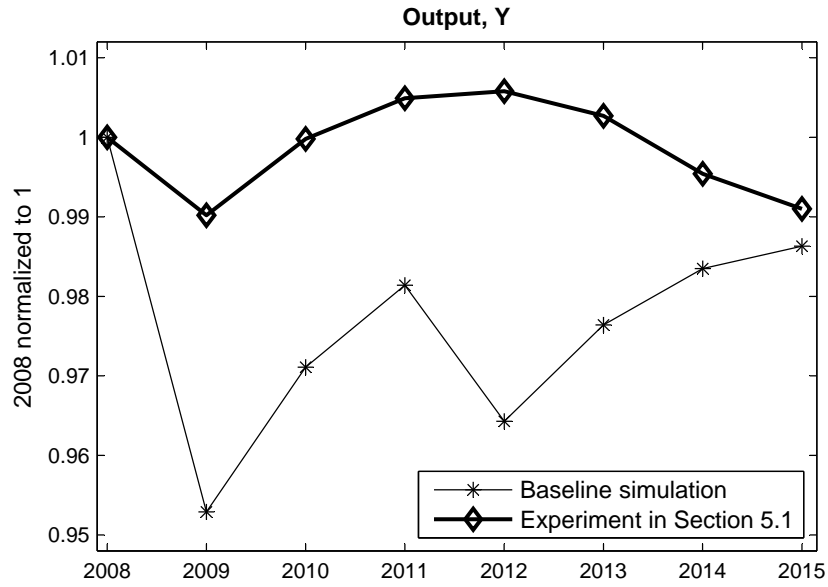
Policy experiment: a centrally-operated fund issuing Eurobonds

- Ready to purchase debt of fiscal authority n so long as that authority follows a prescribed rule.
- If $R_t = 1$, the monetary authority switches to setting an exogenous path for R_t converging to the intended steady state.
- If $R_t = 1$, fiscal authority n switches to setting

$$\tilde{S}_{nt} = \bar{\psi}_n + \psi_B \left[\tilde{B}_{n,t-1} - \theta_n \left(\sum_n \tilde{B}_{n,t-1} \right) \right] + \psi_{Yn} (Y_t - Y)$$

where $\sum_n \theta_n = 1$ (Sims, 1997). An active fiscal policy for the union as a whole, implying a unique solution for $\{Y_t, \Pi_t, R_t\}_{t=1}^{t=\infty}$.

Figure 4: The policy experiment in Section 5.1 vs. the baseline simulation



Default 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 default. We use the model to assess the consequences of default.

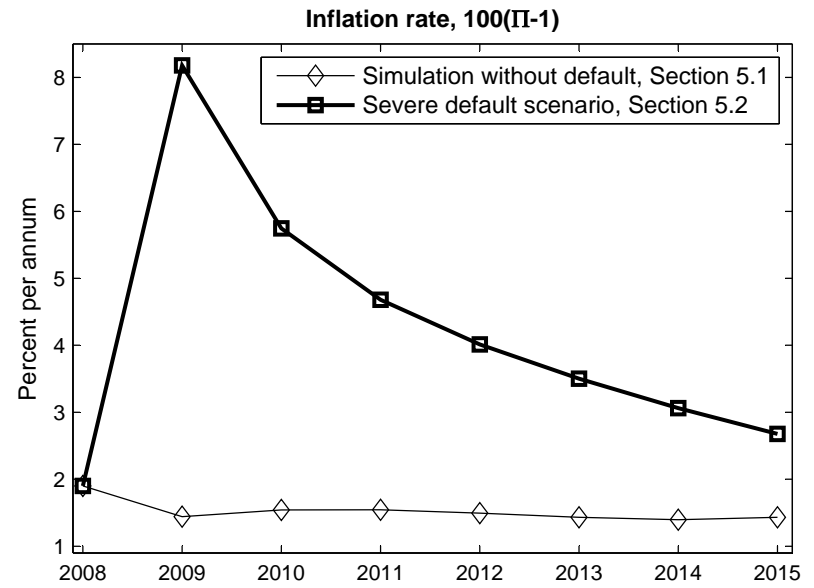
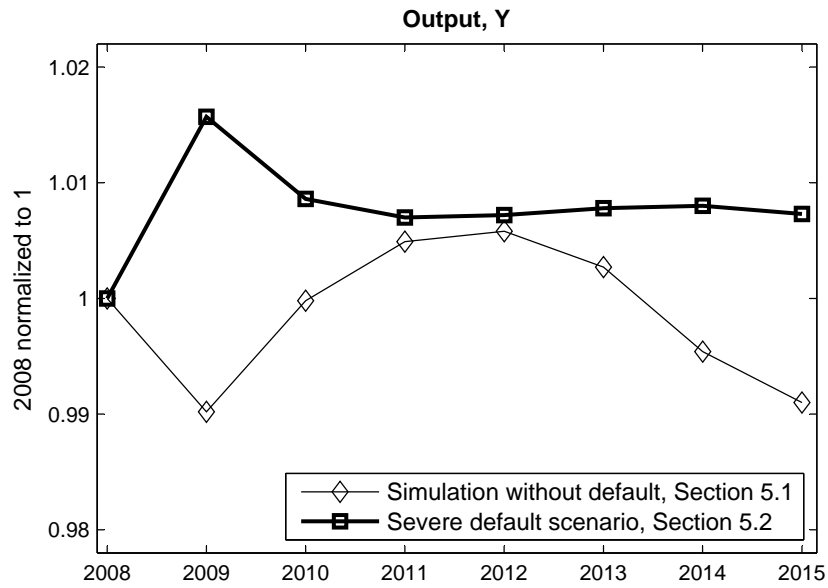
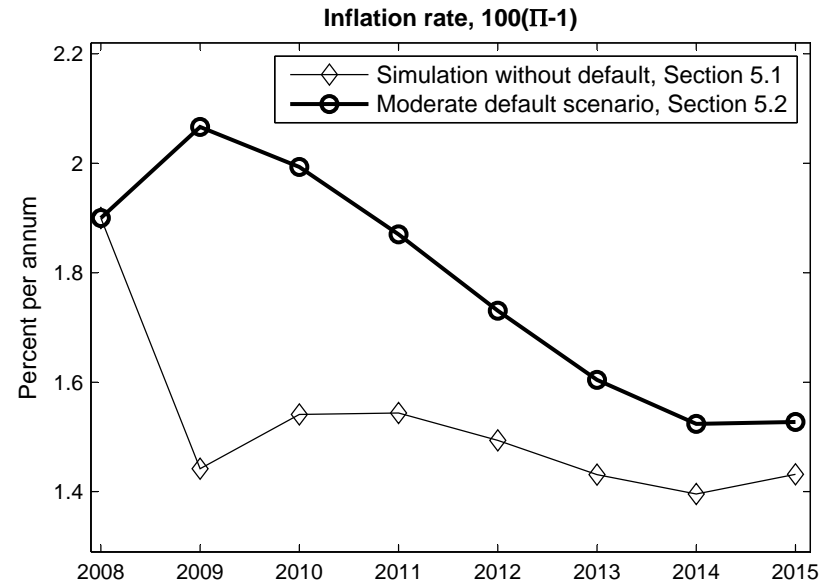
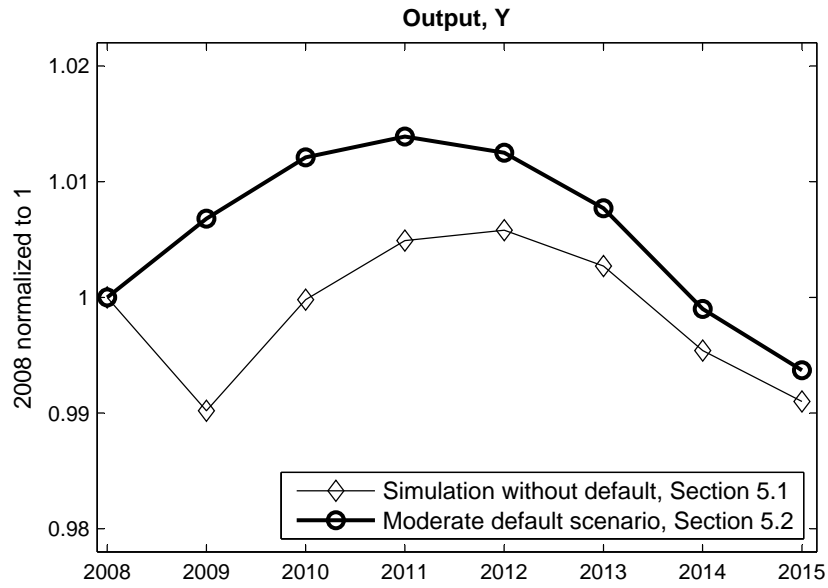
- Splitting $\tilde{S}_{nt} = \tilde{S}_{nt}^F + \tilde{S}_{nt}^H$ between the fund and households:

$$\tilde{S}_{nt}^F = \bar{\psi}_n + \psi_B \left[\tilde{B}_{n,t-1}^F - \theta_n \left(\sum_n \tilde{B}_{n,t-1}^F \right) \right] + \psi_{Yn} (Y_t - Y)$$

$$\tilde{S}_{nt}^H = \psi_n + \psi_B \tilde{B}_{n,t-1}^H + \psi_{Yn} (Y_t - Y)$$

- We suppose that South deviates by lowering $\bar{\psi}_2$ and defaulting on households, with recovery rate $\Delta = \left(\bar{\psi}_2^{new} / \bar{\psi}_2^{old} \right)$.

Figure 5: The effect of default on the policy experiment from Section 5.1



Conclusions from the simple model

- The current configuration of monetary and fiscal policy in the euro area has been central to the recent macroeconomic outcomes.
- An alternative configuration of monetary and fiscal policy, with a non-defaultable Eurobond, could have led to much improved outcomes.

Back to the research questions

- “What is the relation between how monetary and fiscal policy interact in the euro area and the macroeconomic outcomes?”
- “What kind of interaction between monetary and fiscal policy in the euro area would improve macroeconomic outcomes?”
- Much work remains, e.g., modeling country heterogeneity, adding debt of different maturities, bringing the model closer to the data.