ON THE OPTIMAL SPEED OF SOVEREIGN DELEVERAGING WITH PRECAUTIONARY SAVINGS

Discussion by:
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* The views expressed in this presentation are those of the presenter and do not necessarily represent those of the IMF or IMF policy.

Overview

- The paper analyzes the optimal speed of sovereign deleveraging in a depressed economy where some private agents are already deleveraging
  - Should government delay its deleveraging or proceed along with the private deleveraging?
  - Trade-off between reducing fiscal vulnerabilities and further depressing the economy
- Very important policy question with real-world implications

Overview

- To address this question a model needs:
- Non-Ricardian Features
- A motive for deleveraging
- Trade-off between deleveraging earlier or later

Overview of the Model: Households

- Households have preferences over consumption and leisure:

$$\sum_{t=0}^{\infty} \beta_i^t \left(u(\boldsymbol{C}_t^i) - k_n \frac{N_{i,t}^{1+\varphi}}{1+\varphi} \right)$$

- Consumption is a CES aggregate of home and foreign goods
- Households have CARA utility

Overview of the Model: Savers vs Borrowers

- Mass χ of households is impatient (borrowers)
- Mass $1-\chi$ is patient (savers)
- Savers:
  - Lend to borrower households
  - Hold government debt
  - Hold foreign assets
  - Hold equity on firms
- Savers vs borrowers is a source of non-Ricardian equivalence in the model

Overview of the Model: Government and Firms

- Government
  - Exogenous government expenditure in home goods (does not enter in household utility)
  - Levies lump-sum taxes
  - Issues long-term bonds with geometrically decaying coupon; All debt held domestically (by savers)
- Firms
  - Production linear on index of labor of borrowers and savers:

$$N_t \equiv N_{b,t}^{\chi} N_{s,t}^{1-\chi}$$

Private Deleveraging

- Impose constraint that borrower households need to reduce their private debt
  - Reduction in household debt from 80 to 60 percent of GDP over 5 years
- Consumption of borrowers decline
- Consumption of savers does not compensate for that decline
  - Savers can still save by holding government bonds or foreign assets

Public Deleveraging

- If the government defaults:
  - Creditors incur a haircut
  - Output suffers a deadweight loss
  - No further default can take place in the model
- Probability of default is a function of the level of debt; Calibrated based on spreads in the eurozone, with a spline at 90 percent of GDP
- Public deleveraging reduces debt from 120 to 80 percent of GDP
- Consider simulations of an early public deleveraging and one where public deleveraging is delayed until private deleveraging is completed

Figure 8: Dynamics with Early Sovereign Deleveraging

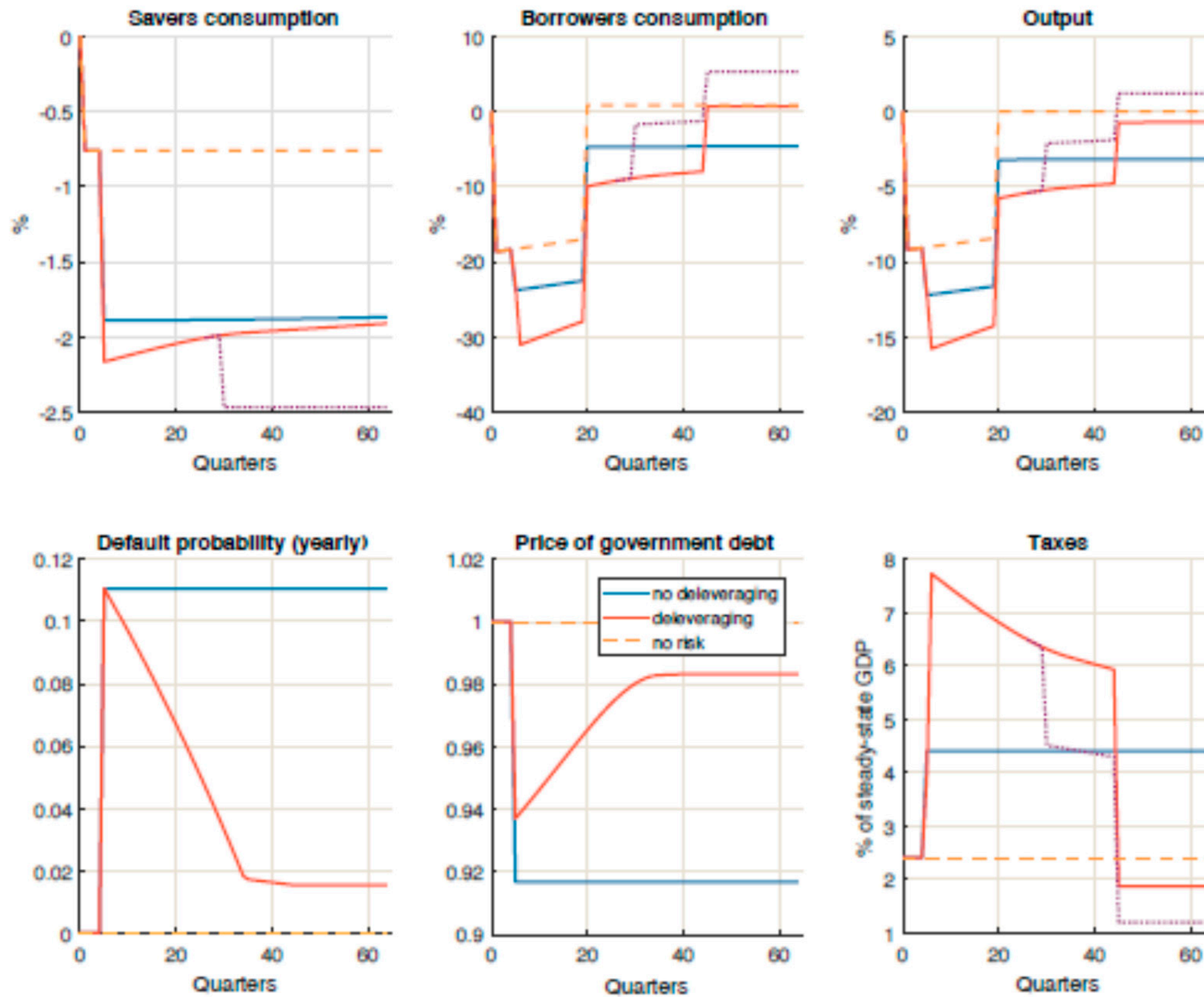
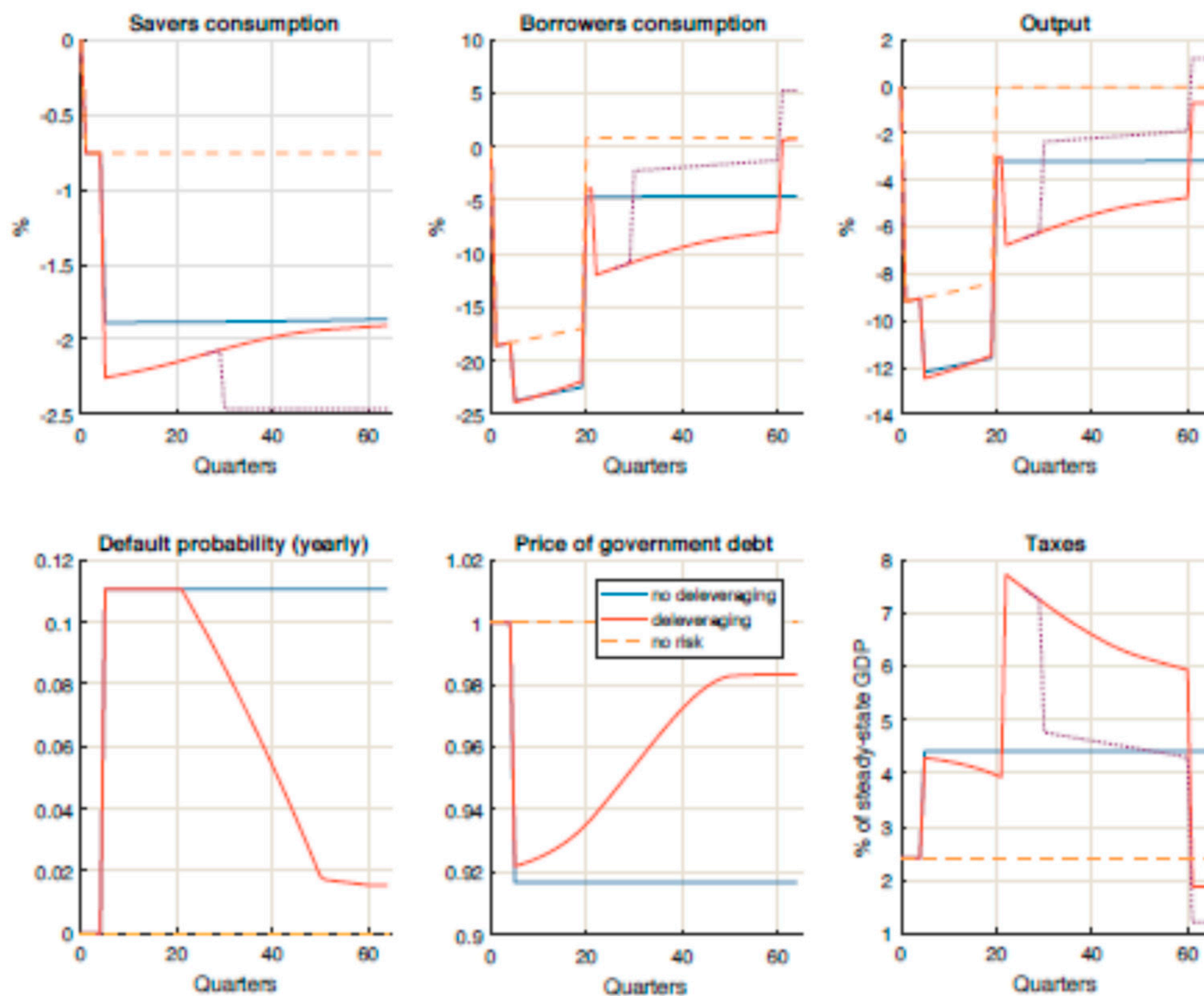


Figure 9: Dynamics with Late Sovereign Deleveraging



Comments/Suggestions

- Paper considers alternative scenarios for public deleveraging
- Is it possible to solve for optimal path?
- If solution complicated; can we compare welfare under different rules?
- All paths considered in the paper involve gradual reduction of debt
  - Imply a fairly front-loaded increase in taxes, particularly in the early deleveraging scenario

Comments/Suggestions

- What about paths anchored on taxes? Analogous to using fiscal balance as the anchor of adjustment (since G_t is exogenous)
- Could also consider gradual adjustment in taxes
  - Some of the resulting paths could even allow debt to initially increase before declining

Comments/Suggestions

- Result that savers prefer early deleveraging while borrowers prefer late deleveraging is very interesting from a political economy perspective
- In practice richer households account for disproportionate share of savings
- Political economy problem further compounded if debt held by foreigners