Self-Fulfilling Debt Crises, Fiscal Policy and Investment

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The European debt crisis of 2010-12 raised, in both academic and policy circles, two important issues: one relates to the possibility of self-fulfilling debt crises in sovereign debt markets, the other to the effectiveness of austerity policies. Pessimistic investors' beliefs on government solvency have often been cited to explain, at least partly, the spike observed in government bond spreads during late 2010, and their subsequent reduction following interventions by the European Central Bank. Austerity policies have sparked a heated debate during the crisis, when fiscal consolidation measures were adopted by southern European countries as a response to the turbulence in sovereign debt markets. Some considered these policies necessary to reduce debt levels and decrease exposure to debt market fluctuations; others argued that their effects were largely contractionary and worsened the debt crisis.

These two issues are related by the existence of a negative feedback loop between bond spreads, government fiscal and debt policy, and economic activity. Bond spreads can have a significant impact on policy, because they affect the cost of government borrowing and in turn its decisions regarding the mix between debt and fiscal policy. There is ample descriptive evidence that the turmoil in sovereign debt markets observed during the European debt crisis was a concern for policymakers, and in many occasions the motivation for austerity measures that proved to adversely impact consumption, investment and output. The dependence of government bond prices on economic activity closes the circle, as default incentives tend to be increasing in debt/GDP ratios, being stronger during recessions and when debt stocks are large.

This paper studies in detail the circular relationship between spreads, policy and output, providing a tractable framework to characterise under what conditions there may exist multiple equilibria where the beliefs of sovereign debt market participants are self-fulfilling. I propose a simple two-period model building on the tradition of Eaton and Gersovitz (1981) and subsequent quantitative work of Aguiar and Gopinath (2006) and Arellano (2008). I extend the model to allow for government fiscal policy and private capital accumulation. The assumptions on government lack of commitment and timing imply that the government adjusts to external borrowing conditions with debt as well as fiscal policy, and the latter affects private consumption-saving decisions. Private investment determines future output and, in turn, future default incentives, which affect debt prices via lenders' expectations. The feedback between government bond prices, fiscal policy and private investment creates the possibility of multiple self-fulfilling equilibria.

I characterise with a general proposition the optimal policy of the government as a function of external borrowing conditions, and show with a numerical example the existence of multiple equilibria that depend on lenders' self-fulfilling beliefs. In the model, a confidence crisis makes it costlier for the government to obtain external funding, forcing it to increase domestic taxation instead. Higher taxes depress private investment and in turn future output, increasing future default probabilities and ultimately verifying lenders' pessimistic beliefs, resulting in an equilibrium that is bad for the government. If instead borrowing conditions are favourable, the government can borrow more cheaply and tax less, so investment is high and default probabilities are in turn low. The bad equilibrium illustrates situations where fiscal consolidation is the government best response to excessive borrowing costs, even though it has contractionary effects and is accompanied by low domestic welfare.