F. Self-Fulfilling Public Debt Crises

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1. Introduction

This paper will show that under certain conditions highly indebted countries could fall into a low credibility trap. This occurs when a government is judged to be not credible by financial markets. It then has to pay a risk premium through higher interest rates. The higher debt service burden that results, if inflation is kept low, makes it even more likely that the authorities will abandon their attempt for stabilization and try to reduce the real value of the debt through a inflation. As a result, this further increases the risk premium demanded by financial markets and could possibly lead to a spiral of increasing interest rates until the government caves in.

However, the debt trap is not the only equilibrium. The same country could also end-up with low interest rates by starting a virtuous circle of high credibility and low interest rates. All that is needed to reach this equilibrium is for markets to think a priori, that the government will be tough on inflation. It will then pay lower interest rates and thus, at the same inflation rate have a lower debt service burden to carry. This could then validate the initial assumption. Hence, there could be two equilibria in financial markets and a mere shift in expectations leading to a bad equilibrium would have to be validated even in the situation of a hard-nosed government.

The current crisis in Italy is a good illustration of the bad equilibrium. It is often argued that the Banca d'Italia cannot tighten monetary policy because the increasing interest rates further increase the fiscal deficit. However, it seems that the national bank of Belgium does not have this similar problem. Belgium and Italy can be compared because they have a similar public finance problem. The debt to GDP ratio is somewhat higher in Belgium than in Italy (140 versus 125) whereas the Belgian deficit is somewhat lower. But Belgium seems to be in a good equilibrium.
because their interest rates are closer to German levels. However, Italy seems to be stuck in a bad equilibrium because its government pays 5 to 6 percentage points more for public debt, although its inflation rate is only about 2 percentage points higher than in Belgium.

This paper differs from previous models on public debt crises because it emphasizes feedback from the initial assumption prevailing in the market to the eventual choice of the government. In the framework of Giavazzi and Pagano (1990), the public does not know the preferences of the government in terms of the fraction of the deficit that should be monetized. In this paper the preferences of the government are known and the government can act in the (short term) interests of the country.

The problem is, that if it is well known, a government that cannot bind its hands, could end up in a bad equilibrium. The novelty of the paper is that it shows that there is also a good equilibrium which is locally stable. However, once financial markets are far away from the good equilibrium they make it very difficult for the government to stabilize.

2. The Model

The starting point is a standard social loss function, $L_t$, given by:

$$L_t = [\alpha q_t^2 + p_t^2] \quad \alpha \geq 0$$

where $p_t$ stands for the inflation rate and $q_t$ stands for tax revenues as a percentage of GDP, which is equivalent to the average tax rate. High taxes and high inflation create distortions which are thus costly in social terms. The parameter $\alpha$ indicates the relative weight of taxes in the social loss function. A high $\alpha$ could be interpreted to mean that the tax collection system is not efficient, i.e. that it causes high distortion costs for a given revenue, or it could be interpreted to mean that the politicians in power dislike high taxes (e.g. high marginal tax rates in households).