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Sovereign defaults: Information, investment and credit ☆

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ABSTRACT

Why would a sovereign government, immune from bankruptcy procedures and with few assets that could be seized in the event of a default, ever repay foreign creditors? And, correspondingly, why do foreign creditors lend to sovereigns? This paper finds general conditions under which, even in the absence of sanctions, lending to sovereigns can emerge in a single shot game. Furthermore, it shows that positive borrowing can be sustained both in pooling and separating equilibria. In this way, it makes clear that neither sanctions nor reputation considerations, the two classical explanations, are necessary to enforce repayment. Information revelation is the crucial mechanism for these results. The repayment/default decision is interpreted as a signal used by the government to communicate information to domestic and foreign agents about the fundamentals of the economy. Governments repay to affect agents' expectations about them. A default, through its effect on expectations about fundamentals, can generate a decline in foreign and domestic investment and a credit crunch in domestic credit markets. Governments repay to avoid these costs, but may default (in equilibrium) when hit by a negative shock.

1. Introduction

In January 2003 Luiz Inacio “Lula” Da Silva was sworn in as President of Brazil. Soon afterwards, Lula's government undertook an adjustment in public expenditures that dented its popularity. The main purpose of this adjustment was to restore Brazil's fiscal health and avoid a default on its debts. In this way, Lula's government tried to prevent Brazil from following the path of Argentina which defaulted on its sovereign debt not long before, in December 2001. Why did the Brazilian government choose to repay its external debts instead of enjoying the “instant gratification” of a default?

This question arises due to the weak legal framework of sovereign debt. The legal enforceability of sovereign debt contracts is very limited. Sovereign governments are immune from bankruptcy procedures and few of their assets could be seized in the event of a default. So, why did Lula's government choose to repay? And, in general, why would governments ever repay foreign creditors? Correspondingly, why do foreign creditors lend to them? This is the puzzle that the sovereign debt literature has been studying since Eaton and Gersovitz (1981) and that I will address in this paper.

The question is very simple and has generated a vast literature. The overwhelming majority of suggested explanations fall into two categories: sanctions and reputation. Sanctions-related explanations rely on the ability of creditors to impose sanctions (usually trade-related) to punish a defaulting government. The standard reputation argument relies on the ability of creditors to exclude a defaulting government from credit markets. However, Bulow and Rogoff (1989) showed that for this threat to enforce

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repayment, it is necessary to assume as well that governments cannot save using a sufficiently rich set of assets following a default. Otherwise, there will always be a point in time when the government would find it optimal to default and begin a sequence of savings that replicates the payoffs of the original contract but generates extra income.[1]

There has been a recent revival of the credit market exclusion story in response to Bulow and Rogoff's critique. The arguments have focused on two assumptions required for their result, namely the availability of a rich enough set of assets following the default and the ability of the government to save optimally. Kletzer and Wright (2000) and Wright (2002) argued that the set of assets becomes endogenously restricted if banks could default too or collude. Amador (2003) showed how a political economy problem may lead to myopic government behavior and, therefore, suboptimal savings.[2]

My paper suggests an explanation to the puzzle that is based neither on sanctions nor on the exclusion from credit markets. Information revelation is the crucial element. Debt repayment acts as a signal sometimes used by governments to reveal information and influence foreign and domestic investors' expectations. In contrast, a sovereign default, through its effect on expectations, may have a widespread effect on the domestic economy, generating costs in terms of output and welfare.

A contribution of the paper is to find general conditions under which this signaling story could provide incentives to repay and, therefore, support some positive level of sovereign debt. In particular, this paper shows that the signaling argument can act as an enforcement mechanism in a finite horizon model without a repeated game argument behind it. In this context, positive borrowing can be sustained both in pooling and separating equilibria.

In order to emphasize the role that information revelation might play, I build a model that rules out by construction the prior explanations. The government borrows to produce a public good and will be able to borrow at most once regardless of whether it chooses to default or not, so the threat of exclusion from credit markets cannot enforce repayment, and neither can any other reputation story. Furthermore, I assume that creditors cannot impose sanctions in the event of a default.

The basic structure studied in this paper is one in which the government is privately informed about some variables that might be relevant for private sector decisions such as its willingness or ability to undertake structural reforms, deal with corruption or protect property rights (i.e.: some of the fundamental institutions of an economy). Private sector actions affect the government welfare function and depend on private sector agents' beliefs about the government's private information. As a result, the government may use its repayment/default decision to signal this information to the private sector and influence their beliefs and actions. It is important to emphasize that for the purpose of this paper, the information of the government about the fundamentals does not need to be better than that of the private sector, it just needs to be different and relevant.

Several possible illustrations of this sort of signalling story can be presented. For example, the level of foreign direct investment might depend on the expected improvement in the fundamental institutions of the economy (i.e. corruption, property rights, etc), and the government might have some private information about its own ability or willingness to undertake the structural reforms required to improve them. So, if the government welfare increases in the level of output generated by foreign investment, then a "good" government might need to signal its superior ability to improve institutions through a costly signal that a "bad" government will choose not to undertake, such as repaying its debt. Another illustration could be one in which a set of domestic entrepreneurs about which the government cares, needs to borrow from abroad to finance their investment and they are constrained by the amount of collateral they have. The expected value of this collateral depends on the realization of the fundamentals of the economy. The government has private information about them and may undertake the costly action of repaying foreign creditors in order to signal the existence of good fundamentals.

Repayment is one of the many possible signals that a government may undertake to influence expectations. However, just communicating the information to the private sector (i.e.: just telling them) is usually not one of them. The reason is that the government faces a credibility problem. In the model, the government's welfare is higher the higher the level of the private sector action, which in turn is positively related to beliefs about the government's private information. This means that regardless of the realization of its private information, the government would, in general, like to induce the highest possible beliefs if doing so is costless. An interesting characteristic of the model is that the presence of alternative costly signals might reduce welfare. The reason is that if other signals exist, then the amount of repaying that the government could "commit" itself to make will be reduced and, as a result, creditors will reduce the amount of lending, limiting the production of public goods.

In the model, defaults occur in equilibrium, and only when fundamentals are worsening (i.e.: "bad" government). A crucial ingredient for this result is that the gains from repaying are increasing in the fundamentals. This occurs because the productivity of capital is higher when fundamentals are better, and, therefore, the gains of affecting beliefs through repayment and having higher levels of investment will be larger. On the other hand, the cost of repaying with standard debt instruments is either invariant or decreasing in the fundamentals. This is what generates the single crossing property in the model. For a given level of debt, a separating equilibrium could arise in which a "good" government may choose to repay rather than default and suffer a decline in the output generated by foreign investors, while a "bad" one might choose the opposite as the decline in output would be smaller. However, for relatively lower levels of debt there could be a pooling equilibrium in which both the "good" and the "bad" government choose to repay. In equilibrium, foreign creditors will limit the amount of lending to the government, so that the government finds it optimal to repay at least for some realizations of the fundamentals. The interest rate on the government debt will reflect the default risk.

[1] See Eaton and Fernandez (1995) for a detailed review of the early reputation and sanctions arguments. The reputation argument has also been applied to intra-national lending in situations where commitment is not possible by Kocherlakota (1996), and Ligon et al. (2000) among others.

[2] There have been few attempts to test empirically the alternative theories of the costs of sovereign default, and the results have been mixed. See Martinez and Sandleris (2005) for a more detailed analysis of this issue.