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Can debt crises be self-fulfilling?

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Abstract

Several papers argue that debt crises can be the result of self-fulfilling expectations that no one will lend to a country, triggering default and rationalizing the refusal to lend. I show these coordination failures can be eliminated by a combination of state-contingent securities and a mechanism that allows investors to promise to lend only if enough other investors do so as well. This suggests that runs on the debt of a single borrower (such as the government) can be eliminated and that self-fulfilling features are more plausible when externalities among many decentralized borrowers allow for economy-wide debt runs to occur.

JEL classification: E60; F30; F34
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1. Introduction

The concept of a “solvent but illiquid” debtor has frequently been used to explain debt crises. In these models, a borrowing country is willing to repay its debts provided it can spread repayments over time by issuing new debt in order to roll over part of the debt coming due. However, if the country is unable to issue new debt, it is assumed to either be forced to default for not being able to repay the debt out of its current output or to find it optimal to default, because repaying the debt would leave very little for current consumption. Such seemingly arbitrary loss of access to credit can be the result of a self-fulfilling creditor panic even if all agents are rational. This view has become one of the dominant frameworks used to discuss alternative policies and crisis prevention measures. This paper shows that this type of self-fulfilling feature often articulated in the debt crises literature can in theory be eliminated by simple market mechanisms of voluntary participation.

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The argument that self-fulfilling expectations can trigger runs on the short-term debt of a country that are analogous to a Diamond and Dybvig (1983) bank run was first formally articulated by Sachs (1984). Cole and Kehoe (1996, 2000) present a much richer model, where the coordination failure is not limited to existing creditors and involves new potential lenders as well. They show that, if every investor expects other investors not to lend to the country and if that would trigger default, then no individual investor would be willing to lend new funds, self-fulfilling their expectations. I show that, if this is the only reason investors are unwilling to lend, the coordination failure can be overcome by offering the new debt through a mechanism where investors are allowed to condition their participation on a large enough amount being successfully issued. The borrowing country can then choose any outcome for that issue provided it satisfies the participation constraints laid out by the investors in their contingent bids. Since every investor is willing to lend provided the others do so as well, the country is always able to select the "good equilibrium". Similar procedures are observed in practice for different types of financial intermediation. For example, when underwriting a bond issue, an investment bank guarantees its size, holding whatever amount it cannot find a buyer for. A very similar mechanism to the one proposed is used by some start-up firms to raise funds. Investors often commit to providing a share of the amount that needs to be raised by the start-up firm, provided the remaining part can be raised from other investors at similar terms. Sovereign debt exchanges, which take place following a default or as an attempt to prevent one, may also include features that condition the outcome on the overall participation. For example, completion of a debt exchange may be tied to the achievement of a given participation level.[1] That way, participants know that they will only exchange their old bonds for the new ones if enough other bondholders do the same (non-participation in a successful exchange may lead to losses depending on how hold-outs are treated).[2]

The repayment of today's investors may also depend on whether or not future investors will lend to the country. Alesina et al. (1990) argue that, if investors today expect their future counterparts not to lend and if this prospect implies a default on the debt offered today, then today's investors are not willing to hold the country's debt. This triggers a default and, following it, future investors will not lend to the country, making the initial expectations self-fulfilling. The present paper shows this type of coordination failure is eliminated if the setting is modified to one where the country is forced to pay its debt over a long but finite horizon or default. As a result, investors at that future date would be willing to lend to a fundamentally sound country under the expectation that their future counterparts will not. That is enough to ensure through a simple backward-induction argument that the country is able to borrow today. The country can self-impose the constraint that it must pay its debt before that future date or be forced to default by issuing state-contingent securities that pay a large amount (enough to force a default) if that condition is not met, and pay zero otherwise.

The findings of this paper cast doubt on debt crises explanations that emphasize a self-fulfilling run on the public debt, since such run could be prevented by the mechanisms described.[3]

[1] That was the case, for example, in Uruguay's 2003 debt exchange. A detailed description is provided in Annex II of IMF (2003).

[2] Some exchange offers require participating creditors to amend key clauses such as cross-default and cross-acceleration provisions, which can typically be changed with the approval by a majority of holders of the particular bond issue (unlike the repayment terms that typically require unanimity).

[3] While the mechanisms proposed are a way of achieving coordination in the extreme case of atomistic investors, in practice, meetings and conference calls among a few key players may well be just as effective. In fact, many observers attribute a prominent role to such informal coordination strategies in the resolution of the 1998 Korean crisis.