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Bank runs and currency peg credibility

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Abstract

It is shown that as a currency peg constrains a government's ability to finance a bailout, bank runs are more likely in credible fixed exchange rate regimes than in those in which the central bank is less committed to its exchange rate. Within the context of the model and given the government responses to their respective banking crises during the period 1994–1995, the bank runs in Argentina and lack thereof in Mexico seem to be rational responses of depositors.

JEL classification: F3; G2

Keywords: Bank run; Currency peg credibility

1. Introduction

The 1980s and 1990s are littered with examples of banking crises. In their study of the causes of such crises, Demirguc-Kunt and Detriagiache (1998) identify 31 crisis episodes for the period 1980–1994 only a subset of which were also accompanied by massive depositor attempts to liquidate funds. This paper aims to shed light on the question: Why do some crises give rise to runs while others do not? As a bank run (i.e., loss of depositor confidence in the willingness of banks to stand behind their liabilities) worsens the severity of a financial crisis, the answer is important for policy-makers who wish to limit the deleterious effects of such crises.

This paper investigates the probability of a bank run in a credit-constrained econ-

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omy with a currency peg.[1] Assuming that recourse to taxation or borrowing are insufficient to finance a bailout, a government facing a bank run in a fixed exchange rate regime must choose between printing money to bail out banks or leaving them to fail. In the first alternative bank solvency is maintained while the integrity of the currency peg is not. In the latter, it is bank solvency that is lost and currency stability that is maintained. As bank runs occur when depositors fear that deposits will become illiquid or be devalued, the likelihood of a run is affected by the credibility of the currency peg and whether depositors think that the government will bail out banks rather than remain true to the currency.

The paper is motivated by Miller (2000) which analyses central bank reactions to banking crises in fixed exchange rate regimes. That paper outlined the implicit choice between banks and the currency peg that a government faces when the exchange rate is fixed and banks are weak. To illustrate the point in that paper, an "irrational" bank run (i.e., one in which the bail out is not rationally expected in advance or expected to occur with delay) was analyzed. Here, we extend the analysis of Miller (2000) and "rationalize" the bank run by making the run probability a function of the government's loss function and thus, the expected choice between banks or the currency.

Given the recent joint occurrence of banking and currency crises, many researchers have considered how these two crises may be related (see for example Kaminsky and Reinhart (1995) and Miller (1998) for a review). Miller (1999) departs from that research slant by illustrating how a healthy rather than an unhealthy banking sector can aggravate a currency crisis. The present text complements Miller (1999) by showing how a healthy or credible currency peg can aggravate a banking crisis by giving rise to runs.

The remainder of the paper is organized as follows: Section 2 contains the model which shows under which conditions an exogenous shock to bank solvency will cause a bank run in a fixed exchange rate regime. There the probability of a run is shown to be a function of the government's loss function which weighs the costs of bank instability with those of currency instability. As the relative costs of bank instability will be larger the worse the crisis, an intriguing and somewhat counter-intuitive result will be that the worse the crisis, the less likely a run will occur. Section 3 discusses banking crises in Mexico and Argentina in light of the credibility of their respective currency pegs and section 4 concludes.

[1] One sure-fire way to avert a bank run is to offer deposit insurance or some other implicit or explicit government deposit guarantee. While such guarantees are usually offered in industrialized countries, financing constraints often prevent the same from being true in many developing countries. A government can finance a bailout in any of three ways: taxation, borrowing and/or money creation. However, inefficient tax systems and borrowing constraints usually restrain the choice of financing to money creation. If the exchange rate is fixed, this third option should also technically be unavailable.