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# International lending of last resort and moral hazard: A model of IMF's catalytic finance

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## Abstract

This paper analyzes the trade-off between official liquidity provision and debtor moral hazard in international financial crises. In the model, crises are caused by the interaction of bad fundamentals, self-fulfilling runs and policies by three classes of optimizing agents: international investors, the local government and an international official lender. Limited contingent liquidity support helps to prevent liquidity runs by raising the number of investors willing to lend to the country for any given fundamentals, i.e., it can have catalytic effects. The influence of the official lender is increasing in the size of its interventions and the precision of its information. Unlike the conventional view stressing debtor moral hazard, our model identifies circumstances in which official lending actually strengthens a government's incentive to implement desirable but costly policies.


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## 1. Introduction

In the last decade, many emerging market economies have experienced currency, debt, financial and banking crises: Mexico, Thailand, Indonesia, Korea, Russia, Brazil,

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Ecuador, Turkey, Argentina and Uruguay, to name the main ones. At the time of the crisis, each of these countries faced a massive reversal of capital flows and experienced a large drop in economic activity. In every case, large external financing gaps emerged because of strong capital outflows and the unwillingness of investors to rollover short-term claims on the country (including those on its government, its banks and its residents).

A leading view is that these international crises are primarily driven by liquidity runs and panics, and could, therefore, be avoided via the provision of sufficient international liquidity to countries threatened by a crisis. According to this view, the global financial architecture should be reformed by creating an international lender of last resort (ILOLR). Not only would such an institution increase efficiency ex post by eliminating liquidation costs and default in the event of a run: by severing the link between illiquidity and insolvency, it would also prevent crises from occurring in the first place (see Sachs, 1995; Fischer, 1999). An opposing view doubts that international illiquidity is the main factor driving crises. When crises can also be attributed to fundamental shocks and policy mismanagement, liquidity support may turn into a subsidy to insolvent countries, thus generating debtor and creditors moral hazard (see the Meltzer Commission, 2000).[1] Accordingly, IMF interventions should be limited in frequency and size so as to reduce moral hazard distortions, even if limited support would not prevent liquidity runs.

The official IMF/G7 position is somewhere between the two extreme views described above: provided a crisis comes closer to being grounded in illiquidity than in insolvency, a *partial* bailout conditional on policy adjustment by the debtor country can restore investors' confidence and therefore stop destructive runs—i.e., can have a 'catalytic effect'.[2] If the 'catalytic' approach is successful, official resources do not need to be unlimited (i.e., so large as to fill in any potential financing gap), since some official liquidity provision and policy adjustment will convince private investors to rollover their positions (rather than run) while restoring market access by the debtor country. But can partial 'catalytic' bailouts ever be successful or, as argued by many, can only corner solutions of full bailouts or full bailins (i.e., debt suspension or standstill) be effective in preventing destructive runs?[3]

This paper contributes to the current debate on these issues by providing a theoretical model of financial crises and the main policy trade-offs in the design of liquidity provision by an international financial institution. In our model, a crisis can be generated both by fundamental shocks and by self-fulfilling panics, while liquidity provision affects the optimal behavior of the government in the debtor country (possibly generating moral hazard distortions). Our study draws on the theoretical model by Corsetti et al. (2004) and the policy analysis by Corsetti et al. (2002), on the role of large speculative traders in a currency crisis. Consistent with these contributions, we model the official creditor (the IMF or ILOLR) as a *large player* in the world economy, with a well-defined objective function and financial resources. In our model, the strategies of the official creditor,

[1] See Jeanne and Zettelmeyer (2001) for an empirical study on whether IMF programs have a subsidy component and Eichengreen (2003) and Roubini and Setser (2004) for surveys of the empirical evidence on moral hazard from IMF bailout packages.

[2] For the official sector's views of 'catalytic finance,' see Cottarelli and Giannini (2002) and Roubini and Setser (2004).

[3] For a detailed and general discussion of the 'bailouts versus bailins' debate, see Roubini (2000) and Roubini and Setser (2004).