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Does the IMF Help or Hurt? The Effect of IMF Programs on the Likelihood and Outcome of Currency Crises

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Summary. — We empirically analyze the effect of International Monetary Fund (IMF) involvement on the risk of entering a currency crisis and, respectively, the outcome of such a crisis. Specifically, we investigate whether countries with previous IMF intervention are more likely to experience currency crises. In a second step, we analyze the IMF's impact on a country's decision to adjust the exchange rate, once a crisis occurs. We find that IMF involvement reduces the probability of a crisis. Once in a crisis, IMF programs significantly increase the probability that the authorities devalue the exchange rate. The amount of loans and compliance with conditionality have no impact.

Key words — IMF programs, growth, compliance, conditionality, world

"*The Purposes of the International Monetary Fund are:*

(iii) To promote exchange stability, to maintain orderly exchange arrangements among its members [...]
(v) [... to provide] them with opportunity to correct maladjustments in their balance of payments [...]
(vi) [...] to shorten the duration and lessen the degree of disequilibrium in the international balances of payments of members"
Article I, IMF Articles of Agreement

1. INTRODUCTION

When the International Monetary Fund (IMF) was created in 1945 its founders envisioned a Fund that would promote exchange stability and would help its member countries to adjust to disequilibria in their balance of payments. Despite these high goals, the IMF has come under increased scrutiny and attack in recent years (e.g., Stiglitz, 2002). Some of the most intense criticisms aim at the ineffectiveness of the Fund's programs and conditionality to promote good policy and economic outcomes in the recipient countries (e.g., Dreher, 2006; Przeworski & Vreeland, 2000; Vreeland, 2003). A large amount of literature has emerged that investigates how IMF programs and their implementation affect countries' balance of payments, the current account, inflation, and economic growth rates (for recent surveys see Bird (2007), Joyce (2004), Steinwand & Stone (2009)).

In face of this abundance of studies, it is surprising that few of them have investigated the Fund's performance with regard to one of its most generic purposes: the promotion of a stable international exchange rate system.[1] One of the rare exceptions is Muckherjee (2006), who reports that the IMF's stabilization programs failed to prevent currency crises in countries with a high degree of state intervention in the financial sector, but not in others. Hutchison (2003, chapter 10) reports that 28% of currency crises were associated with a contemporaneous short-term IMF program, while 18% of such programs were associated with a contemporaneous currency crisis. However, he does not provide an analysis of the causal direction of this empirical relationship. Finally, Bird and Mandilaras (2009) find some evidence that countries that have had an IMF program hold higher levels of foreign reserves.[2] To the extent that foreign reserves deter speculative attacks on currencies, this result suggests that IMF involvement mitigates crisis risk.

Overall, we know little about whether IMF programs increase or decrease a country's risk of experiencing a currency crisis or how programs affect a country's strategies to resolve such a crisis. Given the paucity of evidence, it is not surprising that we know even less about the channels by which the IMF influences crisis risk and the outcome of currency crises. In theory, the Fund can influence economic policies and outcomes by its available or disbursed money, the policy conditions it attaches to its loans and, more generally, its policy advice. An

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equally important, but more indirect, channel is what we call the "scapegoat-channel." By allowing policymakers to shift the blame for unpopular policies onto the Fund and thus increasing their chances of political survival, the IMF can enhance the chances that economically sensible policies will in fact be implemented (Vreeland, 1999). Finally, the second indirect channel is the "moral-hazard" potentially associated with IMF lending, which might affect macroeconomic policies negatively (Vaubel, 1983). As IMF lending may be interpreted as income insurance against adverse shocks, this insurance cover might induce the potential recipients to lower their precautions against such damages. The overall effect of the IMF depends on the net effect of these channels. In this paper we therefore examine how IMF programs, disbursed loans, and compliance with conditionality affect the risk of currency crises and the outcome of such crises. [3] Specifically, we investigate whether countries with previous IMF intervention are more or less likely to experience currency crises.

In a second step, we test for the IMF's impact on a country's decision to adjust the exchange rate, once a crisis occurs. Even though the IMF aims to prevent currency crises in the first place, these crises have been a regular feature of the international exchange system. Once crises occur, the Fund's goal is to limit their severity, resolve them quickly, and thus prevent them from having systemic implications. Protracted crises often result from the authorities' attempt to delay a necessary adjustment of the exchange rate for too long. One of the most frequent pieces of advice the IMF gives to countries experiencing such crises therefore is an adjustment of the exchange rate. Even though IMF loans bolster countries' reserves, this advice, or even conditionality, coupled with the opportunity to blame the IMF for a devaluation, should lead to an increased propensity for exchange rate adjustment caused by IMF crisis involvement.

To anticipate our main results, we find that IMF involvement reduces the probability of a crisis. Once in a crisis, IMF programs significantly increase the probability that the exchange rate devalues.

The next section discusses the various channels by which the IMF can influence crises; section three describes the method and data employed. Section 4 presents the empirical analysis, while Section 5 provides extensions. The final section concludes.

2. CHANNELS FOR THE IMPACT OF THE IMF ON CURRENCY CRISES

There are a multitude of channels by which the IMF can influence economic outcomes. We discuss three direct channels—money, conditionality, and policy advice—and two more indirect ones: the role of the IMF as a scapegoat for unpopular policies and its role in inducing moral hazard with the borrowing countries.

(a) *IMF programs and the risk of currency crises*

Let us first discuss the channels through which the IMF can affect the risk that a currency crisis occurs in a country. First, IMF program approval is associated with a certain amount of money. [4] The effect of this money is, however, not obvious. In theory, IMF credit is meant to bolster reserves. Since low levels of foreign currency reserves increase the likelihood of speculative attacks, a boost in reserves can help prevent such a crisis. When central banks' have plenty of international reserves, this will not only deter speculators from attacking the currency but will also reassure domestic and foreign investors so as to not to withdraw their funds. This in turn gives governments enough breathing space to reform and stabilize the economy in response to an economic shock. IMF credit should thus decrease the risk of currency crises.

The second channel through which the IMF might affect the risk of currency crises is conditionality. The Fund attaches policy conditions to its loans. These conditions contain measures which the Fund believes to be adequate to overcome an overt or smouldering economic crisis. If these measures are adequately designed and implemented, macroeconomic conditions should improve in the wake of an IMF program and currency crises should become progressively less likely. In addition, the research on currency crises has shown that crises become more likely when investors lose confidence in a government's willingness to sacrifice domestic policy goals (such as low unemployment) in exchange for maintaining its exchange rate peg (Obstfeld, 1994, 1996; for an overview over these so-called second-generation models see Flood and Marion (1998)). IMF conditionality can thus indirectly decrease the likelihood of crises by increasing investors' confidence that the government will adjust its macroeconomic policies.

With regard to the effect of IMF conditions, emphasis is put on *implemented* conditions, however. Many studies have shown that non-compliance and program interruptions are quite frequent. [5] The IMF (2001) itself reports that countries complied with structural benchmarks in only 57% of all programs during 1987–99. Compliance with performance criteria was almost 10 percentage points higher, while prior actions have been implemented in 80% of the programs analyzed. The worst implementation rates were found for conditions relating to privatization (45%), the social security system (56%), and public enterprise reforms (57%). These data are not without problems, however, because they do not include programs that are interrupted or permanently canceled and classify compliance as high even if the borrower implements many minor conditions but fails to implement the important ones (Bird & Willett, 2004). Killick (1995) proposes an alternative indicator of compliance. This indicator is the most widely used measure of program implementation. Specifically, IMF loans agreed but left undrawn at program expiration are used as an indicator of performance under a program. As Killick (1995, p. 58) points out, credit agreed but left undrawn may be a useful indicator of performance. After concluding an arrangement, part of the credit associated with it will be paid out immediately. The rest is payable in tranches. Since IMF credits are highly subsidized, countries have incentives to draw all the money available immediately. However, the money is conditional on observance of several performance criteria. Unless a waiver is granted, non-compliance results in program interruptions. Therefore, if there are large unused credit lines, non-compliance and interruptions are likely to be the cause.

Bird and Willett (2004) summarize the disadvantages of this approach. Resources may not be withdrawn, because of improvements in the economy. Sometimes programs are approved on a precautionary basis only, without intentions to draw at all. On the other hand, the Fund might disburse its money even though implementation of conditions has been poor, for example, because it feels that significant progress has been made, or even for political reasons.

It is not surprising that authors who concentrate on proxies that examine the percentage of IMF loans agreed but left undrawn have found even higher non-compliance rates as compared to those using the Fund's MONA data. For example, Dreher (2003) finds that in the period 1970–99 an average of 61.3% of programs per year suffered from non-compliance. If conditions are not implemented, of course, they cannot have