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Pricing IMF liquidity provision ☆ The value of the IMF liquidity commitment

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Abstract

This paper presents a market-based framework for pricing the International Monetary Fund's commitment to provide liquidity assistance, accounting for the credit risk and the insurance benefit involved in such operations. It is based on the isomorphic correspondence between Fund liquidity and common stock put options. The illustrative numerical examples show that the value of this liquidity guarantee could range between several and three hundreds basis points depending on the borrower's creditworthiness, the volatility of capital flows to the borrowing country, and the amount of funds potentially needed to meet the borrower's external obligations.

JEL classification: F33; F34; F53; G13

Keywords: IMF financing facility; Lender of last resort; Liquidity provision; Option pricing

1. Introduction

Lending from the International Monetary Fund (IMF) has traditionally aimed at supporting members' balance of payments, and, increasingly since the Mexican crisis, it has responded to the need to provide financial assistance to members experiencing exceptional pressures on their capital account (and reserves) as a result of a sudden and disruptive loss of market confidence. Since the crises in South-East Asia and other emerging market economies, the design of a liquidity instrument that could help prevent financial crises has featured prominently on the IMF's reform agenda. Such

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an instrument was deemed to complement the existing borrowing toolkit available to the membership, which had been expanded in the late 1990s with the introduction of the Supplemental Reserve Facility,[1] but whose aim remained that of resolving – rather than preventing – financial crisis.

A first attempt at introducing a contingent liquidity instrument for countries with access to capital markets–namely, the creation of the Contingent Credit Line (CCL) facility — did not meet with enough interest from the membership and the facility was let to expire.[2] Many have continued to call for a new IMF financing instrument specifically designed to support crisis prevention in countries with access to international capital markets.[3] And the IMF Medium-Term Strategy underscores the need to make further progress on designing such a liquidity instrument that could muster the support of the membership.[4] The discussion continues.[5]

Since crisis prevention is the nature of the new liquidity instrument under discussion, its design should meet two key criteria for the user. First, liquidity should be available with a high degree of automaticity and reliability. Second, the cost of the instrument should reflect its benefit in preventing a crisis; prospective users would probably compare this cost with that of alternative ways to insure against a possible crisis. For the liquidity provider, an additional criterion is key: containing financial risks and safeguarding its resources. Clearly, a series of design elements – pricing, access, qualification, monitoring, maturity structure, length of time during which liquidity through the new instrument is available – will impinge upon the attractiveness of the new liquidity instrument and will probably be considered as a package.

This paper focuses on pricing. At this stage of the discussion on the new liquidity instrument, it is envisaged that borrowers will be assessed, as customary, the rate of charge on IMF loans plus level- and time-based surcharges, and commitment and service fees.[6] While these charges and fees are intended to recoup funding, administrative and opportunity costs and to build precautionary balances, they do not explicitly incorporate an assessment of the borrower's credit risk, and the intrinsic value of the liquidity guarantee that it provides to the borrower.[7] It is this latter prominent feature of a new contingent liquidity facility the specific focus of this paper.

This paper proposes a market-based framework for pricing the value of an IMF's commitment to provide liquidity that explicitly distinguishes between lower- and higher-risk borrowers, while incorporating the benefits to the borrower of being able to tap a source of liquidity when necessary. The framework is based on the isomorphic correspondence between IMF liquidity and common stock put options, and is consistent with the literature on modern portfolio insurance (Black and Jones, 1987). The fees generated by this framework would be assessed upfront at time of qualification to reflect IMF's contingent commitment to provide liquidity. Potential users could compare these with the costs of alternative insurance strategies.

[1] Press Release No. 97/59, December 17, 1997 (http://www.imf.org/external/np/sec/pr/1997/pr9759.htm).

[2] Press Release No. 03/207, November 26, 2003 (http://www.imf.org/external/np/sec/pr/2003/pr03207.htm).

[3] Most recently, see "Is the IMF Obsolete", The International Economy, Spring 2007.

[4] A Medium-Term Strategy for the IMF: Meeting the Challenge of Globalization http://www.imf.org/external/np/exr/ib/2006/041806.htm.

[5] Public Information Notice No. 07/40, March 23, 2007 (http://www.imf.org/external/np/sec/pn/2007/pn0740.htm).

[6] *Further Consideration of a New Liquidity Instrument for Market Access Countries—Design Issues*, February 13, 2007 (www.imf.org). See http://www.imf.org/external/np/tre/sdr/burden/2007/082007.htm for a detailed explanation of the rate of charge.

[7] The Fund's preferred creditor status is often mentioned to weaken the rationale for formally assessing credit risk. However, pricing such a risk would help restore a proper ex ante incentive structure to borrow and foster the implementation of policies that would minimize the chances of having to receive Fund financing assistance.