INTERNATIONAL MONETARY FUND

Review of Fund Facilities—Analytical Basis for Fund Lending and Reform Options

Prepared by

Legal, Monetary and Capital Markets, Research, and Strategy, Policy, and Review Departments

In consultation with other departments

Approved by Sean Hagan, Reza Moghadam, Jonathan D. Ostry, and Christopher Towe

February 6, 2009

	Contents	Page
Ex	ecutive Summary	3
I.	Introduction	5
II.	The Basis for Fund Crisis Lending: Analytical Considerations	6
III.	. Fund Crisis Lending: Empirical Evidence and Implications	9
	A. Crisis Prevention: Evidence and Implications	
	B. Crisis Resolution: Evidence	
	C. Crisis Resolution: Implications	15
IV	. Is the BOP Need Criterion an Undue Constraint on Fund Lending?	18
	A. Legal Framework	
	B. Potential Causes of BOP Need	20
V.	Rethinking the GRA Toolkit: Options for Reform	21
	A. The Starting Point	
	B. Streamlining Current Facilities	
	C. Strengthening Crisis Prevention and Resolution	27
	D. Conclusions	35
VI	Issues for Discussion	35

Bo	oxes	
1.	Private Sector Instruments	11
2.	Alternative Official Financing Options	16
	Private Sector Involvement	
4.	Targeting Fund Lending?	19
5.	Conditionality and Exceptional Access Policy	24
6.	Possible Modifications to the Short-term Liquidity Facility	27
	A Pure Signaling Instrument for Emerging Market Countries	
	The Role of Commitment Fees	
•	gures Impact of Fund Financing on Lowering Crisis Probability	10
	Impact of Fund Financing on Lowering Crisis Probability Duration of Selected Capital Account Crises	
	•	13
3.	Actual versus Programmed Current Account Balance and	1.4
	Short-Term Debt Minus Reserves in Selected Capital Account Crises	14
	bles	
1.	Fund GRA Facilities and Policies	36
2.	Comparison Between Alternative Proposals for a New Liquidity Instrument	37
Δr	ppendix	
-	A Formal Model of IMF Lending	38
	Lending Instruments of MDBs and Other IFIs	
Re	ferences	45

EXECUTIVE SUMMARY

Scope. In the context of the ongoing review of Fund facilities, this paper examines the analytical basis for Fund lending in emerging market countries and provides a broad-ranging perspective for reforming the General Resources Account (GRA) lending toolkit.

Fund lending role. The Fund's important lending role in crisis prevention and resolution is buttressed by its unique characteristics: (i) its ability as a nonatomistic lender to provide *large-scale financing* and reduce the likelihood of a run by private creditors; (ii) its ability as a cooperative institution with near-universal membership to agree *conditionality* with members, thus providing national authorities with a policy commitment tool to underpin confidence and catalyze private lending; and (iii) its de facto *preferred creditor status*, which allows it to provide crisis financing when private creditors may be reluctant to lend.

Crisis prevention role. Both theory and empirical evidence suggest that an explicit Fund crisis prevention instrument could have an appreciable impact on lowering the likelihood of a crisis. Effective crisis prevention requires upfront Fund financing sufficient to cover a significant proportion of stock vulnerabilities, such as the country's short-term external debt.

Crisis resolution role. Fund financing is intended to ease the burden of adjustment both by giving the country more time to adjust and by helping to restore confidence. Evidence on crisis resolution suggests that greater access to upfront financing relative to the country's stock vulnerabilities has a better chance of catalyzing creditors. Given limited Fund resources, this requires greater voluntary involvement of private and other official sources of finance.

Basis of Fund lending. The requirement that a member must have a balance of payments (BOP) need at the time of drawing Fund resources is not an undue constraint on the Fund's ability to lend in crises. Most problems warranting Fund lending (e.g., trade shocks, budget financing, deposit runs, private-to-private external funding needs) typically give rise to a BOP need.

Simplifying the lending toolkit. Any GRA lending reform needs to take into account the everchanging nature of crises—particularly, their increased complexity and unpredictable duration. Indeed, the uncertainty about the depth and pace of the present global deleveraging process underscores the importance of flexibility, especially with regard to access levels and repayment terms, as well as having in place an effective crisis prevention instrument. This suggests the advantage of relying more on the general credit tranche lending framework, which can be used to meet any type of BOP problem on an actual or precautionary basis, as applies to Stand-By Arrangements (SBAs), and phasing out most special facilities catering to particular BOP problems and carrying special repayment terms.

Addressing stigma. Ultimately, to be successful, any reform needs to alleviate the stigma associated with Fund lending, which stands in the way of members approaching the Fund *before* the onset of a crisis. This points to a need to tailor Fund conditionality to the varying strengths

of members' policies and fundamentals—e.g., where justified by the member's economic position and track record, by relying more on ex ante conditionality and outright purchases (as in the Short-term Liquidity Facility (SLF)), and less on ex post conditionality and phasing. A companion paper considers reforms to conditionality, including along these lines.

Reform options. Building on the above considerations, this paper lays out the following reform options: (i) eliminating all special GRA facilities; and (ii) tailoring the precautionary use of credit tranche resources to the strength of members' policy track records and fundamentals. To this end, consideration could be given to introducing a new crisis prevention instrument, the Flexible Credit Line (FCL), catering to high-performing members. Alternatively, the SLF could be modified by allowing it to be used on a precautionary basis and lengthening its maturity. Even with these changes, however, the SLF's repayment period may still be short relative to the time that members may need to recover from the current deleveraging process. In addition, consideration could be given to clarifying the use of high-access precautionary SBAs for members that may not qualify for the FCL or the modified SLF.

Flexible Credit Line. The FCL synthesizes earlier proposals considered by Executive Directors for a crisis prevention instrument and aims to provide rapid access to large and upfront disbursements of Fund resources to members with strong policies and sound fundamentals. The FCL would be designed to address all types of BOP problems, to apply both on an actual and precautionary basis, and to provide flexible repayment terms. To achieve this, it would be set up as a window in the credit tranches with the standard repurchase period (3½–5 years). Key design issues would include the length of the arrangement and whether to cap access in the absence of an actual BOP need.

High Access Precautionary Arrangements (HAPAs). The clarification and elaboration of HAPAs would ensure that all members, particularly those that do not qualify for a modified SLF or the FCL, also have access to an effective crisis prevention window. Improving the effectiveness of the precautionary SBA as a crisis prevention device would require establishing unambiguous modalities for frontloading access and for customizing program design based on the member's policy track record and the required policy adjustment. Again, a key design issue is whether to establish a ceiling on access to avoid undue tying up of Fund resources.

Vision. The reform options in this paper together with the reforms of conditionality, access limits, and surcharges (considered in companion papers) would increase the effectiveness of the Fund's crisis prevention and resolution efforts while considerably simplifying the existing GRA lending toolkit. In particular, the suggested tailoring of the use of credit tranche resources on a precautionary basis to the strength of members' policy track records and fundamentals would help encourage members to approach the Fund early, thereby reducing the likelihood of crises.

I. Introduction*1

- 1. One of the purposes of the Fund is to provide financial assistance, under adequate safeguards, to members facing BOP problems. Fund lending contributes to global financial stability by mitigating the risk that members' problems erupt into full crisis and spill over into other countries through contagion. While most emerging market countries have increased their resilience to shocks over the past decade by accumulating foreign exchange reserves, improving policies, and building stronger institutions, the recent global financial turmoil has underscored the need to take a fresh look at the underpinnings of the Fund's lending toolkit that was put in place several decades ago.
- 2. At the Executive Board discussion of the *Review of the Fund's Financing Role in Member Countries* (the 2008 *chapeau paper*, PIN/08/131, 10/9/08), Directors called for an exploration of the analytical basis of Fund lending, looking at a range of issues such as the nature of market gaps and the Fund's role in filling them, the coherence and completeness of the Fund's lending toolkit, the relevance of the BOP criterion for lending in today's globalized world, and the purpose and modalities of conditionality and the room for increasing its flexibility and focus. This and the companion paper on *Conditionality in Fund-Supported Programs—Purposes, Modalities, and Options for Reform* respond to that request. Additional issues related to the review of access limits and financing terms in the GRA and of the lending role and facilities for low-income countries (LICs) are covered in separate papers.
- 3. A number of factors point to the inadequacy of the Fund's lending toolkit—notwithstanding the recent surge in demand for Fund resources. Among these, members' efforts at self-insurance through the accumulation of foreign reserves, the increased demand for alternative sources of BOP support (regional reserve pools, bilateral swap, and lending arrangements, and even competing facilities offered by MDBs and other IFIs), and the evolution of crises from mainly current account- to complex capital account-centered events. To this end, laying out the analytical basis for Fund lending is important to help guide reforms of the Fund's instruments in a way that leverages the Fund's comparative advantages and is responsive to the evolving needs of its members. Drawing on this analysis—and staff's informal consultations with academics, market participants, and policymakers—options are presented on adapting the Fund's lending instruments to the evolving global economy.

^{*} This paper sets out initial options for reform. The subsequent paper <u>GRA Lending Toolkit and Conditionality:</u> <u>Reform Proposal</u> (03/24/09) identifies specific proposed reforms. Substantial differences between this paper and the subsequent paper these are highlighted in the text.

¹ This paper was prepared by a team comprising C. Ogada, Y. Liu, and W. Bossu (LEG); J. Roaf and Y. Lu (MCM); R. Bi, M. Chamon, J. Kim, R. Ranciere, and L. Ricci (RES); and U. Ramakrishnan, A. Stuart, W. McGrew, I. Halikias, G. Adler, and M. Goretti (SPR), H. Finger (MCD) under the guidance of R. Weeks-Brown (LEG), A. Ghosh and J. Ostry (RES), and L. Giorgianni (SPR).

4. The rest of this paper is organized as follows. Section II discusses the analytical basis of the Fund's crisis lending role—why the Fund has a niche in lending for crisis prevention and resolution relative to private creditors or other sources. Against this background, Section III reviews the experience and implications of Fund lending for crisis prevention and resolution. Section IV discusses the BOP need criterion. Section V considers options for introducing new instruments and modifying existing facilities and lending policies. Section VI presents the issues for discussion.

II. THE BASIS FOR FUND CRISIS LENDING: ANALYTICAL CONSIDERATIONS

- 5. Under the Articles of Agreement, the Fund makes its general resources "temporarily available to [members] under adequate safeguards, thus providing them with opportunity to correct maladjustments in their balance of payments without resorting to measures destructive of national or international prosperity." Fund financing is thus premised on the member having a BOP need and implementing policies that, with Fund support, will help resolve its BOP problems. In turn, this implies an important catalytic role for Fund lending in marshalling new financing, facilitating debt restructuring, or underpinning confidence to help prevent outflows.
- 6. But why does the Fund have a crisis-lending role relative to other lenders? In tackling this question, it should be recognized that a country with BOP needs might face a continuum of situations between crisis prevention, mitigation, and resolution. At one end are countries with strong policies and fundamentals that may nonetheless face *liquidity* problems. In such situations, Fund lending through a contingent credit line or a short-term liquidity window, without necessarily requiring policy adjustment, could help *prevent* incipient liquidity problems from developing into solvency problems and a full-blown debt run.
- 7. At the other end of the spectrum are cases where poor policies or longer-lasting shocks mean that the country needs to undertake external and policy adjustment (and/or a restructuring of its external obligations) in order to restore *solvency*. Crisis *resolution* lending by the Fund requires the member to credibly commit to such an adjustment path while reducing the risk/size of withdrawals of private financing that would force *excessive* external adjustment—i.e., beyond that required for medium-term debt sustainability.
- 8. Along this spectrum, Fund lending is likely to play a crisis prevention-resolution role by: (i) providing contingent support to countries, giving an incentive for stronger crisis prevention policies; (ii) providing liquidity, reducing the likelihood of a creditor run on the country (that, in turn, would involve "value destroying" liquidation of investments), and cushioning the requisite adjustment if a liquidity run nevertheless develops; (iii) conditioning its support, providing the country with a policy commitment device; and (iv) putting its own money on the line, strengthening the policy signal to markets.

-

² That is, to satisfy the intertemporal budget constraint without an implausibly large future adjustment.

9. The Fund's role is buttressed by three characteristics: (i) its ability to provide *large-scale financing* in crisis situations when there are strong pressures for the private sector to exit, thus helping to avert a run by private creditors; (ii) its ability to agree *conditionality* with the member, thus providing national authorities with a *policy commitment* tool that can give credibility to the adjustment program and underpin confidence that creditors will be repaid; and (iii) its de facto *preferred creditor status* (PCS).³

7

- 10. Large-scale financing. As a nonatomistic lender, the Fund can provide (or pledge, in a contingent instrument) significant amounts of liquidity and, thus, play a coordinating role, reducing the likelihood of a run by private creditors that would either trigger or exacerbate a crisis. Since each private creditor provides a relatively small fraction of the country's external financing needs and—in making decisions on whether to roll over or exit—takes as given the actions of other creditors, there may be a rush for the exit whenever there are doubts about the country's ability to honor its obligations. If private creditors could coordinate their lending decisions, they could in principle roll over the liquidity; otherwise it may be individually rational for each creditor to rush for the exit—analogous to a deposit run on a bank—because of uncertainty about whether others will remain. By providing *sufficient* financing, the Fund can catalyze rollovers by private creditors because they have greater assurance that a liquidity run will not develop. If a liquidity run does nevertheless develop, Fund financing can cushion the requisite adjustment, helping the country avoid measures destructive of national prosperity (i.e., excessive external adjustment) or international prosperity (i.e., default or beggar-thy-neighbor policies).
- 11. **Conditionality and policy commitment**. As discussed in the companion *conditionality paper*, the Fund has a unique role in being able to condition its lending on the member's adoption of policy measures that allow it to both resolve its BOP difficulties and repay the Fund. Conditionality has both ex ante and ex post elements: (i) any request to access Fund resources is approved only if the Fund is satisfied about the content of the member's policies and the capacity and commitment to implement them; and (ii) any subsequent disbursement is approved based on whether the policy understandings reached with the member (which must be specified in a "Fund arrangement") are met. Conditionality, therefore, serves the important function of providing the country with a policy commitment tool that helps overcome time consistency problems, giving confidence that the authorities will implement the policies necessary to address the member's

³ The academic literature can be categorized in three main strands: (i) *crisis financing and the likelihood of liquidity crises* based on multiple equilibria (Sachs, 1984, 1995; Zettelmeyer, 2000; Jeanne and Wyplosz, 2001; and Jeanne and Zettelmeyer, 2002) or on "global games" models (Corsetti, Guimaraes, and Roubini, 2006); (ii) *conditionality, commitment and sovereign risk*, whereby Fund conditionality provides a commitment device (Jeanne and Zettelmeyer, 2005; Ostry and Zettelmeyer, 2005; and Jeanne, Ostry, and Zettelmeyer, 2008) or corrects information and incentive problems (Tirole, 2002; Penalver, 2004; de Resende, 2007); and (iii) *PCS and debt overhang*, where the Fund's de facto PCS allows it to lend without the risk of becoming junior to pre-existing creditors, with the fresh financing providing incentives to the country to make the requisite adjustment effort (Krugman, 1988; and Cohen and Sachs, 1986). Sturzenegger and Zettelmeyer, 2006 (and references therein) provide a historical perspective on cross-border financial crisis resolution.

BOP difficulties. Further, as a cooperative institution with near-universal membership, the Fund's financial support indicates the willingness of the international community to back a member's economic program.

8

- 12. **Preferred creditor status.** While the atomism of the private sector generally impedes it from acting as a provider of crisis financing, the Fund's ability to lend in situations where other creditors may be rushing for the exit is buttressed by its PCS. This concept originates in the context of debt restructuring by the Paris Club, where official bilateral creditors have been willing to exclude the Fund from the restructuring process. This treatment reflects the public good nature of Fund financing, as it is provided in the context of an agreed program designed to help the member regain external viability, thus ensuring that the other creditors will have their restructured claims repaid. In this regard, there is an in-built incentive to ensure the involvement of the Fund in resolving the member's BOP problems. With some exceptions, PCS has generally also been accepted by private creditors, as the public good aspects of Fund financing normally also inure to their benefit. The Fund's PCS thus facilitates its ability to provide crisis lending, while the borrower and other creditors have the incentive to recognize the Fund's PCS because of the public good nature of its lending.
- 13. Each of these elements—large-scale financing, conditionality, PCS—individually imply some crisis lending role.⁴ But an institution with these characteristics in *combination* can play a crisis-lending role under a large set of shocks (Appendix I). While other creditors share some of these characteristics, few share all or to the same degree as the Fund. For example, the near-universal membership of the Fund implies efficient risk-sharing compared to regional pools;⁵ relative to other international financial institutions (IFIs), the Fund has three main advantages: (i) its multilateral nature and, based on its mandate, an inherent interest in global financial stability; (ii) its experience in crisis prevention/resolution; and (iii) through the surveillance process, its ability to acquire knowledge about members' economies. Together these characteristics define the Fund's unique crisis-lending role.

_

⁴ These elements are mutually reinforcing. The Fund's ability to provide financing while safeguarding its resources is buttressed by its PCS and the ability to agree conditionality; its ability to agree conditionality depends, in part, on its provision of large-scale financing; and the borrower and other creditors have an incentive to recognize the Fund's PCS because of the public good nature of the Fund's financing.

⁵ The Fund—as a cross-regional pool—provides greater scope for risk sharing, and thus greater diversification benefits and more efficient reserve pooling, relative to regional pools. The latter, however, may be perceived more as a true club of peers and hence provide greater voice and representation. This could make its conditionality more politically acceptable in the borrowing country, though, by the same token, it could make support more difficult to interrupt. Accordingly, some regional pools have required a Fund arrangement for credit drawing.

III. FUND CRISIS LENDING: EMPIRICAL EVIDENCE AND IMPLICATIONS

14. Beyond theory, what has been the experience with Fund lending for crisis prevention and resolution? How effective has such lending been and can that effectiveness be enhanced? This section considers these questions for the Fund's role in crisis prevention (Part A) and resolution (Parts B and C), recognizing that in practice the distinction is difficult to make.

A. Crisis Prevention: Evidence and Implications

- 15. In the absence of a dedicated crisis prevention facility, empirical evidence on the effectiveness of Fund lending for crisis prevention comes from instances where the country has a precautionary or a drawing arrangement in place but is not (or is no longer) in crisis and then faces an episode of heightened "exchange market pressure" (i.e., exchange rate depreciation, loss of reserves, or widening of sovereign spreads). Such instances can be used to infer whether Fund support helped avert a liquidity problem developing into a full-blown crisis. An empirical study of a sample of 27 emerging market countries over the period 1994–2004 identified 32 episodes of "heightened market pressure." Of these 32 episodes, 11 turned into a capital account crisis while 21 did not; and 10 had Fund disbursements (or, in two cases, available purchases under on-track precautionary arrangements) in the year before the market pressure event, while 22 did not. What are the main findings?
- Fund financing is significantly associated with a lower likelihood of a crisis. There is both a liquidity and a signaling aspect to this: (i) Fund financing—not just the existence of a program or possible future drawings—lowers the crisis probability; and (ii) the Fund's "seal of approval" has an added crisis-prevention benefit as the Fund financing variable is significant even controlling for the country's own gross reserves. Moreover, since the simple dummy variable for an on-track Fund-supported program is not statistically significant, but the Fund financing variable is significant, the strength and credibility of the Fund's signal appears to depend at least partially on the magnitude of the resources the Fund is willing to put on the line.
- There is strong complementarity between Fund financing and the country's policies and other "fundamentals." When fundamentals are weak, not only is a crisis likely, but the *marginal* impact of additional Fund financing on lowering crisis risk is small. When fundamentals are strong, the crisis probability is low, and Fund financing has a large impact on further reducing the probability (Figure 1).

⁶ The empirical analysis includes controls for monetary and fiscal policy as well as initial conditions (external debt, reserves, political stability, and currency overvaluation). Econometric details are provided in IMF (2008) and supporting background documents (Ramakrishnan and Zalduendo, 2006; and Kim, 2006).

⁷ Since the probit regression controls for other variables (including macroeconomic policies), this does not imply that the Fund-supported program had no benefit for crisis prevention beyond its liquidity provision role. In particular, macroeconomic policies are stronger under Fund-supported programs, and this contributes to crisis prevention, but this effect is already captured by the inclusion of policy variables in the regression.

• Macroeconomic policies are stronger in cases where a Fund-supported program was in place, and this has also helped lower the likelihood of a crisis.

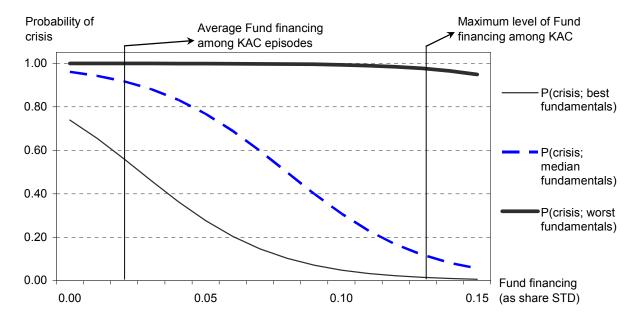


Figure 1. Impact of Fund Financing on Lowering Crisis Probability 1/

Source: Ramakrishnan and Zalduendo, 2006.

1/ This figure shows the impact of Fund financing (as a share of the country's short-term debt) on the probability that a heightened market pressure episode turns into a full-blown capital account crisis, differentiating by the country's "fundamentals" (macroeconomic policies, initial conditions). As illustrated, when fundamentals are weak (top curve), not only is the probability of crisis high, but Fund financing has little impact on lowering that probability. Conversely, when fundamentals are strong (bottom curve), the probability of crisis is low, and Fund financing has a significant impact on further lowering the crisis probability. Vertical lines denote the average and maximum level of Fund financing provided in the four quarters prior to the onset of the market pressure event in previous capital account crises.

16. The evidence is thus highly suggestive of a favorable effect of Fund support for crisis prevention. Depending on country policies and fundamentals, Fund financing would have an appreciable impact on crisis probabilities. Three key implications follow from the analysis: (i) a contingent Fund financing instrument could be highly useful in crisis prevention, especially given the limited scope for the private sector to fulfill this role (Box 1); (ii) to materially reduce crisis probabilities, a prevention instrument would need to provide disbursements that are significant in relation to stock vulnerabilities such as short-term debt (Figure 1); and (iii) since policies are stronger under a Fund-supported program, and there is complementarity in crisis prevention between policies and Fund financing, such an instrument would ideally incentivize stronger policies through ex ante qualification.

Box 1. Private Sector Instruments

Financial markets can also play a crisis prevention or mitigation role—e.g., extending contingent credit lines to the sovereign or the private sector. There are also financial instruments offering ex ante insurance against macroeconomic risk associated with exogenous shocks (terms of trade shocks, natural disasters, and sudden stops/balance of payments crises). Financial instruments such as commodity options, catastrophe bonds, options related to global financing conditions, GDP-indexed bonds, or inflation-indexed bonds can generate capital inflows or reduce outflows upon realization of particular events. Optimal risk management of the country's net foreign asset position should also entail investing in assets whose return is negatively correlated with the typical shock exposure.

In practice, however, few countries use these instruments, and the corresponding markets (with the exception of some commodity derivatives such as oil) are generally too small to deliver macroinsurance to a broad set of emerging markets. Private contingent credit lines, such as those extended to Argentina in 1996 and Mexico in 1997, amounted to \$6.1 billion and \$2.7 billion, respectively. Options on the VIX or EMBI spread are very limited, while a strategy aimed at obtaining a significant payoff in the event of large declines in the S&P500 via simple put options on the index (which are correlated with VIX and EMBI) is likely to be much more expensive than governments would typically be prepared to pay. The global catastrophe reinsurance market (in excess of \$100 billion) is mainly within advanced economies. GDP-indexed bonds are rarely used and generally are not tradable (the Argentine issuance never exceeded the equivalent of a few billion U.S. dollars in valuation). Inflation-linked bonds are probably the widest available form of state-contingent debt, although foreign ownership is hard to assess.

Why are these markets not more developed? On the *supply side*, reasons include first-mover costs of financial innovation, prospective lack of liquidity in secondary markets, lack of natural counterparties, and disagreement on a standard pricing model. Moreover, insurance based on contingencies can suffer from legal complications due to the difficulties in measuring/verifying these contingencies and due to moral hazard if the contingencies can be influenced by the insured country (e.g., GDP-indexed bonds).

On the *demand side*, interest may be limited for political economy reasons (the cost of insurance could be perceived by the electorate as a waste of money if the crisis does not materialize, while the failure to procure insurance is unlikely to be penalized), potential short-term horizon of policy makers, and the availability of ex post assistance from IFIs or governments. Cost and counterparty risk may also be a factor, and public administrations generally lack technical expertise or focus on macro risk management, thus finding it difficult to cope with complex unfamiliar instruments.

The Fund (or other IFIs) could assist these market-based efforts by offering technical support on risk management, pricing models, and standardization of financial products, thus reducing the costs of understanding, designing, and issuing these financial contracts. The lower cost, in turn, would benefit emerging market countries and encourage them to make greater use of such instruments.

For contingent instruments, offering data verification services and promoting adherence to data dissemination standards would allow a more reliable and credible identification of the contingencies. Other IFIs could go further, establishing an international clearing house to reduce the counterparty risk. Alternatively, to reduce counterparty risk, other IFIs could provide some of these instruments—for example, a contingent credit line that disburses credits to member countries on the basis of an exogenous indicator of financial stress that is exogenous to emerging markets but related to capital flows to EME, such as the VIX on the U.S. stock market.

B. Crisis Resolution: Evidence

- 17. For crisis resolution, Fund financing is intended to ease the burden of adjustment both by giving the country more time to adjust and by helping to restore confidence—since large capital outflows could lead to excessive adjustment (i.e., beyond that required for medium-term sustainability). Experience has been mixed. While the evidence suggests that most Fund-supported programs have met important successes,⁸ it also suggests that, once a capital account crisis has erupted, it may take several years to restore normal capital flows, and in the meantime there may be *excessive* correction of the current account balance (through the compression of imports and the contraction of activity) forced on the country by the withdrawal of, or lack of access to, private financing.
- 18. Figure 2 shows the duration of capital account crises using two measures: an index that depends on reserves, the nominal exchange rates, spreads and private capital flows; and a reading of country staff reports. By both metrics, crises last about two years, with substantial variation across cases. Further, analysis suggests that the duration of a crisis depends on its nature and complexity, and is influenced by initial conditions, the external environment, and the policy response to the crisis—factors that often render it difficult to predict the likely crisis duration ex ante.
- 19. Figure 3 looks at excessive external adjustment by comparing the actual current account balance to the programmed balance in capital account crises (top panel); virtually all of the points lie above the 45° line. Moreover, the excess adjustment was related to the "stock" imbalances such as short-term debt not covered by reserves (bottom panel). There are several possible reasons. First, in some instances, program policies, or their implementation, may have been inadequate. Second, programs may have been overburdened with structural measures and conditionality, creating doubts about ownership and implementation, and market confusion about what would be required to secure Fund financing, thus undermining confidence. Third, programs may have been underfinanced. The discussion below focuses on this third possibility, and its implications, while recognizing the importance of appropriate program policies and well-focused conditionality.

⁸ Specifically, there is evidence that a given improvement in the external balance was associated with a smaller output decline if undertaken under a Fund-supported program (IMF, 2005); and that exchange market pressures eased faster when the Fund provided support.

⁹ The comparison of actual to programmed current account adjustment presumes that the latter captures precisely the right mix between financing and adjustment. Obviously that is not necessarily the case, but it is telling that in almost every case actual adjustment was greater than programmed. Also, as documented in IMF (2002), current account adjustment was also greater than that needed for medium-term debt sustainability.

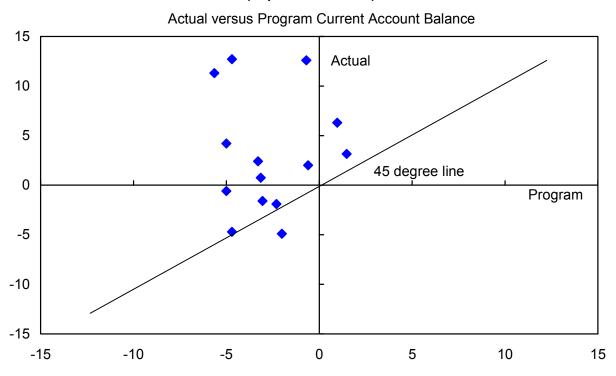
Figure 2. Duration of Selected Capital Account Crises

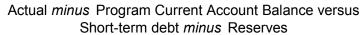
IKAC index 1/ Argentina 1995Q1 - 1995Q4 mean = 8.5 quarters Argentina 2001Q3 - 2004Q4 Brazil 1998Q3 - 2000Q1 Brazil 2002Q2 - 2003Q2 Ecuador 1999Q1 - 2001Q4 Indonesia 1997Q4 - 1999Q2 Korea 1997Q4 - 2000Q1 Malaysia 1997Q3 - 2000Q1 Mexico 1994Q4 - 1997Q1 Philippines 1997Q3 - 1999Q1 Philippines 2000Q2 - 2001Q4 Philippines 2002Q3 - 2003Q2 Russia 1998Q3 - 2001Q2 Thailand 1997Q3 - 2001Q4 Turkey 1994Q1 - 1995Q1 Turkey 1998Q3 - 1999Q1 Turkey 2000Q4 - 2003Q2 Uruguay 2002Q2 - 2003Q3 5 0 10 20 15 IMF staff assessment 2/ Argentina 1995Q1 - 1996Q1 mean = 7.3 quarters Argentina 2001Q3 - 2004Q1 Brazil 1998Q3 - 1999Q3 Brazil 2002Q2 - 2003Q4 Ecuador 1999Q1 - 2001Q1 Indonesia 1997Q4 - 1999Q2 Korea 1997Q4 - 1999Q1 Malaysia 1997Q3 - 1999Q4 Mexico 1994Q4 - 1996Q2 Philippines 1997Q3 - 1999Q2 Philippines 2000Q2 - 2001Q2 Philippines 2002Q3 - 2003Q2 Russia 1998Q3 - 1999Q3 Thailand 1997Q3 - 2001Q2 Turkey 1994Q1 - 1995Q2 Turkey 1998Q3 - 1998Q4 Turkey 2000Q4 - 2003Q3 Uruguay 2002Q2 - 2003Q4 0 5 10 15 20

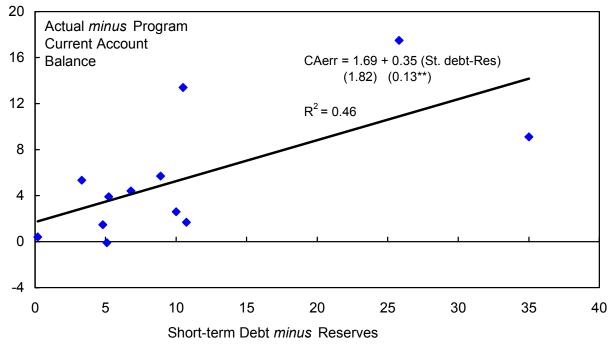
1/ IKAC is an index of capital account crises based on quarterly data on international reserves, the nominal effective exchange rate, secondary market spreads, and net private capital flows.
2/ As inferred from Fund staff documents.

Source: Mecagni et al (2007).

Figure 3: Actual versus Programmed Current Account Balance and Short-term Debt minus Reserves in Selected Capital Account Crises (in percent of GDP)







Sources: IMF staff estimates; and World Economic Outlook database, IMF (2002).

C. Crisis Resolution: Implications

15

- 20. To the extent that there are no voluntary reflows of capital, it is arithmetically true that excessive external adjustment can only be avoided by greater official financing, some form of private sector involvement, or a combination of the two. In determining the appropriate level of program financing, three points bear emphasizing. First, Fund financing cannot solve a solvency problem: the country must undertake sufficient adjustment, reduce the present value of its obligations, or a combination of these, to maintain medium-term debt sustainability. Second, if policies are inadequate, simply providing more financing will not restore confidence. Third, more financing is not a guarantee that the country will not end up undertaking excessive external adjustment. By the same token, however, if upfront financing is inadequate, then excessive adjustment would be difficult to avoid (without a default).
- 21. Although access to Fund resources was exceptionally large in capital account crises, disbursements were phased and fell far short of measures of potential capital outflows such as the stock of short-term debt.¹⁰ Particularly in a global deleveraging scenario, upfront disbursements of Fund financing may need to be considerably larger than in past crises, depending upon the magnitude of balance sheet exposures, the nature of capital at risk, and the scope for involving the private sector. But given the magnitudes involved, it may be neither feasible nor desirable for the Fund to provide all the official financing. And, while involving other official lenders in financial rescues may be desirable (alternative options for doing so are discussed in Box 2), official financing should not seek to fill the entire possible financing gap. This is because, first, the scale could be overwhelming; second, there is the risk that official financing would simply finance larger private outflows; and third, routinely financing private sector outflows could lead to moral hazard. As such, greater efforts at private sector involvement may also be required.
- 22. Success at voluntary private sector involvement likely depends, inter alia, on the number of creditors involved (due to collective action and free-rider problems¹¹), the form and nature of the flows (FDI, equity portfolio investment, and "carry trade" flows) at risk, and the strength of the program to help restore confidence. It also depends on the reasons why creditors are exiting; for example, in a global deleveraging scenario, creditors may be less concerned about the borrower's fundamentals than their own liquidity needs, so restoring confidence—including

¹⁰ To put the magnitudes in perspective, capital outflows from Thailand in 1998 were around 12 percent of GDP, while the total official financing package amounted to some 9 percent of GDP.

¹¹ Fewer creditors can make collective action problems easier to overcome in the event of a run, but a concentration of creditors can make the country more vulnerable to a decision by these entities to withdraw because of their own funding difficulties.

Box 2. Alternative Official Financing Options

Given the magnitudes of financing needed in times of crises, the following options could, in theory, be considered to supplement Fund financing:

Involve official creditors in financial packages. The Fund could more systematically than in the past involve official creditors, for instance, by brokering central bank swap lines, or entering into more formal (e.g., pari passu) co-financing arrangements.¹

Support reserve pooling arrangements. A group of Fund members could choose to combine parts of their official foreign reserve assets in a common pool, which could then be used to provide crisis lending. The Fund could play a role by providing technical and financial services to enhance the effectiveness of such arrangements.

Guarantee official financing. The Fund could leverage its balance sheet by providing guarantees for other official credits, although the Articles would need to be amended for such an undertaking. Such guarantees may, however, muddy the Fund's PCS; plus, providing guarantees in some cases may prompt official creditors to seek them in every case.

through strong adjustment measures—may do little to stem outflows. Box 3 discusses past attempts at private sector involvement and additional options for engaging the private sector.

23. In sum, increasing program financing—whether from official or private sources—is not the only answer to enhancing effectiveness and reducing the likelihood of excessive adjustment (program design and policy implementation are also crucial)—but it is probably part of the answer. Greater upfront financing in relation to the country's stock vulnerabilities, is likely to be required to catalyze creditors. To this end, recently-approved arrangements for Iceland, Hungary, Latvia, Ukraine, and Pakistan have provided exceptionally large amounts of Fund financing—often in conjunction with support from other official sources and voluntary involvement of the private sector—with focused conditionality. But it also needs to be recognized that in some cases, despite strong policies and best efforts at garnering financing from private and other official sources, residual financing needs may exceed the amounts the Fund could prudently lend, taking account of the revolving nature of its resources. In such cases, some overshooting of the current account may be inevitable, and program design would need to focus on cushioning the impact of the adjustment on the economy and society.

¹In the past, two types of problems have arisen. First, other creditors may seek to impose their own conditions as part of formal Fund conditionality even when not critical to achieving the goals of the Fund-supported program. Second, disbursements from these other official creditors may fail to materialize damaging market confidence. For example, official bilateral credits that formed Korea's "second line of defense" in its 1997 crisis were never disbursed.

Box 3. Private Sector Involvement

Attempts at private sector involvement in capital account crises have been quite limited, usually taking the form of voluntary and informal discussions with international banks to maintain their exposure and lengthen their credit lines to domestic banks or subsidiaries. Other options could be considered to provide greater incentive for creditors to maintain exposure or make exit more difficult. Among the former:

Moral suasion. Creditor country supervisors apply moral suasion for banks to maintain credit lines to domestic banks and/or to their foreign subsidiaries. When the corporate sector borrows directly from international banks, however, it may be difficult to distinguish between cases where banks terminate lines due to commercial risks from those resulting from generalized deleveraging.

Forbearance. Recognizing the global public bad of disorderly deleveraging, creditor country regulators could temporarily forbear capital inadequacy—relieving some of the pressure for deleveraging—with additional forbearance in cases where the bank maintains emerging market exposure.

Capital injection. Creditor country governments could make capital injections in their banks or other assistance contingent on banks maintaining emerging market exposure.

Guarantees. The Fund could also guarantee private rollovers. This would allow the Fund to leverage its own balance sheet, but would expose the Fund to credit risk and could complicate the Fund's PCS. Furthermore, the Articles of Agreement do not allow the Fund to provide such guarantees, which would fundamentally change the current nature of the institution.

At the other end of the spectrum are less voluntary forms of private sector involvement such as capital controls and standstills.²³ Aside from being difficult to enforce, imposing involuntary private sector involvement in Fund-supported programs—especially if giving rise to creditor losses—could make investors even more skittish, impelling them to exit even more hastily and so exacerbate contagion in the midst of a crisis. Moreover, in a global deleveraging scenario, there would be a risk that creditors pull their money from other countries without a Fund-supported program in which they have exposure.

This was done in Brazil (1999), Thailand (1997), and Korea (1998). Uruguay (2003) represents one of the few cases of successful "pre-crisis" private sector involvement with a large number of diverse creditors. Voluntary private sector involvement is also a key feature of the 2008 Hungary and Latvia programs, where international banks have publicly stated their intention to continue supporting their subsidiaries in these countries.

² A separate question is whether ex ante controls on capital inflows—such as limits on FX borrowing—might be useful as a crisis prevention device.

³ When there is no mix of feasible adjustment and financing that can deliver debt sustainability, restructuring may be the only feasible option. Eight countries have had IMF programs in the midst of a sovereign debt restructuring.

IV. IS THE BOP NEED CRITERION AN UNDUE CONSTRAINT ON FUND LENDING?

- 24. Beyond increasing official or private financing, enhancing the Fund's crisis mitigation role also requires adapting the purpose and modality of Fund lending to the evolving nature of modern crises—including their roots in private-to-private cross-border lending, the blurring between resident and nonresident transactions, and the effects of financial internationalization and innovation.
- 25. From this perspective, one concern is that Fund lending is still too geared to fulfilling traditional BOP financing needs; another concern is that the modality of delivering Fund lending, with resources typically made available to buttress central bank reserves, may not provide sufficient flexibility to target resources where the need is the greatest. On the premise that program design affords significant flexibility in targeting Fund resources, additional options for achieving better targeting are considered in Box 4—their adoption would, however, require a significant change in the role and modus operandi of the Fund.

A. Legal Framework

- 26. A fundamental prerequisite for using Fund resources is that a member must have a BOP need. The Fund's resources cannot be used in the absence of such a need and their use cannot exceed that need. 12 The concept of need is specified in Article V, Section 3(b)(ii), which provides that a member, in making a purchase from the GRA, must represent that "it has a need to make the purchase because of its balance of payments or its reserve position or developments in its reserves." This provision specifies three exclusive but alternative conditions that must be in place for the requirement to be satisfied. The meaning of these conditions, based on legislative history and Fund practice, can be summarized as follows:
- A need because of a member's "*balance of payments*" exists when the member has a BOP deficit according to accepted definitions of BOP, including the distinction between "above the line" and "below the line" transactions.
- A need because of a member's "reserve position" exists when the member has a gross reserves position that is relatively weak. This requires the exercise of judgment and is a country-specific analysis, as reserve adequacy depends on factors such as a country's volume and variability of exports and imports, past behavior of reserves, seasonal factors, and the size of short-term liabilities. The Fund has wide discretion and flexibility in determining need based on a member's reserve position.

¹² A purchase may not exceed the BOP need that actually exists at the time of the purchase request. And, while the Fund may not challenge a representation of BOP need made in the context of a purchase request, it can take remedial action after such a purchase, if it determines that the purchase was made in the absence of a BOP need.

Box 4. Targeting Fund Lending?

While Fund financing may be economically useful in a wide variety of circumstances, the modality of its delivery is nearly always the same—once the Fund has provided financial support to the borrowing country, the member can use the foreign exchange reserves to optimize their effectiveness within the program context. Typically, central banks would sell the FX in the open market, but the question arises whether more direct *targeting* of Fund financing could make it more effective. For example, in the face of an incipient FX-deposit run, Fund financing could be used to support an explicit deposit insurance fund, thus giving confidence to depositors and helping to avert the run, or to support capital injections to troubled banks.

A systematic approach ensuring more direct and targeted use of the FX provided by the Fund could have three advantages: (i) ensuring that the resources are used for the targeted purpose (e.g., providing confidence to depositors) could avoid cumbersome conditionality; (ii) transparently directing the resources to where they are needed could enhance confidence; and (iii) differentiation from more standard Fund-supported programs could alleviate domestic political stigma associated with seeking the Fund's support. However, through effective program design and public communications (on how the Fund's money is being "used" to support program objectives), much of the same results could be achieved through traditional modalities of Fund support.

Some other proposals for altering more fundamentally the modality and nature of Fund support have also been made. One such proposal, which would require changes to the Articles of Agreement, involves the Fund buying sovereign bonds in secondary markets as a financing (rather than investment) device. This has been variously suggested as a means of achieving a market-based debt restructuring, and as a means of stabilizing debt markets in a crisis. It may be also considered as a way to support countries with existing high public debt burdens without adding to the debt (Lerrick and Meltzer, 2001; and Calvo, 2002). But doing so may only indirectly alleviate BOP pressures (purchases would have to reduce spreads, and the lower spreads would need to translate into lower borrowing costs), and there would be issues such as whether to purchase domestic currency instruments; whether the Fund should accept the lack of preferred creditor status or instead should require government guarantees; and how the Fund would manage a bond portfolio.

Other innovative ideas on the modality of lending include (i) the Fund providing guarantees of external debt issued by sovereigns with good fundamentals that are temporarily unable to roll over their debt because of global market conditions (GRA financing of this would also require a change in the Articles of Agreement);² and (ii) the Fund issuing paper in local markets, both as a means of adding to available lending resources and as a means of providing the domestic private sector with a "risk-free" asset (if sovereign debt is not perceived as such).

In the case of Uruguay in 2002, stopping the withdrawal of dollar-denominated deposits was critical to restore financial sector stability. To achieve this, the central bank deposited a portion of the corresponding gross reserves received under the Fund arrangement into an escrow account that was excluded from the central bank's reserves, and earmarked it to cover all unrestricted dollar deposits. The rationale was to send a clear signal that unrestricted dollar deposits would be fully repaid, with the expectation that deposit runs would cease, which was ultimately the case (Box 4 in *Review of Exceptional Access Policy*, 3/24/04 and PIN/04/84).

² The effectiveness of such guarantees would likely require them to cover the full maturity of the bonds in question, which could involve tying up Fund resources for a prolonged period. The guarantees would also tend to fragment the bond market, with the guaranteed bonds trading at spreads reflecting the Fund's credit status, while the effects on the other (now de facto junior) bonds would be hard to predict, depending on their maturity and expectations as to the continuance of the guarantee program.

• A member's need based on "*developments in its reserves*" may exist if there is an unfavorable development (e.g., an impending discharge of liabilities), even though the member does not have a BOP deficit or inadequate reserves.¹³

20

27. As noted, these three conditions are exclusive and alternative; the requirement of need will be satisfied if any one of the three conditions is met (e.g., where, notwithstanding a strong reserve position, a member has a deficit in its overall BOP). Moreover, it is not necessary for a BOP need to exist when an arrangement is approved, as distinct from when a purchase is made, for which a need is required. Accordingly, a Fund arrangement may be approved on the basis of a prospective need, as with precautionary arrangements.¹⁴

B. Potential Causes of BOP Need

- 28. The different categories of "need" specified in the Articles of Agreement can be caused by a variety of circumstances and, thus, the BOP need requirement is unlikely to be a constraint on the Fund's ability to meet the evolving needs of its members. In addition to problems arising in the current account (e.g., terms of trade shocks) and the need to bolster reserves in the context of capital account crises, countries could also face BOP needs in other circumstances, including the following:
- **Budget financing**. Financing expansive fiscal policies through, for example, monetary expansion could lead to a current account deficit that needs to be financed from external sources. The country could then experience a BOP need if such flows are not available, and foreign reserves provided by the Fund could be used to meet that need. If no current account deficit would occur, the central bank could have expanded domestic credit without having the reserves; in that case, there would be no BOP need and no use (or justification for the use) of Fund resources.
- **Deposit run in dollarized economy**. Withdrawals of foreign currency deposits by residents would not, strictly speaking, create a BOP deficit unless they would involve transactions between residents and nonresidents. Nevertheless, meeting such withdrawals would require foreign exchange reserves, thereby weakening the authorities' reserves, and this could give rise to a BOP need.
- **Deposit run in local currency**. If depositors are willing to hold local currency cash (and not substitute into FX), then the central bank can provide liquidity without requiring

¹³ The legislative history shows that this concept was included in the Articles mainly to address concerns regarding the availability of Fund financing to reserve currency members that were part of the EEC "snake" currency arrangement. *Id.*

¹⁴ Regardless of whether or not it has an actual BOP need, a member may simply choose to treat its Fund arrangement as precautionary by not drawing under it. For purposes of this paper, precautionary arrangements do not include this latter category of cases, but rather include only those for which the member does not have an actual BOP need when at the time of approval of the arrangement.

foreign reserves. If, more plausibly, the deposit run causes monetary expansion leading to inflation, higher imports, and currency substitution, then there would be a pressure on the BOP that could be met with foreign reserves. Ex ante confidence that the central bank has sufficient reserves (or that reserves would be made available) could help deter deposit runs in the first place.

- **Private-to-private external funding needs**. If the private sector is facing difficulties in rolling over external credits, the central bank could extend foreign currency loans to the banking system for on-lending to the household and corporate sectors, as needed. Alternatively, the central bank could expand credit in domestic currency while selling foreign exchange in the market to satisfy the foreign currency demands of the private sector. Both actions would reduce the foreign reserves of the central bank, thus possibly causing a BOP need.
- *Trade credits*. If importers and exporters lack short-term financing, the central bank could provide foreign exchange loans to facilitate international trade. Although these loans would revolve quickly, such financing would have an impact on the central bank's stock of foreign exchange reserves, possibly resulting in a BOP need.

V. RETHINKING THE GRA TOOLKIT: OPTIONS FOR REFORM

- 29. The above analysis—especially when seen through the prism of the ongoing global deleveraging process—carries far reaching implications for reforming the Fund's GRA lending toolkit. The following considerations are particularly germane:
- The Fund has a unique lending role for crisis prevention and resolution that cannot readily be met by private or other official sources. To fulfill this role effectively, *Fund financing needs to be upfront and significant in relation to stock vulnerabilities such as the country's short-term debt*;
- The ongoing global deleveraging has resulted in a steep decline in capital flows. However, the pattern across emerging market countries has been uneven. For some, the impact has been immediate, while for others it will likely be a more protracted process. Crisis resolution is needed for the former. For the latter, it is important to have in place crisis prevention instruments, including contingent financing, that could be used where there is a sudden acceleration in the deleveraging process;
- The duration of crises is hard to foretell ex ante. This applies especially to the current global economic turmoil, for which the recovery phase may take longer to materialize than in previous (mainly borrowing country-centered) crises. In addition, the current deleveraging may portend a structural downward shift in capital flows. Given these uncertainties, the Fund's financing instruments need to be flexible and carry sufficiently long repayment terms to be effective in meeting the members' needs; and

• Finally, stigma remains a key deterrent to members approaching the Fund before a crisis is well underway, thus raising the ultimate cost of crises. This points to a need for more systematic efforts to *tailor Fund conditionality to the varying strengths of members' policies and fundamentals*—for example, where justified by the member's economic position and track record—by relying more on ex ante conditionality, including outright purchases, and less on ex post conditionality and phasing.

22

30. To operationalize these ideas, the lending toolkit could be adapted to ensure its instruments (i) include an effective contingent credit window for crisis prevention; (ii) are designed to cater to members with different strengths of policy frameworks and fundamentals; and (iii) are flexible enough (especially with regard to access levels and repayment periods) to deal with a wide range of BOP needs and crisis situations. The latter would suggest placing greater emphasis on the flexible framework of general policies and terms that exists for Fund lending to address all types of BOP problems (referred to as "credit tranche" policies, or lending "in the credit tranches") and streamlining most existing special facilities, which cater to special and circumscribed BOP problems. ¹⁶ Such reforms would leave the credit tranches as the main vehicle for the delivery of GRA financing, and would have the advantage of achieving a considerable simplification of the Fund's lending toolkit.

A. The Starting Point

- 31. An SBA in the credit tranches is the workhorse of the Fund's current GRA-lending toolkit (Table 1).¹⁷ It is a flexible instrument, in that (i) it can be used to meet any type of BOP problem on an actual or precautionary basis; (ii) the length of the arrangement may lie anywhere between six months and a legal maximum of three years; and (iii) the size of financing is uncapped, although access above normal limits is subject to the strictures of the exceptional access policy. Notwithstanding its flexibility, the SBA has been mostly used in actual crisis situations and by members often requiring significant policy adjustments.
- 32. In part, this narrow use reflects a number of shortcomings in the policies governing the modality of lending in the credit tranches, including a cumbersome exceptional access

¹⁵ The recent demand by some middle-income members for "Fund-type" financial support from MDBs and other IFIs, as well as the excess demand for the Fed swap lines with strong emerging market members, provide current evidence of the stigma still associated with approaching the Fund (Appendix II).

¹⁶ For additional discussion of the nature and development of the Fund's policies on lending in the credit tranches, see, for example, *Review of Fund Facilities—Preliminary Considerations* (2000).

¹⁷ Access to Fund resources in the credit tranches is "normally" to be provided through an SBA (<u>Decision No. 12865</u>-(02/102). However, SBAs may also be used to deliver resources under special policies (i.e., outside of the credit tranches). The SRF, for example, specifies that its financing is to be made available to members under an SBA or extended arrangement in addition to resources in the credit tranches or under the EFF. Similarly, the CCL included a comparable provision for the delivery of CCL resources via SBAs.

framework for lending above the normal access limits and, more importantly, a rigid conditionality framework (Box 5). With regard to the latter, as discussed in the companion *conditionality paper* and in the earlier *chapeau paper*, a number of factors deter strong performing members from using the existing SBA for crisis prevention: (i) phasing of purchases, which results in a "staircase" pattern of access; (ii) lags in data provision for assessing compliance with performance criteria (PCs), which give rise to "blackout" periods limiting availability of financing; and (iii) the proliferation of ex post conditionality and of waivers of nonobservance for missed PCs, which foment domestic political stigma.

23

- 33. The GRA toolkit includes also a number of special facilities that were introduced over time to address special BOP problems (and with repayment schedules and in some cases charges different from those applying to lending in the credit tranches). Such special facilities and policies include the CFF (Compensatory Financing Facility), established to offset export shortfalls; the EFF (Extended Fund Facility), introduced to deal with BOP difficulties of a longer-term nature stemming from structural shortcomings; the SRF (Supplemental Reserve Facility), created to provide large and upfront financing to stem short-term capital account crises; and the SLF, recently introduced to meet self-correcting and quick-reversing liquidity needs of members with strong policy track records and fundamentals. While the creation of new facilities reflected responsiveness by the Fund to meet the evolving needs of its membership, it has also led to a proliferation of narrowly-focused lending instruments that the evolution and increasing complexity of the nature of BOP needs tend to make quickly obsolete. Moreover, experience demonstrates that, as an operational matter, it is difficult to distinguish between different types of BOP problems.¹⁸
- 34. Further—and despite the proliferation of facilities—the Fund's lending toolkit still misses an explicit crisis prevention instrument for strong performing members, even though the need for such an instrument has been long recognized.¹⁹ The experience with the Contingent Credit Line (CCL), which was created as a crisis prevention instrument for members with strong policies but was never used before expiring in 2003, carries important lessons for the future design of any such facility. Notably, among the factors deterring use of the CCL were: (i) the lack of automaticity in drawing resources when needed; (ii) the fear of signaling weakness

Thua fo

¹⁸ Thus, for example, a member receiving SRF financing to address sudden capital outflows that are expected to be short-term (and, accordingly, for which a relatively short repurchase period is required) may also be experiencing broader BOP difficulties that will require longer-term adjustment (and, accordingly, a longer repurchase period). A similar issue has arisen with respect to the CFF, where it was recognized that BOP difficulties arising solely from temporary export shortfalls/import costs are rare (the facility was ultimately amended to mandate the provision of CFF assistance in conjunction with a Fund arrangement in most cases). Finally, while the repurchase period under the EFF (4½ to 10 years) is intended to reflect the long adjustment period required to correct structural imbalances, many SBAs in the credit tranches (where the repurchase period is 3¼ to 5 years) also support programs that involve structural adjustment.

¹⁹ See Review of Contingent Credit Lines (2/11/03 and PIN/03/164), Adapting Precautionary Arrangements to Crisis Prevention (6/11/03); Completion of the Review of Contingent Credit Lines and Consideration of Some Possible Alternatives (11/12/03).

Box 5. Conditionality and Exceptional Access Policy*

* The Executive Board subsequently decided to maintain quantitative PCs. The Executive Board was concerned that eliminating PCs could reduce predictability and assurances to members about conditions under which Fund resources would be made available, and could weaken safeguards.

The effectiveness and predictability of Fund financing could be enhanced by addressing the negative perceptions of conditionality and cohering the policy on exceptional access.

Conditionality. The *conditionality paper* considers three reform options: (i) making reviews the primary device for program monitoring under GRA arrangements and discontinuing the use of PCs, thus eliminating the need for waivers; (ii) encouraging greater use of ex ante conditionality (including outright purchases as in the SLF), where justified by the strength of the member's policies, fundamentals, and track record; and (iii) a hybrid approach involving elements of both review-based and ex ante conditionality.

Exceptional Access. A reform of the exceptional access policy (EAP) that streamlines and clarifies the criteria under which the lending above the normal access limits is provided would improve the predictability and effectiveness of the Fund's crisis resolution toolkit. The EAP, which was adopted in 2002–03 and revised in 2004, ¹ establishes safeguards in terms of close Board consultation and enhanced transparency for large-scale lending operations. However, the EAP includes two inconsistencies that stand out:

- Asymmetry in the treatment of capital versus noncapital account crises. The exceptional access framework establishes a number of criteria for providing access above the normal limits that need to be met if the financing need arises from a shock to the capital account. For noncapital account crises, however, while the exceptional access criteria need to be assessed, they do not need to be satisfied. The flexibility in the framework to provide access beyond normal limits in noncapital account crises has led to a perception that access decisions in these cases are ad hoc and unpredictable. Moreover, the overall framework has the ironic effect of constraining exceptional access in those cases where it may be most appropriate (capital account crisis) while allowing greater flexibility in other cases.
- **Debt sustainability criterion**. This asymmetry is particularly stark in regard to the debt sustainability criterion. In capital account crises, the exceptional access policy effectively precludes use of exceptional access where the debt position at the time of the member's request for financing is judged to be unsustainable *even if sustainability can be restored through policy adjustment and/or debt restructuring*. The same restriction does not, however, apply in situations where financing needs do not stem from a capital account shock. Moreover, the policy provides little guidance on how to assess debt sustainability, including whether this criterion involves both public and private external debt. (In the latter case, for example, it is not straightforward to come to a judgment about the sustainability of an atomized debtor class).

To enhance the predictability and effectiveness of the Fund's lending toolkit, it would help to eliminate the distinction between capital and noncapital account crises and the prohibition to lend above the normal access limits in capital account crisis situations when the external debt burden is very heavy or unsustainable. Instead, the principle could be established that such lending is permitted as long as there is a credible strategy to address the debt situation and restore sustainability. Moreover, definitional uncertainties should be clarified and guidance be provided on how to deal with the debt sustainability criterion.

¹ <u>Access Policy in Capital Account Crises</u> (7/29/02; and PIN/03/3, 3/21/03); <u>Access Policy in Capital Account Crises—Modifications to the Supplemental Reserve Facility and Follow-Up Issues Related to Exceptional Access Policy (1/14/03); Review of Exceptional Access Policy (3/23/04, and PIN/04/54, 5/13/04).</u>

rather than strength when requesting a CCL; and (iii) the fear of a negative signal from ending a CCL or from losing eligibility. Essentially, a key lesson from the CCL experience is the importance of reducing stigma by tailoring the modality of delivery of lending to the varying strength of members' policies and fundamentals.

B. Streamlining Current Facilities*

- * The Executive Board subsequently decided to maintain the EFF, given its usefulness for LICs.
- 35. An important reform option considered in this paper is to eliminate all special GRA facilities and policies (other than the policy on emergency assistance for post-conflict situations and natural disasters). This is rationalized by the difficulty in determining ex ante either the duration or the type of BOP need, as well as the lack of demand for these facilities—although this is difficult to determine conclusively for the recently-launched SLF.
- Compensatory Financing Facility. The CFF was created in 1963 to provide low-conditionality assistance for countries facing exogenous export shortfalls (or for excess costs of cereal imports, added later). It was last used in 1999. The CFF is most appropriate for middle-income members since its terms are nonconcessional, but these countries generally have access to market financing to deal with a temporary shock and so there has been little use of the facility by them. While countries with underlying BOP problems may not have access to market financing, they could use the CFF only in combination with an arrangement with upper credit tranche conditionality. Furthermore, the need for the member to demonstrate a satisfactory BOP position, apart from the effects of CFF-related shocks, may also have reduced demand for the CFF. Tellingly, the CFF remained unused even during the recent episode of high food and fuel prices.
- Extended Fund Facility. The EFF was designed to provide financing where improvements in members' BOP required the implementation of policies to correct imbalances in production, trade and prices, and such improvements could be achieved in an appropriate manner only over an extended period of time. There has been no demand for a stand-alone EFF arrangement since 2002. This decline in demand may be related to the fact that members no longer need long-term financing of the kind provided under the EFF, and to the growing access to capital markets by emerging market economies (notwithstanding the recent crisis). Thus, the EFF's usefulness for emerging markets has diminished. Recent use of the EFF has mainly been as a blend with PRGF-ESF Trust resources for some LICs transitioning out of low-income status. As such, blending is likely to remain an important element of the LIC facilities toolkit (given scarce concessional resources), one alternative option if the EFF were eliminated would be to use SBAs for blending with concessional facilities.
- **Supplemental Reserve Facility**. The SRF was created in December 1997 as the Fund's lending instrument to provide large and upfront financing to stem short-term capital account crises. Consistent with these objectives, the SRF has a shorter maturity period

than the credit tranches and also has higher and time-based surcharges both to encourage repayment once borrowers regain access to private capital markets and to mitigate the risks to the Fund. However, since Korea's crisis, no capital account crisis has met a "V-shaped" pattern associated with the quick reversion of such a crisis, and the SRF has not been used since 2002. In the most recent exceptional access Fund arrangements (Georgia, Iceland, Hungary, Latvia, Pakistan, and Ukraine), the SRF was considered inappropriate due in part to the mismatch between its short maturity and the expected duration of the crises affecting these countries. Finally, under the proposed reform of surcharges, SRF purchases would remain much more expensive than purchases in the credit tranches, discouraging demand for the instrument. In sum, the SRF is a little-used facility whose main features overlap with other instruments, and which, if retained, unnecessarily complicates the structure of Fund lending.

- Short-term Liquidity Facility. The SLF was introduced in October 2008 to help members with solid policy track records and strong fundamentals to deal with quickreversing and self-correcting BOP needs. A noteworthy innovative feature of the SLF is the absence of ex post conditionality and the reliance, instead, on ex ante qualification, and the nature of the BOP problem. While it is too early to establish conclusively lack of interest in the SLF, there are a number of design aspects that may thus far have kept members away from this instrument. These include (i) the outright purchase nature of financing under this facility, which prevents it from being used on a precautionary basis; (ii) the capped access (500 percent of quota) and short repurchase period (three months. with a maximum of three drawings per 12-month period), which may not give adequate time to deal with the scale and persistence of the ongoing global deleveraging; and (iii) the related high borrowing costs, which stem from the assessment of a service charge (50 basis points) each time a purchase is made (up to three times per 12-month period). Finally, the concurrent establishment of the Fed swap lines may have reduced eligible countries' urgency or need to tap the SLF. If the noted design issues are not addressed and the instrument remains unused, then also the SLF could be phased out.
- Reforming the SLF? An alternative approach discussed fully in Box 6 would be to reform the SLF to increase its relevance and flexibility by turning it into a dual-modality lending instrument (i.e., for both crisis prevention and crisis resolution) catering to high-performing members. This reform would involve allowing precautionary use of the SLF and lengthening the effective repayment period to a maximum of one year. Even with these changes, however, the SLF's repayment period would remain relatively short compared to the time that may be needed for emerging markets to recover from the current deleveraging process. Moreover, SLF qualification would remain constrained by the nature of the special BOP shock it was designed to address (i.e., a quick-reversing and self-correcting liquidity shock that, thus, requires no policy adjustment). The flexible crisis prevention instrument considered below aims to address these rigidities.

Box 6. Possible Modifications to the Short-term Liquidity Facility

The following modifications would enhance the relevance and flexibility of the SLF:

- Making the SLF precautionary. The special BOP need for which SLF resources could be drawn
 would remain the same but, with such a reform, approval of SLF financing would be possible on
 a precautionary basis even where the member was not yet experiencing this need. From a legal
 perspective, the vehicle for delivery of SLF financing would be changed from an outright
 purchase to an arrangement.
- Extending the repurchase period. The SLF currently has a three-month repurchase period. However, especially amid current very tight global liquidity conditions, the quick-reversing need contemplated for the SLF and implicit in this very short repurchase period may not be realistic, as members' liquidity needs are likely to be more persistent. The repayment period could therefore be extended to six months, and the number of successor purchases allowed within a 12 month period reduced from two to one. These changes would extend the effective length of possible financing under the facility from 9 to 12 months per 12-month period.
- Reducing costs. The proposed reduction in the number of successor purchases from three to two
 would effectively lower the service charges levied from 150 to 100 basis points in the event all
 allowed purchases are made during a 12-month period. The cost of borrowing under the SLF
 would be also reduced (for access above 300 percent of quota) if the proposed reform of
 surcharges in is adopted.

C. Strengthening Crisis Prevention and Resolution

36. In espousing the principle of flexibility in lending instruments to attend to a variety of BOP problems and to provide adequate breathing space to members to repay the Fund as their BOP situation improves, this section considers establishing a crisis prevention instrument as a new window in the credit tranches. Like the SLF, this instrument would exclusively cater to members with very strong policy track records and fundamentals. However, because of the flexibility built into its design, this new instrument would encompass the SLF and thus would be envisaged as an alternative to modifying the SLF. For those members that would not qualify for the new instrument, consideration is given to clarifying and elaborating the existing framework for precautionary SBAs to ensure its effectiveness as a crisis prevention tool. In line with the earlier discussion, the options considered here integrate flexibility by tailoring the delivery of Fund lending to the strength of members' policies and fundamentals.

Flexible Credit Line

37. Specific proposals for a crisis prevention instrument (the "RAL") have been considered by the Board on different occasions since August 2006. The goal of the RAL was to provide members meeting strong qualification criteria with rapid access to financing to address specific capital account-related BOP needs. Since then, two other proposals for a contingent liquidity instrument have been put forth by some Executive Directors—Financial Stability Line (FSL)

and Rapid Liquidity Line (RLL)—with objectives and design that are similar to the RAL, but with some key innovations.²⁰ The Flexible Credit Line (FCL) discussed below attempts to synthesize these alternative proposals, while building on the reform options considered in the *conditionality paper*, with its emphasis on *ex ante* conditionality (Table 2 summarizes the key features of the RAL, FSL, and RLL).

- 38. The FCL would make resources available with high automaticity to countries with a strong policy track record and sound fundamentals. Its main objective would be to provide assurances to eligible members of rapid and upfront access to resources from the Fund with no ex post conditionality. The FCL would be available to address all types of BOP problems and would not rule out lending against an actual need. As such, the FCL could also help high performing members deal with financing pressures from the ongoing global deleveraging.
- 39. Key elements of the FCL's design, particularly the flexibility emphasized in its name, could be as follows:
- **BOP need.** Unlike special facilities like the RAL, FSL, or RLL, the FCL would address the full-range of BOP problems that members may face, from global changes in risk aversion to exogenous current account shocks. To achieve this, it would be established as a window in the credit tranches. And, while the FCL would be expected to be requested and approved on a precautionary basis, it could also be approved on a nonprecautionary basis (as is the case with the RLL).
- Access. There are arguments for and against fixing the level of access. A fixed access level in relation to Fund quota (like under the SLF or the proposed RAL) would provide predictability and evenhandedness across the membership, thereby avoiding reliance on uncertain estimates of potential BOP need and unclear market signals associated with differing access levels. But, capping access would reduce the flexibility of the instrument and/or may require exceptionally high quota-related ceilings to fit most possible cases. Instead, to retain flexibility in dealing with most shocks, access could be kept uncapped and be based on country-specific potential financing needs and capacity to repay indicators (the absence of a cap on access is a key feature of the RLL).²¹

²⁰ See <u>Further Consideration of a New Liquidity Instrument for Market Access Countries—Design Issues</u> (PIN/07/40, 2/14/07), <u>Consideration of a New Liquidity Instrument for Market Access Countries</u> (PIN/06/104, 8/3/06), and <u>Review of Fund's Financing Role in Member Countries—Background paper on Proposals for a Rapid Access Line, a Financial Stability Line, and Rapid Liquidity Line (Supplement, 10/11/08, PIN/08/131).</u>

-

²¹ The procedural requirements (albeit not the numerical limits) under the exceptional access policy could apply as a safeguard.

• *Phasing*. The entire approved access could be made available upfront in a single purchase, which the member would have the right to make at any time during the period of the arrangement. One of the advantages of the FCL is that it brings "automaticity" in that, once the arrangement is approved, no activation is required before the member could draw resources when needed. The design could be such that, once a purchase is made, the FCL arrangement would expire; or, alternatively, the member could be allowed to make multiple drawings (up to the overall approved access) during the duration of the arrangement. As a safeguard for the Fund, on expiration of the arrangement, the member would immediately go into post-program monitoring (PPM) mode, unless a successor arrangement is requested.²²

29

- Qualification and conditionality. Like the SLF, access to the FCL would be based on rigorous qualification criteria (ex ante conditionality) that only part of the membership would be able to meet. The FCL would involve a broader judgment of qualification criteria than the SLF, especially if it is not subject to an access cap, and given that it would address a broader range of BOP problems than the SLF. The qualification framework would need to be sufficiently robust and focus on members' policy frameworks, quality of economic institutions, and track record of performance, in order to give markets, and the Fund, confidence that the member would take appropriate corrective measures in the event of a crisis despite the lack of ex post conditionality. To reduce the risk of negative signals—as discussed in the RAL—qualification could be confidentially assessed upon request by the member or in the context of Article IV consultations (as suggested in the case of the FSL).
- Length of the FCL. A key design issue is the length of the FCL. From the perspective of crisis prevention, ideally, a one-year arrangement would provide sufficient flexibility to members. However, as noted in the conditionality paper, providing a commitment to make resources available under an arrangement without review becomes riskier from a safeguards standpoint as the term of the arrangement becomes longer, given the possibility that the circumstances of the member may change over time. In light of this concern, consideration could be given to limiting the duration of FCL arrangements to six months, but in a context where, at the request of the member, the Board could approve additional FCL arrangements for periods of six months each.
- *FCL terms*. Under its most flexible design, the FCL would cater to all types of BOP problems, and thus—as noted above—it would be established as a window in the credit tranches, which is the Fund's general policy framework for addressing general BOP problems. Thus, the FCL would be subject to the same charges, surcharges, and

_

²² PPM is activated with members with outstanding GRA credit exceeding 100 percent of quota (PPM is not applicable under the SLF because of the very quick repayment schedule.). PPM involves frequent consultations with the Fund, with a particular focus on external viability and the member's capacity to repay the Fund. See Review of Fund Facilities—Proposed Decisions and Implementation Guidelines (11/02/00).

repurchase periods as all other lending in the credit tranches.²³ It could be argued that a shorter repurchase period would be justifiable, given the shorter time likely to be needed for FCL qualifiers to return to market access. However, justifying the shorter repurchase period would require the articulation of a special BOP problem, which would effectively constrain the FCL's desired flexibility. Moreover, as noted above, while duration of crises is hard to foretell, the current deleveraging process will likely be protracted and recovery may take longer to materialize, affecting members' access to capital markets. At any rate, members are expected to repay the Fund as their BOP and reserve positions improve, and they may even be required to effect an early repayment if the Fund were to adopt policies to this effect.²⁴ Consideration could therefore be given to ways in which these provisions could be implemented vis-à-vis FCL qualifiers.²⁵ In practice, however, strong members are likely to seek early repayments because of the positive signaling effect of such a move.

40. The FCL would represent a significant change in the mode of delivering Fund financial resources. While ex ante conditionality is already familiar from the Fund's recent adoption of the SLF, the idea of a dedicated window in the credit tranches for a particular category of high-performing members is relatively new.²⁶ Nevertheless, the suggested approach would be in line with streamlining facilities and instruments, where those that remain are designed to maximize their flexibility for use in a wide-range of circumstances.

High-Access Precautionary Stand-by Arrangements (HAPAs)

41. The existing policy framework governing the use of SBAs on a precautionary basis could be clarified to ensure that all emerging market members, particularly those that do not qualify for the FCL, also have access to an effective crisis prevention window.²⁷ While Fund

²³ All members making purchases in the credit tranches are subject to the default 3½ to 5 years repurchase period specified in the Articles of Agreement, and charges also must be "uniform" for members. Further, while the Fund has the authority to change the repurchase period for financing in the credit tranches, any such new period "shall apply to all members." See Article V, Section 7(c) (repurchase periods); and Article V, Section 8(d) (charges).

²⁴ Article V, Section 7(b).

²⁵ Consideration could be given, for example, to enshrining the expectation in the Articles of Agreement of early repayments in a policy similar to the time-based repurchase expectation policy. However, such a policy would unduly create confusion and may be difficult to administer.

²⁶ The FCL in this sense would be similar to the policy on emergency assistance, which previously was a window in the credit tranches with special conditionality for members meeting specified criteria (related to the natural disaster/post-conflicts covered by that policy). In the event, emergency assistance was taken out of the credit tranches and converted to a special policy in 2000 to enable the exclusion of financing under that policy from the policy on time-based repurchase expectations in the credit tranches.

²⁷ Some members may prefer to receive Fund-endorsement of their policies with no financial backing via a pure signaling instrument. This option is explored in Box 7.

Box 7. A Pure Signaling Instrument for Emerging Market Countries

A pure signaling instrument with no financial backing is an option that lies at one end of the continuum of Fund-endorsed programs. Previous pure signaling tools have included staff-monitored programs, assessment letters, and various forms of enhanced, strengthened, or intensive surveillance, and most recently the Policy Monitoring Arrangement. Some of these ideas and instruments have not been successful for several reasons including the limited leverage over members policy implementation, reservations about providing endorsements of programs without committing financial resources, lack of demand, and uneven reporting on the performance, which undermined the intended signaling effect. Thus, in practice, emerging market countries requiring a signaling instrument have resorted to low-access precautionary SBAs.

Some members, however, may find it disadvantageous to request a financing arrangement even when they do not want or need to draw on Fund resources because of the risk that markets perceive an actual or potential BOP problem where none exists. Moreover, analogous to the Policy Support Instrument (PSI)—which was introduced as a signaling instrument for PRGF-eligible "mature stabilizers" that intended to graduate from the PRGF but would benefit from continued Fund endorsement of their policies and performance—a pure signaling instrument might be useful for some emerging market countries, particularly those that are just gaining entry to global capital markets.

Against this backdrop, staff could explore with the Fund's middle-income members whether they see a role for such an instrument and what design features they would view as desirable. Any such deliberations would be informed by the upcoming review of the existing PSI.

policies allow HAPAs, their use has been very limited: Brazil's augmentation in 2003 and, more recently, El Salvador in 2009 had HAPAs. Improving the effectiveness of the precautionary SBA as a crisis prevention device would require establishing unambiguous modalities based on the country's circumstances and policy track record for (i) exceptional and frontloaded access under SBAs; (ii) fewer interruptions of drawing rights; and (iii) customized program design. These should help to encourage countries to approach the Fund early for precautionary support, thereby reducing the likelihood of a crisis.

- 42. Key features of the HAPA would be:
- BOP need and access. Like the FCL, access under a HAPA could be tailored to country-specific circumstances and potential needs, although access levels would not normally expected to exceed significantly the new proposed cumulative limit of 500 percent of quota.²⁸

²⁸ See Review of Limits on Access to Financing in the Credit Tranches and Under the Extended Fund Facility, and Overall Access Limits Under the General Resources Account.

For a summary of these signaling instruments, their use, and related Executive Board discussions see <u>Signaling by the Fund—A Historical Review</u> (7/16/04); Signaling Assessments of Members' Policies (1/8/03; PIN/03/12, 2/13/03); and <u>Policy Monitoring Arrangement</u> (9/8/04 and PIN/04/114, 10/1/04).

- **Phasing**. Phasing could be frontloaded for stronger members, but countries in need of significant policy adjustment would be expected to have more uniform phasing of access to Fund resources. Such an approach for these members would be required not only as a safeguard for Fund resources, but also to preserve the signaling effect of the Fund's endorsement of the member's policies.
- Conditionality. Performance under a HAPA would be periodically monitored based on a pre-announced review schedule, similar to the procedures for the standard SBA, and would be anchored to the goals of the authorities' economic program set out in a letter of intent. Drawing on the conditionality paper, in lieu of formal performance criteria, monitoring could be review-based, whereby the review would be completed if the Executive Board determines (inter alia, on the basis of performance vis-à-vis the program's targets) that the program is progressing along the lines of the policy framework specified in the letter of intent. This would mitigate the blackout period problem.²⁹ For members with frontloaded access, completion of reviews would signify continued access to resources and would also signal to the public and the markets that policies remain in line with the targets and envisaged policy agenda; this could impact the catalytic flow of international capital into the country.
- *Safeguards*. Given the potential risks of committing large and frontloaded resources under HAPAs, it will be important to establish adequate safeguards to the Fund:
 - i. As discussed above, for countries in need of significant adjustment the presumption would be that the financing would be more uniformly phased. In these cases, implementation of policies to facilitate adjustment will govern the completion of reviews and serve as the main safeguard to the Fund.
 - ii. Rigorous justification could be required for eligibility to frontloaded phasing, including an assessment of debt sustainability, relatively strong policy track record, commitment to sound macroeconomic management, and the need for only limited adjustment. In any event, even these members would be subject to the review process for the entire period of the arrangement and the associated signals on whether the program is on or off-track.
 - iii. The protections to the Fund built into the procedural framework for exceptional access would also provide additional safeguards to the Fund in cases where the exceptional access policy is triggered.

²⁹ While there would be no PCs, there would be performance targets that would guide reviews. To the extent data regarding such targets is not available by the scheduled review date, the review date would likely be postponed. In such cases, the member would be unable to make any purchases from the original expected review date until the data becomes available and the review is completed.

43. In sum, this reform option would clarify and elaborate the dual modality of the SBA—for crisis resolution and for crisis prevention. For resolution purposes, the traditional SBA—possibly with review-based conditionality modalities as discussed in the *conditionality paper*—would continue to serve as the main vehicle to channel resources to members facing actual BOP needs. For crisis prevention purposes, the SBA would make resources available based on potential financing needs either at normal access levels or at high access levels with frontloading.

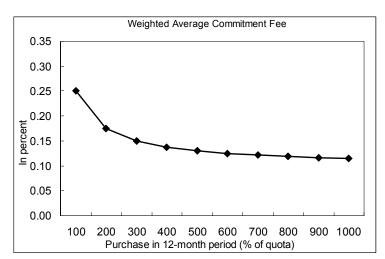
Risks with Crisis Prevention Instruments

- 44. Developing the Fund's crisis prevention toolkit as outlined above could contribute significantly to global financial stability. But it would also carry risks:
- The Fund's resources could become overstretched. Committing significant amounts of resources to members under precautionary arrangements could crowd out the Fund's resources for crisis resolution. Also, the proposed options could result in a large stock of outstanding commitments being simultaneously drawn (say, a contagion effect from an exogenous shock), which the Fund will be obliged to disburse. On the other hand, inasmuch as these arrangements help prevent crises, fewer Fund resources may be tied up in costly and lengthy crisis resolution. In any event, any evaluation of the risk that the Fund's resources may become overstretched needs to be informed by the ongoing assessment of the adequacy of the Fund's loanable resources (Review of the Adequacy and Options for Supplementing Fund Resources, 1/12/09; and PIN/09/24, 2/26/09).
- Members may be tempted to use excessively large precautionary arrangements to overinsure against risks thus leading to moral hazard. The cost of potential moral hazard needs to be weighed against the benefit of reducing "real hazard"—i.e., the reduction in the likelihood of crises, including because of the incentive for stronger policies that the FCL would provide. In any event, the exceptional access policy would be a safeguard against such misuse in that it would enable to carefully scrutinize access requests by members and compliance with eligibility criteria. Consideration could also be given to reliance on a price mechanism to reduce incentives for large (precautionary) use of Fund resources by modifying the structure of the commitment fee (Box 8).
- Stigma of using SBAs could be exacerbated. One risk of targeting the strong performers under the FCL, or a suitably modified SLF, is that the stigma associated with requesting an SBA could increase for members who are unable to qualify for the FCL or modified SLF. This risk could, however, be mitigated by adapting the regular SBA modalities as described above to enhance the effectiveness and flexibility of HAPAs.

Box 8: The Role of Commitment Fees

The current schedule of commitment fees was introduced in 2000 and consists of two tiers: 25 basis

points on amounts up to 100 percent of quota that could be purchased over each twelve-month period; and 10 basis points on amounts in excess of 100 percent of quota that could be purchased over the same period. This results in a (weighted average) fee schedule that *decreases* in relation to the level of borrowing (Figure). Commitment fees apply to all Fund arrangements (precautionary or not) and are refunded to the member to the extent that available amounts are



purchased. The practice of charging commitment fees varies among IFIs and MDBs.²

As noted in earlier papers,³ the basic financial rationale for charging a commitment fee for contingent credits—to cover the cost of establishing and monitoring the credit line and setting aside financial resources over a period of time—also holds for the Fund. Two Fund-specific observations can be made: (i) the cost of monitoring an arrangement does not necessarily vary based on the size of the arrangement—i.e., Fund costs to monitor a very large arrangement are not any more than the cost to monitor a small arrangement; and (ii) there are, however, other costs and risks associated with very large arrangements—e.g., costs related to the management of a finite pool of liquidity and credit risks—that are linked to the size of the arrangement.

The costs and risks noted in (ii) above may justify a schedule of (weighted average) fees that *increases* in relation to the level of access. However, any reform that introduce such price disincentive for large arrangements should ensure that the *initial* level of the commitment fee is not set in a way that discourages countries from approaching the Fund early on, if the Fund is to be effective in its crisis prevention role. Specific reform options are expected to be covered by the ongoing review of charges and maturities.

Any changes to commitment fees would require a 70 percent majority of the total voting power.

¹ Prior to 2000, the commitment fee was 25 basis points for all access levels. The lower 10 basis point fee for access above 100 percent of quota was adopted in order not to discourage use of the CCL.

² See http://treasury.worldbank.org/Services/Financial+Products/Lending+Rates+and+Loan+Charges/index.html.

³ For example, see Review of Fund Facilities—Further Considerations (7/10/00; PIN/00/79, 09/18/00).

D. Conclusions

45. A number of options have been raised in the paper, which together with the reforms of conditionality, access limits, and surcharges proposed in companion papers, could significantly increase the effectiveness of the Fund's crisis prevention and resolution efforts while also streamlining the existing GRA lending toolkit. In particular, the proposed tailoring of the use of credit tranche resources in a precautionary setting to the strength of members' policy track records and fundamentals would help encourage members to approach the Fund early, thereby reducing the likelihood of crises and easing the path of policy adjustment.

VI. ISSUES FOR DISCUSSION

- 46. Directors' views on the following specific issues would be welcome.
- The analytical discussion for the basis for Fund lending shows that systematic crisis prevention efforts would require a contingent financing instrument providing large, upfront disbursements when needed, with flexible repayment terms. Do Directors agree on the need to ensure that the Fund's lending toolkit includes an instrument that is high-access, precautionary, and with a sufficiently flexible repayment period?
- The paper envisages simplifying the lending framework and providing greater flexibility by utilizing the general framework for financing in the credit tranches, which addresses all BOP problems, and eliminating all special policies (except emergency assistance). Do Directors agree with this approach?
- The papers proposes eliminating the SRF, the CFF, and the EFF given their relative inflexibility, overlap with other existing and proposed facilities and limited use. *Do Directors agree that the noted facilities should be eliminated?*
- The paper discusses the possibility of modifying the SLF, inter alia, to enable its use on a precautionary basis, or of replacing it with a more encompassing instrument, the FCL. *Which option do Directors favor?*
- The paper considers a new flexible credit line, the FCL for strong performing members. Do Directors concur with its flexible design, in particular with regard to access, length, and (credit tranche) terms?
- Another option for reform raised in the paper is to clarify the framework for the use of HAPAs for members that do not qualify for an FCL. Do Directors agree with such an approach? Also, do Directors agree that reforming the commitment fee schedule is one option to discourage excessive use of large arrangements?
- The paper raises some concerns with regard to the exceptional access framework. In particular, the framework is asymmetric in its application to capital and noncapital account crisis cases, especially in the treatment of debt sustainability. *Do Directors agree with this assessment and the need to reduce the complexity of the framework?*

Table 1. Fund GRA Facilities and Policies 1/

Name	Purpose	se Access limits	Phasing and monitoring		Charges and fees		Repayment (years)	
				Charges	Surcharges	Other	Obligations	Expectation s
Stand-By Arrangement (1952)	For all types of BOP need (including precautionary) of short-term character.	Annual: 100 percent of quota. Cumulative: 300 percent of quota. Limits can be exceeded in exceptional circumstances.	Quarterly purchases contingent on observance of performance criteria and other conditions.	Basic rate of charge.	Level-based: 100 basis points on outstanding access above 200 percent of quota, and 200 bps on access above 300 percent of quota.	Commitment fee and service fee. 2/	31⁄4–5	21/4-4
Extended Fund Facility (1974)	For BOP need of a longer-term character for members with limited access to capital markets.	Same as above.	Quarterly or semi-annual purchases contingent on observance of performance criteria and other conditions.	Basic rate of charge.	Same as above.	Commitment fee and service fee. 2/	4½-10	41/4-7
Supplemental Reserve Facility (1997)	For exceptional, short-term BOP (capital account) need resulting from a sudden and disruptive loss of market confidence.	No limits. SRF used only when access under associated stand-by or extended arrangement would be exceptional.	Front-loaded access with two or more purchases.	Basic rate of charge.	Time-based: From the date of the first purchase, the surcharge is 300 bps and rises by 50 bps at the end of the first year and every six months, up to a maximum of 500 bps.	Commitment fee and service fee. 2/	2½-3	2–2½
Compensatory Financing Facility (1963)	For BOP need related to temporary export shortfalls or cereal import excesses that is largely beyond the member's control.	45 percent of quota each for export and cereal components; and combined limit of 55 percent of quota.	Typically available over a minimum of six months. Can be outright purchases, or together with an arrangement.	Basic rate of charge.	None.	Commitment fee and service fee. 2/	31⁄4–5	21/4-4
Short-term Liquidity Facility (2008)	For short-lived and self-correcting BOP needs arising from external market developments despite strong fundamentals.	Up to 500 percent of quota.	Up to three outright purchases per 12-month period; no ex post conditionality.	Basic rate of charge.	Same as the SBA.	Service fee. 2/	Single repurchase three months after the date of purchase.	

^{1/} As of December 31, 2008. The table excludes Fund policies designed for use in emergency cases, such as post-conflict situations and natural disasters, which are part of the GRA facilities and policies.

^{2/} The commitment fee is 25 basis points on access up to 100 percent of quota; and 10 bps on access above that level. The service fee of 50 bps on each purchase.

Table 2: Comparison Between Alternative Proposals for a New Liquidity Instrument¹

	Table 2: Comparison Between Alternative Proposals for a New Liquidity Instrument							
	FCL	RAL	FSL	RLL				
Purpose and BOP need	Crisis prevention/resolution for members at risk of any BOP shock.	Crisis prevention for members with market access at risk of being hit by a capital account shock.	Crisis prevention for members at risk of a short-term liquidity need arising from an exogenously-driven financial stability crisis.	Dual purpose. Credit line for countries with broadly adequate policies that are hit by turmoil in global capital markets, but not because of inadequate domestic economic policies.				
Eligibility and Qualification	Ex ante qualification as in the SLF (sound policy track record, strong policy frameworks and underlying fundamentals, sustainable debt position). Assessment done upon request.	Members with a meaningful degree of integration into capital markets would qualify based on four criteria (no immediate BOP need, good policies, sustainable debt, and data transparency). Assessment done upon request.	Members with track record of sound policies and fundamentals that are in the process of following a roadmap for integrating into capital markets. Qualification would be at the end of each Article IV consultation. If authorities agree, staff will include a statement that, based on their assessment, the member qualifies for the FSL.	Eligibility based on sound policies and a meaningful degree of integration into capital markets. Qualification based on enhanced bilateral and multilateral surveillance as well as record in past programs. No list of qualified countries. When member request RLL, the Board will confidentially consider management's recommendation based on staff assessment.				
Policy reforms and adjustment	Member in a position where no major policy reform would be expected; if adjustment is needed, expectation is that member would take the appropriate measures.	Member in a position where no major policy adjustment or reform would be expected.	Members would take reform measures to strengthen the regulatory and supervisory framework.	Policy adjustments would be included, if necessary, as a signaling device to restore market access.				
Access	If no predetermined limit, access would depend on net borrowing needs and potential liquidity drains, given buffers and global economic risks, and capacity to repay.	Open Issue. Two options are either (i) predetermined at 500 percent of quota; or (ii) on a case-by-case basis within a range of 300–500 percent of quota.	Up to 500 percent of quota would be available automatically and remain valid for 12 months or until the next Article IV cycle, whichever is shorter.	No predetermined limits. Amount available should be sufficient to rapidly restore market access.				
Monitoring and length of arrangement	Either a 6- or 12-month arrangement, with option to renew on member's request. Expires upon drawing in full. No ex post conditionality. Post-drawing monitoring with PPM.	One to two years long arrangement with six monthly Board reviews. Review-based conditionality (based on authorities' policy document, including quantitative indicators). Post-drawing informal Board review.	Assessments of continued eligibility done during Article IV; but Board could reverse the credit line in case of flagrant departure from sound policies and road map. Drawing triggers a post-drawing Board review.	Half-yearly monitoring (or shorter if policy adjustments are required). No ex post conditionality; a simple check if policies have been implemented. Mid-cycle staff visit would generate Board report.				
Drawing and Phasing	One or multiple drawings when actual BOP need arises.	One large and frontloaded drawing if there is a large short-term financing need.	Automatic and frontloaded drawing if there is a short-term liquidity need. Additional financing under SRF/SBA.	Member draws if there is an exogenous capital account shock and contagion.				
Terms and Costs	Standard credit tranche terms for maturity, charges, and surcharges.	SRF repurchase periods. Subject to charges and surcharges.	Maturity and charges should discourage excessive and/or prolonged use; minimum commitment fees. Cost neutral to Fund.	Terms based on past experience with similar shocks. Repayment periods have varied between two to three years. Charges initially cost neutral to Fund, but surcharges applied to discourage excessive and/or prolonged use.				

¹See *Review of Fund Financing Role in Member Countries* for a detailed comparison between the RAL, FSL, and RLL.

APPENDIX I. A FORMAL MODEL OF IMF LENDING

Kim (2008), drawing on Jeanne and Zettelmeyer (2005), Kim (2007), and Jeanne, Ostry, Zettelmeyer (2008), develops a model to illustrate how characteristics of Fund lending—disbursements that are large relative to atomistic creditors, conditionality, and preferred creditor status—allows it to play a useful crisis prevention and resolution role over a larger range of shocks than it otherwise could.

In the model, a borrowing country finances investment from short-term and long-term private creditors. The country's output and debt-servicing capacity is increasing in a productivity shock, θ . Define two thresholds (θ^D , θ^L) such that: if $\theta < \theta^D$, the country defaults; if $\theta^D < \theta < \theta^L$, there is a liquidity run by short-term creditors which—unless offset by Fund lending—requires value-destroying liquidation of the investment, which is costly to both the country and to creditors. The paper then shows how these thresholds (θ^D , θ^L) depend on the characteristics of Fund lending (Figure I.1).

- If the Fund has no preferred creditor status or conditionality, it cannot lend (without incurring expected losses on its lending³⁰), so the country suffers a liquidity crisis and defaults regardless of whether the Fund exists whenever $\theta < \theta_0^D = \theta_0^L = \theta_1^D = \theta_1^L$.
- If the Fund has PCS, then it can lend to offset the liquidity run when $\theta_2^D < \theta < \theta_2^L$, preventing the costly liquidation, which benefits the country and creditors in aggregate (depending on how value-destroying is liquidation, long-term creditors benefit from Fund lending but have their claims diluted by the Fund's PCS). Moreover, since the Fund reduces risk, in equilibrium it lowers the country's ex ante borrowing cost, making a liquidity run less likely (i.e., over the range $\theta_2^L < \theta < \theta_1^L$). With conditional Fund lending (modeled as allowing the country to precommit to a larger adjustment effort) but no PCS, the result is similar except that part of the ex post benefit of avoiding the value-destruction from liquidation is shifted from the country to long-term creditors.
- Finally, when the Fund has both PCS and conditional lending, the range of shocks over which the country defaults is smallest (θ < θ₃^D < θ₂^D < θ₁^D) and, again, the prospect of Fund support reduces the likelihood of a liquidity run in the first place over the range θ₃^L < θ < θ₁^L. (At the cost of tractability, the model can be extended to consider a pure crisis prevention role of contingent Fund financing, which would further reduce the range of shocks over which an initial liquidity run can occur.)

³⁰ As noted in IMF (2007b), by the "Mussa theorem," a condition for Fund lending to cause moral hazard is that the Fund make expected losses on its lending. Thus, in the model, if the Fund were to lend in this case (i.e., without PCS or conditionality) it could cause moral hazard.

No IMF or no $\theta_I^L \theta_I^D$ no lending no lending conditional lending *no* liquidity run liquidity run and default and no PCS I and no default no liquidity run b/c of lower borrowing cost θ_2^L Unconditional no lending lending no lending IMF lending with PCS no liquidity fun liquidity run liquidity run arld no default and default but no default Conditional no lending no lending θ_3^D lending IMF lending with PCS liquidity run liquidity run no liquidity run and default and no default but no default no default b/c lending possible

with conditionality

Figure I.1. Characteristics of Fund Lending and Crisis Prevention and Resolution

APPENDIX II. LENDING INSTRUMENTS OF MDBs and Other IFIS

Recent examples of new "Fund-type" facilities include the BIS extending loans to facilitate Argentina's debt repayments, or the World Bank providing BOP assistance via development policy loans to several East European members. In addition, the World Bank recently introduced the Deferred Drawdown Option, effectively a crisis prevention instrument, which targets countries that have no immediate needs of funding, but which may be forced to borrow because of unforeseen events. This instrument was recently used by Colombia, Mexico, and Uruguay.

The attached matrix (Table II.1) lists the existing lending instruments of the World Bank Group (IBRD and IFC), the Inter-American Development Bank (IADB), the Asian Development Bank (AsDB), and the European Bank for Reconstruction and Development (EBRD) that are comparable to the Fund's GRA-lending activities. It is not intended to be an exhaustive list of all the lending operations of the noted MDBs and IFIs.

Table II.1. Lending Instruments of Other MDBs and IFIs Comparable to the IMF

MDB	Type of the instrument	Type of support	Purpose	Conditionality	Eligibility and Access Level	Financial terms and conditions
World Bank (IBRD)	Development policy lending (DPL) for IBRD borrowers	Budget Support	Supports reform programs in IBRD countries.	Prior actions and triggers mutually agreed upon with government.	IBRD countries. The level of access consistent with relevant country	Maturity limit on all IBRD loans up to 18 years and a final maturity limit for blend instruments up to 30 years; usually provided as Fixed Spread Loan (FSL) or variable
	1. Programmatic support/DPL		Address actual or anticipated development financing requirements of domestic or external origin.	Typically, all DPL Board packages are expected to reflect IMF views, including through a separate annex (either the PIN from a program review or Article IV Consultation conducted within the last six months before the time of Board submission or an IMF Assessment Letter).	partnership strategy (CPS).	spread loans (VSL). FSL. The initial interest rate on FSLs consists of (a) a variable base rate of six-month LIBOR in respect of each interest period for each loan; and (b) a spread, fixed for the life of the loan. Variable spread loans(VSL). The lending rate on VSLs consists of: (a) a variable base rate of six-month LIBOR in respect of each interest period for each loan; and (b) a variable spread.
	2. Supplemental financing	IMF-supported program required	Countries already implementing DPL-supported program and facing an unanticipated shock, which can jeopardize program implementation and can result in an urgent and unexpected financing gap (resulting from commodity price shocks, natural disasters, etc.).	No prior actions and triggers additional to those in the original DPO.	Countries already implementing a DPL-supported program.	

	Δ
- 1	
u	$\overline{}$

				_		,
IBRD	3. Special DPL	Part of	For IBRD-eligible countries		All IBRD-eligible	Special DPL Terms are currently:
(cont.)		international	that are approaching or are		countries. Part of	Front-end Fee: 100 bps
		support	in a crisis with substantial		an international	Minimum Interest rate: LIBOR+400
		package	structural and social		support package	bps.
			dimensions, and that have		(including the	
			urgent and extraordinary		IMF).	
			financing needs, the Bank			
			may, on an exceptional			
			basis, provide special DPL			
			beyond the level set out in	The same as for all		
			the CAS.	DPLs. Periodic		
				monitoring of prior		
	4. DPLs with	Precautionary	Address the needs of Bank	actions and key	All IBRD	IBRD lending offers a borrowing
	deferred		clients that are accessing	conditionalities required.	members	option called deferred drawdown
	drawdown option		capital markets for a large	The loan proceeds may		option (DDO), which allows the
	(DPL-DDO)		part of their funding needs	be drawn down at any		IBRD borrowers to postpone
	(applicable with		and do not foresee the need	time during the three-		disbursement of a loan for a defined
	all above		for immediate IBRD	year drawdown period		period, instead of drawing down
	instruments)		disbursements. The DPL	unless the Bank has		funds immediately after approval.
	,		DDO provides access to	notified the borrower that		Key features of DPL DDO: (i) the
			IBRD advisory support and	one of the drawdown		borrower may defer disbursement
			serves as a risk	conditions (e.g.,		of a DPL for up to three years,
			management tool to support	adequate macro		renewable for an additional three
			structural programs in the	framework, prior actions		years; and (ii) during the period in
			event of an unexpected	under the program, etc.)		which resources remain undrawn,
			funding need.	is not being met.		an annual fee on 0.25 percent of
						the undrawn balance is charged.
IFC	Expanded trade	Lending to	Launched or expanded	N/A	Members of the	Financing is expected to total about
	finance program;	selected	facilities to address		World Bank	\$30 billion over the next three
	Bank Recap	companies/	crisis-related problems faced		Group	years; this total includes IFC funds
	Fund;	institutions	by the private sector, critical		·	as well as money mobilized from
	Infrastructure		to employment, recovery,			other sources, including
	Crisis Facility		and growth.			governments and other IFIs.
Inter-	1. Emergency	Budget	Fast-disbursing emergency	Must fit within a macro	Creditworthy	Disbursement periods can range up
American	Lending	support;	lending, as part of an	stabilization program	borrowers	to 18 months. US\$ finding with
Develop-		requires IMF-	international effort to provide	endorsed by the IMF;	potentially in	interest rate tied to the six-month
ment		supported	support for structural and	policy matrix required.	crisis, and with	U.S. dollar LIBOR rate, plus
Bank		program	social reforms. To mitigate	, ,	exceptional	400 bps. They have a five-year term
(IDB)		_	effects of crisis on vulnerable		financing needs.	and a three-year grace period.

	_
7	-
(~

	2. Liquidity Program for Growth Sustainability (2008). Expires December 2009	Investment lending	groups, protect financing of selected social programs. Provide liquidity to regulated financial institutions facing reduced access to foreign credit, so that they can provide trade credit to domestic exporters and producers, and maintain firms' access to working capital. To offset temporary impact of external credit shock).	Require a Fund Article IV Consultation within the last 18 months and an assessment letter at the time of consideration of the loan.	All sovereign borrowers or borrowers with a sovereign guarantee are eligible to borrow from the ordinary capital of the Bank could participate in the program up to \$500 million per country.	Disbursement periods can range up to 18 months. US\$ finding with interest rate tied to the six-month U.S. dollar LIBOR rate, plus 400 bps. Five-year term and a three-year grace period. Ordinary Capital (i) Pool-based
IDB (Contd)	3. Policy-Based Loans (or Sector Adjustment Loans)	Budget Support	Multi-Tranche PBL: support for institutional and policy changes, through fast-disbursing funds. Programmatic PBL: Phased support to a multiyear program of policy reforms and institutional change, through fast-disbursing funds.	Multi- Tranche PBL: Approval of a loan with multiple tranches, each disbursed after verifying completion of conditions. 12-47 conditions (sample from 2000-02 PBLs). Programmatic PBL: Approval of a series of operations that are each disbursed in a single tranche upon achievement of pre- established triggers.		adjustable lending rate option: The interest rate is tied to the average cost of a pool of medium-to-long term borrowings in each loan currency plus the IDB's standard lending spread for that semester. Amortization may go from 15 to 25 years. (ii) LIBOR-based lending rate option: The interest rate is based on three-month LIBOR in the loan currency, plus a cost margin, plus the IDB's standard lending spread. Amortization is 15 to 25 years. Fund for Special Operations (concessional financing): 40 year amortization period, 10 year grace period, interest rate 1% for 10 years, 2% thereafter. FSO resources available to countries with GDP per capita below \$2,193 through a blend of

_	\wedge
_	◺

						OC and FSO in predetermined ratios.
Asian Develop- ment Bank (ADB)	Special Program Loan (SPL)	BOP and budget support; part of an international support package that may include the IMF.	Address crisis situations (e.g., large reversals of capital flows and unexpected swings in relative prices) by providing large-scale lending as part of an international package, usually including IMF and World Bank. Short-term time horizon, large size, quick disbursing (up to three years), nonstandard lending terms, and focus on reducing severity of the crisis.	Broad-based sector reform/development plan that will lift efficiency and performance, comprising in particular policy changes and institutional enhancement, is the basis for program lending. Plan is set forth in a policy statement by the DMC government concerned.	To avail of the SPL, a DMC must be Ordinary Capital Resource (OCR) eligible. Countries that have graduated out of regular ADB assistance are eligible for SPLs.	For all program lending, no individual country ceilings. Total annual program lending cannot exceed 20 percent of total lending on a 3-year moving average basis. Maturity period of an SPL is five years including a grace period of three years. The floor for SPL charges 400 basis points above LIBOR, and the spread is fixed for the life of the loan. In addition, such other charges as are applicable to regular OCR loans also apply to SPLs.
EBRD	Investment lending for crisis response: Corporate Support Facility (ST refinancing, working capital); Trade Finance Program (liquidity, bank guarantees); Bank Recap. Program (equity, sub-debt); Unfunded Risk Participations (syndications)	Investment lending, equity, working capital and commercial funds mobilization.	To support bank balance sheets and corporate sector investment financing and working capital, and to ensure that financing flows (including trade) are not disrupted at times of severely restricted access to finance.	Predominantly private sector operations. Public sector loans (ca. 25 percent of volume) can carry sector policy conditionality. Policy dialogue on bank restructuring and capital market regulation).	30 EBRD member countries; target signings 2009 €7 billion. The scale of operations varies case-by case, mostly in the range \$10–50 million and up to a maximum of around \$250 million per transaction.	Lending terms client driven, but generally linked to a floating rate such as LIBOR. Local currency lending encouraged where local reference rate (e.g., MosPrime, KievPrime). Equity terms individually negotiated; quasi-equity usually floating rate basis with a cap or a collar.

REFERENCES

- Atoyan, Ruben, Eugenio Cerutti, and Uma Ramakrishnan, 2008, "Duration of Capital Account Crises," mimeo, International Monetary Fund.
- Bulow, Jeremy & Rogoff, Kenneth, 1989, "Sovereign Debt: Is to Forgive to Forget?," American Economic Review 79(1), pp. 43–50.
- Calvo, Guillermo A., 2002, "Globalization Hazard and Delayed Reform in Emerging Markets," *Economica* 2(2), pp. 1–29.
- Cohen, Daniel, 1995, "Large External debt and (slow) Domestic Growth: a Theoretical Analysis," *Journal of Economic Dynamics and Control* 19, 1141–1163.
- Cohen, Daniel, and Jeffrey Sachs, 1986, "Growth and External Debt Under Risk of Debt Repudiation," *European Economic Review* 30, pp.529–550.
- Corsetti, Giancarlo, Guimaraes, Bernardo and Nouriel Roubini, 2006, "International Lending of Last Resort and Moral Hazard: A Model of IMF's Catalytic Finance," *Journal of Monetary Economics* 53, pp. 441–471.
- de Resende, Carlos, 2007, "IMF Supported Adjustment Programs: Welfare Implications and the Catalytic Effect," Working Paper 2007–22 (Ottawa: Bank of Canada).
- Federico, Giulio, 2001, "IMF Conditionality," Economics Papers 2001–W19, Economics Group, Nuffield College, University of Oxford.
- Flood, R. and N. Marion, 1998, "Prospectives on the Recent Currency Crisis Literature," NBER Working Paper No. 6380 (Cambridge, Massachussets: National Bureau of Economic Research).
- IMF, 1999, "IMF-Supported Programs in Indonesia, Korea, and Thailand: A Preliminary Assessment", Occasional Paper No. 178 (Washington DC: International Monetary Fund).
- IMF, 2002, "IMF-Supported Programs in Capital Account Crises," Occasional Paper No. 210 (Washington DC: International Monetary Fund).
- IMF, 2005, "The Design of IMF-Supported Programs", Occasional Paper No. 241 (Washington DC: International Monetary Fund).
- IMF, 2007, "Country Insurance: The Role of Domestic Policies", Occasional Paper No. 254 (Washington DC: International Monetary Fund).
- IMF, 2008, "IMF Support and Crisis Prevention", Occasional Paper No. 262 (Washington DC: International Monetary Fund).

- Jeanne, Olivier and Charles Wyplosz, 2001, "The International Lender of Last Resort: How Large is Large Enough?," NBER Working Paper No.8381 (Cambridge, Massachusetts: National Bureau of Economic Research).
- Jeanne, Olivier, and Jeromin Zettelmeyer, 2002, "Original Sin,' Balance Sheet Crises, and the Roles of International Lending," IMF Working Paper, WP/02/234.
- ———, 2005, "The Mussa Theorem (and Other Results on IMF-Induced Moral Hazard)," *IMF Staff Papers*, Vol. 52, Special Issue, pp. 64–84.
- Jeanne, Olivier, Jonathan Ostry and Jeromin Zettelmeyer, 2008, "A Theory of International Crisis Lending and IMF Conditionality," IMF Working Paper, WP/08/59.
- Kim, J., 2006, "IMF-Supported Programs and Crisis Prevention: An Analytical Framework," IMF Working Paper 06/156 (Washington: International Monetary Fund).
- Krugman, Paul, 1988, "Financing versus Forgiving Debt Overhang," *Journal of Development Economics*, 29, 253–268.
- Lerrick, Adam and Allan Meltzer, 2003, "Blueprint for an International Lender of Last Resort," *Journal of Monetary Economics*, 50(1), pp. 289–303.
- Mecagni, M., R. Atoyan, D. Hofman, and D. Tzanninis, 2007, "The Duration of Capital Account Crises—An Empirical Analysis," IMF Working Paper 07/258, (Washington: International Monetary Fund).
- Ostry, Jonathan D. and Jeromin Zettelmeyer, 2005, "Strengthening IMF Crisis Prevention," IMF Working Paper, WP/05/206.
- Penalver, Adrian, 2004, "How can the IMF Catalyze Private Capital Inflows? A model, Bank of England Quarterly Bulletin, Summer 2004, v.44(2).
- Ramakrishnan, Uma and Juan Zalduendo, 2007, "The Role of IMF Support in Crisis Prevention", IMF Working Paper 06/75 (Washington DC: International Monetary Fund).
- Sachs, Jeffrey, 1984, "Theoretical Issues in International Borrowing," *Princeton Studies in International Finance* 54 (Princeton: Princeton University Press).
- ——, 1995, "Do We Need an International Lender of Last Resort?," Frank D. Graham Lecture at Princeton University, Vol. 8, April 20.
- Sturzenegger, Federico and Jeromin Zettelmeyer, 2006, *Debt Defaults and Lessons from a Decade of Crises*, Cambridge and London: The MIT Press.
- Tirole, Jean, 2002, Financial Crises, Liquidity, and the International Monetary System, Princeton and Oxford: Princeton University Press.

Zettelmeyer, Jeromin, 2000, "Can Official Crisis Lending be Counterproductive in the Short Run?," *Economic Notes* Vol. 29, No. 1, pp.13–29.