

The Global Liquidity Safety Net

Institutional Cooperation on Precautionary Facilities
and Central Bank Swaps



The Global Liquidity Safety Net

Institutional Cooperation on Precautionary Facilities and Central Bank Swaps

C. Randall Henning



Copyright © 2015 by the Centre for International Governance Innovation

The opinions expressed in this publication are those of the author and do not necessarily reflect the views of the Centre for International Governance Innovation or its Board of Directors.



This work is licensed under a Creative Commons Attribution — Non-commercial — No Derivatives License. To view this license, visit (www.creativecommons.org/licenses/by-nc-nd/3.0/). For re-use or distribution, please include this copyright notice.



67 Erb Street West
Waterloo, Ontario N2L 6C2
Canada
tel +1 519 885 2444 fax +1 519 885 5450
www.cigionline.org

Acronyms	1
Executive Summary	1
Introduction	1
Precautionary Facilities	2
Central Bank Swap Agreements	6
Which Countries Qualify?	9
Conclusion	11
Acknowledgements	11
Annex: Country Performance on the Criteria for the FCL	12
Works Cited	17
About CIGI	20
CIGI Masthead	20

About the New Thinking and the New G20 Project

The project aims to promote policy and institutional innovation in global economic governance in two key areas: governance of international monetary and financial relations and international collaboration in financial regulation. Sponsored by CIGI and the Institute for New Economic Thinking, the project taps new research and next-generation scholars in the emerging economies, linking them to established networks of researchers in the industrialized world. The objective over the longer run is to create a more permanent and self-sustaining research network that will provide a continuing stream of new ideas, sustain international collaboration and integrate researchers from the emerging economies into global policy discussions.

Miles Kahler and Barry Eichengreen (principals in the original project) recruited C. Randall Henning (new principal, American University) and Andrew Walter (University of Melbourne) to lead two research teams devoted to macroeconomic and financial cooperation and to international financial regulation. Gathering authors from eight countries, the project consists of 11 CIGI papers that add to existing knowledge and offer original recommendations for international policy cooperation and institutional innovation. CIGI will also publish the final papers as an edited volume that addresses the global agenda in these issue-areas.

About the Author



C. Randall Henning is professor of international economic relations at American University in Washington, DC. He specializes in international and comparative political economy, global governance and regional integration. He has focused specifically on regional financial arrangements, the

International Monetary Fund, European monetary integration, fiscal federalism and the Group of Twenty. Currently, he is conducting projects on the fragmentation of global financial governance and the interaction among regional and multilateral economic institutions in the euro crisis. He has his B.A. from Stanford University and his and his Ph.D. from the Fletcher School of Law and Diplomacy, Tufts University.

Acronyms

ASEAN+3	Association of Southeast Asian Nations plus China, Japan and South Korea
BIS	Bank for International Settlements
BoJ	Bank of Japan
BRICS	Brazil, Russia, India, China and South Africa
CMIM	Chiang Mai Initiative Multilateralisation
CRA	Contingent Reserve Arrangement
ECB	European Central Bank
ECCL	Enhanced Conditioned Credit Line
ESM	European Stability Mechanism
FCL	Flexible Credit Line
FSAP	Financial Stability Assessment Program
G20	Group of Twenty
IMF	International Monetary Fund
PBoC	People's Bank of China
PCCL	Precautionary Conditioned Credit Line
PCL	Precautionary Credit Line
PLL	Precautionary and Liquidity Line
QEDS	Quarterly External Debt Statistics
RFA	regional financial arrangement
SBA	standby arrangement
SDDS	Special Data Dissemination Standard
SDR	Special Drawing Right
SLF	Short-Term Liquidity Facility
WEO	World Economic Outlook

Executive Summary

The global financial safety net is incomplete with respect to the provision of liquidity in a crisis and both providers and users would benefit from closing the gaps in coverage. This paper examines the proliferation of precautionary facilities and central bank swaps over the last seven years. It recommends harnessing the surveillance and analytical capacity of the International Monetary Fund (IMF) to the precautionary facilities of regional financial arrangements and the swap agreements of key-currency central banks. First, regional and plurilateral facilities should make the IMF's qualification of a member for a Flexible Credit Line (FCL) sufficient to grant access to one of their own precautionary facilities. Second, qualification for an FCL should create a presumption that key-currency central banks extend swap agreements to those countries' central banks. Inferring the thresholds for qualification from the economic performance of the three countries that have been given FCLs and applying them to recent indicators, the paper identifies the additional countries that would likely qualify. These proposals would exploit the comparative advantage of global and regional institutions while reducing the fragmentation of the system.

Introduction

Global economic governance contains a dangerous gap. While key-currency central banks provide currency swaps to one another, they do not have mandates to provide liquidity for the global financial system. Although the IMF is able to create Special Drawing Rights (SDRs), international institutions have neither the resources nor the decision-making arrangements to provide liquidity on the scale or at the speed required by a global crisis. This state of affairs leaves small- and medium-sized countries at all levels of development exposed to a seizing up of short-term capital and bank-funding markets, among other liquidity problems.

There has been some progress in providing for potential liquidity needs beyond the Group of Ten countries. Key policy makers and academics have offered a number of proposals to expand the coverage of the global financial safety net. But, for several reasons, that coverage remains incomplete. Meanwhile, emerging markets open domestic financial markets further, the international regulatory community inveighs against ring-fencing banks' liquidity in crises and global financial integration deepens — trends and tendencies that are at odds with gaps in the safety net.

Completing the safety net engages the relationship between regional financial arrangements (RFAs) and the IMF. This relationship is the focus of a growing policy and academic literature, as well as the agendas of the international institutions, particularly in the aftermath of the euro crisis and experience with the “troika.” This literature generated a set of recommendations for cooperation between the IMF and the

RFAs that is mainly focused on surveillance and balance-of-payments financing.¹ The global financial crisis and the euro crisis witnessed the proliferation of central bank swap arrangements and precautionary facilities and highlighted liquidity as an arena of inter-institutional conflict and cooperation.

The global financial safety net is conventionally defined as a “network of country insurance and lending instruments — encompassing multilateral institutions like the IMF, RFAs, bilateral creditors, and individual countries’ own defenses — that countries could draw on to cope with financing shortfalls, volatility and contagion from a crisis” (Miyoshi et al. 2013, 4). This paper is concerned specifically with the patchwork of precautionary lending facilities and central bank swap agreements that help to shield high-performing countries from contagion — a subset of the broader network that is labelled here the “global *liquidity* safety net.”

This paper examines the proliferation of these arrangements over the last several years and the considerations of both providers and users. It seeks to extend the liquidity safety net while avoiding fragmentation among global and regional institutions. The paper recommends harnessing the surveillance and analytical capacity of the IMF to the broader network of liquidity provision in three ways. First, regional and plurilateral financial facilities should make the IMF’s qualification of an FCL member sufficient to qualify their own members for precautionary lending windows. Second, the Fund’s FCL qualification should also create a presumption that countries receive support from a key-currency central bank in the form of a currency swap arrangement. That support, third, can be tiered regionally, with each leading central bank extending coverage to qualifying countries in its area, in local currency in the case of the Federal Reserve and European Central Bank (ECB), but in US dollars for the moment in the case of the Bank of Japan (BoJ). The People’s Bank of China (PBoC) might someday step into this role once China liberalizes its capital account and the renminbi develops a broader role in international financial markets.

This paper argues that the status quo is Pareto *suboptimal*: some actors can be made better off without making others worse off. There is demand for access to liquidity by deserving states that is not being satisfied, while the objections of reticent liquidity providers can be addressed. We can identify a bargain that can bridge the gap. But some proposals to do so would place heavy demands on the institutional machinery and political cohesion of the Group of Twenty (G20). While many of those proposals are desirable objectives in the long run, realism counsels that we consider middle-range solutions today.

The next section describes the introduction of precautionary lines of credit at the IMF and their proliferation to East Asia and Europe over the last five years. The second section discusses the central bank swap arrangements and proposals for their multilateralization. Both sections present proposals for aligning the use of these liquidity facilities with FCL qualification. To give concreteness to these proposals, the third section identifies the countries that would be likely to qualify for an FCL on the basis of the criteria and country performance through the end of 2013.

Precautionary Facilities

Global and regional institutions have acknowledged the need for precautionary financing for some time, but only responded robustly with the global financial crisis of 2008-2009. Precautionary financing differs from regular balance-of-payments financing in being available for countries prior to the actual need to draw on the line of credit. It is designed to protect countries with sound policies (that is, which do not need to adjust fundamental policies), but which could nonetheless be sideswiped by financial contagion in a crisis. By giving confidence to financial markets that liquidity is available if needed, such countries could be spared sudden stops of capital inflows. Precautionary lines of credit need not be drawn upon to be effective; but their credibility relies on disbursing funds immediately when called and in large quantities.

The IMF

Development of precautionary facilities became a priority in the aftermath of the Asian financial crisis of 1997-1998.² Officials at the IMF and in the finance ministries identified the need for a broader range of instruments for crisis contingencies, including quick-dispersing short-term financing. In so doing, they sought to address criticism of the IMF’s approach on the part of some Asian officials that standby arrangements (SBAs) were not appropriate for what they argued had been a “capital account crisis” (Ito 2007; 2012; Henning and Khan 2015).

After a couple of false starts in the late 1990s and early 2000s, the Fund introduced the Short-Term Liquidity Facility (SLF) shortly after the Lehman Brothers crisis in fall 2008.³ The SLF was quickly followed by the FCL in 2009 and the Precautionary Credit Line (PCL) in 2010. The Precautionary and Liquidity Line (PLL) replaced the PCL in November 2011.

2 On the evolution within the IMF, see Boughton (2001, 747-48; 2012, 187-251).

3 The SLF was announced on the same day that the Federal Reserve announced a series of new swap arrangements. This is further discussed below.

1 See, for example, Henning (2002; 2011; 2013), Kawai (2010), Kawai and Lombardi (2012), Miyoshi et al. (2013), Rhee, Sumulong and Vallé (2013), Sussangkarn (2011) and Volz (2012).

Table 1: IMF Criteria for PLL and FCL Qualification

PLL Qualification Area	FCL Qualification Criterion
I. External Position and Market Access	1. Sustainable external position. 2. A capital account position dominated by private flows. 3. A track record of steady sovereign access to international capital markets at favorable terms. 4. A reserve position that is relatively comfortable when the arrangement is requested on a precautionary basis.
II. Fiscal Policy	5. Sound public finance, including a sustainable public debt position determined by a rigorous and systemic debt sustainability analysis.
III. Monetary Policy	6. Low and stable inflation, in the context of a sound monetary and exchange rate policy.
IV. Financial Sector Soundness and Supervision	7. Absence of bank solvency problem that pose an immediate threat of a systemic banking crisis. 8. Effective financial sector supervision.
V. Data Adequacy	9. Data transparency and integrity.

Source: IMF (2014a).

With respect to the FCL, the Fund would establish access limits in each case but there would be no general ceiling; amounts in excess of 1,000 percent of quota would be subject to an assessment of the impact on the liquidity of the IMF. Once approved, a member would have access for either one or two years, at the discretion of the executive board. Because the threshold for qualification was high, qualifying countries would not be subject to conditionality *ex post* and, once the FCL was approved, drawings would not be subject to Fund review:

An FCL arrangement shall be approved upon request in cases where the Fund assesses that the member (a) has very strong economic fundamentals and institutional policy frameworks, (b) is implementing — and has a sustained track record of implementing — very strong policies, and (c) remains committed to maintaining such policies in the future, all of which give confidence that the member will respond appropriately to the balance of payments difficulties that it is encountering or could encounter. (IMF 2014b, 23)

The Fund established nine criteria by which “very strong” would be judged. Those are presented in Table 1 alongside the five criteria for the PLL. To qualify for a PLL, members had to show “strong” performance on most of the five criteria (at least three) and no substantial underperformance in any one of them. The modalities were further spelled out in guidance notes to staff. But substantial room for judgment remained and the standard for qualification was actively debated among members

of the IMF executive board. Staff and the board review these arrangements regularly at three-year intervals.⁴

Three countries qualified for the FCL — Colombia, Mexico and Poland — and staff analysis indicates that access to the facility eased funding conditions during and after the crisis. Nonetheless, the IMF was disappointed that a larger number of countries did not formally apply for qualification. Potential qualifiers had a number of reservations about precautionary facilities generally, as well as the FCL in particular. First, countries did not want any rejection to become known to the capital markets. Members thus approached the staff informally in advance of any official application. Second, countries were sensitive to being removed from the list of qualifiers. Unless they could be confident that they would not be dropped at an inopportune moment in the future, they would not seek qualification as long as funding conditions were benign. Third, despite substantial transformation since the 1997-1998 crisis, the IMF still carried stigma in the domestic discourse within several member countries.

Soul-searching over the fate of these facilities produced a number of constructive suggestions. Drawing on IMF Article IV consultations and the Financial Stability Assessment Programs (FSAPs), the Fund could automatically assess all members for suitability for precautionary lines. Members would not have to make specific requests and the results could be confidential, so markets would not know which countries were qualified and, once qualified, possibly delisted. This procedure, though not yet adopted, came to be known as “prequalification” (see IMF 2010a; Truman 2010; Rajan 2014). To assuage the stigma associated with Fund programs, groups of countries could be qualified for parallel FCLs together. This author has proposed that a country that qualified for an FCL should be deemed to satisfy the IMF link under first the Chiang Mai Initiative and then Chiang Mai Initiative Multilateralisation (CMIM) (Henning 2002; 2009; 2011).

East Asia

In response to the global financial crisis, the 10 members of the Association of Southeast Asian Nations plus China, Japan and South Korea (ASEAN+3) — introduced several reforms to its regional financial arrangements. The group multilateralized the Chiang Mai Initiative, dedicating \$240 billion⁵ to it, established the ASEAN+3 Macroeconomic Research Office and launched the introduction of a precautionary line of credit.

The precautionary line would, in principle, qualify members *ex ante* for up to two years for six-month financing, in the case of funds that were not linked to an IMF program, and for one-year

4 During the 2014 review, for example, staff introduced a new index for measuring external stress and broadened the indicators used for the strength of policy-making institutions.

5 Unless otherwise noted, all currency is in US dollars.

financing in the case of funds that were linked. Combining the unlinked and linked portions, the five largest countries within ASEAN could each access up to \$22.76 billion. A country that drew liquidity support under a precautionary arrangement, but then experienced a deepening of its crisis, could turn to the CMIM Stability Facility for financing with a three-year maturity.⁶

The 2012 ASEAN+3 finance ministers' statement identified the criteria by which qualification would be assessed. These were phrased identically to the five criteria for the PLL of the IMF, which were consistent with but not as specific as the nine criteria for the FCL. But it is unclear what standard the ministers will apply when assessing potential qualifiers on these criteria and, in particular, whether members must meet the relatively relaxed and somewhat vague standard of the PLL ("sound") or the higher standard ("very strong") of the FCL. The deputy finance ministers are preparing a matrix of economic and financial indicators in order to backstop the qualification assessments.⁷

The Euro Area

The Treaty Establishing the European Stability Mechanism (ESM) provides for precautionary arrangements for the euro-area member states.⁸ There are two types, broadly paralleling the distinction between the IMF's precautionary facilities: the Precautionary Conditioned Credit Line (PCCL) and the Enhanced Conditions Credit Line (ECCL). Similar to the FCL, the PCCL is available to countries whose policies are "fundamentally sound," while the ECCL is available to those whose economic and financial policies "remain sound" but do not comply with the higher standard. Assistance can take the form of either loans or purchases of bonds directly from the issuing government on the primary market.

The criteria by which eligibility for the PCCL and ECCL is to be judged fit within, but differ from, those of the IMF.⁹ The ESM has adapted the criteria to the circumstances of the monetary union by, for example, dropping inflation and monetary policy, over which the individual members no longer have control. It has also dropped data adequacy, on the assumption that this is fulfilled under countries' other treaty obligations, and financial sector supervision, which migrated in 2014 to the ECB in the case of large banks.

6 See the ASEAN+3 May 2012 finance ministers' statement at www.amro-asia.org/wp-content/uploads/2012/05/120503AFMGM+3-JS.pdf.

7 See paragraph 9 of "The Joint Statement of ASEAN+3 Finance Ministers and Central Bank Governors, May 3, 2014, Astana, Kazakhstan," available at www.amro-asia.org/wp-content/uploads/2014/05/20140503_ASEAN+3_Joint-Ministerial_Statement-for-Ministers-Meeting_final-for-distribution.pdf.

8 See Article 14 of the ESM at www.esm.europa.eu/pdf/ESM%20Treaty%20consolidated%2003-02-2015.pdf.

9 See the ESM's Guideline on Precautionary Financial Assistance, available at www.esm.europa.eu/about/legal-documents/index.htm?lang=-en.

Sustainable debt, sustainable external position, access to capital markets and bank solvency are common to the IMF and ESM criteria lists. Even these criteria are specified differently, though. Euro area countries must respect the Excessive Deficit Procedure under the Stability and Growth Pact and the Excessive Imbalances Procedure. During the euro crisis, European officials differed with IMF staff over these rules of the monetary union and, publicly, over how debt sustainability should be assessed. Whether these differences in how the IMF and ESM define the criteria complicate cooperation in specific cases remains to be seen, but there is potential for divergent assessment.

Legally, it is possible for the ESM to extend precautionary financing to a member without a parallel arrangement with the IMF. But the ESM treaty specifies that these assessments "shall be conducted together with the IMF," "wherever appropriate and possible."¹⁰ During the sovereign debt crisis of 2010–2013, the creditor countries within the euro area strongly preferred to include the IMF in programs. Thus, the link remains strong in political terms.

Note that in September 2012, the ECB made access to Outright Monetary Transactions contingent on the requesting country also striking an agreement with the ESM on precautionary financing. Such an agreement would have to provide for ESM purchases on the primary market and would, when possible, be negotiated in conjunction with the IMF.¹¹

During 2013–2014, Ireland, Portugal and, prematurely, Greece considered precautionary arrangements with the Fund and the ESM as insurance against volatility associated with tapering from quantitative easing during the exit from their troika programs. The IMF and European institutions would have coordinated their approach through the troika. These arrangements would probably have been precautionary SBAs, rather than FCLs or PLLs, and were in the end declined.

The BRICS

Brazil, Russia, India, China and South Africa (BRICS) are establishing a precautionary facility and short-term balance-of-payments facility under the Contingent Reserve Arrangement (CRA), announced in July 2014 along with the creation of the New Development Bank.¹² The facilities can together provide up to the amount of their contribution to the CRA in the case of Brazil, Russia and India (\$18 billion) and twice the contribution in the case of South Africa (\$10 billion). Of these amounts, 30 percent can be released without a parallel

10 See www.esm.europa.eu/pdf/ESM%20Treaty%20consolidated%2003-02-2015.pdf.

11 See www.ecb.europa.eu/press/pressconf/2012/html/is120906.en.html.

12 See "Treaty for the Establishment of a BRICS Contingent Reserve Arrangement," Melbourne, June 21, 2014, available at www.pbc.gov.cn/publish/english-

arrangement with the IMF, while the remaining 70 percent is linked to the IMF — proportions that match exactly those in effect within the CMIM at the time. Decisions on qualification would be decided by five directors, appointed from the central bank staffs of each of the five members, a “Standing Committee.” The criteria by which the Standing Committee will assess the merits of qualification may not have been decided and have not been disclosed. But conditions for approval include submission of documents and data, *pari passu* treatment at a minimum and the absence of arrears to the other BRICS and multilateral or regional financial institutions. In addition, members must be in compliance with surveillance and disclosure obligations of the IMF — IMF Article IV, sections 1 and 3, and Article VIII, section 5, are specified.¹³ The reason for this provision, no doubt, is that the IMF’s Article IV reports are the best regular source of economic and financial information that the BRICS have about one another.¹⁴

Table 2: Proliferation of Precautionary Facilities, 2009–2014

Institution	Name of Facility	Link to IMF
IMF	Flexible Credit Line	N/A
	Precautionary and Liquidity Line	N/A
CMIM	Precautionary Line	Above 30 percent of allotment
ESM	Precautionary Conditioned Credit Line	Informal, not strictly necessary
	Enhanced Conditioned Credit Line	Informal, not strictly necessary
BRICS	Contingent Reserve Arrangement	Above 30 percent of allotment

Source: Author.

The Problem

Precautionary lines of credit have thus proliferated as regional and plurilateral financial facilities followed the path paved by the IMF. While these precautionary windows have been substantially predicated on IMF assistance, the correspondence of the qualification criteria is unclear and the link is untested. Only the IMF has formally qualified members for precautionary lines and none of these institutions, including the IMF, have disbursed through precautionary arrangements.

13 Ibid., see Article 14 (b) (v).

14 The regional facility in Latin America, the Latin American Reserve Fund, has long maintained a liquidity facility for credits to member central banks of one year or less. Over 1978–2013, it provided a total of \$4.4 billion to members and it has extended these credits independently from the IMF (Titelman 2006; Ocampo and Titelman 2012; Latin American Reserve Fund 2013; Haggard 2013). It has not yet introduced a precautionary facility.

Regional and plurilateral facilities face a fundamental problem in the administration of precautionary arrangements: extraordinarily high requirements for information and analysis of the economic and financial situation of member countries. By virtue of their precautionary nature — in which credit is made available to countries that are potentially exposed to a liquidity crunch through no deficiency of their own, but by virtue of their integration into international financial markets — these financing windows require evaluation and qualification *ex ante*. This requires, in turn, not simply the disclosure of a host of economic and financial indicators, policy settings and features of policy institutions, but also the analysis of vulnerabilities and modelling of stress scenarios.

Only a technically sophisticated, well-resourced and independent international secretariat can provide this. Some regional arrangements are in the process of building this capacity for surveillance and analysis. But the BRICS do not seem to be creating one to backstop their CRA. In general, regional arrangements are currently unable to adequately assess the risks of extending precautionary coverage to their members. The ESM is the single exception; in addition to its own staff, which is growing, the ESM board of governors can call upon the formidable resources of the European Commission and the ECB. While the European institutional machinery might be technically capable, however, the euro crisis shows that member states have also wanted to have the IMF involved when taking on such exposures.¹⁵

A Solution

By contrast, the IMF *does* have the capacity for *ex ante* qualification for precautionary financing. Until such time as the regional and plurilateral facilities build their own capacity in this respect, they can, in effect, “borrow” the capacity of the IMF. *They should accept the IMF’s qualification of members for an FCL as sufficient for qualifying their own members for precautionary financing from within the region.* This principle should hold under both regular qualification for FCLs at the Fund, as it is now practiced, and for *pre*qualification, as has been proposed. Under *pre*qualification, the IMF could compile and maintain a list of countries to which FCL access could be granted if the country in question placed an official request.

What would such a principle provide beyond the IMF links that are now embodied in the regional arrangements? First, regional arrangements are vague about the kind of IMF program to which their precautionary windows are linked. This solution would clarify that the link is to FCL qualification (or perhaps to PLL qualification in the case of regional precautionary windows with a lower threshold). Second, by reducing but not eliminating ambiguity in the criteria, this proposal would create

15 See, for example, Pisani-Ferry, Sapir and Wolff (2013), Leipold (2013) and Henning (2014).

greater certainty about the policy standard that countries would have to meet.

Third, there is a risk that multiple facilities would either slough the task of providing precautionary financing onto one another or compete by easing qualification criteria. This proposal would reduce the risk of interference among global, regional and plurilateral facilities. Fourth, liquidity crises, such as the 2008–2009 meltdown, are global problems that require the pooling of risk on a global basis; regional arrangements may not have the diversity, resources and credibility to respond to such a crisis on their own. For such contingencies, it is important to align the work of the Fund with that of the RFAs.

Finally, the proposal would allow a division of labour between the IMF and the RFAs. Most RFAs — Europe is again the exception — might arguably design their surveillance and analytical capacities to complement rather than overlap with the IMF. By outsourcing precautionary qualification in this way, RFA secretariats can concentrate on areas of genuine comparative advantage within their regions, economizing on staff and budget resources.

Deference to the Fund on FCL qualification does not mean subjugation of the regional arrangement to the IMF. The regions maintain separate decision making on the qualification of members and disbursement of funds. When a regional arrangement develops a robust analytical capacity that inspires the confidence of regional creditors, it can bring qualification for precautionary windows in-house. With particular respect to Europe, non-Europeans might argue that European institutions should assume the full responsibility for providing liquidity within the euro area. Many Europeans share that view but, as of this writing, their regional arrangements have not extended precautionary financing independently of the Fund.

The benefits would be mutual. While relying on the IMF's surveillance and analysis in qualification, regional arrangements would augment the resources that were mobilized by a decision to qualify and help to assuage the stigma that is sometimes associated with the Fund. With greater resources released by qualification, members themselves would be the principal beneficiaries.

Central Bank Swap Agreements

During the global financial crisis, the Federal Reserve extended swap arrangements to 14 other central banks. The ECB drew very heavily, followed by the BoJ. At one point during the crisis in 2009, outstanding swaps amounted to more than \$580 billion and represented about one-quarter of the Fed's balance sheet. The novel element of this effort was the extension of swaps to four countries outside the usual set of advanced-country central

banks: Mexico, Brazil, South Korea and Singapore.¹⁶ Mexico previously had a standing swap facility with the Federal Reserve by virtue of geographic proximity and the North American Free Trade Agreement, but the new arrangement expanded the amount that Mexico's central bank could draw and the Fed's swaps with Brazil, South Korea and Singapore broke new ground. The swaps in general were credited with preventing a more serious seizing up of interbank lending and financial markets during 2008 to 2009 (Helleiner 2014, 38–45; Prasad 2014, 202–11; IMF 2013a; 2014a, Box 2).

The Federal Reserve board of governors considered the “boundary” question at length, torn between opening itself up to additional demands for coverage from emerging markets and creating stigma against those left outside the safety net. Fed officials used economic size and connections to international financial markets as the main criteria for selecting Brazil, Mexico, Singapore and South Korea. Chile, Peru, Indonesia, India, Iceland and likely others also requested swaps but were denied. The governors wanted to deflect requests by additional countries to the IMF, which coordinated its announcement of the SLF with the Fed's announcement of the additional swaps at the end of October 2008. Governors and staff saw in this tiering a natural division of labour that coincided with the resources and analytical capacity of the Fed and IMF.¹⁷

The ECB extended swaps to Hungary, Poland, Sweden, Switzerland and Denmark, in addition to its arrangement with the United States. The BoJ extended swaps as well, notably to South Korea after the Federal Reserve announced its Korean swap. The PBoC began to conclude a set of swap agreements with Asian and non-Asian central banks that would eventually number more than 20 and amount to RMB 2.57 trillion. Only those swaps with the central banks of Hong Kong, Singapore and South Korea are known to have been activated (Zhang 2015, 5). Boosting the role of the renminbi in international trade was the express objective of these swaps, although their establishment also helped to secure market confidence during unsettled times.

The proliferation of swaps resulted in a set of star-shaped networks of agreements among central banks that were linked by Fed liquidity (Allen and Moessler 2010). Although a number of the swaps in the network were activated, only those swaps of the Federal Reserve were heavily used during the crisis.

The “fortunate four” emerging market countries among the Fed 14 were each covered for amounts up to \$30 billion, but only temporarily. When the Fed later declined to renew the swaps,

16 The other eight central banks were those of Australia, Canada, Denmark, New Zealand, Norway, Sweden, Switzerland and the United Kingdom.

17 See www.federalreserve.gov/monetarypolicy/files/FOMC20081029meeting.pdf. See also Prasad (2014); Broz (2014), who finds that the extension of swaps is associated with exposure of US banks; and Aizenman and Pasricha (2010).

these countries became as vulnerable to liquidity shortfalls as the others. So, when South Korea took the chair of the G20 in 2010, its government proposed that the central bank swaps be multilateralized on a more permanent basis. It argued this would be increasingly necessary to stabilize the global financial system and would be in the interest of swap providers and recipients alike. Specifically, during the preparations for the G20 summit, South Korean officials proposed that the advanced-country central banks provide swaps to the IMF, which would conduct due diligence and provide liquidity to qualifying central banks. In this way, the global community could mobilize enough resources to address even a massive liquidity crunch and central banks would avoid credit risk.

Although developing countries and emerging markets strongly favoured the proposal, the key-currency countries were predictably opposed. US officials in particular raised several objections. First, central banks would not be willing to give up control over the terms and the recipients of swap activation in this way. Second, in the United States, the Treasury is the only agency through which financial resources can flow to the IMF, by virtue of the Bretton Woods and Related Agreements Act. Third, except insofar as required to deflect spillback into US banking and financial markets, the Fed has no mandate to stabilize the international financial system generally. The Fed, in other words, is not and cannot serve as the world's central bank. Finally, IMF mediation of swaps would hand control to finance ministries, which would be anathema to independent central banks. The Bank for International Settlements (BIS), in apparent deference to its largest members, showed no interest in adopting such a role (BIS 2008). US officials thus urged the Koreans and their supporters to pursue development of the precautionary facilities at the Fund instead.

In late 2013, six key-currency central banks made their temporary swap arrangements permanent standing facilities. Each central bank entered into a bilateral arrangement with the five others, comprising a network of 30 such agreements.¹⁸ But they prefer to maintain a constructive ambiguity with respect to whether they would re-extend swap arrangements to the other central banks that were covered during the global financial crisis, including Brazil, Mexico,¹⁹ South Korea and Singapore (Papadia 2013).

Persistence of the gap carries costs for all actors, however. Many countries secure insurance against capital outflows and firm illiquidity by amassing international reserves in US dollars and other key currencies. Self-insurance is not the only motive for reserve accumulation; trade competitiveness motives are also clearly at work. Reserve accumulation has nonetheless

18 See www.federalreserve.gov/newsevents/press/monetary/20131031a.htm. In addition to the Federal Reserve, the other central banks are the Bank of Canada, the Bank of England, the BoJ, the Swiss National Bank and the ECB.

19 Mexico retains a smaller \$6 billion swap facility with the US Treasury and Federal Reserve under the North American Framework Agreement.

been massive and has distorted current account imbalances and international payments (Gagnon 2012; Bergsten and Gagnon 2012). Another cost is the likely tendency of countries to ring-fence liquidity and renationalize banking in the teeth of financial crises. If we wish to avoid these costs, the lack of congruency between vulnerability and liquidity coverage will have to be addressed.

Thus, while it has not been adopted, the idea of a broad, multilateralized safety net of swap agreements has thrived.²⁰ Under one of Edwin M. Truman's proposals, the IMF would intermediate liquidity between key-currency central banks and a broader array of potential users in a systemic crunch through the issuance of SDRs to central banks to fund these operations (Truman 2008, 15–17, 30; 2010, 24). He also advocates that the Fund prequalify all of its members for access to the range of precautionary and regular facilities as appropriate in light of assessments in the course of IMF Article IV and FSAP consultations, “comprehensive prequalification” (Truman 2010, 21–23). Arguing that a safety net was important in the context of volatility from the tapering from quantitative easing, Raghuram G. Rajan (2014) reiterates the essence of the original Korean proposal and advocates confidential prequalification for IMF liquidity lines.

A Middle-range Proposal

The adoption of a seamless global liquidity net would require a comprehensive negotiation. The political requirements for a successful outcome are formidable and it remains to be seen whether this can be achieved. In the meantime, we can make substantial progress on this agenda by entertaining some middle-range proposals that do not require a new global multilateral agreement or a change in the IMF Articles of Agreement. In particular, *countries that qualify for an FCL under the criteria used by the IMF and establish an FCL agreement should be eligible for swap agreements with key-currency central banks*. The remainder of this section develops this proposal in more detail.

Risk is a legitimate concern on the part of key-currency central banks. In the domestic context, some central banks were protected by their governments against losses on liquidity operations during the global financial crisis. As creatures of states, all central banks are ultimately connected to the fiscal authority in an *ex post* fashion: losses on central bank portfolios are effectively transferred with the payment of net income to the government. But to avoid impairment of central bank capital — setting aside for the moment the question of whether such capital is a meaningful concept — they prefer such indemnification \times

The Federal Reserve was backstopped by the US Treasury in liquidity-support operations during the subprime crisis through

20 This can be seen in IMF (2010a), Truman (2008; 2010; 2013), Prasad (2014, 219–26), Farhi, Gourinchas and Rey (2011, 33–39), Kahn (2013) and, more recently, Rajan (2014). Truman is probably the most prolific on this subject.

the Term Asset-Backed Securities Loan Facility.²¹ Treasury injection of capital into the large banks through the Troubled Asset Relief Program, which would have taken first losses in any failure, also provided a measure of protection for the Fed. The Bank of England was fully indemnified by the UK Treasury against losses on its Asset Purchase Facility.²² Governments should, in principle, bear the risk of massive liquidity operations when a crisis demands it.

The problem at the international level so far has been the absence of effective indemnification of potential losses of central bank liquidity operations. In the absence of the kind of guarantees that central banks received at the domestic level, who can blame them for caution in extending international swap arrangements? Advocates of expanding the liquidity safety net would usefully concentrate on filling this gap.

Incomplete information and analysis about potential swap recipients compounds the problem of risk. Key-currency central banks need these in real time, or close to it, in order to judge risk in these counterparties. The demands on central bank intelligence could multiply if swap coverage were extended to a large number of small- and medium-sized emerging market countries.

The problems of risk and information could be addressed, short of sweeping reforms requiring amendments to the articles, by the IMF and key-currency central banks marrying the FCL to the swap arrangements. The IMF's threshold for qualification for an FCL is high and a country that the IMF executive board deems eligible should, in principle, be sufficiently low-risk to pose no difficulty for key-currency central banks. Therefore, FCL-qualifying countries should also be eligible for a central bank swap. Such eligibility could be extended to countries that prequalify, should proposals for FCL prequalification ever be adopted by the Fund. Should the IMF also introduce group qualification, swaps could be available to all members of the group (Truman 2010, 23; IMF 2010b, 8-9).

The reason is not simply that the country in question has sound policies and a well-regulated banking system. It is also that disbursements under the swap can be reversed at maturity from drawings on the FCL if alternative sources are not available at that time. There are precedents for this type of "takeout." During the 1970s, the Federal Open Market Committee made drawings on swaps by the United Kingdom and Mexico contingent on their turning to the IMF if they could not repay drawings on time. The US Treasury and the BIS have made bridge loans prior to IMF programs that have been repaid with drawings on SBAs (Henning 1999, 58-59).

The degree to which key-currency central banks would be obliged to provide a swap is a sticking point. Central banks prefer complete discretion to decide whether to extend a swap arrangement to FCL qualifiers. However, the essence of this proposal would be to introduce a *strong presumption* that FCL qualifiers would receive a swap as well — one step away from unconstrained discretion on the part of the Fed, the ECB and the BoJ. The guarantee that a swap could be reversed at expiration — backstopped by the Fund with its members collectively standing behind it — would justify this step. Central banks that refused a swap agreement to an FCL qualifier would, at a minimum, be obligated to explain their refusal in closed-door meetings at the Fund and the BIS. Once swap providers become comfortable with IMF qualification under this proposal, automatic eligibility could be considered.

To be clear, this paper is *not* suggesting that countries *must* meet the FCL criteria to be eligible for swap agreements. While FCL qualification would create a presumption of access to central bank swaps, FCL qualification would *not* be *necessary* for swap agreements. Even in the absence of FCL qualification, central banks could nonetheless enter into swap agreements with whichever central bank counterparties they please. The introduction of this norm would certainly not require the six advanced-country central banks to dissolve their permanent swap agreements. This proposal would instead expand the coverage of the network of star-shaped clusters of swap agreements by making those countries that qualify for the FCL eligible.

Benefits

Adoption of the proposal would have benefits for swap recipients, swap providers and the IMF.

The swap recipient would, first, have access to greater liquidity than under the FCL alone. Second, central bank swap liquidity could be more appropriate than the FCL drawings for some contingencies. Ninety- or 180-day funds at a fee of 0.5 percent over the central bank lending rate, for example, would be better suited for a very short-term bank-funding problem.²³ Fees that apply to drawings among the five key-currency central banks in the future could be lower and will be agreed at the time of the drawing.²⁴ By comparison, FCL drawings have a maturity of 3.25–5 years at surcharges above the basic rate of charge of 200 basis points for drawings above 300 percent of quota, and 300

23 Under the early agreements during the global financial crisis, the Federal Reserve lent at the Overnight Indexed Swap rate plus one percent. This was reduced to 50 basis points in November 2011 (Kamin 2011). The Fed posts the texts of swap agreements at www.newyorkfed.org/markets/liquidity_swap.html and www.newyorkfed.org/markets/liquidity_swap_archive.html. See also www.federalreserve.gov/newsevents/reform_swaplines.htm and www.federalreserve.gov/monetarypolicy/bst_liquidityswaps.htm.

24 See section 4(b) of the Swap Agreement at www.newyorkfed.org/markets/USD_Euro_swap_agreement.pdf.

21 See, for example, Stolz and Wedow (2010), www.newyorkfed.org/markets/talf_faq.html and www.intereconomics.eu/archive/year/2010/6/759/.

22 See www.bankofengland.co.uk/monetarypolicy/Pages/qe/facility.aspx.

basis points for drawings above that level that are outstanding for more than three years.²⁵

The IMF would benefit from leveraging its resources, enhancing the attractiveness of the FCL, appealing to a greater number of users and expanding its institutional mission by bringing together swap providers and users in this way. This proposal could also help pave the way for general acceptance by members of prequalification.

The swap-providing key-currency central bank would have two main benefits under this arrangement. First, as mentioned, it would be effectively shielded against losses by the recipient's ability to draw on the FCL to redeem swap obligations, at least up to the amount of the FCL. Second, the provider would benefit from the institutional infrastructure for surveillance and the analytical capacity of the IMF, which even the key-currency central banks themselves do not maintain. For their part, the governments of the United States, euro area and Japan would benefit (compared to extending swaps simply on a bilateral basis) from the risk-sharing across the entire IMF membership that comes with FCL backstop.

Note that elements of the proposal have already been introduced into some of the existing arrangements. The BoJ has made an IMF program a condition for India activating its bilateral swap arrangement beyond the first 20 percent. And the new BRICS swap arrangement, the CRA, explicitly conditions access on the borrower having an agreement with the IMF or good prospects for concluding one soon. The proposal advanced here would generalize this practice and connect the bilateral qualification for swap arrangements to the multilateral process of FCL qualification.

Possible Objections

Notwithstanding these benefits, two further objections might be raised to this proposal to link swaps to FCL qualification: that swap drawings could derail domestic monetary policy and that regulation of bank liquidity management is preferable.

First, cautious central bankers sometimes worry that drawings on swap agreements could excessively inflate monetary aggregates. Such a concern would be heightened in a global systemic crisis, when several countries might activate their swaps simultaneously.²⁶ By this line of argument, proposals that would expand the swap network or make swaps permanent should be resisted. During a liquidity panic, though, central banks should indeed provide it. Supply accommodates the demand for money in this case without putting upward pressure on prices. As panic subsides, central banks can reverse their swap drawings more or less in tandem, as the ECB did with its drawings on the Fed

over the course of 2009. Although they amounted to more than \$580 billion at their peak, total drawings on the Fed through these swaps produced no discernible inflation in the United States.

Second, one might argue that private banks have no business conducting maturity transformation in a currency in which they do not have access to a central bank discount window.²⁷ The ECB funded European private banks with drawings on the Fed, as those banks were caught short when their usual sources of dollar funding dried up after the Lehman bankruptcy. Had the maturity mismatch instead been located on the balance sheets of the US subsidiaries of European banks, which have access to the Fed discount window, much of the swap operation might have been unnecessary. This author is sympathetic to arguments for stricter regulation of liquidity management of international private banks. However, such regulation is not likely to be established in a form sufficiently robust to obviate the need for swaps for the foreseeable future. Furthermore, while the seizing up of bank-funding markets led to the large drawings during 2008-2009, swaps satisfy liquidity needs arising for a number of other reasons as well.

Which Countries Qualify?

Open discussion of precautionary facilities and the criteria for access is often impeded by governments' sensitivity to qualification. While we know which countries have qualified for the FCL and the PLL, there is no official list of countries that would qualify if they chose to apply. IMF members have objected to the compilation of such a list because they do not want to be known to have been excluded from the list or, having once made the list, to being delisted. The latest IMF report on these arrangements (IMF 2014a, 43, Box 2) circumvents this problem by examining the status of nine countries that are deemed by the investment community to qualify without naming them.

Fortunately, we can draw plausible inferences as to which countries would qualify for an FCL on the basis of the policy performance of the three countries that have already done so. Staff judges "very strong" policies against the nine criteria for the FCL (see Table 1), although strong performance against all of them is not necessary to secure qualification. The IMF publishes the reviews of countries that have qualified for the FCL — Mexico, Colombia and Poland (IMF 2013b; 2013c; 2014d). From these, implicit thresholds for the criteria can be identified and applied to the rest of the IMF membership.

The Annex of this paper conducts this exercise. IMF country membership is passed through three filters. First, only the 70 countries that adhere to the Special Data Dissemination

25 Plus a 24–27 basis point commitment fee and 50 basis point service charge on amounts drawn. See www.imf.org/external/np/exr/facts/fcl.htm.

26 Papadia (2013) shares this concern.

27 Joseph E. Gagnon provided insights on this argument for an earlier version of this paper.

Standard (SDDS) are considered (FCL criterion number 9 in Table 1). Second, these countries are examined on the five criteria for which there is IMF data for the end of 2013 — sustainable external position, uninterrupted access to international capital markets on favourable terms, relatively comfortable reserve position, sustainable public debt and sound public finances, and low and stable inflation. The Annex uses five of the indicators that are calculated by the Fund in making these assessments (a couple of indicators are dropped owing to the lack of publicly available data). When countries meet the most permissive threshold implied by the three FCL qualifiers, they were deemed to have met each criterion. Third, for those countries that passed the second filter, the FSAPs and IMF Article IV reports were examined for the “absence of systemic bank solvency problems that pose an immediate threat of banking crisis” and “effective financial sector supervision” (FCL criteria 7 and 8, Table 1).

The exercise generates a list of countries that should qualify for an FCL on the basis of a literal application of the three filters. Including the three current qualifiers (the first three in the list), the list is as follows:

- Colombia
- Mexico
- Poland
- Chile
- Czech Republic
- Lithuania
- Malaysia
- Philippines
- South Korea

Israel would also be included, if the IMF were lenient on the debt ratio (66 percent). Three countries pass the first two filters but probably fail on banking fragility and financial supervision, based on our reading of their FSAPs and/or Article IV reports: Peru, Romania and Thailand.

Macedonia does not pass the three filters only because it does not issue 10-year government bonds. Morocco also misses on this criterion and barely misses on the debt–GDP ratio (61.9 percent). Both countries received PLLs, in 2012 and 2011 respectively, but do not appear to have ever been in serious contention for FCLs. Given their situations (see IMF 2014a), it can be concluded that a substantial number of other countries could also qualify for PLLs, though not for FCLs.

A partial check of the stability of these results over time was conducted, comparing the performance of those countries listed above on the five quantifiable indicators at the end of 2009. Some countries would have missed qualification on the interest rate criterion or owing to deflation. But overall, considering that

2009 was a crisis year, the assessment was remarkably similar to that based on performance in 2013.

These lists produce some bemusing anomalies. None of the swap-providing key-currency countries, or any of the Group of Eight countries, satisfies the criteria for an FCL. Nor do any of the members of the euro area but one — Lithuania, the most recent adopter of the common currency. Nor does China, for lack of adherence to the SDDS. Nor, it should be pointed out, do most of the 14 countries to which the Federal Reserve extended swap arrangements during the financial crisis. The two exceptions are Mexico and South Korea.

These anomalies might say more about the ability of these criteria to capture risk than they do about the creditworthiness of central banks around the world. Most of the triple-A-rated countries do not satisfy the criteria, yet we would expect creditworthiness of central banks as swap counterparties to closely match the governments that stand behind them. Some of the criteria, such as external debt, are not well suited to countries in a financially integrated monetary union.

The Fund staff and executive board have always acknowledged the need to exercise judgment in applying the criteria, rather than doing so mechanically. It is also important to note that the IMF reviews the criteria and process by which countries are evaluated every three years, and its 2014 review altered the criteria somewhat (IMF 2014b; 2014c). But these outcomes nonetheless suggest that FCL qualification is a conservative standard.

These nine countries, plus perhaps Israel, are a significant group in their own right and could destabilize their regions if subjected to a liquidity crisis. Their size is also quite manageable from the standpoint of swap-providing countries. The availability of swap arrangements for countries that meet FCL criteria could itself be an incentive for better policy performance for countries on the margin and the group of qualifying countries could grow over time.

If we were to marry FCL qualification to swap agreements, which central banks should provide them? Key-currency central banks should build on the division of labour that has evolved as a matter of practice along *regional* lines. If the countries listed above officially qualified — they are used for purposes of illustration as the list of qualifiers, while reasonably stable, will evolve over time — the ECB would offer a swap to the Czech Republic in addition to its existing swap partners. The BoJ could expand its bilateral swap with the Bank of Korea, again, and extend new ones to the Philippines and Malaysia. The Federal Reserve would renew its swap with Mexico and extend new swaps to qualifiers in the Western hemisphere, Colombia, Chile and Peru — as well as continuing to supply dollar liquidity through the five standing arrangements. The Fed swaps to the other key-currency central banks would continue to provide liquidity across the regions, knitting the network together. The other key-currency central banks can provide local currency

in many cases, but US dollars would probably be necessary in East Asia. The BoJ and PBoC have prodigious amounts of the US dollar in foreign exchange reserves. If, after Chinese capital account liberalization, the renminbi were to develop a large role in Asian financial markets (Zhang 2015; Eichengreen and Kawai 2015; Helleiner and Kirshner 2014), the PBoC's participation would become essential.

Conclusion

This paper reviews the precautionary lending facilities of the IMF and RFAs, as well as the swap agreements of key-currency central banks. The global liquidity safety net contains gaps that are costly for the international financial system and creditor and borrowing countries alike. The paper offers two proposals for narrowing these gaps: regional financial facilities should make precautionary arrangements available to members that qualify for an FCL at the IMF, and key-currency central banks should extend swap agreements to central banks in emerging market and advanced countries that receive FCLs from the Fund — not automatically, but with a review that is predisposed to favour central bank counterparties that satisfy this exacting threshold.

These proposals would not solve the problem of providing *systemic* liquidity in a crisis — they are country-specific. Nor would they address the problems of countries that do not qualify for an FCL — these would still need IMF or RFA programs in which financing is contingent on policy adjustment. The proposals would instead extend the coverage of the liquidity safety net to a limited set of countries that sit on the margin of qualifying for RFA precautionary arrangements and central bank swaps. The group is significant in size and access to additional sources of precautionary financing could induce countries on the margin to undertake additional measures to meet the standard of qualification. Adoption of these proposals would be a substantial improvement over the status quo and probably more digestible by the IMF, G20 and key-currency central banks than full-scale systemic reforms.

Acknowledgements

The author thanks James M. Boughton, Barry Eichengreen, Joseph Gagnon, Olivier Jeanne, Miles Kahler, Paul Jenkins, Francesco Papadia, Edwin M. Truman, Ming Zhang, two anonymous central bank officials and participants in the October 2014 workshop for this project for comments on earlier versions of this paper. He is also grateful to Peter Foley for diligent research assistance. The author alone is responsible for any errors in fact or judgment that might remain and welcomes further reactions at henning@american.edu.

Annex: Country Performance on the Criteria for the FCL

Which member countries satisfy the criteria that have been established by the IMF for access to an FCL? This Annex provides the likely answers to this question, reviews the criteria that have been used by the Fund up to the 2014 review of the FCL, lays out the method by which we can infer the thresholds applied under most criteria and applies those thresholds to all of the members as best as the availability of data allows. The results are presented in Table 1 below and summarized in the main text of the paper.

The nine criteria that are used to judge FCL qualification are listed below. Six are amenable to quantitative assessment, two require qualitative assessment and the last is binary. To identify the threshold for the quantitative indicators, the policy and institutional performance of the three countries that currently have an FCL (Colombia, Mexico and Poland) are examined, drawing on the Fund's country reviews. We take the most permissive threshold among the three countries for each criterion on the basis of data for the end of 2013.

The list below presents the identified threshold, some detail on how it was derived and the data sources used for assessment.

1. Sustainable External Position

- External debt/GDP less than 74 percent.
- The reports on the currently qualified countries used external debt/GDP as the main measure of this criterion. The highest of the three countries was Poland, whose external debt was 74 percent of GDP, but expected to decline.
- External debt data comes from the World Bank's Quarterly External Debt Statistics (QEDS) hub,²⁸ the IMF, the World Bank, the BIS and the Organisation for Economic Co-operation and Development. GDP data was taken from the IMF's World Economic Outlook (WEO) database, April 2014.²⁹

2. Capital Account Position Dominated by Private Flows

- More than 80 percent external debt to private creditors.
- This threshold is inferred from the three country reports. But neither the Fund nor others provide a database that is both up-to-date and consistent across all potential qualifiers. So, for this criterion alone, this Annex provides no assessment.

3. Uninterrupted Access to International Capital Markets on Favourable Terms

- Yield on 10-year bond less than 7.1 percent.
- Country reports focused on 10-year government bond yields as the appropriate measure. Colombia's 7.1 percent was the highest 10-year bond yield of the three countries. Where a country did not issue a 10-year government bond, this was interpreted as difficulty accessing international capital markets and the country failed on this criterion.
- Interest rate data, for the beginning of 2014, were taken from www.tradingeconomics.com.

4. Relatively Comfortable Reserve Position

- Reserves/GDP greater than 10 percent; reserves/broad money greater than 20 percent.
- Country reports alluded to a number of reserve ratios. The ones for which data was most consistently available were GDP and broad money. The graphs included in the reports gave a "rule of thumb" for each ratio, which was taken as the threshold value. Because broad money data was not available for all countries at end 2013, this ratio is dropped in favour of reserves/GDP.
- Reserves data were taken from the IMF Data template on foreign reserves and foreign currency liquidity. GDP data were from the WEO database, April 2014.

5. Sustainable Public Debt Position and Sound Public Finances

- Public debt/GDP less than 58 percent.
- The public debt to GDP ratio was the main measure used in the reports. In Poland, public debt was expected to drop below 50 percent of GDP in 2014. The data in Table 1 below estimates Poland's ratio at just below 58 percent.
- Public debt data were from the WEO database, April 2014.

6. Low and Stable Inflation

- Inflation under four percent.
- Poland performed most poorly on this criterion among the three. While inflation is currently low, it had fluctuated to almost five percent at the beginning of 2012. The outcome for 2013 was used as the threshold. Countries with deflation failed.
- Inflation data were from the WEO database, April 2014.

²⁸ The QEDS hub can be found at <http://datatopics.worldbank.org/debt/>.

²⁹ The WEO database archive can be found at www.imf.org/external/ns/cs.aspx?id=28.

7. Absence of Systemic Bank Solvency Problems that Pose an Immediate Threat of Banking Crisis

- Resilient, according to most recent FSAP and IMF Article IV.
- Country reports referred to stress testing under FSAPs. The most recent FSAP was examined, except where one had not been carried out since 2010, in which case the most recent Article IV report was used.

8. Effective Financial Sector Supervision

- Strong regulation and supervision, according to the most recent FSAP or Article IV report.

9. Data Transparency and Integrity

- Observes the SDDS.
- Each country report states clearly whether the government adheres to the SDDS.

Using these criteria, this procedure passes the country membership of the Fund through three filters. First, data is compiled for only the 70 countries that adhere to the SDDS, the ninth criterion. Second, these countries are examined on the five criteria for which there are IMF data for the end of 2013. When countries meet the most permissive threshold implied by the three FCL qualifiers, they were deemed to have met each criterion. Third, for those countries that pass the second filter, the FSAPs and Article IV reports were examined for the “absence of systemic bank solvency problems that pose an immediate threat of banking crisis” and “effective financial sector supervision.”

The results are reported in Table 1. The three countries that currently qualify for FCLs are shaded in blue. Countries that are not formally approved, but meet the thresholds under these criteria, are shaded in green. The “near misses” are shaded in orange. Countries that would not qualify are shaded in red, though many of these might qualify for a PLL.

Note: The author acknowledges the excellent research assistance of Peter Foley in preparing this Annex.

Table 1: Country Performance on IMF FCL Criteria, End 2013

	1. External Debt/GDP (in %)	3. Interest 10-year bond (in %)	4. Reserves / GDP (in %)	5. Public Debt/ GDP (in %)	6. Inflation (in %)	7-8. FSAP/Article IV Comments
Threshold	< 74	< 7.1	> 11.3	< 58	< 4	
Argentina	28.3	n/a	6.3	46.9	10.9	
Armenia	82.4	n/a	21.4	41.9	5.6	
Australia	89.4	4.1	3.5	28.8	2.7	
Austria	196.8	2.0	5.6	74.2	2.0	
Belarus	54.5	n/a	9.3	36.7	16.5	
Belgium	243.0	2.4	5.3	99.8	1.2	
Brazil	21.5	13.1	16.0	66.3	5.9	
Bulgaria	98.8	3.6	37.5	17.6	-0.9	
Canada	73.7	2.5	3.9	89.1	1.0	
Chile	47.2	5.0	14.8	12.2	3.0	(FSAP, 2011) "Banking system is likely to be resilient to adverse shocks....Chile's financial regulatory and supervisory system is robust."
Colombia	24.1	7.1	11.3	31.8	1.9	(FSAP, 2013) "Stress tests underscore that Colombian banks appear resilient to a variety of shocks....All financial institutions are supervised effectively by the SFC."
Costa Rica	32.2	n/a	14.8	37.0	3.7	(Article IV, 2011) "The financial system remains sound, although there is scope to further strengthen supervision and regulation."
Croatia	109.2	5.2	30.6	59.8	0.3	
Czech Republic	56.1	2.1	28.4	47.9	1.4	(FSAP, 2012) "Czech banks are resilient against substantial shocks....Supervisory framework for financial institutions is generally sound but suffers from inadequate resources."
Denmark	183.3	1.7	26.6	45.2	0.8	
Ecuador	19.2	n/a	2.6	24.3	2.7	
Egypt	16.9	15.0	5.8	89.2	9.8	
El Salvador	57.5	n/a	11.0	54.9	0.8	(FSAP, 2014) "Despite the global and domestic shocks of 2008-2009, the banking sector remains sound.... Remaining gaps in banking supervision and the safety net should be addressed."
Estonia	90.5	n/a	1.3	11.3	3.2	
Finland	219.6	2.0	4.3	57.0	1.9	
France	202.7	2.3	5.3	93.9	0.0	
Republic of Macedonia	70.1	n/a	26.7	35.8	1.4	(Article IV, 2014) "The financial system remains liquid and relatively healthy....Prudent bank supervision framework."
Georgia	81.8	n/a	17.5	31.8	2.3	(Article IV, 2013) "Financial system sound, comfortable levels of capital and liquidity in banks....New supervisory measures have tightened liquidity requirement for nonresident deposits."
Germany	149.8	1.7	5.5	78.1	1.2	
Greece	237.9	7.6	2.4	173.8	-1.7	
Hong Kong	426.2	2.3	113.7	33.8	4.3	
Hungary	149.1	6.1	35.2	79.2	0.4	
Iceland	727.8	6.7	28.8	90.2	3.3	
India	22.8	8.8	15.7	66.7	8.1	
Indonesia	30.5	9.1	11.4	26.1	8.1	

	1. External Debt/GDP (in %)	3. Interest 10-year bond (in %)	4. Reserves / GDP (in %)	5. Public Debt/ GDP (in %)	6. Inflation (in %)	7-8. FSAP/Article IV Comments
Threshold	< 74	< 7.1	> 11.3	< 58	< 4	
Ireland	1015.5	3.3	0.8	122.8	1.8	
Israel	32.7	3.7	26.9	66.7	1.8	(FSAP, 2012) "Financial sector is robust, although concentration in the financial and nonfinancial sectors could amplify systemic effects....Regulation and supervision are strong."
Italy	126.4	3.6	7.0	132.5	0.7	
Japan	57.5	0.6	25.8	243.2	1.4	
Jordan	70.3	n/a	37.3	87.7	3.0	
Kazakhstan	67.5	n/a	11.2	13.5	4.8	(Article IV, 2014) "The global financial crisis exposed serious bank vulnerabilities in Kazakhstan....A faster transition to risk-based oversight is needed."
Korea	34.1	3.5	28.4	36.7	1.1	(Article IV, 2014) "Directors agreed that the financial sector is sound overall....The authorities have taken resolute steps to strengthen the regulation and supervision of the financial sector."
Kyrgyzstan	76.1	n/a	30.9	47.7	4.0	
Latvia	135.6	3.2	25.5	32.1	-0.4	
Lithuania	67.9	3.5	17.0	39.3	0.5	(Article IV, 2014) "Lithuania's financial system remains stable and resilient....Decisive action and effective supervision have improved overall financial sector stability."
Luxembourg	5671.2	n/a	1.6	22.9	1.5	
Malaysia	67.0	4.1	43.6	58.2	3.2	(FSAP, 2013) "Banks are resilient to a range of economic and market shocks....The regulatory and supervisory regime exhibits a high degree of compliance with international standards."
Malta	518.3	n/a	6.3	71.7	1.0	
Mexico	33.6	6.4	14.3	46.5	4.0	(FSAP, 2011) "Financial sector resilient....Mexico is one of the early adopters of Basel III capital requirements."
Moldova	83.3	n/a	35.5	24.4	5.2	
Morocco	37.9	n/a	17.4	61.9	0.4	(Article IV, 2014) "Banking system has remained resilient, but liquidity pressures should continue to be closely monitored....Further strengthened banking supervision in line with Basel III."
Netherlands	305.9	1.9	5.8	74.9	1.7	
Norway	141.2	2.8	11.7	29.5	2.0	
Peru	26.9	6.4	32.3	19.6	2.9	(Article IV, 2013) "The overall financial system remains healthy and strong....Need to continue enhancing financial supervision."
Philippines	21.5	4.3	30.6	38.3	4.1	(Article IV, 2014) "Financial soundness indicators signal strong performance....Seeks to develop and implement a risk-focused supervisory approach in keeping with the Basel Core Principles."
Poland	73.8	4.5	20.6	57.5	0.7	(FSAP, 2013) "Poland's banking system appears to be resilient. It found that Poland is broadly compliant with Basel Core Principles."
Portugal	231.7	4.8	8.0	128.8	0.2	
Romania	70.7	5.5	25.8	39.3	1.6	(Article IV, 2012) "The banking sector is vulnerable to spillovers from the euro area and the weak economic recovery....Need for better cross-sectoral cooperation in supervision."
Russia	34.4	8.2	24.1	13.4	6.5	

	1. External Debt/GDP (in %)	3. Interest 10-year bond (in %)	4. Reserves / GDP (in %)	5. Public Debt/ GDP (in %)	6. Inflation (in %)	7-8. FSAP/Article IV Comments
Threshold	< 74	< 7.1	> 11.3	< 58	< 4	
Singapore	434.8	2.5	92.3	103.8	2.0	
Slovakia	86.0	n/a	2.3	54.9	0.4	
Slovenia	117.5	4.9	2.0	73.0	0.7	
South Africa	39.1	8.6	14.1	45.2	5.4	
Spain	165.8	3.5	3.4	93.9	0.3	
Sweden	200.0	2.3	11.7	41.4	0.1	
Switzerland	250.1	1.0	82.3	49.4	0.0	
Thailand	36.1	4.0	43.2	45.3	1.7	(Article IV, 2013) “While the banking sector remains sound, the regulatory and supervisory frameworks for specialized and non-bank institutions needs to be strengthened.”
Tunisia	56.6	n/a	15.6	44.4	6.0	
Turkey	46.9	10.0	15.8	35.8	7.4	
Ukraine	79.9	n/a	11.5	41.0	0.5	
UK	373.9	2.8	5.2	90.1	2.1	
USA	98.1	2.7	0.9	104.5	1.2	
Uruguay	40.6	n/a	28.9	59.4	8.5	

Data sources:

1. Joint QEDS hub
2. WEO database, April 2014
3. www.tradingeconomics.com
4. IMF Data template on foreign reserves and foreign currency liquidity (www.imf.org/external/np/sta/ir/IRProcessWeb/colist.aspx)
5. WEO database, April 2014
6. WEO database, April 2014
- 7-8. Individual IMF country reports

Shading Key

	Meets criterion
	Near miss
	Fails to meet criterion
	Existing FCL Qualifier

Works Cited

- Aizenman, Joshua and Gurnain K. Pasricha. 2010. "Selective Swap Arrangements and the Global Financial Crisis: Analysis and Interpretation." *International Review of Economics and Finance* 19: 353–65.
- Allen, William A. and Richhild Moessler. 2010. "Central Bank Co-operation and International Liquidity in the Financial Crisis of 2008–9." BIS Working Papers No. 310. June.
- BIS. 2008. "Central Bank Operations in Response to the Financial Turmoil. Committee on the Global Financial System." CGFS Papers No. 31. www.bis.org/publ/cgfs31.pdf.
- Bergsten, C. Fred and Joseph E. Gagnon. 2012. "Currency Manipulation, the US Economy, and the Global Economic Order." Peterson Institute Policy Brief No. 12–25. Washington, DC: Peterson Institute for International Economics.
- Boughton, James M. 2001. *Silent Revolution: The International Monetary Fund 1979–1989*. Washington, DC: IMF.
- . 2012. *Tearing Down Walls: The International Monetary Fund 1990–1999*. Washington, DC: IMF.
- Broz, Lawrence J. 2014. "The Politics of Rescuing the World's Financial System: The Federal Reserve as a Global Lender of Last Resort." November 20. SSRN Research Paper. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2531108.
- Eichengreen, Barry and Masahiro Kawai, eds. 2015. *Renminbi Internationalization: Achievements, Prospects and Challenges*. Washington, DC: Brookings Institution Press and Asian Development Bank Institute.
- Farhi, Emmanuel, Pierre-Olivier Gourinchas and Hélène Rey. 2011. *Reforming the International Monetary System*. Centre for Economic Policy Research Report.
- Gagnon, Joseph E. 2012. "Combating Widespread Currency Manipulation." Peterson Institute Policy Brief No. 12–19. Washington, DC: Peterson Institute for International Economics.
- Haggard, Stephan. 2013. "Regional Responses to Financial Crises: The Americas, East Asia and Europe." In *Responding to Financial Crisis: Lessons From Asia Then, the United States and Europe Now*, edited by Rhee Changyong and Adam S. Posen. Washington, DC: Peterson Institute for International Economics.
- Helleiner, Eric. 2014. *The Status Quo Crisis: Global Financial Governance After the 2008 Meltdown*. New York: Oxford University Press.
- Helleiner, Eric and Jonathan Kirshner, eds. 2014. *The Great Wall of Money: Power and Politics in China's International Monetary Relations*. Ithaca, NY: Cornell University Press.
- Henning, C. Randall. 1999. *The Exchange Stabilization Fund: Slush Money or War Chest?* Policy Analyses in International Economics No. 57. Washington, DC: Peterson Institute for International Economics.
- . 2002. *East Asian Financial Cooperation*. Policy Analyses in International Economics No. 68. Washington, DC: Peterson Institute for International Economics. September.
- . 2009. "Future of the Chiang Mai Initiative: An Asian Monetary Fund?" Peterson Institute Policy Brief No. 09–5. Washington, DC: Peterson Institute for International Economics.
- . 2011. "Coordinating Regional and Multilateral Financial Institutions." Peterson Institute Working Paper 11–9. Washington, DC: Peterson Institute for International Economics. March.
- . 2013. "Economic Crises and Regional Institutions." In *Integrating Regions: Asia in Comparative Context*, edited by Miles Kahler and Andrew MacIntyre, 170–92. Stanford: Stanford University Press.
- . 2014. "Tangled Governance: International Regime Complexity in the Euro Crisis." Presentation to the International Relations Colloquium, Princeton University, November 3.
- Henning, C. Randall and Mohsin S. Khan. 2015. "Asia and Global Financial Governance." In *South and East Asian Integration*, edited by Shiro Armstrong and Peter Drysdale. London and New York: Routledge.
- IMF. 2010a. "The Fund's Mandate — Future Financing Role." Policy Paper. Washington, DC: IMF. March 25.
- . 2010b. "The Fund's Mandate — An Overview." Policy Paper. Washington, DC: IMF. January 22.
- . 2013a. "Assessing Reserve Adequacy — Further Considerations." Policy Paper. Washington, DC: IMF. November.
- . 2013b. *Colombia: Arrangement Under the Flexible Credit Line — Staff Report*. Country Report No. 13/201. Washington, DC: IMF. July.
- . 2013c. *Mexico: 2013 Review Under the Flexible Credit Line Arrangement*. Country Report No. 13/335. Washington, DC: IMF. November.
- . 2014a. "Review of Flexible Credit Line, the Precautionary and Liquidity Line, and the Rapid Financing Instrument." Washington, DC: IMF. January.

- . 2014b. “The Review of Flexible Credit Line, the Precautionary and Liquidity Line, and the Rapid Financing Instrument.” Washington, DC: IMF. April.
- . 2014c. “IMF Concludes Review of Flexible Credit Line, Precautionary and Liquidity Line, and Rapid Financing Instrument.” Washington, DC: IMF. July.
- . 2014d. *Republic of Poland: Review Under the Flexible Credit Line Arrangement*. Country Report No. 14/8. Washington, DC: IMF. January.
- Ito, Takatoshi. 2007. “Asian Currency Crisis and the International Monetary Fund, 10 Years Later: Overview.” *Asian Economic Policy Review* 2: 16–49.
- . 2012. “Can Asia Overcome the IMF Stigma?” *American Economic Review* 102 (3): 198–202.
- Kahn, Robert. 2013. Cash or Credit? Global Economics Monthly, October 2013. Council on Foreign Relations. October 7.
- Kawai, Masahiro. 2010. “East Asian Financial Cooperation: Perspectives on the CMIM, ERPD and AMRO.” Presented to the ADBI-Brookings Institution conference, “Financial Regionalism: Next Steps,” Washington, DC, October 13–14.
- Kawai, Masahiro and Domenico Lombardi. 2012. “Financial Regionalism.” *Finance & Development* 49 (3): 23–25.
- Kamin, Steven B. 2011. “The Economic Situation in Europe.” Testimony to the Committee on Oversight and Government Reform, US House of Representatives. Washington, DC, December 16.
- Latin American Reserve Fund. 2013. *35th Anniversary of LARF*. Bogota, Colombia: LARF. October.
- Leipold, Alessandro. 2013. “Lessons from Three Years of Euro-Area Crisis Fighting: Getting It Right Next Time.” Lisbon Council Special Briefing Issue 14/2013. Brussels.
- Miyoshi, Toshiyuki, Stephanie Segal, Preya Sharma and Anish Tailor. 2013. “Stocktaking the Fund’s Engagement with Regional Financing Arrangements.” Washington, DC: IMF. April 11.
- Ocampo, José Antonio and Daniel Titelman. 2012. “Regional Monetary Cooperation in Latin America.” ADBI Working Paper Series No. 373. August.
- Papadia, Francesco. 2013. “Central Bank Cooperation During the Great Recession.” Bruegel Policy Contribution 2013/08. Brussels. June.
- Pisani-Ferry, Jean, André Sapir and Guntram Wolff. 2013. *EU-IMF Assistance to Euro Area Countries: An Early Assessment*. Bruegel Blueprint 19.
- Prasad, Eswar S. 2014. *The Dollar Trap: How the US Dollar Tightened Its Grip on Global Finance*. Princeton, NJ: Princeton University Press.
- Rajan, Raghuram G. 2014. “Competitive Monetary Easing: Is it Yesterday Once More?” Speech presented at the Brookings Institution, Washington, DC, April 10.
- Rhee, Changyong, Lea Sumulong and Shahin Vallé. 2013. “Global and Regional Financial Safety Nets: Lessons from Europe and Asia.” Bruegel Working Paper 2013/06. Brussels. November.
- Stolz, Stéphanie Marie and Michael Wedow. 2010. “Extraordinary Measures in Extraordinary Times: Public Measures in Support of the Financial Sector in the EU and the United States.” ECB Occasional Paper 117.
- Sussangkarn, Chalongsob. 2011. “Institution Building for Macroeconomic and Financial Cooperation in East Asia.” www.amro-asia.org/wp-content/uploads/2011/11/CS-CMIM-AMRO.pdf.
- Titelman, Daniel. 2006. “Subregional Financial Cooperation: The Experiences of Latin America and the Caribbean.” In *Regional Financial Cooperation*, edited by José Antonio Ocampo. Washington, DC: Brookings Institution Press.
- Truman, Edwin M. 2008. “On What Terms is the IMF Worth Funding?” Peterson Institute Working Paper 08–11. December.
- . 2010. “The G-20 and International Financial Institution Governance.” Peterson Institute Working Paper 10–13. September.
- . 2013. “The Global Financial Safety Net Needs Better Tools to Cope with Future Crises.” RealTime Economic Issues Watch. Peterson Institute. September 13.
- Volz, Ulrich. 2012. “The Need and Scope for Strengthening Cooperation between Regional Financial Arrangements and the IMF.” Discussion Paper 15/2012. Bonn: Deutsches Institut für Entwicklungspolitik. December.
- Zhang, Ming. 2015. *Internationalization of the Renminbi: Developments, Problems and Influences*. New Thinking and the New G20 Paper No. 2. March. www.cigionline.org/publications/internationalization-of-renminbi-developments-problems-and-influences.

CIGI Publications

Advancing Policy Ideas and Debate

New Thinking and the New G20 Paper Series



These papers are an output of a project that aims to promote policy and institutional innovation in global economic governance in two key areas: governance of international monetary and financial relations and international collaboration in financial regulation. With authors from eight countries, the 11 papers in this series will add to existing knowledge and offer original recommendations for international policy cooperation and institutional innovation.

Changing Global Financial Governance: International Financial Standards and Emerging Economies since the Global Financial Crisis
Hyoung-kyu Chey

Internationalization of the Renminbi: Developments, Problems and Influences
Ming Zhang

Capital Flows and Capital Account Management in Selected Asian Economies
Rajeswari Sengupta and Abhijit Sen Gupta

Emerging Countries and Implementation: Brazil's Experience with Basel's Regulatory Consistency Assessment Program
Fernanda Martins Bandeira

The Shadow Banking System of China and International Regulatory Cooperation
Zheng Liansheng

Emerging Countries and Basel III: Why Is Engagement Still Low?
Andrew Walter

Financial Inclusion and Global Regulatory Standards: An Empirical Study Across Developing Economies
Mariana Magaldi de Sousa

International Regulatory Cooperation on the Resolution of Financial Institutions: Where Does India Stand?
Renuka Sane

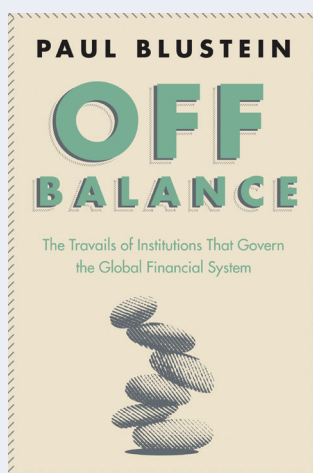
Capital Flows and Spillovers
Sebnem Kalemli-Ozcan

The Global Liquidity Safety Net: Institutional Cooperation on Precautionary Facilities and Central Bank Swaps
C. Randall Henning

Capital Controls and Implications for Surveillance and Coordination: Brazil and Latin America
Marcio Garcia

CIGI Books

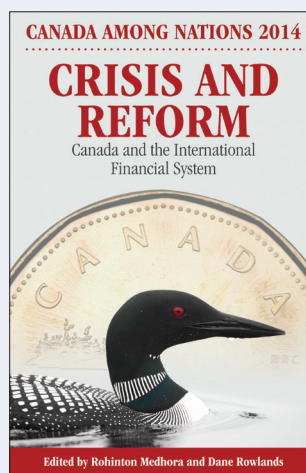
Available for purchase directly from www.cigionline.org/bookstore



Off Balance: The Travails of Institutions That Govern the Global Financial System
Paul Blustein

Paperback: \$28.00;
eBook: \$14.00

The latest book from award-winning journalist and author Paul Blustein is a detailed account of the failings of international institutions in the global financial crisis.



Crisis and Reform: Canada and the International Financial System

Edited by Rohinton Medhora and Dane Rowlands

Paperback: \$32.00;
eBook: \$16.00

The 28th edition of the Canada Among Nations series is an examination of Canada and the global financial crisis, and the country's historic and current role in the international financial system.

Available as free downloads at www.cigionline.org

About CIGI

The Centre for International Governance Innovation is an independent, non-partisan think tank on international governance. Led by experienced practitioners and distinguished academics, CIGI supports research, forms networks, advances policy debate and generates ideas for multilateral governance improvements. Conducting an active agenda of research, events and publications, CIGI's interdisciplinary work includes collaboration with policy, business and academic communities around the world.

CIGI's current research programs focus on three themes: the global economy; global security & politics; and international law.

CIGI was founded in 2001 by Jim Balsillie, then co-CEO of Research In Motion (BlackBerry), and collaborates with and gratefully acknowledges support from a number of strategic partners, in particular the Government of Canada and the Government of Ontario.

Le CIGI a été fondé en 2001 par Jim Balsillie, qui était alors co-chef de la direction de Research In Motion (BlackBerry). Il collabore avec de nombreux partenaires stratégiques et exprime sa reconnaissance du soutien reçu de ceux-ci, notamment de l'appui reçu du gouvernement du Canada et de celui du gouvernement de l'Ontario.

For more information, please visit www.cigionline.org.

CIGI Masthead

Managing Editor, Publications

Carol Bonnett

Publications Editor

Jennifer Goyder

Publications Editor

Vivian Moser

Publications Editor

Patricia Holmes

Publications Editor

Nicole Langlois

Graphic Designer

Melodie Wakefield

Graphic Designer

Sara Moore

Executive

President

Rohinton Medhora

Vice President of Programs

David Dewitt

Vice President of Public Affairs

Fred Kuntz

Vice President of Finance

Mark Menard

Communications

Communications Manager

Tammy Bender tbender@cigionline.org (1 519 885 2444 x 7356)



67 Erb Street West
Waterloo, Ontario N2L 6C2, Canada
tel +1 519 885 2444 fax +1 519 885 5450
www.cigionline.org

