Geneva Reports on the World Economy 20

IMF Reform: The Unfinished Agenda

José De Gregorio, Barry Eichengreen, Takatoshi Ito and Charles Wyplosz

ICMB INTERNATIONAL CENTER FOR MONETARY AND BANKING STUDIES

CEPR

IMF Reform: The Unfinished Agenda

Geneva Reports on the World Economy 20

International Center for Monetary and Banking Studies (ICMB)

International Center for Monetary and Banking Studies
2, Chemin Eugène-Rigot
1202 Geneva
Switzerland

Tel: (41 22) 734 9548
Fax: (41 22) 733 3853
Web: www.icmb.ch

Centre for Economic Policy Research

Centre for Economic Policy Research
33 Great Sutton Street
London EC1V 0DX
UK

Tel: +44 (20) 7183 8801
Fax: +44 (20) 7183 8820
Email: cepr@cepr.org
Web: www.cepr.org

ISBN: 978-1-912179-16-9

IMF Reform: The Unfinished Agenda

Geneva Reports on the World Economy 20

José De Gregorio
University of Chile

Barry Eichengreen
University of California, Berkeley and CEPR

Takatoshi Ito
Columbia University and CEPR

Charles Wyplosz
The Graduate Institute, Geneva and CEPR

ICMB INTERNATIONAL CENTER FOR MONETARY AND BANKING STUDIES

CIMB CENTRE INTERNATIONAL D'ETUDES MONETAIRES ET BANCAIRES

CEPR PRESS

The International Center for Monetary and Banking Studies (ICMB)

The International Center for Monetary and Banking Studies (ICMB) was created in 1973 as an independent, non-profit foundation. It is associated with Geneva's Graduate Institute of International and Development Studies. Its aim is to foster exchanges of views between the financial sector, central banks and academics on issues of common interest. It is financed through grants from banks, financial institutions and central banks. The Center sponsors international conferences, public lectures, original research and publications. In association with CEPR, the Center has published the Geneva Reports on the World Economy since 1999. These reports attract considerable interest among practitioners, policymakers and scholars.

ICMB is non-partisan and does not take any view on policy. Its publications, including the present report, reflect the opinions of the authors, not of ICMB or any of its sponsoring institutions. The President of the Foundation Board is Thomas Jordan and the Director is Charles Wyplosz.

Centre for Economic Policy Research (CEPR)

The Centre for Economic Policy Research (CEPR) is a network of over 1,200 research economists based mostly in European universities. The Centre's goal is twofold: to promote world-class research, and to get the policy-relevant results into the hands of key decision-makers.

CEPR's guiding principle is 'Research excellence with policy relevance'.

A registered charity since it was founded in 1983, CEPR is independent of all public and private interest groups. It takes no institutional stand on economic policy matters and its core funding comes from its Institutional Members and sales of publications. Because it draws on such a large network of researchers, its output reflects a broad spectrum of individual viewpoints as well as perspectives drawn from civil society.

CEPR research may include views on policy, but the Trustees of the Centre do not give prior review to its publications. The opinions expressed in this report are those of the authors and not those of CEPR.

About the authors

José De Gregorio is Dean of the School of Economic and Business of the Universidad de Chile and nonresident senior fellow at the Peterson Institute for International Economics. He has been a Full Professor of the Department of Economics since 2012. He was Governor of the Central Bank of Chile from 2007 until 2011. He was formerly Vice-Governor from 2003, and member of the Bank's Board from 2001. During 2000 and 2001, Mr. De Gregorio was Minister of the combined portfolios of Economy, Mining and Energy.

Barry Eichengreen is the George C. Pardee and Helen N. Pardee Professor of Economics and Professor of Political Science at the University of California, Berkeley, where he has taught since 1987. He is a Research Associate of the National Bureau of Economic Research (Cambridge, Massachusetts) and Research Fellow of the Centre for Economic Policy Research (London). In 1997-98 he was Senior Policy Advisor at the International Monetary Fund. He is a fellow of the American Academy of Arts and Sciences (class of 1997). Professor Eichengreen is the convener of the Bellagio Group of academics and economic officials. He has held Guggenheim and Fulbright Fellowships and has been a fellow of the Center for Advanced Study in the Behavioral Sciences (Palo Alto) and the Institute for Advanced Study (Berlin). He is a regular monthly columnist for Project Syndicate.

Takatoshi Ito is a Professor at the School of International and Public Affairs, Columbia University (since 2015) and Senior Professor at the National Graduate Institute for Policy Studies (since 2016). He has taught at the University of Minnesota (1979-1988), Hitotsubashi University (1988-2002), and the University of Tokyo (2004-2014) and held visiting professor positions at Harvard University, Stanford University, Columbia Business School, and University of Malaya. He has been elected President of the Japanese Economic Association in (2004). He is a Fellow of the Econometric Society, Research Associate at the National Bureau of Economic Research and a CEPR Research Fellow. He has served as Senior Advisor in the Research Department at the International Monetary Fund, Deputy Vice Minister for International Affairs at the Ministry of Finance of Japan and as member of the Prime Minister's Council on Economic and Fiscal Policy. He was awarded the National Medal with Purple Ribbon by the Government of Japan in 2011 for his excellent academic achievement.

Charles Wyplosz is Professor of International Economics at the Graduate Institute in Geneva where he is Director of the International Centre for Money and Banking Studies. He is Policy Director at the Centre for Economic Policy Research (CEPR). Previously, he served as Associate Dean for Research and Development at INSEAD and Director of the PhD programme in Economics at the Ecole des Hautes Etudes en Science Sociales in Paris. He also has been Director of the International Macroeconomics Programme of CEPR. He was a founding Managing Editor of the journal Economic Policy, a founding contributor of the websites VoxEU and Telos and is a member of the Bellagio Group and of Euro 50.

Acknowledgements

We thank Cédric Dupont, Pablo Garcia, Carlos Giraldo, Gérard Roland and José Darío Uribe for advice and comments, and Felipe Leal for excellent research assistance.

Contents

List of conference participants

Mirko Abbritti	Associate Professor Economic Department Universidad de Navarra
Ivan Adamovich	Chief Executive Officer Private Client Bank AG Zürich
Edmond Alphandery	Chairman Euro 50 Group Paris
Mourtaza Asad-Syed	CEO Yomoni Asset Management Paris
Katrin Assenmacher	Head of Division Monetary Policy Strategy Division European Central Bank Zürich
Simone Auer	Advisor to the Governor Swiss National Bank
Richard Baldwin	Professor of International Economics The Graduate Institute Geneva
Jeanne Barras-Zwahlen	Consultant Banque Julius Baer Geneva
Vít Bárta	Advisor to Governor Czech National Bank Prague
Geoffroy Bazin	Chief Executive Officer BNP Paribas Geneva
Charles R. Bean	Professor London School of Economics UK Office for Budget Responsibility London Chair, CEPR, London

David Begg	Professor Imperial College Business School London
Erik Berglof	Director Institute of Global Affairs London School of Economics
Jan Marc Berk	Director Economics & Research De Nederlandsche Bank
Claudio Borio	Head of the Monetary and Economic Department Bank for International Settlements Basel
Michael Burda	Prof. Dr. h.c., Ph. D School of Business and Economics Humboldt-University Berlin
Luigi Buttiglione	Managing Partner of Sempera Founder of LB-Macro London
Mark Carey	Co-President GARP Risk Institute Arlington, USA
Jaime Caruana	Former General Manager BIS
Francesca Caselli	Economist Research Department IMF
Stephen Cecchetti	Rosen Family Chair in International Finance Brandeis International Business School Waltham, USA
Stijn Claessens	Head of Financial Stability Policy Deputy Head of Monetary and Economic Department Bank for International Settlements Basel
Benoît Coeure	Member of the Executive Board European Central Bank Frankfurt

Jonah Crane	Regulator in Residence FinTech Innovation Lab
Jean-Pierre Danthine	President Paris School of Economics
Xavier Debrun	Division Chief Research Department IMF
Jose de Gregorio	Professor Department of Economics Universidad de Chile
Jacques Delpla	Associate Researcher Toulouse School of Economics
Renaud De Planta	Managing Partner Pictet Group Geneva
Virginia di Nino	Economist International Policy Analysis Division European Central Bank
Steve Donzé	Senior Macro Strategist Pictet Asset Management Geneva
Cédric Dupont	Professor of International Relations The Graduate Institute Geneva
Jean-Pierre Durante	Economist – Head of Applied Research Banque Pictet & Cie
Barry Eichengreen	Professor Department of Economics and Political Science University of California Berkeley
Emmanuel Ferry	Chief Investment Officer Banque Pâris Bertrand Sturdza Geneva
Alessandro Flamini	Professor Department of Economics University of Pavia

Andrea Fracasso	Professor School of International Studies University of Trento
Jeffry Frieden	Professor Department of Government Harvard University
Hans Genberg	Executive Director The SEACEN Centre Kuala Lumpur
Gary Gensler	Senior Advisor to the Director MIT Media Lab Senior Lecturer MIT Sloan School of Manageme
Petra Gerlach	Head of Monetary Policy Analysis Swiss National Bank
Stefan Gerlach	Chief Economist EFG Bank Zürich
Francesco Giavazzi	Professor of Economics Bocconi University Milan
Olivier Ginguene	CIO Asset Allocation and Quantitative Investment Pictet Asset Management SA Geneva
Michel Girardin	Lecturer University of Geneva
Pierre-Olivier Gourinchas	Professor of Economics University of California Berkeley
Clemens Grafe	Economist Goldman Sachs London
Laszlo Halpern	Senior Research Fellow Institute of Economics Centre for Economic and Regional Studies Hungarian Academy of Sciences Budapest

Philipp Hartmann	Deputy Director General Research European Central Bank Frankfurt
Harald Hau	Professor of Economics and Finance University of Geneva Geneva Finance Research Institute
Pablo Hernandez de Cos	Director General Economics, Statistics and Research Banco de España Madrid
Mathias Hoffmann	Professor of International Trade and Finance Department of Economics University of Zurich
Patrick Honohan	Professor of Economics Trinity College Dublin Peterson Institute for International Economics Trustee, CEPR, London
Yi Huang	Assistant Professor of Economics Pictet Chair in Finance and Development The Graduate Institute
Takatoshi Ito	Professor School of International and Public Affairs Columbia University New York
Nadezhda Ivanova	Advisor to the First Deputy Governor Bank of Russia Moscow
Simon Johnson	Professor Sloan School Massachusetts Institute of Technology (MIT) Cambridge, USA
Thomas Jordan	Chairman of the Governing Board Swiss National Bank
Vivek Joshi	Principal Secretary Monitoring and Co-ordination Government of Haryana I ndia
Jean Keller	Chief Executive Director Quaero Capital SA Geneva

Signe Krogstrup	Advisor Research Department IMF
Jean-Pierre Landau	Professor SciencesPo Paris
Jan Langlo	Director Association of Swiss Private Banks Geneva
Valérie Lemaigre	Chief Economist Asset Management BCGE Geneva
Carlos Lenz	Head of Economic Affairs Swiss National Bank
Andréa M. Maechler	Member of the Governing Board Department III Swiss National Bank
Antoine Magnier	General Inspector of Social Affairs French Ministry of Labor and Social Affairs Paris
Michaël Malquarti	Senior Portfolio Manager Quaero Capital Geneva
Nikolay Markov	Senior Economist Pictet Asset Management Geneva
Aurelie Martin	Economist Autonomy Capital London
Robert McCauley	Senior Adviser Monetary and Economic Department Bank for International Settlements Basel
Alessandro Missale	Professor of Economics University of Milan
Carlo Monticelli	Vice-Governor Financial Strategy Council of Europe Development Bank – CEB Paris

Neha Narula	Director MIT Digital Currency Initiative MIT Media Lab Cambridge, USA
Judith Nemenyi	Senior Advisor Financial Research Institute Budapest
Dirk Niepelt	Director Study Center Gerzensee
Patrick Odier	Senior Managing Partner Banque Lombard Odier & Co Ltd Geneva
Fabio Panetta	Deputy Governor Member of the Governing Board Banca d'Italia
Ugo Panizza	Professor of International Economics Pictet Chair in Finance and Development The Graduate Institute
Pierre Pâris	CEO Banque Pâris Bertrand Sturdza Geneva
Yung Chul Park	Professor of Economics Division of International Studies Korea University
Alonso Perez	Portfolio Manager Wellington Management London
Avinash Persaud	Professor and Chairman Intelligence Capital Limited Barbados
Marcel Peter	Deputy Director International Monetary Cooperation Swiss National Bank
Adrien Pichoud	Chief Economist SYZ Asset Management SA Geneva

Huw Pill	Chief European Economist Global Macro Research Goldman Sachs International
Jean Pisani-Ferry	Professor SciencesPo Paris
Richard Portes	Professor of Economics London Business School European Systemic Risk Board Honorary President and Founder, CEPR, London
Frédéric Potelle	Head of Research Bordier & Cie Geneva
Fabrizio Quirighetti	CIO Multi-Asset & Fixed Income SYZ Asset Management
Bertrand Rime	Director Financial Stability Swiss National Bank
Alain Robert	Executive Vice Chairman Global Wealth Management UBS Switzerland AG
Andrew Rose	Professor Haas School of Business University of California Berkley
Valerie Rouxel-Laxton	Senior Fellow The Atlantic Council Washington D.C
Hans-Joerg Rudloff	Chairman Marcuard Holding London
Philippe Rudloff	Founding and Managing Partner Atlantis Marcuard Geneva
Nabil Jean Sab	Chief Executive Officer Compagnie Privée de Conseils et d'Investissements SA Geneva

Pierre Sicsic	Invited Scholar Paris School of Economics and Banque de France
Anthony Smouha	CEO Atlanticomnium SA Geneva
Sergio Sola	Economist Middle East and Central Asia IMF
Nicolas Stoffels	Head of Financial Markets Analysis Swiss National Bank
Livio Stracca	Head of International Policy Analysis Division European Central Bank
Katsiaryna Svirydzenka	Economist Asia and Pacific Department IMF
Alexandre Swoboda	Professor of Economics Emeritus The Graduate Institute
Gianluca Tarolli	Market Economist Research Banque Bordier & Cie Geneva
Leslie Teo	Chief Economist Economics and Investment Strategy GIC Private Limited Singapore
Cédric Tille	Professor of Economics The Graduate Institute
Albi Tola	Senior Economist International Monetary Cooperation Swiss National Bank
Pascal Towbin	Senior Economist Financial Stability Swiss National Bank
Angel Ubide	Managing Director Goldman Sachs & Co
Sebastian Weber	Economist European Department IMF

Ghislaine Weder	Head Economics and International Relations Nestlé SA
Charles Wyplosz	Professor of International Economics The Graduate Institute Director ICMB, Geneva CEPR, London
Attilio Zanetti	Head of Economic Analysis Swiss National Bank
Jean Zwahlen	Former General Director Swiss National Bank
Patrick Zweifel	Chief Economist Pictet Asset Management Geneva

Foreword

The Geneva Reports on the World Economy are published annually by CEPR and ICMB and have been providing innovative analysis on important topical issues facing the global economy since 1999.

The very first Geneva Report, published in September 1999, was *An Independent and Accountable IMF*. For this 20th report, the same group of authors have reunited to survey changes in the global economy and the IMF. They find that the earlier trend toward globalisation has continued, and the IMF has adapted, but there are new challenges. The authors highlight seven key developments affecting the monetary and financial environment and their implications for the Fund. These developments range from the global financial crisis and the euro area crisis to the challenges to the world financial order posed by the emergence of China as a superpower.

The IMF is aware of the challenges that face it and has offered responses. But much remains to be done to preserve the multilateral financial order that is its *raison d'être*. The report suggests introducing a quick-disbursing emergency-financing facility for countries with strong fundamentals that does not require prequalification; proposes new ways for the Fund to deal with regional arrangements; and recommends major changes to IMF governance, including a high-level non-resident Board elected using a tailored voting procedure, whose role is to make the independent management team more accountable.

This report was produced following the Geneva Conference on the World Economy held in May 2018. CEPR and ICMB are very grateful to the authors and several discussants for their efforts in preparing material for this report, as well as to the conference attendees for their insightful comments. We are also thankful to Laurence Procter for her continued efficient organisation of the Geneva conference series, to Richard Varghese for recording and summarising the discussions, and to Anil Shamdasani for his unstinting and patient work in publishing the report. CEPR, which takes no institutional positions on economic policy matters, is delighted to provide a platform for an exchange of views on this topic.

Tessa Ogden
Chief Executive Officer, CEPR

Charles Wyplosz
Director, ICMB

August 2018

Executive summary

Over the last two decades, the world of international finance has changed and so too has the IMF. In this report we highlight seven key developments affecting the monetary and financial environment and their implications for the Fund.

The world and the IMF have changed

First, global gross capital flows have continued to expand. Although there has been some retrenchment in the most recent decade, gross flows remain double what they were two decades ago and fifty percent higher as a percentage of global GDP.

Second, the growth of cross-border capital flows has been associated with continued volatility of real and financial activity. Crises have not gone away despite concerted efforts to strengthen markets and policies. Nor have subsequent policy changes obviously reduced their disruptive impact. Phoenix miracles where crisis countries quickly bounce back have given way to slow recoveries and secular stagnation. The contagion problem has not visibly declined. Twenty-first century crises remain centred on the capital account of the balance of payments and international capital flows.

Third, monetary and exchange rate policies have continued to adapt, albeit slowly. Additional countries have abandoned exchange rate-based monetary policies in favour of inflation targeting and related monetary policy rules. They have embraced greater monetary policy transparency and developed central bank communication.

Fourth, the international policy community has reemphasised financial regulation. At the national level, there have been efforts to strengthen microprudential regulation and develop macroprudential policies. The IMF has strengthened its financial surveillance accordingly.

A fifth development is the accumulation of foreign exchange rate reserves. This movement has been spearheaded by Asian countries, in response to the belief that they were treated badly by the IMF during the 1997-98 crisis. Subsequent efforts by the Fund to offer better alternatives in the form of various flexible and precautionary credit lines have been unsuccessful.

A sixth innovation has been the development of bilateral swap agreements among the central banks of the G10 countries plus a few emerging market countries, now matched by the swap lines of the People's Bank of China. While swap lines helped to restore confidence and stability during the global financial crisis, they represent a break from the principle of multilateralism. They raise disquieting concerns about countries extended – and denied – emergency assistance.

Twenty years ago, the IMF was advocating capital account liberalisation and, following the implications of the Mundellian trilemma, the adoption of greater exchange rate flexibility. Yet capital account liberalisation has ebbed and flowed, and managed exchange rates remain as popular as ever. In response, the IMF has moved to a more pragmatic position on both questions.

Resources and alternatives to the Fund

Nor has the perennial question of IMF resources vanished. The question of resources is inseparable from quotas and therefore the distribution of power. But some donor countries worry about the moral hazard associated with the availability of large amounts of emergency finance. As a result, although total quotas have been doubled in recent years, a commitment to phase out the General Agreement to Borrow was extracted as a quid pro quo.

The rise of regional financial arrangements, it can be argued, has rendered the issue of more IMF resources less urgent. Yet how the IMF should cooperate with Regional Financing Arrangements (RFAs) remains unclear. The Fund has developed a set of principles to guide its relations with RFAs, but these are vague about key points, and the adequacy of coordination remains questionable.

We therefore propose that the IMF should negotiate formal agreements with current and future RFAs and consider a binding arbitration procedure to resolve disagreements.

The international monetary and financial system relies heavily for emergency liquidity on bilateral currency swaps provided by a handful of key-currency central banks. Their extension is arbitrary and unpredictable. Better would be an equivalent system of credits disbursed by the IMF itself. We propose a fast qualification procedure, without conditionality, to replace bilateral swaps to countries with robust fundamentals that fall victim to crises. We discuss how these credit lines differ from previous efforts on the part of the IMF to establish precautionary credit lines and how they can be financed.

The China factor

The emergence of China will continue to challenge the world financial order. If its growth rate remains high, China will be entitled to claim the largest IMF quota and, with it, a veto over consequential policy decisions like that which the US currently possesses. One question is whether this claim will be granted. Another is what China will do with that power.

If China becomes the largest shareholder, according to the Articles of Agreement the IMF headquarters would have to move from Washington to a Chinese location. This would be a change of major symbolic value, but it is not clear that location provides the host country with significant additional influence. One can also imagine moving headquarters to China while keeping most staff in Washington. Nor is it clear what China would do if it acquired more power and influence in the Fund. While some believe that China will want to maintain the liberal order, others think that it will want to challenge the IMF's current worldview.

If its economic clout is not acknowledged, China may try to create an alternative to the prevailing dollar-centric order. China's efforts in this direction have been successful so far. The People's Bank of China has extended currency swap agreements with more than thirty central banks in the world. These swap lines promote use of the renminbi, and once the renminbi becomes more internationalised the swap lines can provide a safety net that rivals the IMF. Much will depend on market acceptance, which in turn will require China to remove residual restrictions on the currency's use and on capital flows, as well as to implement steps to enhance financial market liquidity, financial transparency, and the reliability of contract enforcement in order to foster wide international use of its currency.

China has also sought to strengthen its influence by creating the Asian Infrastructure Investment Bank (AIIB) and providing development aid bilaterally and through the One Belt, One Road Initiative. It would be better if the World Bank, Asian Deveopment Bank (ADB) and AIIB shared common lending standards, which could also apply to bilateral aid. One way forward would be to offer China membership of the OECD and its Development Assistance Committee, which seeks to set standards for assistance and to coordinate donors.

Governance reform: Beyond quota revisions

The more facilities the IMF possesses, the more important it becomes to strengthen governance of the institution. The status quo, under which management answers to the Fund's principal shareholders, makes it hard for the management team to disregard the preferences of the countries with the largest quota and voting shares in the interest of the global good. It makes it hard for management to make time-consistent decisions, for example not to extend exceptional access to countries whose debts are of questionable sustainability, or to bail in politically influential institutional investors.

Yet another effort to rejig quotas and voting shares will not solve these problems. Instead we propose institutional reorganisation along the lines of a modern central bank. A team made up of the Managing Director and Deputy Managing Directors would make operational decisions concerning, inter alia, programme design and disbursements. Those individual decisions would no longer be subject to the prior approval of a resident Executive Board of governmental representatives. Management would be free to choose its tactics, subject to the mandate spelled out in an amended Articles of Agreement.

The management team would be accountable to a non-resident board or council of high central bank and finance ministry officials, perhaps organised along the lines of the present constituency system, to which it would be obliged to explain and justify its tactics.

With this organisation, selection of the Managing Director and the Deputy Managing Directors would assume greater importance. To ensure their legitimacy, they should be elected by the non-resident Executive Board, or by the governments of member countries, using a weighted voting scheme.

It would be desirable to adopt a voting system with a reasonable degree of proportionality guaranteeing that different regions and economic constituencies were represented by management. The resulting voting system should not be too opaque or complex.

No voting system is perfect, but good systems minimise tactical voting that results in manipulation. One option would be approval voting. Under approval voting, each voter may select a number of candidates. The winner is then the candidate with the largest number of approvals. Following this procedure, the Managing Director and the Deputy Managing Directors would be elected one by one.

Another option would be the single transferable vote (STV). STV delivers proportionality in multi-seat organisations, while limiting wasted votes (votes for sure winners and losers) by transferring them to other candidates, thereby making every voter feel that he had a say and therefore possesses representation. Were selection to occur by STV, there could be a first ballot to select the Managing Director and another ballot to select the Deputy Managing Directors.

1 Introduction

IMF reform may be a perennial topic, but it is a perennial for good reasons. The efficacy of the IMF's lending programmes, in Greece for example, continues to be disputed.[3] In Asia the problem of IMF stigma persists. New lending facilities such as the Fund's Flexible Credit Line and Precautionary and Liquidity Line, supposedly so important for the global financial safety net, remain largely untapped. While there has been some progress in reforming IMF governance, European countries "present at the creation" remain overrepresented on the Executive Board. The United States retains its de facto veto, and rapidly growing emerging markets still complain of inadequate voice and votes.

Discussion of these issues has been ongoing since the Asian financial crisis. Hence a logical starting point for framing the debate is to step back and ask how the global economy has changed since 1998, when the international policy community was still digesting the lessons of that crisis and we wrote our earlier Geneva Report on the World Economy (De Gregorio et al., 1999).

First, global gross capital flows (defined as the sum of cross-border transactions in debt securities, equity, lending, foreign direct investment and other investment vehicles) have expanded enormously, from $2.6 trillion in 1997 to fully $12.4 trillion at their peak in 2007, more than doubling as a share of global GDP.[4] Although there was some retrenchment subsequently, mainly in the form of a decline in cross-border bank lending, gross flows remain double what they were two decades ago. They are half again as high as a percentage of global GDP. Financial globalisation, for better or worse, is ongoing.

Second, the growth of cross-border capital flows has been associated with the continued volatility of real and financial activity. The crisis problem has not gone away despite concerted efforts to strengthen markets and policies, and despite the accumulation of foreign reserves.[5] Nor have subsequent policy changes obviously reduced its disruptive impact. So-called phoenix miracles where crisis countries quickly bounce back have given way to slow recoveries and worries about secular stagnation.[6] The tendency for crises to erupt more or less simultaneously in different countries and to spread among them (the contagion problem) has not visibly declined (Ozkan and Unsal, 2012; Dungy, 2015). Twenty-first century crises remain capital-account crises centred on the capital account of the balance of payments and international capital flows.[7] This is in contrast to the current account crises that dominated before the Mexican and Asian crises.[8]

3 As summarised in Independent Evaluation Office (2016).
4 Data here are from McKinsey Global Institute (2017), based on IMF Balance of Payments Statistics. For further detail see Eichengreen et al. (2017a) and below.
5 Observations in this paragraph are from Eichengreen and Gupta (2016).
6 The term 'phoenix miracle' is due to Calvo et al. (2006). On the contrasting recovery from the global financial crisis, see Dwyer and Lothian (2011) and Arias and Wen (2015).
7 What used to be called the capital account is now called the financial account after the latest revision of the IMF's Balance of Payments Manual in 2013.
8 On the contrasting earlier period, see Milesi-Ferretti and Razin (2000). Two early examples of capital account crises are Chile in 1982 and Mexico in 1994.

Third, monetary and exchange rate policies have continued to adapt, albeit slowly. Additional countries have abandoned exchange rate-based monetary policies in favour of inflation targeting and related monetary policy rules. They have moved in the direction of greater monetary policy transparency and further developed central bank communication tools.

Fourth, the international policy community has necessarily reemphasised financial regulation. At the national level, there have been efforts to strengthen microprudential regulation and develop macroprudential policies. At the international level, there was the Basel II agreement on capital adequacy for internationally active banks in 2006 and then Basel III in 2015.[9] There have been broader efforts at regulatory harmonisation via the Financial Stability Board, created as the Financial Stability Forum by G7 finance ministers and central bank governors in 1999. The IMF has strengthened its financial surveillance by, among other things, conducting bilateral Financial Stability Assessment Programs (FSAPs, undertaken in cooperation with the World Bank) and by publishing a biannual *Global Financial Stability Report*.

We anticipated some of these changes in our earlier Geneva Report. There we highlighted the tendency for international capital flows to expand with the relaxation of capital controls, deregulation of banks, and development of financial markets. We warned that financial volatility was not going away and underscored the increasingly capital account-centred nature of crises. We highlighted the need for strengthened surveillance of financial institutions and markets. We emphasised the desirability of increased exchange rate flexibility in emerging markets, but also the need for an effective monetary anchor. We questioned the infatuation of the international policy community with capital account convertibility.

Full disclosure requires acknowledging also what we did not anticipate. We did not anticipate that the financial crisis problem would infect the advanced country world. We did not anticipate the devastating effects. We did not entirely anticipate the challenges for crisis resolution that would arise in the euro area, where crisis-hit countries have limited scope for adjustment because they lack their own exchange rate and monetary policies. We did not anticipate that the Chinese economy would continue to grow at near double-digit rates for two additional decades, becoming the second largest economy in the world and bestowing on the country the considerable economic, financial, monetary and political influence it now possesses. We did not anticipate China's creation of new international institutions, such as the Asian Infrastructure Investment Bank, or the People's Bank of China's network of central bank swap lines. Nor did we fully anticipate the growth of regional monetary arrangements like the Chiang Mai Initiative Multilateralization and the European Stability Mechanism.

As for the IMF itself, a number of policy dilemmas from 20 years ago remain unresolved. Questions remain about the effectiveness of IMF surveillance, for example. The size of IMF lending programmes has continued to grow, reaching an unprecedented 2,159% of quota in the case of Greece. The IMF continues to demand fiscal adjustments of questionable efficacy. Notwithstanding a stated commitment to streamlining conditionality, it continues to festoon its

9 These dates are only indicative, since there are stages in the Basel negotiating process and different provisions are phased in at different times.

programmes with structural conditions. It still waits too long to demand debt-structuring by crisis countries and to bail in international creditors (again see Greece). And it remains too attendant to the preferences of Europe and the United States. We flagged most of these issues in our earlier report.

Defenders of the institution will argue, not without reason, that it has made progress on many of these fronts and that the controversial Greek programme, with its inordinate size, panoply of structural conditions, emphasis on fiscal consolidation and reluctance to insist on debt restructuring, was an exception from which generalisations should not be drawn. Time will tell.

We examine these issues further in what follows. Chapter 2 starts with an overview of developments in the world economy and global financial markets since our earlier report. Chapter 3 then discusses how the IMF has evolved, describing challenges met and unmet. Chapter 4 focuses on regional funds and the question of how these regional arrangements and the IMF should interact. Chapter 5 examines the emergence of China. It documents the expansion of its foreign economic relations, the internationalisation of its currency, and the potential implications for the IMF.

In Chapter 6, we turn to the topic that was the focus of our earlier report and remains central to IMF reform, namely, governance. Building on that report, we develop a proposal for reform.[10] We suggest that the IMF's Managing Directors should be granted greater leeway to implement policy, consistent with the mandate given to them by their governing board, in the manner of the monetary policy committee of a central bank. Management would still be required to report to the Executive Board of country directors, making them accountable for their actions. The management team would thereby be required to justify its decisions. Its members would have to explain how their tactics were consistent with pursuit of their mandate, but they would not be required to obtain the assent of the Executive Board for day-to-day decisions. This independence would allow them to pursue time-consistent policies and free them from the undue influence of their principal shareholders. The result would be IMF policies that were credible, time-consistent and better aligned with the global interest.

10 This section also builds on a proposal previously advanced in Eichengreen (2009).

2 How the world has changed

In this chapter we review global financial developments shaping the environment in which the IMF operates. We start by documenting the volatility of capital flows and incidence of sudden stops. From there we move to policy-related matters: changes in the frameworks countries utilise to conduct monetary policy and manage their exchange rates, the incidence of capital controls, the accumulation of reserves, and the frequency and size of IMF programs.

2.1 Capital flow volatility

Table 1 contrasts the magnitude, persistence and volatility of capital flows to emerging markets in successive five-year periods.[11] The sample is an unbalanced panel of 34 emerging markets for which quarterly capital flow data are available for at least 24 consecutive quarters from 1990Q4 to 2017Q4.[12] Gross capital flows by non-residents are in US dollars and scaled by trend GDP. Our preferred measure of capital flow volatility is the coefficient of variation.[13]

So measured, FDI inflows into emerging markets have remained stable compared to other capital flows. Those FDI flows have grown more stable, if anything, since 2000 and, especially, 2005.[14] In contrast, portfolio debt inflows have grown even larger and more volatile since the turn of the century. Although portfolio equity inflows remain relatively small as a share of recipient-country GDP, they too show increased volatility. The average quarterly level of other inflows (in practice mainly bank-intermediated lending, but also suppliers' credits, trade credits and other difficult to classify items) rises and falls between successive five-year periods but remains relatively stable within them. This is consistent with the idea that bank-related lending exhibits long swings, as international banks expand and retrench (a phenomenon known as the financial cycle). This pattern will resonate with observers of interbank flows among the advanced countries, flows that were considerably larger in the five or so years before the 'Transatlantic financial crisis' than after.[15]

11 The table is an update of one in Eichengreen and Gupta (2016).

12 Quarterly data are particularly useful for documenting capital flow volatility and pinpointing the timing of sudden stops. Data here are from the IMF's *International Financial Statistics*.

13 The standard deviation divided by the mean.

14 FDI outflows from emerging markets are a different story, but they have only gained importance relatively recently.

15 The phrase is from Bayoumi (2017), who concentrates on the role of bank flows between Europe and the United States in the onset of the global financial crisis.

Table 1 Magnitude and volatility of capital inflows to emerging markets, 1991-2017

		1991-1995	1996-2000	2001-2005	2006-2010	2011-2017
FDI	Mean (quarterly average)	0.23	0.76	0.55	0.92	0.68
	Standard deviation	0.15	0.50	0.38	0.59	0.40
	Coeff. of variation	0.61	0.71	0.70	0.57	0.64
Portfolio equity	Mean (quarterly average)	0.06	0.05	0.03	0.05	0.03
	Standard deviation	0.10	0.12	0.09	0.21	0.15
	Coeff. of variation	1.35	1.56	2.21	1.99	2.86
Portfolio debt	Mean (quarterly average)	0.03	0.11	0.10	0.20	0.32
	Standard deviation	0.23	0.39	0.40	0.63	0.62
	Coeff. of variation	1.52	1.72	1.58	2.64	2.37
Other flows	Mean (quarterly average)	0.22	0.32	0.20	0.56	0.24
	Standard deviation	0.97	0.79	0.59	1.09	0.66
	Coeff. of variation	1.26	1.41	0.92	1.65	2.21

Notes: Mean, standard deviation and coefficient of variation are the median across all countries in the sample during respective time period. Coefficient of variation is standard deviation divided by mean. Data are quarterly from 1990 Q1 to 2017 Q4. All capital flows are expressed as % of annual trend GDP.

2.2 Sudden stops

Table 2 tabulates the frequency and magnitude of sudden stops in capital flows in this same set of countries before and after 2002 (roughly the halfway point in our sample). Here we focus on portfolio and other flows on the grounds that these are the most volatile components. We classify an episode as a sudden stop when portfolio and other inflows decline below their average in the previous 20 quarters by at least one standard deviation, when the decline lasts for more than one quarter, and when flows are two standard deviations below their prior average in at least in one quarter. Episodes end when capital flows recover to at least their prior mean minus one standard deviation. When two sudden stops occur in close proximity, we treat them as a single episode.[16]

We count 39 sudden stops in our 34 countries since 1991.[17] The number of such episodes is higher in the second subperiod than in the first, but the number of countries for which we have data is also higher; raw incidence (percentage of the available observations) is slightly higher in the second period, but only slightly (and not significantly). The average frequency of sudden stops in any one quarter is 1.9%.

Duration is also similar across periods. The episodes last on average for four quarters. While the duration of sudden stops is slightly less in the second period, again the difference is not statistically significant. Indeed, none of the statistics in the first four rows of Table 2 differs significantly across columns at standard confidence levels.

16 This is the case in only a few instances.

17 Readers may worry that country coverage is unbalanced and, in relatively early years, limited. But data availability in fact reflects the significant engagement of countries with global capital markets. We are therefore capturing the most important sudden stops.

Table 2 Incidence and duration of sudden stops, 1991-2017

	1991-2002	**2003-2017**
No. of sudden stops	16	33
Available observations	903	1666
As percentage of available observations	1.77	1.98%
No. of quarters for which sudden stops lasts	4.44	3.52
Capital flows (% of GDP), first quarter	-1.09	-1.23
Capital flows (% of GDP), average for first 4 quarters	-0.92	-0.78
Capital flows in four quarters preceding (% of GDP)	1.29	2.18
Portfolio flows in four quarters preceding (% of GDP)	0.68	0.42
Other flows in four quarters preceding (% of GDP)	0.26	1.71
Turnaround: average during 4 quarters - average in 4 preceding	-2.22	-2.98
Turnaround: average during all quarters - average in 4 preceding	-2.36	-3.69

Note: Incidence of sudden stops in 34 emerging markets, calculated as detailed in the text.
Source: Authors' calculations.

Sudden stops continue to bunch in certain years (see Figure 1). In the 1990s they were concentrated around the Asian and Russian crises; in the last decade the most prominent cluster was in 2008-2009 around the collapse of Lehman Brothers.

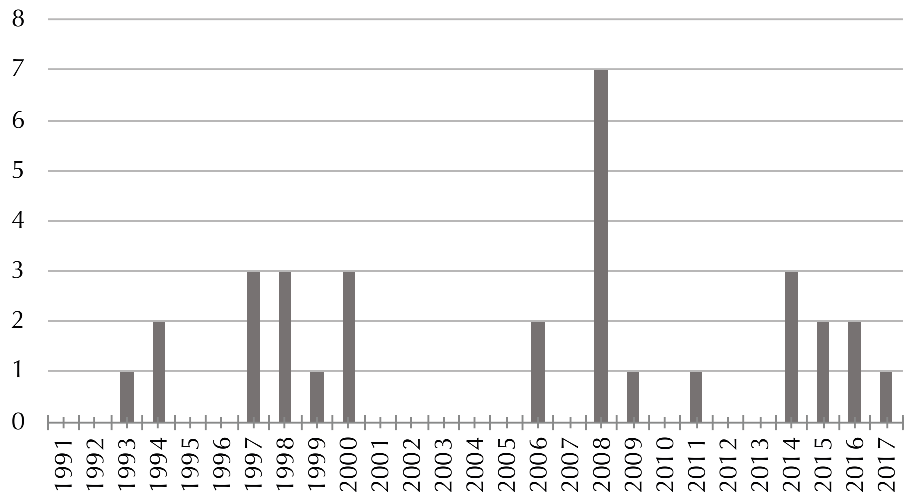
This clustering is suggestive of contagion. Contagion may occur when, following difficulties in a borrowing country (the disclosure of large deficits, political turmoil or adverse changes in the terms of trade), international investors withdraw from countries with similar characteristics; this is the 'wake-up call mechanism' (Goldstein, 1998). Alternatively, contagion can occur when a financial institution, having suffered losses elsewhere, withdraws funding from a country in order to rebuild its balance sheet; this is the 'common creditor channel' (Kaminsky et al., 2003). The first type of contagion is likely to rise with financial globalisation, as more countries become borrowers. The second becomes more prevalent when the financial industry becomes more concentrated and the same large lenders are present in many countries.

What is the magnitude of the capital flow reversal? In our sample, capital outflows during sudden stops average about 1% of GDP per quarter (cumulatively 4% of GDP for the duration of the sudden stop) compared to inflows of about 2% of GDP a quarter over the preceding year. This implies a swing in capital flows of 3% of GDP in a quarter.

When we compare the two subperiods, we observe that the magnitude of the capital flow turnaround has become significantly larger in recent years because pre-sudden stop inflows have increased.[18] This increase, in turn, is associated with a significant increase in 'other inflows' (to repeat, interbank borrowing, suppliers' credits, trade credit and other more difficult to classify items), not in portfolio capital (equity and bond market-related) flows. One suspects that as the authorities have tightened oversight of short-term portfolio debt and equity flows in response to earlier problems, these other flows have become more important as conduits for short-term capital movements.

Thus, sudden stops, like capital flow volatility, remain a fact of international financial life, and the magnitude of the associated capital flow turnaround has, if anything, become even larger.

Figure 1 Number of sudden stops and year of commencement



Source: Eichengreen and Gupta (2016, as updated by the present authors.

2.3 Exchange rates, capital accounts and IMF programmes

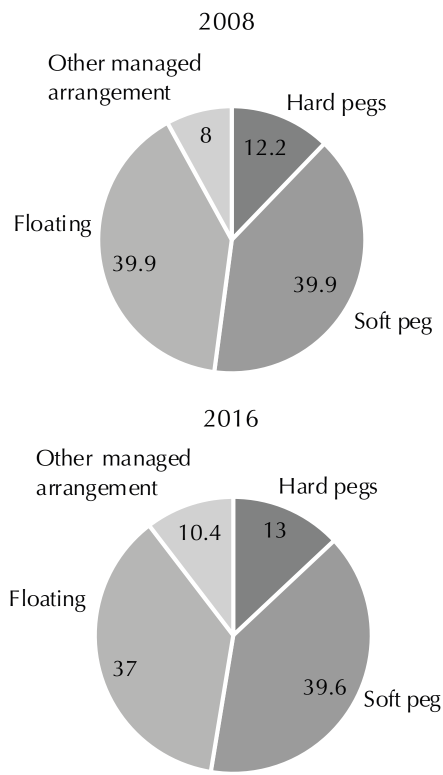
Figure 2 shows that there has been relatively little change in the constellation of exchange rate regimes over the past decade. Roughly 40% of IMF members operate soft pegs (conventional pegs, crawling pegs, and pegged rates within horizontal bands), roughly 40% float, and the remaining 20% maintain other managed arrangements (including hard pegs).[19] The main change is in the number of countries classified as operating hard pegs on the grounds that they have no separate legal tender, as additional countries joined the euro area.

18 The figures in Table 2 differ significantly across subperiods in the two bottom rows of the table. (The figures for turnarounds are significantly larger in absolute value in the second subperiod, in other words.) The same is true for other inflows and for capital inflows in the four preceding quarters.

19 These data are for the IMF's de facto exchange rate regime classification; hence they are only available from 2008.

Thus, we continue to observe considerable diversity in exchange rate arrangements. Chapter 3 examines the evolution of exchange regimes in more detail. It confirms this picture of stability, globally and across country groups.

Figure 2 Exchange rate arrangements, 2008-14 (percent of IMF members as of April 30)

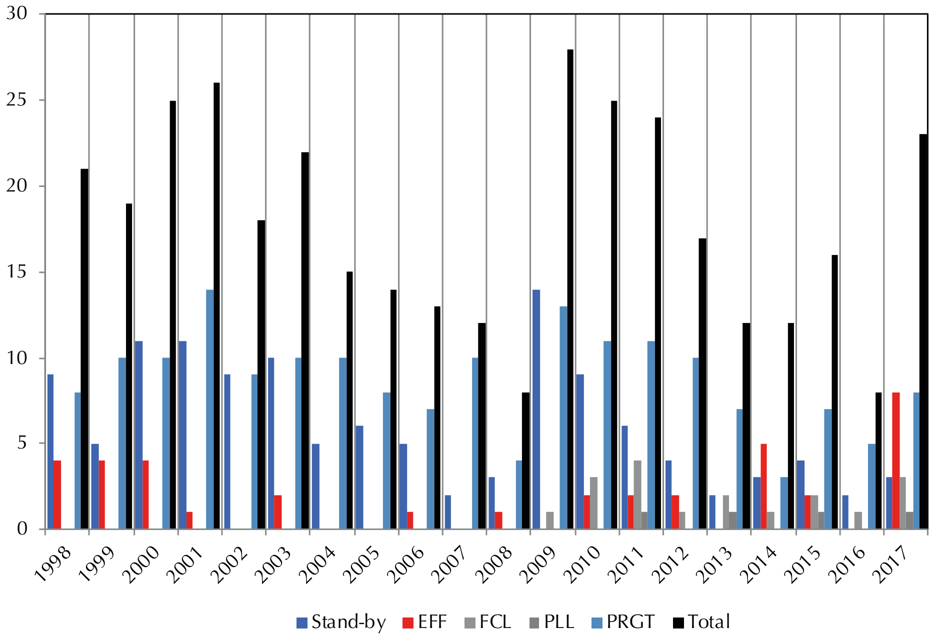


Note: Figures cover 188 member countries and three territories: Aruba and Curaçao and Saint Maarten (all in the Kingdom of the Netherlands) and Hong Kong SAR (China). 2008 data as retroactively classified 2 February 2009; does not include Kosovo, Tuvalu, and South Sudan, which became IMF members on 29 June 2009, 24 June 2009 and 18 April 2012, respectively.

Source: AREAER database.

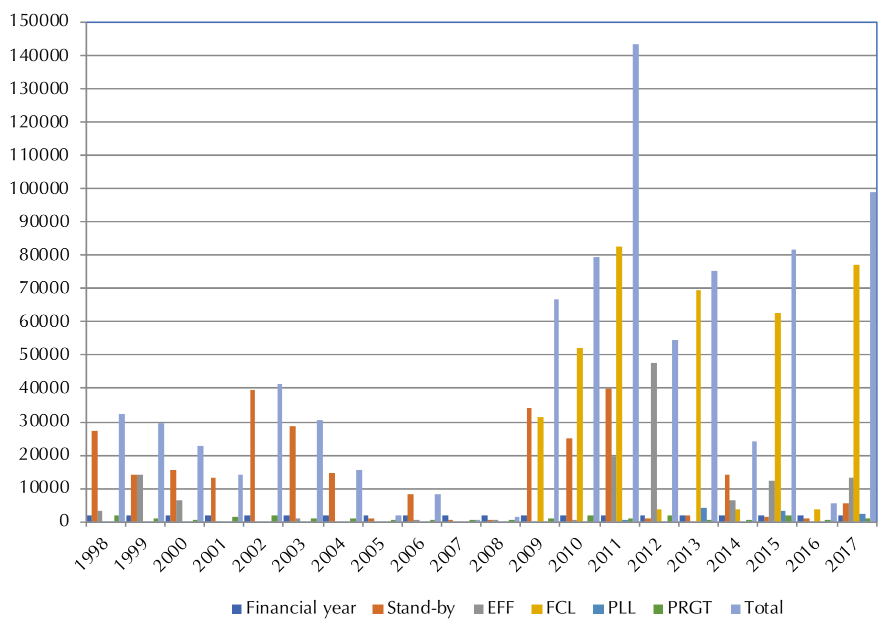
Figures 3 and 4 show the number and size of IMF programmes since 1998. The number of programmes has fluctuated without trend, falling in the quiet period prior to the global financial crisis, when there was talk of downsizing the IMF, and then rising in the crisis. But the amounts committed under programmes have continued to rise. In our earlier report, we warned of this trend in the direction of ever-larger programmes owing to increasing international capital flows and the reluctance of the international policy community to bail in creditors. The growing size of programmes places strain on IMF resources. In conjunction with the reluctance to bail in creditors, it is a burden on the government and taxpayers of the crisis country, insofar as they are ultimately on the hook for repaying the Fund (whose resources will then have been used, indirectly, to pay off the creditors).

Figure 3 Number of IMF arrangements



Source: IMF Annual Report.

Figure 4 Amounts committed under IMF arrangements (millions of special drawing rights)



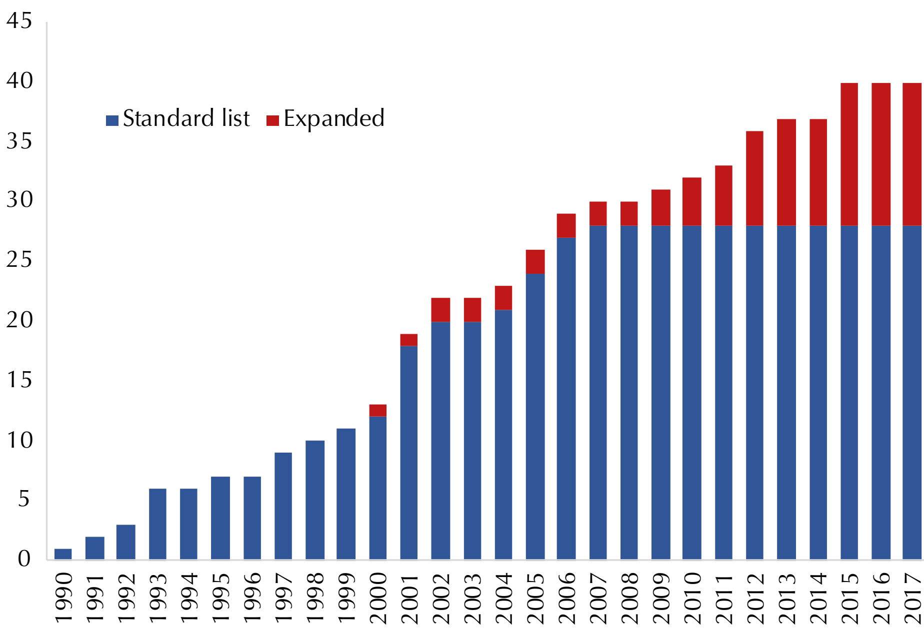
Source: IMF Annual Report.

2.4 Inflation targets

Chapter 3 further documents that choice of exchange rate regime has been stable except in the group of countries adopting inflation targeting as a monetary strategy. Greater exchange rate flexibility is evident only within this group. An interpretation is that countries are reluctant to give up the exchange rate as a target or nominal anchor unless they can substitute an alternative anchor and a fully articulated monetary policy strategy, which is what inflation targeting provides.

Prior to the 1990s, countries abandoning exchange rate pegs often relied on monetary aggregates for this anchoring function. In the course of the 1980s monetary aggregate anchors became increasingly unstable owing to financial innovation. The exchange rate anchor became fragile owing to the liberalisation of capital flows. This left inflation targeting as an increasingly popular choice. This evolution was coupled with growing central bank independence, logically insofar as committing to an inflation target is credible only when monetary policy is not subordinated to fiscal policy (with central bank independence limiting the danger of such subordination).

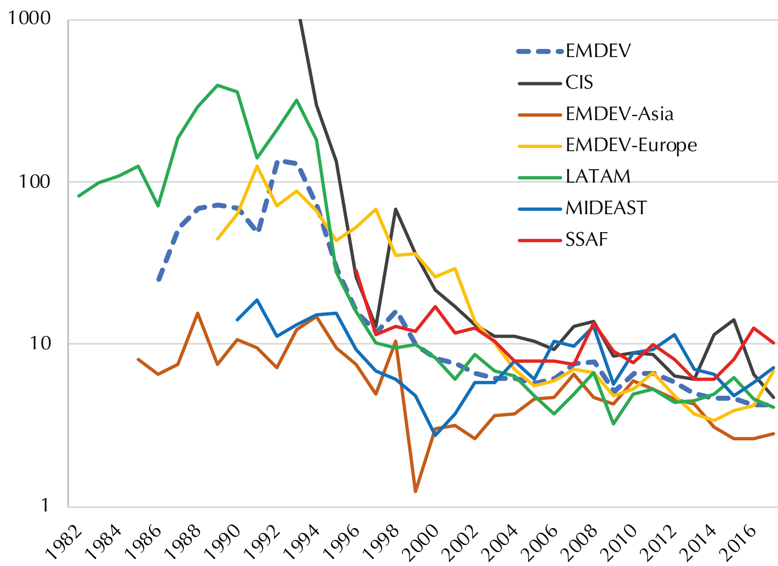
Figure 5 Number of countries operating inflation-targeting regimes



Source: Standard list based on Roger (2010), Hammond (2011) and Jahan (2017), as expanded by the authors.

Before the Asian crisis, fewer than ten countries targeted inflation; today approximately 40 do so.[20] Advanced countries, starting with New Zealand, were first to adopt this regime, which then spread to emerging markets (Figure 5). Most Latin American countries had no anti-inflation strategy until the mid-to-late 1990s, despite some failed exchange rate-based and heterodox stabilisations (Figure 6). Thanks to more independence for their central banks and government commitments to low inflation, stabilisation was then successfully achieved in the 2000s in the vast majority of cases. The process culminated in the adoption of inflation targets by Brazil, Chile and Colombia in the aftermath of the Asian crisis. Mexico, Peru, Uruguay and Paraguay and other Central American and Caribbean countries soon followed. A similar trend occurred in Asia. Following the collapse of exchange rate anchors in the 1997-8 crisis, South Korea, Thailand, the Philippines and Indonesia switched to inflation targeting. They were followed more recently by Japan and India.

Figure 6 Inflation rates by region (year end, percent, log-scale)



Source: IMF-WEO.

In principle, consistency requires that an inflation targetter not utilise another nominal anchor. In order to avoid subordinating inflation to the exchange rate, the latter should be free to float. However, not all inflation-targeting countries are clean floaters in practice. Most central banks operating inflation targeting combine the medium-term inflation target with short-run exchange rate stabilisation (Ho and McCauley, 2005; Svensson, 2000). This willingness to

20 There are many lists of inflation targeting countries. Figure 5 is based on the sources cited in the source note (blue portion) as supplemented by central bank statements and the IMF's AREAER (red portion). The most comprehensive enumeration is at http://www.centralbanknews.info/p/inflation-targets.html, which includes 66 countries as declaring inflation targets. More restrictive lists emphasise that a full-fledged inflation-targeting regime entails more than just stating a goal for inflation. Many countries followed what has been referred to as 'inflation target lite' (Stone, 2003), and there is some dispute about how to classify them.

deviate from the inflation target in the short run, together in some cases with the maintenance of limited capital controls, creates scope for pursuing a second nominal target, namely, a value for the exchange rate. That said, the evidence presented in Chapter 3, backed by results from Ebeke and Fouejieu (2015), indicates that, while their exchange rates seldom float freely, inflation-targeting central banks allow for more exchange rate flexibility than others.

Box 1 Inflation targeting

Inflation targeting involves a range or point target for inflation, to be achieved over a given horizon, usually two or three years but sometimes specified as the 'medium term' (Svensson, 1997; De Gregorio, 2009). Inflation targeting is only credible when monetary policy is not subordinated to fiscal policy.

The advantages of inflation targeting go beyond the direct effect on macroeconomic variables (inflation, growth). There may also be positive consequences for institutional design, for example creating pressure for central bank autonomy, for increasing the transparency of monetary policy, and sharpening incentives for fiscal responsibility.

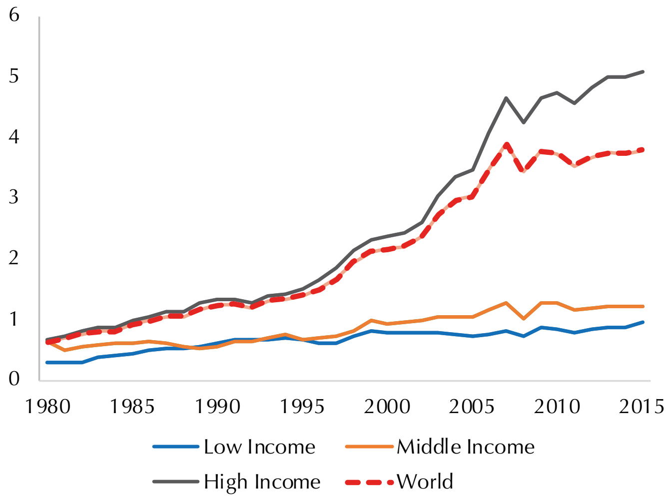
The evidence on inflation targeting is favourable but not entirely conclusive. Differences in evaluations are partly related to samples of countries. Ball and Sheridan (2006) report no significant benefits in advanced economies, while Goncalves and Salles (2008) find that developing countries experience drops not just in inflation but also in output volatility. It may be that developing countries benefit disproportionately from inflation stabilisation (given their high inflation starting point) and improvements in institution design (given the weak initial state of institutions). In their analysis of more than 100 studies of both advanced and developing countries, Ballima et al. (2017) conclude that inflation targeting succeeds in reducing inflation levels and output volatility, with no significant effects on inflation volatility and output growth overall.

Recently the focus has shifted to the role of the monetary regime in fostering financial stability. One criticism is that low and stable inflation encouraged risk taking, and that excessive attention to inflation targets allowed the development of asset bubbles and financial excesses. The Bank for International Settlements argues that monetary policy should be tightened beyond what is necessary to meet the inflation target in order to avoid asset price bubbles (see, for example, Borio, 2012; Svensson, 2016). This may imply the need to rethink conventional inflation-targeting frameworks.

2.5 Capital controls

Figure 7 shows the evolution of financial integration in three equally sized groups of countries distinguished according to their per capita incomes. Financial integration is measured as the sum of international assets and liabilities for each group as a proportion of GDP. The figure confirms that the world has become more financially integrated over the last 20 years, with much of this evolution concentrated among relatively high-income countries.

Figure 7 International financial integration (international assets plus liabilities over GDP)

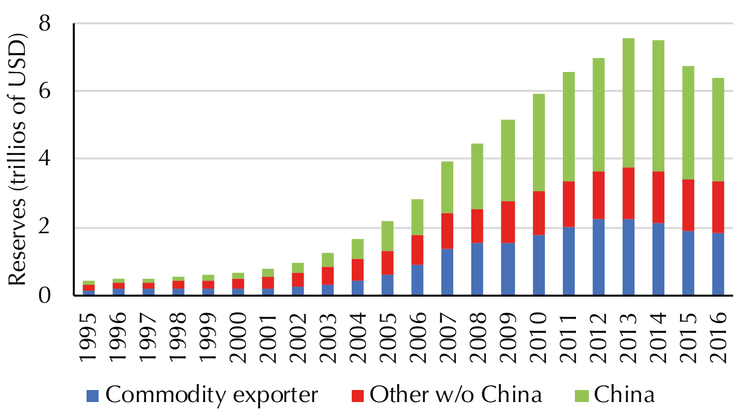


Source: Lane and Milesi-Ferretti (2017).

2.6 Reserve accumulation

After the Asian crisis, emerging and developing economies accumulated international reserves. Still more rapid accumulation then took place in the mid-to-late 2000s, coincident with booming commodity prices (Figure 8). Although China accounts for the largest fraction of reserve accumulation among emerging market economies, followed by commodity exporting countries, the increase in foreign exchange holdings was widespread.

Figure 8 International reserves (trillions of US dollars)

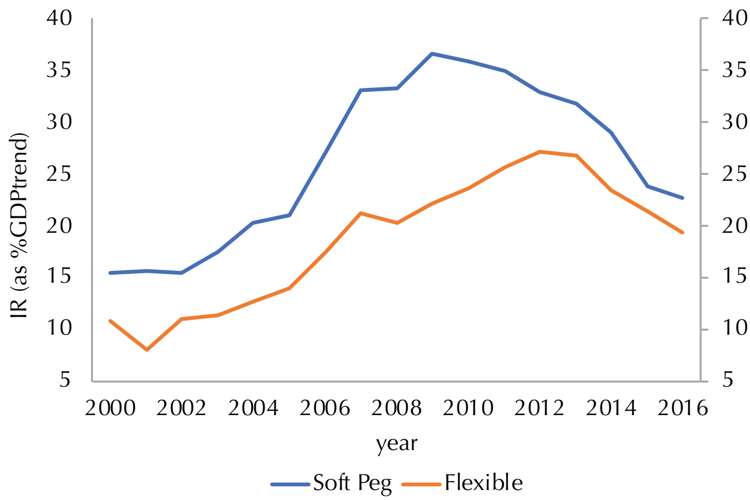


Source: IMF International Financial Statistics.

Two explanations have been offered for the accumulation of reserves. The first is the precautionary motive, by which countries hold foreign exchange in order to better manage financial turmoil. Asian countries in particular sought to avoid having to go to the IMF. Countries exposed to sudden stops of capital inflows or large outflows like those described in Table 2 attempt to mitigate the effects by holding reserves.

When the exchange rate is fixed, the central bank needs to hold sufficient reserves to cover all monetary liabilities, which are subject to potential liquidation. In a floating exchange rate regime, in contrast, there should be no need to hold international reserves, in theory at least, since financial shocks can be absorbed by the exchange rate. But large exchange rate changes can be destabilising if there are foreign currency exposures on national balance sheets. Sudden movements in the exchange rate can undermine confidence and create expectations of more of the same. Conversely, a large war chest may discourage speculation against the currency during episodes of financial turmoil. Unsurprisingly, countries with less flexible exchange rates tend to hold more reserves as a share of GDP. That said, the holdings of countries with flexible regimes are sizeable, and have been rising since the global financial crisis (Figure 9).

Figure 9 Evolution of reserves by exchange rate regime (percent of GDP)



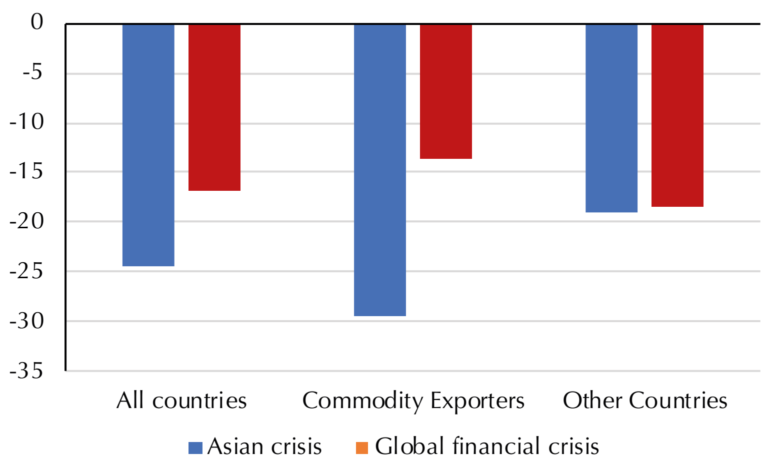
Note: Reserves are scaled by trend GDP, which is calculated as using the average rate of growth within the sample period of 2000-2016.

Source: Cabezas and De Gregorio (2018), as updated by the present authors.

But holding reserves in order to signal financial strength can create coordination problems. If what engenders confidence is holding more reserves than one's neighbours, then the average level of reserves may be inefficiently high. This suggests a role for the IMF (and possibly for Regional Financial Arrangements) in coordinating policies toward reserve accumulation.

Related to this signalling function, Aizenman and Sun (2011) note also a fear of losing reserves. As shown in Figure 10 for a sample of 52 middle-income developing countries, reserves are far from being fully utilised even in a crisis. During the Asian crisis, the decline was only 25% on average;[21] in the global financial crisis it was 17%. South Korea let its reserves fall by about 24%, from $264 billion in March 2008 to $201 billion in December 2008; $200 billion then came to be seen as a red line below which reserves could not be permitted to fall, presumably to avoid sending an adverse signal. This suggests that self-insurance through reserve holding is costly.[22] Not only must countries accumulate reserves sufficient for use in foreign exchange market intervention, but they also must accumulate further reserves that they are not able to use, whether for signalling or other reasons.[23]

Figure 10 Decline in international reserves during the Asian and global financial crises (percent)



Notes: The figure shows the decline from the maximum of reserves level reached before the crisis – January 1997 to August 1998 for the Asian crisis and April to September 2008 for the global financial crisis – to the minimum post-crisis – September 1998 to January 2001 for the Asian crisis and October 2008 to April 2009 for the global financial crisis. The countries used are those which had per capita incomes of between US$3,000 and $20,000 in 2011 for which data are available. Commodity-exporting countries are those where over 70% of their total exports in 2008 consist of minerals, fuels or agricultural products (WTO, 2009).

Source: IMF data for the set of countries considered by Cabezas and De Gregorio (2018).

21 In 1997, Thailand lost most of the international reserves in forward transactions that did not show up in its official statistics (in accordance with the disclosure rules of the time); Korea lost most of its international reserves when they were committed as deposits in commercial banks, which were then lent to Korean corporations with no guarantee of recovery, but this again was not evident in official statistics. Hence the 25% cited here may be an underestimate. More generally, some countries' reserve losses during the Asian and the global financial crises may be understated to the extent that they do not capture the forward book. We are grateful to Bob McCauley for the point.

22 How costly this is depends on the interest rate differential between US treasuries and domestic sovereign liabilities.

23 However, Dominguez et al. (2012) argued that there is some evidence that countries with larger reserves avoided capital outflows.

Perversely, reserve accumulation may even aggravate capital inflow problems. Consider a central bank that decides to accumulate reserves. If the current account remains unchanged – which assumes that reserve accumulation has no effect on the exchange rate – then the net financial account, including changes in reserves, will also remain unchanged. Therefore, the accumulation of reserves will be matched, one for one, by an increase in capital inflows. Such interventions, designed to prevent exchange rate appreciation, induced additional inflows on a number of occasions in the first decade of the 21st century (De Gregorio, 2014).

A second reason to accumulate reserves is mercantilism (Aizenman and Lee, 2007). Countries accumulate reserves in order to weaken the currency and render their exports more competitive. Notably, China has been accused of manipulating its currency through foreign exchange rate intervention in order to boost its exports and limit imports. These policies can have negative impacts on other countries, which is why the IMF scrutinises cross-country and global spillovers in its surveillance exercises (see Chapter 3). But while making observations about spillovers is one thing, getting countries to act on them is another. Global policy coordination may be desirable, but attempts to engineer it regularly succumb to national objectives.

2.7 New instruments: Flexible credit lines and agreements

Doubts about the efficacy of reserve accumulation point to the question of whether there are better alternatives that provide protection against financial turmoil without hurting other countries. One option, which we discuss in Chapter 3, is the precautionary arrangements with the IMF.

Another option is bilateral swap lines. During to the global financial crisis, the Federal Reserve extended bilateral swaps to 13 central banks. While these arrangements were initially seen as temporary, the Fed, the ECB and the central banks of Canada, the UK, Japan, and Switzerland converted their bilateral swaps into standing arrangements in 2012. The ECB similarly offered swap lines to countries on the periphery of the euro area. The People's Bank of China negotiated swap arrangements with countries in East Asia but also with countries from Argentina to Belarus. The Chiang Mai Initiative was similarly built around bilateral swap lines until these were multilateralised in 2007.

Analogous swap lines had been arranged on previous occasions, of course, although the size and country coverage of the latest arrangements are unprecedented. Regarding them as a core element of the multilateral financial architecture would be problematic insofar as control is in the hands of a few national authorities (generally the central banks of the largest economies). While swaps augment the emergency resources available in crisis, they substantially alter the international financial architecture without formal international deliberation and agreement. This is a troubling departure from the principle of multilateralism that is the defining characteristic of the Bretton Woods Agreement.

Destais (2014) suggests that the G20 should be tasked with designing a set of principles that reduce the arbitrariness of bilateral swap arrangements. These principles would guide the decision to extend swaps and help to determine needy and deserving participants through a process free of political favouritism and bias. However admirable this proposal may be in theory, national monetary authorities are most unlikely in practice to share or delegate the decision of whether to extend swaps, and to whom. There would be nothing to guarantee that all countries that issue international currencies or possess ample reserves would contribute equally, or that all potential borrowers would be treated comparably.

This has led Truman (2013) to propose a three-step process to govern the provision of swaps. In Step 1, the IMF would declare the existence of a global liquidity shortage. In Step 2, a group of central banks – according to Truman, selected "based, for example, on the independence of the central banks and assessments of the stability of their financial systems" – would then decide, collectively, whether the IMF's declaration merits action. In Step 3, those central banks would independently decide whether to extend swaps to countries in need.

This proposal reintroduces the IMF into the process, thereby re-establishing a degree of multilateralism. Nonetheless, final decisions remain in the hands of reserve-currency central banks. And absent further refinement, the selection of which central banks are invited to participate would still be arbitrary.

Our conclusion is that bilateral swaps are inequitable, insofar as the criteria governing their extension are arbitrary and possibly shaped by political calculus.[24] This makes it hard to regard them as a legitimate element of the multilateral financial architecture. In the next chapter, we therefore develop a proposal designed to preserve the advantages of bilateral swaps while upholding the principles and spirit of multilateralism that guide the IMF.

2.8 Conclusions

Twenty years ago, financial globalisation was already well underway, and since then it has continued apace. But while financial globalisation has benefits, it also has costs. Capital flows are volatile, and sudden stops remain a threat. The crisis problem, once thought to be a particular affliction of emerging markets, has migrated to the advanced economies. Emerging markets, for their part, have experienced somewhat greater success in managing their international accounts and avoiding crises. They have achieved this through the adoption of appropriate domestic regulatory measures and by accumulating reserves. They have attained a reasonable mix of exchange rate stability and flexibility, some by installing regimes of flexible inflation targeting, others through the selective retention of capital controls.

The question is what these developments imply for the IMF. Does the continued forward march of financial globalisation imply the need for still larger IMF programmes and resources? Or does the accumulation of foreign reserves and selective use of controls by emerging markets, together with the problem of IMF stigma, point to the irrelevance of the Fund? Is the future of the IMF mainly in poor countries lacking the resources to self-insure? Does the IMF have a future in high-income parts of the world, such as Greece, or will the European Union, unhappy with its recent experience just as Asian countries came away unhappy with their 1997-8 experience with the Fund, seek other ways of managing crises? The next chapter turns to these questions.

24 However, the central banks of the advanced countries regard their swap arrangements as a safety net for the stability in financial markets and internationally active financial institutions, rather than as sovereign debt safety net.

3 How the IMF has changed

As the world has changed, so too has the IMF. A number of suggestions in Eichengreen et al. (1998) have been taken on board, most notably the shift in emphasis away from the current account and toward capital flows. Shifts in emphasis and attitude may not mean heightened effectiveness, however. The IMF failed to anticipate, publicly at least, the three crises defining the last decade – the US subprime crisis, the global financial crisis, and the euro area crisis – all of which had a prominent financial aspect. As Eichengreen and Woods (2015, p. 30) put it, "the IMF batted 0 for 3 on these three events, which suggests that its capacity to 'highlight risks to stability' leaves something to be desired".

This chapter reviews the major changes and challenges facing the IMF over the last 20 years. It covers the Fund's key activities and suggests further changes going forward.

3.1 Improved bilateral and multilateral surveillance

Surveillance of member countries under Article IV remains the core of the IMF's activities. Surveillance provides the background for policy advice in the context of consultations with governments and central banks. It cultivates institutional knowledge of member countries, which is crucial when the Fund is called on to intervene.

The IMF has also invested in multilateral surveillance of country groupings, such the G7, the G20, the euro area and the major geographic regions. Such surveillance focuses on macroeconomic and financial linkages transmitting shocks across borders and on policy actions, including the role of exchange rates and their cross-border repercussions (cross-border repercussions being integral to the exchange rate, since the latter is necessarily the relative price of two countries' currencies). Its purpose is to monitor global and regional risks and to engage the governments of systemically important countries whose actions have significant impacts beyond their borders. It has produced spillover reports and notes, and its analysis plays a prominent role in the *World Economic Outlook*.

The IMF itself evaluates its surveillance every three years. Its Independent Evaluation Office (IEO) produces further assessments. The resulting reviews cover economic analysis, the evolution of house doctrine, policy advice, success in detecting imbalances that create vulnerability to crises and transparency, among myriad other topics.

3.2 Capital controls

As noted in Chapter 2, the IMF was an advocate of capital account liberalisation prior to the Asian financial crisis. At the height of that crisis, in September 1997, the Interim Committee considered amending the Articles of Agreement to declare capital account liberalisation a purpose of the Fund and bring the process under IMF jurisdiction, ultimately with the effect of making capital account convertibility an obligation of members (Fischer, 1998). The Fund was aware of the risks and argued in favour of an orderly process, but the ultimate goal was clear.

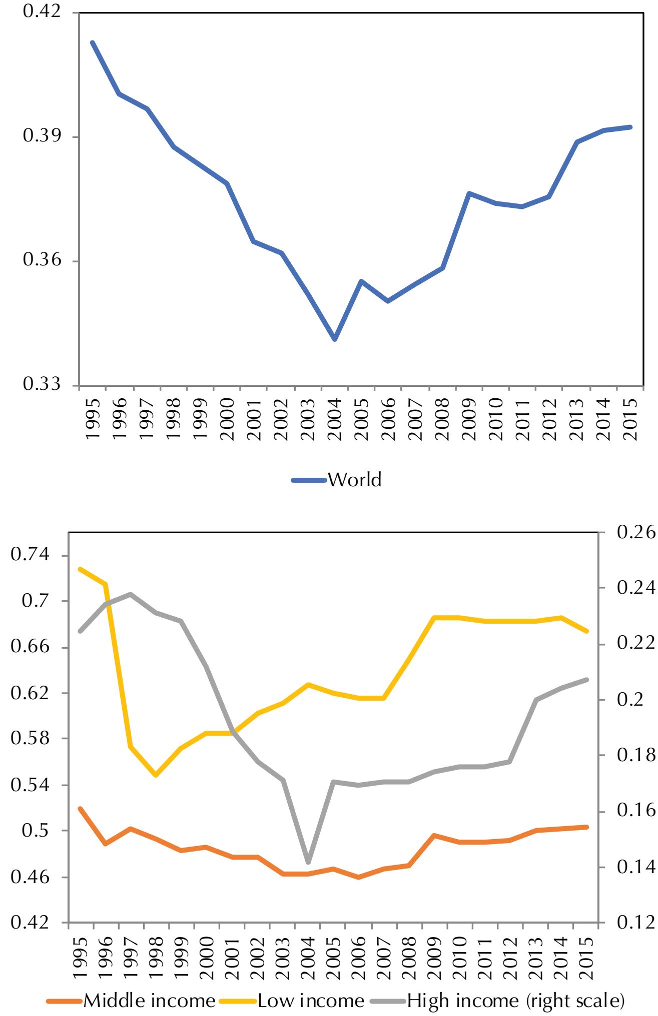
The crisis then prompted a rethink. In the early 2000s, the drive to amend the Articles of Agreement was dropped, accumulating evidence suggesting that the capital account, if not adequately regulated, could become a source of instability and contagion (see, for example, Calvo and Reinhart, 2000). Countries imposing controls when the crisis broke did not fare significantly worse than those with open capital account, and sometimes did better (Rodrik, 1998; De Gregorio et al., 2000; Eichengreen, 2003). The IMF ultimately accepted the implication that the advisability of capital account liberalisation depended on circumstances and that, in advising governments, the Fund needed to take a more nuanced approach (IMF, 2012). It concluded that "there is…no presumption that full liberalization is an appropriate goal for all countries at all times".

Figure 11 presents the index of capital account restrictions constructed by Fernández et al. (2016). The top chart shows that, globally, capital account restrictions diminished from the mid-1990s up to the mid-2000s before increasing again. The bottom chart shows that this pattern is broadly shared by lower- and higher-income countries. Additional restrictions in high-income economies centred mainly on crisis-hit economies like Iceland, Greece and Cyprus in the most recent decade.[25] In low-income countries, restrictions were progressively tightened mainly in the decade between the Asian financial crisis and the global financial crisis. The global measure of capital account restrictions reached its minimum in in 2004, which roughly coincides with when the IMF gave up its drive to amend the Articles of Agreement.[26]

25 Other high-income countries that imposed restrictions of various types in the most recent decade, according to Fernandez et al. (2016), include the Czech Republic, Israel, South Korea, Saudi Arabia, Slovenia and Switzerland.

26 It is impossible to know whether the IMF's doctrine shaped developments on the ground, or whether the IMF simply reacted to members' choices.

Figure 11 Index of capital restrictions



Note: Unweighted averages; different scales.
Source: Fernández et al. (2016).

3.3 Debt sustainability

In the 1990s, the IMF sought to develop tools useful for anticipating crises. When reliable leading indicators failed to materialise, it invested instead in debt sustainability analysis (DSA).[27] DSA consists of using debt-accumulation accounting to determine whether a borrower is capable of servicing its debts. Circumventing the concept of solvency – which is meaningless for a government

27 The framework was introduced in 2002, with refinements in 2003 and 2005.

or country whose future income is endogenous – and that of illiquidity – which can be as much the consequence as the cause of a crisis – the IMF (2002) defined sustainability as "a situation in which a borrower is expected to be able to continue servicing its debts without an unrealistically large future correction to the balance of income and expenditure". The path of debt is computed over the medium term, usually five years, using forecasts by country desks of the primary balance, GDP growth, interest rates and other variables. Judgement is passed on the basis of whether the end-period debt ratio exceeds comfortable thresholds, and robustness checks regarding assumptions (i.e., 'stress tests') are applied.[28]

The IMF now routinely uses DSA in Article IV consultations and in negotiations with programme countries.[29] In doing so, it confronts the following problems.

- The definition of sustainability rules out policy reactions that lead to "large and unacceptable adjustments", whatever that means. D'Erasmo et al. (2016) note that DSA does not spell out what is large and unacceptable, beyond an adjustment that violates the equally vague concept of political acceptability. The IMF acknowledges that a given adjustment can be achieved in different ways which may have different welfare, distributional and therefore political implications. Which political implications are acceptable is a judgement call.
- DSA requires forecasts of the budget and current account balance, interest rates, GDP growth, and additional variables. These forecasts are necessarily subject to significant uncertainty and imprecision (Guzman and Heymann, 2015). Consiglio and Zenios (2014) note that the procedure is likely to ignore or downplay tail risk, a known precursor of financial crises.
- The budget constraint at the heart of DSA is a long-run concept. Analysis therefore requires making forecasts over a long horizon. Medium-term projections of deficits and debts, which tend to be what are available, focus on too short a period to be relevant. However, lengthening the horizon reintroduces the issue of forecast precision, since uncertainty grows with the horizon (Wyplosz, 2011).
- There is a practical limit to the number of stress tests. The selection of shocks and durations is unavoidably arbitrary.
- The procedure specifies thresholds for when debt becomes so large as to be unsustainable. The Fund uses debt levels that historically preceded crises, but circumstances change and the predictive power of these historical levels is dubious.
- Lang and Presbitero (2017) show that the imprecision of simulations and thresholds allows for considerable discretion when interpreting results.

28 Further refinements concerned the construction of the stress tests, specifically the use of historical data to assess the likelihood of shocks.

29 The World Bank uses DSA analysis to decide on granting loans and on the terms of these loans. This question is not pursued here.

In its own assessment (IMF, 2008), the Fund has acknowledged these criticisms. It encourages staff to take uncertainty into account and to standardise its procedures. It has issued further instructions (IMF, 2011, 2013a) meant to correct methodological shortcomings revealed by the global financial crisis. The revised methodology extends the list of variables to be monitored to include the structure of the debt (its currency denomination, maturity, and the obligations of non-state public organisations). Simulations now deal with uncertainty using fan charts, a device imported from central banks' forecasting of inflation (Celasun et al., 2007).[30]

But the continuing use of thresholds means that a high degree of arbitrariness remains. This may matter relatively little for Article IV consultations, when the IMF and governments merely discuss policy. But it matters greatly for programme countries, for whom DSA is a key criterion used when setting conditions and evaluating compliance.

In any case, five years is a poor approximation of the relevant long-run steady state. In effect, countries are asked to achieve 'sustainability' within five years, where there may be good reason to spread the adjustment over a longer period. Focusing on the medium term inevitably biases advice toward front-loaded adjustment when a country is still in crisis or barely recovering from one.

All this means that DSA should be used with greater circumspection. The horizon should be extended beyond the medium term because the next few years necessarily play a minor role in determining the long-run path of debt, an observation that is lost when truncating the horizon. Rather than presenting DSA as justifying a particular prescription, it is better to use DSA simulations as an exploration of the impact of various paths of deficits and related variables. The IMF should offer national authorities a menu of policies, each sufficient to restore debt sustainability, defined as a high likelihood that debt remains stable over a long horizon.[31]

3.4 Exchange rates

Toward the end of the 1990s, the IMF argued that the only consistent and stable exchange rate regimes were either fully flexible or rigidly pegged (Fischer, 2001). Seeing the world through the lens of the Asian crisis, it argued that soft pegs were neither stable nor desirable. Implicit in this view was the assumption that all countries would eventually fully liberalise their capital accounts. Given this assumed end point, monetary policy could either be directed at domestic targets (assuming that the exchange rate floats freely) or alternatively be dedicated to the chosen exchange rate target (assuming that the latter is the credible anchor for policy).

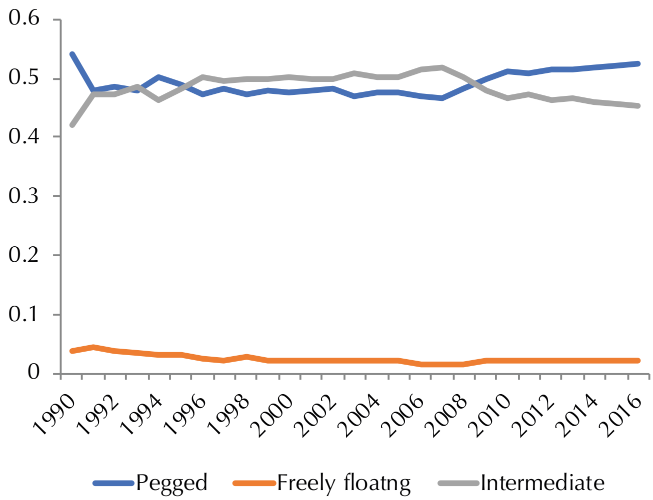
30 Blanchard and Das (2017) offer an alternative treatment of uncertainty. They estimate the probability distribution of the debt and of gross financing needs, from which a probability of solvency can be derived. The new procedure is both more sophisticated and more detailed. Yet, the horizon remains (mostly) set at five years and thresholds remain in use.

31 See Zettelmeyer et al. (2017) for an attempt in this direction.

As noted above, not all countries have in fact moved to full capital account openness. This prediction (or prescription) assumes that financial markets are developed and efficient, that the market-determined exchange rate gravitates toward appropriate levels, and that exchange rate intervention is largely ineffective. In practice, however, not all countries have deep domestic financial markets, and foreign exchange market interventions do have effects. Even where foreign exchange markets are well developed, it is possible to question whether they deliver efficient outcomes.

As a consequence, there has been less change than anticipated in prevailing exchange rate regimes. Figure 12 presents the proportion of countries in a three-way *de facto* classification of free floats, pegged rates, and intermediate regimes, following Ilzetzki et al. (2017) (for details see Box 2). Evidently, very few countries (Japan, Australia, the UK and the US) effectively let their currencies float.[32] Of the remaining 98%, about half peg their rates while the other half remain between the two poles.[33]

Figure 12 Exchange rate regime classification



Notes: (1) Coarse classification. Fixed regime is Code 1; flexible regime is Code 4; the rest are treated as intermediate regimes. (2) Euro area countries are treated as having a fixed exchange rate even though the euro is freely floating. (3) Countries with freely falling currencies (Code 1) and those with dual markets in which parallel market data are missing are excluded.

Source: Ilzetzki et al. (2017).

32 A well-known weakness of this classification is that Canada is not recognised as a floater, against all evidence. It must also be noted that euro area countries are classified as peggers while the euro is freely floating.

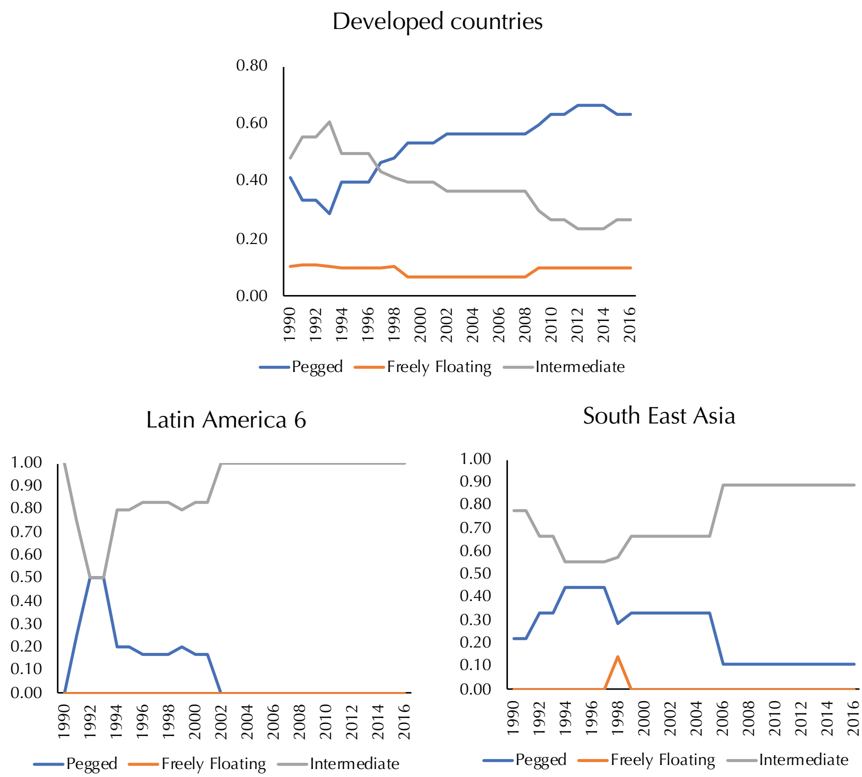
33 This 98% figure is subject to methodological qualifications (see again Box 1).

Box 2 Exchange rate regime classifications

Ilzetzki et al.'s (2017) *de facto* classification is based on an analysis of the observed behaviour of the exchange rate. While other classifications have been proposed, this one is regularly updated. That it is not perfect is evident from the facts that Canada is not recognised as a floater, against all practical evidence, and euro area countries are classified as peggers (because they do not have their own separate tender) while the euro is freely floating.

Figure 12 summarises regimes across the world. Figure 13 does the same for country subgroups. Among the developed countries, full flexibility is more prevalent; it would be dominant if the euro area countries were classified as floaters. In contrast, no country in Latin America and South East Asia (excluding Japan) has a fully flexible exchange rate. In both subgroups, the intermediate regime dominates.

Figure 13 Exchange rate regimes in selected country groups



Source: Ilzetzki et al. (2017).

Box 2 (contd).

Looking at more detail within the intermediate regime group, Ghosh et al. (2015) report movement away from managed exchange rates (crawling pegs and exchange rate bands) to managed floats (floating but with frequent foreign exchange market interventions). The main change has thus been an evolution toward more exchange rate flexibility. It could be that emerging market countries are gradually shedding 'fear of floating', sometimes by adopting inflation targeting. Improved financial regulation has limited exchange rate adjustments, whether occasioned by banking crises or for other reasons.

Currently the IMF simply points to the pluses and minuses of each regime and emphasises links with the development of financial markets and institutions, consistent with the advice of Frankel (1999). In response to an IEO Report on surveillance, the Fund has asked its staff to only take positions on the appropriateness of the regime chosen by each country.

3.5 IMF resources

IMF governance, resources and lending are linked to the quotas of members. Table 3 shows the ten countries with the largest quotas over time.[34] Countries with large vote shares typically have stronger voices in the appointment of the Managing Director, Deputy Managing Directors and department heads. Important decisions must be approved by a super-majority of at least 85% of total votes. The United States alone has a share exceeding 15%, although the Europeans, if voting cohesively, can similarly veto consequential decisions.

34 The complete list of quotas and voting power for each country is available on the IMF website at http://www.imf.org/external/np/sec/memdir/members.aspx.

Table 3 IMF quota revisions

Quota Review	**Establishment**			**Japan joined**			**1958/1959**			**4th Quinquennial**			**5th General**		
No. of members	30			53			68			108			117		
Resolution adopted							2/2/59 6/4/59			31/3/65			9/2/70		
Effective	27/12/45			13/8/52			6/4/59			23/2/66			30/10/70		
		Quota (mill. $)	Share (%)		Quota (bill. SDR)	Share (%)		Quota (bill. SDR)	Share (%)		Quota (bill. SDR)	Share (%)		Quota (bill. SDR)	Share (%)
1	USA	2,750	35.90	USA	2.75	31.48	USA	4.13	30.23	USA	5.16	25.07	USA	6.70	23.56
2	GBR	1,300	17.14	GBR	1.30	14.88	GBR	1.95	14.29	GBR	2.44	11.86	GBR	2.80	9.85
3	CHN	550	7.44	CHN	0.55	6.30	FRA	0.79	5.77	GER	1.20	5.83	GER	1.60	5.63
4	FRA	450	6.15	FRA	0.53	6.01	GER	0.79	5.77	FRA	0.99	4.79	FRA	1.50	5.28
5	IND	400	5.50	IND	0.40	4.58	IND	0.60	4.40	IND	0.75	3.64	JPN	1.20	4.22
6	CAN	300	4.20	GER	0.33	3.78	CHN	0.55	4.03	CAN	0.74	3.60	CAN	1.10	3.87
7	NED	275	3.88	CAN	0.30	3.43	CAN	0.55	4.03	JPN	0.73	3.52	ITA	1.00	3.52
8	BEL	225	3.23	NED	0.28	3.15	JPN	0.50	3.66	ITA	0.63	3.04	IND	0.94	3.31
9	RSA	100	1.62	JPN	0.25	2.86	NED	0.41	3.02	CHN	0.55	2.67	NED	0.70	2.46
10	MEX	90	1.49	BEL	0.23	2.58	AUS	0.30	2.20	NED	0.52	2.53	BEL	0.65	2.29
Total		6,980	100.00		8.73	100.00		13.64	100.00		20.58	100.00		28.43	100.00

Quota Review	6th General			7th General			8th General			9th General			11th General		
No. of members	134			141			146			155			182		
Resolution adopted	22/3/76			11/12/78			31/3/83			28/6/90			30/1/98		
Effective	1/4/78			29/11/80			30/11/83			11/11/92			22/1/99		
		Quota (bill. SDR)	Share (%)		Quota (bill. SDR)	Share (%)		Quota (bil. SDR)	Share (%)		Quota (bill. SDR)	Share (%)		Quota (bill. SDR)	Share (%)
1	USA	8.41	21.66	USA	12.61	21.16	USA	17.92	20.06	USA	26.53	18.14	USA	37.15	17.52
2	GBR	2.93	7.54	GBR	4.39	7.36	GBR	6.19	6.94	JPN	8.24	5.64	JPN	13.31	6.28
3	GER	2.16	5.56	GER	3.23	5.43	GER	5.41	6.05	GER	8.24	5.64	GER	13.01	6.14
4	FRA	1.92	4.95	FRA	2.88	4.83	FRA	4.48	5.02	GBR	7.42	5.07	GBR	10.74	5.06
5	JPN	1.66	4.28	JPN	2.49	4.18	JPN	4.22	4.73	FRA	7.42	5.07	FRA	10.74	5.06
6	CAN	1.36	3.50	CAN	2.04	3.42	KSA	3.20	3.59	KSA	5.13	3.51	ITA	7.06	3.33
7	ITA	1.24	3.20	ITA	1.86	3.12	CAN	2.94	3.29	ITA	4.59	3.14	KSA	6.99	3.30
8	IND	1.15	2.95	CHN	1.80	3.02	ITA	2.91	3.26	CAN	4.32	2.96	CAN	6.37	3.00
9	NED	0.95	2.44	IND	1.72	2.88	CHN	2.39	2.68	NED	3.44	2.36	RUS	5.95	2.80
10	BEL	0.89	2.29	NED	1.42	2.39	NED	2.27	2.54	CHN	3.39	2.32	NED	5.16	2.44
Total		38.81	100.00		59.60	100.00		89.30	100.00		136.70	100.00		212.03	100.00

Quota Review	Special Increase I			Special Increase II			14th General		
No. of members	184			185			188		
Resolution adopted	18/9/06			28/4/08			15/12/10		
Effective	21/5/07			3/3/11			26/1/16		
		Quota (bill. SDR)	Share (%)		Quota (bill. SDR)	Share (%)		Quota (bill. SDR)	Share (%)
1	USA	37.15	17.08	USA	42.12	17.67	USA	82.99	17.41
2	JPN	13.31	6.12	JPN	15.63	6.56	JPN	30.82	6.46
3	GER	13.01	5.98	GER	14.57	6.11	CHN	30.48	6.39
4	GBR	10.74	4.94	GBR	10.74	4.51	GER	26.63	5.59
5	FRA	10.74	4.94	FRA	10.74	4.51	GBR	20.16	4.23
6	CHN	8.09	3.72	CHN	9.53	4.00	FRA	20.16	4.23
7	ITA	7.06	3.24	ITA	7.88	3.31	ITA	15.07	3.16
8	KSA	6.99	3.21	KSA	6.99	2.93	IND	13.11	2.75
9	CAN	6.37	2.93	CAN	6.37	2.67	RUS	12.90	2.71
10	RUS	5.95	2.73	RUS	5.95	2.50	BRZ	11.04	2.32
Total		217.53	100.00		238.33	100.00		476.78	100.00

Note: KSA = Saudi Arabia

Source: Ministry of Finance, Japan https://www.mof.go.jp/about_mof/councils/customs_foreign_exchange/sub-foreign_exchange/proceedings/material/gai230201/03.pdf

Quotas are supposed to be a function of GDP (with a weight of 50%), openness (30%), economic variability (15%), and international reserves (5%). But reviews take place only every five years, and revisions tend to lag reality. If overall quotas remain unchanged, increasing one country's quota requires those of other countries to fall. Increasing total quotas does not eliminate the problem insofar as voting power is relative. In addition, increasing the sum of quotas means that the Fund can lend more, which some members are reluctant to allow. Two decades ago we noted discrepancies between quotas, GDP shares and other elements of the quota formula. Since then, these discrepancies have, if anything, increased, in practice penalising fast-growing countries.

Table 4 General quota reviews

Review of quotas	Resolution adopted	Overall quota increase (%)
First Quinquennial	No increase proposed	---
Second Quinquennial	No increase proposed	---
1958/59	February and April 1959	60.7
Third Quinquennial	No increase proposed	---
Fourth Quinquennial	March 1965	30.7
Fifth General	February 1970	35.4
Sixth General	March 1976	33.6
Seventh General	December 1978	50.9
Eighth General	March 1983	47.5
Ninth General	June 1990	50.0
Tenth General	No increase proposed	---
Eleventh General	January 1998	45.0
Twelth General	No increase proposed	---
Thirteenth General	No increase proposed	---
Fourteenth General	December 2010	100.0

Source: IMF. http://www.imf.org/en/About/Factsheets/Sheets/2016/07/14/12/21/IMF-Quotas.

Doubts about the adequacy of IMF resources arose with the emergence of capital account crises in the 1990s. The amounts Mexico needed to avoid default of its dollar-linked, short-term government bonds, or Tesobonos, in 1994-5 were much more than the country could borrow from the IMF (just 300% of quota). The IMF agreed to provide exceptional access of $17.8 billion, or 689% of quota. In addition, the Fund worked with the US government to create a package in which the United States provided $21 billion, the World Bank $1.5 billion, the IADB $1.3 billion and the BIS $10.0 billion.

As shown in Section 2.1, the capital flow reversals occurring in such episodes have, if anything, grown even larger. The global financial crisis has shown that financial crises may force even advanced countries to seek international assistance. It is impossible to estimate the IMF resources needed to meet these needs; doing so would require knowing how many countries could require how much support at the same time. Table 5 provides a shortcut – it shows that the Fund's resources have more than tripled since 2000, but that they have risen much more modestly relative to global GDP. Since gross capital flows have increased historically much faster than GDP, the resources are likely to be less adequate than 20 years ago.[35]

Table 5 IMF financial resources (US$ billion)

Source	End of year		
	2000	**2008**	**2017**
Quotas	306	316	691
New Arrangements to Borrow (NAB)	76	76	265
Bilateral borrowing	n.a.	n.a.	450
Total	382	392	1,407
Percent of global GDP	1.13	0.62	1.77

Notes: n.a. = not applicable. (1) Individual items may not total because of rounding. (2) All non-dollar figures are converted to US dollars from Special Drawing Rights (SDR) at the 24 Juanuary 2018 rate of $1.4547 per SDR. (The rate on 20 March 2018 was $1.4509 per SDR.) (3) Bilateral borrowing includes some commitments that have not yet been formalised. (4) IMF financial resources are not all usable in IMF lending operations because the external financial condition of some countries is too weak for them to fulfill their commitments; on average about 15% of the total would not be available, a larger percentage for quota commitments and a smaller number for NAB and bilateral borrowing sources because the latter are with member countries that are generally in stronger external financial positions.

Source: Truman (2018).

This debate over IMF resources is, of course, as old as the institution.[36] How can the IMF acquire resources adequate to help countries experiencing capital account crises? We consider five options:

1. increasing quotas,
2. forcing lenders to write down their loans (i.e., to take a 'haircut'),
3. IMF borrowing from member countries,
4. supplementing IMF lending with bilateral country lending, and
5. allowing the IMF to borrow on the market.

A natural solution would be to continuously increase quotas to match the Fund's lending needs (Option 1) and to distribute the increase according to the standard quota formula. But regular quota increases would presumably have to be accompanied by the regular redistribution of voting power. Since countries that stand to see their influence decline – the US, Europe and Japan – are those that currently hold the most power, linking quota increases to share redistribution all but rules this solution out.

Option (2) is appealing to those who regard lenders to be as culpable as borrowers in crises, but it worries those with financial stability concerns; they worry that bail-ins will unsettle investors and damage the balance sheets of creditor institutions, and through these channels give rise to contagion. Still, this

35 Even more worrisome is the fact that they could well be cut by half over the next few years, as explained below.

36 Indeed, even older – it traces back to the first half of the 1940s, when the Keynes Plan envisaged an IMF with much more extensive resources than did the White Plan. Ocampo (2017) reviews these past debates and recent proposals.

option is appropriate under a variety of circumstances, as we argued in our earlier Geneva Report, although it continues to be resisted by influential stakeholders. The IMF has taken steps in this direction under its Exceptional Access Lending procedure as explained in Box 3. Whether it proves possible to implement this option more widely remains to be seen.

Option (3) is in place but under threat (Truman, 2018). The G10 and other countries have long stood ready to lend to the IMF in emergencies. The pioneering arrangement was the General Agreement to Borrow (GAB) in 1962. In 1997, a similar agreement, the New Arrangement to Borrow (NAB), was reached with a longer list of countries. These arrangements supplement IMF resources without requiring agreement on a revision of quota shares, which is both their strength and weakness. But the GAB is currently scheduled for extinction at the end of 2018, and the NAB could face a similar fate if the current US administration moves away from relying on multilateral institutions.

In that case, the IMF will have to work out ad hoc arrangements with countries willing to provide resources on a case-by-case basis (Option 4). The emergence of bilateral swaps among major central banks and regional arrangements may then emerge as the default solution. But this could also encourage participating countries to bypass the IMF rather than augment its resources, as discussed in Chapter 4.

Option (5), allowing the IMF to borrow on financial markets, is not ruled out in the Articles of Agreement but raises complicated issues. The Fund does not have capital. Because it is just a fund with quotas, it cannot offer private lenders a fully funded guarantee; such a guarantee can only be provided by some or all its members, which would have to agree to potentially bear losses on the associated lending.

Box 3 Exceptional access

IMF lending increased sharply starting with the crises in Mexico and East Asia. Until then, lending was subject to an access limit of 300% of quota. During the Mexican crisis in 1994 and Thai crisis in 1997, the IMF assembled packages involving bilateral contributions that reached 500% of quota from the IMF and even larger additional assistance from regional neighbours. When the Korean crisis erupted in December 1997, the IMF created a Supplemental Reserve Facility (SRF) that eventually reached 2000% of the country's quota. As explained by the Fund in a press release on 17 December 1997, "this facility has been put in place to provide financial assistance to a member country experiencing exceptional balance of payments difficulties due to a large short-term financing need resulting from a sudden and disruptive loss of market confidence reflected in pressure on the capital account and the member's reserves". The SRF was not limited in amount but rather scaled to need. SRF financing was available in the context of a stand-by arrangement (SBA) or an extended arrangement (EFF). Russia (1998), Brazil (1998), Turkey (2000), Argentina (2001), Brazil again (2001, 2002) and Uruguay (2002) were granted SRF access.

Box 3 (contd.)

As "exceptional access" became less exceptional, the IMF's principal shareholders grew concerned that large loans to already highly indebted governments could delay the return to market borrowing and make it impossible to honour existing as well as new obligations. In 2002 the Fund therefore adopting four criteria designed to act as restraints. First, a country receiving exceptional access should be experiencing exceptional balance of payments pressures and require financing exceeding the usual access limit. Second, it had to submit a rigorous analysis showing that its public debt is sustainable with high probability. In the absence of such certification, exceptional access could be granted only if existing debt was restructured or if individual countries were willing to offer bilateral loans on concessional terms. Third, the member had to show that it was capable of regaining access to the private market within the period of the Fund programme. Fourth, the Fund programme had to have the prospect of success, given the borrower's reform plan and implementation capacity.

When, in 2010, Greece required exceptional access, staff were not able to certify that its debt was sustainable. At the same time, euro area countries were concerned that contagion from a Greek default could infect banks in other European countries and thereby damage the sustainability of their public debts. In response, the Fund introduced a "systemic exemption" meant for countries in the grey zone between "high" and zero probability of debt sustainability, whose default could trigger a systemic banking crisis or spread to other countries, in turn threatening global financial stability.

This clause was introduced without the usual review by the Executive Board.[37] The Greek programme then veered off course, making it clear that a return to market borrowing would be delayed, that a new programme would be required, and that a debt restructuring was unavoidable. In the meantime, however, the systemic exemption was again invoked as a precedent for lending to Ireland and Portugal, as well as in further programmes for Greece itself.

The United States and emerging markets complained about the special treatment granted to European countries.[38] They warned that large loans could provide an excuse for delaying an inevitable restructuring and that they could be a source of moral hazard. In response, the systemic exemption was eliminated in 2016. (The United States essentially insisted on its elimination as a condition for finally agreeing to the 2010 quota increase.) Under the new policy, countries in the grey zone may still be granted exceptional access but under tightened conditions. The IMF does not require a debt restructuring at the outset if other official creditors offer loans or re-profile pre-existing loans that are junior to the IMF own lending. But the presumption is that a debt restructuring will be required if the country is unable to meet pre-existing debt commitments during the programme.

37 To the displeasure of some executive directors.

38 "Facing resistance to debt restructuring and a determination that the IMF should provide exceptional access, staff and management decided to seek an amendment to the four criteria to allow exceptional access in the absence of a high probability of debt sustainability if there was a risk of significant systemic spillover effects." (Schadler, 2016, p. v). The "systemic exemption" was created to justify a foregone conclusion that the IMF would provide exceptional access to Greece.

Box 3 (contd.)

Whether this renewed commitment to limit exceptional access is credible and time consistent (and, if not, what might make it so) is an important question, to which we return below.

Box 4 The General Agreement to Borrow and New Arrangement to Borrow

General Agreement to Borrow

The GAB was established in 1962 and expanded to its current size in 1983, from about 6 billion special drawing rights (SDRs) to 17 billion SDRs.[39] It has been activated ten times, most recently in 1998. While the GAB has proved useful, its role has been reduced by the creation of the NAB and by the 100% quota increase decided in 2010 (and implemented in 2016). The member countries have agreed that the GAB will be terminated on 25 December 2018.

New Arrangement to Borrow

In November 1997, the NAB became effective with 34 billion SDRs as the maximum amount that the IMF can borrow. At that point, countries in the arrangement were high-income emerging market economies, and the NAB was regarded as a complement to the G10 arrangement, the GAB. In March 2011, however, the G10 countries were also included in the NAB and its amount was increased to 370 billion SDRs (about $580 billion at the time). Following the total quota increase of 100% agreed in 2010, the total amount of NAB was reduced to 182 billion SDRs. The Managing Director must now make a proposal to activate the NAB, and it must be approved with a supermajority (85%) of total NAB credit arrangements. Executive Board approval is also required. The NAB was activated for the first time in December 1998 and has been used ten times since March 2011. The US agreement to participate elapses in 2020; if it is not renewed, the arrangement could unravel.

3.6 Precautionary arrangements

As explained in Chapter 2, countries accumulate foreign exchange reserves to discourage speculative attacks and avoid having to call on the Fund. But self-insurance is costly and weakens the principle of collective insurance that underpins the Bretton Woods Agreement. The IMF has therefore responded with precautionary arrangements. It first determines that a country's economy is sound and that it therefore qualifies. In doing so, it agrees to extend an unconditional loan automatically on request. In effect, prequalification provides authorisation to draw funds unconditionally.

39 G10 countries include 11 countries: the G7 plus Belgium, the Netherlands, Sweden and Switzerland.

The expectation was that precautionary arrangements would make it easier for governments to ask for help. But it turned out to be hard to convince members to apply, despite repeated efforts to make this more enticing. The history of these mostly unsuccessful attempts is recounted in Box 5, which presents the various precautionary arrangements devised to date.

Box 5 Earlier precautionary arrangements

The IMF has a long history of attempting to create precautionary credit lines. The pioneering effort, the Contingent Credit Line (CCL), was created in 1999 as a response to criticism that the Fund had been unable to mobilise financial support quickly enough during the Asian crisis. Amounts available under the CCL ranged from 300% to 500% of quota as under regular Stand-by Arrangements, but no countries applied to be prequalified for this facility, consistent with what we anticipated in our previous report. There being no takers, the CCL was abolished in 2009.

In 2008 the IMF created the Short-term Liquidity Facility (SLF) for countries with strong fundamentals that needed quick access to resources in amounts up to 500% of quota with three-month maturity. Eligible countries were authorised to draw up to three times in a 12-month period. Again, no country used this line, and it too was discontinued.

In 2011 the IMF created the Rapid Financing instrument (RFI) for emergency assistance to countries needing urgent balance-of payments-support. These lines have never been used.

Yet another precautionary arrangement, the Flexible Credit Line (FCL), was created in March 2009 for countries with strong fundamentals.[40] This arrangement was designed to be more attractive to potential borrowers by reducing associated conditionality and its effects and by setting no cap on the amount to be borrowed. This arrangement is renewable every two years, and resources can be drawn at any time. The FCL was enhanced in 2010 by doubling the arrangement's duration and making other features of the programme more flexible.

40 In the IMF fact sheet, strong fundaments are defined as follows: "At the heart of the qualification process is an assessment that the member country:
- Has very strong economic fundamentals and institutional policy frameworks
- Is implementing – and has a sustained track record of implementing – very strong policies
- Remains committed to maintaining such policies in the future.

In addition to the very positive assessment of the country's policies in the most recent Article IV consultations, the criteria used to assess a country's qualification for an FCL arrangement are:
- A sustainable external position
- A capital account position dominated by private flows
- A track record of steady sovereign access to international capital markets at favorable terms
- When the arrangement is requested on a precautionary basis, a reserve position which – notwithstanding potential BOP pressures that justify Fund assistance – remains relatively comfortable
- Sound public finances, including a sustainable public debt position
- Low and stable inflation, in the context of a sound monetary and exchange rate policy framework
- Sound financial system and the absence of solvency problems that may threaten systemic stability
- Effective financial sector supervision
- Data integrity and transparency."

Box 5 (contd.)

Qualified countries have the right to draw resources immediately, and pay a commitment fee even if the lines are not drawn. The Fund convinced three countries to apply: Colombia, Mexico and Poland. Poland ended its precautionary FCL in November 2017, arguing that its economy was sufficiently strong enough that it had no need for an FCL.

In August 2010, a Precautionary Credit Line (PCL) was established for countries with some degree of vulnerability that would not qualify for the FCL. The access limit was set at 125% of quota for short-term credit lines and 145% of quota for long-term credit lines. In addition, in November 2011 a new precautionary credit line, the Precautionary and Liquidity Line (PLL), was introduced. The PLL is similar to the PCL, but the qualification criteria are slightly relaxed. The relevant IMF fact sheet states: “While requiring strong performance in most of these areas, qualification for the PLL allows moderate vulnerabilities in one or two of these areas, while substantial vulnerabilities in any of the five areas would disqualify a member country for the PLL.” The access limit is 250% of quota. A commitment fee is required, as with the FCL. Two countries – the Republic of Macedonia and Morocco – have used the PLL.

In the spirit of swap lines implemented by major central banks, in 2017 the IMF discussed the possibility of introducing a revolving credit line called the Short-term Liquidity Swap (SLS) (IMF, 2017). The swap involves a repurchase obligation after 12 months and a rolling access cap of 145% of the quota. It is intended for countries with fundamentals sufficiently strong to be considered for an FCL. As in the FCL, a problem with the SLS is the need to pre-qualify and the associated adverse signal. In addition, the need to exit at some point would reduce incentives to pre-qualify. Asian countries objected to the proposal for a commitment fee, while the new US administration was less than supportive of the idea of giving the IMF an additional facility. Despite positive comments from some board members, it was decided not to proceed with implementation of SLS.

Why have these efforts been unsuccessful? Put simply, countries that could prequalify for precautionary arrangements don’t need them, while those standing to benefit are unlikely to prequalify. Applying is seen as an admission of weakness that could trigger a crisis (i.e., an adverse signal). Not unrelatedly, if only a few countries apply and qualify, participation may be a source of stigma.[41]

The implicit assumption of the previous discussion is that temporary precautionary lines are for strong countries. But why would an economy with strong fundamentals wish to apply to a precautionary line? Would doing so indicate some concern not identified by markets? All of this, of course, would aggravate the adverse signal problem.

41 We discuss the stigma phenomenon in more detail in Chapter 4 below.

Then there is the problem of de-prequalification. If a country was regarded as possessing solid fundamentals and granted a precautionary line, a deterioration of its macroeconomic conditions could lead to disqualification, which could trigger market turbulences and even a crisis. Therefore, just as precaution, a country may decide not to apply, to not to face this exit problem.

3.7 A fast qualification facility

We now bring together three issues discussed earlier to formulate a proposal for a new facility, which we refer to as the Fast Qualification Facility (FQF).[42] Section 3.6 explained why precautionary lines make sense, but also why they have failed to generate interest among the IMF membership (largely because of the potential adverse signal and stigma effects). In Section 2.7 we noted that the bilateral swap agreements established during the global financial crisis were an effective, targeted means of providing liquidity to distressed countries but that they stand in contradiction with the universal principles of the IMF. Third, we noted in Section 3.5 the danger that the IMF's resources may decline in the years to come.

Building on these observations, we develop a proposal aimed at essentially multilateralising bilateral central bank swaps for countries with strong fundamentals that face a sudden stop in capital flows, when inflows stop and turn into potentially massive outflows. Often, these sudden stops are self-fulfilling – technically, multiple equilibria – events that unfold because market participants come to believe that they could happen and withdraw financing, liquidate positions or, even worse, speculate on the crisis. As the amounts needed may be large, we consider various possibilities for the Fund to raise the necessary resources, including temporarily in times of financial stress.

The FQF would serve the same goal as the precautionary lines, namely, to be rapidly available to protect strong economies. A country facing sudden liquidity needs could apply for immediate support from the IMF. Commitment fees would start being charged when the request is approved, which would be cheaper than a permanent commitment to a precautionary line. The FQF would be unconditional, as it is designed for strong economies.[43] It would work as follows.

- **Fast qualification.** Through its Article IV consultations, the IMF already possesses detailed knowledge of its members' situations. With periodic updates by the desk economists, this information should be sufficient to allow the Fund to quickly determine whether such a loan is justified at a particular juncture. Approval could then be granted by the Executive Board in a matter of days. In some cases, the Fund may still wish to check whether the situation has changed since the Article IV meeting. (An example was Greek Prime Minister Papandreou's revelation in late 2009 that the budget deficit was four times as large as estimated during the previous Article IV mission). In any case, once the FQF is approved, a formal mission would be sent to the country. If

42 Some proposals suggest to link swaps and flexible credit lines (Weder di Mauro and Zettelmeyer, 2017).

43 The IMF already has one credit line with rapid approval for balance of payments support, the Rapid Financing Instrument (RFI), which currently is not used. However, its purpose is very different from ours. The RFI is meant to replace previously existing credit lines for natural disasters and emergency post-conflict assistance, or a commodity shock, not sudden financial turmoil. This is why it is also relatively small, at 37.5 % of the quota in a year with an accumulated maximum of 75%.

the staff conclude that the situation has deteriorated significantly since the last Article IV consultation, the Fund would have the possibility of transforming the FQF into a regular SBA.

- **Temporary arrangement**. The line of credit should be temporary, say three to six months, to give time for market fears to dissipate. A country that is given fast qualification would not have to draw funds; in some instances, being qualified should suffice to relieve market pressure. The FQF line would not be renewable, because the need to do so would signal that the underlying causes are not of the self-fulfilling variety or that the country's response has been inadequate. This would eliminate the exit problem that plagues current precautionary lines.
- **No guarantee but transparent information.** The proposed new facility resembles some aspects of lending of last resort by central banks. Like lending of last resort, in order to limit moral hazard, there should be a degree of uncertainty – sometimes dubbed 'creative ambiguity' – about its activation.[44] There should be no prior commitment to extend it to particular countries. The Fund would have to publish general rules regarding qualification, indicating for example that countries under programmes would not be eligible for FQFs. Article IV reports could include general but not definitive statements indicating whether a country is likely to be eligible for an FQF. This would also contribute to limiting the signal and stigma effects, since a country that would appear to be eligible would not have to apply. In addition, the risk of being denied qualification, which could trigger a crisis, will be minimised while providing incentives to each country to maintain its good standing and perform its own self-assessment before applying to a FQF. When faced with market pressure, a country would be encouraged to informally consult with the IMF on measures to be taken in order to maintain its good standing and maximise the chance of fast qualification (as is currently done with the FCL). If a country is told by the staff that it does not qualify for an FQF, it could apply instead to an SBA without bearing the risk of being publicly denied the FQF.
- **Large amounts.** For the facility to be effective, the line of credit would have to be substantial. The FCL has no access limit but requires pre-qualification and a commitment fee has to be paid, which may explain why member countries limit their use. In contrast, the FQF would probably require access limits if rapid approval makes it impossible to allow for exceptional resources.
- **IMF resources.** The FQF could require substantial resources. The best way to meet this need would be to increase quotas. A second option would be to renew the NAB, allowing the IMF to borrow from select members. A third option would be for the Fund to borrow on the markets, which, as we argued above, could be difficult to implement. All of these options face hurdles.

44 There are of course differences with lender of last resort, since this requires unlimited money creation backed by 'eventually' good collateral, something that cannot be done under current articles of agreement.

This is why we envision another option, namely, that the IMF would temporarily issue SDRs.[45] Issuing SDRs directly to countries borrowing through the FQF would require a change in the Articles of Agreement, since they specify that SDRs are allocated simultaneously to all member countries in proportion to their quotas. Selective allocations for, inter alia, development purposes have been suggested in the past, but countries not destined to be part of the targeted allocation have resisted changing the rules. The key difference of our proposal is that these targeted allocations are temporary and short-term.

One way of finessing this problem is for the new SDR allocation to be donated by members to a trust or common pool overseen by the Fund. The Fund could use the resulting pool to make emergency loans at short notice. In the past, some members have made their SDRs available to the IMF to lend to poor countries through the Poverty Reduction and Growth Trust (PRGT), providing a partial precedent. The advantage of our approach is that a general allocation of SDRs to all members in proportion to quota, followed by voluntary donation to the trust or pool, would require only a supermajority vote (of 85%), not an amendment to the Articles of Agreement.

The credit risk of the FQF loan would presumably reside with the contributors to the pool, just as the central bank providing a bilateral swap faces the (admittedly very small) risk that the recipient central bank will not honour its commitment. Because governments would commit to pooling their special allocation, the credit risk might be greater than that associated with an individual central bank swap, in which case the initiating central bank (say, the Fed) has the option of not providing the swap when it fears putting its credit at risk.[46] At the same time, since the credit risk of lending would be diversified across members allocating their SDRs to the trust or pool, the credit risk borne by any one member would be correspondingly less.

How would the borrowers convert those SDRs into usable currencies? Once allocated, members are entitled to sell part or all of their SDR allocations; they can exchange SDRs for freely usable currencies among themselves.[47] Such exchanges can be voluntary or they can take place through the designation procedure, under which the Fund designates a member with a strong balance of payments and a usable currency to exchange its currency for SDRs. In a sense, the designated members would be undertaking a currency swap in which they were providing their own currency (say, dollars) in return for a claim backed by the five currencies in the SDR basket (and presumably convertible into those currencies at a future date when liquidity returned to the SDR market and the designation procedure no longer had to be invoked).

The proposed facility has several merits. First, opening a substantial credit line is likely to radically affect market sentiment and deter a budding self-fulfilling crisis. This is what the Fed's swap lines achieved during the global financial crisis – witness the case of South Korea. Second, the FQF would act as a seal

45 Several schemes along these lines have been proposed. For example, Griffith-Jones and Kimmis (2001) suggested that the IMF's Contingent Credit Line be financed through the creation of SDRs. These would be issued to the government drawing its CCL but on a temporary basis; the issue would be extinguished once the CCL was repaid. As they put it, "SDRs would provide relatively rapid additional global liquidity in times of crisis, reducing the risk of delays involved in negotiating Fund quota increases or arrangements to borrow".

46 This observation raises the further question of what would make a commitment to pool SDRs received through the special allocation credible and time consistent.

47 In addition, various 'prescribed holders' of SDRs, which are not fund members, such as the ECB, stand ready to buy SDRs on demand.

of approval by the Fund that the economy is strong and would signal that a crisis is unwarranted. Simply announcing the FQF, without drawing funds, could be enough for turmoil to end. Third, the FQF provides the Fund with its long-sought instrument of precautionary lines without the stumbling blocks of formal pre-qualification and pre-selection. Fourth, the FQF would eliminate the need for bilateral swaps while advancing the same objectives and preserving the multilateral system. Fifth, it would reduce the appeal of self-insurance through the accumulation of costly foreign exchange reserves. Sixth, it would give teeth to Article IV consultations, which have become more formal than helpful.

The critical observation is that moving from pre-qualification to fast-qualification is likely to lessen both stigma and adverse signalling. The FQF would be requested at times of turmoil, when support is needed, when combatting adverse signals is of the essence and when an adverse signal is a second-order concern. It would be requested under conditions similar to those that would prevail when a precautionary line was actually be activated.

The obvious weakness is inherent to any lending in last resort scheme, which must combine constructive ambiguity with the presumption of availability. A related weakness is the difficulty of determination. No matter how detailed the rules, a country that is borderline will always object to not being accepted. Finally, the credit line should be large enough to deter speculation, which probably means that the required amount will fall into the exceptional access category and call for the same safeguards (see Section 3.5). And it will require substantial funding that must be compatible with the Articles of Agreement.

3.8 Streamlined structural conditionality

In the years leading up to the Asian crisis and during the crisis itself, the Fund expanded the scope of its conditionality, adding structural reform objectives to the classic macroeconomic requirements. Crises, the proponents of this practice observed, can result from or be compounded by distortive and inefficient tax systems, subsidies and price controls that interfere with market allocation, licensing requirements that limit competition, corruption that makes the enforcement of rules unreliable, insecure property rights, and so forth. The critics responded that invasive reforms imposed from outside can weaken a government's political legitimacy and authority. The benefits of structural reforms typically accrue in the long term while costs in the short term can be significant, which makes advice to undertake structural reforms difficult to accept and implement.

It is sometimes asserted that a crisis offers an opportunity to introduce politically difficult reforms. But attempts to do so can backfire. An example is the 1997 Indonesian programme, which included 69 paragraphs covering everything from taxation to energy prices, agricultural subsidies and the timber monopoly, as opposed to just 16 paragraphs on macroeconomic policy. Removing kerosene and rice subsidies may have been good for long-run economic growth, but doing so in the midst of a crisis magnified the already heavy burden on poor segments of the population. Similarly, requiring 16 banks to be closed and imposing a haircut on depositors undermined confidence in the entire Indonesian banking system and precipitated capital flight by wealthy depositors.[48]

In response to such criticism, the IMF revised its operational guidelines in 2002. The revision recognised that structural conditionality is appropriate only if related to the origins of crisis, not if the aim is simply to raise long-term efficiency. Structural conditions are justified only if they address "macro-critical" failures, in the words of the relevant document. The revision called for "parsimony" and explicit justification of such conditions.[49]

How well has the IMF done in moving in this direction? A 2011 review found that the number of structural conditions had declined since 2002 but that their number started rising again in 2009. Its conclusion, that "it is important to continue to scrutinize the macro-criticality of certain conditions in these programs, particularly given the large number of conditions in non-core areas (e.g., judicial reform and competition policy)", is evidently easier to state than to implement (IMF, 2012b).

3.9 Transparency

Over the last 20 years the IMF has taken significant steps in the direction of transparency. It has acknowledged the need for dialogue with its critics. The Communication Department proactively organises press conferences and meetings with a wide array of groups. Seizing upon (then) new website technology, it publicly provides a mass of information not made available previously. Reports on Article IV surveillance and programmes are now published unless the relevant member objects. Objections are rare, and the list of countries objecting is published.[50] The IMF has also extended the range and size of its regular publications (*World Economic Outlook*, *Global Financial Stability Report*, *Fiscal Monitor*) and provided valuable databases.

The IMF also carries out an impressive amount of high-quality research. This serves as background for its flagship publications listed above. It also provides analysis of relevant issues related to, among other things, macroeconomic policies and financial stability. The flagship documents make their basic data publicly available. However, transparency standards for other research lag behind those of academic work, where increasingly the norm is to make available all data and program codes to permit replicability.

Since 2002 the IMF has done more to self-evaluate. Some evaluations, for example those concerning programmes with exceptionally large access to funds, are made public after discussion in the Executive Board. The Fund also commissions outside experts to evaluate its activities and publishes their reports. According to the IEO (2015), much of this output is of good quality but has limited impact.

48 One of the shuttered banks was controlled by a son of President Suharto, but when that bank was reopened within days by the son through a merger and acquisition of another bank, which was not something that IMF could easily prevent, investors concluded that political resolve was lacking.

49 "Guidelines on Conditionality", IMF, 2002.

50 Language is sometimes 'adjusted' in response to sensitivities, however.

Related to this was the creation in 2002 of the Independent Evaluation Office (IEO). The IEO is governed by terms of reference laying out its mission, governance and relationship with the rest of the Fund. It is formally independent from staff, including the Managing Director, and reports only to the Executive Board. IEO reports thus differ from the self-evaluations mentioned above.

The IEO formally has access to internal documents. Since its creation, it has published 28 reports covering particular programmes and aspects of the Fund's operations, with each report including criticisms and proposals. Reports also include a summary of the ensuing discussion within the Executive Board, along with the Board's recommendations for remedial action and comments by the Managing Director. The IEO has been evaluated twice by outside experts whose reports were published in 2006 and 2013.

While the IEO's existence and output represent a further increase in transparency and evaluation, "awareness and knowledge of the IEO is surprisingly low within the Fund, and indeed lower than in 2006" (Ocampo et al., 2013, p. 5). Ocampo et al. go on to say that "relations [with Management and Staff] have consequently [as a result of the creation of the IEO] become tense, formalized, more focused on process, and more dependent on the quality of inter-personal dynamics". Evidently, staff are less comfortable with independent evaluations, in contrast with self-evaluations. When the IEO evaluated the IMF's involvement in the euro crisis, there were complaints that staff were reluctant to share the relevant documents. In the end, the Managing Director had to intervene to ensure its full access (Thomas, 2016).

4 The emergence of regional funds

In 1989, seven years into the Latin American debt crisis, a group of Andean countries created the Latin American Reserve Fund, or *Fondo Latino Americano de Reservas* (FLAR), to provide its members with balance-of-payments assistance. In 1997, during the Asian crisis, Japan proposed the creation of an Asian Monetary Fund (AMF). Although the IMF and its principal shareholders scotched the idea, the proposal led in time to the Chiang Mai Initiative (CMI), essentially a scaled down version of the AMF built to complement the IMF. The CMI was subsequently transformed into the Chiang Mai Initiative Multilateralization (CMIM), which is even closer in spirit to the AMF. In 2010, when a sovereign debt crisis erupted in Greece and threatened to engulf other euro area countries, European governments created the European Financial Stability Fund (EFSF), subsequently the European Stability Mechanism (ESM). Along with the European Commission, the ECB and the IMF, the EFSF/ESM played a key role in managing the subsequent crisis. At the time of writing, discussions are underway to transform the ESM into a European Monetary Fund (EMF), perhaps with more extensive borrowing powers and streamlined lending procedures.

This blossoming of acronyms highlights the trend toward regional funds, a development that has important implications for the IMF, as the Fund itself has acknowledged (IMF 2013b, 2017, 2018).[51] But there is nothing resembling a consensus on how much reliance should be placed on regional funds or on how those funds and IMF should interact.

4.1 Pros and cons of regional funds

The IMF is globally diversified: it is able to tap resources through the quota subscriptions of its members, supplementary arrangements like the New Arrangements to Borrow, and bilateral loans from its members. Lending to a diverse membership allows for greater risk diversification than is available to a regional fund; this is especially the case given that contagion from crises often has a regional dimension. The lessons the IMF draws from crises in one region can be applied to others. As conditionality-setter, its prominent and all-but-universal role in crisis resolution limits venue shopping that can result in lax conditionality and regulatory arbitrage.

Given this, one might think that there should be no demand for regional monetary funds. Why then do we see them?

51 We provide a full listing of such regional funds in the appendix to this chapter.

A first conceivable justification is asymmetric information. The premise is that neighbours know about neighbours. They understand one another better than an institution with only a small resident office and headquarters in Washington, DC. This information advantage presumably applies to both economic conditions and political constraints.

A related argument is that the regional nature of contagion heightens the incentive for neighbours to engage in firm surveillance of neighbours and deal promptly with budding crises. Countries that may be affected by a crisis in a neighbouring country have a special incentive to devote thought, effort and funding to a rescue.[52]

A third justification cites the power structure at the IMF (discussed in the previous chapter). The IMF is often seen as dominated by the US and Europe, resulting in surveillance and programme conditions that are inadequately sensitive to economic and political realities in other parts of the world (see, for example, Dreher et al., 2015). The formal distribution of power in the IMF has changed only slowly over the last two decades (see Chapter 3). This frustration encourages initiatives designed to bypass the IMF, or at least to create alternatives and tempering mechanisms.[53] As the IMF itself puts it, "dissatisfaction with Fund conditionality and concerns about Fund governance may also have been relevant triggers" for the creation of regional funds (IMF, 2013b).

A fourth rationale derives from the stigma of IMF programmes (see Box 6 for a discussion of stigma and its relationship with RFAs). Almost by definition, an IMF standby includes policy actions that current and previous governments hesitated to take. Even when such measures are justifiable, their adoption in conjunction with an IMF programme cannot but create the impression that foreigners are imposing them. The Fund is careful in framing each programme as a memorandum of understanding voluntarily negotiated and agreed by the national government. But in practice that negotiation is asymmetric. The memorandum is essentially written by IMF staff, following negotiations between a prostrate government and a Fund that holds the power to decide whether or not to provide emergency funding.[54] The Fund's own requirement that it be transparent means that every detail is made public and invariably linked to past policy failures.

A fifth and final justification is that financial globalisation requires increases in the size of rescue loans (as described in Chapter 2). The resources mobilised by regional funds can supplement IMF resources, mitigating the problem of limited financial capacity.

52 This may also be why regional development institutions (the African Development Bank, the Asian Development Bank, the Inter-American Development Bank, the European Bank for Reconstruction and Development) exist that operate alongside the World Bank.

53 This interpretation of course sits uneasily with the fact that one of the principal regional arrangements is a creation of the Europeans themselves.

54 This feeling of subservience is reinforced when a programme lasts many years, which is increasingly the case (Reinhart and Trebesch, 2016).

Box 6. Stigma

In sociology, stigma is a term used to describe an individual or group that is shunned because of physical differences, social traits, ethnic origins or other attributes. IMF stigma describes how countries have a tendency to shun the IMF because of its perceived attributes, and to decline its resources even when these are lightly conditioned and subject to prequalification.[55]

IMF stigma could have historical roots (the salience of history has been argued for other forms of stigma; see Goffman, 1963; Kurzban and Leary, 2001). In the case of Asian countries, for example, IMF stigma could be rooted in the historical experience of the 1997-8 financial crisis and how that experience affected perceptions, norms and behaviour.

In addition, that crisis and the IMF stigma to which it gave rise could conveniently promote other objectives. Group solidarity, for example, something that Asian countries evidently value, is a well-known by-product of stigmatisation, insofar as it allows a group to define itself in opposition or contradistinction to the stigmatised other.

This formulation suggests that RFAs might not be similarly burdened. They are arrangements of likeminded neighbouring countries defined by their group solidarity and therefore not positioned in opposition to one another, more so insofar as they were created as a response to dissatisfaction with prior IMF intervention.

Despite the presumption that the stigma attached to regional arrangements is less, there also appears in practice to be a reluctance to draw on bilateral swaps and regional financial arrangements for fear of how doing so might be interpreted. The Chiang Mai Initiative Multilateralization, for example, has not been drawn on the decade and a half since its creation, not even at the height of the global financial crisis. Of course, it could be that the stigma problem that inhibits access to this facility attaches to the IMF and not to CMIM itself given the existence of the IMF link, as explained in the text.

Some rationales are more compelling than others. The asymmetric information argument can be a cover for abetting shared economic and political vested interests, cronyism and protectionism. The power structure at the IMF may be a problem, but so too can be the power structure within regional arrangements.[56] Regional lending can also create stigma, as was evident in Greece and as was reflected in the reluctance of other governments (that of Spain, for example) to apply to a programme. As for lending capacity, the IMF has long experience of forming 'coalitions of the willing' to provide resources bilaterally and directly supplement the resources disbursed under its aegis.[57]

Then there are the problems of regional safety nets themselves. In order to be successful, the safety net has to be large so that the investors are sufficiently impressed to not rush for the exits. But if the amount is large, it may give rise to moral hazard, especially if conditionality is weak.

55 This box draws on Eichengreen (2016).

56 The power of China in the Chiang Mai Initiative is widely resented, as is the dominating role played by Germany during the euro area crisis, as amplified through the EFSF and ESM.

57 As noted in Chapter 3, where we discuss this and other approaches to the Fund's resource problem.

Second, as noted in Chapter 3, a country that applies for a precautionary arrangement, whether this is provided by the IMF or a regional counterpart, runs a risk that, in the event that its application is rejected, the withdrawal of private-sector lending may accelerate. Simply applying may trigger outflows, because doing so will be interpreted as admission of vulnerability.

Third, a regional safety can become a refuge from firm IMF conditionality. Friendly neighbours may find it hard to be tough on friendly neighbours. But providing liquidity, with few or no conditions attached, may not solve the fundamental underlying problem when there is one; it might only allow the government to ignore it. Moreover, determining the nature of that underlying problem necessitates a rigorous examination of the economy. It calls for effective surveillance, which requires skill and experience and the political cover to deploy them. At best, this represents a duplication of IMF capacity.

These concerns were voiced when the idea of an Asian Monetary Fund was floated in 1997. Subsequently, Asian countries built a surveillance organisation, the ASEAN+3 Macroeconomic Research Office (AMRO), to address many of them. In addition, CMI/CMIM features an 'IMF link' so that it can be positioned as a complement to, rather than a substitute for, the IMF. Disbursement of CMIM funds, now totalling $240 billion, can take place without an IMF programme only up to 30% of the overall access limit. The European Union and euro area also possess the capacity to exercise firm surveillance through the good offices of the European Commission and, in the financial regulatory sphere, the ECB. These entities have worked together with the IMF in the past.

4.2 Chiang Mai

The 1997-8 financial crisis convinced Asian governments that they needed a regional safety net that could be deployed quickly without extensive conditionality. The genesis of the movement was the IMF package to Thailand of August 1997, to which Japan and eight other Asian countries contributed.[58] But their original idea of an AMF, which was floated in the margin of the IMF-World Bank Annual Meeting in September 1997, collapsed when the US and IMF opposed it and China did not support it.

Once the dust settled, the ASEAN+3 (the members of the Association of Southeast Asian Nations plus Japan, China and Korea) agreed to create a network of currency swaps, later known as the Chiang Mai Initiative. Initially, the participating countries negotiated these swaps bilaterally. In the first agreement, signed on 4 July 2001, Japan agreed to swap up to $7 billion in exchange for Korean won, for up to three months, renewable once. Other similar arrangements followed. Table 6 shows the initial 16 bilateral swaps agreed by end 2003, with a total size (the sum of bilateral swaps) of $35 billion.

Each bilateral swap could be triggered by consultation between a borrowing and a lending country. Initially, only 10% of the agreed amount could be disbursed without an IMF programme. The IMF linkage was insisted on by the largest potential lenders, Japan and China.[59] Since the CMI had no surveillance

58 The IMF contributed $3.9 billion; Japan contributed $4 billion in pari passu arrrangements; China, Australia, Hong Kong, Malaysia and Singapore pledged contributions of $1 billion each; and South Korea, Indonesia, and Brunei $0.5 billion each (for details, see Ito, 2007, Table 1).

59 Some of the would-be borrowing countries argued unsuccessfully for a lower linkage ratio.

mechanism or secretariat, examination and analysis of macroeconomic conditions were delegated to the IMF. In effect, then, the 10% portion was essentially a bridge to an IMF programme, while the 90% portion was to be included in a package with the IMF. In 2005/2006 the initial swap agreements were renewed and expanded to 20 bilateral swaps worth $55.5 billion, further increased in 2009 to $90 billion, while the IMF linkage was reduced to 80%.

These initial arrangements were unwieldy. For example, with three separate bilateral swaps with Japan, China and Korea, in a crisis Thailand would have to negotiate three separate agreements. In addition, the IMF linkage meant that the usable amount would be less than the total size of the CMI, absent an IMF programme.

This led in 2010 to the Chiang Mai Initiative Multilateralization.[60] Resources were pooled, eliminating the bilateral arrangements, and the liquidity assistance decision was unified. The CMIM became more like a regional fund as envisaged in the original AMF proposal. A research office to conduct macro surveillance of member countries was created – the ASEAN+3 Macroeconomic Research Office (AMRO). The IMF linkage was again lowered, this time to 70%, and in 2012 the total size of the swap network was increased to $240 billion. As a result, the CMIM now mimics the structure of the IMF in terms of contribution, voting shares and maximum swap amount (which is a multiple of financial contributions).

60 See Sussangkarn (2011) for details of creating the CMI and later the CMIM.

Table 6 Bilateral swap agreements under the CMI as of end 2003

Bilateral sides	Currencies	Conclusion dates	Size	One way or two ways
Japan–South Korea	USD-Won	4 July 2001	US$7.0 billion[a]	Japan→South Korea
Japan–Thailand	USD-Baht	30 July 2001	US$3.0 billion	Japan→Thailand
Japan–Philippines	USD-Peso	27 August 2001	US$3.0 billion	Japan→Philippines
Japan–Malaysia	USD-Ringgit	5 October 2001	US$3.5 billion [b]	Japan→Malaysia
China–Thailand	USD-Baht	6 December 2001	US$2.0 billion	Japan→Thailand
Japan–China	Yen-Renminbi	28 March 2002	US$3.0 billion [c]	Two way
China–South Korea	Renminbi-Won	24 June 2002	US$2.0 billion [c]	Two way
South Korea–Thailand	USD-Won or USD-Baht	25 June 2002	US$1.0 billion	Two way
South Korea–Malaysia	USD-Won or USD-Ringgit	26 July 2002	US$1.0 billion	Two way
South Korea–Philippines	USD-Won or USD-Peso	9 August 2002	US$1.0 billion	Two way
China–Malaysia	USD-Ringgit	9 October 2002	US$1.5 billion	China→Malaysia
Japan–Indonesia	USD-Rupiah	17 February 2003	US$3.0 billion	Japan→Indonesia
China–Philippines	Renminbi-Peso	29 August 2003	US$1.0 billion [c]	China→Philippines
Japan–Singapore	USD-Singapore dollar	10 November 2003	US$1.0 billion	Japan→Singapore
South Korea–Indonesia	USD-Won or USD-Rupiah	24 December 2003	US$1.0 billion	Two way
China–Indonesia	USD-Rupiah	30 December 2003	US$1.0 billion	China→Indonesia

Notes: (a) The amount including US$5.0 billion committed (on 17 June 1999) under the New Miyazawa Initiative. (b) The amount including US$2.5 billion committed (on 18 August 1999) under the New Miyazawa Initiative. (c) The amount is US dollar equivalent.

4.3 Fondo Latino Americano de Reservas (FLAR)

To provide financial support for members in external difficulties, the Andean Reserve Fund (FAR), the precursor of FLAR, was created in 1978 by Bolivia, Colombia, Ecuador and Venezuela. In 1989 FLAR was created and membership was expanded to include Costa Rica, Paraguay and Uruguay. But without the inclusion of the largest Latin American countries – Argentina, Brazil and Mexico – it represents countries comprising only 20% of Latin America GDP. Paid-up capital is $3 billion, which is 0.3% of combined GDP of the members. Colombia, Costa Rica, Peru and Venezuela have contributed approximately $500 million each, and the remaining members half of this amount.

The objectives of FLAR are to provide balance-of-payments loans and guarantees and to contribute to the improvement of reserve management. Its balance of payments support line provides up to 2.5 times the paid-up capital of each country for up to three years. The main customer has been Ecuador. Outstanding credits currently amount to $1 million to Costa RIca and $485 million to Venezuela.

FLAR loans are small compared to typical IMF Stand-By Arrangements. For instance, Venezuela's IMF quota is about $5.4 billion, whereas its maximum accessible credit from FLAR is $1.2 billion, about 0.6% of its GDP. In the case of Costa Rica, balance-of-payments support is somewhat larger, although it is still less than half of the country's potential IMF Stand-By Arrangement. Indeed, normal access in a Stand-By Arrangement is up to 435% of quota over the duration of the programme. Table 7 shows the size of the quota at the IMF and the FLAR paid-in capital; quotas and access are larger at the IMF.

Although FLAR does not impose conditionality, it requires an economic plan and projections to ensure that credit will be repaid and adjustment takes place. Because loans are relatively small, the lenders worry less about safeguarding members' resources. The small size of FLAR also promises to limit moral hazard. Repayments to FLAR have been always on time, and no default on FLAR loans has occurred. Given its preferred creditor status, FLAR's credit rating is the highest in the region.

Notwithstanding its small size, FLAR can still play a useful role in crises. Given its ability to disburse quickly without negotiating conditions, FLAR can function as a bridge while a country negotiates the terms of IMF assistance. Two examples of successful FLAR involvement were during the return of Peru to international capital markets at the beginning of the 1990s, and financial assistance for Colombia during that country's economic crisis in 1999. Access to FLAR gave Colombia time to formalise support through an agreement with the IMF. It provided a rapidly disbursing credit line, equivalent to an IMF contingent credit line from the IMF, but without the associated problems of pre-qualification. In the case of Peru, the FLAR credit allowed balance-of-payment support while the country was negotiating arrears with the IADB and engaged in negotiations with the IMF and World Bank.

Table 7 FLAR and IMF quotas and lending, as of February 2018 (millions of US dollars)

	Paid-in capital FLAR	**Outstanding loans FLAR**	**Quota IMF**
Bolivia	245	---	348
Colombia	491	---	2,976
Costa Rica	488	1,000	536
Ecuador	245	---	1,013
Paraguay	245	---	292
Peru	491	---	1,937
Uruguay	246	---	623
Venezuela	491	485	5,403

Notes: Outstanding loans at FLAR in May 2018. Colombia is the only country with an approved flexible credit line with the IMF for 8,180 million SDRs, never withdrawn.

Source: IMF and FLAR.

Were FLAR to expand its resources and support so as to significantly supplement IMF programmes, a change in its governance and operations would be required. A larger FLAR would require conditionality to limit moral hazard and promote adjustment by borrowers and to safeguard the member's assets. The members have been reluctant to move in this direction. All this suggests that FLAR and the IMF will continue to work together, with the IMF providing the bulk of the finance and negotiating the conditionality, while FLAR plays a supplementary role.

4.4 The European Stability Mechanism

As the Greek crisis unfolded, euro area countries quickly realised that they needed to provide support. They initially attempted to keep the IMF out, because inviting it in would have been "humiliating", in the words of Jean-Claude Trichet (*Le Monde*, 2 February 2010). Yet only a few weeks later, the IMF was invited to join what became known as the Troika. The official reason was that the European Commission had no experience in creating conditional rescue programmes. An alternative explanation is that the large lending countries worried that the Commission would not be sufficiently concerned about moral hazard and lending risk, so that the IMF would act as a useful enforcer.[61]

In May 2010, euro area governments provided Greece with a first set of bilateral loans. In June they created the European Fiscal Stability Fund (EFSF) as a temporary structure, and a year later this arrangement was made permanent. The end result was the creation of the European Stability Mechanism (ESM), established by treaty. The ESM has paid-up capital of €80 billion, and resources

61 Henning (2017) further argues that the largest lender, Germany, intended to play the role of referee when the IMF and the Commission would disagree.

that can be scaled up to €700 billion if signatories to the treaty agree to allow it to borrow on financial markets. The ceiling on borrowing is currently €620 billion, of which €600 billion is available for lending while the remainder is held as a reserve to safeguard the ESM's AAA rating.

Table 8 shows how much has been lent by the ESM and its predecessors (the EFSF, bilateral loans and a rarely used Commission facility). The loans have been very large, far in excess of the IMF's largest loans. Obviously, Greece is an outlier, as is Spain at the other end of the spectrum. (Spain, it is worth observing, did not face conditionality). These loans also have very long maturities, which again is in contrast with the IMF.

Table 8 Lending during the euro area crisis

	Programme duration	**Amount committed (€ billion)**	**Amount disbursed (€ billion)**	**Amount disbursed (% of 2012 GDP)**	**Average maturity (years)**	**IMF amount disbursed**
Greece	2010-2018	280.7	240.6	125.8	32.5	32.1
Ireland	2010-2013	52	45	25.6	20.8	22.5
Portugal	2011-2014	52	26	15.4	20.8	26.4
Cyprus	2013-2016	9	6.3	32.3	14.9	1
Spain	2012-2013	100	41.3	4.0	12.5	

Source: ESM, various documents.

The ESM lends to governments, including by buying bonds on the primary and secondary markets, but it can also lend to banks. Decisions are taken by an ESM board composed of representatives of member countries' finance ministries. Loans can only be made to countries under a programme approved and monitored by the European Commission. This means that, while the ESM formally decides on loans, in practice it follows the lead of the Commission.

The euro area is thus able to execute all the functions of the IMF. The Commission is in charge of surveillance, especially of euro area member states that are subject to close monitoring in the framework of the Stability and Growth Pact. Surveillance includes not just the budget but also the macroeconomy, under the Macroeconomic Imbalance Procedure, as well as policy coordination under the provisions of the Broad Economic Policy Guidelines. The Commission evaluates national policies annually and publishes opinions on fiscal policies and structural reforms. Since the crisis, the Commission has built up its ability to design and monitor programmes which entail IMF-style conditionality.

It is too early to speculate about whether the ESM will in fact be transformed into a European Monetary Fund (EMF) and, if so, whether this will amount to more than a change of name. A full-blown fund would be in charge of surveillance, programme design, negotiation, enforcement and funding, which would remove significant responsibilities from the Commission and give them to the national governments that are shareholders and decision makers in the ESM, or their designees. It also remains to be seen whether the effective veto power of every member country will be abandoned in favour of making decisions on the basis of consensus or qualified majority vote.

4.5 The IMF's response

The IMF (2013b, 2017) has articulated a number of principles for how the Fund should interact with these regional arrangements.

Equal treatment. In terms of surveillance and programmes, countries that are part of an RFA must be treated the same way as other countries. This statement is unobjectionable as far as it goes. But because RFAs have their own surveillance procedures (in the cases of the euro area and the CMIM), differences and disagreements are bound to arise. Analogous problems can also arise at the programme design and implementation stages.[62] In any case, with resources available at the regional as well as multilateral levels, it is not even clear what equivalent treatment means when regional and IMF loans are combined.[63]

Respecting the mandates and independence of RFAs. The Fund notes that each RFA has its own rules, mandates and institutional arrangements, which may differ from those of the Fund itself. The IMF (2013b) proposes to "align lending terms, clarify how qualification to precautionary instruments is applied, establish avenues for regular dialogue between Fund and RFA staffs outside of crises and create the expectation that co-financing would be subject to principles and safeguards similar to the Fund's lending framework, such as debt sustainability, the eventual resumption of market access, and capacity to repay".

This is sensible but fails to recognize that RFAs are created partly because of dissatisfaction with the IMF's lending policies. There is no indication of how the underlying disagreements can be resolved.

Single programme frameworks. The IMF insists on the importance of close programme alignment. It proposes a 'lead agency model' under which the Fund designs the macroeconomic part of the programme, while the RFA takes the lead on other aspects. The viability of this division of labour is uncertain. Indeed, because the IMF provided only a minority of the finance in the euro area crisis, it effectively operated as a junior partner. Initially it was led to concede on key aspects of the programmes.[64]

Moreover, the CMIM, FLAR and the EMS have not adopted the lead agency model. In the case of the CMIM, loans can be made up to 30% of regional commitments without an IMF programme, a proportion that has been raised twice. FLAR has lent on its own without a parallel IMF commitment and mostly without conditionality. The ESM has moved toward operating on its own and may go further in that direction. In order to promote the lead agency model, the IMF needs to convince RFAs to reverse these trends while simultaneously respecting their independence. The IMF has the advantage of not being a regional organisation, and hence it is more credibly equipped to be a lead agency regarding the macroeconomic programme. But, this principle should be accepted by RFAs, even when the IMF is a junior lender.

62 This is precisely what happened during the euro area crisis.
63 Note how the resources made available to the euro area countries in crisis far exceeded the largest assistance amounts provided by the Fund.
64 Over time it deferred less and less, which eventually led to its effective withdrawal from lending.

The situation is even more complicated when the regional arrangement is organised at the level of a monetary union. Monetary unions have a single central bank and possibly other collective institutions, which affects the situation of a member country that seeks Fund support. The question is whether and how a programme should bind these collective institutions. The IMF (2018) articulates the following principles as applying to this case.

First, macroeconomic and structural conditions should apply only to the country in balance-of-payments difficulty. That said, since the common monetary policy inevitably affects the country's balance of payments and financial condition, the common central bank has to be subjected to conditionality. This happened, for instance, when the exchange rates of the two African monetary unions – the West African Monetary Union (WAEMU) and West African Monetary Zone (WAMZ) – became overvalued in 1994. These exchange rates are tied to the euro – formerly to the French franc – through an arrangement with the French Treasury. Overvaluation created balance of payment difficulties for the members of both unions and crises in the most vulnerable countries. Devaluing the common currencies was therefore a clear programme requirement.

Second, the IMF (2018) observes that even when reassurances from a union-wide institution are deemed critical, they should be voluntary and limited in duration. This may be unrealistic, however. During the euro area crisis, the ECB was unwilling to be bound by national programmes. It sat on the same side of the table as the Fund and the Commission, not on the relevant country's side. It is doubtful that it would voluntarily switch sides in future programmes.

One of the lessons of the euro area crisis is that a monetary union entails more than just sharing a common currency and a single central bank. It unavoidably includes fiscal policy rules and commitments. When a country is in crisis, both the central bank and the institutions that underpin those fiscal policy rules and commitments must contribute to the programme's success. In theory, they should sit on the same side of the table as the crisis country, since they must all be bound by conditionality for as long as the programme lasts. This is not currently the case in Europe, however. The Commission is both in charge of setting the programme's conditions, alongside the IMF, and of interpreting the fiscal rules. The ECB sits alongside the Commission, reinforcing its message. This can lead to conflicts. For instance, during the crisis the Commission chose to promote fiscal austerity at a time when some flexibility would have been needed, which is in fact what the IMF was calling for but did not achieve as it was the junior partner.

4.6 Dealing with disagreements

The principles developed by the IMF and presented in the previous section fail to address these concerns. A first unresolved question is who should sit on what side of the table. Clearly, the IMF must be on one side of the negotiating table and the borrowing county on the other. But on what side of the table should regional institutions and central banks sit? It would seem natural that the lending authorities sit on the same side as the IMF, since they commit resources and therefore set conditions – this would be the case of AMRO in a CMIM agreement. It has been the case with the ESM during the euro area crisis.

A more difficult question concerns the central bank. When the RFA is not established in the framework of a monetary union, each country has its own central bank. In this case, there is no difference from standard programmes where the central bank does not sit at the table at all except to provide technical support. This is key to preserve its independence.

But is the situation different in the case of a monetary union? We know that during the euro area crisis, the IMF was joined on its side of the table by the European Commission and the ECB. On the other side, the crisis country was joined by its own central bank, formally a subsidiary of the European System of Central Banks, of which the ECB is the leading member. This was confusing, to put it mildly.

Independence was the official reason why the ECB was part of the Troika. The European Treaty forbids member governments and other European institutions from issuing instructions to the ECB. As a member of the Troika, the ECB could always claim that any measure requiring its action was included in the conditions adopted at its own request and/or with its own approval. Yet ECB independence sits uncomfortably with shared responsibility for setting conditions in areas far outside its mandate and competency, such as fiscal policy and structural reforms.[65] In the end, it is preferable that a monetary union's central bank not sit at the table except as advisor to the government. This has been the case with other monetary unions such as the African Monetary Unions.

Henning (2017) recounts disagreements within the Troika during the euro area crisis. While some of these stemmed from genuine differences in economic analysis, others reflected the different mandates of different institutions. The IMF focused primarily on the condition of the crisis country as seen through the lens of its staff, principal shareholders and Executive Board. In contrast, the European Commission and ECB were responsible to their entire membership and disproportionately to their principal shareholding governments.

The solution adopted during the euro area crisis operated at two levels. Between the Commission and the IMF, the rule was that those who contributed the most have the last word. As shown above, the IMF was the smaller contributor. While it could argue its views, whenever it failed to convince the Commission the latter prevailed, providing it had the support of other European governments. At this level, the largest European contributor, Germany, was disproportionately in control, since it could torpedo financial arrangements. In some way, this resembles what happens within the IMF. When disagreements within the staff arise, the issue is resolved by moving it up the hierarchy, taking input from and requiring a decision by the Executive Board where, in practice, the large shareholders typically prevail.

65 Perhaps a solution is the presence of the common central bank governor as an observer, as in case of CFA franc monetary unions and the signing of a separate document by the governor of the Eastern Caribbean Central Bank.

Inasmuch as disagreements are not solved on the basis of the relative merits or arguments, however, it may be worth considering an alternative. The natural reference when parties disagree is going to court or, when this is excessive costly or time consuming, taking recourse to arbitration.[66] Arbitration is also used for disagreements between states, for example disputes over foreign investments. A relevant example is the ASEAN Comprehensive Agreement of 2009.

This model of investment dispute agreements is a good starting point for disagreements between an RFA and the IMF about programme design and oversight. As summarised by Bernasconi-Osterwalder (2014), best-practice arbitration procedures involve the following elements.

- The arbitration body typically includes three members, who decide by majority voting. Each side appoints a member and these two members agree on the third one, who is not associated with either side. This third member will act as chair. In the present case, the RFA and the IMF would appoint an arbitrator and the chair would be chosen from outside the region and the IMF.
- Arbitration can be requested by either side. The RFA and the IMF would agree *ex ante* to the procedure and commit to accept the decision of the arbitration body.
- Transparency is desirable because the disputed issue is likely to be of considerable public interest. Transparency includes making public the recourse to arbitration, the composition of the arbitration body, and the topic subject to arbitration.

Two specific aspects are the need to reach a decision quickly and the technical nature of disputes. Because emergency programmes must be agreed quickly, arbitration cannot be lengthy. And the technical nature of disputes may require providing the arbitrators with the resources to call upon specialised experts. This is how disputes among states, including NAFTA, are arbitrated according to Bernasconi-Osterwalder (2014), for example, or in US labour arbitration.

As an example, it is well known that, when the programme for Greece was first mooted, the IMF wanted the public debt to be restructured, a step that was rejected by the Commission (and the ECB and the lending governments). Arbitrators would have had to determine whether the programme was likely to succeed in the absence of a debt restructuring. The arbitrators would either have decided that a restructuring was required, or they could have mandated a programme compatible with a decision not to restructure the debt.

66 Binding arbitration is used in a variety of situations, ranging from divorce proceedings to international land disputes. In the economic area, arbitration of labour disputes has been the object of many studies. At the game theoretical level, arbitration is seen as a way of seeking a cooperative solution that is Pareto superior to non-cooperative conflict. The game can be complicated in the presence of principal-agent relations, but the general intuition is that arbitration is expected to be a fair and effective way to resolve disputes. Of interest to the present case is that the choice of arbitrators matters. Arbitrators with wide experience of the dispute matter reduce the uncertainty of the process outcome, which may help resolution without arbitration (Ashenfelter, 1987).

Appendix: List of regional funds

RFA	Established	Size[1] (SDR billions)	Members
Arab Monetary Fund (AMF)	1976	3.6	Algeria, Bahrain, Comoros, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, West Bank and Gaza, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, United Arab Emirates, Yemen
BRICS Contingent Reserve Arrangement (CRA)	2014	74.4	Brazil, China, India, Russian Federation, South Africa
Chiang Mai Initiative Multilateralization (CMIM)	2000 (2010)	178.5	Brunei Darussalam, Cambodia, China, Indonesia, Japan, Korea, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam, Hong Kong Monetary Authority of Hong Kong, SAR, China
Eurasian Fund for Stabilization and Development (EFSD)	2009	6.3	Armenia, Belarus, Kazakhstan, Kyrgyz Republic, Russian Federation, Tajikstan
European Union-Balance of Payments Facility (EU-BoP)	2002	39	(EU non-euro area countries) Bulgaria, Czech Republic, Denmark, Hungary, Poland, Romania, Sweden, United Kingdom
European Stability Mechanism (ESM)[2]	2012	392	(Euro area countries) Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Portugal, Slovakia, Slovenia, Spain
Latin American Reserve Fund (FLAR)	1978	3.5	Bolivia, Colombia, Costa Rica, Ecuador, Paraguay, Peru, Uruguay, Venezuela

Notes: (1) Calculated using 2016 end-year exchange rates. (2) As outlined in the ESM treaty, the ESM is an intergovernmental organisation under public international law and the European Commission is delegated authority to conduct debt sustainability analyses, discuss MoU with borrowers and monitor implementation of programmes.

Source: Regional Financing Arrangements.

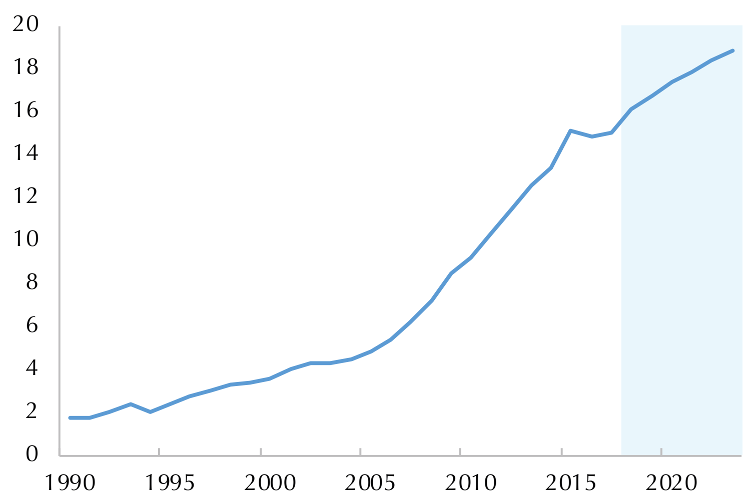
5 China

5.1 The rise of China

The single most momentous change affecting the international economic and monetary environment in the last 20 years has been the rise of China. Twenty years ago, China's per-capita income was low. The country was a net recipient of foreign aid. It was not among the top ten countries in quota and voting rights at IMF. It was not a sufficiently significant country to claim managerial positions in leading international organisations. It gave a cold shoulder to the Asian Monetary Fund proposal in 1997 and was a reluctant participant in the Chiang Mai Initiative in 2000. Use of its currency, the renminbi, was limited to China itself.

Over the subsequent 20 years, Chinese GDP has grown at an average annual rate of more than 9%. Its share in global GDP, valued in US dollars at market rates (which are what matter for international transactions), has quintupled from 3% to 15%, as shown in Figure 14. Its nominal growth rate over the same period has averaged 13.4%. By the size of its nominal GDP – which matters in terms of global purchasing power – China became number two in the world in 2010, surpassing Japan. It will surpass the United States in the mid-to-late 2020s, unless its growth drops substantially in the coming years. The renminbi has appreciated steadily starting in 2005. China is now the number one exporter in the world. It is not surprising, therefore, that many observers anticipate that China will become a key player in international monetary and financial affairs.

Figure 14 Chinese share in global GDP



Source: World Economic Outlook database, IMF.

China understandably wishes to have a role in global governance commensurate with its economic size. It also considers that the international economic and financial architecture suffers from defects that reflect, in its view, assumptions that are not borne out by the country's own experience or the experience of other late-developing countries.[67]

The economic and financial powers of the 20th century – the US, Japan and Europe – understand China's ambitions but have yet to formulate a response. On the one hand, they wish to embrace a new partner. On the other, they see China as a rival which they seek to contain. They must decide whether they are prepared to share leadership of the existing global monetary and financial institutions with China, or whether they prefer to let China transform the international economic and financial architecture in ways that shift its focus away from the multilateral system constructed in the aftermath of World War II towards a (set of) regional institution(s).

5.2 Challenging the dollar and renminbi internationalisation

China's views of the international monetary architecture, like those of its neighbours, were shaped by the Asian Crisis and by the global financial crisis. Prominent among its views are those concerning the position of the US dollar as the key currency in the international monetary and financial system. Zhou (2009) criticised the dollar-central global monetary order and advocated strengthening the role of the Special Drawing Rights to replace the US dollar as an international currency. In particular, he suggested that the SDR play all three functions of money in private-sector and well as official-sector transactions. Box 7 recalls his main points.

Yu (2014) argues that the absence of reaction to Zhou's proposal encouraged the Chinese authorities to act on their own, which led to the subsequent drive toward renminbi internationalisation.[68] The question is whether that drive will succeed.

67 Witness this statement published by a quasi-official organisation: "The 'shortcomings' of the existing global governance system are prominent, which can hardly ensure global development. First, the traditional dominant forces are seriously imbalanced. The US and Europe that used to dominate the global governance system have been beset with structural problems, with their economic development stalling, social contradictions intensifying, populism and secessionism rising, and states trapped in internal strife and differentiation. [...] China has made outstanding contributions to the recovery of world economy under relatively great pressure of its own economic downturn. Encouraged by the "four confidences", the whole of the Chinese society has burst out innovation vitality and produced innovation achievements, making people have more sense of gain and more optimistic about the national development prospect." (Shen, 2018).

68 Yu (2014) also provides further explanations for this lack of take-up. First, reform of the international monetary system was difficult without the support of the United States. Second other advanced countries similarly showed little interest in replacing the US dollar with the SDR. "[...] If regional financial cooperation is going nowhere and the international community has not yet made up its mind on the use of the SDR as a unit of account, means of exchange, and store of value in place of the US dollar, why can the People's Republic of China (PRC) not use its own currency to fulfil these functions? [...] RMB internationalization would allow the PRC to pursue its policy objectives on its own initiative without waiting for outsiders' consent." Third, "as a result of the liquidity shortage and credit crunch caused by the collapse of the MBS and CDO markets, the RMB's international acceptability increased significantly. [...] The strong position of the RMB in the wake of the subprime crisis led the PRC to believe that the RMB can be made an international currency."

Box 7 Thoughts of Chairman Zhou

In Zhou (2009), then Governor of the People's Bank of China (PBOC) articulated a number of changes that were needed to improve the international financial architecture. In his view, a key issue is the role of the US dollar as both a domestic and international currency:

> *"Theoretically, an international reserve currency should first be anchored to a stable benchmark and issued according to a clear set of rules, therefore to ensure orderly supply; second, its supply should be flexible enough to allow timely adjustment according to the changing demand; third, such adjustments should be disconnected from economic conditions and sovereign interests of any single country. … The Triffin Dilemma, i.e., the issuing countries of reserve currencies cannot maintain the value of the reserve currencies while providing liquidity to the world, still exists."*

His preferred solution was the creation of a super-sovereign currency to ensure the adequate supply of global liquidity:

> *"A super-sovereign reserve currency not only eliminates the inherent risks of credit-based sovereign currency, but also makes it possible to manage global liquidity. A super-sovereign reserve currency managed by a global institution could be used to both create and control the global liquidity."*

He identified the SDR as having "the features and potential to act as a super-sovereign reserve currency". He went on to describe the benefits of using SDRs for invoicing, settlement and store of value in private transactions as well as in official transactions. To that effect, he supported increasing the amounts of SDRs:

> *"Moreover, an increase in SDR allocation would help the Fund address its resources problem and the difficulties in the voice and representation reform. Therefore, efforts should be made to push forward an SDR allocation."*

Finally, he proposed to reform the SDR:

> *"The basket of currencies forming the basis for SDR valuation should be expanded to include currencies of all major economies, and the GDP may also be included as a weight."*

Although he did not explicitly say so, he was calling for the renminbi to be included in the SDR basket, a goal which would be realised seven years later.

The international role of a currency can be assessed along six dimensions: the three usual attributes of money – unit of account, medium of exchange and store value – in both private and official use. Regarding its role as a medium of exchange for the private sector, in Table 9 we look at the proportion of interbank transactions through the SWIFT network conducted in different currencies. The share of the renminbi has increased rapidly but remains very small, and it has declined since 2015 (when China tightened its capital controls in response to an increase in financial volatility).

Table 9 The renminbi's share as a domestic and international payments currency

Month	Ranking	Share
May 2018	5	1.62%
June 2016	6	1.72%
June 2015	5	2.09%
June 2014	7	1.55%
June 2013	11	0.87%
January 2012	20	0.25%
October 2010	35	NA

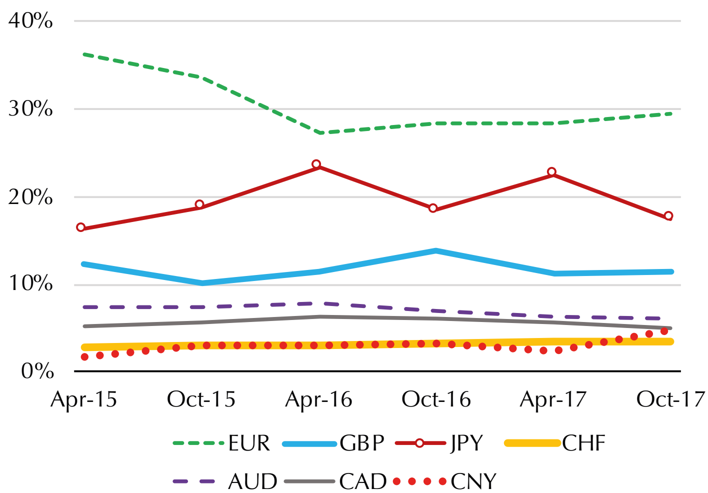
Source: RMB Tracker (various issues), SWIFT.

A second indicator is use of the renminbi in foreign exchange market transactions, as tabulated by the triennial survey of the Bank for International Settlements. Table 10 shows that the renminbi was ranked 8th in 2016, a sharp rise from 17th in 2010. This is the period when the renminbi was appreciating, as exchange rate management became more flexible. Yet, the renminbi's share, at 4%, remains small in comparison with the other currencies included in the SDR, whose shares all exceed 12%.

Overall, the evidence on use of the renminbi as a medium of exchange suggests that the currency still punches below its weight – its share is significantly below China's 15% share of global GDP.

Along similar lines, Figure 15 shows the results of semi-annual survey conducted by the Bank of England on spot-market turnover of currency pairs involving the US dollar. The renminbi's share rose from 1.7% in April 2015 to 4.9% in October 2017. Its ranking in October 2017 was 6th, after the euro, Japanese yen, British pound, Australian dollar and Canadian dollar.

Figure 15 Turnover of currency pairs (spot, vis-à-vis the US dollar) in London



Source: Results of the Semi-Annual FX Turnover Survey, Bank of England.

Table 10 Daily turnover of the renminbi in (over-the-counter) foreign exchange transactions

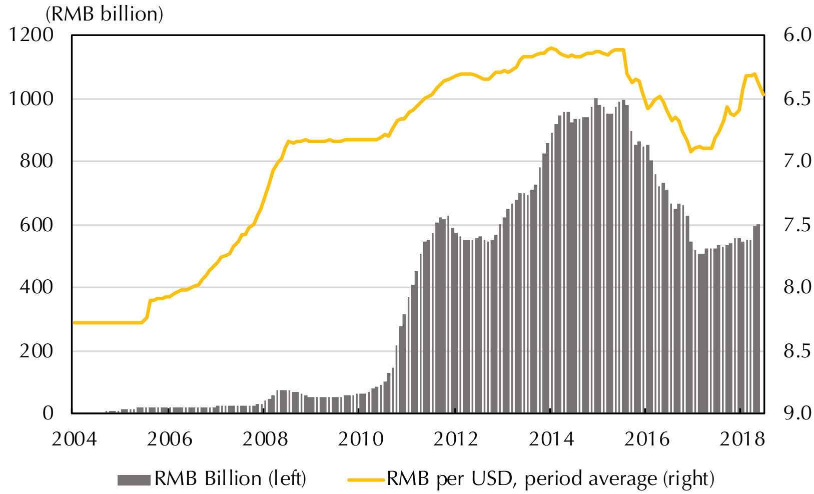
Currency	2001		2004		2007		2010		2013		2016	
	Share	Rank	Share	Rank	Share	Rank	Share	Rank	Share	Rank	Share	Rank
USD	89.9	1	88.0	1	85.6	1	84.9	1	87.0	1	**87.6**	**1**
EUR	37.9	2	37.4	2	37.0	2	39.0	2	33.4	2	**31.4**	**2**
JPY	23.5	3	20.8	3	17.2	3	19.0	3	23.0	3	**21.6**	**3**
GBP	13.0	4	16.5	4	14.9	4	12.9	4	11.8	4	**12.8**	**4**
AUD	4.3	7	6.0	6	6.6	6	7.6	5	8.6	5	**6.9**	**5**
CAD	4.5	6	4.2	7	4.3	7	5.3	7	4.6	7	**5.1**	**6**
CHF	6.0	5	6.0	5	6.8	5	6.3	6	5.2	6	**4.8**	**7**
CNY(1)	0.0	35	0.1	29	0.5	20	0.9	17	2.2	9	**4.0**	**8**
SEK	2.5	8	2.2	8	2.7	9	2.2	9	1.8	11	**2.2**	**9**
NZD(1)	0.6	16	1.1	13	1.9	11	1.6	10	2.0	10	**2.1**	**10**
MXN(1)	0.8	14	1.1	12	1.3	12	1.3	14	2.5	8	**1.9**	**11**
SGD(1)	1.1	12	0.9	14	1.2	13	1.4	12	1.4	15	**1.8**	**12**
HKD	2.2	9	1.8	9	2.7	8	2.4	8	1.4	13	**1.7**	**13**
NOK(1)	1.5	10	1.4	10	2.1	10	1.3	13	1.4	14	**1.7**	**14**
KRW(1)	0.8	15	1.1	11	1.2	14	1.5	11	1.2	17	**1.7**	**15**

Notes: Adjusted for local and cross-border inter-dealer double-counting (i.e., 'net-net' basis). Because two currencies are involved in each transaction, the sum of the percentage shares of individual currencies totals 200% instead of 100%. (1) Turnover for years prior to 2013 may be underestimated owing to incomplete reporting of trading in previous surveys. Methodological changes in the 2013 survey ensured more complete coverage of activity in emerging market and other currencies.

Source: Triennial Survey, Bank for International Settlements, 2016.

In terms of the role of currency as a private store of value, consider the denomination of bank deposits in Hong Kong. As shown in Figure 16, the value of renminbi deposits rose sharply from mid-2010 to end-2013, reaching RMB 1 trillion in mid-2015. Following the eruption of financial-market turmoil in August 2015, which marked the end of the long phase of trend appreciation, the value of renminbi deposits halved in the following 18 months. This suggests that the increase in renminbi deposits was more related to the desire of investors to take long positions in an appreciating currency than to its use in financial transactions.

Figure 16. Renminbi deposits in the Hong Kong banking sector (RMB billion)



Source: Authors calculations. Original data are from *International Financial Statistics*, IMF, and Hong Kong Monetary Authority.

Official use of the renminbi as a unit of account entails four possibilities: 1) other countries peg their currencies to the renminbi ; 2) other countries peg to a basket that attributes a large weight to the renminbi ; 3) the renminbi is included in the SDR basket; or 4) the renminbi is used as a currency of denomination of bonds issued by international financial institutions such as the World Bank and the ADB.

Although no country officially pegs its currency to the renminbi, Ito (2017) estimates the currency's weight in the (implicit) baskets of Asian countries to be substantial.[69] ADB issued the first renminbi-denominated bonds in Hong Kong in 2010. In January 2011, the World Bank issued for the first time renminbi-denominated bonds for a value of RMB 500 million (equivalent to $76 million). The amount increased to RMB 2 billion by 2013.

As a medium of exchange for the official sector, a currency can be used for intervention in foreign exchange markets, for central bank swaps, and for bond issuance by national governments and international organisations. During the global financial crisis, the People's Bank of China extended swap lines to several

69 The weights are estimated using the Frankel-Wei regression. It is well known that the use of third currency for a base currency may cause a wrong inference. The New Zealand dollar was chosen as the base currency in the paper.

countries: Argentina (CNY 70 billion),[70] Belarus (CNY 20 billion), Hong Kong (CNY 200 billion), Indonesia (CNY 100 billion), Korea (CNY 180 billion), and Malaysia (CNY 80 billion), among others. After the crisis ended, it continued to extend additional swaps, including to Iceland (CNY 3.5 billion) in June 2010 and to Kazakhstan (CNY 7 billion) in June 2011. Although the main motivation for these swaps – during the crisis and afterwards – was originally explained as trade promotion, it is now presented as a source of international liquidity. In the future, these swaps can become part of a global safety net for crisis management, especially once additional foreign liabilities are denominated in China's currency.

The People's Bank of China has also offered central banks such as those of Australia, the UK and the euro area swap agreements in return for the establishment of a renminbi clearing bank in their financial centres. By the end of 2016, excluding the Chiang Mai Initiative, China had established currency swap arrangements with 36 countries and regions, for a total amount of RMB 3.05 trillion (International Monetary Institute, 2017, pp. 23-24). The most recent of such currency swap arrangements (as of this writing) is the China-Nigeria swap arrangement of RMB 15 billion (or 720 billion Nigerian naira) in May 2018.

The role of the renminbi as an official store of value is measured as its share in foreign reserves. Table 11 shows that here, China's currency still plays at best a minor role.

Table 11 Currency shares of foreign exchange reserves (percent of total allocated)

	2014Q3	**2017Q4**
US dollars	64.59	62.70
Euros	21.57	20.15
Chinese renminbi	1.1*	1.23
Japanese yen	3.57	4.89
Pounds sterling	3.75	4.54
Australian dollars	1.68	1.80
Canadian dollars	1.79	2.02
Swiss francs	0.23	0.18
Other currencies	2.83	2.50

Note: * Result from a special survey by IMF. Shares of allocated reserves (i.e. reported by member countries), which represented 58.8% of total reserves in 2014Q3 and 87.7% in 2017Q4.

Source: COFER, IMF.

Table 12 brings together this information. It shows that while the renminbi has gained importance, it is still far from a major international currency and lags behind China's shares in global output and trade. Further progress will require relaxing and removing China's remaining capital controls and allowing the currency to fluctuate more freely on the foreign exchange market. These

70 When Argentina approached the IMF for an SBA of $50 billion in May 2018, the Chinese swap line was not activated. Three possible explanations are that 1) Argentina has adequate reserves to face current market turmoil – what it wants from the IMF is verification of the quality of its policies, which it can get by negotiating a programme; 2) what Argentina ultimately requires is financing for its government budget, which is not urgent but whose size exceeds that of the Chinese swap, which is about $11 billion; or 3) Argentina does not have renminbi needs, but US dollar ones.

are consequential changes. For this reason, many believe that the renminbi is unlikely to become a global currency in the foreseeable future. However, the speed at which the renminbi became internationalised is so impressive that it may become an important reserve currency among those countries that receive Chinese bilateral development aid and those that rely on bilateral currency swaps for their foreign exchange liquidity.

Table 12 Summary of renminbi rankings

Category	Year/month	Rank	Share (%)	Source
SWIFT world payment	2018, May	5	1.62	SWIFT
SWIFT cross-border payments	2018, March	8	0.98	SWIFT
Forex market turnover, total	2016, April	8	2.00	BIS Triennial Survey*
Forex market turnover, spot	2016, April	7	2.00	BIS Triennial Survey*
Forex market turnover in London, spot	2017, October	6	4.89	Bank of England
Forex reserves by COFER	2017, Q4	7	1.23	IMF COFER
SDR composition	2016 October	3	10.92	IMF (2015b)
International banking liabilities	2105, Q2	5	1.8	IMF (2015a), p. 13
International debt securities, outstanding	2015, Q2	9	0.4	IMF (2015a), p. 14
International debt securities, issuance	2015, Jan-Jun	6	1.0	IMF (2015a), p. 14

Note: * Original table shows 4.0% out of 200%. It is scaled to 100%.

Source: Ito (2017) with updates.

5.3 New international institutions

China has also sought to strengthen its international economic and financial influence by creating the Asian Infrastructure Investment Bank (AIIB) and providing development aid bilaterally and through the One Belt, One Road Initiative (or Belt and Road Initiative, BRI). These steps aim at encouraging the international take-up of its currency, but also reflect frustration with the existing order. China has reason to be unhappy with the fact that the presidents of the World Bank and the Asian Development Bank (ADB) are always American and Japanese, respectively. It has been disappointed that it took many years for the US Congress to ratify the decision on IMF quotas which raised China's share.

China's development aid initiatives build on an ADB report that detailed the enormous infrastructure needs of emerging Asian economies (ADB, 2011). The Asian AIIB, established partly in response, started in December 2015 with 57 charter members and an authorised capital of $100 billion. As of June 2018, it has 66 actual and 21 prospective members.[71] The AIIB competes with the World

71 Source: AIIB.

Bank and the ADB, although the AIIB has a narrower focus on infrastructure investment. As of end June 2018, the AIIB had approved 27 projects worth $5.19 billion. So far, a majority of approved projects concern roads, power plants, pipelines and dams.[72]

Box 8. Governance of the AIIB

China determined the AIIB's governance before it invited charter members. It divided the shareholders into two groups, with 75% of shares reserved for countries of the region. Within each group, shares are proportional to GDP, giving China twice the share of the second largest Asian economy, Japan. Not unexpectedly, the AIIB is headquartered in Beijing and its founding president, Jin Liqun, is Chinese.[73]

China next set a deadline for charter membership applications. Although the G7 countries were initially unenthusiastic, once the UK unexpectedly announced that it would join, Germany, France and Italy followed suit. The United States and Japan, in contrast, decided to stay out because they did not like the new institution's governance. Canada joined at a later point in time.

In contrast to the IMF, the World Bank and regional multilateral development banks, there is no resident board to represent shareholder governments, a fact that strengthens the power of management. The Board of Executive Directors makes decisions by correspondence. (The only regional development bank that has a non-resident board is the European Investment Bank, where shareholders are like-minded EU members.)

Together with Brazil, Russia, India and South Africa, China has also created the New Development Bank (NDB, also informally known as the BRICS Development Bank) and a BRICS Contingent Reserve Arrangement. The former is another development bank, while the latter is a safety net intended to address liquidity shortages. The NDB's governance structure specifies equal contributions and voting shares for the five members.

As an institution of just five countries, the NDB is not an encompassing global institution. In principle, it could nonetheless provide China and the other members with an alternative to the Bretton Woods institutions when seeking to obtain and provide development and liquidity assistance. That said, the NDB has shown few signs of life. A number of its members – Russia and South Africa for instance – have economic and financial problems of their own. In thinking about possible scenarios for the evolution of the international financial architecture – and about possible China-centred competitors for the IMF – it would seem to make more sense to focus on People's Bank of China swaps, China's bilateral development assistance, the One Belt, One Road Initiative and Chiang Mai Initiative Multilateralisation.

72 The list of approved projects is available on the AIIB home page at https://www.aiib.org/en/projects/approved/index.html

73 In case of the ADB, Japan has the top voting share, with the US sharing the de facto top shareholder position; European countries have large voting shares.

The BRI is designed to link China to Europe via a land route through Central Asia and a sea route through the Indian Ocean. In 2014, China created a facility known as the Silk Road Fund to finance the associated investments. The owners of the Silk Road Fund are the State Administration of Foreign Exchange (SAFE) (with 65%), the Export Import Bank of China (15%), the China Investment Corporation (15%) and the China Development Bank (5%).

Chinese aid often comes with Chinese construction companies and Chinese labour attached. China does not hesitate in lending to countries with authoritarian governments already saddled with large sovereign debts and questionable repayment capacity (Hurley et al., 2018). Up to 2014, most of its loans were denominated in dollars, although more recently a growing number have been in renminbi, something that will enhance use of the currency in the region.[74]

There is a tension between China's role as a provider of development assistance and the fact that it remains a large recipient of loans from the World Bank and the ADB. This has let the US to require that China no longer receive new development loans as a condition for the agreed-upon capital increase for the World Bank. In fact, the capital increase has occurred, but the Bank and the US only agreed to a reduction of new bank loans to China. As of April 2018, outstanding World Bank loans to China amounted to $60.5 billion for 416 projects.[75]

In principle, China's efforts to foster connectivity within Asia and between Asia and Europe can be viewed positively. However, there are reasons for concern that these efforts primarily reflect China's geopolitical and strategic ambitions, as opposed to a desire to spread the economic benefits of integration per se.[76] In practice, BRI initiatives are not limited to projects linking China to Europe but extend to any and all countries prepared to accept Chinese investments. The term 'BRI' is used not for a single framework where funders and borrowers are identified, but is used to refer to a loose collection of all Chinese-led initiatives – mostly infrastructure – that are financed by the AIIB and Chinese bilateral aid and investment funds. Given all this, it would be better if the World Bank, the ADB and the AIIB shared common lending standards, which could also apply to bilateral aid.

One way forward would be to offer China membership of the OECD and its Development Assistance Committee (DAC). The DAC seeks to set standards for assistance and to coordinate donors. Some might object that the OECD is a club of advanced countries and that China is not yet an advanced country in terms of per capita income. But China is as consequential as any advanced country as a source of development assistance, by virtue of its sheer economic size. This, together with the need for clear standards for development aid, creates a case for inviting China to join the OECD. China could also be invited to the Paris Club, where major creditor countries negotiate coordinated solutions to the problems of indebted countries.

In the next section, we consider the implications of China's financial rise for the IMF. Here we just note that its development aid strategy also matters. Over-lending may eventually force some recipient countries to seek IMF rescue programmes. In the 1980s, the IMF addressed the balance-of-payments difficulties of the poorest countries by providing concessional financing. From the outset, the

74 AidData by Open Data for International Development. http://aiddata.org/donor-datasets.

75 http://www.worldbank.org/en/country/china/projects.

76 This is not to deny that aid from the US and other western countries is not always guided by economic logic.

line between the World Bank loans and IMF's Enhanced Structural Adjustment Facility (ESAF) was fuzzy. In 1999, the Poverty Reduction Strategy Paper (PRSP) was introduced, replacing the ESAF, with a focus on poverty reduction. Similarly, in 1996, the IMF and World Bank launched the Heavily Indebted Poor Countries (HIPC) Initiative that provided debt forgiveness, subject to conditions. Official institutions and national providers of bilateral aid agreed to write off earlier loans in order to reduce the debts of the poorest countries to manageable levels. China may have to address similar problems in the future. Best would be if it addressed them in cooperation with the IMF, the World Bank, the DAC and the Paris Club.

5.4 Implications for the IMF: Many questions and few certainties

China's role as a major player on the international financial scene could have important consequences for the IMF. In 2011, China obtained a Deputy Managing Director (DMD) position when the IMF agreed to expand the number of DMDs from three to four in order to accommodate it.[77] It was decided in 2015 to add the renminbi to the SDR basket, and the step was implemented in 2016. Extrapolating to the future, we may expect that China will seek more power as its economy grows larger and it ultimately surpasses the US in overall economic size.

Will China become the main shareholder?

The quota formula that determines the voting share of each IMF member country puts heavy weights on GDP and international trade.[78] It is therefore likely that China will be able to claim the largest IMF quota in the not too distant future. The challenge is not just for other members seeing their voting shares shrink, but also in allocating the shrinkage. The current main shareholders – the European countries and the US – will have to bear the brunt of the transformation.

The IMF Executive Board is mandated to conduct quota reviews every five years. Such reviews have been postponed in the past, and even when agreed, revisions must be approved by 85% of IMF members. With a voting share of about 17%, the US has a veto (changes in quotas and voting shares require an 85% super-majority). How the Trump administration, much less a successor, would view a loss of its veto is, to put it mildly, unclear. Moreover, it is not just the administration but Congress that must agree. (The last revision was held up in Congress for five years.)

And it is not just the United States. Taken together, the 'Western' powers – labelled as advanced economies, including Japan – hold nearly 58% of the voting shares. These countries, or any substantial subset of them, may seek to block or delay the inevitable change. If they do, China will have yet more justification for creating a bloc of countries that rely on Chinese-led institutions. This would

77 It was only in 1994 that the number of Deputy Managing Directors was expanded from one to three. New positions went to Mr Ouattara from Cote d'Ivoire and Mr Narvekar from India. Mr Narvekar was replaced by Mr Sugisaki from Japan in 1997.

78 The formula is $(0.5*GDP + 0.3*O + 0.15*V + 0.05*R)^{0.95}$ where O is a measure of trade openness (the average size of imports and exports), V is a measure of the volatility of international trade and net capital flows, and R is the size of official reserves.

downgrade the role of the IMF, which already faces the danger of a diminished global role, as described in Chapter 4. It could set the stage for a scenario where the global financial system is fragmented into a dollar zone, a euro zone and a renminbi zone.

Moving the IMF headquarters to China

If China becomes the largest shareholder, it will be in a position to ask for the IMF headquarters to be relocated to Beijing or Shanghai. Article XIII(1) of the Fund's Articles of Agreement states: "The principal office of the Fund shall be located in the territory of the member having the largest quota, and agencies or branch offices may be established in the territories of other members." But what exactly is the principal office? Could most staff stay in Washington, DC while management, or management and the Executive Board, have their de jure headquarters in China and a subsidiary office in Washington?[79]

A change of location would be symbolic, but would it have significant implications for policy and procedure? It is sometimes argued that the undue influence the United States has exercised over IMF decisions is due to the Fund's physical proximity to the US Treasury and White House, a situation that Keynes tried hard to avoid during the Bretton Woods negotiations. Twenty years ago, in the first Geneva Report on the World Economy, we wrote: "The US Treasury has the advantage of physical and intellectual proximity to the Fund. From the US government's point of view, it helps that the IMF headquarters is not only in the same time zone but also a two-minute cab ride from the Treasury" (De Gregorio et al., 1999). This point is of course debatable.[80]

If the headquarters move to Beijing or Shanghai, will this purported policy bias disappear or be replaced by undue Chinese influence? It could be that some current staff members will not want to move and opt to resign, which would change the intellectual profile of the staff. These uncertain consequences are likely to lead to negotiations. China could agree to keep the IMF in Washington in exchange for other concessions. For instance, China could ask that one of its nationals be appointed to a top position at the IMF or another international organisation.

What would Chinese influence mean for the IMF?

The discussion assumes that China will want to use its status as country holding the largest quota to influence the Fund's worldview. To what effect?

Noting that the Bretton Woods institutions have come to epitomise "a mix of liberal multilateralism and market-oriented policies", Subacchi (2015) only mentions a greater future role for the renminbi as a possible Chinese objective. Liao (2015), on the other hand, argues that "the Bretton Woods system cannot continue its promulgation of liberal democracy, free markets, and Western governance institutions if it wants to effectively head the economic world order. And, for that matter the United States' leadership of the global economy would have to stop being partial to Western neoliberal orthodoxy." This would seem

79 Alternatively, the Articles of Agreement could be revised before China becomes the largest quota country to specify that Washington, DC is the permanent home of the IMF. Another remote possibility is that the euro area countries consolidate their quotas and Executive Board chairs to become the largest quota 'member'. Then the euro area could demand the headquarters be moved to Europe.

80 And even if geographical proximity played a role in the past, that role may be weaker or non-existent in a world of instant messaging and Skype.

to imply that more radical changes in IMF policies and procedures are in the offing. But he then goes on to conclude that China is only "hungry for profitable overseas investments". In this view, "the AIIB is returning to bank fundamentals of judging a borrower based on pure economic considerations", hardly a major change in the status quo. Similarly, Zhang (2015) sees China as aiming at a multipolar system with a strong 'Sinocentric' component. Rather than imagining that it will challenge the Bretton Woods institutions, he anticipates that "the Chinese-led institutions will complement and improve the Bretton Woods system" and that it will do so by "safeguarding the stability of the global financial system and promoting the development of the global economy".

But even this will have implications for the primacy of the IMF in the international monetary and financial domain. Liow (2017) concludes that "it is unlikely the World Bank or IMF will remain the primary ports of call in future storms, internal reforms of these institutions notwithstanding. With this diffusion of economic power and the emergence of these new institutions, the shape of the global financial architecture has changed. Correspondingly, the clout of the Bretton Woods institutions – and by extension America's soft power reach – will diminish. In fact, the historical coincidence of the rise of these new configurations of economic power, together with America's inward turn and Europe's continued malaise, suggests the emergence of a new multipolar order and a decentralised global architecture where the Bretton Woods institutions and regional institutions would complement each other in providing global 'public goods'". These views do not suggest that China might want to seriously transform IMF policy and procedure.

But will China's growing influence change IMF policy on the margin? For example, will an IMF-led China more enthusiastically support the maintenance of capital account restrictions? While the Fund continues to maintain that capital mobility is a positive, it has supported restrictions in specific instances. Would we see some further steps, such as actively advocating restrictions as a new normal? If so, would the IMF grow more supportive of pegged exchange rates, which are more durable when protected by capital controls?

Alternatively, since China needs to remove its own capital account restrictions in order to encourage other countries to hold the renminbi as their principal form of reserves, might this imply that China will be happy with the status quo in which the IMF gently nudges countries in the direction of capital account convertibility and greater exchange rate flexibility?

More fundamentally, will China want to promote a growth model that includes an important role for the state in guiding the markets? The IMF encourages privatisation and light-touch regulation. Could this change when China becomes the largest shareholder? China's "overarching goal," according to Zhang (2015), "is to safeguard the global free trade system and an open world economy. This goal is rooted in a quintessentially Western liberal internationalist economic doctrine. The irony is that China, which has never had a liberal internationalist tradition in its intellectual history until modern times, is now claiming to be assuming the mantle of international economic liberalism." This perspective suggests that a China-led IMF will not follow fundamentally different policies toward market liberalisation and reform.

A third question is whether China would use the IMF to reduce the role of the dollar as the key international currency. Will it promote the renminbi as an alternative? Will it support new allocations of SDRs now that the renminbi has been included in the basket? And if so, what specific policies might it advance? In recent years, China has strongly argued that the role of the dollar as the sole international currency is not satisfactory and has pushed for a multipolar system, including an international role for the renminbi and for the SDR, as reported in Box 7. Obviously, as the largest shareholder of the IMF, China would use its influence to achieve its aims, especially as they are shared by many developing – and even some developed – countries. They would have many opportunities. For instance, as part of the Article IV consultations, the IMF could encourage member countries to diversify the reserves of their central banks and member governments to issue public bonds in renminbi and possibly SDRs. A natural evolution, then, would be for the IMF to offer loans in renminbi. China could also seek to change the mandate of the SDR. So far, SDRs are only held by, and exchanged among, central banks. The mandate could be extended to allow SDRs to be privately held, which would nurture SDR-denominated assets. However, all these changes will ultimately depend on market acceptance of the renminbi. If loans are provided in renminbi and there is no demand for them, and if the renminbi remains not fully convertible, this may end up as a futile effort.

A final conjecture is that an IMF with China as the largest shareholder may promote RFAs and bilateral swaps by systemically important central banks. Chapter 4 sees such an evolution as competition for multilateralism and, in particular, for the IMF as the sole international lender in last resort. Over the recent period, China has been casting its own net of swaps and has sought to promote its own sphere of influence. The question is whether it will modulate its challenge to the IMF when it becomes the main shareholder. Will it seek to channel its credits and related financial resources through the IMF rather than extending them bilaterally and through regional arrangements? Much will depend, in this specific context and generally, one whether other countries cede power and influence in the IMF and other multilateral institutions to the rising power.

6 Governance

The fundamental problem of IMF governance, we have argued, is that it hinders the institution from taking decisions that are time consistent and not unduly shaped by the self-interest of its principal shareholders. Governance and decision making do not deliver efficient outcomes. They are not congruent with the interests of majority of shareholders (one might say with the interests of the shareholders as a whole).

The consequences are illustrated by the Greek programme in 2010, when the IMF, after having agreed on an exceptional access framework in 2002, failed to enforce it when push came to shove, given the insistence of its large European shareholders on the need for an exceptionally large package. Thus, the prior commitment to limit exceptional access was not time consistent, given the pressures of the moment. Then, having insisted on the desirability of bailing in creditors on both equity and efficiency grounds, it failed to do so, again owing the objections of European governments concerned about the implications for their banking systems.[81] The global interest and the interest of the crisis country itself were casualties of the undue political influence of a subgroup of powerful European shareholders.

These dilemmas have counterparts in the context of monetary policy, where time consistency is similarly an issue and there is similarly a danger that policy will be unduly influenced by special interests. The solution there is to delegate decision making to an independent board tasked with choosing policies consistent with a politically given mandate but free to choose its tactics – a board sometimes made up of members committed even more strongly than its public and political masters to the goals of that mandate ('conservative', highly inflation-averse central bankers in the monetary policy context), who will therefore push back against special interest pressures and short-termism. Members of central bank policy committees typically serve for extended terms and cannot be dismissed or replaced except for cause, allowing for their independence. Committee members are not free agents, however. They must justify their policy choices to their political masters (through congressional and parliamentary testimony) and to the broader public (through speeches, the release of transcripts, inflation reports, and so on).

81 The exceptional access framework had required the IMF to provide large-scale financing only if (i) there was a high probability that a member country's debt is sustainable, (ii) that member has large balance-of-payments needs, (iii) the member has prospects for regaining private market access, and (iv) the member has the institutional and political capacity to implement the IMF programme.

6.1 Independent decision makers

We propose an analogous system for the IMF. A team made up of the Managing Director and Deputy Managing Directors would be empowered to make operational decisions concerning programme design and disbursements. These individual decisions would no longer be subject to the approval of a resident Executive Board of governmental representatives. Rather, the management team would have to explain and justify its decisions in periodic meetings with a non-resident board. The IMF would then possess instrument independence but not goal independence, in the language of central banking (see, for example, Tucker, 2018).

Transformed to non-resident status, that board could be reconstituted as a body of high central bank and finance ministry officials, perhaps organised along the lines of the present constituency system to limit numbers and facilitate frank discussion while at the same time ensuring broad representation. Had such a system been in place in 2010, the IMF well might have not chosen to waive its exceptional access policy in the case of Greece, and instead would have demanded debt restructuring as a condition of its participation in a lending programme.

Our proposal, a variant of one made in our earlier Geneva Report, is less radical than it might appear. In talks surrounding the Bretton Woods Conference, John Maynard Keynes recommended that IMF management be accountable to a part-time, non-resident board that convened several times a year. In 2006, Bank of England Governor Mervyn King suggested that responsibility for policies congruent with the Fund's mandate should be placed in the hands of an independent management accountable to a non-resident board made up of senior finance ministry or central bank officials that met six to eight times a year (King, 2006). We are not the first to advance these proposals, in other words.

An objection to this proposal is that the IMF is fundamentally a political, intergovernmental institution and that governments, jealous of their prerogatives, will resist delegating important decision-making powers to international technocrats. Our response is that governments are prepared to delegate prerogatives when they are convinced that the resulting outcomes are superior to those obtained under direct political control. And when problems of time consistency and special interest capture are serious, as here, there is good reason to think that outcomes under delegation are superior. If a growing number of governments are willing to delegate important responsibilities for monetary policy to independent central banks on these grounds, it is hard to see why the IMF should be different. Moreover, our proposal is not for unconditional independence. It is for independence with a high level of accountability, as necessary for political legitimacy.

Another objection is that countries like the United States, which effectively possesses a veto over IMF policy as a result of a quota share of more than 15%, will resist any proposal for delegating independence. The answer is that absent meaningful governance reform, other countries will continue to vote with their feet, and the IMF will lose influence and business to regional funds. Even the United States would be forced to acknowledge that veto power in an institution that does nothing is not valuable veto power. And the US veto is unlikely to last forever. As emerging markets continue to emerge and grow faster than the United States, America's quota and voting shares will decline. What was a US veto will become a Chinese veto.

A weightier objection is that an independent management team would lack the legitimacy of a central bank monetary policy committee. Monetary policy committees rely on what political scientists refer to as 'output legitimacy'. They are judged by results, since results like inflation are easy to observe and measure against the central bank's self-professed target or politically given mandate. The IMF, by contrast, must decide not just at what interest rate to lend but also whether to lend to a crisis country at all, what conditions to attach, and myriad other factors. The Fund's mandate – maintaining and restoring financial stability and growth and facilitating balance-of-payments adjustment – is fuzzy by construction. Judging its 'output legitimacy' – whether financial stability and, ultimately, growth are restored and balance-of-payments adjustment has been achieved – may only be possible after a considerable number of years.

The answer here is that modern central banks in fact have responsibilities extending well beyond a mandate to achieve low inflation. They are also responsible for high employment (in some cases) and financial stability (in others). They utilise many other financial instruments in addition to the policy interest rate. In the global financial crisis, they had to decide whether to rescue individual financial institutions. They assisted not just member banks but also other financial institutions through, inter alia, 'back-to-back' lending operations. They purchased not just treasury securities but also other instruments, including mortgage-backed derivatives and common equities. These operations provoked questions and, at times, criticism. But they demonstrated the advantages of statutory independence in a difficult economic and political setting. While questions about central bank autonomy continue to be raised, and in some cases have led to political and legislative challenges, we have not seen significant reductions in central bank independence in practice.

Two points should be distinguished in this connection. One is that the IMF, like many modern central banks, possesses multiple instruments which it uses to achieve its objectives. That the IMF has several lending instruments and attaches conditions to its disbursements does not distinguish it from national central banks and other independent agencies of government.

The other point is that the IMF, like many modern central banks, has a multi-dimensional mandate: it is charged with achieving multiple goals. Tucker (2018) argues that a multi-dimensional mandate is best rendered consistent with operational independence when there is a clear hierarchy of goals, so that the agency in question can justify why it sacrificed one goal in the interest of achieving another, in a manner consistent with that mandate. Thus, the operational independence we envisage here would be facilitated by an amendment to the Articles of Agreement in which the members explicitly stated the institution's mandate and did so in hierarchical terms.

To be sure, our proposal leaves open important questions. A first question is the appropriate size of the management team. A team that is too small is unlikely to be representative of the Fund's diverse constituencies: high- and low-income countries, and different geographical regions. But too large a team would be unwieldy. It would find it hard to conduct meaningful, substantive discussions. The present management team of five, made up of a Managing Director, a first Deputy Managing Director and three additional Managing Directors, is arguably too small. But a management team as large as the current Executive Board of 24 members, or as large as the 25-member Governing Council of the ECB, is clearly too large and unwieldy.

6.2 Selection procedures

Another question is how members of the management team would be selected. At present, both executive directors and governments (via their membership in the Board of Governors) submit nominations. Next the Executive Board draws up a short-list of three candidates on the basis of a statement of necessary professional qualifications but without geographical preference. The Executive Board discusses the merits of the finalists and makes a final selection from the short-list, either by consensus (as in the past) or by a majority of votes cast – one director, one vote (a 'straw poll', as has happened once in the history of the Fund). The Managing Director then selects the Deputy Managing Directors, where in practice geographical representation is taken into consideration. The post of first Deputy Managing Director has traditionally been reserved for the nominee of the US Treasury.[82]

Delegating the selection of Deputy Managing Directors to the MD would be inappropriate under the model we have in mind. More appropriate would be to rely on a vote by the Executive Board, as at present in the case of the MD, or on direct votes by members, where each member's votes would correspond to the value of its quota.

This in turn raises the question of the appropriate voting system. No voting system is perfect, as we know from Arrow's Impossibility Theorem. It would be desirable to adopt a system with a reasonable degree of proportionality guaranteeing that different regions and economic constituencies within the Fund were represented by management. And it would be desirable that the resulting system not be too opaque or complex.

One option would be approval voting, which is used by the American Statistical Association, the American Mathematical Society and the Mathematical Association of America.[83] Under approval voting, each voter may select (or 'approve') any number of candidates. The winner is then the candidate with the largest number of approvals. For a seven-member board, the seven candidates with the most approvals would be elected. One can again imagine two rounds: one for the Managing Director, and a second for the Deputy Managing Directors.

The strengths of approval voting include that it is simple.[84] It leads to the choice of candidates with broad appeal to the electorate ('consensus winners', or the candidate with the greatest overall support) as opposed to just a simple majority. Outcomes are relatively insensitive to the number of candidates, which is a good thing since the number of candidates in a race for Managing Director is difficult to predict.[85] Approval voting also discourages negative campaigning and

82 Peretz (2008) notes that the US Treasury has sometimes offered the Managing Director a choice between candidates, and that the MD has on some occasions consulted with the wider membership or executive directors before making a choice.

83 See Brams and Fishburn (1978). Approval voting was also used for papal conclaves for about three centuries ending in 1621.

84 In a relatively sophisticated electorate like the IMF Executive Board, this may not be as important as in other settings, but the IMF's shareholders still have to communicate their preferences and voting decision to their publics.

85 An exception is when there is a small number of positions and small number of candidates. With seven or more Managing Director slots to fill and more than 180 countries qualified to nominate candidates, this is obviously not a serious shortcoming.

prevents minor-party candidates from turning elections. A selection procedure for the Managing Director that favoured the candidate with the broadest appeal to IMF members – and who was not just able to garner a bare majority of the votes – would seem desirable in this context.

Approval voting also gives minority candidates their proper due, in that their supporters are not discouraged from voting for them because another candidate, though less appealing to them, is generally considered the stronger candidate; thus, voters from a particular region or constituency would have every opportunity to vote for a candidate from that region or constituency. Finally, approval voting also tends to produce more desirable outcomes than, inter alia, plurality or majority voting with runoffs when there is a large field of candidates, including a number that do not have sharply differentiated views, something that seems likely were selection of the Managing Director to be opened up to voting by the members.

One might designate the candidate with the largest number of approvals as Managing Director. Or the Managing Director could be chosen by the management team once the latter is constituted (in the manner of a prime minister).

Critics of approval voting argue that it creates incentives for tactical voting. It encourages voters to withhold approval for candidates who are obvious rivals of (close competitors to) their first choice (see, for example, Tideman, 2006). Incentives for tactical voting are greatest when there are relatively few positions to fill and relatively few candidates. Thus, this voting system would work best if there were a single election for all members of the management team and if the management team were relatively large. But a single election for all members of the management team would have the unfortunate consequence that staggered terms for Managing Directors would not be possible, introducing the possibility that an inexperienced management team might be periodically installed.[86]

Another option would be the single transferable vote. This voting system delivers proportionality in multi-seat organisations, while limiting wasted votes (i.e., votes for sure winners and losers) by transferring them to other candidates, thereby making every voter feel that he had a say and therefore possesses representation.[87] Each voter has a single vote and ranks the candidates in descending order of preference. First choices are counted, and any candidate receiving more than the required minimum number of votes is deemed elected. The relevant minimum is known as the Droop quota: for a five-member board it would be 17% of votes cast plus one; for a seven-member board it would be 13% of votes cast plus one; for a nine-member board it would be 9% of votes cast plus one. If an elected candidate has more votes than the quota, his or her excess votes are transferred to his or her voters' second choices in proportion to those choices. If open seats remain, the candidate with the fewest votes is eliminated, and his or her votes are transferred to his or her voters' second choice again in proportion to those choices. The process then repeats until the relevant number

86 Moreover, the candidate who is the first choice of the largest number of voters, and even potentially the first choice of a simple majority of voters, may not win an approval-voting election. Indeed, the winner might not be the first choice of any voter, causing the system to be dismissed as not producing a legitimate result. Intensity of support for a candidate is lost when voters simply express approval for a number of runners rather than ranking them in order of preference.

87 In other words, it minimises disenfranchised voters.

of candidates exceeds the Droop quota. One can imagine one round, where the candidate with the most votes becomes Managing Director, or alternatively two rounds, the first for selection of the Managing Director and the second for his/her deputies.

In addition to ensuring broad representation and proportionality, single transferable voting requires candidates to appeal to the supporters of other candidates for their second or third preferences, which works against candidates who are adversarial or confrontational while fostering support for those who are collegial, open-minded and flexible. Single transparent voting is also resistant to strategic manipulation.[88] These are all appealing attributes for a voting system used for the selection of IMF management.

One might designate the first candidate to surpass the threshold (with the highest number of votes, if more than one candidate exceeds the threshold in the first round) as Managing Director. Or, again, the Managing Director could be chosen by the management team once the latter is constituted (in the manner of a prime minister).

A downside of the single transferable vote is that it is difficult to understand. This may matter less when the electorate is made up of representatives of governments, who have advisors on which to rely, than in other contexts.

We conclude that there is no optimal selection rule for the Managing Director and the Deputy Managing Director slate, but that there are a number of alternative voting schemes that would work tolerably well. Moreover, the board selection must be staggered to insure continuity and avoid a completely new and inexperienced board. For example, for a term of six years, half of its members could be selected every three years, in a staggered fashion. In one selection the Managing Director could be chosen, and in the other the first Deputy Managing Director. This of course requires some constraints on countries' proposals of candidates to the board to avoid that in each of the elections, which take place every three years, the outcome is the same geographical representation.

6.3 Accountability

Moving to a part-time Executive Board would strengthen legitimacy and accountability insofar as management would have to justify their actions directly to high officials of leading governments rather than to designated bureaucrats (where only the latter is possible when the board meets four days a week). A further step in strengthening legitimacy and accountability would be to make the Independent Evaluation Office truly independent: to give its lead members long terms in office, secure funding, and guaranteed access to the relevant individuals and documents – attributes that are not all present currently.[89] Finally, the viability of this proposal – as with all proposals for IMF reform – rests on further reform of quota shares so that all countries and regions are convinced that they are adequately represented in the process.

88 For an analysis, see Bartholdi and Orlin (1991).
89 See Independent Evaluation Office (2014) for some polite discussion.

Tucker (2018) suggests that accountability of an independent agency is most effective when there exists an external community of experts available to assess its performance and propose improvements. The Independent Evaluation Office, strengthened along the lines suggested above, can help to play this function. So too can outside experts, including the authors of future Geneva Reports. This mechanism for accountability can only work, of course, if the actions of the agency in question are monitorable. That the IMF has moved a significant way in the direction of greater transparency works to enhance this mechanism. Yet further movement in this direction, as suggested in Chapter 3, would presumably have to be adopted to render our proposal feasible.

Discussions

Comments by the discussants

Jeff Frieden, *Harvard University*
The report presents an excellent summary of the problems that the IMF has faced in the past and is likely to face in the foreseeable future. It also provides compelling proposals for what might be done about these problems. My comments focus on the reasons for proposals, and on their political feasibility.

Let me start with the diagnosis and the prescriptions of the report. The authors do not really provide the general rationale for their ideas. One interpretation might be that global finance creates many externalities, such as market failures or spillovers. International financial and monetary stability therefore requires the provision of some international public good, but there is no global government. Gradually, over the past 50 years, we have seen the emergence of a patchwork of policies to address this issue. The IMF has done what it could, but more needs to be done. The proposals outlined in the report go several steps in the direction of making the IMF more like a global central bank, as the authors recognise. The Fund would expand its remit, loosen its ties to shareholders, and transition into providing something approaching lender of last resort facilities while gaining more autonomy from member states.

In this sense, the report is largely an exercise in mechanism design. It provides an important and compelling normative baseline that we can use to think about what might be needed in the international financial system and how it might be provided. All four authors are honourable men, and their proposals are eminently honourable as well, but are they feasible? Here we enter the realm of political economy, and we know a fair deal about the political economy of international institutions.

Governments cede power, sovereignty or influence to international institutions if and when the organisations in question can do things governments cannot do alone, or cannot do well alone. This leads to a principal-agent problem – in this case, the international organisation is a common agent with multiple principals. In any agency problem there is a trade-off – the benefit is more effective policies, but the cost is less control by the principals. The willingness of the principals (nation-states, in this case) to surrender control to an international organisation is a function of benefits that would accrue on the one hand, and the costs they would incur from a more autonomous institution on the other, especially when its policies might be expected to deviate from national preferences.

This conflict goes back to the very beginnings of the IMF and the Bretton Woods institutions. The principal disagreement was over whether the IMF should reflect the interests of expected debtors, such as the United Kingdom as represented by John Maynard Keynes, or the interests of expected creditors such as the United States, as represented by Harry Dexter White. And the conflict continues. We can probably generalise, without too much exaggeration, that debtor countries regard the IMF as excessively pro-creditor, while creditors see it as excessively pro-debtor. These attitudes were highlighted most recently in the Northern European views on the role of the IMF in the Greek debt crisis.

The broad point is that the willingness of shareholders to delegate more to IMF is a function of what the IMF is expected to do and how different this is from what individual countries would do without the Fund. In this regard, there are aspects of the report that strikes me as somewhat naive. To quote from Section 6.1 of the report, "governments are prepared to delegate prerogatives when they are convinced that the resulting outcomes are preferable to those obtained under direct political control. And when problems of time consistency and special-interest capture are serious, as here, there is good reason to think that outcomes under delegation are preferable." The question one would have to ask in thinking about the political feasibility is: preferable to whom? One could answer, a little unfairly, that for elected policymakers, time-inconsistency means worrying about elections and special-interest capture means being responsive to powerful constituents. Winning elections and satisfying powerful constituents is what governments are hired to do – and if they don't do these things, they do not remain governments for long. Viewed this way, it is hard to see very strong prospects for major governments giving in simply because delegation is "preferable" from the standpoint of aggregate social welfare. When we are talking about aggregate global social welfare, no less, it is important to remember that global social welfare does not vote and is not represented in national politics.

The world, like the IMF, is made up of governments whose job it is to protect the interests of national financial institutions and other national economic actors, and to respond to national public opinion. There is, and always will be, a conflict between the needs of the global financial system – presumably for an expanded, more technocratic IMF – and constraints imposed by member states. Where conflict erupts between the economic rationale of the Fund, on one hand, and political or economic interests of powerful member states on the other, the latter will pretty much always win. This is not an argument against reform, but an argument for thinking about reform in the context of political constraints. The analogy to national central banks is illustrative and not. There is substantial political oversight of central banks in many countries, including in the United States; they are not apolitical, purely technocratic bodies.

I also feel compelled to point to the large (orange) elephant in the room. The Trump administration has not made a secret of its belief that multilateralism is not in the interest of the United States. It prefers unilateral and bilateral actions, believing that the United States has much greater bargaining powers on its own than within the constraints of a multilateral institution. In a sense, this is a return to the traditional Republican values of the 19th century and the 1920s – a preference for bilateralism or unilateralism, a tendency towards economic nationalism, and a distaste for multilateral institutions. So far, this view has not been expressed openly on international monetary and financial issues or with respect to the Fed, but it will not be long coming. There is no indication of any US interest in, or willingness to, expand the role of international institutions, because the leading figures in the current administration sees them only as weakening the United States' unilateral bargaining power.

So, the authors will have to forgive my *déformation professionelle*. I cannot help but be a political economist, and *Eppur si muove*. Those who want to reform the IMF must learn some of the lessons that the Fund itself has learnt. The Fund, the World Bank and regional development banks have, over the years, realised that proposing first-best policies that are politically impossible can lead to terrible outcomes. It is better to think systematically about political economy limits. In this case, this means thinking about political limits on attempts to reform this most important of all international economic institutions. The Fund can evolve to be more useful, more productive, and to be a major contributor to a more fruitful development of the international financial system. However, it can only do so if it, and those who care about it, take very seriously the political constraints that they face.

Jean-Pierre Landau, *Sciences Po, Paris*
It is a real pleasure to be here to comment on a typical Geneva Report. Typical because the report is thought provoking, deeply analytical and very provocative on some proposals. As the title of my slides, "The IMF as a hybrid (and why it should stay so)", suggests, I believe that the IMF should stay a hybrid organisation rather than a global central bank, unlike what the authors partly suggest. The IMF is a hybrid for the following reasons. First, it is a monetary institution that helps governments on the fiscal side. I wonder if it is monetary financing of governments. I think it is, but many others might not agree. Second, the Fund has unique economic and programme expertise, yet it remains a deeply political organisation. Third, the Fund imposes tough conditionality but tries to alleviate countries' debts and differentiates among countries. One of the big tasks that I faced when I served as the French Executive Director at the Fund was to interact with the Paris Club, which means seeking concessions related to debt. Fourth, the IMF is increasingly transparent but is entrusted with deep secrets. Fifth, it is responsible for the international monetary system, but it has very limited resources. Finally, the Fund is entrusted with managing financial globalisation, but it has neither jurisdiction nor mandate to do so, especially without legal powers with respect to capital flows. This is why it is a distinctly hybrid organisation.

In this context, one must ask what needs to be changed. The authors want the IMF to be less political and more economic, as well as to provide it with more resources to manage the international monetary system. My alternative agenda, coinciding with the authors' suggestions, would also include a mandate for managing international capital flows.

The core of the report is linked to the changing landscape in which we live. We live in a very different world from that of 20 years ago when the first Geneva Report was written. First, financial globalisation and gross capital flows have become much more significant. If we think of the "world as a single financial system" (as put forward by Maurice Obstfeld), we face some challenging questions. Who is going to oversee this single financial system? Who will be the key global authority? My view is that the global system needs a macroprudential authority, as we have in domestic financial systems. The IMF could be the macroprudential authority in an era of financial globalisation. The second question is about China.[90] What kind of financial internationalisation would China prefer? The report could have developed further along this dimension. There is an attempt

90 Editor's note: Chapter 5 has been added since the conference.

to internationalise the renminbi through the offshore markets. China could also setup a network of rival financial institutions and swaps (bilateral and multilateral). These have serious implications for the IMF. Thus, my suggestion would be for the report to explore this scenario further and consider what China would do and its implication for the IMF. I feel it would have far-reaching implications from moving the headquarters from Washington, DC to Shanghai (a reference to the clause that requires the headquarters of the IMF to be located in the largest shareholder country).

Where could or should the report go further? First, the big question is about who is going to provide international liquidity and whether the provision is conditional or unconditional. It is really a black and white situation. Foreign exchange reserves are totally unconditional in the eyes of the beholders of reserves. As soon as there is an element of conditionality, liquidity provision is no longer a substitute for reserves. Therefore, if the policy objective is to provide a substitute for reserves, the world has to provide a source of unconditional liquidity. We have been dancing around this dilemma. Various IMF products tried to be unconditional without being totally unconditional, as is described very well in the report. However, these products have not met with much success. Some of them have helped to remove the associated stigma and have validated the recipients' economic policies, but most of them have failed. I understand from the report that the authors propose a liquidity facility that is totally unconditional. Perhaps the report should be more explicit about it.

Second, the IMF needs to have mandate and jurisdiction over capital flows: source, destination, symmetry, surveillance and systemic. This may require changing Article IV, which relates to controlling and restricting capital flows. As long as the IMF does not have a formal mandate, there should be at least some recognition of its authority – not just as a mere analyst or an observer, but an authority with powers to make recommendations. If members do not follow the recommendations, they have to explain why. It is not obvious that all countries would be willing to give the Fund jurisdiction on capital flows. At the very least, it should be recognised that the Fund in its new role would consider both the source and the destination of capital flows.

Next, the report could be challenged on two points. First, on the issue of governance. It is no surprise I am very much in line with what Professor Frieden said. I don't think it could be a global central bank and I do not think that there should be any. A central bank is an agent with a very clear mandate, which could be almost measured and very precisely defined. I struggled to define a mandate for an adjustment programme. Achieving price stability and measuring the success of an adjustment programme are two very different issues. Adjustment programmes involve a decision by the international community on whether they are willing to let the country go down or not. This is a political judgement. You cannot formalise that into a delegated authority. The accountability of the IMF staff to its Board is a very attractive feature. They have to explain everything they do, which makes them accountable to themselves. This gives rise to a culture of constant discussion and debate, a great feature for an international institution. The issue is the mandate, not the resident Board.

Second, the importance of the emergence of Regional Financing Arrangements might be exaggerated. I don't think RFAs are in conflict with the IMF, rather they are complementary. The question is whether the shocks are local or global. Moreover, the problems with Europe are very specific. The Europeans called the IMF for the wrong reason – they could not agree amongst themselves. In addition, the rest of the membership could not see the legitimacy of the IMF pouring money into Europe, given its resources.

Overall, I am very supportive of the report. I think it has singled out the two most important issues that the IMF has to face in the future, which are financial globalisation and China.

Yung Chul Park, *Korea University*

This Geneva Report is a comprehensive review of changes in the structure and role of the IMF that have taken place over the past two decades. These changes compel a fundamental reform of the way in which the IMF is governed. It is in this spirit that the authors of the report present a grand vision for creating a new IMF that is assured of the political legitimacy and independence commensurate with a multilateral institution specialised in crisis lending and management. The report also develops a new funding facility, a Fast Qualification Facility (FQF), which could bring the Fund a step closer to assuming the role of global lender of last resort.

It is a valuable study for setting an agenda and the direction for fundamental reform of the IMF's governance and its role in the future. Perhaps it is an overdue reform. Yet, one cannot be too optimistic if the past experience with the quota reviews is any guide; it remains unclear whether the IMF's major stock holders will be ready to embrace such a radical restructuring anytime soon.

No matter how preferable it is to transfer IMF management to international technocrats, for the major stockholders (including the United States), giving up their control at the IMF is likely to arouse domestic political opposition as it is viewed as symbolising their relative economic decline and the loss of an instrument of foreign and commercial policy.

Even if they were willing to accept the proposal as part of a reform agenda, the ensuing debates and negotiations would drag on many years, and possibly more than a decade, without reaching any conclusions.

By then, a recent IMF forecast shows that China will have emerged as the largest economy in the world and its currency is likely to be used more extensively as a reserve currency. These developments may alter the calculus of IMF reform but, as argued below, in a global financial system where the three reserve currencies – the US dollar, the euro and the renminbi – compete for a larger share of foreign exchange transactions, it is difficult to imagine any future domestic or global developments that may persuade these major central banks to delegate their global lender of last resort functions to the IMF.

In proposing the creation of a Fast Qualification Facility, the authors argue that although central bank bilateral swap agreements established during the global financial crisis were effective in restoring stability by injecting a large amount of dollar liquidity, they should be replaced by this new facility.

They take issue with extension of swap loans by reserve currency central banks such as the Fed as arbitrary and unpredictable. It is arbitrary because the criteria for selecting countries and conditions for providing liquidity are non-transparent, inequitable and politically motivated. It is also uncertain because the circumstances under which the swap arrangements will be activated in the future are unclear.[91]

The authors also rightly point out that the bilateral currency swaps provided by a handful of key-currency central banks represent a break from the principle of multilateralism and thus a threat to the IMF.

For these reasons, the authors propose a new IMF fast qualification procedure, without conditionality, to replace bilateral swaps to countries with efficient policy regimes and robust fundamentals when they fall victim to crises.

In this note I present a contrary view, suggesting that there are no compelling reasons for substituting the Fast Qualification Facility for the currency swap system for efficiency and stability of the global financial system in either the current or a reformed IMF governance structure.

Even if the governance reform the authors propose were to succeed in creating an independent IMF, the Fast Qualification Facility is likely to meet opposition from emerging economy members, as it runs against their interests, while falling far short of a lending arrangement capable of providing sufficient liquidity to rescue member countries suffering from the vagaries of capital account crises.

One reason for this contrary view is related to structural flaws of the Fast Qualification Facility. The new lending facility may help lessen stigma effects, but at the same time it could increase the risk of susceptibility to a crisis for a large number of member countries ineligible for it.

This problem becomes more evident when determination of qualification for an FQF loan is scrutinised. The authors point out in Section 3.7 that "[t]he Fund would have to publish general rules regarding qualification … Article IV reports could include general but not definitive statements indicating whether a country is likely to be eligible for [a Fast Qualification Facility]". As the authors admit, "qualification can be arbitrary". Many members will always find flaws and unfairness in the rules, no matter how meticulously they are constructed.

If the general statements included in Article IV suffer from ambiguities which allow different interpretations, many countries will be unsure of whether they are eligible for an FQF . They may not want to take the risk of exposing a policy regime lacking consistency and credibility and weak fundamentals when they apply, as in the case of other IMF precautionary lending facilities. Stigma effects may then come back to prevail on their decision to forgo application.

An assessment for prequalification for the Flexible Credit Line include 13 conditions for strong fundamentals. Suppose they are also used for the general rules for FQF eligibility, as they cover a wide range of prerequisites. The general rules would then be detailed enough to make the section process for countries eligible for an FQF transparent and objective.

91 In his empirical estimation, Broz (2015) finds that the Federal Reserve supported foreign banks in countries in which US money centre banks had high loan exposures, which suggests that the Fed served the interests of major US banks.

In this case, by just reviewing the Article IV reports, member countries will be able to find out whether they are eligible, on the borderline or ineligible. The general statements may then serve as an explicit or implicit procedure for preselecting countries which are likely to be eligible for an FQF. Strictly speaking, therefore, it would be incorrect to say that the facility is "without formal prequalification or a list of preselected countries".

In the case of existing precautionary facilities, the Fund judges the qualification of member countries when they apply for liquidity support. In contrast, the Fast Qualification Facility scheme is designed to identify those members who could potentially qualify for an FQF loan,

What would then happen to those countries excluded from the list of eligible countries? For one thing, they would know that the only alternative source of credit support is a stand-by loan. Given the reluctance to request such a loan, the authors believe that the Fast Qualification Facility provides incentives for taking measures that will improve economic fundamentals and the efficiency of policy regimes with the hope of qualifying for an FQF loan.

The ineligible countries may indeed follow IMF suggestions for macroeconomic policy adjustments and structural reform, but if past experience with IMF crisis management is any guide, structural reform could drag on for years without producing any visible results. During these intervening years, ineligible countries will continue to be exposed to the risk of succumbing to a crisis in the absence of any safeguard.

Being denied qualification for an FQF will exacerbate the risk of triggering a full-blown crisis. Realising this risk, the non-eligible members, comprising mostly emerging economy members, will mount opposition to the creation of an FQF on the grounds that the new facility will turn the IMF into a sovereign credit-rating agency.

A second reason is that the Fund will not be able to mobilise resources that would be sufficient when really needed in managing FQF loan operations, especially if it is designed to replace central bank swaps.

The authors turn to the issuance of SDRs to the borrowing country as a means of financing FQF loans. The viability of this proposal depends on the amount of SDRs members are willing to donate to the pool managed by the IMF

As of April 2018, 204.2 billion SDRs have been allocated to members. This figure includes 182.6 billion SDRs allocated in 2009 in the wake of the global financial crisis. If this figure is any guide, it is highly unlikely that members would donate anywhere close to the nearly $600 billion that was drawn through the Federal Reserve swap facilities in late 2008. Unless there are other ways of securing resources that are nearly unlimited, as in the swap lines, it is hard to see how the IMF would be able to serve as a global lender of last resort.

Obstfeld (2009) claims that the IMF may even evolve into a global lender of last resort if it gains access to individual central bank credit lines. But he is not optimistic about such a transformation because under the existing governance structure, IMF lending decisions are perceived to be politically or ideologically motivated.

Once the IMF is restructured to achieve political independence, would the countries with a reserve currency become more favourable to delegating their lender of last resort functions to the IMF? The answer is no, because these countries would not transfer benefits they draw from being reserve currency countries. They may also be concerned that delegation could interfere with their conduct of monetary policy and limit their ability to protect their banks with large loan exposures in foreign financial markets

To see why this is the case, it is instructive to examine how the Fed was thrusted into serving as a global lender of last resort during the 2007-10 crisis period. The Fed has no mandate for supporting foreign banks or serving as lender of last resort to the rest of the world, yet during the crisis period, it provided an extraordinary amount of liquidity in US dollars to private foreign banks and central banks with significant dollar-denominated exposures.

Private foreign banks took over 70% of Fed discount window loans and about 65% of the loans from two other broad-based facilities (the Term Auction Facility and the Commercial Paper Funding Facility).[92]

US branches of foreign banks could borrow dollars from the Fed, but many foreign banks could not. The Fed stepped in by offering dollar swap lines to foreign central banks, which enabled these central banks to provide dollar liquidity to banks within their jurisdictions. The amount of liquidity provided came to almost $600 billion.

The dominance of the US dollar in the international financial system shows how significant the benefits would be. There is broad agreement that the United States benefits from the fact that so many international transactions are denominated in US dollars. For instance, more than 85% of forex trading involves the US dollar and 39% of the world's debt is issued in dollars. In 2008, non-US banks had $27 trillion in international liabilities denominated in foreign currencies. Of that, $18 trillion was in US dollars. At present, US dollar-denominated assets account for 62.7% (or $6.5 trillion) of global foreign exchange reserves. According to Cecchetti (2014), the gross benefit the United States draws from being the issuer of the reserve currency is around 2.5% to 3% of GDP per year. Would it also be in the United States' interest to expand the list of central banks participating in the swap arrangements during a crisis? Cecchetti argues that the answer is yes.

Andrew Rose, *University of California at Berkeley*
In my opinion, there is an excessive amount of berating of the Fund in this draft of the report. Some of the criticisms seem minor, even verging on the petty. In reality, the IMF has engaged in considerable reform during this time period; the report seems only to occasionally give grudging acknowledgment to these changes. Perhaps that needs to be given fuller acknowledgement. Let me give you some examples. The Fund has spent far more time focusing on financial flows of late. That is consistent with the first Geneva Report, but it is not really acknowledged here. The Fund also pays far more attention to emerging markets and developing countries. It is also way more transparent now; if you look at the Fund's website, you see Article IV surveillance reports, conferences, data, reports, papers and so forth. My email is infested by the IMF blogs that arrive in my inbox. There is also the Independent Evaluation Office, which makes a difference to the Fund's work. Finally, and importantly, very few entities predicted the crisis. The

92 See Broz (2015) for details on Fed's supply of dollar liquidity during the crisis period.

fund did not, but the Fund also had a 'good crisis' and emerged with considerable honour. It is easy for academics to take pot-shots, especially at international institutions. So when they do criticise these institutions, the critiques should be rare, big and overwhelming. If the authors want the IMF to be independent and accountable, they should also be accountable.

Number two, where is the beef? The report contains a lot of accurate, fair-minded descriptions. But there is relatively little analysis, and only a few conclusions or recommendations. Now I realise that this is a first draft, and the report will probably be beefed up. Even so, I only discovered four proposals, and some seem minor. First, the IMF should try to create a formal framework to deal with regional financial arrangements; this hardly seems objectionable. Second, replace swaps with another pre-approved fast qualification system. I am somewhat sceptical of that, as the Fund itself has proposed a number of such facilities without much success. After the failure of CCL, SLF, RFI and so on, how is this one different? Fourth, there is a lot of interesting discussions on choosing the right voting schemes; again, eminently reasonable, but relatively minor. The third and most important recommendation is to make the IMF independent and accountable. This is what I want to dwell upon.

What is the case for independence? It is not like the case for independence of judiciary. To join the OECD a country needs to have an independent judiciary, in part so that the government can be both checked and investigated. This does not seem relevant for the IMF. The case for IMF independence is also not like the case for central bank independence, which is based largely on dynamic inconsistency. So what is the fundamental argument for IMF independence? Is there some divergence between the IMF's principals and the IMF as an agent (if you want to think about it that way) which makes independence necessary or appropriate? What is the nature of the dynamic inconsistency or special interests? Ordinarily, governments make intrinsically political decisions over fiscal affairs. The old saying is that the IMF stands for "It's Mostly Fiscal"; indeed, that is what they are often criticised for. If the ambit of the IMF is mostly fiscal, doesn't government supervision of the IMF seem appropriate? Here is a quotation that I pulled out from this draft of the report: "The status quo, under which management answers to the Fund's principal shareholders, makes it hard for the management team to disregard the preferences of the countries with the largest quota and voting shares in the interest of the global good." But who defines "the global good" if not the principal shareholders and largest members of the Fund? Is this a simple argument that quotas are misallocated, without saying how they are misallocated? I also want to bring your attention to the fact that the United States has a blocking quota. However, a large amount of research says that there is a special and unvalued role of the US dollar. It means that the US quota may be too low. More generally, I just don't understand the case for independence. It seems to me that IMF Independence is a solution in search of a problem.

Let me summarise. The draft is a good beginning to what will eventually be a fine Geneva Report. The report needs more focus with regards to linkages to the IMF. All the discussion regarding exchange rate regimes and inflation targeting and so forth needs to be brought back and linked very strongly to the IMF. Without fawning, perhaps the report should acknowledge the IMF's successes in reforming over the last 20 years. Most importantly, I would also like the final version report to make a clear and strong case for independence!

Floor discussion

José De Gregorio agreed that political feasibility concerns remain valid. The probability of these proposals going through is low. Referring to Andrew Rose's comments, he acknowledged that the Fund has made tremendous progress in the last 20 years. Today, it is much more eclectic and open. Yet the Fund's big crisis involvements – such as the Asian financial crisis, the Mexican crisis or the Greek debt crisis – have been disappointing. This is due to political interference, and the Fund is full of political interference. One of the motivations for the report's FQF proposal is that the first Geneva Report published 20 years ago already noted that CCLs would not succeed, and all efforts to have contingent credit lines have failed. The FQF is designed to be much more attractive, especially as countries do not apply for eligibility. On comparisons with central bank independence, he accepted that it is difficult to make a parallel argument for the IMF. Governments give central banks power because central banks take care of the well-being of a society, while global wellbeing is a less straightforward concept to be defined for an international organisation.

In response to Jeff Frieden, **Takatoshi Ito** noted that political constrains are always going to be there. If one were to invoke them in discussions about reforms, one ends up justifying the status quo. The report's proposals are to be revisited in 20 years to see what will have been feasible. He observed that he was surprised by Yung Chul Park's concerns about the report's proposals given the Korean experience in 1998. Back then, too many conditions were imposed on Korea that had nothing to do with crisis resolution. Many of the report's proposals, in particular the FQF, were crafted keeping in mind the concerns from Asian countries based on their experiences with the IMF. He agreed with Andrew Rose that the analytical part of the report might be weak and it may need a dynamic inconsistency model to show why IMF independence is important. The authors' current consensus is that decisions are often biased, and that is our starting point.

Charles Wyplosz remarked that Andrew Rose's comment about the report's petty criticism of the IMF is misplaced, as the authors go out of their way to recognise and applaud how the IMF has reinvented itself several times. Addressing the concerns of Jean-Pierre Landau and Yung Chul Park, who worry about the mandate of the IMF acting as a global central bank, he reminded the floor of how Michael Mussa, IMF Chief Economist from 1991 to 2001, used to assert that the IMF is a lender of the *first* resort, and not *last* resort. Whatever that statement meant, it is very strong. In many crisis situations, the IMF is merely plugging a fiscal hole when countries temporarily lose market access. The focus of the report, however, is not on such situations but on financial crises, in particular on banking crises that morph into full-blown sovereign debt crises. In such situations, a country does not just need a small amount of funds to plug a current account deficit for a few months, but large and immediately available amounts to fight sudden stops and speculative attacks. In such situations, reserves are never large enough, which is why an entity that is close to a global central bank is needed. Unless such an entity puts enough money on the table, markets are going to keep speculating. Previous crises indicate that it is only when key currency central banks step in that such situations come under control. He reminded the floor of the Korean experience in 2008, and the role of the Fed. But this solution raises questions about which countries the key central banks are going to help and which countries they are not going to help, and why. The authors believe that this arrangement is not adequate. The international financial system should not leave countries dependent on particular central banks' preferences about their willingness to provide liquidity or not.

On Andrew Rose's question about why the IMF needs to be independent, Charles Wyplosz argued that the slow progress on IMF governance reforms is a core issue. It includes debates about quotas, as well as the nationalities of the Managing Director and of the Deputy Managing Directors. Progress on these issues has been slow with no immediate solutions in sight. With the rise of China, these issues will need an earlier, more permanent resolution. The absence of any resolution stands to critically undermine the day-to-day management of the Fund. The report's executive management solution is similar to what has been implemented in national central banks. Day-to-day management needs to be entrusted to a professional team, an issue that is absent from the current debate about governance reforms.

Barry Eichengreen pushed back against a few points raised by the discussants. First, he argued that Andrew Rose's concerns about IMF independence are underdeveloped for three reasons. The report makes the point that the Fund does face time-consistency problems that can only be solved by independence. Referring specifically to exceptions to the Exceptional Access programme, he noted that when the Greek crisis erupted, for instance, the Fund failed to enforce the previously agreed upon protocols about when debt should be restructured. He also gave examples of judiciary and securities commission (in the United States) as institutions that are independent. Commissioners of the SEC, for example, have long, fixed terms with appropriate remuneration to prevent them from catering overtly and excessively to special interests.

Second, he disagreed with Jeff Frieden's point that the issues under consideration are too political to be delegated to the Fund. The same argument can be made about national central banks. Creditors, debtors, bankers, and workers are affected by central bank policies. Yet, we have come up with an agreement on delegating the functions associated with monetary policies to independent central banks. Perhaps, the timing to go ahead with this proposal needs to be chosen with care.

Finally, on Jean-Pierre Landau's concern that the IMF should not be considered like a central bank as its mandate is difficult, fuzzy, multi-dimensional and hard to quantify, Eichengreen mentioned that given the recent experiences, we have learned a lot about the role of central banks. They have resorted to unconventional monetary policies, they have accepted regulatory responsibilities, and they have become hydra-headed institutions with complicated mandates. The Fund, perhaps, is an even more complicated institution.

Jean-Pierre Landau made two remarks. First, he stated that to fight a financial crisis one needs a large amount of resources. It doesn't follow logically that an institution in charge of fighting crises needs to be independent to gather enough resources. In fact, for an international organisation, independence might make it even more difficult to raise the required resources. Thus, the issue boils down to a single question: can the Fund be the ultimate provider of liquidity? He believes the Fund will have to be trusted by the shareholders, whose national central banks can provide that liquidity. In other words, for the Fund to be a network of multilateral swaps, it needs to be trusted because national central banks are the true source of liquidity. The political argument goes exactly in reverse. The more resources are required, the more the organisation has to act in coordination with central banks.

Second, it is not the Fund that is responsible for financial stability but national regulators. In Europe, for example, it is the European Commission and the Council of Ministers. If you delegate authority to a body, it needs accountability. Moreover, the proliferation of public policy institutions with independence could be a recipe for revolt against experts and independence. The economics community should be very careful about advocating independence.

Carlo Monticelli noted that this discussion cannot afford to dismiss the long-standing debates within the G20 about the reform of the international monetary system. Key unresolved issues relating to the IMF cannot be solved by independence alone. There is also an issue of power games between G7 countries, on the one side, and the emerging markets on the other. At the time of the first Geneva Report twenty years ago, the main issue was the end of the Washington consensus and the desire of the emerging markets to be proportionately represented in international organisations. In spite of some improvements in quota arrangements, nothing much has changed in terms of the IMF's framework for policy and conditionality. Attempts from emerging market countries, including new institutions such as the New Development Bank, have not succeeded in significantly changing the governance of the international monetary system.

Stephen Cecchetti drew attention to a quote from Paul Tucker, former Deputy Governor of the Bank of England. In his latest book, *Unelected Power*, Tucker refers to central banks as “the third great pillar of unelected power alongside the judiciary and the military”. Creating independent agencies in liberal democracies requires caution and it is not clear how that would work in practice in the case of the Fund. Tucker, however, develops a set of criteria for the independence of an institution. These include the mandate, which must be defined clearly, a well-specified set of instruments and the measurement of its effectiveness. In addition, any first-order distributional impact should be excluded while accountability is required. There is already a huge debate on whether central banks should have non-monetary policy powers – some of their actions involve fiscal powers. A fortiori, the need for IMF independence is not evident.

Richard Portes noted that the authors might need to consider the role of the US Congress, which is known to not really favour an independent IMF. During the Greek debt crisis, the Fund was under heavy external political pressure while it also had to deal with its own internal pressures and motives. The Fund has learnt a lot from this episode. This is reflected in the way in which the sustainability analysis is treated and in the new document on lending when a country is in a grey zone regarding debt sustainability. This may be time-inconsistent, and yet it is about as good as what can be done. More recently, the Fund has had a very positive role, so we should not want to hang it on the Greek case. Reacting to this statement, **Charles Wyplosz,** accepted that the Fund had tried to play a positive role in the recent phase of the Greek crisis but by that time, it largely was out of the game – it did not provide loans in the third programme. It did remain influential, but it effectively lost its institutional role. This experience signals that RFAs can increasingly act independently of the Fund. This should be of concern because the Fund has a number of strong advantages relative to RFAs. The authors of this report would not want the Fund to be pushed out, and Portes' example is a case of the Fund being pushed out.

Pierre-Olivier Gourinchas noted that if reserves are considered unconditional safe assets, the only substitute for them is an asset that is also unconditional and safe. How would the FQF procedure, without an unconditional safe asset, solve this problem? How exactly is the FQF proposal different from, or better than, a pre-condition-based eligibility for access? Can't the Fund decide during the Article IV consultation whether a country is eligible for access to certain resources? This could remove uncertainty, as some countries would be automatically qualified for precautionary lines and others not. Ultimately, it is an issue of resources – a fiscal question. On this front, Gourinchas found the report to be a little bit vague. For the Fund to have access to the resources that are needed, it should be able to borrow from the key reserve currency issuers. How does the report envisage this happening? Without solving this issue, the Fund cannot carry out the lender of last resort responsibility the report is calling for.

In response to Gourinchas' remarks, **José De Gregorio** recalled the concerns associated with Flexible Credit Lines (FCLs). He mentioned his interactions with the Fund as part of an attempt to make Chile access an FCL. Out of the 20 or 30 countries that were eligible for FCLs, only three – Poland, Mexico, and Colombia – accessed one. He cannot understand why these countries requested an FCL, maybe for political economy reasons or some very specific country issues. The bigger concern is not actually the pre-qualification but the potential for disqualification and the exit strategy. There is lack of clarity on how the exit from FCLs would work. A country cannot be on an FCL for a 20-year period. Pre-qualification in itself is problematic. And for disqualification, a country could unilaterally decide to suspend Article IV because it believes that there is a risk of losing pre-qualification. **Pablo Hernández de Cos** concurred and added that this point was missing in the report.

Following up on this discussion, **Angel Ubide** wondered whether De Gregorio's point on pre-qualification would serve as a strong argument against IMF independence. Purely technocratic assessments might raise serious concerns. The report could call for IMF independence with regards to surveillance but not for programme disbursement. One intermediate step could be for Article IV to be independent, and in addition carry a grading, but then how does the Fund deal with downgrading? The issue is a bit nebulous and perhaps comparable to the experience with debt-sustainability analysis. The Fund has changed its debt-sustainability analysis a number of times over the past decade. It is not a matter of time-inconsistency but rather one of flexibility, and flexibility is welcome.

José De Gregorio added that independence does not necessarily lead to full transparency. Consider how independent central banks undertake stress tests of national financial systems. In many countries, when they publish their results, they do not mention issues associated with individual banks and nor do they indicate which ones are at the limit of fragility. A similar system can be adopted with regards to the Fund within the framework of Article IV consultations. De Gregorio further observed that the board is not entirely constituted of technocrats unrelated to real-world problems. The purpose of Board independence is to enhance its ability to move further and quicker with approvals. These should be viewed as continuous discussions and not as two extreme solutions. Potentially, it could be a sort of pre-qualification which is not necessarily public but known to individual member countries.

Claudio Borio stated that he had enjoyed reading the report, which is a well-crafted and succinct summary of what has been going on in international finance over the past 20 years. The report is really about the IMF as a firefighter and a provider of liquidity, however, and says very little about prevention. This is a little ironic, given the central bank analogy. When central banks provide liquidity support, they tend to have supervisory responsibilities or act in coordination with regulators if they do not have supervisory responsibilities. Moreover, when it comes to crisis management, they are not really independent. At that stage, governments or fiscal authorities are extremely important. With regards to prevention, the IMF does not have much teeth. As a result, the authors should explain what they see as the key problem with the international monetary and financial system that requires an independent IMF. For example, the report could consider issues associated with spillovers and spillbacks, and how those issues should be addressed. Presumably, this would involve coordination with other authorities and would require a discussion of the role that the IMF could play in prevention.

Robert McCauley discussed the urban myth of Korean reserves of $200 billion being a limit during the intervention. This might be misstating the true figure. Forward dollar sales effectively brought reserves below the $200 billion limit. This experience is not restricted to Korea, it also applies to many other Asian countries – the forwards book is the last accumulated and the first de-accumulated.

Stefan Gerlach observed that central bank independence itself might come under pressure over the coming years, which could make the report look outdated.

Patrick Honohan observed that the objective of central bank swaps has evolved over time. During the 1970s, central banks were arms of the government; if governments wanted to make intergovernmental loans, they relied on central banks. More recent swaps have been driven by banking crises. In their role as monetary authorities, central banks have provided foreign exchange across borders to solve problems of bank liquidity in partner countries. Even with the right governance structure at the Fund, central banks could argue that providing high volumes of monetary financing to other governments is not part of their mandate.

Pablo Hernandez de Coz briefly pointed out that Charles Wyplosz used to be against the creation of a European Monetary Fund (EMF), but has moved towards a more practical position in the report. What has changed with regards to the EMF?

Takatoshi Ito agreed with Patrick Honohan that central bank swaps should be only used for crisis management. What is unfortunate is that the Fed swaps could be seen as a replacement for multilateral institutions. In fact, Korea liked the swaps so much that, during its G20 presidency, it introduced them into the discussions about the financial safety nets. However, it is not a workable solution and there is zero probability that the Fed will develop swaps as an instrument for sovereign bailouts.

Answering **Livio Stracca,** who had suggested that surveillance was now more important than lending, **Barry Eichengreen** supported the view that surveillance should be an important part of IMF reform. Blaming the Fund for having failed to anticipate the Asian financial crisis, the global financial crisis and the European debt crisis might be setting the bar too high, but current pressure to moderate surveillance reports – in response to the largest shareholders' concern with resources – should be resisted. Responding to Pierre-Oliver Gourinchas, he suggested that the resource problem becomes more pronounced if the GAB is allowed to expire. Regarding the FQF proposal, which calls for even larger additional – but temporary – resources, he referred to a new version of the report that suggests a special allocation of SDRs. This would be a temporary allocation to be used only in liquidity crises. The proposal further specifies that the receiving country can convert SDRs into the national currencies of the countries in the SDR basket on demand. Under this arrangement, the risk to the IMF and its shareholders would be minimal.

Responding to Andrew Rose's comment on the need for more analysis, **Charles Wyplosz** mentioned that the comment has been partly addressed in the second version that is yet to be shared. He also responded to Pablo Hernandez de Coz that the report does not take any view about the desirability of an EMF, it simply looks at its implications for the IMF.

References

Adler, G., and C.E. Tovar, (2011), "Foreign Exchange Intervention: A Shield Against Appreciation Winds?", IMF Working Paper WP/11/165 .

Aizenman, J. and J. Lee (2007), "International Reserves: Precautionary versus Mercantilist Views, Theory and Evidence", *Open Economies Review* 18, pp. 191-214.

Aizenman, J, and Y. Sun (2012), "The Financial Crisis and Sizable International Reserves Depletion: From 'Fear of Floating' to the 'Fear of Losing International Reserves'?", *International Review of Economics & Finance* 24, pp. 250-269.

Alvarez, R. and J. De Gregorio (2014), "Understanding Differences in Growth Performance in Latin America and Developing Countries between the Asian and the Global Financial Crises", *IMF Economic Review* 62, pp. 494-525 .

Arias, M. and Y. Wen (2015), "Recovery from the Great Recession Has Varied Around the World", Federal Reserve Bank of St. Louis, October.

Ashenfelter, O. (1987), "Arbitrator Behavior", *American Economic Review, Papers and Proceedings* 77(2), pp. 342- 346.

Asian Development Bank (2011), *Asia 2050: Realizing the Asian Century*, Manila.

Ball, L.M. and N. Sheridan (2006), "Does Inflation-Targeting Matter?", in B.S. Bernanke and M. Woodford (eds.), *The Inflation-Targeting Debate,* NBER and University of Chicago Press.

Ballima, H.W., E.G. Kilama and R. Tapsoba (2017), "Settling the Inflation Targeting Debate: Lights from a Meta-Regression Analysis", IMF Working Paper WP/17/213.

Bartholdi, J. and J. Orlin (1991), "Single Transferable Vote Resists Strategic Voting", *Social Choice and Welfare* 8, pp. 341-354.

Bayoumi, T. (2017), *Unfinished Business: The Unexplored Causes of the Financial Crisis and the Lessons Yet to be Learned*, Yale University Press.

Bernasconi-Osterwalder, N. (2014) *State–State Dispute Settlement in Investment Treaties*, Best Practices Series, International Institute for Sustainable Development.

Blanchard, O. and M. Das (2017) "A New Index of Debt Sustainability", NBER Working Paper No. 24068.

Borio, C. (2012), "The Financial Cycle and Macroeconomics: What Have We Learnt?", BIS Working Paper No. 395.

Brams, S. and P. Fishburn (1978), "Approval Voting", *American Political Science Review* 72: 831-847.

Broz, J.L. (2015), "The Federal Reserve as Global Lender of Last Resort, 2007-2010", SRC Discussion Paper No 30

Cabezas, L. and J. De Gregorio (2018), "Accumulation of Reserves in Emerging and Developing Countries: Mercantilism vs. Insurance", mimeo, Universidad de Chile.

Calvo, G.A. and C.M. Reinhart (2000), "When Capital Flows Come to a Sudden Stop: Consequences and Policy", in P.B. Kenen and A.K. Swoboda (eds), *Reforming the International Monetary and Financial System*, International Monetary Fund.

Calvo, G., A. Izquierdo and E. Talvi (2006), "Phoenix Miracles in Emerging Markets: Recovering without Credit from Systemic Financial Crises", *American Economic Association Papers and Proceedings* 96, pp. 405-410.

Cecchetti, S.G. (2014), "Towards an International Lender of Last Resort", BIS Papers No. 79.

Celasun, O., X. Debrun, and J.D. Ostry (2007), "Primary Surplus Behavior and Risks to Fiscal Sustainability in Emerging Market Countries: A 'Fan-Chart' Approach", *IMF Staff Papers* 53(3), pp. 401-425.

Consiglio, A. and S. Zenios (2014), "Risk management optimization for sovereign debt restructuring", Working paper No. 14–10, The Wharton Financial Institutions Center.

Cukierman, A. (2017), "Forex Intervention and Reserve Mnagment in Switzerland and Israel since the Financial Crisis: Comparison and Policy Lessons", mimeo, Tel-Aviv University.

De Gregorio, J. (2009), "Implementation of Inflation Targets in Emerging Markets", in G. Hammond, R. Kanbur and E. Prasad (eds), *Monetary Policy Frameworks for Emerging Markets,* Edward Elgar.

De Gregorio, J. (2014), *How Latin America Weathered the Global Financial Crisis*, Peterson Institute for International Economics.

De Gregorio, J., S. Edwards, and R. O. Valdés (2000), "Controls on Capital Inflows: Do they Work?", *Journal of Development Economics,* 63, pp. 59-83.

De Gregorio, J., B. Eichengreen, T. Ito and C. Wyplosz (1999), *An Independent and Accountable IMF,* Geneva Reports on the World Economy 1, International Center for Monetary and Banking Studies and CEPR.

D'Erasmo, P., E.G. Mendoza and J. Zhang (2016), "What is a Sustainable Public Debt?", in J.B. Taylor and H. Uhlig (eds), *Handbook of Macroeconomics*, Volume 2, Elsevier.

Destais, C. (2014), "The International Monetary System as a Swap Nexus", CEPII.

Dominguez, K., Y. Hashimoto and T. Ito (2012), "International Reserves and the Global Financial Crisis", *Journal of International Economics* 88(2), pp. 388-406.

Dreher, A., J.-E. Sturm and J.R. Vreeland (2015) "Politics and IMF Conditionality", *Journal of Conflict Resolution* 59(1), pp. 120-148.

Dungy, M. (2015), "Contagion and Banking Crisis – International Evidence for 2007-2009", *Journal of Banking and Finance* 60, pp. 271-283.

Dwyer, G. and J. Lothian (2011), "The Financial Crisis and Recovery: Why So Slow?", Center for Financial Innovation and Stability, Federal Reserve Bank of Atlanta.

Ebeke, C. and A. Fouejieu (2015), "Inflation Targeting and Exchange Rate Regimes in Emerging Markets", IMF Working Paper WP/15/228.

Eichengreen, B. (2003), *Capital Flows and Crises,* MIT Press.

Eichengreen, B. (2009), "Out of the Box Thoughts about the International Financial Architecture", IMF Working Paper WP/09/115.

Eichengreen, B. (2016), "Global Monetary Order", in V. Constancio (ed.), *The Future of the International Monetary and Financial Architecture*, ECB, pp. 21-63.

Eichengreen, B. and P. Gupta (2016), "Managing Sudden Stops", World Bank Policy Research Working Paper no.7639.

Eichengreen, B. and N. Woods (2015) "The IMF's Unmet Challenges", *Journal of Economic Perspectives* 30(1), pp. 29-52.

Eichengreen, B., P. Gupta and O. Masetti (2017), "Are Capital Flows Fickle? Increasingly? And Does the Answer Still Depend on Type?", World Bank Policy Research Working Paper no.7972.

Fernández, A., K., A. Rebucci, M. Schindler and M. Uribe (2016), "Capital Control Measures: A New Dataset", *IMF Economic Review* 64(3), pp. 548-574.

Fischer, S. (1998), "Capital-Account Liberalization and the Role of the IMF", in *Should the IMF Pursue Capital-Account Convertibility*, Essays in International Finance No. 207.

Fischer, S. (2001), "Exchange Rate Regimes: Is the Bipolar View Correct?", *Journal of economic Perspectives* 15(2), pp. 3-24.

Frankel, J. (1999), "No Single Currency Regime is Right for All Countries and at All Times", *Essays in International Finance* 215, Princeton University.

Ghosh, A.R., J.D. Ostry and M.S. Qureshi (2015), "Exchange Rate Management and Crisis Susceptibility: A Reassessment", *IMF Economic Review* 63, pp. 238-276.

Goffman, E. (1963) *Stigma: Notes on the Management of a Spoiled Identity*, Prentice Hall.

Goldstein, Morris (1998) "The Asian financial crisis causes, cures, and systematic implications", Institute for International Economics, Washington D.C.

Gonçalves, C.E.S. and J.M. Salles (2008), "Inflation Targeting in Emerging Market Economies: What the Data say?", *Journal of Development Economics* 85(1-2), pp. 312-318.

Guzman, M. and D. Heymann (2015), "The IMF Debt Sustainability Analysis: Issues and Problems", *Journal of Globalization and Development* 6(2), pp. 387-404.

Hammond, G. (2011), "State of the Art of Inflation Targeting", *Centre for Central Banking Studies Handbook* 29, Bank of England.

Henning, R. (2017), *Tangled Governance*, Oxford University Press.

Ho, C. and R.N. McCauley (2005), "Living with Flexible Exchange Rates: Issues and Recent Experience in Inflation Targeting Emerging Market Economies", BIS Working Paper No. 130.

Hurley, J., S. Morris and G. Portelance (2018), "Examining the Debt Implications of the Belt and Road Initiative from a Policy Perspective", CGD Policy Paper No. 121, Center on Global Development.

Ilzetzki, E., C.M. Reinhart and K.S. Rogoff (2017), "Exchange Arrangements Entering the 21st Century: Which Anchor Will Hold?", unpublished paper, Harvard University.

Independent Evaluation Office (2014), *Recurring Issues from a Decade of Evaluation*, International Monetary Fund.

International Monetary Fund (2002), "Assessing Sustainability", prepared by the Policy Development and Review Department.

International Monetary Fund (2008), "Staff Guidance Note on Debt Sustainability Analysis for Market Access Countries", prepared by the Policy Development and Review Department.

International Monetary Fund (2011), "Modernizing the Framework for Fiscal Policy and Public Debt Analysis", prepared by the Fiscal Affairs Department and the Strategy, Policy and Review Department.

International Monetary Fund (2012), "The Liberalization and Management of Capital Flows: An Institutional View", IMF Policy Paper.

International Monetary Fund (2013a), "Staff Guidance Note for Public Debt Sustainability Analysis in Market-Access Countries", prepared by the Strategy, Policy, and Review Department in collaboration with the Fiscal Affairs Department.

International Monetary Fund (2013b), "Stocktaking The Fund's Engagement With Regional Financing Arrangements", IMF Policy Paper.

International Monetary Fund (2015a), "Review of the Method of Valuation of the SDR", 13 November.

International Monetary Fund (2015b), "IMF Executive Board Completes the 2015 Review of SDR Valuation", Press Release, 1 December.

International Monetary Fund (2017), "Collaboration Between Regional Financing Arrangements and the IMF", IMF Policy Paper.

International Monetary Fund (2018), "Programme Design in Currency Unions", IMF Policy Paper.

International Monetary Institute (2017), R*MB Internationalization Report*, Renmin University.

Ito, T. (2017) "A New Financial Order in Asia: Will a RMB Bloc Emerge?", *Journal of International Money and Finance* 74, pp. 232-257.

Jahan, S. (2017) "Inflation Targeting: Holding the Line," *Finance & Development*, International Monetary Fund.

Kaminsky, G.L., C.M. Reinhart and C.A. Vegh (2003) "The Unholy Trinity of Financial Contagion", *Journal of Economic Perspectives* 17(4), pp. 51-74.

King, M. (2006), "Reform of the International Monetary Fund", speech at the Indian Council for Research on International Economic Relations, Delhi, 20 February.

Kurzban, R. and M. Leary (2001), "Evolution Origins of Stigmatization: The Functions of Social Exclusion", *Psychological Bulletin* 127(2), pp. 187-208.

Lang, V.F. and A.F. Presbitero (2017), "Room for Discretion? Biased Decision-Making in International Financial Institutions", unpublished manuscript.

Lane, P. and G.M. Milesi-Ferretti (2017), "International Financial Integration in the Aftermath of the Global Financial Crisis", IMF Working Paper WP/17/15.

Liao, R. (2015), "Out of the Bretton Woods - How the AIIB is Different", *Foreign Affairs*.

Liow, J.C. (2017), "Taking Shape: New Global Financial Architecture", RSIS Commentary,

McKinsey Global Institute (2017), *The New Dynamics of Financial Globalization*, McKinsey & Company.

Milesi-Ferretti, G.M. and A. Razin (2000), "Current Account Reversals and Currency Crises: Empirical Regularities", in P. Krugman (ed.) *Currency Crises*, University of Chicago Press, pp. 283-323.

Obstfeld, M. (2009) "Lenders of Last Resort in a Globalized World", Keynote address prepared for the 2009 International Conference, Institute for Monetary and Economic Studies, Bank of Japan, Tokyo, 27-28 May.

Ocampo, J.A. (2017), *Resetting the International Monetary (Non)System*, Oxford University Press.

Ozkan, F.G. and F. Unsal (2012), "Global Financial Crisis, Financial Contagion, and Emerging Markets", IMF Working Paper WP/12/293.

Peretz, D. (2008), "The Process for Selecting and Appointing the Managing Director and First Deputy Managing Director of the IMF", Background Paper NP/07/01, IMF Independent Evaluation Office.

Reinhart, C. and C. Trebesh (2016), "The International Monetary Fund: 70 Years of Reinvention", *Journal of Economic Perspectives* 30(1), pp. 3–28.

Rodrik, D. (1998), "Who Needs Capital-Account Convertibility?", Essays in International Finance No. 207, Princeton University.

Roger, S. (2010), "Inflation Targeting Turns 20", *Finance & Development* 47(1), pp. 46-49.

Schadler, S. (2016) "Living with Rules: The IMF's Exceptional Access Framework and the 2010 Stand-By Arrangement with Greece", Background Paper BP/16-02/08, IEO.

Shen, Y. (2018), "Probing into the 'Chinese Solution' for the Transformation of Global Governance", China Association for International Friendly Contact, 9 January.

Stone, M. (2003), "Inflation target Lite", IMF Working Paper WP/03/12.

Subacchi, P. (2015), "American Leadership in a Multipolar World", Project Syndicate, 10 April 10.

Sussangkarn, C. (2011), "Chiang Mai Initiative Multilateralization: Origin, Development, and Outlook", *Asian Economic Policy Review* 6, pp. 203-220.

Svensson, L.E.O. (1997), "Inflation Forecast Targeting: Implementing and Monitoring Inflation Targets", *European Economic Review* 41, pp. 1111-1146.

Svensson, L.E.O. (2000), "Open-Economy Inflation Targeting", *Journal of International Economics* 50(1), pp. 155-183.

Svensson, L.E.O. (2016), "A Simple Cost-benefit Analysis of Using Monetary Policy for Financial-Stability Purposes", in O. Blanchard, R. Rajan, K.S. Rogoff, and L.H. Summers (eds), *Progress and Confusion: The State of Macroeconomic Policy,* MIT Press.

Thomas, L. (2016), "IMF Assessment Hints at Internal Struggles", The New York Times, 20 October.

Tideman, N. (2006), Collective Decisions and Voting, Ashgate.

Truman, E.M. (2013), "Enhancing the Global Financial Safety Net through Central-bank Cooperation", VoxEU.org, 10 September.

Truman, E.M. (2018), "IMF Quota and Governance Reform Once Again", Policy Brief 18-9, Peterson Institute for International Economics.

Tucker, P. (2018), *Unelected Power: The Quest for Legitimacy in Central Banking and the Regulatory State*, Princeton University Press.

Weder di Mauro, B. and J. Zettelmeyer (2017), "The New Global Financial Safety Net. Struggling for Coherent Governance in a Multipolar System", *Essays in International Finance*, Volume 4, Center for International Governance and Innovation.

Wyplosz, C. (2011), "Debt Sustainability Assessment: Mission Impossible", *Review of Economics and Institutions* 2(3), pp. 1-37.

Yu, Y. (2014) "How Far Can RMB Internationalization Go?", ADBI Working Paper No. 461, ADB Institute.

Zettelmeyer, J., E. Kreplin, and U. Panizza (2017), "Does Greece Need More Official Debt Relief? If So, How Much?", PIIE Working Paper 17-6.

Zhang, F. (2015), "China as a Global Force", *Asia and Pacific Policy Studies* 3(1), pp. 121-128.

In this sequel to the first *Geneva Report on the World Economy*, published twenty years ago, the same group of authors review changes in the global economy and the IMF over this two-decade interval. While they find that that the IMF has responded actively to the ongoing globalisation trend, they flag concerns about formidable new challenges. For example, there is a danger that the IMF's resources could be significantly reduced at the very time that effective crisis management requires additional funding. The growth of emerging market economies increasingly calls into question the current distribution of voting power within the institution. Regional monetary arrangements and bilateral currency swaps create an alternative to the multilateral order epitomised by the IMF, as evidenced by the Fund's diminished role in the euro area crisis and by the rise of China with its own network of economic and financial initiatives.

To address these challenges, this report suggests a quick-disbursing emergency financing facility for countries with strong fundamentals that does not require prequalification; puts forward new ideas for the IMF's dealings with regional arrangements; and recommends major changes to IMF governance, including a high-level non-resident Board, elected using a tailored voting procedure, whose role is to make the independent management team more accountable.

ISBN: 978-1-912179-16-9

Centre for Economic Policy Research

33 Great Sutton Street • LONDON EC1V 0DX • UK

TEL: +44 (0)20 7183 8801 • FAX: +44 (0)20 7183 8820 • EMAIL: CEPR@CEPR.ORG

WWW.CEPR.ORG

ISBN 978-1-912179-16-9

9 781912 179169 >