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COLLABORATION BETWEEN REGIONAL FINANCING ARRANGEMENTS AND THE IMF—BACKGROUND PAPER

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COLLABORATION BETWEEN REGIONAL FINANCING ARRANGEMENTS AND THE IMF—BACKGROUND PAPER

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OVERVIEW

1. **This paper provides background information for that presented in *Collaboration between Regional Financing Arrangements and the IMF (SM/17/190)*** by: (i) summarizing the key characteristics of major regional financing arrangements (RFAs); (ii) presenting detailed case studies of selected past IMF-RFA co-financing episodes; and (iii) presenting the technical details of the stylized contagion model used in the main paper.

2. **Characteristics of the RFAs**. This chapter summarizes the main institutional characteristics of the RFAs covered: the Arab Monetary Fund (AMF); BRICS' Contingent Reserve Arrangement (CRA); the Chiang-Mai Initiative Multilateralization (CMIM); the Eurasian Fund for Stabilization (EFSD); the European Union's Balance of Payments facility (EU-BoP); the European Financial Stability Mechanism (EFSM); the European Stability Mechanism (ESM), and the Latin American Reserve Fund (FLAR). The chapter includes a description of each RFA's membership, resources, decision making process, and governance. In addition, it describes each RFA's lending instruments—facilities, objectives, and lending modalities—as well as its surveillance and monitoring capacity, and its procedures for information sharing. In the discussion of lending, the chapter also examines the nature of conditionality the RFA requires, and whether the RFA has any link with Fund support. The description of each RFA concludes with a brief overview of its recent activity. The information presented builds on available public information and supports Table 1 and Figure 5 in the main paper.

3. **Case Studies of Past IMF-RFA Co-Financing**. This chapter discusses several case studies of recent IMF-RFA co-financing—Armenia (2014 EFF); Cyprus (2013 EFF), Hungary (2008 SBA); Ireland (2010 EFF), Latvia (2008 SBA) and Romania (2009, 2011, 2013 SBAs)—and draws some lessons from these episodes. These case studies serve as an input for the analysis in Section III of the main paper, which is used as a basis for the set of operational principles proposed in that paper. The case studies rely on official Fund and RFA reports, inputs from Fund staff, as well as some bilateral discussions with individual RFAs.

4. **Cross-Country Contagion and the Global Financial Safety Net** (GFSN). The stylized model of contagion dynamics described in this chapter quantifies contagion arising from large balance of payments (BoP) shortfalls emanating from a globally or regionally systemic economy, as the shock spreads to other connected economies. This analytical framework allows a comparison of the differential effectiveness of alternative layers of the global financial safety net (GFSN) in stemming contagion. The model described in this chapter is used to generate the results reported in Box 1 of the main paper.

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MAIN FEATURES OF MAJOR REGIONAL FINANCING ARRANGEMENTS

A. The Arab Monetary Fund (AMF)

Establishment. The AMF was established in 1976.

Members. Algeria, Bahrain, Comoros, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, United Arab Emirates, and Yemen.

Resources. AMF has SDR3.6 billion (US$4.8 billion) in capital as of end-2016, of which paid-in capital is SDR 2.5 billion (US$3.3 billion). The AMF may borrow from member countries, Arab and foreign monetary and financial institutions and markets. It can also issue securities, if decided by the Board of Governors.

Governance and decision making. The system of organizational units of the Management consists of the Director General, Chairman of the Board of Executive Directors, and six specialized executive management departments—namely, the Economic and Technical Department, the Economic Policy Institute (EPI), the Investment Department, the Finance and Computer Department, the Administration Department, and the Legal Department. Additionally, the executive management committees—Loan Committee, Investment Committee, Administration Committee and Risk Management Committee—, in their respective advisory capacities, advise on core matters. Their membership consists of senior AMF staff.[1]

Lending instruments

Objectives. The AMF aims at correcting disequilibria in the balance of payments (BoP) of member States. It also fosters the removal of restrictions on current payments between member States, and aims at establishing policies and modes of Arab monetary co-operation. The AMF also renders advice about policies related to the investment of the financial resources of member States in foreign markets, promotes the development of Arab financial markets, helps pave the way towards the creation of a unified Arab currency; and promotes trade among member States.

Facilities and modalities.

- The *Automatic Loan* is a facility with access up to 75 percent of the member's paid-in capital in convertible currencies. With a maturity of three years, this facility is not conditional on program implementation.

[1] Further details on the Governance of the AMF can be found at: http://www.amf.org.ae/en/page/governance-framework .

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- The *Ordinary Loan* is extended if financing access needs exceed 75 percent of the member's paid-in capital in convertible currency and provided the member has already withdrawn its reserve tranche from similar regional or international organizations. It is generally offered up to 100 percent of paid-in capital, could be supplemented with an Automatic Loan (for a total of 175 percent of paid-in capital), and must be accompanied by a macroeconomic adjustment program of at least one year agreed with the AMF.

- The *Extended Loan* is provided to countries suffering chronic BoP deficits arising from structural imbalances. It requires withdrawal of its reserve tranche from similar regional or international organizations, access up to 175 percent of paid-in capital, and can be supplemented by an Automatic Loan to access a total of 250 percent of paid-in-capital.

- The *Compensatory Loan* is designed for unanticipated BoP needs resulting from a shortfall in exports or an increase in the value of agricultural imports (access up to 100 percent of paid-in capital).

- The *Structural Adjustment Facility* is available for members that have achieved progress in macroeconomic stability and agreed to implement a reform program at the sectoral level, particularly the financial or banking sector or in public finance (with access up to 175 percent of paid-in capital for each sector).

- The *Trade Reform Facility* assists members in meeting the financial costs associated with the implementation of trade reforms (up to 175 percent of paid-in capital).

- The *Oil Facility* is for net oil importing members affected by a rise in world oil and gas prices (access of up to 200 percent of paid-in capital).

- The *Short-Term Liquidity Facility* aims at assisting developments in the international financial markets. Access to this facility is up to 100 percent of the member's paid-in capital.

Surveillance and monitoring. Consultations are conducted to monitor the effectiveness of the adjustment programs aimed at alleviating the member's BoP deficit during the loan's maturity period. An additional function of AMF is technical assistance and capacity building. The Economic Policy Institute conducts research to deepen knowledge of issues of relevance to economic policies in member countries.

Fund's role in lending operations. The AMF's institutional set up does not envisage an explicit role for the IMF. However, for several loan facilities, the AMF requires its member to first withdraw its reserve tranche from the IMF and other similar regional or international organizations of which they are members.

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Conditionality

- *Automatic Loan*. Disbursements are not conditional on the implementation of an economic reform program, if the concerned member has no conditional loan outstanding (*ordinary* and/or *extended* loan). However, if the country has *ordinary* or *extended* loans outstanding at the time it applies for an automatic loan, and the country has already implemented such a reform program, the AMF, based on an assessment of the causes driving the overall BoP deficit, will decide whether the requested loan would be considered an automatic loan, or be tied to ordinary or extended loans. In the latter case, the *Automatic Loan* would be subject to the terms applied to the outstanding loans, and its amount would be considered an extension to the limit of the conditional loans outstanding.
- *Ordinary Loan*. The borrowing member country must agree with the AMF on a stabilization program, covering a period of not less than a year. The policies and measures included in such a program would aim at restoring fiscal equilibrium with a view to reducing BoP deficit. The AMF follows up on the implementation of the program.
- *Extended Loan*. The member country is required to agree with the AMF on a structural adjustment program covering a period of no less than two years.
- *Compensatory Loan*. There is no conditionality for this instrument. The borrowing country must be experiencing a transitory fall in exports or a transitory increase in food imports
- *Structural Adjustment Facility*. A member country is required to have achieved some progress in macroeconomic stabilization and agreed on the implementation of a reform program monitored by the AMF.
- *Trade Reform*. The borrowing member country agrees with the AMF on a structural reform program necessary to facilitate their access to financing from international markets to consolidate growth and create job opportunities. Progress on reform implementation is monitored by the AMF.
- *Oil Facility*. Financing of up to 100 percent under simple and quick procedure does not require the agreement on a reform program, but only requires consulting with the authorities to confirm the incidence of a deficit and discussing policies adopted to contain such a deficit. To benefit from the full amount, the member must agree with the AMF on a reform program that is supported by one of the AMF's ordinary facilities, including SAF and other facilities dedicated to finance sectoral structural reforms, depending on prevailing conditions and current needs. Access to AMF resources in this case will be subject to the same terms and conditions applicable to a loan or a facility to be agreed upon with a member country. Thus, resources available under the Oil Facility would be additional resources to the resources under the loan that supports an existing and ongoing reform program. This reflects the AMF's interest in encouraging members affected by the rise of oil prices to implement the required reforms to reduce the exposure of their economies to external shocks.
- *Short Term Liquidity Facility*. The facility is extended promptly and without any prior agreement on a reform program with the eligible borrowing member country.

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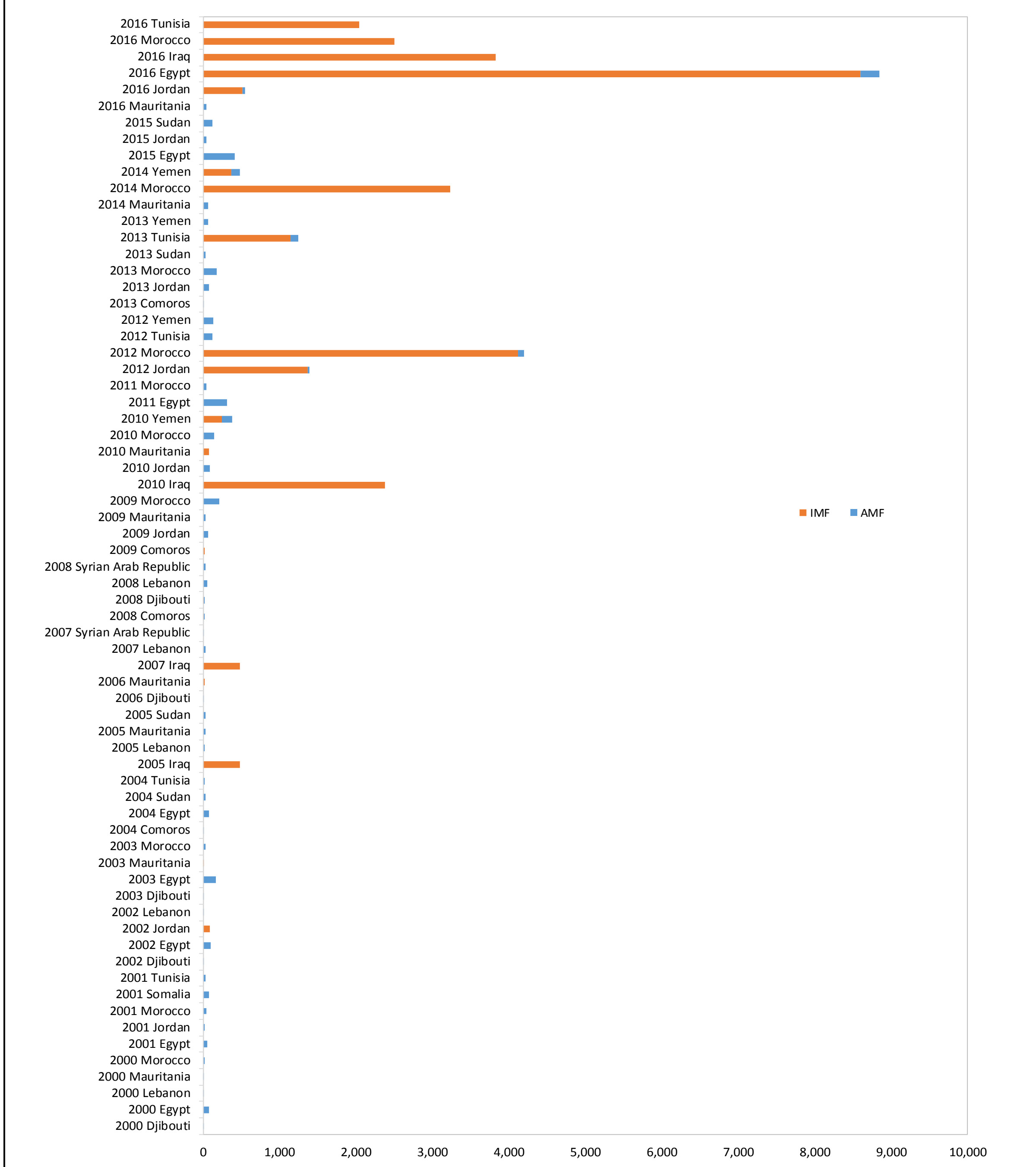
Figure 1. AMF and IMF Programs (2000–16) [1/]

(Millions of SDRs)



Sources: AMF; IMF IFS; MONA; Muhlich and Fritz, 2016; Fund Staff Calculations

[1/] Does not include emergency lines, such as the IMF's emergency post-conflict assistance (EPCA).

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Information sharing (with the Fund) procedure. None.[2]

Recent activities. In 2016 AMF extended three new loans to borrowing members, including two compensatory loans to Mauritania (US$50 million) and Egypt (US$82 million), and an automatic loan to Jordan (US$40 million).[3] Egypt received an Automatic Loan of US$250 million to support the BoP in 2015. Sudan received and Extended Loan in 2015–16 of US$166 million to support a comprehensive reform program—to achieve economic and financial stability and promote a conducive macroeconomic environment for sustainable and inclusive growth. Jordan received a Structural Adjustment Facility during June 2015-June 2016 of US$55.4 million to support a reform program in the government finance sector. Egypt received a Structural Adjustment Facility of US$330 million, during May 2015-May 2016, to support a reform program in the financial and banking sector.

B. BRICS' Contingent Reserve Arrangement (CRA)

Establishment. In 2006, Brazil, Russia, India, and China initiated informal diplomatic coordination through meetings of Foreign Ministers at the side of the General Debate of the United Nations General Assembly. This led to the decision of conducting the dialogue at the level of Heads of State and Government in annual Summits. The First Summit was held in 2009, and in April 2011, South Africa joined the group, formally conforming what is now referred to as the BRICS. In 2014, the BRICS countries signed a treaty establishing the CRA.

Members. BRICS countries (Brazil, China, India, Russia, and South Africa).

Resources. The size of the BRICS CRA is US$100 billion (about SDR74.4 billion). China has contributed US$41 billion; South Africa US$5 billion; and Brazil, Russia and India US$18 billion each.

Governance and decision making. Governance of the CRA is constituted by a *Governing Council* and a *Standing Committee*. The Governing Council, comprising one Governor and one Alternate Governor. Governors must be a Finance Ministers, Central Bank Governor, or hold an equivalent post. The Governing Council works by consensus on strategic issues (e.g., membership, instruments, framework), while the Standing Committee is responsible for the executive level and operational decisions, such as approving and renewing requests for support through the liquidity or precautionary instruments. The party that chairs the BRICS acts as coordinator for the Governing Council and for the Standing Committee. Lending decisions are to

[2] Nonetheless, in April 2015 the AMF and the Fund signed a Memorandum of Understanding (MoU) to provide training opportunities to Arab officials, support the development of domestic capital markets in the Arab countries, and strengthen collaboration on the *Arabstat initiative*—which aims at the development of efficient statistical systems in Arab region. The two parties also intend to carry out joint analytical work to inform Arab finance ministers and central bank governors, and to organize high-level events on topics of mutual interests and priority for the region. See http://www.imf.org/external/np/sec/pr/2015/pr15171.htm

[3] Since its establishment the AMF has extended a total of 177 loans to 14 member states for a total of US$8.4 billion. See Figure 1.

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be taken by simple majority (weighted by the size of financial commitments), while waivers and sanctions are based on consensus from the members providing support. The CRA currently does not possess independent international legal personality.

Lending instruments

Objectives. The BRICS CRA involves commitments by members to support each other through currency swaps in case of actual or potential short-term BoP pressures. It provides members the ability to swap domestic currencies for USD.

Facilities and modalities. Facilities under the BRICS CRA include:

- A *liquidity* instrument to provide support in response to short-term BoP pressures.
- *A precautionary* instrument to provide support in light of potential short-term BoP pressures.

The total amount available under each facility shall not exceed the maximum access for each party. Access is determined by a multiple of each member's individual commitment: China, 0.5; Brazil, Russia, and India, 1; and South Africa, 2. The maturity period for both the liquidity and the precautionary instrument is 6 months with a maximum of 3 renewals for the IMF-delinked portion (see below for the definition of IMF-linked and de-linked portion); and one year with a maximum of 2 renewals for the IMF-linked portion. The applicable interest rate on the USD purchased from the providing party is an internationally accepted benchmark interest rate for the corresponding maturity of the swap transaction plus a spread. The spread shall increase periodically by a certain margin, up to a predetermined limit. In the case of the precautionary instrument, the amount committed but not drawn shall be subject to a commitment fee.

Surveillance and monitoring. No surveillance and monitoring functions.

Fund role in lending operations. Under both instruments, 30 percent of the maximum amount that can be drawn by any member is available subject only to the agreement of the providing parties; the remaining 70 percent of maximum access is linked to an on-track arrangement between the IMF and the requesting party that involves a commitment of the IMF to provide financing to the Requesting Party based on conditionality, and the compliance of the requesting party with the terms and conditions of the arrangement.

Conditionality. Limited to the requirements to submit documents and economic and financial data as requested; compliance with Treaty; no arrears with the other parties or their public financial institutions; no arrears with multilateral and regional financial institutions; and compliance with surveillance and provision of information obligations to the IMF.

Information sharing (with the Fund) procedure. No formal mechanism specified in treaty.

Recent activities. Never used.

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C. The Chiang Mai Initiative Multilateralization (CMIM)

Establishment. The ASEAN+3 Finance Ministers agreed to launch the Chiang Mai Initiative (CMI) in May 2000 as a regional mechanism to provide sufficient and timely financial support to ensure financial stability in the East Asian region and to supplement the existing international facilities.[4] The CMI initially consisted of the enhanced ASEAN Swap Arrangements (ASA) and a network of bilateral swap arrangements (BSAs) subject to a common basic framework of terms and conditions. However, a single multilateral swap arrangement called the CMI Multilateralization (CMIM) agreement took effect on March 24, 2010. This new arrangement was designed to enhance the effectiveness of CMI by facilitating prompt transactions by establishing a common decision-making process.[5] CMIM replaced the existing network of BSAs among ASEAN+3 member countries. However, ASEAN+3 member countries are not precluded from entering separate bilateral currency swap arrangements to supplement the CMIM. The ASA have remained in effect.[6]

Members. ASEAN countries (Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam) and Plus Three countries (China, Japan, and Korea)

Resources. The size of the CMIM Arrangement is US$240 billion (about SDR178.5 billion). The ten ASEAN member states collectively contribute US$48 billion, while China, Japan, Korea and Hong Kong SAR collectively contribute US$192 billion. Members commit to provide financial support within the agreed amount of contribution. Funds are transferred from central banks/monetary authorities only when a request for drawing is made and approved.

Governance and decision making. Activation of swap transactions under the CMIM may be initiated by any CMIM Party by submitting to the CMIM Coordinating Countries—i.e. the two Chairs (one from the ASEAN Member States and one from the Plus Three countries) of the ASEAN+3 Finance and Central Bank Deputies' Meeting a request for the purchase of US dollars under the CMIM arrangement with its local currency. The Coordinating Countries deliver the swap request notice and other relevant information to the Executive Level Decision Making Body (ELDMB), which decides on the swap request.[7] Upon approval, CMIM Parties proceed with the activation of bilateral swap transactions between each of the swap providing parties and the swap requesting party, in accordance with the terms and pro rata allocation provided in the CMIM Agreement. In any event, determinations required in response to a swap request should

[4] See the Joint Statement of the ASEAN+3 Finance Ministers at their second meeting in Chiang Mai, Thailand, May 2000.

[5] The CMIM arrangement was signed on 24 December 2009.

[6] The CMIM is a multilateral currency swap arrangement, while CMI is a network of bilateral swap arrangements.

[7] The ELDB is composed of the Deputy-level representatives of the ASEAN+3 Finance Ministries and Central Banks and the Hong Kong Monetary Authority.

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be completed within two weeks following the delivery of the swap request notice to the members of the ELDMB.

Lending instruments

Objectives: The CMIM is a multilateral arrangement among the finance ministries and central banks of the ASEAN+3 member countries and the Hong Kong Monetary Authority that is governed by a single contractual agreement to providing financial support in USD through currency swap transactions among the members. The CMIM aims to: (a) address potential and actual BOP and short-term liquidity difficulties in the region; and (b) supplement existing international arrangements.

Facilities and modalities: Facilities under the CMIM include a crisis prevention facility called CMIM Precautionary Line (CMIM-PL) and a crisis resolution facility called CMIM Stability Facility (CMIM-SF). The total amount available under each facility cannot exceed the maximum access for each member. Access is determined by a multiple of each member's individual commitment to the CMIM varying from up to 5 times for some of the ASEAN countries and 0.5 times for China and Japan (see Table 1).

Table 1. CMIM: Financial Resources and Access

Countries		Financial Contributions		Purchasing Multiple	Maximum Swap Amount (U.S. billions)
		U.S. billions	Share (%)		
Plus-3		**192**	**80**		**117.30**
China	China (ex-Hong Kong SAR)	68.4	28.5	0.5	34.20
	Hong Kong SAR	8.4	3.5	2.5	6.30
Japan		76.8	32.0	0.5	38.40
Korea		38.4	16.0	1.0	38.40
ASEAN		**48**	**20**		**126.20**
Indonesia		9.104	3.793	2.5	22.76
Thailand		9.104	3.793	2.5	22.76
Malaysia		9.104	3.793	2.5	22.76
Singapore		9.104	3.793	2.5	22.76
Philippines		9.104	3.793	2.5	22.76
Vietnam		2.00	0.833	5.0	10.00
Cambodia		0.24	0.100	5.0	1.20
Myanmar		0.12	0.050	5.0	0.60
Brunei		0.06	0.025	5.0	0.30
Lao PDR		0.06	0.025	5.0	0.30
Total		**240.0**	**100.000**		

Source: AMRO.

- For CMIM-PL, ex-ante qualifications are based on (i) external position and market access; (ii) fiscal policy; (iii) monetary policy; (iv) financial sector soundness and supervision; (v) data adequacy. The maturity period for the CMIM-PL is 6 months (IMF-delinked portion—see below

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for details) and one year (IMF-linked portion—see below for details), with a maximum supporting period of two years.

- The maturity period for the CMIM-SF is 6 months (IMF-delinked portion) and one year (IMF-linked portion). The maximum supporting period of 2 years for the IMF-delinked portion and 3 years for IMF linked portion.

Surveillance. The ASEAN+3 Macroeconomic Research Office (AMRO) was first established in 2011 to serve as an independent regional surveillance unit with a mandate for monitoring and analysis of the ASEAN+3 economies. AMRO provides support to CMIM activities, but is separate from CMIM (which has no legal personality). This surveillance mechanism is designed for early detection of risks, swift implementation of remedial actions, and effective decision-making of the CMIM. AMRO conducts annual consultations with individual members and on this basis, prepares quarterly consolidated reports on the macroeconomic assessment of the ASEAN+3 region and individual member countries. In 2016, AMRO became an international organization by virtue of the ratification of the AMRO Agreement. As an international organization, AMRO's mandated is to: (i) monitor, assess and report to members on their macroeconomic status and financial soundness; (ii) identify for members macroeconomic and financial risks and vulnerabilities in the region and assist them, if requested, in the timely formulation of policy recommendations to mitigate such risks; (iii) support members in the implementation of the CMIM, the ASEAN+3's regional financial arrangement; and (iv) conduct other activities necessary for achieving the purpose of AMRO as determined by the Executive Committee, including technical assistance.

Fund's role in lending operations. Under both facilities, 30 percent of the maximum drawable amount by any member is categorized as quick disbursing (IMF de-linked portion), while the remaining portion is linked to an IMF program.[8]

Monitoring function. In addition to holding annual consultations with member countries and preparing quarterly regional reports, during crisis times AMRO is tasked with preparing recommendations on any swap request (based on its macroeconomic analysis of the requesting member) and monitoring the use and impact of funds once any swap request is approved. A review of the borrower's economic and financial policy (with support from AMRO) must be completed to the satisfaction of each creditor. These requirements can be waived by a qualified majority (2/3 of the effective votes) of the ELDMB.

Information sharing (with the Fund) procedure. There is no formal mechanism in place.

Recent activities. Never used. Nonetheless, members have conducted test runs on a regular basis under various scenarios. The first joint test run with the IMF was conducted in 2016.

[8] The delinked portion was increased from 20 to 30 percent in July, 2014.

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D. Eurasian Fund for Stabilization and Development (EFSD)

Establishment. The EFSD was first established on June 9, 2009 as the EURASEC Anti-Crisis Fund. Its mission is to help member countries ensure their long-run economic stability and foster economic integration between them.

Members. Armenia, Belarus, Kazakhstan, Kyrgyz Republic, Russian Federation, and Tajikistan.

Resources. Budget contributions from member states total US$8.5 billion (about SDR 6.3 billion).

Governance and decision making. The EFSD Council makes all key decisions on the EFSD's fundraising, investment, and lending operations. The Council is composed of Ministers of Finance of member states and chaired by the Finance Minister of the Russian Federation.

Lending Instruments

- *Financial credits* (FC) aim to support of anti-crisis and stabilization programs. This instrument can be used for budgetary, BoP and/or exchange rate support of the borrower country, but it is available to governments only. There are two types of loans under this facility: (i) *Stabilization Credits to Low-Income Countries* (up to 20 years' maturity, including up to 5 years' grace; fixed interest rate of 1–3 percent, program duration up to 3 years); and (ii) *Sovereign Loans to Medium-Income Countries* (up to 10 years' maturity, including up to 5 years' grace; interest rate of six months- LIBOR+Russia/Kazakh spread). For both loans, the size is within country access limits, extended in USD and Euro only. Minimum size of an FC is US$10 million.

- *Investment loans* (IL) are provided either to EFSD member states or to companies implementing interstate investment projects that spur integration between member states, e.g. in the power and infrastructure sectors, and big national investment projects. Minimum loan size is US$30 million for countries with GNI per capita over US$5,000 and US$10 million for countries with GNI per capita under US$5,000. Interest rate is six-month LIBOR+Russia/Kazakh spread, with up to 15 (10) years maturity and 5-year grace for governments (companies).[9] Financial terms on ILs contracted by low-income countries shall comply with the requirements of those countries' anti-crisis programs supported by the IMF, meaning that ILs to these countries will carry grant element of no less than 35 percent.

- *Grants* aim to finance government programs in social sectors, such as education, healthcare, public administration and social security, and food security. Grant size ranges between US$0.5 million and US$5 million with a term of 1.5 years of implementation.

[9] Country access limits are set by the EFSD council based on GNI per capita. The latest access limits are as follow: Armenia US$1.1 bn (13 percent of the Fund); Belarus US$1.8 bn (21 percent of the Fund); Kazakhstan US$2 bn (24 percent of the Fund); Kyrgyzstan US$255 million (3 percent of the Fund); Russia (US$3.1 bn (37 percent of the Fund); and Tajikistan US$170 million (2 percent of the Fund). If needed for the implementation of major projects, a member state may elect to relocate part of its limit to another member state of EFSD.

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Surveillance and monitoring. Policy/project implementation is measured by specific indicators and is evaluated by the EFSD's Council based on reports from the EFSD Manager.

Fund's role in lending operations. FCs are extended in coordination with other IFIs, bilateral donors and other relevant development partners; they can be co-financed with other international financial institutions (IFIs), and bilaterals. ILs are extended in coordination with other IFIs, governments and stakeholders and can also be co-financed.

Conditionality. FCs are extended only if the government of a member country has developed an Anti-Crisis Program that aims to stabilize the national budget, strengthen the BoP, enhance business environment and/or facilitate trade and investment in order to improve the macroeconomic position of the borrower country. ILs are extended only if no other source of financing is available to the project, either from the markets (on terms acceptable to the borrower) or from other IFIs including the Eurasian Development Bank itself. No unsecured ILs can be extended to project companies. Acceptable forms of security are: (a) full or partial sovereign guarantees if the issuer(s) is/are current on its/their external debt obligations; (b) guarantees of financial institutions that have international credit rating of "AA-" (Fitch/S&P) or Aa3 (Moody's) or higher; (c) highly liquid assets acceptable to the EFSD Council; and (d) third party suretyships if accepted by the EFSD Council.

Information sharing (with the Fund) procedure. No formal mechanism specified in treaty.

Recent activities

- *Financial Credits*. Completed: Tajikistan, 2010, US$70 million, to support budgetary social expenditures; Belarus, 2011, US$3 billion, to support BOP stabilization. *Ongoing*: Armenia, 2015, US$300 million, budget support for structural reforms (references to IMF program, but no direct link); Belarus, 2016, US$2 billion, to support BOP stabilization.

- *Investment loans*. The Bishkek-Osh Road Rehabilitation Project, Phase IV in Kyrgyz Republic; Agricultural machinery supplies to Kyrgyz Republic; Construction of The North-South Road Corridor in Armenia; Toktogul HPP Rehabilitation Component: replacement of the second and fourth turbine-generator units in Kyrgyz Republic; Irrigation System Modernization Project in Armenia.

E. RFAs in the European Union

Balance-of-Payments (BoP) Assistance Facility

Establishment. The BoP assistance facility was introduced by Council Regulation No. 332/2002 of 18 February 2002, replacing an earlier facility providing medium-term financial assistance for member states' BoP established in 1988.

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Members. Non-euro EU member states: Bulgaria, Croatia, Czech Republic, Denmark, Hungary, Poland, Romania, Sweden, and the United Kingdom.

Resources. The total outstanding amount of loans to be granted to Member States under the medium-term financial assistance facility is limited to € 50 billion (about SDR 40 billion) in principal. The funds to be extended to Member States experiencing external financing constraints are raised by the European Commission (EC) on behalf of the EU on international financial markets or from financial institutions.

Governance and decision making. The request, backed by the adjustment program, is presented to the EC and is discussed within the relevant EU bodies and, if applicable, with other creditors. The EU Council, based on a recommendation by the EC, takes a decision whether to grant mutual assistance.

Lending instruments

Objectives. Mutual assistance to non-euro area Member States is provided when a Member State is in difficulties or is seriously threatened with difficulties in its BoP. The assistance is designed to ease a country's external financing constraints and is limited to €12 billion in principal.

Facilities and modalities. The EU Council decides based on a EC proposal whether to grant a loan or appropriate financing facility (which could be precautionary in nature), its amount and average duration (normally about five years), as well as technicalities for disbursing the loan or financing facility. 'AAA' loan rates obtained by the EU on international financial markets at the moment of fund-raising are passed on to the Member States in need without adding any additional margin.

Surveillance and monitoring. The EU institutions assess the Member State's compliance with the program conditions. There is post-program surveillance that resembles the Fund's post-program monitoring (PPM).

Fund's role in lending operations. There is no formal link to a Fund-supported program. However, recent assistance has been extended in close cooperation with the IMF and other international institutions or countries.

Conditionality. The Member State in need presents a draft adjustment program—designed to achieve a sustainable BoP position—in support of its application. Economic policy conditions usually involve an agreed path of fiscal consolidation, governance measures, as well as financial sector stabilization measures and structural reform measures to improve business environment and support growth. In addition, conditions are included regarding safeguards against fraud. Precautionary arrangements also include ex-post conditionality.

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Information sharing (with the Fund) procedure. No formal mechanism is in place, nonetheless EU-BoP financing typically takes place in cooperation with the Fund.

Recent activities, including linked to the Fund program. The most recent activities involve loans to Romania, Latvia and Hungary. See details in Table 2.

Table 2. Programs under the EU's Balance of Payment Facility

Country	Total Assistance / of which EU (Billions of Euros)	Period Covered by EU Assistance	Status of the Program (as of end 2016)
Hungary	20.0 / 6.5	October 2008—November 2010	Expired in November 2010 (€1 bn unclaimed); Post program surveillance concluded in 2015 as the more than 70 percent of the Loan was repaid.
Latvia	7.5 / 3.1	December 2008—January 2012	Completed (disbursements completed in October 2010; Part of bilateral funding was treated as credit lines); Post program surveillance
Romania	20.0 / 5.0	May 2009—June 2011	Completed (disbursements completed in June 2011)
Romania	5.4 / 1.4	May 2009—March 2013	Precautionary (not disbursed)
Romania	5.0 / 2.0	October—until September 2015	Precautionary (not disbursed)

Source: European Commission.

European Financial Stabilization Mechanism (EFSM)

Establishment. The European Financial Stabilization Mechanism (EFSM) expands the BoP assistance to all European Union member states. It was established on May 2010 by Council Regulation (EU) No 407/2010 and amended on August 2015 by Council Regulation (EU) 2015/1360. *Following the establishment of the European Stability Mechanism (ESM) in 2013, the main institution for providing financial assistance to a euro-area country as a rule is now the ESM.* However, under exceptional circumstances, the EFSM can be used for a euro-area country generally before or alongside ESM financial assistance. In the absence of exceptional circumstances, the EFSM remains in place for specific tasks such as lengthening of maturities for existing loans and bridge loan.

Members. All European Union member states: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy,

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Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden, and the United Kingdom.

Resources. The EC is authorized to borrow in capital markets or from financial institutions on behalf of the EU. The maximum financing capacity of the EFSM is **€60 billion** (about SDR 48 billion) and is backed by an implicit EU guarantee.

Governance and decision making. Financial assistance is granted by a decision by the Council, acting by a qualified majority on a proposal from the EC. Following the initial approval, the EC (in consultation with the ECB) reexamines the conditionality set at program request and proposes any adjustment to the program to the Council.

Lending instruments

Objectives. To provide external financial assistance to a member state experiencing or seriously threatened with a severe economic and financial disturbance caused by exceptional occurrences beyond such member states' control.

Facilities and modalities. The amount, average duration, and disbursement terms of a loan or credit line are decided by the Council, including based on funding conditions. The terms of the loan as well as the economic program—that identify the economic policy conditions attached to the financial assistance with a view to re-establishing a sound economic or financial situation in the beneficiary member state and to restoring its capacity to finance itself on financial markets—are presented in the Memorandum of Understanding (MoU) between the EC and the Member State, and the Loan Agreement. Maturities with respect to the two loans granted to Ireland and Portugal were disbursement specific and ranged between 7 and 30 years. The bridge loan granted to Greece in July 2015 had a maturity of 1 month.

Surveillance and monitoring. The adjustment program is designed by the EC in consultation with the ECB and reflected in MoU. The EC is authorized to monitor the program implementation at regular intervals (at least every six months) and verify compliance.

Fund's role in lending operations. EFSM Regulation allows for financing outside the EU subject to own conditionality such as the IMF. In such as event, the member state is expected to first consult with the EC, which will in turn examine the compatibility with IMF conditionality. The EFSM Regulation states that its activation will be in the context of a joint EU/IMF support.[10]

Conditionality. Under the EFSM, the beneficiary member state is expected to implement economic policy conditions with a view to re-establishing sound economic or financial situation and to restoring its capacity to finance itself on financial markets.

[10] SM/13/87.

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Information sharing (with the Fund) procedure. No formal mechanism specified in the regulation.

Recent activities. EFSM loans extended to Ireland and Portugal were both co-financed with the Fund contributing, who provided about 1/3 of total financing. See further details in Table 3.

Table 3. Programs under the EFSM

Country	Total Assistance/ of which EFSM (Billions of euros)	Period Covered	Status of the Program (as of end 2016)
Ireland	85.0 / 22.5	January 2011 until November 2013	Post-program surveillance (€21.7bn disbursed from EFSM)
Portugal	78.0 / 24.0	May 2011 until May 2014	Post-program surveillance (€24.3bn disbursed from EFSM)
Greece	7.1 / 7.1	July-August 2015. Short term assistance (bridge loan)	Fully repaid and closed

Source: EFSM.

European Financial Stability Facility (EFSF) and European Stability Mechanism (ESM)

Establishment. EFSF was created as a temporary crisis resolution mechanism by the *euro area* member states in June 2010. Since 2012, following the establishment of the ESM, the EFSF does not provide any further financial assistance, as this task is now performed solely by the ESM. However, the EFSF will continue to operate to receive loan repayments from beneficiary countries of previous financial assistance, make interest and principal payments to holders of EFSF bond as well as roll over outstanding EFSF bonds (as the maturity of loans provided to Ireland, Portugal and Greece is longer than the maturity of bonds issued by the EFSF).

Members. Euro area member states: Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Portugal, Slovak Republic, Slovenia, and Spain.

Resources. The ESM's capital stock is about €700 billion, of which €80 billion is paid-in capital with the remaining €620 billion as callable capital. The ESM has an effective lending capacity of €500 billion with 75 percent of its capacity still available. Funding is obtained by issuing bonds or other debt instruments in financial markets.

Governance and decision making. The ESM is an intergovernmental organization under public international law. Key decisions under the ESM Agreement are reserved to the Board of Governors consisting of the Finance Ministers of the euro area member states (with the European Commissioner for Economic and Monetary Affairs and the ECB President as observers), and generally require unanimity, including decisions to grant financial assistance and approve lending agreement and an MoU. The Board of Directors consists of representatives appointed by the

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Governors. Voting rights are proportional to the number of ESM shares allocated. The EC is delegated authority to conduct debt sustainability analyses, negotiate MoUs with borrowers, and monitor implementation of programs.

Lending instruments[11]

- *Loans* to member states are provided within a macroeconomic adjustment program. This is directed to ESM members that have lost market access.

- *Primary market purchases* of bonds or other debt securities at market prices are aimed at reducing the risk of a failed auction and enabling the ESM member to finance its debt on the bond market. Such purchase could complement the regular ESM loan to a program country as well as a complement to the drawdown of funds under a precautionary arrangement.

- *Secondary market purchases* of bonds of other debt securities issued by the ESM member are aimed at supporting a sound functioning of the government debt markets when market illiquidity threatens financial stability. Secondary market purchase could be done in the context of a loan with a macroeconomic adjustment program or for non-program Members whose economic and financial situation is fundamentally sound.

- *Precautionary credit lines* are aimed at helping ESM Members whose economic conditions are sound. The purpose is to maintain continuous access to market financing by strengthening the credibility of macroeconomic performance. There are two types of credit lines, and both can be drawn via a loan or a primary market purchase:

    a. *Precautionary Conditioned Credit Line (PCCL)* is available to a Member State whose economic and financial situation is fundamentally sound, as determined by respecting six eligibility criteria such as public debt, external position, or market access on reasonable terms.

    b. *Enhanced conditions credit line (ECCL)* provides access open to euro area Member States whose economic and financial situation remains sound but that do not comply with the eligibility criteria for PCCL. The ESM Member is obliged to adopt corrective measures addressing such weaknesses and avoid future problems in respect of access to market financing.

- *Loans for indirect bank recapitalization* are aimed at preserving financial stability of the euro area by addressing those cases where the financial sector is the primary cause of a crisis. The instrument provides loans to the ESM member government, which are then used to recapitalize banks. The member state must show that private sector solutions (including a bail-in) are not sufficient to raise the necessary capital. It must also be shown that the

[11] The lending toolkit is subject to changes on decision of the Board of Governors.

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beneficiary institution must pose a serious risk to the financial stability of the euro area as a whole or one of its member states.

- *Direct recapitalization of institutions* is aimed at removing a serious risk of contagion from the financial sector to the sovereign. The ESM therefore would inject capital in the financial institution directly. The instrument is relevant for banks (systemically important credit institutions), financial holding companies, and mixed financial holding companies as defined in relevant EU legislation. Eligible institutions are the ones that are or likely to be in breach of relevant capital requirements and are unable to attract sufficient private sector resources (including a bail-in). The member state must also show that it is unable to provide financial assistance to the institution in question without severely endangering fiscal sustainability.

Modalities

- *Precautionary credit line*. Both precautionary credit lines have an initial availability period of one year and are renewable twice, each time for six months.

- *Primary market purchases*. The amount purchased by the ESM shall, as a rule, be limited to a maximum of 50 percent of the final issued amount. The management of the bond portfolio will be determined by the managing director, including options to resell the bonds, hold them to maturity, sell back to the member state, or use for repos with commercial banks to support liquidity management of the ESM.

- *Direct recapitalization of institutions* has a cap on the total available resource for this instrument of €60 billion. The ESM is permitted to use a degree of funding flexibility as regards the currency, timing, interest rate base[12], and maturity of the funding instruments. No access limits are set for loans to individual members, with access based on the member's financing need. Access under the facilities is subject to agreement on an MoU between the member state and the ESM containing policy conditionality.

Surveillance and monitoring. Surveillance and program monitoring functions are delegated to the EC.

Fund's role in lending operations. Wherever possible, Fund participation will be sought on a technical and financial level, e.g., MoUs and program monitoring will be negotiated by the EC in liaison with the ECB and the Fund (Article 13/3 and 13/7 of the ESM Treaty), and debt

[12] There is no single interest rate on loans for beneficiary Member States. The ESM passes on to program countries its costs in funding the loans, specifically its cost of borrowing money from financial markets by issuing bonds and bills. This cost is expressed as the 'base rate' and is calculated daily. Apart from the base rate, there are three other components that make up the total cost of a loan: a service fee (covering the ESM's operational costs), margin, and commitment fee. The base rate is by far the largest component of the total interest paid by program countries. At the end of 2015, the interest rate charged by the ESM was below 1 percent for all beneficiary countries. As explained, this rate fluctuates per market conditions.

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sustainability analysis will be jointly conducted by the EC and the Fund (Article 13/1). A euro area member state requesting financial assistance from the ESM is expected to address, wherever possible, a similar request to the Fund.

Conditionality. Conditionality varies across each instrument.

- *Loans* require a macroeconomic adjustment program.
- As *primary market purchases* complement the regular ESM loan to a program country or the drawdown of funds under a precautionary arrangement, the conditionality attached to the instrument is the same as the underlying program.
- For *secondary market purchases*, if the beneficiary member state is not under a program, specific policy conditions will be prepared by the EC/ECB.
- Within *the precautionary credit lines*, a PCCL is available to a euro area Member State whose economic and financial situation is fundamentally sound, as determined by several criteria. A beneficiary country would apply for an ECCL if it did not comply with the stricter PCCL criteria. Both types of credit lines require an MoU specifying policy conditionality. However, the policy conditions for an ECCL are broader. In addition, when an ECCL is approved, the beneficiary ESM Member would be under enhanced surveillance. This would only apply to a PCCL if the country draws on the credit line.
- Conditionality attached to *loans for indirect bank recapitalization* will be specific to the financial sector and apply to financial supervision, corporate governance, and domestic law pertaining to restructuring or resolution.
- Conditionality attached to *the direct bank recapitalization instrument* will address the sources of difficulties in the financial sector and, where appropriate, the general economic situation of the ESM Member. Additional institution-specific conditions will also apply.

Information sharing (with the Fund) procedure. There are no specific provisions addressing information sharing between the ESM and the IMF. However, under the General Terms for ESM Financial Assistance Facility Agreements, so long as any amount is outstanding, the beneficiary member state is obliged to supply all documents dispatched by the member state to the IMF under an IMF arrangement.

Recent activities. The EFSF/ESM loan and indirect bank recapitalization facilities have been used to date. Precautionary credit lines, primary and secondary market purchases, as well as direct recapitalization instruments have not been used.

Four co-financed EU/IMF programs have been approved to date, in Ireland, Portugal, Greece (second program) as well as Cyprus under the EFSF/ESM. Stand-alone EU programs without Fund co-financing include the recent Greek program approved on August 2015 and the indirect bank recapitalization assistance to Spain approved in July 2012. See further details in Table 4.

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Table 4. Programs under the EFSF and ESM

Country	Total Assistance/ of which EFSF-ESM (Billions of euros)	Period Covered	Status of the Program (as of End 2016)
Ireland	85.0/17.7	December 2010—November 2013	Closed (€17.7bn disbursed from EFSF)
Portugal	78.0/26.0	May 2011—May 2014	Exited (€26.0 bn disbursed from EFSF)
Greece	172.7/144.7	March 2012—December 2014	Expired June 2015 (€141.8bn disbursed from EFSF)
Greece	86.0/86.0	July 2015—August 2018	Active (€31.7bn disbursed from ESM)
Cyprus	10.0/9.0	May 2013—March 2016	Closed (€6.32bn disbursed from EFSM)
Spain	100.0/100.0	July 2012—January 2014	Closed (€41.3bn disbursed from EFSM)

Source: EFSF, ESM.

F. The Latin American Reserve Fund (FLAR)

Establishment. The Andean Reserve Fund was established in 1978, which was transformed into the Latin American Reserve Fund (FLAR) in 1991 to allow membership from all Latin American countries.

Members. Bolivia, Colombia, Ecuador, Costa Rica, Peru, Uruguay, and Venezuela.

Resources. Paid-in capital stands at US$2.9 billion. In 2016, the maximum disbursement capacity was over US$4.7 billion (about SDR 3.5 billion).

Governance and decision making. The highest authority is the Assembly of Representatives, composed of Finance Ministers of each member's designated official. The assembly has a rotating President named for a one-year period. Each Member country has a single vote. FLAR also has a Board composed by Central Bank Governors and an Executive President. The Executive Presidency is the main permanent technical body of the institution.

Lending instruments

Objectives. FLAR's aim is to provide BoP support through loans or credit guarantees; foster the harmonization of exchange rate, monetary, and financial policies; and help improve international reserve's investment conditions.

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Lending Facilities and modalities

- *Balance of Payments credit*. This facility has a three-year maturity and one year grace period for the amortization of the loan principal. The access limit is 2.5 times paid-in capital. The maximum limit is US$1.6 billion for the larger member countries—i.e., Colombia, Peru, and Venezuela—and US$820 million for smaller member countries—i.e., Bolivia, Costa Rica, Ecuador, and Uruguay. The interest rates on loans are set at 3-month Libor plus between 300–400 bps. There is also a prepaid charge/commission of 30 bps.

- *Liquidity Credit*. This instrument has a maturity of one year, with an access limit equivalent to one time paid-in capital. The maximum lending limit is US$656 million for the larger member countries and US$328 million for the smaller member countries. Interest rates are set equal to 3-month Libor plus between 170–230 bps. A prepaid charge/commission of 10 bps also applies.

- *External Debt restructuring of Central Banks*. This facility has a three-year maturity and one year grace period for the amortization of the loan principal. The access limit is 1.5 times paid-in capital. The maximum access limit equals US$984 million for the larger member countries and US$492 million for the smaller member countries. The interest rate is set at 3-month Libor plus between 300–400 bps. A prepaid charge/commission 30 bps is also charged.

- *Contingency Credit*. This instrument has a six-month maturity. The access limit is set at 2 times paid-in capital, with a maximum limit of US$1.3 billion for the larger member countries and US$656 million for the smaller member countries. Interest rates are set at 3-month Libor plus between 140–190bps. A prepaid charge/commission of 10 bps applies.

- *Treasury Operations*. This facility provides financing for up to 30 days. The access limit is set at 2 times paid-in capital.

Surveillance and monitoring. FLAR has a surveillance function and an economic secretariat, which is used to monitor lending operations.

Fund's role in lending operations. FLAR's institutional set up does not envisage an explicit role for the IMF.

Conditionality. The central bank of the country requesting the loan must provide a report on the monetary, credit, exchange, fiscal, and trade policies to be implemented in order to correct the disequilibria. FLAR's Board examines the country's report. FLAR's staff presents a report on the economic program to the Board. Historically, FLAR has always supported the member's request. Members have always repaid their loans on time; in some instances, they have made early repayments.

Information sharing (with the Fund) procedure. None.

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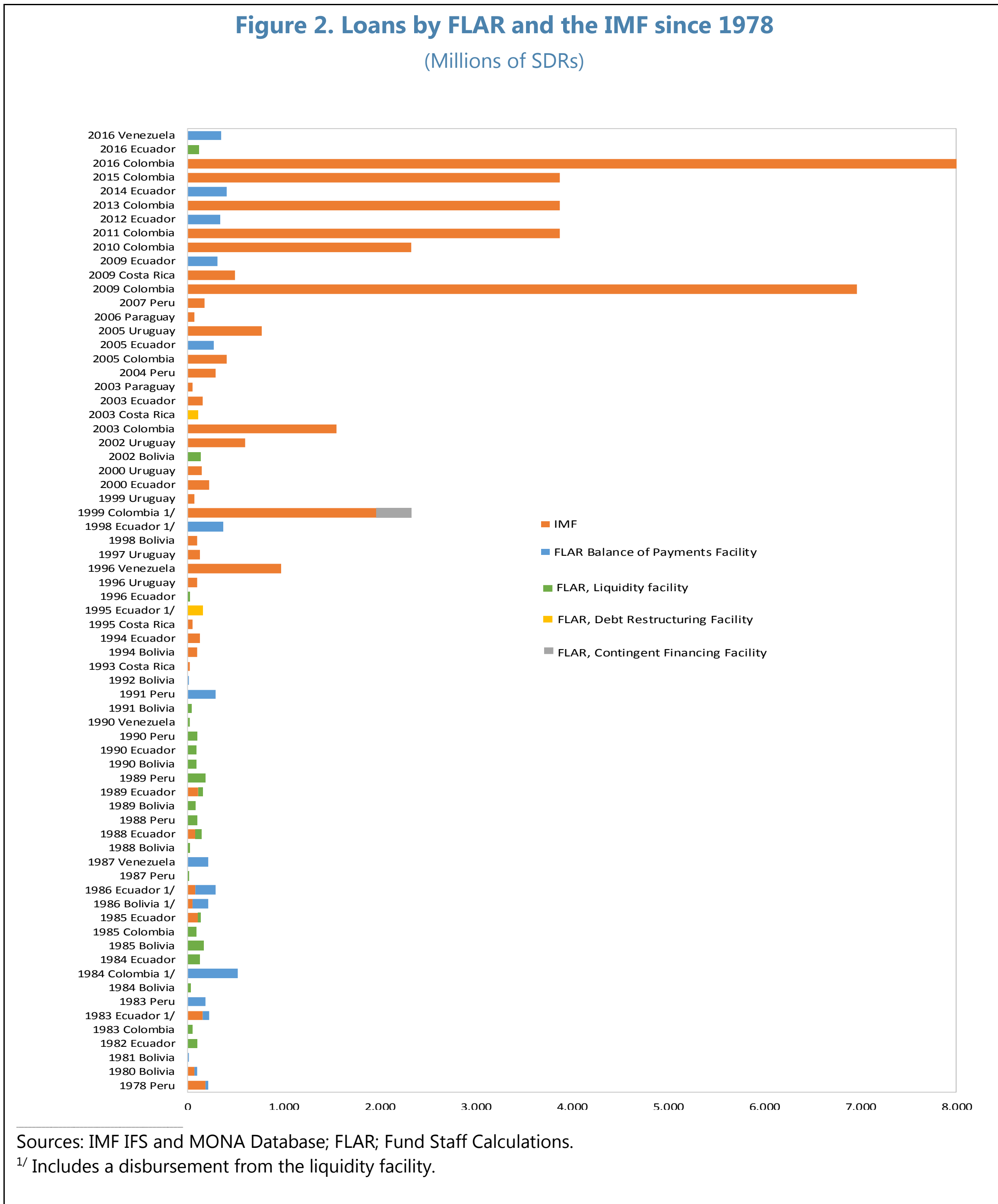
Figure 2. Loans by FLAR and the IMF since 1978

(Millions of SDRs)



Sources: IMF IFS and MONA Database; FLAR; Fund Staff Calculations.

1/ Includes a disbursement from the liquidity facility.

Recent activities. Central Bank of Venezuela received a US$482.5 million loan (3-year maturity) in July 2016. FLAR extended a loan for US$617.58 million to Ecuador, in 2014, which followed another loan for US$515 million in 2012 (see Figure 2). FLAR also provides technical assistance (e.g., in 2015 to central banks of Venezuela and Peru; or support Colombia's Finance Ministry visit to the World Bank to illustrate analysis of the global and regional macroeconomic environment, and FLAR's investment decision making process).

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CASE STUDIES OF PAST RFA FUND CO-FINANCING PROGRAMS

This chapter discusses recent RFA-Fund co-financing cases and draws some lessons. The content is based on documents in the public domain as well as interviews with mission chiefs and/or team members from the time of the program. Not all country cases discussed in the main paper are presented in detail here. The depth of coverage reflects the degree of active collaboration. While the degree of interaction was intense in some cases, in others (e.g., Jordan and Tunisia) there was more limited and/or no involvement with the RFA at the stage of program design despite the Fund maintaining very good relations with the RFA. Such cases are not presented in this chapter as they offer fewer lessons for future collaboration.

A. Armenia (2014 EFF)[13]

This case study illustrates co-financing experience between the Fund and the EFSD, where the two parties played complementary roles: the Fund led in the design of the program, with EFSD building from it to strengthen its conditionality.

5. In July 2014, the IMF Board approved an arrangement under the Extended Fund Facility for SDR 82.21 million (89 percent of quota). Its aim was to consolidate economic stability—following 2010–13 arrangements under the EFF and EFC—and rebuild buffers against possible external shocks. The arrangement was also aimed at supporting further reforms to facilitate the transition towards a dynamic emerging market economy. In October 2015, the EFSD Council approved a US$300 million budget support loan in support of the goals set out in the authorities' EFF program. Disbursements were designed to ensure support for specific activities under the Stimulus Program to promote economic growth and boost export-driven industries.

6. EFSD involvement helped limit program risks through the provision of budget financing and more generally supporting the program's objectives. The EFSD drew implications from the Fund's program design and macroeconomic framework when setting its conditionality (EFSD, 2015a, b). Although, there was no agreement on Fund-EFSD coordination, at an operational level the EFSD-Fund collaboration was open, cordial, and effective.

Lesson for cooperation

- Effective cooperation and division of labor, reflecting each institution's comparative advantage, can facilitate co-lending.

[13] This case study benefit from EFSD documents and discussions with Fund staff.

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B. Cyprus (2013 EFF)[14]

This case study discusses the operational efficiency of cooperation between the Fund and its European partners (EC/ECB/ESM) in the Cyprus EFF. It also illustrates the cost of not requesting financing assistance in a timely way, as well as the difficulties which can arise in reaching an agreement among the lending institutions. Once the program commenced, however, collaboration was effective throughout the entire program. In addition, the adopted program strategy was highly successful; relative to expectations at the outset, there was a quicker recovery and a faster adjustment, ultimately leading to an early exit from the program.

7. While the imbalances that culminated in intervention in major domestic banks were evident in late-2011, the authorities only requested assistance from the EU and the IMF in mid-2012. Imbalances that accumulated in the run-up to the global financial crisis (GFC), a lax fiscal policy response to the GFC, and deep financial links to Greece all contributed to Cyprus's financial sector stress and eventual loss of market access in May 2011. Other developments, including the explosion of Cyprus's main power station and the restructuring of Greek sovereign debt also added to these pressures (IMF, 2014). Lacking market access, the authorities secured a loan from Russia in late 2011, which provided temporary support without conditionality. Nonetheless, continuous deposit outflows and tight sovereign-bank links resulted in the collapse of major banks and a sharp deterioration of public finances. In the face of these developments, the Cypriot authorities requested official assistance from the EU and the IMF in mid-2012.

8. Differences between the Fund and the EC/ECB/ESM over program strategy, together with the authorities' concerns over some aspects of proposed conditionality, resulted in delays in the approval of the program. Almost a year elapsed between the Cypriot authorities' request for financial assistance and the announcement of a staff-level agreement. This contrasts with other programs, such as Greece (2010), Ireland (2010), and Portugal (2011), where agreement was reached within two to four weeks. The extended delay in this case was in part due to a fundamental difference between the IMF and the EC/ECB/ESM related to the banking sector strategy. The Fund supported the resolution of insolvent banks, including the bail-in of private creditors, aimed at restoring financial stability (the root of the crisis) and limiting the significant risk of an unsustainable debt path. European partners opposed the resolution of these banks given their concerns about potential intra-euro area spillover risks, and considered the IMF's strategy highly risky. Together with an impending presidential election in early 2013, the authorities' opposition to a number of possible program conditions (beyond the solution for the banks) also added to the delay.

[14] *The study is based on reviewing various staff reports, and interviews with former mission chiefs.*

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9. Program agreement was reached amid rapidly deteriorating economic conditions and growing deposit outflows. By March 2013, rapidly growing deposit outflows were imposing additional economic costs on the already strained Cypriot economy (Figure 3). At this point, the solution to the banking system required an even larger bail-in of private creditors and substantially higher emergency liquidity assistance (ELA) to the banks. These developments limited the options for bank resolution by preventing the separation of non-performing loans (NPLs) into a bad bank while leaving a smaller good bank in place. The inability to create a bad bank added to program risks. Another cost of protracted negotiations was leaked information: aspects of the banking strategy under consideration were leaked, hurting market confidence, and further accelerating deposit outflows.

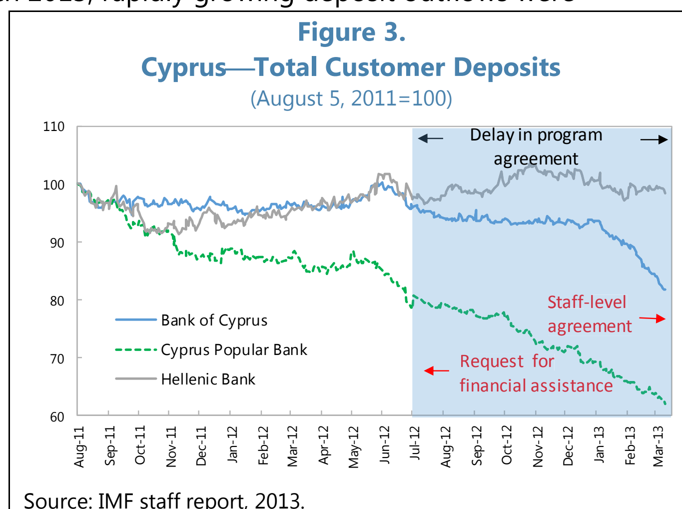

Figure 3. Cyprus—Total Customer Deposits
(August 5, 2011=100)

Source: IMF staff report, 2013.

10. The lack of demarcation of responsibilities and significant overlap of competencies resulted in added complexity in the EC's program. While each review was focused on essential macro-critical conditions—as agreed by both institutions—the EC's structural conditions were far more numerous and detailed than those included in the Fund program (which has a *principle of parsimony* in its conditionality framework, Figure 4). This contributed to longer program discussions and placed a strain on the authorities' implementation capacity. While most MoU conditionality was self-contained—e.g., energy and product market reform—some proposed reforms such as healthcare had macro-fiscal costs that affected the coherence and consistency of the program design.

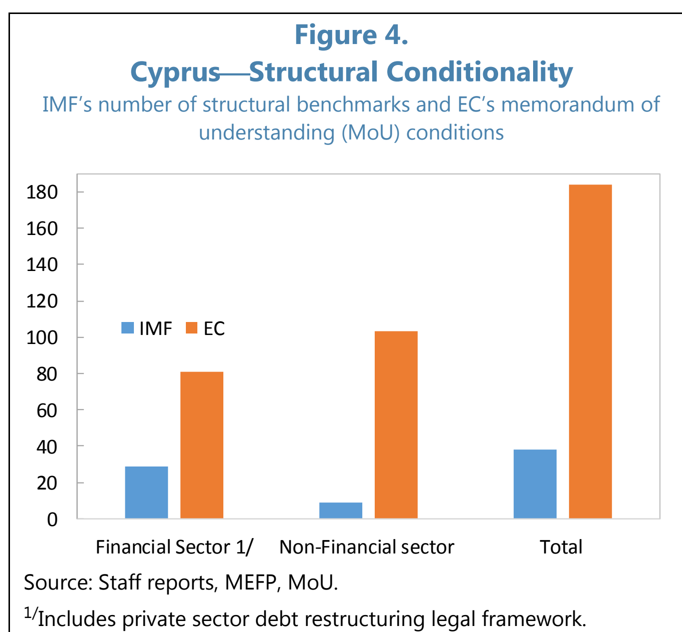

Figure 4. Cyprus—Structural Conditionality
IMF's number of structural benchmarks and EC's memorandum of understanding (MoU) conditions

Source: Staff reports, MEFP, MoU.
1/Includes private sector debt restructuring legal framework.

11. Notwithstanding the initial disagreement, the adjustment program led to an impressive turnaround of the economy and strengthening of the financial sector. Growth resumed much faster than expected, with the fiscal position quickly restored to a sustainable path and market access reestablished. The banking system, which was a core issue of the

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program, ended the program on a much more solid footing, with NPL workouts accelerating, thus creating space for new lending. These achievements allowed the authorities to request cancellation of the arrangement two months early.

Lessons for cooperation

- While delays can be costly, sustainable agreement over program issues must ensure a coherent program design that addresses the economic problems and safeguards, and has buy-in from the respective parties.
- Parsimonious and focused conditionality avoids straining the authorities' implementation capacity and is important to ensure coherence and consistency of program design.
- Effective and consistent public communication reduces program uncertainty and limits the risks of financial market disruptions.

C. Hungary (2008 SBA)[15]

This was the first program supported co-financed by both the EU and the Fund, and thus created a precedent for effective cooperation in program design and communication. It also illustrated the Fund's readiness to take the lead in designing an adjustment program at very short notice.

12. In 2008 amid a rapidly spreading global financial crisis, Hungary requested a Stand-by Arrangement for SDR 10.5bn (about 12.5bn euros) with the Fund. However, as a member of the European Union (EU), Hungary was required to consult with the EU on its BoP needs before requesting assistance from the Fund and other sources.[16] Nonetheless, given the speed of the crisis, the EU agreed to cooperate (and provide co-financing) with the Fund under accelerated procedures. The Hungarian program was therefore co-financed by both the EU and the Fund, setting a precedent for future requests by EU members. The timely request by the authorities and the prompt response by the Fund and the EU with a large and front-loaded financing package were critical to stabilizing market confidence and, together with a strengthened set of policies, laid the ground for a successful program. Funding pressures receded, parent banks supported their subsidiaries consistently with their initial commitments, and the government tapped international markets earlier than expected. The program was also the EU's first operation under its BoP instrument.

[15] This case study is based on Fund staff reports, EPE report, and a report commissioned by the EC.

[16] Item 3 in Article 119 of the Treaty on the Functioning of the European Union (TFEU) says "These activities of the Member States and the Union shall entail compliance with the following guiding principles: stable prices, sound public finances and monetary conditions and a sustainable balance of payments." This, de facto, leads to Fund lending in EU members being undertaken in collaboration with the ESM or EU BoP facility.

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13. Hungary's financing package was designed within four weeks and relied on exceptional and frontloaded access to Fund resources in addition to the support from the EU. The objectives to prevent large drains in capital outflows, restore confidence, and reduce risks of regional contagion—the SBA request made explicit reference to the need to reduce the scope for financial spillovers to other countries—were important pillars of the program. On the European side, the BoP financing was tied to achieving policy conditions on fiscal consolidation, fiscal governance, financial regulation and supervision, and other structural reforms. The full package reached 20bn euros, with a €6.5 billion contribution from the EU (about half of the Fund contribution).

14. The operation also appears to have been mutually beneficial for the EU and the IMF, as reflected in the ex-post assessment of BoP facility prepared for the EC (Ecorys, 2013). The report highlights the complementary nature between the EC and the Fund. From a resource perspective, neither the EU nor the Fund could have provided the total resources required for the operation—at 1,015 percent of quota, this was already an exceptional access program for the Fund. It also recognized that the Fund was better prepared to address the emergency nature of such operation, including designing the operation within weeks. Furthermore, it recognized that the EC had to adjust its practice to the emergency nature of the operation and that it managed to do so successfully. Finally, the report states that cooperation was beneficial for the timing of disbursements and repayments. While the IMF could frontload part of the loan, the EC had a longer repayment window than the Fund.

15. The collaboration between institutions was done on the ground. The EC's ex-post assessment report also recognizes that the projection's implementation led to attempts to align press releases, reviews, and disbursement cycles (Ecorys, 2013). Moreover, although the conditionality was set out in two distinct documents with different phrasing (the MOU and the LOI), this did not complicate implementation or achievement of conditionality. Given the sensitivity of financial markets to public information, the timing of the press releases was important, highlighting the need to ensure consistent communication with the public.

Lessons for cooperation

- The Fund demonstrated a comparative advantage in responding to emergency situations and operational experience.
- There can be an effective burden sharing, with the Fund front loading and the EC offering longer term support
- Effective, consistent, and coordinated communication is important for program success.

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D. Ireland (2010 EFF)[17]

This case study aims to assess operational efficiency and modes of cooperation (and the resolution of differences) between the IMF and its European partners (EC/ECB/ESM). It illustrates the importance of the authorities' program ownership, parsimony in conditionality, and early engagement between program partners.

16. In terms of operational efficiency, a staff-level agreement between IMF/EC/ECB and the Irish authorities was reached within only a few weeks of the request for financial assistance. Following a range of informal meetings in late 2010 in Brussels between Irish officials and teams from the EC, ECB and IMF, the Irish authorities requested financial assistance on November 10, 2010. The staff level agreement was announced on November 28, 2010. The efficiency of this process was aided by the earlier preparations of the Irish authorities, who were already actively tackling fiscal and financial challenges that had surfaced during 2008-10 and had prepared a detailed National Recovery Program (NRP) in late 2010, including specific measures to support medium-term fiscal adjustment.

17. Despite rapidly reaching a program agreement, serious differences arose during the program design phase. These differences were over the baling-in of senior bond holders. Fund staff had recommended that the banking sector resolution should include burden sharing by senior bank creditors to reduce recapitalization expenses and fiscal adjustment needs, as well as to support debt sustainability. While there was no EU policy on bail-in at the time, the European authorities opposed bail-in due to the potential risk of cross-border spillovers to bank funding in the euro area. Fund staff considered that the European authorities would be in a position to manage any potential spillovers, and that the risk of spillovers had been reduced by the expectation of bail-in (as reflected in the pricing of these bonds) and the transfer of these bonds to hedge funds and other high-risk investors (IMF, 2015). The Irish government supported bail-in, but emphasized that they could not go ahead without the agreement of their European partners. In the end, the Fund accepted that a consistent adjustment program with a sufficiently credible financing package could be put in place without including burden sharing by senior bondholders. While the Fund agreed to proceed, it left open the possibility of bailing-in these bonds in future reviews if needed. Thus, this key conflict was not entirely resolved at the program design phase, although it did not prevent moving forward.

18. The inability to reach a final agreement over burden sharing encouraged program partners to look for alternative options to mitigate risks to debt sustainability. These joint projects included developing an exit strategy from Emergency Liquidity Assistance provided by the Central Bank of Ireland, and technical work leading to an extension of the maturity of EFSM loans by seven years in April 2013.

[17] The study is based on various staff reports, the EPE report, the EAC Audit report, IMF statements to the Irish Parliament and an interview with a former mission chief.

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19. Other, less critical, differences—such as the pace of fiscal consolidation and bank deleveraging—were resolved at the technical level after extensive discussions. Regarding the pace of fiscal consolidation, the European partners—especially the ECB—favored a more front-loaded path, but after some discussion agreed to extend the timeframe for reaching the 3 percent deficit ceiling by one year, consistent with the flexibility built into the EU fiscal framework under the Stability and Growth Pact. The ECB also favored rapid bank deleveraging, with the proceeds from bank asset sales being principally used to repay ECB liquidity support. More extensive discussions were required around the deleveraging issue, drawing on external consultants and in-depth analysis of the asset portfolios of the banks. On this basis, a framework was agreed with phased sales initially focused on the banks' foreign assets, subject to a high level of transparency to the program partners and governed in a manner that provided safeguards against "fire sales" of assets.

20. While there was no clear demarcation of responsibilities across program partners, the EC's conditionality was not as expansive as in other EA programs. This partly reflected the fact that Ireland was in little need of major structural reforms outside the financial sector. The EC conditionality focused on removing remaining structural impediments inhibiting competitiveness and employment creation. The IMF's conditionality, however, remained focused on financial sector reforms.

21. Ireland's Ex-post Evaluation noted that a "*close and early Fund engagement with monetary union authorities can facilitate program success*" (IMF, 2015, ¶65). There were little Ireland-specific interactions between the Fund and other European partner institutions until late 2010, some two years after the property bubble had burst.[18] In the interim, each party was involved relatively independently with the Irish authorities. Earlier, close cooperation on emerging crisis risks, as well as on other key issues both at the national and union-wide level, could have facilitated even faster progress in developing policy solutions and possibly stronger program results.

Lessons for cooperation

- Strong ownership and capacity for program design and implementation by the authorities can serve as an anchor facilitating Fund-RFA cooperation.
- Parsimonious and focused conditionality increases the probability of program success.
- Early engagement by the Fund with RFA authorities can facilitate program success in the event of a lending program.

[18] In part, this was driven by the authorities' perception of being able to manage the situation on their own.

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E. Latvia (2008 SBA)[19]

This case study presents an early example of EU-IMF co-financing. This case is unique with respect to the program exit strategy (euro adoption) and was a successful example of where the Fund's initial strategy was adjusted, reflecting ongoing discussions with the RFA and the authorities. An alternative strategy, which reflected the authorities' policy preferences (to maintain the peg) but also resulted in a consistent solution to Latvia's problems—was ultimately pursued. At the same time, this case illustrates how uncoordinated communications and actions can undermine the parties and put the program at risk.

22. The SBA for Latvia, approved on December 2008, was a coordinated international effort with the EC, the World Bank, and other international partners. The main objectives of the program were to: (i) arrest the loss of reserves and bank deposits; (ii) restore confidence in the banking sector, (iii) rebuild competitiveness through income policies and structural reforms; and (iv) maintain the fixed exchange rate regime and fulfill Maastricht criteria fiscal targets for euro adoption. The macroeconomic adjustment was characterized by internal devaluation through a combination of wage restraint and productivity gains, which entailed large output costs (Figure 5). The program was an early example of EU-IMF co-financing and is unique with respect to its exit strategy (euro adoption).

23. A defining element of the program was the authorities' unwavering commitment to the exchange rate peg, underpinned by support from the EU (RFA). Maintaining the exchange rate peg was a widely-debated element of the program strategy. Fund staff had significant concerns over the sustainability of the peg and the authorities' ability to implement the significant fiscal adjustment and controversial income policies required to maintain the peg. Such concerns were not limited to the initial program design phase; they persisted through the first review, when it became apparent that the output contraction would be much larger than initially expected, renewing doubts about the program strategy. However, with the peg central to Latvia's commitment to ERM-II and eventual euro adoption, the Latvian authorities remained committed to undertaking adjustment policies consistent with its maintenance.[20]

24. Ultimately, a strategy where the peg was retained was adopted. Eventually, after extensive technical discussions between the authorities, and the staff of the Fund and the EC, as well as high-level discussion between Fund management and the political leadership of the EU, it was agreed that the peg was the most viable strategy to help restore confidence.[21] This decision was based on the strength of Latvia's commitment to the peg, the EC's focus on minimizing the risk of regional spillovers, and the authorities' commitment to undertake any necessary measures

[19] The study is based on staff reports, the EPE report, and an interview with former team members.

[20] The Latvian lats joined ERM II in 2005. Like other ERM II countries, Latvia was allowed a fluctuation of its currency of ± 15 percent around the central rate vis-à-vis the euro, but it unilaterally maintained a 1 percent fluctuation band.

[21] See Pisani-Ferry, Sapir and Wolff (2013).

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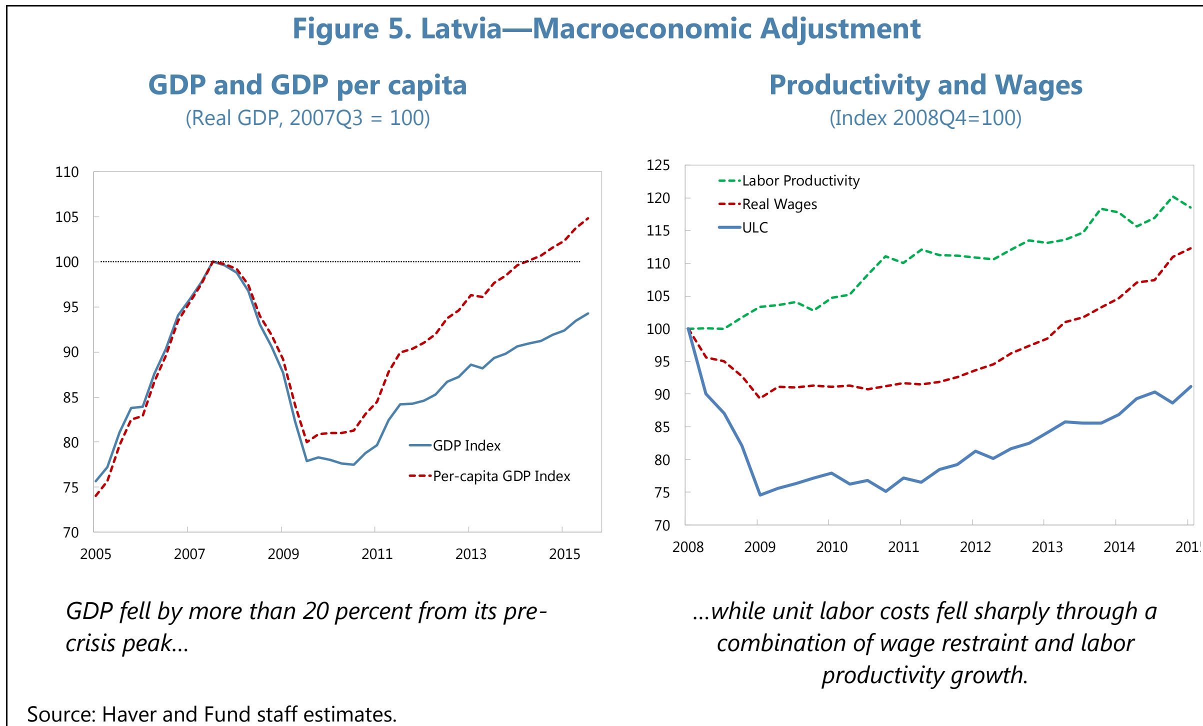
to maintain the peg. With this commitment, the programed policies and adjustment were viewed as consistent with the restoration of external sustainability, which allowed the Fund to proceed. While the counterfactual is hard to assess, the Latvia program is an important example of a successful Fund program where the initial strategy was altered to internalize the authorities' strong commitment to particular policies, backed by support from the RFA. Maintaining the peg was seen as important to allay concerns over potential regional spillovers, and the adverse impact any devaluation may have on bank balance sheets.[22]

Figure 5. Latvia—Macroeconomic Adjustment



GDP fell by more than 20 percent from its pre-crisis peak...

...while unit labor costs fell sharply through a combination of wage restraint and labor productivity growth.

Source: Haver and Fund staff estimates.

25. The modalities for cooperation evolved over time, which created challenges. At the outset, there were no arrangements established for cooperation, (confidential) information sharing, or dispute resolution—although informal arrangements were established over time. Drafts of program documents (the authorities' Letter of Intent, Memorandum of Economic and Financial Policies, and Memorandum of Understanding with the EC) were consistently exchanged and cross-checked by the program partners. Each institution took funding decisions independently, in line with its own statutes and internal procedures. Initially, the EC lacked experience in providing BoP assistance and expertise in program design. Therefore, in the initial phase, the Fund team took the lead in preparing the macroeconomic framework and program modalities. This evolved over the course of the program as the EC gained experience in program management and implementation. Over time, the EC adopted many of the Fund's practices such

[22] See IMF (2013b), Latvia: Ex Post Evaluation.

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as policy notes, detailed forecasts, and the use of resident representatives to facilitate program discussions and implementation.

26. Differences of views, and the uncoordinated completion of reviews, weakened confidence in the program early on. As noted in the Latvia EPE report (IMF, 2013b), tensions arose between the staff of the Fund and the EC in the summer of 2009 over fundamental aspects of the program's strategy. The Fund was hesitant about concluding the first review because of doubts about the sustainability of the fiscal targets. Nonetheless, the EU concluded its review, releasing its second tranche due to concerns that any further delay could precipitate a run on Latvia's currency. The uncoordinated completion of reviews weakened the position of the Fund's program,[23] and led to an inconsistency between the two programs—when the Fund's review was completed, the fiscal conditionally in the Fund program was more gradual than that in the EC's program, since this path was no longer seen as realistic. As a result of the inconsistency, the Fund review documents included two alternative scenarios, which created uncertainty and weakened confidence in overall program.

Lesson for cooperation

- Strong ownership by the authorities can serve as an anchor facilitating Fund-RFA cooperation.
- The RFA can have different priorities, and an early recognition of these differences can facilitate a timely resolution.
- Uncoordinated decisions can undermine the parties, result in conflicting messages and erosion of credibility, and put the program at risk.

F. Romania (2009, 2011, 2013 SBA)

This is a case of repeated collaboration between the RFA and the Fund. While cooperation was initially successful—with effective division of labor, as the RFA complemented the Fund expertise in long-term structural reforms—it diminished over time. The deterioration was due to both divergent decision-making procedures and a perception of incomplete consultation across the partners, ultimately making the process of reaching agreements more protracted.

27. Since 2009, Romania has benefitted from Fund and EU assistance on three occasions. In 2009, agreement was reached to provide Romania with multilateral financing assistance for €20 billion. Of this, €5 billion was provided by EU's BoP facility, SDR11.4 billion (around €12.95 billion, exceptional access) by the IMF, and the remaining amount was financed by other multilateral institutions. The 2011 agreement was reached for a follow up financial assistance program, in which the Fund and the EU would provide co-financing for €3.5billion

[23] See footnote 46 of IEO report on *IMF response to the Financial and Economic Crisis* (IEO, 2014) and Åslund and Valdis (2011), "How Latvia came through the financial crisis."

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(SDR 3.1 billion) and €1.4 billion (SDR1.2 billion), respectively. Other multilaterals provided some additional funds. Finally, a third assistance program was agreed in 2013 in which the EU provided €2 billion, in parallel with a Fund SBA for SDR 1.75 billion (around €2 billion).

28. Early engagement with the EU and other international lenders was fundamental in helping design a strong program in 2009. Large financing, flexible program design, and appropriate prioritization were considered key elements to achieve the 2009 program objectives. The cooperation between the EU and the Fund was viewed as successful, given that it contributed effectively to the financing package and allowed burden sharing. The authorities' commitment to adhere to the EU targets under the convergence program and the EDP framework played a key role in ensuring that medium term goals under the EU's Growth and Stability Pact remained on track, which also helped anchor the fiscal consolidation (IMF, 2012).

29. The 2011 SBA was a successful case of collaboration between an RFA and IMF, involving an effective division of labor with the EC focused on structural reforms. The objectives of the program were to: (i) provide precautionary support against external shocks; (ii) complete economic adjustment; and (iii) advance the unfinished structural reform agenda. In this regard, it set the precedent for future joint support programs (IMF, 2014b). The program also displayed signs of effective division of labor. The reform agenda in key sectors (e.g., energy, transportation, and health) was guided by EC (and World Bank) expertise and, as in other programs, the authorities' commitment to adhere to EU targets under the Excessive Deficit Procedure helped anchor the fiscal consolidation plan. Nonetheless, the Fund's Ex-post Evaluation concluded that the larger than projected pro-cyclical impact of the fiscal adjustment was a reminder of the need for flexibly adjusting program targets and conditionality as the country's circumstances evolve.

30. Romania requested a successor program in October 2013, which further highlighted the need for better coordination. The 2013 SBA request was motivated by external vulnerabilities resulting from uncertainties in the euro area and surrounding capital flows to emerging markets. The Fund's Ex-post Evaluation highlighted that, while coordination worked relatively well, coordination could have been enhanced, especially in areas where the Fund had limited experience (e.g., reforms in the energy and transportation sectors). During the program, the Fund had to rely on the expertise of the EC and the World Bank for key elements of reform, which was complicated by the different views on program priorities across the three institutions (IMF, 2017).[24] These differences were compounded by divergent decision-making procedures and perceptions of insufficient consultation. Inconsistent information sharing also led to delays at times. As time elapsed, the institutions increasingly proceeded with their own agendas on separate tracks.

[24] For instance, the EC had 49 Specific Economic Policy Criteria, with more detailed conditionality and covering a broad range of issues, including for strengthening the business environment and public debt management. None of the EU reviews were completed.

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Lessons for cooperation

- Parsimonious and focused conditionality is necessary for program success.
- Divergent institutional decision-making procedures, insufficient consultation, and inadequate information sharing can make the process of reaching agreements protracted and place the program at risk.
- A well-designed division of labor can facilitate program design and implementation, although when program partners have different views on key issues, the division of labor can hinder progress.

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CROSS-COUNTRY CONTAGION AND THE GLOBAL FINANCIAL SAFETY NET

This chapter describes the network contagion model employed in Box 1 in the main paper. The model illustrates the contagion across economies arising from large balance of payments (BoP) shortfalls emanating from globally or regionally systemic economies, and the effectiveness of different layers of the global financial safety net (GFSN) in limiting this contagion. In the model, contagion results from an initial shock that propagates through trade and financial channels to other countries. The initial external shock—a suspension of external liability payments by a systemic economy—affects other economies through reduced capital and trade inflows. The resulting decline in gross foreign assets in other countries can then create external implications for their partners. The Fund and RFAs can mitigate contagion through the provision of liquidity support. Simulations show that in the absence of stigma, Fund support is generally more effective than that of the RFAs due to its global membership and larger financial resources. However, contagion can spread more rapidly if Fund involvement is delayed—e.g. due to stigma. The simulations illustrate that collaboration between the Fund and RFAs provides potentially the most effective mitigation against contagion, especially if the RFA can hasten the Fund's involvement.

A. A Simple Model of Global Interconnectedness and Cascading Contagion

31. The model employed is a network in which countries are interconnected through financial and trade linkages. Countries are interconnected through bilateral asset and trade positions, which for simulation purposes are all measured in U.S. dollars. These exposures across countries affect the balance of payments dynamics and thus gross international reserves of individual countries. Specifically, gross international reserves increase with the current account surplus and inflows from foreign assets, and decline with payments on foreign liabilities. Starting from a situation where the balance of payment is in equilibrium,[25] changes in reserves are a function of both asset position and changes in relevant exchange rates.

$$\Delta R_{i,t} = \underbrace{\sum_{j \neq i}^{\in ND_t} a_{ij}\, r_{j,t}\, \Delta e_{j,t}}_{\substack{Return\ on \\ net\ foreign\ Assets}} - \underbrace{\sum_{j \neq i} a_{ji}\, r_{i,t} \Delta e_{i,t}}_{\substack{Return\ on \\ net\ foreign\ liabilities}} + \underbrace{\sum_{j \neq i} TB_{ij}\left(\Delta e_{j,t-1}\right)}_{\substack{Trade \\ inflows}}$$

where a_{ij} denotes country i's asset holding against country j, $r_{j,t}$ is country j's specific interest rate on its liabilities, and $\Delta e^{*}_{i,t-1}$ is the nominal effective exchange rate of the previous period.

[25] Every simulation is assumed to start with a BoP position that is consistent with a stable net foreign asset position and reserves. Hence, a difference between returns on country i's gross foreign assets a_{ij} and its gross foreign liabilities a_{ji} would be fully financed in equilibrium and would only result in changes in reserves due to default or changes in the proper or the partner countries' exchange rate.

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32. Payments on foreign assets (interest and amortization) and the trade balance create a need for liquidity, particularly if payments on foreign liabilities exceed income on foreign assets. In such a situation, gross foreign reserves, R are used as a source of liquidity and all external liabilities are honored if reserves are sufficient (i.e., $R_i > 0$). This ensures the country remains current on its obligations and therefore $i \in ND_t$, which denotes the set of non-defaulted countries. However, if reserves are depleted (i.e., $R_i = 0$), foreign payments can no longer be made, forcing the country into external default. In this case, let $i \in D_t$, where D_t denotes the set of countries that are unable to remain current on their external obligations—as reserves (and any other available exceptional financing) are inadequate to cover the balance of payments deficit. The adequacy of gross foreign reserves is thus an indicator of a country's ability to remain current on its obligations.

Contagion

33. An exogenous external shock triggers potential contagion. The model assumes an initial suspension of external payments by country h —simulations assume that the initial event takes place in a systemic economy.[26] Country h stops making payments due on its foreign liabilities, $\boldsymbol{a_{ih,t} r_{h,t}}$. For countries with an exposure to country h, this implies an external revenue loss and an increasing pressure as its international reserves decline. Formally, for any country $\boldsymbol{h} \in \boldsymbol{ND_t}$ the initial loss in international reserves is equivalent to its exposure to the defaulted amount, $\Delta \boldsymbol{R_{I,t}} = -\boldsymbol{a_{ih,t} r_{ht} e_{h,t}}$. If reserves are depleted, the country also defaults.

Contagion Cascades

34. Countries "default" on their external obligations when their central bank does not have adequate reserves to meet their BoP deficit. If adjustment (including through the exchange rate) is insufficient to maintain gross reserves at a positive level, the country is no longer able to honor external payment obligations. In such a situation, the initial default can lead to an inability for other countries to make scheduled payments.

$$\forall\, i \in NF_t \text{ if } \sum_{h \in F_i} r\, \mathrm{a_{hi}} > R_i \rightarrow \text{Country } i \text{ defaults: } i \in F_{t+1}$$

B. The Role of the GFSN

35. The GFSN can provide liquidity to support countries with BoP needs. That is, a country can draw on credit lines from the Fund (EF_{IMF}) or from the RFAs (EF_{RFA}) it is a member of, when its own liquidity becomes insufficient—that is a BoP need arises. Drawdowns on these

[26] This is a strategic assumption to make the cascading effects illustrated by the model as "contagion." Buffers remain critical even for advanced economies if there is a risk that liquidity can evaporate during systemic events. While unlikely, modelling external default by systemic country optimally illustrate the functioning of the international financial safety net.

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credit lines support reserve accumulation up to a limit determined by the countries' maximum access in the Fund and the RFA. Formally,

$$\Delta R_i = \underbrace{\sum_{j \neq i}^{\in NF_t} a_{ij}\, r_{j,t}\, e_{j,t}}_{Return\ on\ net\ foreign\ Assets} - \underbrace{\sum_{j \neq i} a_{ji}\, r_{i,t} e_{i,t}}_{Return\ on\ net\ foreign\ liabilities} + \underbrace{\sum_{j \neq i} TB_{ij}\left(e^{*}_{ji,t-1}\right)}_{Trade\ revenues} + \underbrace{\boldsymbol{EF_{it}}}_{GFSN\ financing}$$

Where,

$$EF_{it} = EF_{RFA;\, i,t} + EF_{IMF;\, i,t}$$

External financing cannot exceed the maximum access of the respective credit lines, that is $EF_{RFA;\, i,t} \leq \overline{EF}_{RFA;i,t}$ and $EF_{IMF;\, i,t} \leq \overline{EF}_{IMF;i,t}$.

36. The model allows delays in access to IMF support. Such delays may arise because member countries may not want to signal or request a Fund supported program, a problem often referred to as stigma. Hence, in the model $EF_{IMF;\, i,t} = 0$ for as long as Fund involvement is delayed. While RFAs cover fewer countries, their financial assistance is likely to materialize more rapidly. Partly, this can be related to the existence of specific liquidity instruments without a structural component and thus simpler processes.

C. Taking the Model to the Data

37. The model is applied to a dataset covering 62 countries representing 78 percent of global GDP (Table 5). The bilateral asset positions and trade flows are set to match the actual exposures as of 2016. The former are composed of interbank liabilities (from BIS locational statistics) and portfolio investment (from the Coordinated Portfolio Investment Survey —CPIS). Trade flows are taken from the Direction of Trade Statistics (DOTS). The model is calibrated to quarterly frequency starting with situation equivalent to the first quarter of 2017. The RFAs considered in this paper include the Chiang Mai Initiative Mechanism (CMIM), BRICS (Brazil, Russia, India, China and South Africa), the Latin American Reserve Fund (FLAR), and the European Stability Mechanism (ESM)—See Chapter I.

38. For this illustrative exercise, the size of the initial shocks is calibrated to simulate to a large BoP crisis. The results show the impact of global and regional systemic shocks. The global shock is a simultaneous shock from different globally relevant countries. The regional shock emanates from a single regional power. In each case, the shock leads to a permanent suspension of interest payments to all other countries in the sample.[27]

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[27] Generally, convergence is reached when for two periods, no additional default occurs. As this can affect the comparability of different constellations of the GFSN, the results presented below all use six iterations, which is

(continued)

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Table 5. Country Sample for Network Model

Australia	Estonia	Latvia	Romania
Austria	Finland	Lithuania	Russian Federation
Bahrain, Kingdom of	France	Luxembourg	Singapore
Barbados	Germany	Malaysia	Slovak Republic
Belgium	Greece	Malta	Slovenia
Bolivia	Hungary	Mauritius	South Africa
Brazil	Iceland	Mexico	Spain
Bulgaria	India	Mongolia	Sweden
Canada	Indonesia	Netherlands	Switzerland
Chile	Ireland	New Zealand	Thailand
Hong Kong SAR	Israel	Norway	Turkey
Macao SAR	Italy	Pakistan	United Kingdom
Costa Rica	Japan	Panama	United States
Cyprus	Kazakhstan	Philippines	Uruguay
Czech Republic	Korea, Republic of	Poland	
Denmark	Kuwait	Portugal	

D. Results

39. Simulations show that collaboration between the IMF and RFAs induces the most effective support. Table 6. illustrates the performance of different layers of the financial safety net following the two shocks described above. For both shocks, the contagion cascade quickly gets out of control if countries rely exclusively on their own means (i.e., their own reserves); roughly 20 countries would be affected by contagion. In the case of a globally systemic shock, immediate access to Fund resources has a positive impact, as it reduces the number of affected countries to 9—due to the central role of the IMF in the GFSN. However, if the IMF and RFAs collaborate, the number of contagion events can be halved.

Table 6. The Effectiveness of the GFSN

Number of countries affected by the initial shock

Systemic Shock	IMF with no lag	IMF with 2-quarter lag	RFA only	IMF (no lag) + RFA	IMF (2-quarter lag) + RFA
Global	9	19	13	5	12
Regional	0	5	7	0	2

Source: Fund staff calculations.

generally what is generally what is needed for convergence. Since we assume that the balance of payment is in equilibrium, exchange- and interest rates are normalized. Any drawdown of reserves is exclusively a function of changes since the starting situation.

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40. RFAs in isolation can play a significant role, mostly when dealing with regional shocks. RFA support tends to be more effective when the initial shock is regional, provided the shock is not synchronized across all RFA members or does not affect significantly the largest members of the RFA. Specifically, simulations show that RFA's can reduce the number of contagion events to 13 countries if the initial shock is global, but less than half if the shock is regional.

41. The Fund's effectiveness in preventing contagion hinges on the speed of intervention. This is evident by comparing contagion scenario in which the Fund engages without delay with a scenario in which the Fund faces *stigma*, that is, when Fund support is delayed by 2-quarters. Results show that with *stigma,* contagion cascades materialize rapidly, undermining the effectiveness of the Fund when acting alone as well as its marginal contribution when collaborating with the RFAs.

Robustness analysis

42. The qualitative conclusions presented here are robust across different values of the parameters in the model, but the number of defaults depends crucially on the assumed size of the initial default. The initial shock is set equal to the implied quarterly interest payments due, based on total outstanding liabilities and an appropriate interest rates, but (for purposes of this illustrative exercise) excluding principle repayment. While the results are qualitatively robust, the number of defaults may increase more than proportionally with larger shock. As credit lines with international financial institutions shrink relative to the size of the initial shock, their usefulness is quickly reduced. In this environment, a single additional country falling under contagion can, given the multiple interactions, quickly increase the stress on the rest of the countries. Ultimately, the number of potential countries falling under contagion would increase in a non-linearly manner. Nevertheless, given that the relative performance of the different constellations of the GFSN is unchanged, the overall conclusions remain robust.

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References

Åslund, Anders, and Valdis Dombrovskis, 2011, How Latvia came Through the Financial Crisis. Vol. 17. Peterson Institute.

Ecorys, 2013, "Ex-post evaluation of balance of payments support orientation to Hungary decided in November 2008"., Final Report prepared for the Economic Commission, February.

Eurasia Fund for Stabilization and Development, 2015a, "Appraisal of the Request of the Republic of Armenia for a Budget Support Credit from the Resources of the Eurasian Fund for Stabilization and Development in the Amount of US$300 million," Document 16-3-F, September.

__________, 2015b, "Evaluation of Report of the Ministry of Finance of Republic of Armenia on Compliance with Conditions for First Tranche of EFSD Budget Support Credit", November.

European Commission, 2013, "Overall assessment of the two balance-of-payments assistance programmes for Romania, 2009–13," European Economy, Occasional Papers, I56, July.

European Court of Auditors, 2015, "Financial Assistance Provided to Countries in Difficulties", Special Report No 18.

Internal Evaluation Office of the International Monetary Fund, 2014, *IMF Response to the Financial Crisis.* (Washington: International Monetary Fund).

International Monetary Fund, 2009, "Republic of Latvia: Request for Stand-By Arrangement—Staff Report; Staff Supplement; Press Release on the Executive Board Discussion; and Statement by the Executive Director for the Republic of Latvia", IMF Country Report No. 09/3.

___________, 2009b, "Republic of Latvia: First Review and Financing Assurances Review Under the Stand-By Arrangement, Requests for Waivers of Nonobservance of Performance Criteria, and Rephasing of Purchases Under the Arrangement", IMF Country Report No. 09/297.

__________, 2011, "Cyprus: 2011 Article IV Consultation—Staff Report; Supplement; Public Information Notice on the Executive Board Discussion; and Statement by the Executive Director for Cyprus", IMF Country Report No. 11/331.

__________, 2011b, "Hungary: Ex-post Evaluation of Exceptional Access under the 2008 Stand-By Arrangement", IMF Country Report No. 11/145.

©International Monetary Fund. Not for Redistribution

___________, 2012, "Romania: Ex Post Evaluation of Exceptional Access under the 2009 Stand-By Arrangement", IMF Country Report No. 12/64.

__________, 2013, "Cyprus: Request for Arrangement Under The Extended Fund Facility", IMF Country Report No. 13/125.

__________, 2013b, "Republic of Latvia: Ex Post Evaluation of Exceptional Access Under the 2008 Stand-By Arrangement; Public Information Notice on the Executive Board Discussion; and Statement by the Executive Director for the Republic of Latvia", IMF Country Report No. 13/30.

__________, 2014, "Cyprus: 2011 Article IV Consultation—Staff Report; Press Release; and Statement by the Executive Director for Cyprus", IMF Country Report No. 14/313.

____________, 2014b, "Romania: Ex Post Evaluation of Exceptional Access under the 2009 Stand-By Arrangement", IMF Country Report No. 14/88

____________, 2015, "Ireland: Ex Post Evaluation of Exceptional Access under the 2010 Extended Arrangement", IMF Country Report No. 15/20.

____________, 2017, "Romania: Ex Post Evaluation of Exceptional Access under the 2013 Stand-by Arrangement—Press Release; Staff Report; and Statement by the Executive Director of Romania", IMF Country Report No. 17/135.

Pisani-Ferry, Jean, André Sapir, and Guntram Wolff, 2013, "EU-IMF Assistance to Euro-area Countries: An Early Assessment", Bruegel Blueprint Series, Volume XIX.

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