Appendix I: IMF structure

A country that joins the IMF is given a "quota," which is the amount that must be paid by the country to the IMF upon joining. The total of all national quota is at present around $330 billion (although the IMF denominates the total in "Special Drawing Rights" whose value changes with movements in exchange rates). The main factor determining the quota is the size of a country's GDP, but a country's openness to trade, economic variability and size of international reserves may also play a role. Up to three-quarters of a nation's quota can be paid in its own currency, while the rest must be paid in "hard" currencies that are widely accepted in the global economy like the US dollar, the euro, and the yen. Quotas determine voting rights within the IMF. Because quotas are linked to GDP, it follows that during the history of the IMF, the United States and the major economies of western Europe have largely controlled the decision-making apparatus: for example, the United States has a large enough share of total votes that it can exercise veto power over any substantial IMF decisions, while the Managing Director of the IMF has always been a European. What a country can borrow from the IMF is typically in the range of 200 to 600 percent of its quota, depending on the situation, although as we will see the recent IMF loans in Europe have greatly exceeded this threshold. For a basic overview of the quota system, the IMF website offers a useful starting point is http://www.imf.org/external/np/exr/facts/quotas.htm.

Appendix II: ***A Note on Official debt***

As noted, the sheer magnitudes of the IMF lending to periphery Europe is on a different scale from most past metrics in terms of the real dollar amounts, its share of IMF quotas, and its size relative to the GDP of the borrowers.[1] However, there is another important dimension in which the recent episode stands out from experience. Other official lending to Greece, Ireland and Portugal from newly-created post-crisis facilities, predominantly the European Financial Stabilization Mechanism (EFSM); and the European Financial Stability Facility (EFSF) has also soared. Indeed, Greek, Irish and Portugese debt is now largely in the hands of official creditors, as carefully documented by Arslanalp

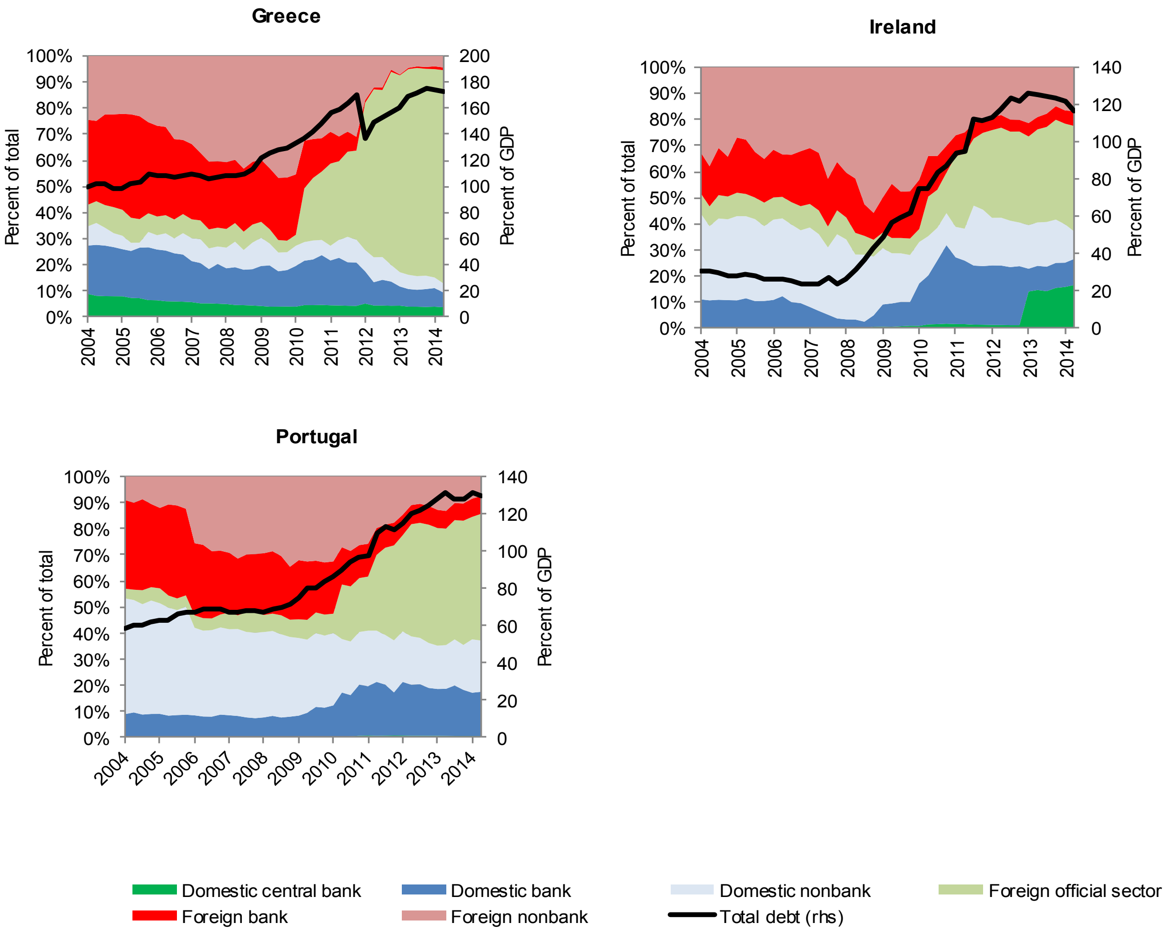
[1] Periphery here also includes emerging Europe.

and Tsuda (2014) and shown in Figure 7. This is strikingly at odds with the experience of most middle-income emerging markets and more similar to the low-income countries that seldom (if ever) had access to international private capital markets.

In the modern era, debts to the official sector of those magnitudes have only been associated with the two World Wars and their immediate aftermath. As documented in Reinhart and Trebesch (2015), most (if not all) of the WWI official debt of the advanced economies (of comparable magnitudes) went into default in the summer of 1934 and was never repaid. [2]

[2] The notable exception was Finland, which fully repaid its obligations to the United States.

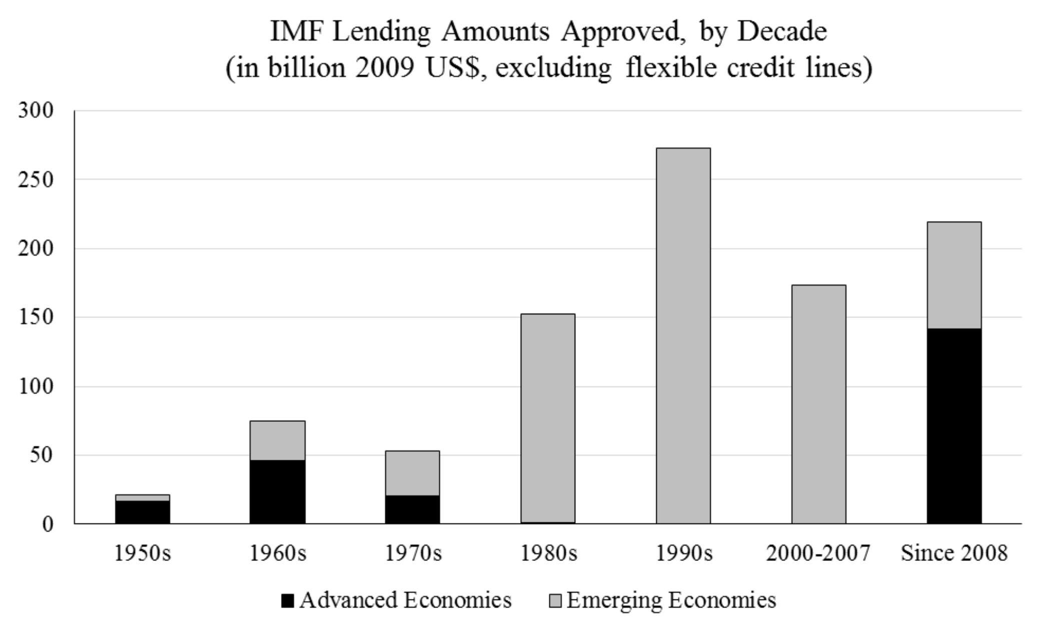
Figure A.1. Holders of Advanced Economy Government Debt, 2004-2014Q2
(components in percent; total in percent of GDP)



Source: Arslanalp and Tsuda (2014), https://www.imf.org/external/pubs/cat/longres.aspx?sk=40135.0

Appendix III ***Supplementary material on IMF lending patterns***

Figure A.2. From Advanced Economies to EMEs and Back: Lending Volume, 1950-2014



Sources: Gold (1970), International Monetary Fund, Monitoring of Fund Arrangements (MONA) Database, Joyce (2005), Killick (1995), Mody and Saravia (2006)

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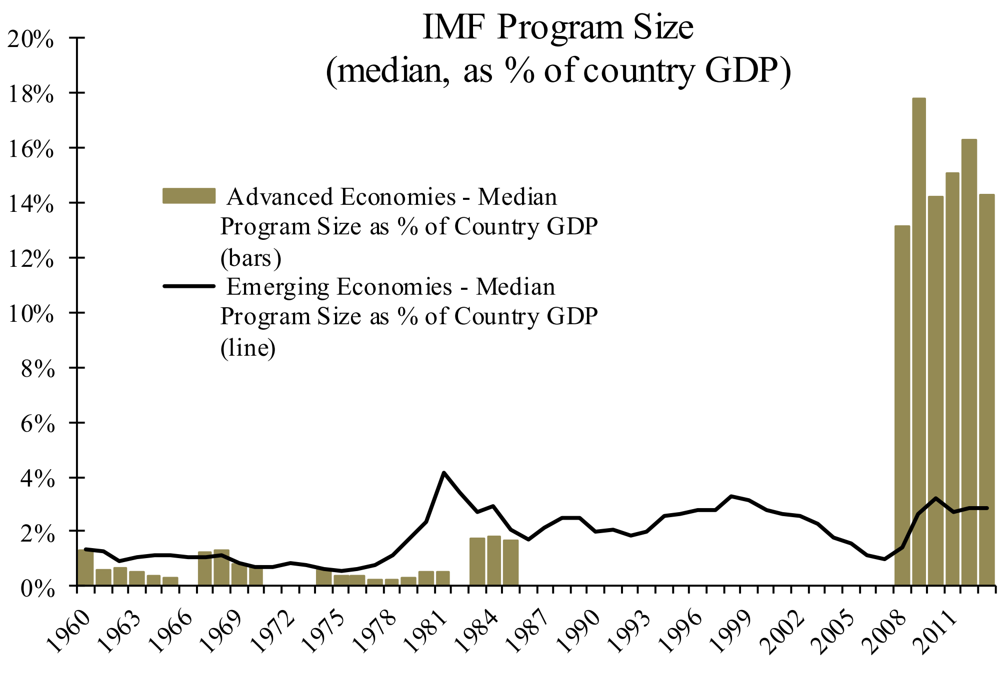
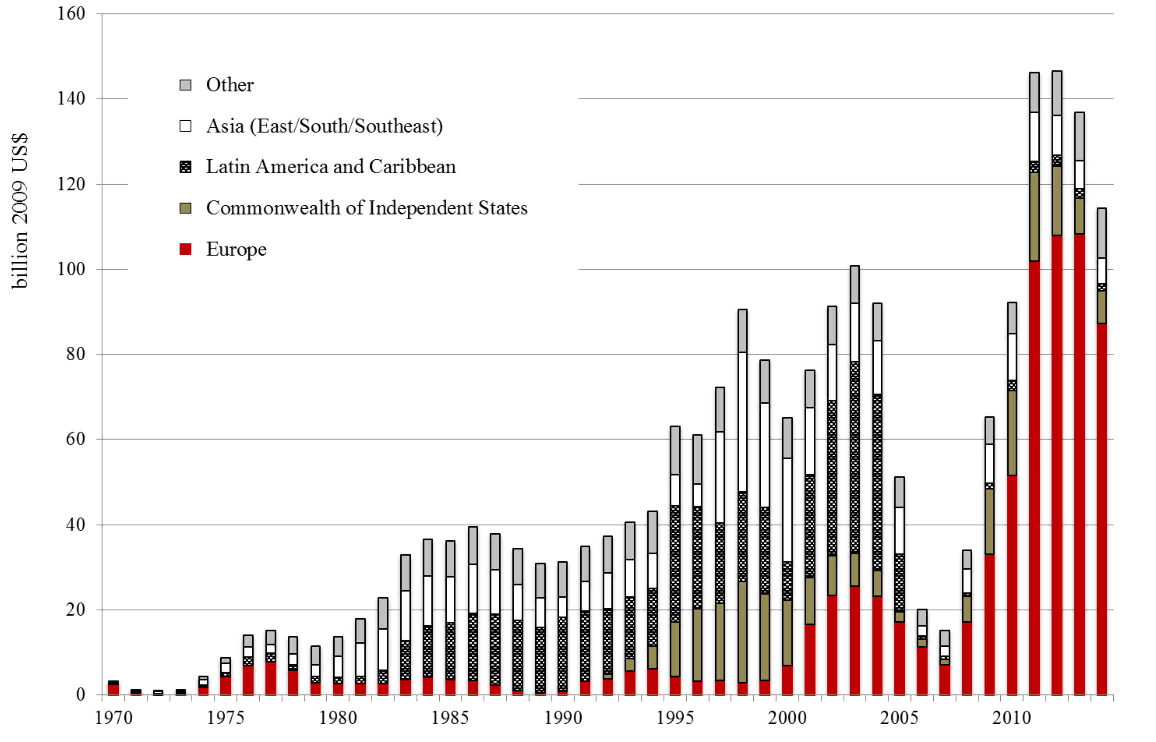
Figure A.3. IMF Programs Get Bigger, 1960-2014



Sources: Gold (1970), International Monetary Fund, Monitoring of Fund Arrangements (MONA) Database, Joyce (2005), Killick (1995), Mody and Saravia (2006).

Figure A.4. Outstanding IMF credit (total) by world region



Sources: IMF, International Financial Statistics (outstanding loans and GRAs), author's calculation. Amounts are converted from SDR to real US$ using 2009 as the base year.

Appendix IV: ***Supplementary material on IMF program duration***

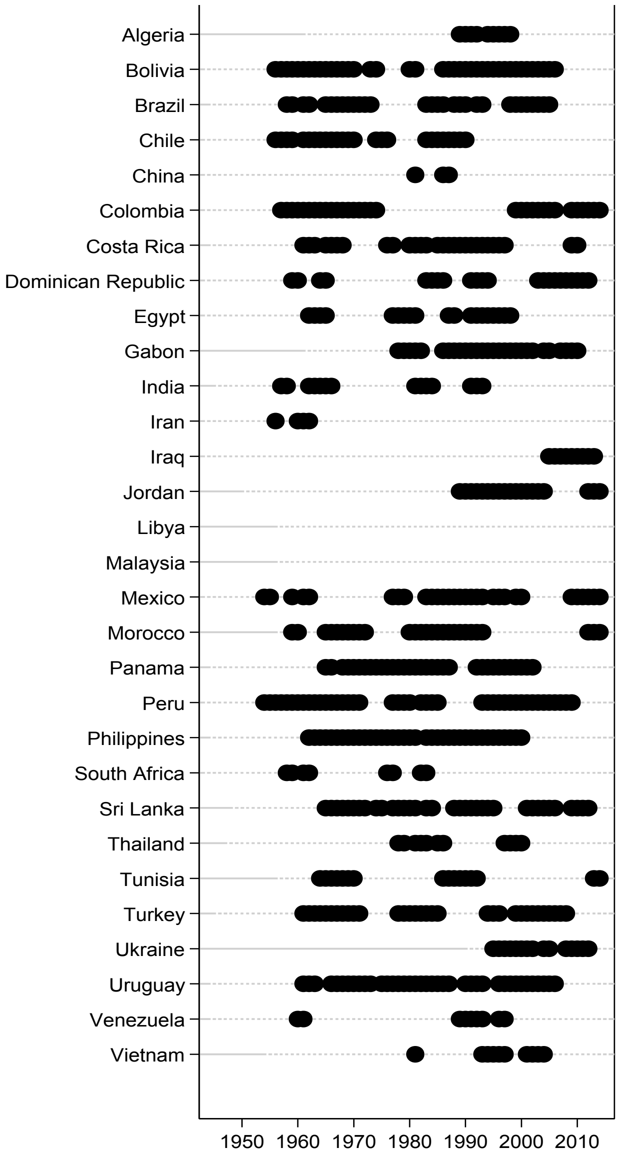
We suggest that these differences in the underlying problems faced by IMF membership over time influenced important features of IMF programs in terms of their duration, recurrence (serial IMF programs), and their size (relative to both the size of the economy and to their respective IMF quotas). The selected country profiles presented in Figures A.5 and A.6, complement the evidence discussed in Section III. As A.5 highlights for the advanced economies, IMF programs prior to the 1980s (on the whole) were shorter and less recurring (with the exception of the UK) than the programs of more modern vintage in many emerging and developing economies (Figure A.6). The high incidence of default/restructuring of external debt that has accompanied many of the emerging market cases across nearly all regions (for instance, Ghana, Peru, and Vietnam) is, no doubt, connected the different modalities of the IMF interventions. Some of these programs had their origins in the reversal of favorable external factors, as real interest rates climbed in the early 1980s, commodity prices crashed and external financing became difficult, if not impossible, for many sovereigns

Appendix Figure A.5. Years under IMF Programs: 26 Advanced Economies, 1950-2013

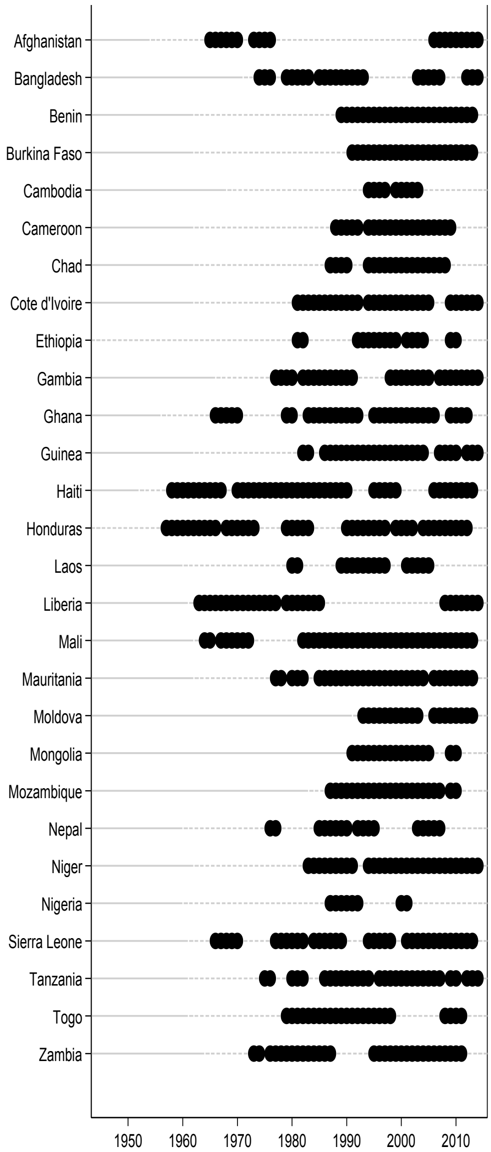
Sources: Gold (1970), International Monetary Fund, Monitoring of Fund Arrangements (MONA) Database, Joyce (2005), Killick (1995), Mody and Saravia (2006).

Appendix Figure A.6. Serial Dependence – Years under IMF Programs 1950-2013

Panel a: Selected Emerging Markets



Panel b: Selected Low Income Countries



Sources: Gold (1970), International Monetary Fund, Monitoring of Fund Arrangements (MONA) Database, Joyce (2005), Killick (1995), Mody and Saravia (2006).

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Appendix IV: *Arrears to the IMF*

Country	Years with arrears to the IMF	Declared Ineligible for IMF Lending?	Declaration of Non-Cooperation?	Suspension of Voting Rights?	Compulsory withdrawal?
Afghanistan	1996-2003				
Bosnia and Herzegovina	1992-1995				
Cambodia	1975-1993	Yes, in 1978			
Central African Republic	1993-1994				
Congo, Dem. Rep.	1988, 1991-2002	Yes, in 1991	Yes, in 1992	Yes, in 1994	
Cuba	1959-1964	Initiated in 1963, but Cuba withdraws from the Fund in 1964 and repays			
Egypt	1967-1968				
Gambia	1985-1986				
Guyana	1983-1990	Yes, in 1985			
Haiti	1988-1989, 1991-1994				
Honduras	1987-1990	Yes, in 1989			
Iraq	1991-2004				
Liberia	1985-2008	Yes, in 1986	Yes in 1999	Yes, in 2003	
Panama	1988-1992	Yes, in 1989			
Peru	1985-1993	Yes, in 1986			
Serbia	1993-2000				
Sierra Leone	1985, 1987-1994	Yes, in 1988			
Somalia	1987-today	Yes, in 1988			
Sudan	1984-today	Yes, in 1986	Yes, in 1990	Yes, in 1993	Initiated in 1994, but suspended
Tanzania	1985-1986				
Vietnam	1984-1993	Yes, in 1985			
Zambia	1986-1994	Yes, in 1987			
Zimbabwe	2001-today	Yes, in 2001	Yes, in 2002	Yes, in 2003	Initiated in 2003, but suspended in 2006 due to repayments

Notes: The IMF has an established procedure to react to protracted arrears on its loans. The punishment measures range from declaring a country ineligible for additional IMF leinding, to a declaration of non-cooperation (which implies a halt of technical assistant programs, for example), to a suspension of voting rights, and, most drastically, a procedure to prepare a compulsory withdrawal from the IMF (this has never actually occurred, countries like Cuba left voluntarily and fully settled their arrears eventually). For details, see - IMF 2012. “Review of the Fund’s Strategy on Overdue Financial Obligations” (link below)

Sources used in this table:

- U. S. Government Accountability Office, 1999. “International Monetary Fund: Observations on the IMF's Financial Operations”, Appendix IV – “Arrears by Country since 1983”
- Boughton, James, 2001. *Silent Revolution, The International Monetary Fund 1979–1989*, Chapter 16. "Digging a Hole, Filling It In: Payments Arrears to the Fund" https://www.imf.org/external/pubs/ft/history/2001/
- Boughton, James, 2012. *Tearing Down Walls. The International Monetary Fund 1990-1999* Chapter 16 "Carrots and Sticks: Safeguarding the Fund’s Resources" https://www.imf.org/external/pubs/ft/history/2012/
- IMF 2012. “Review of the Fund’s Strategy on Overdue Financial Obligations” https://www.imf.org/external/np/pp/eng/2012/082012.pdf

Appendix V: ***Variables and data sources***

Variable	Coverage	Sources
IMF programs	1952-2015	Gold (1970), International Monetary Fund, Monitoring of Fund Arrangements (MONA) Database, Joyce (2005), Killick (1995), Mody and Saravia (2006).
Note: the first program is 1952:		same
Amount	1952-2015	same
Type of program	1952-2015	same
Beginning date	1952-2015	same
End date	1952-2015	same
Duration	1952-2015	Author' calculation based on above sources
IMF membership date	1945-2015	International Monetary Fund, Financial Position in the Fund, all member countries
IMF quota	1945-2015	International Monetary Fund, Financial Position in the Fund, all member countries
IMF credit outstanding	1970-2014	IMF International Financial Statistics, sum of GRA and loans outstanding
PPP-per capita GDP in US dollars year=2009	2009	International Monetary Fund, *World Economic Outlook*
Nominal GDP	1952-2015	
Public debt	1952-2015	Reinhart and Rogoff (2009), Reinhart and Trebesch (2015), Abbas
External (public plus private) debt	1970-2015	Lane and Milesi Ferretti, International Monetary Fund, World Bank
World GDP	1952-2015	International Monetary Fund, *World Economic Outlook*
World imports	1952-2015	International Monetary Fund, *World Economic Outlook*
US CPI	1952-2015	Bureau of Labor Statistics
Banking crises dates	1945-2015	Reinhart and Rogoff (2009) and Reinhart (2015)
Currency crises dates	1945-2015	Reinhart and Rogoff (2009) and Reinhart (2015)
Default on external debt (private creditors)	1945-2015	Reinhart and Rogoff (2009) and Reinhart (2015)
Default/arrears on external official creditors	1975-2015	Reinhart and Trebesch (2015), Beers and Nadeau, (2015), World Bank, various.