No one left behind? Assessing the Global Financial Safety Net Performance During COVID-19

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1. Intro

Since the Global Financial Crisis of 2008, the global financial safety net (GFSN) has changed dramatically to become increasingly voluminous and complex. In particular, new lending institutions and mechanisms have been developed; lending instruments have diversified, and there has been a dramatic increase in resources. Today, the GFSN is comprised of the International Monetary Fund (IMF), regional financial arrangements (RFAs), and bilateral currency swaps between central banks. Prior to these changes, the IMF was the largest crisis finance institution and it was accompanied by a handful of regional financial arrangements (RFAs) that were either very small or untested.

Today, the GFSN has an unprecedented capacity for crisis prevention and liquidity support via emergency financing institutions and arrangements at the bilateral, regional, and global level. In total, the collective lending capacity of the GFSN is least US$ 3.5 trillion (Mühlich et al. 2020; see figure 1). This represents a more than tenfold increase to available short-term liquidity compared to before the global financial crisis.[2]

As the Covid-19 pandemic took hold, the potential need for liquidity resources were estimated to exceed US$ 2.5 trillion (UNCTAD 2020). This presented a great opportunity for the expanded and more robust GFSN to be put to the test during a truly global crisis. However, the significantly expanded crisis finance capacity of regional (RFAs) and global (IMF) elements in the GFSN remains largely untapped.

This article examines this puzzle: while the GFSN's total size and associated lending capacity is as large as it has never been before, institutionalized lending at the global and regional level through the IMF and RFAs has to date underachieved its potential in lending in response to COVID-19 (Stubbs et al. 2020; Mühlich et al. 2021). While experts have identified RFAs and IMF as potentially a scalable crisis backstop during COVID-19 (see Kozul-Right 2020; Gallagher et al. 2021), this has yet to materialize. This paper conducts an analysis of GFSN lending during

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[2] Beyond these commonly named core elements, also crisis lending by multilateral development banks, bilateral short-term government loans, and special drawing rights (SDRs) holdings in the IMF could be seen as part of the GFSN but are not within the scope of this analysis.

COVID-19 and before as a first step at holistically assessing the functionality and impacts of the GFSN in responding to the COVID-19 pandemic.

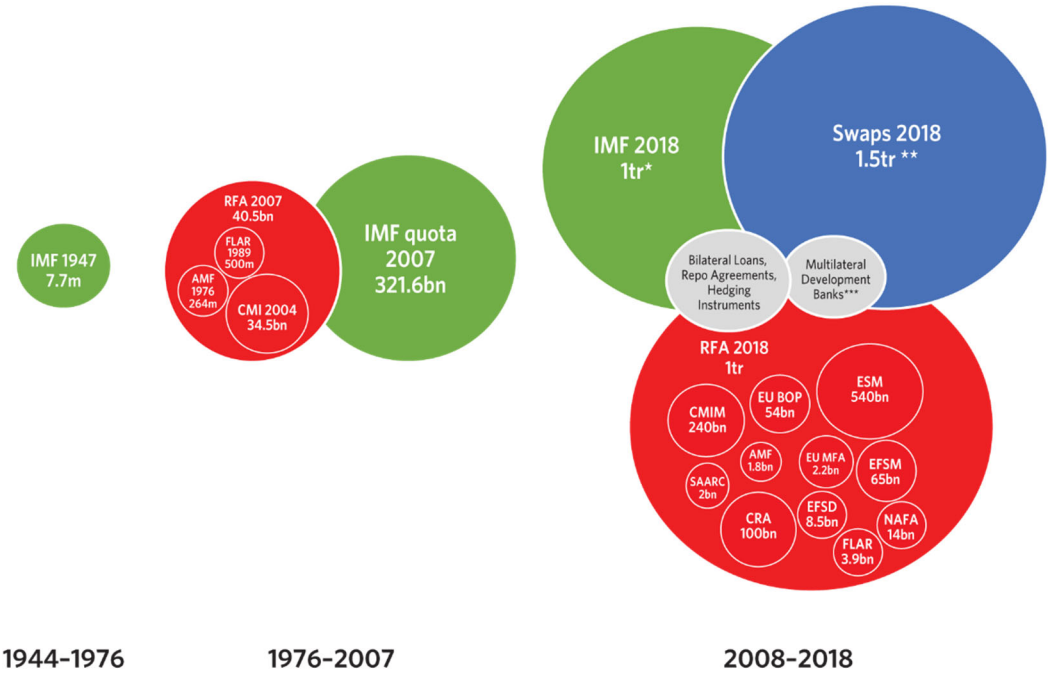
Drawing from our analysis of the patterns of use of RFAs in the GFSN during the COVID-19 pandemic and before, this paper explores potential explanations for the unexpectedly low RFA use since the outset of the pandemic, in order to deduce conclusions on the role of RFAs in crisis finance and on directions for reform of IMF facilities. While private capital inflows may have staved off the need for crisis finance up until the present moment (Wheatly 2020), the looming debt crisis across emerging market and developing economies (EMDEs) and rapidly rising interest rates in the global North pose considerable risks. Market-based financing, especially for EMDEs, is already beginning to erode due to rising interest rates in advanced economies, as debt levels in EMDEs continue to surge (Forni and Turner 2021).

While much of the literature to date has focused on one element of the GFSN or specific mechanisms, such as the IMF (Stiglitz 2002), a specific RFA (see for example Grimes and Kring 2020), or bilateral swaps (Aizenman et al. 2021; Perks et al. 2021), this article presents the first effort to date to quantify the GFSN and to assess the functioning of all layers of the GFSN in a time of crisis. Using the utilization of the GFSN during the COVID-19 pandemic, this paper assesses the extent to which the GFSN and in particular the RFA component is adequately built to efficiently respond to such a crisis as the COVID-19 pandemic. For a long time, the IMF was the only available source of financing for the majority of the world's countries. The first Regional Financial Arrangements (RFAs) between emerging and developing economies, the Arab Monetary Fund (AMF) and the Latin America Reserve Fund (FLAR), emerged in the 1970s as alternative lending sources. In part, their emergence represented reactions to oil price volatility and debt crises in North Africa and Latin America. The second wave of RFAs was created following the Asian financial crisis. The global financial crisis provoked the creation of a number of diverse institutions that provide emergency liquidity at the multilateral, regional, and the bilateral level. Rather large regional funds were created or enlarged in Europe, Eurasia (Eurasian Fund for Stabilization and Development, EFSD), and Asia (Chiang Mai Initiative Multilateralization, CMIM; and South Asian Association for Regional Cooperation Swap Arrangement, SAARC), or trans-regionally between emerging markets (Contingent Reserve Arrangement of the New Development Bank – CRA) (see figure 2).

This article triangulates economic and international political economy concepts to develop a novel framework to analyze the utilization of the GFSN for crisis finance and to detect inefficiencies. Empirically, we compare patterns of RFA use before and during the pandemic. Through our analysis, this paper derives possible explanations for the underutilization of most of the regional elements in the GFSN in reaction to COVID-19. We examine the data provided in Mühlich and Fritz (2018) on historical GFSN utilization between 1976 and 2018 and the data provided by Kring et al. (2022; https://gfsntracker.com/) on GFSN utilization from February 2020 until December 2021 by employing comparative descriptive statistics. While the concept of regime complexity has been applied to the GFSN before, this is to our knowledge the first application of regime complexity to GFSN lending during COVID-19.

Finally, application of the theoretical framework to patterns of borrowing and lending in the GFSN allows us to derive conclusions on how to improve crisis prevention and backstop by the GFSN. Our analysis finds that the GFSN is characterized by overlapping membership; a lack of coordination; a variety of lending and surveillance rules and regulations; and incremental institutional changes in each element. Relatedly, we find that it is not only economic factors such as borrowing volumes or conditionality that determine GFSN use but rather a variety of political economy properties of the complex GFSN. The next section develops the theoretical framework. Based thereon, the third section analyzes RFA lending patterns before and during the COVID-19 related crisis and, finally, derives conclusions on essential parts of GFSN reform to bring untapped RFA resources into utilization.

Figure 1: Institutions, agreements and size of the global financial safety net 1944-2018 in US$



Source: Authors' compilation (Mühlich et al. 2020).
Notes: NAFA – North American Framework Agreement; ESM – European Stability Mechanism; EFSM – European Financial Stabilization Mechanism; EU BOP – EU Balance of Payments Assistance; EU MFA – EU Macro Financial Assistance. The figures for CRA and CMIM include the total amount of accessible liquidity, including the 70 percent that were only available upon agreement on an IMF program in 2018. In 2021, this share was reduced to 60 percent. The lending capacity of the RFAs per country is calculated based either on the given maximum borrowing amounts, independent of the maturity, or the stated multiple of the paid-up capital for the maturity of one year – depending on each RFA's individual rules and regulations. *Total resources stated by the IMF is SDR 978bn; lending capacity is stated to be SDR 715bn (about US$ 958.1bn) (IMF n.d.a). Authors' data sum up to US$ 927bn based on member country's quota under normal access (maturity of one year of 145% of paid in quota). **Estimated volume for 2018, based on Denbee et al. (2016), updated by Essers and Vincent (2017). We follow Denbee et al. (2016) by assuming that the reciprocal nature of currency swaps among advanced economies requires counting each swap twice, and by assuming that the unlimited swap lines between the US Fed and the ECB, Canada, Japan, United Kingdom, and Switzerland can be estimated by the amounts drawn during the global financial crisis, which sums up to about US$ 600bn. When we apply these assumptions to our estimates for the year 2018, the amount of total active swaps

sums up to about least US$ 1.5tr. ***Several multilateral development banks (MDBs) have established credit lines for emergency lending during the global financial crisis (see Grabel 2017).

2. A theoretical framework for liquidity provision through the GFSN: Drawing from economics and international political economy

Research on the GFSN in different disciplines is young and dynamically evolving. In contrast, academic debate about individual elements of the GFSN looks back on a longer history, particularly with regards to the IMF (Stiglitz 2002; Dreher 2009), but also as regards RFAs (Ocampo 2006). More recently, central bank currency swaps have become subject of scientific interest (Aizenman et al. 2021, Perks et al. 2021).

Recent literature that examines the GFSN primarily falls into one of two camps: either more traditional economic theory or international political economy. Scholarly elaboration with an economic focus concentrates by and large on estimating the appropriateness of the size of crisis liquidity provision of each element of the GFSN as well as of the total GFSN to respond to idiosyncratic or systemic shocks, or to different types of crises (Scheubel and Stracca 2019; Essers and Vincent 2017; Denbee et al. 2016). With the evolving proliferation of crisis finance sources in the GFSN (Henning 2016, 2019), scholars of political economy have primarily focused on the politics of borrowing and lending activities. In particular, the literature has debated the consequences of countries having alternative financing sources for crisis prevention and backstop. While some have suggested the positive potential for alternative sources of finance (Grabel 2017; Kring and Grimes 2019), others have raised concerns about moral hazard (WederDiMauro and Zettlmeyer 2017) on the one hand and the requirements for GFSN coordination on the other hand (McKay et al. 2011; Henning 2019).

This article leverages literature from economics and political economy to develop a novel theoretical framework to analyze the utilization of crisis finance from the uncoordinated global and regional elements of the GFSN. We apply this framework to the utilization of liquidity provision through the GFSN before and during the COVID-19 crisis until the end of 2021. Based on Mühlich and Fritz (2021), we argue that despite the fact that borrowing volume is essential for crisis prevention and backstop capacity, aspects beyond financing volume are important to assess the effectiveness of the GFSN in its crisis finance provision.

First, the economic literature offers three generations of balance of payments crises models that provide insights on how crisis prevention and liquidity backstop should be provided. Central to these models is the idea that there is a limited stock of any asset, which is depleted by either policy errors or investors' flight, or a combination of both. While the first generation explains attacks on a currency with a fixed exchange rate as the result of inconsistent government policies or the flight out of public bonds under the assumption of rational expectations, second-generation models do not necessarily assume a clear-cut policy failure but include the possibility of multiple equilibria for countries with economic policies that are

not clearly unsustainable. This leads to the possibility of a self-fulfilling debt or fiscal crisis (Cole/Kehoe 2000). Third-generation models of financial crises (e.g. Corsetti et al. 1998) surfaced in the context of emerging market crises during the 1990s and reveal the negative consequences of international debt and domestic financial crises.

The literature identifies two major questions that need to be assessed to adequately respond to a financial crisis: First, whether financial distress is temporary illiquidity or profound insolvency. Second, whether the crisis is caused by an exogenous shock or domestically or both. The former distinction is important to assess whether crisis lending is appropriate, instead of debt re-negotiation or cancellation. The latter distinction is important to assess reform and lending needs. In the first-generation models, any liquidity provision from outside must be conditional on an adjustment program to achieve a rebalancing of public finance and to prevent moral hazard. In the second- and third-generation models, a shift in expectations can trigger a crisis. In such cases – even without a change in underlying fundamentals – it is difficult to pinpoint one specific reason for the occurrence of a crisis (Krugman 1999). The implication in both of these models is that if a third party – such as one or more of the elements of the GFSN – can guarantee continued access to loans at sensible interest rates, expectations in a 'good' equilibrium will stabilize and a self-fulfilling crisis will not occur. The timeliness and sufficiency of the provided liquidity are the key criteria for the third party to reduce financial vulnerabilities.

The essential outcome of all generations of models that we recur to here is that prevention and backstop of balance of payments difficulties in a situation of temporary illiquidity requires a quick third-party intervention with voluminous and adequately conditioned short-term lending (Obstfeld 1996, Krugman 1999).

The recent proliferation of international rules, laws, and institutions has triggered attention in the field of international political economy to the role that nested and overlapping institutions, forum shopping and regime complexes play in shaping the patterns of global governance, i.e. regime complexity (Drezner 2009, p. 65). To better understand complex regimes and their potential influence on actors' decisions, scholars have sought to assess how complexity of interacting international and multilateral institutions develops and shapes decision-making in the use of these institutions (Alter/Raustalia 2018).

This article builds on this literature in arguing that regime complexity provides a theoretical frame for examining both the causes and consequences of the dynamic expansion of the GFSN at the regional and bilateral levels over the last decades. Regime complexity has been used previously to assess European and global institutions' responses to the Eurozone crisis (Henning 2017, 2019), and countries' choices in the GFSN (Mühlich and Fritz 2021).

Here, we observe some changes of this complex system: On the one side, the IMF has been able to adjust, to a certain degree, to the specific conditions of the pandemic, by opening up for more non-conditional crisis lending. At the same time, the IMF has not been able to re-establish itself as a coordinator of the complex and multi-layered GFSN. Bilateral swap

agreements now are established as a powerful third layer of the GFSN, escaping completely multilateral coordinated crisis response.

DeBúrca et al. (2013) categorize regime complexes as one mode of pluralist global governance: "Institutional inertia and the dispersion of power and interests have thus led to the emergence of a variety of governance arrangements, including regime complexes and various internationally 'orchestrated' governance arrangements" (DeBúrca 2013: 735). These alternative regimes can develop as legitimate alternatives to the status-quo regimes as "platforms from which to influence the development of existing international organizations" (DeBúrca et al. 2013: 733). When applied to the GFSN, regime complexity demonstrates that though the objective aims of individual actors may vary, the proliferation of institutions within the GFSN is motivated by a desire to develop alternatives to the IMF (see also Grabel 2017).

Prior to the emergence of RFAs, the first wave of which emerged in the 1970s, EMDEs were dissatisfied with the status-quo crisis prevention and backstop mechanisms provided by the IMF. Historical evidence supports many EMDEs views that IMF policies and practices have exacerbated financial, currency, and debt crises, for example, in Latin America and Southeast Asia in the 1980s and 1990s, and missed potential financial crisis, such as the 2008/09 global financial crisis and the Eurozone crisis (Schneider 2013). Further, particularly EMDEs are dissatisfied with their representation in the fund, its borrowing conditions (Kentikelenis et al. 2016) and the governance structure of the IMF.

The political economy concept of regime complexity allows relating dissatisfaction with standard emergency finance as an important cause for creating alternative crisis finance sources on the one hand and as an important driver of patterns of use of the GFSN on the other hand. Increasing complexity in the GFSN stems from the search for alternative crisis finance sources: RFAs have been created as alternatives to the IMF with the aim to create regional ownership, develop more balanced decision-making structures, and allow crisis finance rules that are autonomous from the IMF. Central bank currency swaps have been created as an alternative form of liquidity provision to multilateral mechanisms, both, IMF and RFAs. They provide a source of quickly disposable liquidity without a multilateral decision-making process and reform obligations.

That said, dissatisfaction of borrowing countries does not only uni-directionally impact the GFSN. Both the theoretical lens of regime complexity and empirical evidence on the utilization of the GFSN presented here historically and in the present COVID-19 pandemic, suggests that regime complexity in the GFSN also shapes borrowing decisions of countries. The unique contribution of this article is that it does not only account for the liquidity provided through the GFSN and the development of the regime complex GFSN, but also for the impact of the complexity in the GFSN on the countries' borrowing patterns. In so doing, we account for the mutually constitutive nature of countries and the GFSN regime complex.

We triangulate balance of payments crises models and the regime complexity concepts to develop a theoretical framework to study the use of the GFSN as an uncoordinated and non-

hierarchical overlapping ecosystem of multilateral and bilateral crisis finance institutions during the COVID-19 pandemic. This framework allows relating economic criteria of volume, timeliness, and conditionality of crisis finance of the different elements of the GFSN with explanations for the under-utilization of the IMF and the RFAs in response to the COVID-19 shock.

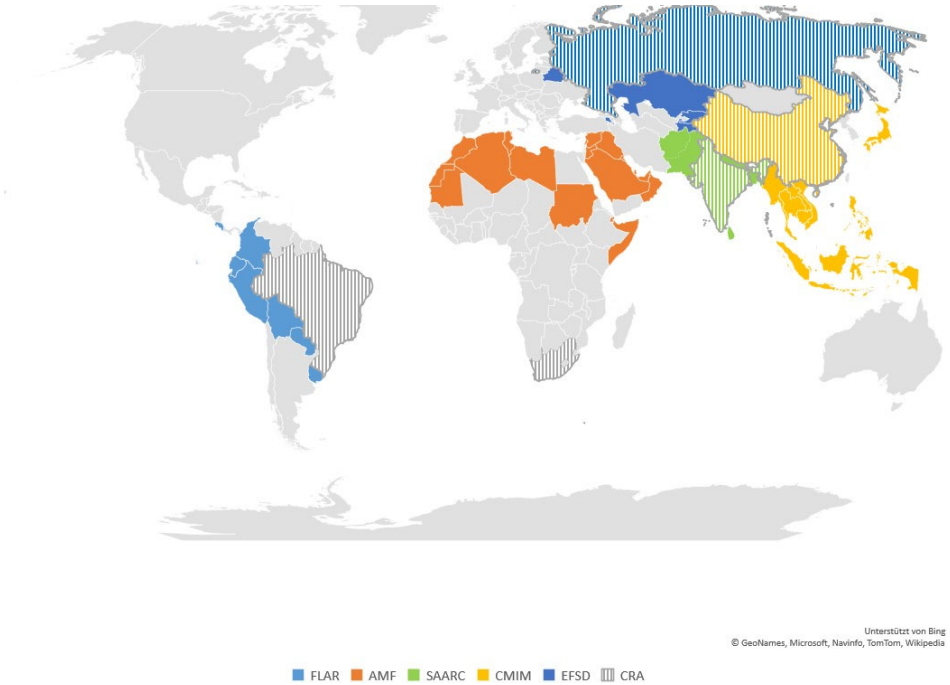
3. GFSN capacity and utilization before and during the COVID-19 pandemic

The creation of regional and bilateral crisis prevention and backstop mechanisms has been fueled by crisis events ever since the 1970s whereof the global financial crisis 2008/9 catalyzed the most dramatic transformation. Oftentimes, the reaction of the IMF at the global level has left countries dissatisfied with the recovery under IMF programs.

Further, with the global financial crisis 2008/09, the dynamic expansion of central bank bilateral currency swaps represents a strong transformation in the GFSN (Destais 2016). While currency swaps are the least institutionalized, least conditional, most timely and most voluminous emergency finance source in the GFSN today, as a non-multilateral instrument, swaps are also the least predictable and the most selectively provided crisis response (Denbee et al. 2016, Perks et al. 2021). Central banks mutually agree to a currency swap for different purposes. In particular the Peoples Bank of China (PBOC) uses currency swaps to facilitate trade with the partner central banks' country. Yet, Mühlich and Fritz (2018) report 45 central bank currency swaps until 2015 for a sub-set of 50 EMDEs of which 23 have the purpose of financial stabilization. Five years later, Kring et al. 2022 report about 76 active swap agreements with a total volume of about US$ 1.5 trillion (see figure 1) of which 40 have the purpose of financial stabilization.

The COVID-19 shock has induced a further reform of IMF lending facilities that moderately enlarged access to non-conditionally provided external liquidity for balance of payments support. In April 2020, the IMF introduced the Short-term Liquidity Line (SLL) for financing up to one year without standard ex-post conditionality and access to normal multiple of quota (145 percent) – yet, with the same pre-qualification criteria of the Flexible Credit Line (FCL). The FCL is only available to members with very strong fundamentals so that most EMDEs are not eligible. Further, and most important for EMDEs, in April 2020, the IMF temporarily (until June 2023) expanded accessible liquidity volumes of the non-concessional Rapid Finance Instrument (RFI) and the concessional Rapid Credit Facility (RCF) from 100 percent to 150 percent for up to five years. Both, RFI and RCF come without the standard ex-post conditionality criteria for disbursement.

Figure 2: RFAs between EMDEs



Source: Authors

While GFSN expansion has tremendously increased available liquidity, Mühlich et al. (2020, 2021, based on data from the https://gfsntracker.com/ show that inequalities stretch along geographical and structural dimensions: first, between those countries that are members of an RFA or a currency swap and those that are not, and second, between those RFAs loans or currency swaps that are voluminous and provide a high financing capacity and those RFAs loans or currency swaps that are comparatively small and cannot provide crisis prevention and backstop.

In reaction to COVID-19, the rhetorical commitments of the IMF, RFAs, and central banks in the beginning of 2020 to robustly deploy their resources in response to COVID-19 and its economic effects have sought to signal a commitment to bold action. For example, in 2020, the FLAR had committed to tap credit markets, if necessary, to leverage its credit rating and paid in capital. The ASEAN+3 Macroeconomic Research Office had committed to intensified surveillance efforts in CMIM. The BRICS ministers noted a renewed commitment "to make full use of […] the Contingent Reserve Arrangement (CRA) to provide sturdy financial support to our economies" (MFAPRC 2020).

Numerous developing countries have tapped the reformed and expanded IMF facilities since their set up in early 2020. At the same time, requests for the IMF's standard programs have been very low and demanded partly by countries which already have been in negotiations for conventional IMF crisis lending before the pandemic, or have extended earlier agreements with standard conditionalities (Kring et al. 2022; see also Gallagher and Carlin 2020). Further, RFA borrowing highlights a similar paradox: the RFAs with the largest lending capacity are not utilized at all, RFAs with the smallest and mid-sized lending capacity are the most utilized.

Since the beginning of the spread of the COVID-19 virus and the related economic and financial fallout, at end December 2021, the IMF had disbursed about USD 137 billion (80 per cent) of

overall lending as unconditional lending since the beginning of the pandemic. Of this, a smaller share (24 percent) was channeled through the newly reformed catastrophe facilities, in 108 individual loan contracts. The bigger part (76%) was disbursed in only 5 loan contracts which require pre-qualification, i.e. where countries need to have sound macroeconomic stances in order to qualify for a preventive IMF loan. Only about US$ 35 billion (20 percent) of IMF overall lending was channeled through 280 conditional loan disbursements since the onset of the COVID-19 pandemic. Thereof, debt service restructuring made up for US$ 1 billion in 132 individual programs. In terms of number of programs, conditional lending was disbursed through a total of 35 programs.

Thereby, the IMF provided less than a fifth of its available lending capacity of 1 trillion USD. Out of this share, the bulk of financing went through a very small number of countries that had previously pre-qualified for unconditional IMF lending. Further, the RFAs between EMDEs have been utilized very unevenly. They have been demanded at rather small level (AMF: 10 programs with a total volume of about USD 1358 million; EFSD: three programs, USD 650 million; SAARC: 5 programs, USD 1200 million; and FLAR: one program, USD 308 million) or have not been utilized at all (CMIM and CRA). The total loan amount approved of the RFAs that were requested by EMDEs amounted to USD 3.516 billion.

Beyond IMF and RFA disbursements to EMDEs, numerous new bilateral currency swaps between central banks have been agreed upon with the aim to enhance financial stability. Kring et al. 2022 report at least about 44 currency swap agreements with a total volume of at least USD 595 billion – excluding currency swaps by China with advanced economies and excluding renewals of swap contracts. Out of these, 29 have been stated to address financial stabilization and trade facilitation, 6 were addressed exclusively to trade facilitation and 9 were addressed exclusively to financial stabilization. Hence, other than before the COVID-19 pandemic, utilization of currency swaps to respond to short-term liquidity needs increases.[3]

In the following, we apply the above theoretical frameworks to derive possible explanations for the observed underutilization of RFAs during the initial phases of the COVID-19 pandemic. We use descriptive statistics to look at the use of the different GFSN elements by those 61 EMDE that are member to one of the six above mentioned RFAs. We compare borrowing patterns before (based on Mühlich/Fritz 2021)[4] and during the COVID-19 shock.

Mühlich and Fritz (2021) find that for the use of RFAs, the economic crisis finance criteria of volume, time, and conditionality provide only limited explanation. Only when including the variety of governance structures of RFAs, the authors find more robust explanations for

[3] Mühlich/Fritz 2018 find that until 2018, each purpose – trade facilitation and financial stabilization respectively – made up for half of all currency swaps between those countries. Out of the bilateral central bank currency swaps active during the period of the COVID-19 shock, we count more than twice as many currency swap agreements with the purpose of financial stability/crisis prevention than trade facilitation.

[4] Borrowing patterns before COVID-19 are analyzed in Mühlich and Fritz (2021). Their analysis is based on a data set between 1976 and 2018 on 446 cases of borrowing from any of these three GFSN elements by 61 EMDEs that are members to the six existing RFAs.

observable differences in RFA use. For the assessment of RFA governance, they take into account the intra-regional balance of power, i.e. the distribution of capital and voting power between lenders and borrowers within the RFA; and the autonomy of decision-making, i.e. the ability to lend to members without depending on a parallel IMF program. Based on these economic and governance criteria, the authors identify three groups of RFAs that show similarities: First, small sized, institutionally autonomous RFAs with a balanced intra-regional power structure, the Latin American Reserve Fund (FLAR) and the Arab Monetary Fund (AMF). Second, medium-sized, institutionally autonomous and single-lender-dominated RFAs, the Eurasian Fund for Stabilization and Development (EFSD) and the swap arrangement within the South Asian Association for Regional Cooperation (SAARC). Third, non-autonomous RFAs that link their liquidity provision to the IMF, the Chiang Mai Initiative Multilateralization (CMIM), and the trans-regional Contingent Reserve Arrangement (CRA), that have so far not been utilized by their member countries.

In the following, we examine whether we find similar GFSN utilization patterns by member countries of these three groups of RFAs in response to the first phase of COVID-19 as Mühlich and Fritz (2021) elaborate for earlier decades and we develop explanations for the identified usage patterns based on the proposed theoretical framework.

3.1. AMF and FLAR: small, autonomous, balanced governance structure

AMF member countries' borrowing patterns by and large, remained the same before and during the COVID-19 response: frequently borrowing AMF member countries continued drawing on their regional fund quite frequently, even if small loan amounts need to be augmented with IMF loans. Member countries that typically did not draw from the regional fund continued the same practice. Those countries that had swap arrangements in place already before the COVID-19 pandemic that expired renewed those arrangements (such as for example Egypt with China (US$ 2.6 billion) or Qatar with China (US$ 5.4 billion)).

AMF member countries Comoros, Djibouti, Egypt, Jordan, and Mauritania agreed on about US$ 4.3 billion loan agreements under unconditional newly reformed catastrophe facilities of the IMF. About US$ 97 million was utilized through debt restructuring. AMF member countries agreed on about US$ 8.1 billion in loan agreements under conditional lending facilities of the IMF. The largest loan of about US$ 5 billion was taken by Egypt in a classic SBA in June 2020 that was additionally preceded by a non-conditional borrowing. Jordan and Sudan both drew on conditional IMF lending of more than US$ 1 billion respectively.

AMF member countries combined borrowing from their regional fund and IMF drawings in very different ways: Egypt first drew on an unconditional IMF facility before utilizing a conditional IMF loan and subsequently drew on a non-conditional AMF loan of US$ 639 million additionally and combined multilateral borrowing with the renewal of the currency swap with China (see above). In contrast, Jordan combined conditional and non-conditional IMF lending in sequence with AMF non-conditional lending (US$ 142 million) and additionally drew on the EU MFA (US$ 565 million). The conditional IMF borrowing of Sudan was preceded by a non-conditional AMF program. Tunisia requested a non-conditional IMF loan before agreeing on

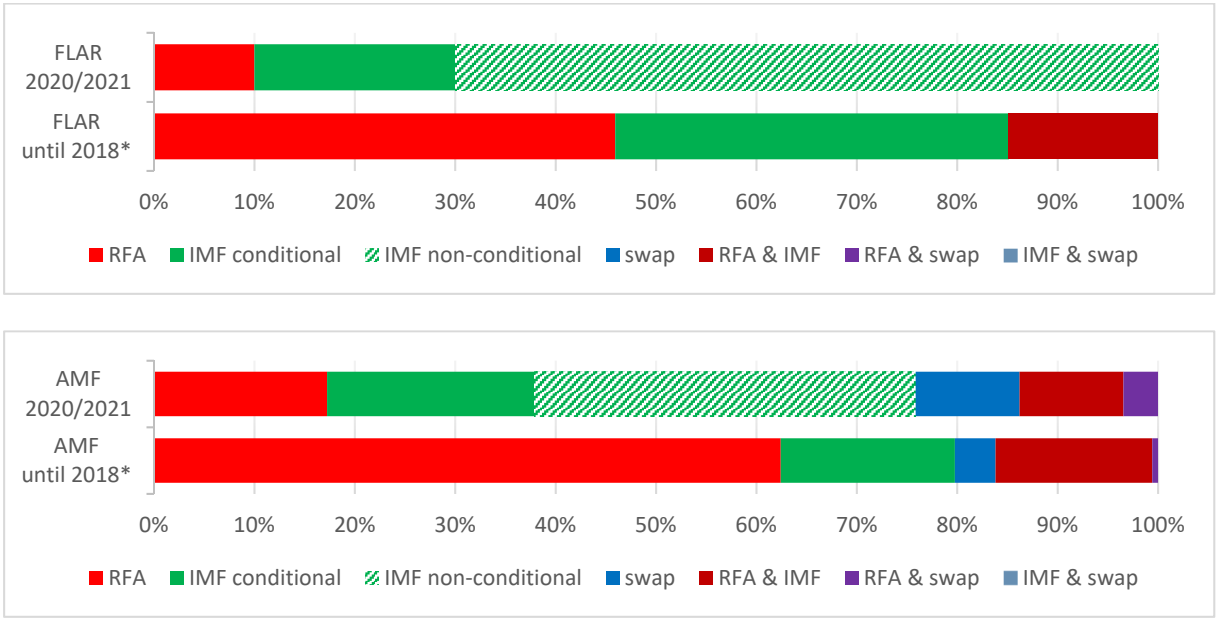
non-conditional and conditional borrowing from the AMF (US$ 239 million) as well as an EU MFA program (US$ 335 million) shortly after. Only Morocco exclusively drew on non-conditional and conditional AMF lines (US$ 338 million).

In contrast to AMF, FLAR frequent borrowing member countries predominantly relied on the IMF. The IMF provided more than US$ 29 billion in pre-qualification non-conditional lending (about US$ 16.8 billion for Colombia and almost US$ 11 billion for Peru) and about US$ 8 billion in conditional loan contracts. With the exception of Uruguay and Venezuela, all FLAR member countries obtained crisis financing from the reformed, non-conditional facilities predominantly in April and May 2020. Ecuador (about US$ 6.3 billion; 2020) and Costa Rica (about US$ 1.7 billion; 2021) requested conditional loans. In the case of Ecuador, this loan had been previously approved and extended in 2020 (IMF 2020; see figure 3)

Ecuador was the only FLAR member country that utilized the regional fund by drawing on the FLAR liquidity facility in April 2021 after having agreed on conditional and non-conditional loan agreements with the IMF in 2020.

As of end 2021, FLAR member countries' central banks are not part of the swap network.

Figure 3 Borrowing patterns before and during COVID-19 crisis in autonomous RFAs with balanced power structures: AMF and FLAR



Source: Authors. Notes: Percentage share of the number of all loan and swap agreements by member countries of the respective RFA with IMF, and agreed currency swaps *IMF non-conditional loan agreements before 2018 are not displayed separately but included in IMF conditional. Data taken from Mühlich and Fritz 2018, 2021; https://gfsntracker.com/.

What explains such borrowing behavior during a systemic shock? The balance of payments crises models gives us the criteria of timeliness, conditionality, and volume of liquidity provision, while the regime complexity framework suggests that a governance structure

different from the traditional institutions as the degree of autonomy from the IMF, and participatory decision structures of the RFA compared to those of the IMF are relevant.

These two eldest regional funds, both created in the 1970s, both fall short of sufficient lending volume for a majority of their members. At the same time, their disbursement time is short and de facto (FLAR) or partly (AMF) with no or little strings of conditionality attached (McKay et al. 2011). In response to the COVID-19 related financial distress in its member countries, FLAR tapped capital markets and increased its lending capacity by leveraging paid-in capital, as it already had done prior to the crisis. Both, AMF and FLAR, are institutionally autonomous, as lending decisions are taken without involvement of other institutions. FLAR fully and AMF partly has a balanced power relationship in the governance structure. In fact, FLAR has an extraordinarily egalitarian governance structure with each member country having one vote, independent from its capital contribution. Furthermore, it is the only RFA that has a very close relationship to its members that allows *de facto* unconditional lending without any arrears in repayment ever since.

AMF balance of power is somehow less egalitarian compared to FLAR and membership is much more economically diverse and broad compared to FLAR but its institutional design precludes strong strategic influence of large capital contributors. Like FLAR borrowers, AMF borrowers did not fall into arrears. A strong ownership of member countries of the RFAs feeds such borrowing behavior (Ocampo 2006; Kring and Grimes 2019).

In response to COVID-19 related financial stress, FLAR and AMF member countries have more intensively used IMF facilities. We hypothesize that IMF's temporarily offered non-conditional crisis support plays a key role here. Especially for the FLAR, utilization of IMF facilities has been much less before reform the pandemic. It seems that the offering of rather voluminous, rapid and condition-free IMF support overruled the former preference for the regional fund with its egalitarian governance structure. Additionally, Ecuador, a former frequent FLAR user, has been suffering from an acute balance of payments crisis where FLAR lending capacity does not seem to have been sufficient any longer, so that it searched for standard conditional IMF support.

Demand for AMF facilities continues despite the very small volumes offered in comparison to IMF. Nevertheless, IMF lending was important especially for those member countries with high financing needs such as Egypt or Suriname that could neither be covered by reformed unconditional catastrophe facilities of the IMF nor by the small AMF lending capacity.

For these small RFAs, expansion of membership and paid-in capital could provide higher lending capacities to member countries. Especially an expansion of FLAR membership in Latin America, as has taken place with Chile's accession in May 2022, would be most effective. At the same time, our analysis suggests that maintaining the egalitarian (FLAR) or balanced (AMF) power structure is a crucial ingredient to remaining a frequently utilized GFSN element. The FLAR's experience further suggests that bond issuance by a regional fund is a possibility to

counter-cyclically increase lending capacity without touching upon the shareholder structure – at least to a certain extent.

3.2. EFSD and SAARC: voluminous, autonomous, unbalanced governance

EFSD and SAARC member countries' borrowing shows less stand-alone use of their RFA than is the case for AMF and FLAR member countries. During the COVID-19 response, the borrowing member countries combined RFA and IMF borrowing. Several central bank currency swaps were still in place so that new swaps were combined with RFA and / or IMF lending only in very few cases (see figure 4). EFSD and SAARC member countries that typically did not draw from the regional fund continued the same practice during the pandemic.

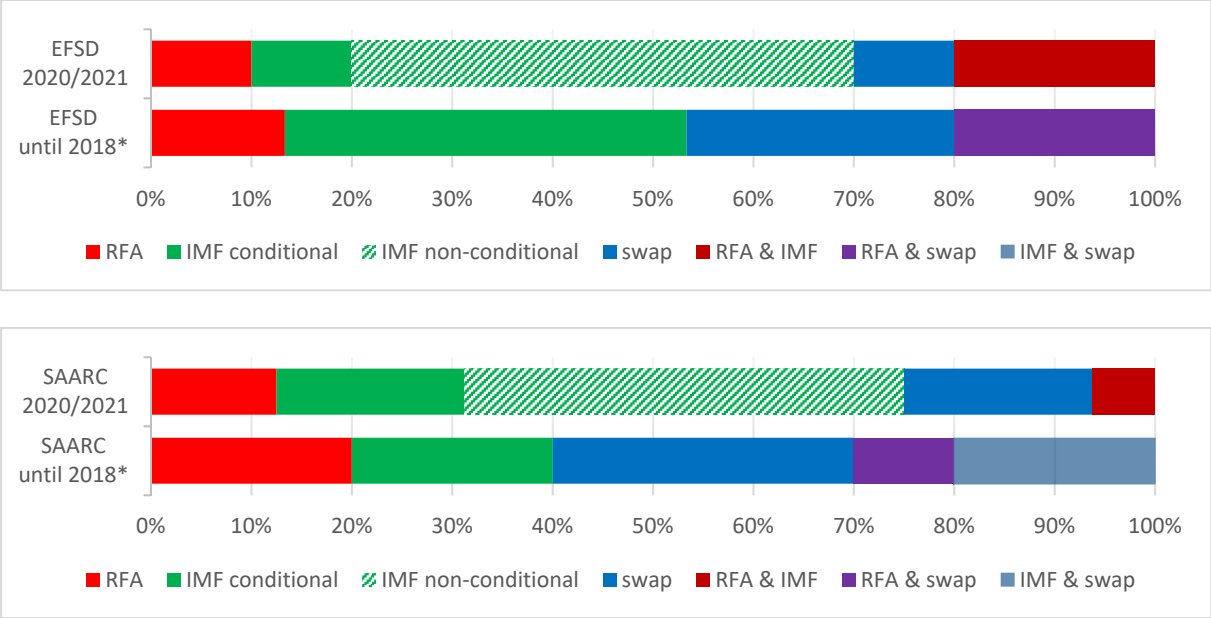
Frequently borrowing member countries continued to tap loans from the EFSD but at comparatively small amounts and in combination with IMF non-conditional lending that has become available to them under the reformed catastrophe facilities. Several bilateral currency swaps had been available already before the COVID-19 shock. Smaller EFSD borrowing member countries used IMF non-conditional lending (Kyrgyz Republic four times in 2020, and Tajikistan once in 2020) with a total amount of about US$ 434 million. Both, Kyrgyz Republic and Tajikistan, also made use of debt restructurings amounting to about US$ 53 million. Armenia augmented its SBA program in May 2020 with the amount of US$ 176.6 million. EFSD loan programs were agreed upon shortly after in 2020 by Kyrgyz Republic and Tajikistan (US$ 100 and US$ 50 million). Belarus drew on a new EFSD loan of US$ 500 million that the country used in parallel to a bilateral currency swap that had already been in place with the PBOC (about US$ 9.9 billion active until 2021). Apart from Belarus, Kazakhstan (about US$ 9.9 billion until 2021), Russia (about US$ 21 billion, renewed in 2020) and Tajikistan (about US$ 500 million active until 2021) had currency swap agreements in place since 2017 and 2018 respectively with the PBOC.

Similar to EFSD, SAARC member countries continued combining borrowing from different GFSN elements. Except Sri Lanka and India, all borrowing SAARC member countries utilized newly reformed non-conditional IMF facilities mostly in 2020 up to a sum of about US$ 2.6 billion of which the largest loan of about US$ 1 billion was agreed with Pakistan. Afghanistan, Bangladesh and Nepal agreed on several non-conditional loans. Additionally, Afghanistan and Nepal made use of the debt restructuring facility with a total sum of US$ 26 million. The only conditional IMF loan was agreed with Afghanistan in June 2020 (about US$ 366 million).

Within the SAARC swap arrangement, the Central Bank of India issued five bilateral swaps with Bhutan (two times US$ 200 million), Maldives (US$ 150 and US$ 250 million) and Sri Lanka (US$ 400 million). Bhutan and Maldives drew first on the SAARC before combining with an IMF non-conditional loan. Sri Lanka combined the SAARC swap with two additional central bank currency swaps in May 2021, one renewal with the PBOC of about US$ 1.5 billion with the twofold purpose of promoting trade and investment and strengthening financial stability, and a new arrangement with the central bank of Bangladesh of about US$ 50 million. Pakistan, in addition to borrowing from the IMF, renewed and augmented a central bank currency swap

with PBOC of at least US$ 3 billion and still had a currency swap arrangement in place with Iran that originated in 2017. India had a swap arrangement with Japan that originated from early 2019 and with United Arab Emirates that originated from 2017.

Figure 4 Borrowing patterns before and during COVID-19 crisis in autonomous RFAs with unbalanced power structures: EFSD and SAARC



Source: Authors. Notes: see figure 3.

Why would those borrowing member countries that find high lending capacity in their respective RFA combine borrowing from their regional fund with liquidity provision by other GFSN elements?

The regime complexity framework suggests that newly created institutions should be satisfactorily different from existing institutions that are considered dissatisfying.

EFSD and SAARC are both institutionally autonomous in the design of their facilities and in lending decisions. Yet, in contrast to AMF and FLAR, EFSD and SAARC have a governance structure that is strongly dominated by one creditor member country – Russia in the case of EFSD and India in the case of SAARC.

Both medium-sized RFAs, the Eurasian EFSD and the South Asian SAARC swap facility where created in the aftermath of the global financial crisis – the EFSD was set up as a trust fund at the Eurasian Development Bank in 2009, the SAARC swap facility came into operation at the Reserve Bank of India (RBI) in 2012 and has been elongated continuously since then. Both, EFSD and SAARC swap facility provide enormous lending capacity for some of their borrowing member countries.

While being able to provide voluminous crisis finance, in EFSD, the disbursement time is considerably slower than AMF or FLAR. Further, EFSD employs strict and comprehensive

reform programs on the one short-term lending facility it provides. In contrast, the SAARC swap agreement mechanism that the Indian central bank offers to the SAARC member countries disburses timely and presumably without further conditionality.

As in the case of AMF and FLAR, member countries' usage patterns cannot be clearly inferred from the criteria of balance of payments crisis models. In the case of EFSD and SAARC, however, it is regional funds that are not only used stand-alone despite higher lending capacity. Paradoxically, member countries who would find comparatively large lending capacity regionally do not exclusively draw on their RFA – neither in the case of EFSD (Armenia, Kyrgyz Republic) nor in the case of SAARC where additionally timely disbursement and low conditionality can be expected (Bhutan, Maldives). It is only in the case of Sri Lanka, that the required crisis finance volume could have led to obtaining additional central bank currency swaps. At the same time, Sri Lanka did not agree on an IMF program but preferred bilateral instruments, at least until the beginning of 2022.

According to regime complexity concept, representation and ownership in newly created institutions are relevant for members to consider those as alternatives to traditional institutions where they are usually underrepresented and do not have ownership. The repeated pattern of combined use of relatively voluminous and institutionally autonomous but single-lender-dominated RFAs, with IMF loans and bilateral currency swaps might be linked to an effort of member countries to prevent too strong dependency from a regional hegemon.

For these medium-sized RFAs, increasing lending capacity could increase use but such increase would need to go hand in hand with balancing more existing structures of capital contributions and voting shares between de facto lending countries and borrowing countries. As long as the strongest countries dominate these mechanisms, smaller members will seek to diversify the borrowing strategies, to avoid dependency on one single hegemonic lender.

3.3. CMIM and CRA: voluminous, non-autonomous, unbalanced governance

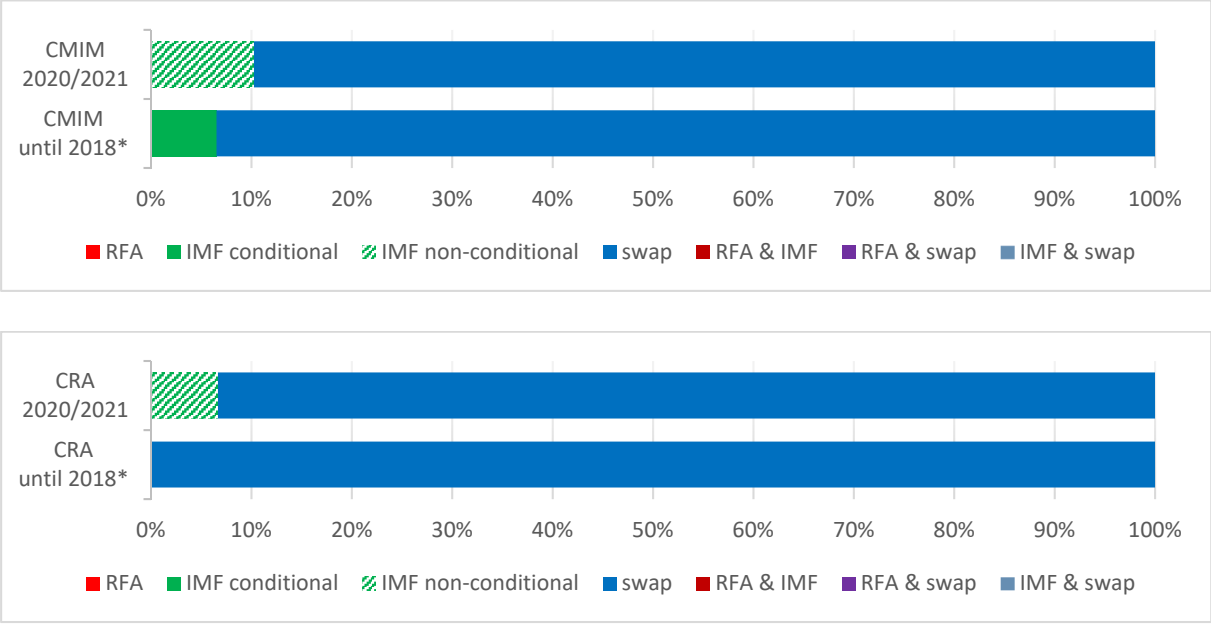
As during previous crisis events, CMIM and CRA member countries decided not to tap on their RFA and mostly not on the IMF either but to obtain liquidity from other sources, if needed. Most CMIM and CRA member countries hold significant foreign exchange reserve volumes, so that financial shocks are less likely to occur.

The members of CMIM and CRA have extensively utilized bilateral swap agreements before and during the COVID-19 shock (see figure 5). Exceptions are CMIM member country Myanmar and CRA member country South Africa who both requested non-conditional RFI and RCF loans from the IMF twice and once respectively. CMIM member countries' central banks agreed on several new bilateral currency swap agreements that had the additional or sole aim of financial stabilization. Particularly China (PBOC), Japan (BOJ) and South Korea (BOK) have been partner to multiple agreements in the region: BOJ with China (with a volume of about US$ 31 billion until 2021), Malaysia (US$ 3 billion, extended in 2020), Philippines (US$ 12

billion, initiated in 2017), Singapore (US$ 10 billion, extended in 2021), and Thailand (US$ 7 billion, extended in 2021); the PBOC with Hong Kong (about US$ 73.7 billion renewed in 2020), Indonesia (about US$ 28.4 billion, extended in 2021, in addition a new arrangement with Singapore since 2020 of about US$ 6.8 billion), Lao (no further information available), Singapore (about US$ 42 billion, renewed in 2019), South Korea (about US$ 59 billion, until 2020) and Thailand (about US$ 10 billion, renewed in 2021) and the South Korea with Indonesia (about US$ 8.8 billion, renewed in 2020) and Malaysia (about US$ 4billion, renewed in 2020). Singapore and Indonesia are also partners in a central bank currency swap of about US$ 6.9 billion that was renewed in 2020. South Korea and Singapore are partner to a currency swap with the US Fed that had been renewed three times until 2021 (US$ 60 billion each).[5] Between February 2020 and December 2021, China had 19, Japan 6 (two of them are unlimited, one of them permanent) and South Korea three active currency swaps with non-neighboring countries. In their RFA, Indonesia, Malaysia, Singapore, Thailand and the Philippines would have access to about US$ 6.8 billion as an IMF de-linked CMIM program, South Korea to about US$ 11.5 billion.

Among the CRA member countries, Russia and China held a currency swap agreement until 2020 (about US$ 21 billion), South Africa (US$ 4 billion) and China until 2021. Russia has extended currency swaps with Singapore (US$ 1 billion) and Japan (US$ 3 billion) in May 2021. India and Japan have had a swap agreement in place since 2019 (US$ 75 billion). The US Fed and Brazil have a swap agreement that has been renewed three times until 2021 (US$ 60 billion).

Figure 5: Borrowing patterns before and during COVID-19 crisis in non-autonomous RFAs with uneven power structures: CMIM and CRA



Source: Authors. Notes: see figure 3.

[5] BOJ and the US Fed have an unlimited, permanent agreement; BOJ and the central bank of Switzerland have an unlimited agreement; BOJ additionally has a central bank currency swap agreement with Australia.

Even in the face of a systemic shock like the COVID-19 pandemic, the member countries of CMIM and CRA use continuously and extensively not their regional funds or the IMF, but bilateral central bank currency swaps. Thus, the pre-pandemic pattern of GFSN use remains unchanged: the largest regional funds between EMDEs remain untapped, while at the same time most member countries arrange bilateral central bank currency swaps in times of crises.

CMIM, but also CRA, are by far the most voluminous RFAs between EMDE. The Asian CMIM and the BRICs-related CRA have been founded in reaction to emerging market crises in the 1990s. The CMIM is a multilateralized swap network. The CRA is an arrangement of the New Development Bank. Both mechanisms subordinate borrowing of more than 40 percent of the accessible lending capacity of a borrowing country under an IMF program.

In contrast to other RFA, CMIM and CRA are not institutionally autonomous. While the dominance of the creditor country/countries is strong in each arrangement, CRA provides room for the influence of borrowing countries. CMIM provides enormous lending capacity for the majority of its borrowing members. In contrast, most CRA borrowing member countries do not find extraordinary lending capacity.[6]

For these large RFAs with their explicit link to the IMF, our framework suggests a strong need to gain institutional autonomy by further reducing the IMF link or even substituting it by regionally governed and determined lending decision and surveillance rules. For these RFAs, institutional autonomy appears much more important than extending scope or increasing volume as suggested by Kozul-Wright (2020).

4. Conclusion

This article develops a novel framework to assess the utilization, preparedness, and sufficiency of the GFSN in responding to a global shock and then applies that framework to the COVID-19 pandemic response. This article draws from economic and international political economy theory to study patterns of borrowing from the GFSN and from RFAs between emerging and developing economies in particular. The creation of the framework and the analysis are incredibly salient, as interest rate hikes in the global North and related deteriorating market financing conditions in the global South are likely to test the financial stability of many EMDEs. That said, the novel framework in the paper should be further tested during future periods of financial instability.

We find that even in reaction to a systemic shock like the COVID-19 pandemic, there has been surprisingly little use of IMF and RFAs compared to their respective lending capacity. With the

[6] Since neither CRA nor CMIM has been utilized since their establishment, apart from their sheer lending capacity, the practical experience in loan disbursement and design of conditionality cannot be analyzed. Several test runs have been conducted by AMRO and IMF but detailed outcomes of those test runs are not publicly disclosed (see ESM 2018).

exception of temporarily unconditional catastrophe lending facilities, the IMF falls short in providing timely and appropriately conditioned loans to member countries. Additionally, we find no EMDE-based RFA that would provide an autonomous regional fund with a balanced decision-making, equitable governance, and is at the same time voluminous, timely, and applies appropriate conditionality to its lending. Especially the most voluminous RFAs, which make most of their lending dependent on a prior IMF program, have not played any role in response to COVID-19 or in previous crises.

Much in contrast to the IMF and the RFAs, bilateral central bank currency swaps are in ever rising use and provide enormous advantages to swap partners: high liquidity volumes, immediate availability, and absence of any conditions. Yet, as ad-hoc arrangements they are not predictive and outside any multilateral governance. Set up of a central bank currency swap entirely depends on the willingness of the offering country to provide liquidity to another country's central bank. Therefore, currency swaps are available only to a selected group of countries.

From the comparison of pandemic and pre-pandemic borrowing patterns, we draw three main conclusions for what we consider urgent needs for reform to make the GFSN fit for purpose:

First, the most outstanding change of borrowing patterns in the GFSN from the pre-pandemic to the pandemic period is the increased demand for temporarily newly reformed non-conditional IMF lending out of the catastrophe facilities. At the same time, demand for traditional IMF lending through conditional facilities remained unchanged low. This suggests that the stigma associated with IMF lending is more attached to its conditionality than to its unbalanced governance structure. In our view, the strong performance of newly reformed non-conditional easy to access crisis response facilities calls for a widening of this kind of credit facilities to address external shocks, and for more substantial overhauling of standard IMF conditionality.

Second, based on the observed borrowing patterns during the COVID19 pandemic, we find that RFA use benefits from an autonomous institutional set up and a balanced decision making and governance structure that allows for representation of borrowing member countries and for ownership by member countries of their regional fund in a way that is not solely dependent on their capacity to contribute capital. Whereas the small autonomous and relatively egalitarian regional funds as the AMF and the FLAR again have been repeatedly demanded by their member countries, even if at lower intensity compared to the pre-pandemic, more unevenly organized but relatively voluminous regional funds as the EFSD or the SAARC swap agreement are less in use as stand-alone crisis finance providers. Furthermore, non-autonomous voluminous regional funds as the CMIM or the CRA have not been in use at all. The stigma attached to IMF borrowing appears to encroach upon these regional mechanisms. We find that the decision making and governance structure of regional funds are an important factor for be considered when analyzing the potential role of RFAs in the GFSN. The observed borrowing patterns suggest that RFAs need not just increased funds, but differentiated reforms: the small and first-generation RFAs would indeed profit from enlarging their capital

and membership. The middle-sized regional funds dominated by Russia and India would especially require more balanced governance mechanisms, increasing smaller members' voice at least to some degree above their capital shares. The voluminous non-autonomous RFAs with strong ties to IMF programs would require increasing autonomy and more balanced decision-making and governance structures. We conclude that this could be a way for these RFAs to become more active components of the GFSN.

Third, utilization of bilateral central bank currency swaps has again increased with the COVID-19 crisis. We find that is not only the volume, but also the variety of actors involved here which increased in the pandemic. Not only the US Fed, the ECB and the PBOC, but also central banks of other advanced economies such as Japan, and even of major emerging markets other than China utilize bilateral swaps as an additional balance of payments finance source for partner countries of their choice. Our analysis reinforces that swaps have become an integral part of GFSN crisis response. In the GFSN, bilateral swaps give room to domestic financial and trade-related interests of the offering countries, and reinforce individual geostrategic interests and aspirations that further fuel the fragmentation of the global financial order.

Our fourth and last conclusion is that coordination of different GFSN elements (ESM 2018; IMF 2017) could reduce the transaction costs both for borrowing countries and lending institutions. The observed borrowing patterns point to the potential of a more effective GFSN that allows optimizing the sequencing and monitoring of loan and swap agreements from the GFSN by making use of comparative strengths of each element in terms of its volume, timeliness and conditionality. Especially for the smaller RFAs, IMF collaboration could pave the way for enlarging the regional funds' lending capacity without touching upon their egalitarian balance of power. In the bigger RFAs, dominance of large de facto lending members could be nuanced to increase ownership of smaller borrowing member countries. The voluminous RFAs, instead of using an IMF program as pre-condition, should embark on regionalized monitoring mechanisms based on intensive exchange of information. Coordination efforts in accordance with comparative strengths of each element would be supportive to a more effective GFSN especially between swap providing central banks and the IMF.

Coordination in the GFSN at its lowest level would include information sharing to better inform loan decisions and to reduce transaction costs of the borrower as well as the lender. Costly facility shopping and the risk of unnecessarily prolongating a crisis through lengthy loan negotiations with different institutions could be reduced. Coordination in the GFSN at a higher level could include joint lending decisions and coordinated monitoring mechanisms. While means of communication with the IMF have been intensified since the global financial crisis 2008/09, this does not live up to the coordination a systemic crisis such as the COVID-19 pandemic would require.

All in all, the preference for IMF non-conditional facilities over standard conditional credit lines, together with the expansion of bilateral currency swaps, seems to be a strong signal that borrowers prefer less intervention in economic policy, reinforcing prior finding (see Ban and

Gallagher 2015). Moreover, reform of policy conditionality in IMF facilities is urgent and fundamental if the IMF intends to regain its central coordinating global fire fighter role. Otherwise, non-use of stigmatized standard IMF facilities will further reduce significance of the IMF in global crisis resolution. In this case, regional and bilateral alternatives that are in part driven by selective geostrategic agendas are likely to prevail and to potentially fragment the GFSN even further.

There are some inherent limitations with this article that must be noted. First, the COVID-19 crisis is ongoing. Thus, there is the potential that some or all GFSN elements could get more involved at a later date. That said, the usage of the multilateral elements of GFSN through the first two and a half years of the crisis has been marginal. Second, much more research is needed to determine both the deficiencies in the architecture of the GFSN, as well as to determine how to strengthen and enhance lending capacity and borrowing in the GFSN.

In future research, we intend to test the proposed theoretical framework to examine GFSN utilization based on qualitative case studies. This seems to be even more urgent since a larger number of countries are likely to face solvency problems in the aftermath of the COVID-19 pandemic, the current interest rate environment, and increasing risks posed by climate change.

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