Market Access and IMF Arrangements: Evidence from Across the Globe

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The article analyses the availing of International Monetary Fund (IMF) loans by various countries and establishes a link between market access and dependence on IMF's funds over the period 2000-2023. It is found that Emerging Market and Developing Economies (EMDEs) continue to rely on IMF resources for managing liquidity pressures on account of their limited access to international financial markets and alternate sources of funding.

Introduction

Since the mid-1980s, the world has witnessed a remarkable acceleration in global trade and financial integration on the back of increased cross-border trade, investments, and financial flows (IMF, 2016). While this increased integration offers benefits such as growth, innovations, and economies of scale, it also presents risks (Villaverde and Maza, 2011; Ahmad, 2019). The higher interconnectedness can lead to cross-border contagion of financial stress and periods of amplified distress in vulnerable countries through sudden swings in financial flows, which can lead to a significant change in countries' gross and net foreign asset positions worldwide (Giglio, *et al.*, 2016; Lane and Milesi-Ferretti, 2006) and/or through trade disruptions, which can reduce financial flows to countries (Attinasi, *et al.*, 2022). In the post-pandemic years, a confluence of factors such as geo-economic fragmentation, elevated global debt, and heightened macroeconomic policy uncertainty poses balance-of-payments (BoP) risks for countries with weak buffers and high foreign currency debt (GFSR, 2024).

IMF, as the centre of Global Financial Safety Net (GFSN), acts as the lender of last resort for countries with acute balance of payments pressures due to its near universal membership and resource size. Existing studies have found that countries that obtain IMF assistance usually have weak macroeconomic fundamentals, such as higher current account deficit, low international reserves, high fiscal deficit, low per capita income, and exchange rate imbalances, and their vulnerability can be exacerbated by global factors such as global business cycle, a steep rise in international commodity prices and world interest rates (Bird and Orne, 1986; Cornelieus, 1987; Joyce, 1992; Bird and Rowlands, 2002; Joyce, 2004; Elekdag, 2008). However, with increased access to international capital markets and alternative funding sources such as swap lines and Regional Financing Arrangements (RFAs), countries now have more options to address external funding needs. Moreover, the non-concessional IMF loans are offered at market-determined rates, which, although potentially lower than market rates[1], may still be unappealing because of the performance conditions and the associated stigma (Kawai, 2010).

It is observed, however, that a host of emerging market and developing economies (EMDEs) continue to rely on IMF loan arrangements, also known as IMF Programs. For instance, in the last decade (during 2014-2024), EMDEs entered a total of 329 IMF arrangements, of which, nearly half of the programs/arrangements were non-concessional loans. On the other hand, advanced economies (AEs) have not entered the IMF arrangements since 2014. In the new millennium, while the dependence of EMDEs on IMF loans has been greater, several fast growing large EMDEs, including India and China did not have to take recourse to the IMF loans. In fact, these economies had been the primary drivers of global growth, barring the COVID period, where nearly the entire globe recorded negative growth. The fast growing EMs continue to be global drivers of growth and are characterized

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^ The authors are from the International Department, Reserve Bank of India. The views presented in this article are those of the authors and do not represent the views of the Reserve Bank of India.

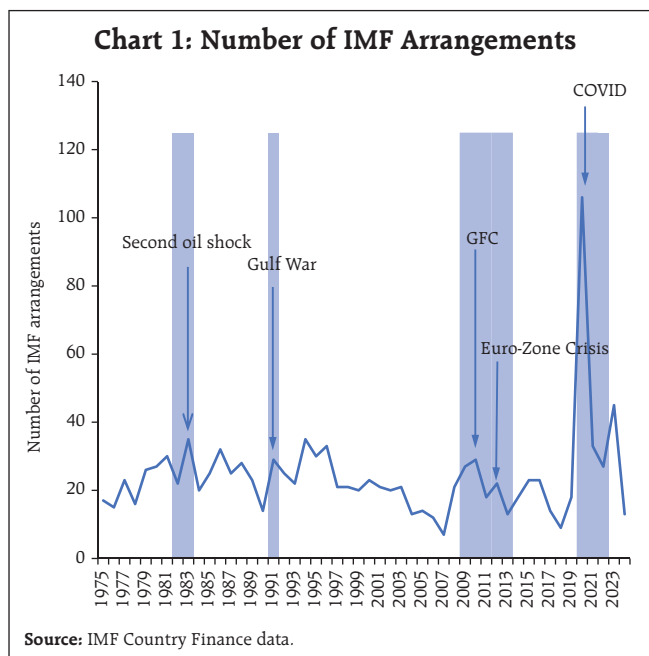[1] https://www.imf.org/en/About/Factsheets/IMF-Lending.

by relatively robust macroeconomic fundamentals. In fact, several large and fast growing EMDEs had turned creditors to the IMF in the aftermath of the Global Financial Crisis (GFC). In the backdrop, this article aims at identifying the key factors driving the recourse to IMF programs by countries. The remainder of the article is organised as follows: Section II gives an overview of access of IMF loans across regions; Section III analyses the link between the demand for the Fund's loans and market access of countries; and section IV contains the concluding observations.

II. Demand for IMF Loans

Historically, it is observed that demand for IMF loans increases during global downturns. For instance, during the global recession of 1983 triggered by oil shock and a subsequent debt crisis in Latin America, many EMDEs, especially in Latin America and Sub-Saharan Africa (SSA), suffered long-lasting slowdown in growth (Kose *et al.*, 2020). As a result, IMF stepped up its lending programs during 1982-83 to these regions. For instance, around 85 per cent of the Fund lending in 1983 was to Latin America and SSA. Next, IMF lending increased during the Gulf war, where 50 per cent of the lending in 1991 was to the Asia-Pacific Region (APR), which was affected adversely by the increased crude prices. Similarly, during the GFC and Eurozone crisis, there was a rise in IMF arrangements to some European countries, while the COVID crisis resulted in demand for Fund resources across the world (Chart 1).

The IMF has multiple instruments/windows to meet the funding requirements of member countries. The "reserve tranche," which is the member's unconditional drawing right on the IMF,[2] allows a member country to draw from the IMF at short notice in need of balance of payments financing. Further, IMF's loans are extended under two heads, *viz.*, the

Chart 1: Number of IMF Arrangements

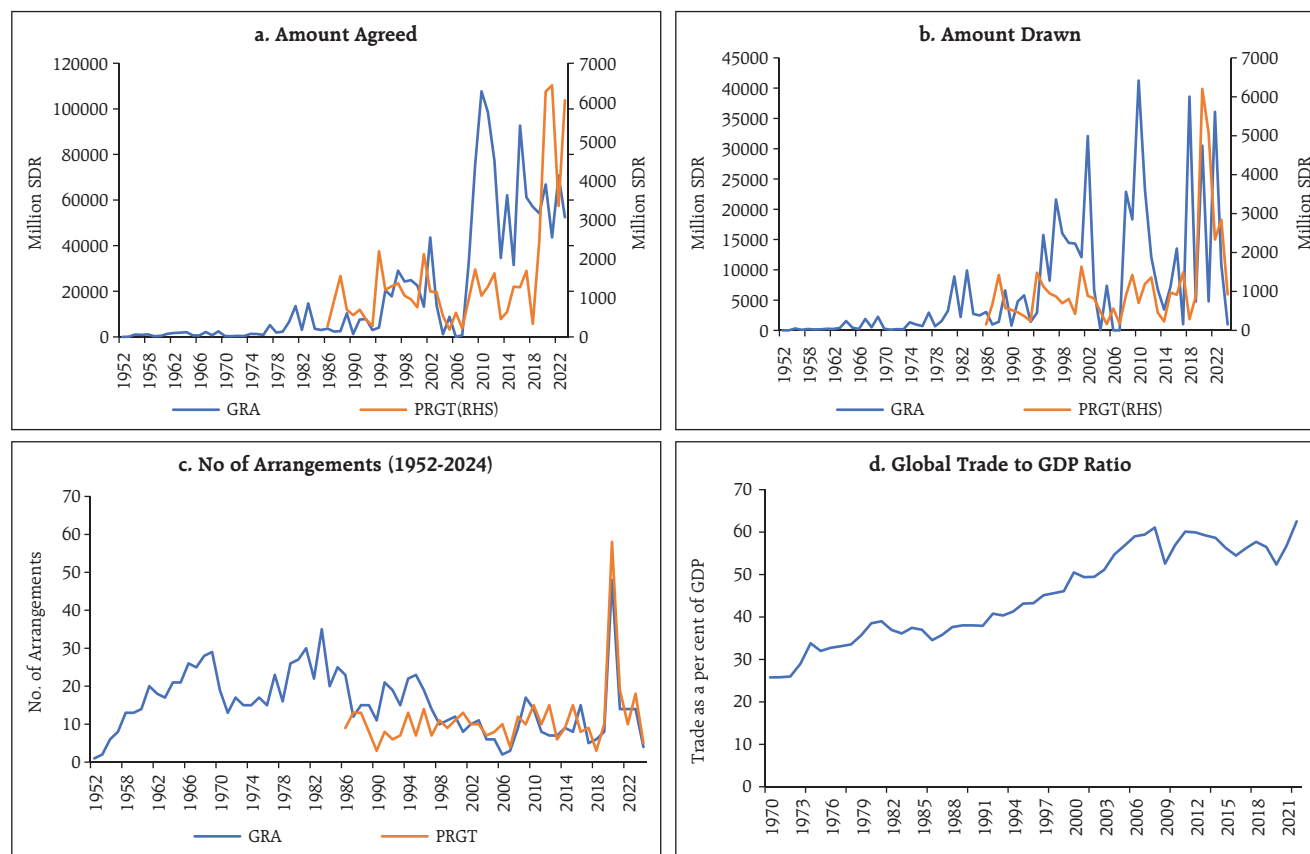**Source:** IMF Country Finance data.

general resource account (GRA) that provides loans at market-based rates, and the Trust-based concessional support to eligible countries (predominantly low-income countries), of which the Poverty Reduction and Growth Trust (PRGT) is the predominant source. Both these have different lines of credit facilities with similar conditionalities and provide short-term to long-term financing support.

The access to IMF loans is determined by members' quotas, with the loan quantum typically being a multiple of the quota.[3] As the PRGT countries are low-income developing countries, the quantum of loans availed by them is significantly smaller than the loans availed by other members through GRA (little less than 12 per cent of GRA amount accessed in 2023), though the number of PRGT arrangements is nearly equal to GRA arrangements (Chart 2c). The quantum of IMF support as well as the number of IMF arrangements availed by members increased substantially during the new millennium, particularly

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[2] The reserve tranche is created by the foreign exchange portion of the quota subscription, plus increase (decrease) through the IMF's sale (repurchase) of the member's currency to meet the demand for use of IMF resources by other members in need of balance of payments financing.

[3] Currently, the normal access limit is 145 per cent; and cumulative access is 435 per cent of quota. In 2023, access limits were increased temporarily to meet the demands arising from COVID pandemic with normal access limit at 200 per cent, and cumulative access limit at 600 per cent of quota. This temporary increase in access limits is set to expire at the end of 2024.

Chart 2: IMF Loans to All Members

Note: Amount agreed refers to the sanctioned amount under an arrangement and amount drawn is the amount of money drawn/utilised by the member.
Sources: IMF Country Finance data; and Authors' own calculations.

during periods of shocks (Chart 2a and 2b). This is in line with the increased global interconnectedness which seems to have accelerated transmission of global spillovers resulting in external financing problem in member countries (Chart 2d).[4]

II.1 Region-wise Borrowing from IMF

In terms of number of arrangements as well as quantum of loans under GRA, the Western Hemisphere Region (WHR[5]) - predominantly Latin America - is the largest borrower, whereas SSA[6] is the largest borrower from PRGT (Chart 3). Moreover, some countries within WHR, SSA and APR[7] have repeatedly borrowed from the IMF.
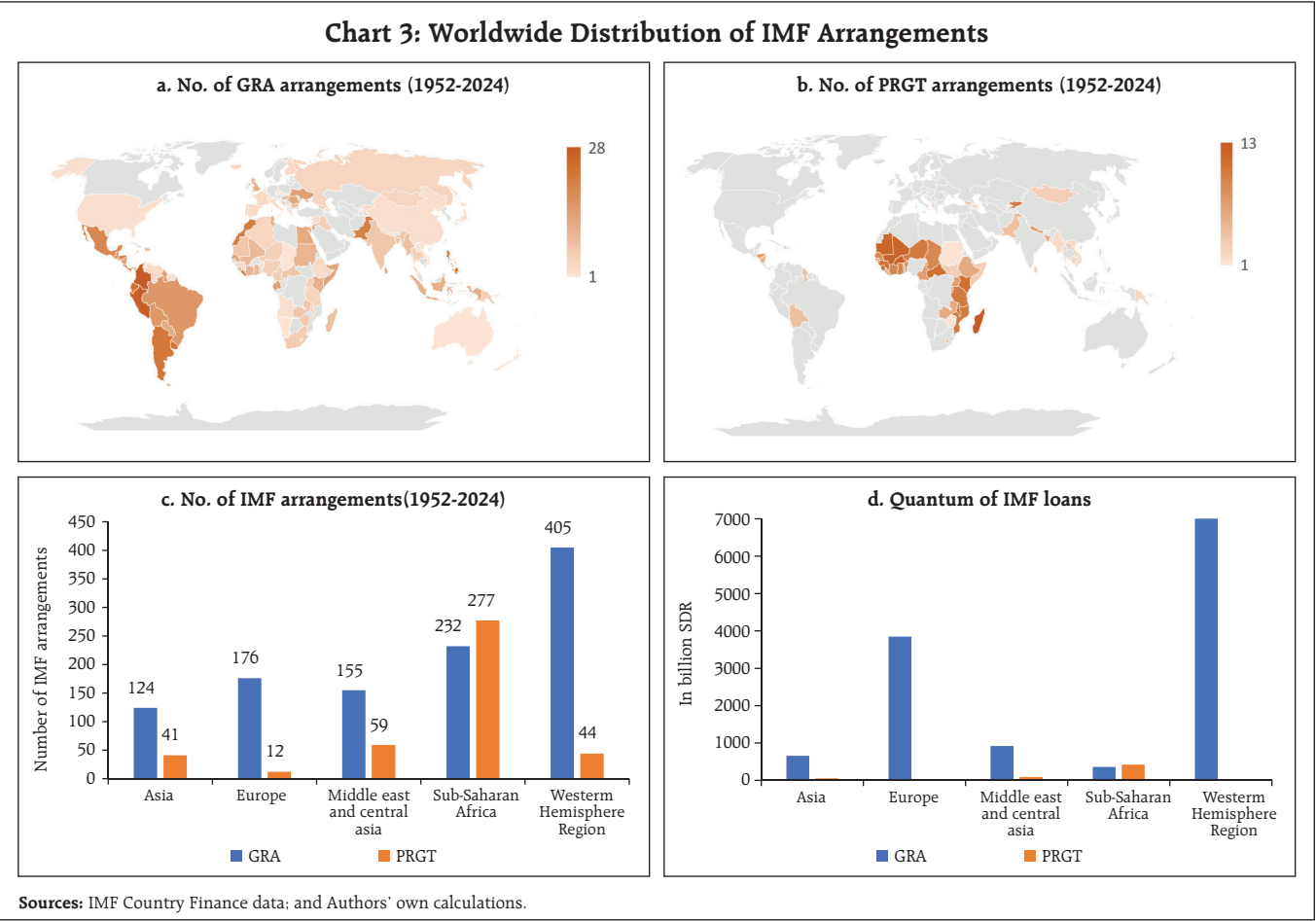
The temporal distribution of IMF loans across regions reveals that in the initial period of IMF operations, they were availed mostly by what

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[4] The correlation between trade to GDP ratio and total amount drawn from IMF during 1970 to 2024 is 0.54 indicating that greater interconnectedness is associated with greater amounts drawn from IMF.

[5] WHR comprises the Americas and Caribbean and includes Antigua and Barbuda, Argentina, Bahamas, Barbados, Belize, Bolivia, Brazil, Canada, Chile, Colombia, Costa Rica, Dominica, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, the Unite States of America, Uruguay, and Venezuela.

[6] SSA comprises: Angola, Benin, Burkina Faso, Burundi, Cabo Verde, Cameroon, Central African Republic, Chad, Comoros, Congo, Congo DR, Cote d'Ivoire, Equatorial Guinea, Eritrea, Eswatini, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sao Tome & Principe, Senegal, Seychelles, Sierra Leone, South Africa, South Sudan, Tanzania, Togo, Uganda, Zambia, and Zimbabwe.

[7] APR comprises of Australia, Bangladesh, Bhutan, Brunei Darussalam, Cambodia, China, Fiji, Korea, Hong-Kong India, Indonesia, Kiribati, Laos, Maldives, Marshall Islands, Micronesia, Mongolia, Myanmar, Nauru, Nepal, New Zealand. Palau, Papua New Guinea, Philippines, Samoa, Singapore Solomon Islands, Sri Lanka, Thailand, Timor-Leste, Taiwan Tonga, Tuvalu, Vanuatu, and Vietnam.

Chart 3: Worldwide Distribution of IMF Arrangements

a. No. of GRA arrangements (1952-2024)

b. No. of PRGT arrangements (1952-2024)

c. No. of IMF arrangements(1952-2024)

d. Quantum of IMF loans

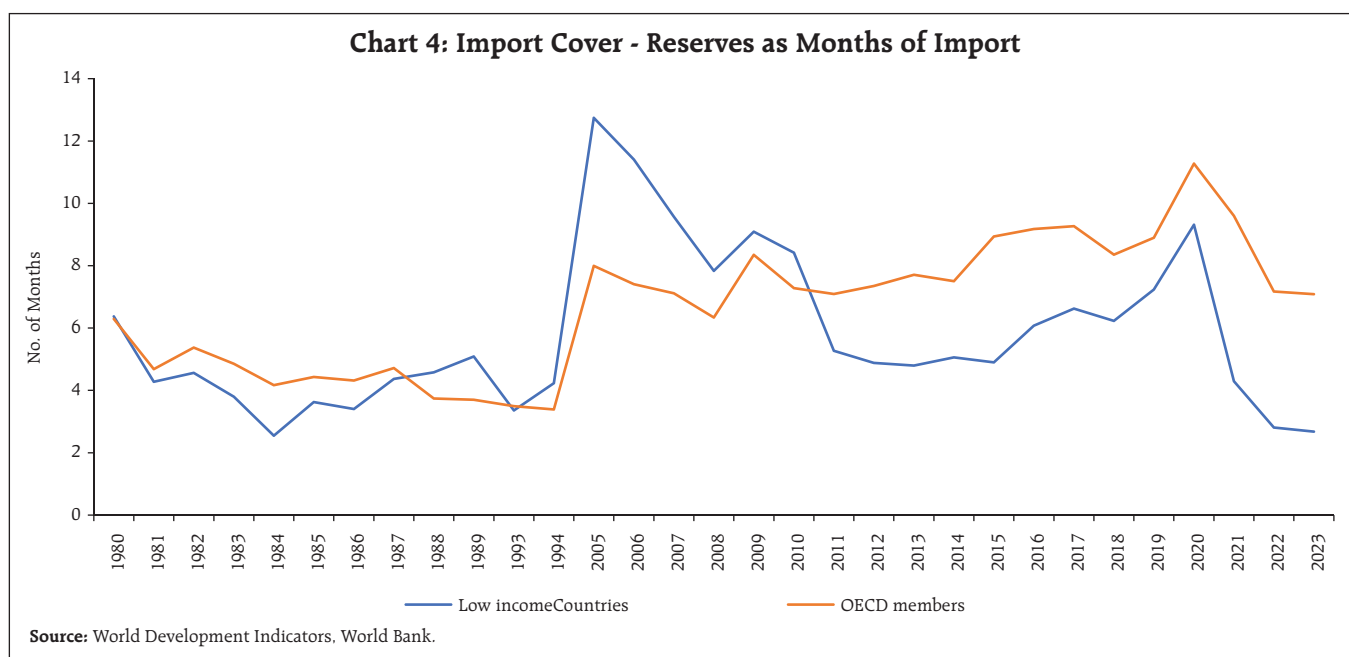**Sources:** IMF Country Finance data; and Authors' own calculations.

are now the AEs. However, the demand for IMF loans from AEs waned over the period, barring the exceptional case of GFC-Eurozone crisis, where some AEs (Greece, Ireland, Portugal, Cyprus) availed extraordinarily large amounts of loans from the IMF. One of the driving factors for obtaining IMF financing is the deteriorating external funding/liquidity position (as proxied by indicators such as the import cover of forex reserves, the share of short-term debt, debt service ratio, *etc.*) for low-income countries (as identified by their eligibility for support of International Development Agency (IDA) of the World Bank). The import cover for AEs (proxied by OECD countries) has improved consistently from 1995, barring dips during crisis periods, whereas the same has turned weak for low-income countries from

2003 (even before the onset of GFC) and remained weak thereafter (Chart 4).

II.2 Role of Regional Financing Arrangements (RFAs)

In the face of BoP issues, the first line of defence is country's own resources, such as forex reserves, followed by other options such as swaps - both bilateral and from RFAs - and market borrowings which are more likely to be preferred to meet BoP financing needs, as these financing options do not have the stigma that is attached to borrowing from the IMF. Finally, countries tend to resort to IMF loans and/or official bilateral loans when other options do not appear to be feasible. As stated above, import cover of AEs remained comfortable and their credit ratings have generally been in the investment grade, leading to comfortable liquidity access from

Chart 4: Import Cover - Reserves as Months of Import

Source: World Development Indicators, World Bank.

international capital markets. The sovereign ratings for most of the low income countries (LICs) and EMDEs, on the other hand, have been non-investible grade, with several LICs not having country ratings, thereby, severely restricting their market access. However, the relatively better postioned EMDEs, such as ASEAN region, BRICS and some Latin American countries had access to RFAs or currency swap agreements (Annex Tables A2, A3 and A4).

The access to alternative sources of funding through RFAs or currency swap arrangements for these fast-growing economies reduced their reliance on IMF loans. For instance, ASEAN+3 countries[8] launched the Chiang Mai Initiative Multilateralisation (CMIM), which came into effect in 2010, to address short term liquidity needs in the region. Since its formation, the CMIM member countries did not borrow from the IMF, whereas prior to 2010 few ASEAN countries such as Korea and Philippines were repeat borrowers from the IMF. Similarly, BRICS
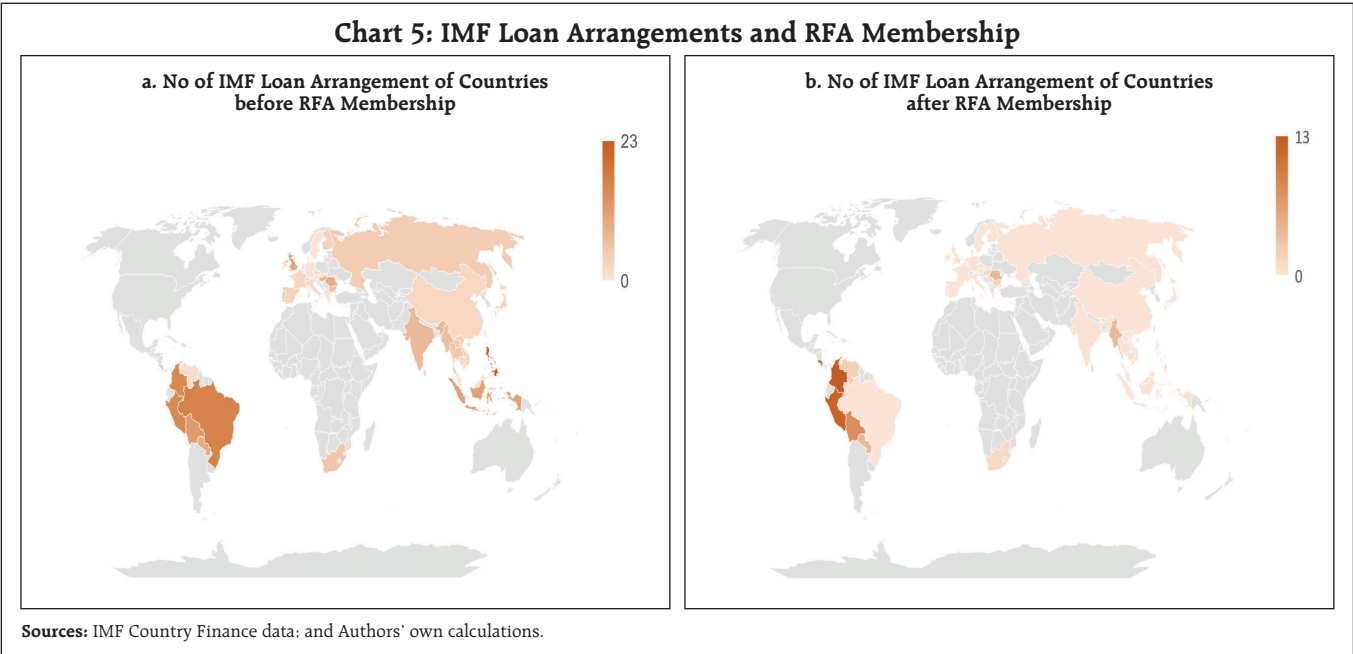
countries have entered into the BRICS contingent reserve arrangement (CRA) in 2015 and since then only South-Africa entered into Fund's arrangement during COVID crisis. In 2002, the European Union formed the EU-BoP facility for non-eurozone countries[9] and in 2012 post the Eurozone crisis, the European Stability Mechanism[10] (ESM) was put into place which led to a drop in IMF borrowings by the member countries. Likewise, in 1978, the FLAR - Latin American Reserve Fund[11] - was established, leading to a fall in the number of IMF arrangements for its member countries (Chart 5). However, the drop in IMF borrowing amongst the members was not as steep for FLAR as compared to the members of other RFAs. Nevertheless, there were no withdrawals from IMF arrangements for countries like Colombia, Peru and Paraguay.

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[8] Brunei Darussalam, Cambodia, China, Indonesia, Japan, Korea, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam, and Hong Kong.

[9] Bulgaria, Czech Republic, Denmark, Hungary, Poland, Romania, Sweden, and United Kingdom.

[10] Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Portugal, Slovakia, Slovenia, and Spain.

[11] Members include Bolivia, Columbia, Costa Rica, Peru, Paraguay, Uruguay, and Venezuela.

Chart 5: IMF Loan Arrangements and RFA Membership

a. No of IMF Loan Arrangement of Countries before RFA Membership

b. No of IMF Loan Arrangement of Countries after RFA Membership

Sources: IMF Country Finance data; and Authors' own calculations.

III. Market Access and IMF Arrangements

Higher country risk profiles lead to higher borrowing costs as market demand higher returns to compensate for the additional risk. Therefore, factors such as poor sovereign ratings, or even absence of sovereign ratings as well as high credit default spreads, for a given country limit their access to international capital markets. Under such circumstances, borrowing from the IMF may be the only feasible option available for such countries, apart from borrowing from official bilateral creditors. However, borrowings from official bilateral creditors may also not be a preferred option for countries, as some of the heavily indebted countries such as Zambia faced debt distress, leading to difficult debt restructuring process in the G20 Common Framework for Debt Treatments.

The market access of countries and recourse to IMF loans by countries which availed loans from the IMF is analysed in this context, with focus on select episodes of global turbulence such as the GFC (2008-2010), Eurozone Crisis (2012-14) and COVID crisis (2020-2021).

A disaggregated analysis of data on country default spreads and risk premium for the post 2000 period, made available by Damodaran (2024), reveals that most of the countries that availed IMF loans are countries with non-investible grade sovereign ratings, and hence, are considered high-risk borrowers in the international capital markets which restricted their market access. These borrowers are mostly concentrated in WHR, SSA and APR, and are mostly low-income countries and EMDEs. For instance, in WHR, countries like Ecuador, Honduras and Jamaica borrowed from the IMF multiple times, and had non-investible grade ratings resulting in higher country risk premium (CRP) and default spreads. Similarly, many countries of SSA availing loan under PRGT such as, Madagascar, Malawi and São Tomé and Príncipe amongst others, do not have any country ratings available (Table 1).

Coming to specific episodes of stress in the new millennium during the GFC, although AEs were at the epicenter of the crisis, there was a spillover to the rest of the world, followed by a period of slowdown in growth (Kose *et al.,* 2020). Next, during the Eurozone-crisis, Cyprus, Greece, Ireland, Portugal, and Spain were the major crisis hit countries in Europe (Gourinchas *et al.,* 2023). Most of the countries which

Table 1: Multiple Borrowers during 2000-2023 (> 5 times)

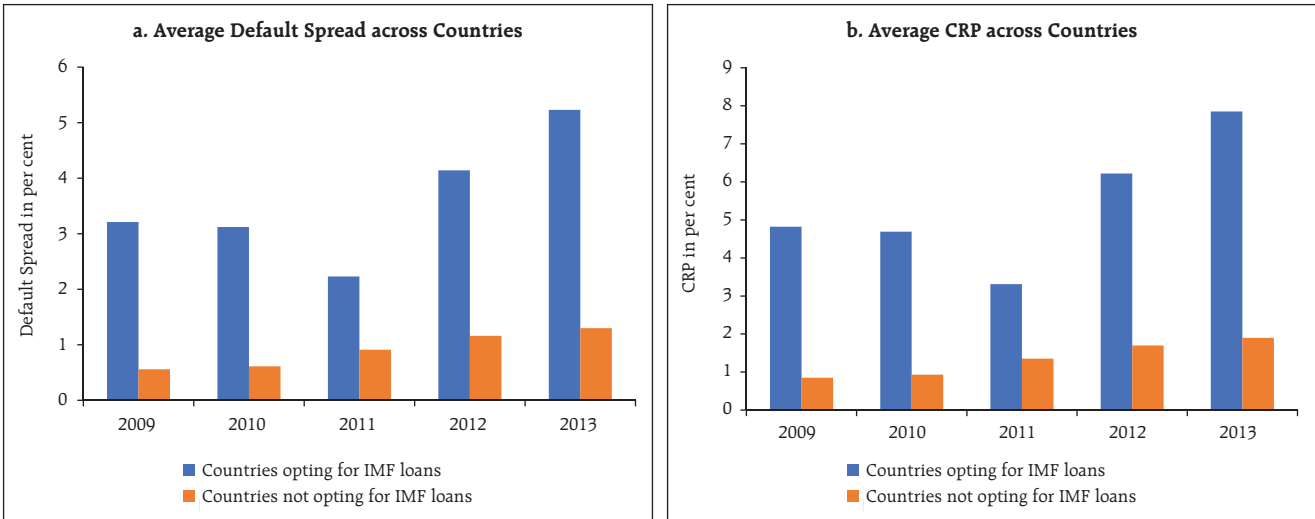|	Country	GRA		PRGT	
		CRP (in per cent)	Default Spread (in per cent)	CRP (in per cent)	Default Spread (in per cent)
WHR	Ecuador	14	42		
	Honduras	7.1	29		
	Jamaica	7.3	23		
SSA	Madagascar			N.A.	N.A.
	Malawi			N.A.	N.A.
	São Tomé and Príncipe			N.A.	N.A.

Notes: 1. Default spread is estimated using the local currency sovereign rating from Moody's and it is calculated as the difference over a default free government bond rate. CRP is calculated by scaling up the default spread by relative equity market volatility, which in turn is calculated as the ratio of the S&P Emerging Market Equity Index standard deviation to the BAML Emerging Public Bond index standard deviation.
2. The CRP estimated using the above methodology are directly available from database made available by Damodaran (2024).
3. N.A. represents no country rating available.

Source: Damodaran (2024)

availed IMF loans during the GFC and Eurozone crisis periods were rated Baa or lower on Moody's rating scale or did not have any ratings available. For instance, Armenia, Colombia, El salvador, Bangladesh, Jamaica and Morocco, among others, had speculative grade or low investment grade ratings, while Angola, Congo, Comoros, Ethiopia and Ghanna, among others had no ratings available (Annex Tables A2 and A3). On the other hand, the credit-worthiness of countries which did not borrow from the IMF, despite being affected by the GFC and Eurozone crisis, remained stable as they enjoyed investible grade ratings.These, *inter alia*, included Finland, France, Germany, Sweden, and the USA. The average default spread for countries which borrowed money from IMF during 2009-2014 was in the range of 3 to 5 percent whereas it was 0.6 to 1 percent for those countries which did not borrow from IMF. Similarly, the CRP were in the range of 4 to 8 percent, and 0.9 to 1.9 percent for these two groups of countries (Chart 6).

Chart 6: GFC and Eurozone Crisis Period

a. Average Default Spread across Countries

b. Average CRP across Countries

Note: The CRP and sovereign default spread data are available from Damodaran (2024). It is a comprehensive data set updated every year providing country wise and regional breakdown of sovereign ratings, default spread, credit default swaps and country risk premiums. This data is available from 2000 until 2023.
Sources: Damodaran (2024); and Authors' own calculations.

Secondly, some AEs, *viz.*, Greece, Portugal, and Ireland entered the IMF loan arrangements during 2008-11 due to their mounting public and private sector debts. During this period, these countries faced rating downgrades, leading to curtailed market access. For instance, Greece was downgraded from A2 to Ba1 from 2009 to 2010 and Ireland was downgraded from Aa1 to Baa1 in the same period. Portugal was downgraded from A1 in 2010 to Ba2 in 2011. Iceland and Latvia had also drawn money from IMF in 2008 following their rating downgrades in 2007. Iceland was downgraded from Aaa in 2007 to Baa1 in 2008 and Latvia was downgraded from A2 to A3 (Annex Table A2). Similarly, African countries such as Angola, Djibouti, Dominican Republic Congo, Ghana, Mali, Niger, Togo, availed IMF PRGT financing and did not have sovereign ratings for the relevant period. On the other hand, Ireland, Portugal and Spain, despite being downgraded from medium investment grade to non-investible grade between 2012-14, did not enter into the Fund's loan arrangement due to availability of financial assistance from the European Financial Stability Facility(EFSF)[12], which was formed in 2012.

Additionally, some countries signed IMF programs to enhance their market access, and did not need to take recourse to borrowals from the IMF. The IMF's flexible credit line (FCL) is designed for this purpose for countries with strong macroeconomic fundamentals such as sustainable external position, low inflation and sound public finances[13]. The IMF certification that these countries have very strong macroeconomic fundamentals has a positive market announcemnt effect leading to easier access to funding from international capital markets. Similarly, the precautionary and liquidity line (PLL) is available
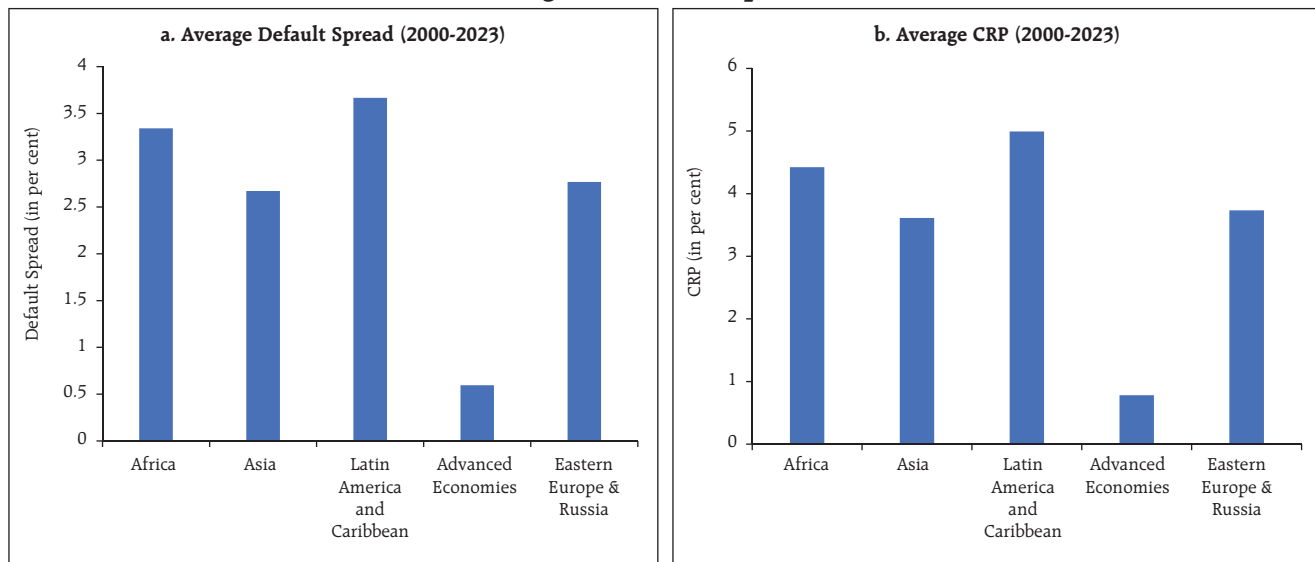
for countries which may have some vulnerabilties which preclude them from FCL, though otherwise they may have reasonable macrofundamentals. Nevertheless, access to PLL also acts as a market signal about assured IMF funds. However, the CRP for Morocco did not decline even after grant of the PLL, possible on account of the fact that PLL does not send a market signal that the country has strong macroeconomic fundamentals. On the other hand, the CRP increased for Morocco, after the PLL expired. (Table 2).

During the COVID pandemic (2020 – 2021), borrowing countries from the WHR and SSA regions were more as compared to other regions (Annex Table A4). Countries in this region had higher risk premium and lower ratings *vis-à-vis* non-borrowers. For instance, the average CRP for countries whch borrowed from IMF was 5.1 and 5.4 per cent in 2020 and 2021, respectively, whereas it was 2.7 and 2.8 per cent for the non-borrowers. In fact, these regions have also been repeated borrowers from IMF due to their poor market access. For instance, Latin America and Caribbean had the highest CRP (5.0 per cent) and a higher default spread (3.7 per cent) after Africa, whereas EMDEs from Asia had a lower CRP (3.6 per cent) and default spread (2.6 per cent). AEs had the lowest avergae default spread (0.7 per cent) and CRP

Table 2: Country Risk Premium

(in per cent)

Country	FCL		
	Pre-FCL CRP (2008)	During FCL CRP (2009-11)	After FCL CRP (2012)
Colombia	3.9	3.0	3.0
Mexico	3.0	2.3	2.3
Poland	2.4	1.5	1.0
	PLL		
	Pre PLL (2011)	During PLL (2012)	After PLL (2013)
Morocco	3.6	3.6	3.7

Sources: Damodaran (2024); and Authors' own calculations.

[12] EFSF disbursement dashboard.

[13] https://www.imf.org/en/About/Factsheets/Sheets/2023/Flexible-Credit-Line-FCL.

Chart 7: Regional Default Spread and CRP

a. Average Default Spread (2000-2023)

b. Average CRP (2000-2023)

Sources: Damodaran (2024); and Authors' own calculations.

(0.8 per cent), and thus, they did not need recourse to IMF loans (Chart 7). Also, some of the fast-growing EMDEs, especially in the APR region, had better market access and did not need to borrow from the IMF.

A panel regression with country fixed effects model has been estimated to establish the link between market access and IMF loans. The regression is estimated on the amount of loans drawn by countries with the relevant country risk premium as the explanatory variable[14], and has the following specification:

Amount Drawn$_{it}$ = α + βCRP$_{it}$ + Global Shock + Country Fixed Effects

In the above equation,

amount drawn refers to the amount of IMF loan support availed by country i in year t in SDR million; market access is measured through country risk premium (CRP), and global shock indicates time dummies for GFC, Euro-zone and COVID crisis.

The sample comprises of an unbalanced panel[15] of 124 countries which have borrwed from IMF during 2000 to 2024. This regression is run for the whole sample period with country fixed effects which takes into account the country-specific factors. In model 1, the impact of CRP is examined without controling for the global schocks. In model 2, 3, 4 and 5, separate dummies are added to account for the three shocks viz GFC, Euro-Zone and COVID. And in model 5 all the three shock dummies are added together.

The regression results reveal that countries with lower market access as indicated by a higher country risk preimum availed greater financial support from the IMF. These results were significant across all the five models which indicates that it is the lack of market access which drives countries to borrow more from IMF. The regression parameter for CRP without time dummies is significant at 90% confidence interval. On the other hand, the estimated parameters for CRP with time dummies turns significant at 99% confidence interval. This appears to indicate that while higher CRPs (*i.e.*, lack of market access) is a significant factor

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[14] Since CRP is calculated using the default spreads, we only include CRP in the regression analysis to avoid multicollinearity.

[15] All 124 countries have not borrowed in a given year, and hence, the sample is an unbalanced panel.

Table 3: Panel Regression Results

	Amount Drawn (2000-2024)
Model 1: Without Global Shock Dummies	
Country Risk Premium	149.2*(2.5)
Country Fixed Effects	Yes
Number of Obervations	312
Model 2: Global Financial Crisis Dummy (2008-2010)	
Country Risk Premium	143.5* (2.4)
GFC Dummy	8.2 (1.0)
Country Fixed Effects	Yes
Number of Obervations	312
Model 3: Euro Zone Crisis Dummy (2012-2014)	
Country Risk Premium	160.2***(2.6)
Euro-Zone Crisis Dummy	-4.9 (-0.9)
Country Fixed Effects	Yes
Number of Obervations	312
Model 4: COVID(2020-2021)	
Country Risk Premium	185.8***(2.8)
COVID Dummy	5.3 (0.1)
Country Fixed Effects	Yes
Number of Obervations	312
Model 5: All Global Shocks	
Country Risk Premium	189.9*** (2.9)
GFC Dummy	8.7* (1.7)
Euro-Zone Crisis Dummy	-2.5 (-0.4)
COVID Dummy	6.0 (0.1)
Country Fixed Effects	Yes
Number of Obervations	312

t-statistics in parentheses. *: $p<0.1$, **: $p<0.05$, and ***: $p<0.01$

in driving countries' recourse to the IMF loans, the shock events accentuate the countries' recourse to IMF loans (Table 3).

As stated before, the recourse of countries to IMF loans has increased during crisis periods. This is probably on account of the fact that crisis episodes leads to worsening of macroeconomic fundamentals and an increase in the country risk preimum of the affected countries, which in turn reduces their market access and makes them resort to IMF loans.

V. Conclusion

This article shows that there has been an increased dependence on IMF loans in the last three decades across regions, particularly for the LICs and some EMDEs, in conjunction with rising economic integration across the globe. Countries with availability of alternate sources of funding including swap lines and RFAs, and had market access through better ratings usually did not avail IMF loans. On the other hand, the borrowers from IMF generally had weak ratings and limited market access. Further, shock events appear to increase the dependence of countries on IMF loans as these event appear to restrict market of crisis affected countries through increased CRPs. Some IMF programs such as FCL and PCL, which are designed for the purpose of enhancing market access for countries with robust macroeconomic fundamentals, appear to have served their purpose. Predominantly, the countries without or limited market access and alternate resources avail IMF loans, which points to the role of the IMF as the global lender of last resort and highlights its central role in the GFSN.

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Annex Tables

Table A1: Moody's Rating Scale

Investible Grade	Aaa	Prime
	Aa1, Aa2 and Aa31	High Grade
	A1, A2 and A3	Upper Medium Grade
	Baa1, Baa2 and Baa3	Lower Medium Grade
Speculative Grade	Ba1, Ba2 and Ba3	Non-Investment grade speculative
	B1, B2 and B3	Highly Speculative
	Caa1, Caa2 and Caa3	Substantial Risk
	Ca	Extremely Speculative
	C	Default
	D	

Table A2: Global Financial Crisis

Countries which borrowed from IMF during 2008-11

Country	2008		2009		2010		2011	
	Rating	CRP	Rating	CRP	Rating	CRP	Rating	CRP
Angola			na	na				
Armenia	Ba2	6	Ba2	4.5	Ba2	4.125		
Colombia			Baa3	3	Baa3	3	Baa3	3
Comoros			na	na				
Congo	na	na						
Djibouti	na	na						
Dominican Republic			B2	8.25				
El Salvador			Ba1	3.75	WR*	15		
Ethiopia			na	na				
Ghana			na	na				
Greece			A2	1.57	Ba1	3.6		
Iceland	Baa1	3						
Ireland			A	0.45	Baa1	2.25		
Jamaica					B3	9		
Latvia	A3	2.625						
Malawi	na	na						
Mali	na	na						
Niger	na	na						
Portugal					A1	1.275	Ba2	4.125
Togo	na	na						

Note: *WR: Rating withdrawn; na: no ratings available.
Source: Damodaran (2024).

Select Countries which did not borrow from IMF during 2008-11

Country	2008		2009		2010		2011	
	Rating	CRP	Rating	CRP	Rating	CRP	Rating	CRP
Austria	Aaa	0	Aaa	0	Aaa	0	Aaa	0
Belgium	Aa1	1.05	Aa1	0.45	Aa1	0.375	Aa3	1.05
Denmark	Aaa	0	Aaa	0	Aaa	0	Aaa	0
Finland	Aaa	0	Aaa	0	Aaa	0	Aaa	0
France	Aaa	0	Aaa	0	Aaa	0	Aaa	0
Germany	Aaa	0	Aaa	0	Aaa	0	Aaa	0
Italy	Aa2	1.5	Aa2	0.9	Aa2	0.75	A2	1.5
Sweden	Aaa	0	Aaa	0	Aaa	0	Aaa	0
United Kingdom	Aaa	0	Aaa	0	Aaa	0	Aaa	0
United States of America	Aaa	0	Aaa	0	Aaa	0	Aaa	0

Source: Damodaran (2024).

Table A3: Euro-Zone Crisis

Countries which borrowed from IMF during 2012-14

Country	2012		2013		2014	
	Rating	CRP	Rating	CRP	Rating	CRP
Albania					B1	6.75
Armenia					Ba2	4.50
Bangladesh	Ba3	4.88				
Burkina Faso			B2	8.25		
Bosnia and Herzegovina	B3	9.00				
Colombia			Baa3	3.30		
Cyprus	B3	9.00	Caa3	15	B3	9.75
Georgia	Ba3	4.88			Ba3	5.40
Greece	Caa3	15.00	Caa3	15	Caa1	11.25
Honduras					B3	9.75
Jamaica			Caa3	15		
Jordan	Ba2	4.13				
Mexico	Baa1	2.25			A3	1.80
Morocco	Ba1	3.60			Ba1	3.75
Pakistan			Caa1	11.25		
Poland			A2	1.28		
Romania			Baa3	3.30		
St. Vincent & the Grenadines					B3	9.75
Tunisia			Ba3	5.40		
Ukraine					Caa3	15

Source: Damodaran (2024).

Countries which did not borrow from IMF during 2012-14

Country	2012		2013		2014	
	Rating	CRP	Rating	CRP	Rating	CRP
Ireland	Ba1	3.60	Ba1	3.75	Baa1	2.40
Portugal	Ba3	4.88	Ba3	5.40	Ba1	3.75
Spain	Baa3	3	Baa3	3.30	Baa2	2.85

Source: Damodaran (2024).

Table A4: COVID Crisis

Select Countries which Borrowed from IMF

Country	2020		2021	
	Ratings	CRP	Ratings	CRP
Bahamas	Ba2	2.91	Ba3	3.56
Benin	B2	5.33	B1	4.45
Bolivia	B2	5.33	B2	5.44
Bosnia and Herzegovina	B3	6.30	B3	6.43
Burkina Faso	B2	5.33	B2	5.44
Cameroon	B2	5.33	B2	5.44
Cape Verde	B2	5.33	B3	6.43
Congo (Democratic Republic of)	Caa1	7.26	Caa1	7.41
Costa Rica	B2	5.33	B2	5.44
Côte d'Ivoire	Ba3	3.49	Ba3	3.56
Dominican Republic	Ba3	3.49	Ba3	3.56
Ecuador	Caa3	9.68	Caa3	9.89
El Salvador	B3	6.30	Caa1	7.41
Ethiopia	B2	5.33	Caa2	8.90
Gabon	Caa1	7.26	Caa1	7.41
Ghana	B3	6.30	B3	6.43
Guatemala	Ba1	2.42	Ba1	2.47
Jamaica	B2	5.33	B2	5.44
Jordan	B1	4.36	B1	4.45
Kenya	B2	5.33	B2	5.44
Mali	Caa1	7.26	Caa1	7.41
Moldova	B3	6.30	B3	6.43
Mongolia	B3	6.30	B3	6.43
Montenegro	B1	4.36	B1	4.45
Mozambique	Caa2	8.72	Caa2	8.90
Namibia	Ba3	3.49	Ba3	3.56
Nicaragua	B3	6.30	B3	6.43
Niger	B3	6.30	B3	6.43
Nigeria	B2	5.33	B2	5.44
Pakistan	B3	6.30	B3	6.43
Panama	Baa1	1.55	Baa2	1.88
Papua New Guinea	B2	5.33	B2	5.44
Paraguay	Ba1	2.42	Ba1	2.47
Peru	A3	1.16	Baa1	1.58
Rwanda	B2	5.33	B2	5.44
Senegal	Ba3	3.49	Ba3	3.56
Solomon Islands	B3	6.30	Caa1	7.41
South Africa	Ba2	2.91	Ba2	2.97
Tunisia	B2	5.33	Caa1	7.41
Uganda	B2	5.33	B2	5.44

Source: Damodaran (2024).