DEFAULTING ON DEVELOPMENT AND CLIMATE

Debt Sustainability and the Race for the 2030 Agenda and Paris Agreement



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The mission of the Debt Relief for Green and Inclusive Recovery (DRGR) Project is to utilize rigorous, policy-oriented research to advance innovative solutions to address the challenges of 21st century sovereign debt crises.

Taking a holistic approach, the DRGR Project engages with policymakers, thought leaders and civil society to further ambitious, evidence-based policy dialogue for sustainable development around the world. The DRGR Project has been designed since its inception with input from stakeholders in the Global South, and to advance its policy recommendations through a development-centered lens.

The DRGR Project is a collaboration between the Boston University Global Development Policy Center, Heinrich-Böll-Stiftung and the Centre for Sustainable Finance at SOAS, University of London. Founded in 2020 during the height of the COVID-19 pandemic, the DRGR Project focuses on the linkages between sovereign debt distress and climate change, advancing pioneering proposals to unlock finance for sustainable development and to achieve shared climate and development goals.

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ABBREVIATIONS

СоТ	Comparability of Treatment
DRGR	Debt Relief for Green and Inclusive Recovery
DSAs	Debt Sustainability Analyses
DSSI	Debt Service Suspension Initiative
ECLAC	Economic Commission for Latin America and the Caribbean
EMBI	Emerging Market Bond Index
EMDEs	Emerging Market Developing Economies
FED	US Federal Reserve
G20	Group of Twenty
GDP	Gross Domestic Product
GNI	Gross National Income
HIPC	Heavily Indebted Poor Countries Initiative
IBRD	International Bank for Reconstruction and Development
IDA	International Development Association
IFC	International Finance Corporation
IMF	International Monetary Fund
LICs	Low-Income Countries
LIC DSF	Debt Sustainability Framework for Low- Income Countries

LMICs	Lower Middle-Income Countries
MDBs	Multilateral Development Banks
MDRI	Multilateral Debt Relief Initiative
MICs	Middle-Income Countries
MIGA	Multilateral Investment Guarantee Agency
NCF	New Common Framework
ODA	Official Development Assistance
PCS	Preferred Credit Status
PNG	Private Non-Guaranteed
PPG	Public and Publicly Guaranteed
PRGT	Poverty Reduction and Growth Trust
ΡV	Present Value
RSF	Resilience and Sustainability Facility
SDGs	Sustainable Development Goals
SDRs	Special Drawing Rights
UMICs	Upper Middle-Income Countries
UNFCCC	The United Nations Framework Convention on Climate Change
WB	World Bank
WEO	World Economic Outlook



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EXECUTIVE SUMMARY

Time is running out to achieve the goals set out in the United Nations 2030 Agenda for Sustainable Development and the Paris Agreement.

Amid a half decade of external shocks, emerging market and developing economies (EMDEs) aside from China are not on track to mobilize the investments needed to meet shared climate and development goals. Not meeting these goals will have tragic impacts on the lives of present and future generations; yet, EMDEs are facing conditions that inhibit their ability to mobilize investment, including historic levels of external debt, higher interest rates and low growth prospects to 2030.

The Independent Expert Group to the Group of 20 (G20) has charted a pathway to prosperity through the mobilization of \$3 trillion annually, \$1 trillion from external sources and \$2 trillion domestically, by 2030. Such investments would not only put EMDEs on a growth and recovery trajectory that would enable them to meet their climate and development needs but would also bring positive spillovers to the Global North and the international community as a whole for avoiding the catastrophic costs of inaction.

The only viable pathway for raising the financing required is through a combination of new liquidity and a stepwise increase in concessional financing, alongside the key focus of this report: significant debt relief for countries in need.

In this report by the Debt Relief for a Green and Inclusive Recovery (DRGR) Project, we perform an enhanced global external debt sustainability analysis (DSA) to estimate the extent to which EMDEs can mobilize the G20 Independent Expert Group recommended levels of external financing without jeopardizing debt sustainability. We find that among 66 of the most economically vulnerable countries, 47 countries with a total population of over 1.11 billion people will face insolvency problems in the next five years as they seek to ramp up investment to meet climate and development goals. Debt

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Appendix II: Guarantee Fund relief must be administered for these countries to stand a chance to invest in a climate-resilient future and achieve their development aspirations.

Main findings:

- External Public and Publicly Guaranteed (PPG) debt levels have more than doubled since 2008. In terms of debt service payments, 2024 is the costliest debt service year yet this century.
- Debt service payments are at an all-time high and are crowding out investment in development and climate. Nearly half of the world's population lives in a country that spends more on external debt service than on investments in health or education.
- Private capital markets are out of reach for the majority of EMDEs.
 With bond yields higher than projected growth rates, EMDEs cannot rely on capital markets to roll over or issue new debt without jeopardizing their debt sustainability.
- In the next five years, an estimated 47 EMDEs would surpass the International Monetary Fund's (IMF) external debt solvency thresholds as they mobilize capital to meet 2030 Agenda and Paris Agreement needs. According to the enhanced global external DSA performed in this report, these EMDEs would reach unsustainable levels of external public debt by 2028 if they were to invest at the levels needed to meet internationally agreed climate and development goals.
- An additional 19 EMDEs lack liquidity and fiscal space for climate and development investment. While these countries will not likely face imminent insolvency issues, they will not be able to finance necessary investments without credit enhancement or liquidity support.

Our analysis shows that by ignoring critical development and climate investment needs, the DSAs that are currently conducted by the IMF grossly underestimate debt sustainability problems in EMDEs. Investment needs in climate resilience, health, education and other critical elements of the 2030 Agenda and Paris Agreement must be included in DSAs to provide a true picture of a country's debt sustainability and prospects for fiscal stability. Not doing so is to ignore the significant costs of inaction and implicitly acknowledge that achieving the 2030 Agenda and Paris Agreement is not important.

We maintain that it is imperative that the world economy accelerates investment to meet shared climate and development goals. Not only will such investments avoid major costs, but they will also put the world on a robust 21st century growth trajectory. In a three-pillared approach, the DRGR Project calls for three areas of urgent reform:

- DSAs, which are under review at the IMF, need to be enhanced and calibrated to account for critical development investment needs, as well as the potential of climate and other shocks.
- The G20 Common Framework needs to be based on enhanced DSAs, compel all creditor classes to participate and deliver a level of debt relief necessary to mobilize financing for climate and development goals.
- Credit enhancement should be provided for countries not in debt distress but that lack fiscal space to lower the cost of capital, alongside other forms of support like a temporary debt service suspension to ensure countries remain liquid while increasing fiscal space for investing in a green and inclusive recovery.

Since 2020, the DRGR Project has called for a reform of the Common Framework and emphasized the need for DSAs to incorporate climate and development financing needs. The DRGR Project's proposal rests on three pillars, as seen in Figure E1: 1) Public and multilateral creditors should grant significant debt reductions that not only bring a distressed country back to debt sustainability but put the country on a path to achieving development and climate goals—in a manner that preserves the financial health and credit rating of multilateral institutions and 2) Private and commercial creditors should grant commensurate debt reductions alongside public creditors with a fair comparability of treatment. Private and commercial creditors would be compelled to participate through 'carrots,' such as a partial guarantee of new bonds, and 'sticks,' such as payment standstills and other legal actions. Whereas the first two pillars reform the Common Framework, Pillar 3) says credit enhancement should be provided for countries not in debt distress but that lack fiscal space to lower the cost of capital, alongside other forms of support like a temporary debt service suspension to ensure countries remain liquid while increasing fiscal space for investing in a green and inclusive recovery.

While debt relief for a green and inclusive recovery is essential for the international community to meet climate and development goals, it is no silver bullet and must be supplemented by broader reforms of the global financial architecture. Chief among these reforms is to increase the amount of liquidity support available through the Global Financial Safety Net by issuing and rechanneling Special Drawing Rights, increasing quotas for EMDEs at the IMF and expanding supportive regional financial arrangements. A stepwise increase in capital for development finance institutions through capital increases and reforms of capital adequacy frameworks is also needed. For both liquidity and development finance, such reforms should also increase

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Figure E1: Three Pillars for Debt Relief for a Green and inclusive Recovery



Source: DRGR Project, 2024.

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the efficacy and efficiency of associated institutions while increasing the voice and representation of EMDEs and their citizens.

Alongside such reforms, debt relief can help put the global economy on a green, inclusive and high growth trajectory. Time is of the essence in providing the fiscal space to invest in climate and development goals. The DRGR proposal is designed to address the immediate challenges facing indebted EMDEs in terms of financing the 2030 Agenda and the Paris Agreement. It could also provide a stepping stone towards a new global debt architecture that is fair, transparent, efficient and cognizant of the needs of EMDEs.

Urgent action is paramount to prevent a default on development and climate goals and secure a sustainable future. EMDEs and advanced economies must jointly steer the global economy towards a trajectory of growth and shared prosperity through strategic investments in development and climate. Crucially, breaking free from unsustainable debt is imperative to paving the way for a promising shared growth prospect.

It is time to eliminate the obstacles hindering progress and forge a new path towards a sustainable and inclusive future.

Inle Lake, Myanmar. Photo by Zinko Hein via Unsplash.



INTRODUCTION

Within every challenge is an opportunity.

The United Nations 2030 Agenda for Sustainable Development (2030 Agenda) consists of an ambitious set of Sustainable Development Goals (SDGs) adopted by United Nations Member States in 2015 (UN 2015). Combined with the Paris Agreement on climate change (UNFCCC 2015), these climate and development goals aim to transform the world economy into a low-carbon, resilient and more socially equitable economy. A stepwise mobilization of financing in the amount of \$3 trillion by 2030 for emerging market and developing economies (EMDEs) excluding China-of which \$1 trillion should come from external sources—is needed to meet these goals (Songwe et al. 2022; G20 Independent Expert Group 2023). These investment needs present an opportunity to not only help avoid the catastrophic consequences of climate inaction, but also put the world economy onto a new green and inclusive growth path. Indeed, recent estimates show that making the necessary investments will not only avoid catastrophic loss, but lead to a world economy that is significantly larger than the present unsustainable course (Kharas and Rivard 2022; Merhoff 2023).

However, the several external shocks that have plagued the world economy since 2020—the COVID-19 pandemic, climate change, war and interest rate hikes in major high-income countries—present a considerable challenge to achieving the SDGs and the Paris Agreement, as much of the Global South is burdened with unsustainable debt levels. Given that interest rates remain high, the prospects for rolling over such debt in private capital markets could prove to be dangerous to countries with solvency risks, as it would exacerbate debt burdens while leaving countries without fiscal space for a longer period. Failing to address the growing sovereign debt crisis will have dire consequences for people and the planet. At a time when EMDEs urgently need to invest in low-carbon, socially inclusive and resilient growth trajectories and avoid the catastrophic costs of climate inaction, much of the Global

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What is more, international macroeconomic conditions are further affecting the capacity to invest in social-economic priorities. According to World Bank (2024) estimates, interest rates on government bonds are at four-decade highs while the next five years of economic growth in developing countries are projected to be at the lowest levels seen in 30 years.

The \$3 trillion in investment needs identified by experts (Songwe et. al 2022, G20 Independent Expert Group 2023) are small relative to the economic and social costs of inaction, estimated to be 20 percent of global gross domestic product (GDP) levels by 2050 (CPI 2024; Kiehl 2022). The necessary investment push is also small relative to the high costs of slashing investment in order to service external debt. Separate studies by the Brookings Institution and the International Monetary Fund (IMF) find that if the G20 Independent Expert Group recommended scale of investments needed to achieve the SDGs and Paris Agreement is made—rather than pursuing fiscal consolidation and stabilization— there will be a 32 percent increase in income levels and better creditworthiness across the Global South (Kharas and Rivard 2022; Metcalf 2023).

Yet, the current economic environment is such that an increasing number of countries are reducing investment at alarming rates to service external debt payments. If the international community does not act in a swift and uniform manner to provide comprehensive debt relief where needed alongside new liquidity, grants and concessional development finance, the costs of inaction will be exorbitant. The United Nations Framework Convention on Climate Change (UNFCCC) Global Stocktake says the international community is facing a "rapidly narrowing window" to act on climate change (UNFCCC 2023). Time is of the essence to transform the debt and development challenge into an opportunity for shared prosperity and growth.

To achieve this, the Debt Relief for a Green and Inclusive Recovery (DRGR) Project has developed a proposal for concerted and comprehensive debt relief to free resources in heavily indebted developing countries to foster a just transition to a low-carbon, socially inclusive and resilient economy (Volz et al., 2020; Volz et al. 2021, Ramos et al. 2023). The DRGR Project's proposal rests on three pillars, as seen in Figure 1:

1. Public and multilateral creditors should grant significant debt reductions that not only bring a distressed country back to debt sustainability but put the country on a path to achieving development and climate

Within every challenge is an opportunity⁹⁹ goals—in a manner that preserves the financial health and credit rating of multilateral institutions.

- Private and commercial creditors should grant commensurate debt reductions alongside public creditors with a fair comparability of treatment. These creditors must be compelled to enter negotiations through a combination of carrot and stick incentives.
- 3. Credit enhancement should be provided for countries not in debt distress but that lack fiscal space to lower the cost of capital, alongside other forms of support like a temporary debt service suspension to ensure countries remain liquid while increasing fiscal space for investing in a green and inclusive recovery.

Figure 1: Three Pillars for Debt Relief for a Green and inclusive Recovery



Source: DRGR Project 2024.

Determining whether a country needs comprehensive debt relief or liquidity support should be calculated with a reformed Debt Sustainability Analysis (DSA) carried out by the International Monetary Fund (IMF) and the World Bank, with input from other institutions. DSAs need to be based on realistic assumptions and account for climate and other sustainability risks, as well as the country's estimated financing needs for climate change adaptation, mitigation and achieving the SDGs. This report performs a global version of an enhanced DSA to identify the countries that are in most need of debt relief under Pillars 1 and 2 of the DRGR proposal, and those that will need treatment under Pillar 3 conditions.

At a time when EMDEs urgently need to invest in low-carbon, socially inclusive and resilient growth trajectories and avoid the catastrophic costs of climate inaction, much of the Global South is saddled with debt burdens⁹⁹

Following this introduction, this report is organized into five sections. Based on newly available data from the World Bank, the following section provides the context showing that the cost of capital and levels of external debt in EMDEs are at record highs, growth projections are at record lows and that investment levels are trending downward at the expense of development spending. The third section outlines the three pillars of the DRGR proposal in detail, while the fourth section performs a global DSA, estimating the number of countries that will need to be part of a New Common Framework, while the fifth section calculates the levels of debt relief needed in order to achieve a fair comparability of treatment among creditor classes. The sixth section concludes.

Nepal Photo by Azin Javadzadeh via Unsplash



EXTERNAL DEBT DYNAMICS IN EMERGING MARKET DEVELOPING ECONOMIES

External debt levels have hit alarming levels while current debt service is at a height not seen since the 1990s when much of the Global South was on the brink of default. What is more, external public debt service is crowding out investment and development spending. Worse still, private capital markets are largely out of sustainable reach for refinancing or new financing for the foreseeable future.

According to the World Bank International Debt Statistics published in December 2023, external sovereign debt in EMDEs (excluding China) increased close to 2.5 times in 2022 relative to the levels during the 2008 global financial crisis—from \$1.27 trillion in 2008 to \$3.1 trillion in 2022, as seen in Figure 2. Not only has the level of debt increased, the composition of external creditors has widened to include not just commercial banks and multilateral development banks (MDBs) as in the last century, but also private bondholders from across the world and emerging market public and private creditors from countries such as China and Saudi Arabia. Indeed, while in 2008, the Paris Club, World Bank and other MDBs held 46 percent of the public external debt stock of developing countries, their combined share decreased to 34 percent by 2022. The share of lending from Paris Club members dropped from 18 percent to 7 percent, while the portion from MDBs, including the World Bank, decreased slightly by one percentage point to 26 percent in 2022.

Concomitantly, private bondholders' claims on EMDEs (excluding China) external Public External Debt (PPG) debt stock increased from 30 percent to 41 percent, while external debt owed to China increased from just under 1 percent to 5 percent. These magnitudes and shares are exhibited in Figure 2.

The picture changes when disaggregated by income, as shown in Figure 3. Across income groups, MDBs, bondholders, the Paris Club and China comprise roughly 80 percent of all external debt stock. For low- and lower middle-income countries (LICs and LMICs, respectively), a significant portion of total debt stock is attributable to multilateral creditors. Specifically,

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Figure 2: EMDE (excluding China) public external debt composition by creditor, 2008-2022, in USD billions

Source: Compiled by authors using World Bank (2023).

Note: Includes 123 EMDE, as per World Bank International Debt Statistics coverage. The World Bank Group comprises the International Bank for Reconstruction and Development (IBRD), International Development Association (IDA), International Finance Corporation (IFC) and Multilateral Investment Guarantee Agency (MIGA).



Figure 3: EMDEs' (excluding China) public external debt stock composition in 2022, by income group, as share of total external debt (including IMF credit)

Source: Compiled by authors using World Bank (2023).

Note: World Bank includes International Bank for Reconstruction and Development (IBRD), International Development Association (IDA), International Finance Corporation (IFC) and Multilateral Investment Guarantee Agency (MIGA). 'LICs' are low-income countries, 'LMICs' are lower middle-income countries and 'UPMICs' are upper middle-income countries, classified according to the World Bank's fiscal year 2024 income groups.

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LICs—those with a gross national income (GNI) per capita below \$1,135 in 2022—owe 48 percent of their external debt to MDBs. In contrast, LMICs, with GNIs per capita between \$1,136-\$4,465, owe 36 percent to multilateral creditors. Upper-middle-income countries (UMICs), those with GNIs per capita ranging from \$4,466-\$13,845, have a high reliance on bondholders, who account for 56 percent of their debt in 2022; as a matter of comparison, LMICS owed 24 percent of their public sovereign debt stocks to bondholders in the same year. Regarding China's role, 12 percent of debt from LICs is owed to China, compared to 8 percent for LMICs and 2 percent for UMICs. The Paris Club holds similar proportions of debt, with 9 percent for LICs, 12 percent for LMICs and 4 percent for UMICs.

EMDEs have also become significantly exposed to concerning levels of private sector external debt. Economic slowdowns and external shocks often bring private sector defaults and distress, which can jeopardize the financial health of sovereigns, especially in cases where they must assume the obligations of a stressed private sector (Panizza et al, 2009). As Figure 4 shows, private non-guaranteed (PNG) debt represents an important share of EMDEs' public external debt stock. For UMICs (excluding China), PNG is roughly the same size as PPG debt (\$1.15 billion and 1.25 billion, respectively). For LICs and LMICs, PNG debt represents about one-third of total external debt. For External debt levels have hit alarming levels⁹⁹

Figure 4: EMDEs' (excluding China) public and private external debt stock, by income group, in USD billions



Source: Compiled by authors using World Bank (2023).

Note: PNG refers to "Private nonguaranteed" while PPG "Public and Publicly Guaranteed" debt.

LICs, PNG debt stock increased from \$4 billion in 2008 to \$67 billion in 2022, while for LMICs it increased from \$238 billion to \$610 in the same period.

A concerning amount of total external public and private debt faces variable interest rates, as shown in Figure 5. Variable interest rates can bring great uncertainty for governments. Whereas the accumulation of debt in earlier years was at lower rates, it is increasingly expensive, as interest rates



Figure 5: Variable interest rate loans as share of total external public and private debt, 2008-2022



A: By income group (excluding China)

Source: Authors' elaboration using World Bank (2023).

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have risen in the post COVID-19 era. Figure 5A shows that the share of LICs' external debt that is variable leaped from 11 percent in 2008 to 38 percent in 2022. Figure 5B shows that Latin America and the Caribbean have the highest proportion of debt subject to variable interest rates.

Although there was a decline in EMDE spreads in recent months, sparking some hope that borrowing costs could decrease in 2024, as Figure 6 shows, costs remain elevated, particularly in Africa. Figure 6 exhibits the Emerging Market Bond Index spreads plus the Federal Funds rates in the United States—the benchmark for risk-free assets and parameter for investment decisions regarding different maturities and assets –, indicating the cost of borrowing in bond markets for countries in the region. It shows that in the case of both African and Asian countries, the cost of borrowing in bonds issued in January 2024 is at or over 10 percent. In Latin America, external costs of borrowing have decreased to 6 percent, but remain well over projected growth rates in the region, which are the lowest across the world (World Bank 2024).

EMDEs have also become significantly exposed to concerning levels of private sector external debt⁹⁹

Figure 6: Cost of borrowing in international bond markets (EMBI spreads + FED rates), by regions, Jan 2010-2024



Source: Authors' calculation based on Emerging Market Bond Index (EMBI, extracted from Eikon) and Federal Reserve Bank of St. Louis Database.

Note: Data is for the first day of each month. Borrowing costs per region factor spreads in addition to the Federal Reserve's average rate of 5.375 percent. This average rate is derived from the current Federal Reserve target range of 5.25 percent to 5.50 percent. FED rates are a reference for the cost of risk-free assets, which are the parameter for investment decisions regarding different maturities and assets.

Periods with high interest rates creates refinancing risks to EMDEs. When bonds mature during such times, renewing them becomes expensive or even unfeasible to countries seen risky by markets, leading to a buildup of debt vulnerabilities. In recent years, a record number of countries were barred from issuing bonds in international markets—as their bond spreads were above 1,000 basis points. In 2022, the number of countries breaching that threshold reached 24; although current financial conditions have improved in 2024, there are still 17 countries across the word with bond spreads above 1,000 basis points as shown in Figure 7. In 2010, only two countries (Belize and Côte d'Ivoire) experienced such a costly environment.

Even countries that continue to have market access may face problems. In early 2024, Kenya issued new debt to pay older obligations at a yield of

Bond Spreads Jan 2024 v. Avg. Nominal GDP Growth Jan. 24, 2024 Jan 2023 (Projected 2023-2028) Country Lebanon 54.882 11,194 N/A Name Venezuela 20,346 (21, 782)N/A 0.2% Belarus 10,221 Ethiopia 5,156 16.5% 2,693 4,494 6.1% Zambia (2,006) 5.7% Ukraine 4,156 67 N/A Sri Lanka 3,479 (1,227) -1.7% Russia 3,411 2,698 Ghana 4.4% (75) Bolivia 2,209 6.0% 1,545 Argentina 1,897 55 2.5% Ecuador 682 3.8% 1.800 Maldives 1,445 223 8.5% Tunisia 4.8% 1.290 (1,123) Belize 1,188 4.6% Pakistan 1,162 N/A (1, 197)Distressed (>1000) Stressed (700 to 1000) Performing (200 to 700) Low Credit Risk (<200) Spread widening Spread tightening

Figure 7: Countries excluded from bond markets (with bond spreads above 1,000 base points), as of end of January 2024

Source: Authors' calculation based on JPMorgan Emerging Market Bond Index Global, IMF World Economic Outlook (2023).

Note: Comparison of financial spreads from January 24, 2024, to January 24, 2023. Positive values (signed in red) account for increase in spreads, while negative values (signed in green), represent reduced spreads. Borrowing costs for individual countries factor their respective spreads in addition to the Federal Reserve's average rate of 5.375 percent. This average rate is derived from the current Federal Reserve target range of 5.25 percent to 5.50 percent. FED rates are a reference for the cost of risk-free assets, which are the parameter for investment decisions regarding different maturities and assets.

10.35 percent, whereas the original bond had a yield of 6.85 percent. Kenya was already spending 32 percent of government revenue on external debt service before the new issuance, raising serious questions regarding the sustainability of such refinancing efforts. Six of 15 of the countries that issued bonds above 9.5 percent after 2008 have since defaulted—a 40 percent default rate (Savage and Jones 2024).

Another concern is related to the sustainability of borrowing costs in forward-looking trajectories. An important rule of thumb is that interest rates on public debt should not exceed the projected growth rate of an economy (Blanchard 2019). This 'interest rate-growth differential' (r-g) had been negative worldwide for many developing countries since the 2008 global financial crisis through the beginning of the multiple external shocks that triggered instability in EMDEs following the COVID-19 outbreak in 2020. When interest rates are higher than growth rates (r>g, or the differential is positive), a debt overhang can occur whereby the need to have a higher fiscal balance through tax revenues crowds out investment capabilities, leading to a lock-in of low growth prospects (Aquiar, Amador, Gopinath 2009). The situation can become even more dire in EMDEs where debt is denominated in a foreign currency, as the country can become more susceptible to short-term shocks that further increase risk and borrowing costs that can lead to insolvency or default (Aquiar, Amador, Gopinath 2009; Lorenzoni and Werning 2019).

As Figure 8 shows, if EMDEs were to rely on current bond market conditions to borrow, 40 countries would face this unsustainable situation where available interest rates are higher than nominal growth rates.¹ Even excluding countries whose bonds are trading 1,000 basis points over Federal Funds rates—and hence are excluded from issuing new bonds—the interest rates are higher than projected economic growth rates for much of the Global South. Even countries with seemingly 'accessible' spreads of 600 and 700 basis points face the same predicament. Although EMDEs do not borrow solely from bond markets and it is important to assess a weighted cost of borrowing, bond markets have become an increasingly important source of finance for EMDEs (World Bank 2023), pushing up the overall cost of capital. Hence, without a stepwise increase in concessional and grant financing, EMDEs will fast move into the interest-rate-growth danger zone. A rather Even countries that continue to have market access may face problems⁹⁹

If EMDEs were to rely on current bond market conditions to borrow, 40 countries would face an unsustainable situation⁹⁹

¹ It is important to note that while it may be appropriate to adjust the interest-growth rate differential for inflation when conducting analyses like this in countries that issue their own currencies, it is commonly understood that in countries that face foreign currency debt that nominal interest rates should be used, as repayment is a function of export possibilities, exchange rate volatility and the level of foreign currency reserves that a country has on hand (Medieros and Serrano 2006; Behring, Serrano, Freitas 2019; Kenworthy et al. 2024).

Figure 8: Selected countries—Sovereign bond spreads (change between Jan 2023-Jan 2024), borrowing costs and nominal GDP growth projections

	Jan. 24, 2024	Jan 2024 v. Jan 2023	Borrowing Cost*	Avg. Nominal GDP Growth (Projected 2023-2028)	Growth Rates L Borrowing Cos
ntry Angola	712	78	12.5%	-0.9%	-1
Trinidad & Tobago	722	-	12.6%	1.2%	-1
Eqypt	978	225	15.2%	4.5%	-1
Gabon	415	-	9.5%	1.2%	-
El Salvador	708	(729)	12.5%	5.3%	
Iraq	458	5	10.0%	3.0%	
Kenya	593	(40)	11.3%	4.4%	-
South Africa	344	(21)	8.8%	2.2%	
Oman	189	(64)	7.3%	1.6%	
Rwanda	493	(64)	10.3%	5.1%	
Suriname	650	(1,121)	11.9%	7.2%	
Kuwait	13	4	5.5%	0.9%	
Nigeria	597	(141)	11.3%	6.9%	
Bahrain	270	(20)	8.1%	3.9%	
Saudi Arabia	122	(5)	6.6%	2.4%	
Tajikistan	826	(310)	13.6%	9.6%	
Azerbaijan	192	(6)	7.3%	3.4%	
Mongolia	287	(43)	8.2%	4.5%	-3.8%
Colombia	316	(49)	8.5%	4.8%	-3.7%
Jordan	378	19	9.2%	5.5%	-3.7%
Namibia	253	-	7.9%	4.6%	-3.3%
Honduras	391	(174)	9.3%	6.0%	-3.2%
Barbados	394	(47)	9.3%	6.2%	-3.1%
Qatar	91	(10)	6.3%	3.8%	-2.5%
Mozambique	811	(72)	13.5%	11.0%	-2.5%
Papua New Guinea	585	(98)	11.2%	8.9%	-2.3%
United Arab Emirates	119	(15)	6.6%	4.3%	-2.3%
Panama	288	79	8.3%	6.3%	-1.9%
Jamaica	183	(67)	7.2%	5.5%	-1.79
Paraguay	209	-	7.5%	5.9%	-1.65
Peru	160	(39)	7.0%	5.5%	-1.5
Brazil	222	(52)	7.6%	6.3%	-1.2
Cameroon	304	-	8.4%	7.2%	-1.2
Dominican Republic	270	(95)	8.1%	6.9%	-1.2
Uruguay	89	(14)	6.3%	5.3%	-0.9
Tanzania	372	-	9.1%	8.2%	-0.9
Chile	134	(8)	6.7%	6.1%	-0.6
Morocco	193	(41)	7.3%	6.9%	-0
Mexico	339	(18)	8.8%	8.5%	-0
Guatemala	238	6	7.8%	7.7%	-0

Source: Authors' calculation based on JPMorgan Emerging Market Bond Index Global, IMF World Economic Outlook (2023). **Note:** Comparison of financial spreads from January 24, 2024, to January 24, 2023. Positive values (signed in red) account for increase in spreads, while negative values (signed in green), represent reduced spreads. Borrowing costs for individual countries factor their respective spreads in addition to the Federal Reserve's average rate of 5.375 percent. This average rate is derived from the current Federal Reserve target range of 5.25 percent to 5.50 percent. FED rates are a reference for the cost of risk-free assets, which are the parameter for investment decisions regarding different maturities and assets.

> small group of countries—20 countries, as shown in Figure 9—would have a sustainable borrowing path in a forward-looking bases (with projected growth rates higher than borrowing costs in bond markets). However, this

possible sustainable borrowing path is not a reflection of the affordable cost of finance, but rather expected high nominal growth projections, which are currently projected by the IMF to be at least 7 percent per year. In case nominal growth rates are below expected, these countries would also see themselves in an unsustainable situation.

Interest rate-growth differentials underscore the importance of being cautious when depending on private capital markets for funding. Domestic and international policymakers alike will need to carefully calibrate debt management to ensure that the weighted cost of capital across all creditor classes are well below projected growth trajectories. Without such calibration, the data show that many EMDEs could be headed toward a debt overhang that would likely lead to eventual default on external debt, as well as a default on shared climate and development goals.



Figure 9: Selected countries (with growth projections above borrowing costs)—Sovereign bond spreads (change between Jan 2023- Jan 2024), borrowing costs and nominal GDP growth projections

Source: Author's calculation based on JPMorgan Emerging Market Bond Index Global, IMF World Economic Outlook (2023). **Note:** Comparison of financial spreads from January 24, 2024, to January 24, 2023. Positive values (signed in red) account for increase in spreads, while negative values (signed in green), represent reduced spreads. Borrowing costs for individual countries factor their respective spreads in addition to the Federal Reserve's average rate of 5.375 percent. This average rate is derived from the current Federal Reserve target range of 5.25 percent to 5.50 percent. FED rates are a reference for the cost of risk-free assets, which are the parameter for investment decisions regarding different maturities and assets. ⁶⁶ The current financial situation of EMDEs and the forwardlooking tendencies highlight increasing debt pressures for EMDEs⁹⁹ As Figure 10 shows, debt service obligations will reach an all-time high in 2024, with high interest rates while growth rates are at an all-time low for this century. Even without considering the contraction of new debt for SDGs and climate action, debt service will already account for over \$400 billion in 2023. These circumstances are creating a debt overhang, as many EMDEs are paying more for debt service than on education, health and long run public investment.

As exports and GDP growth cannot keep pace with rising debt levels, it comes as no surprise that debt service as a share of exports of goods and services is reaching dangerous levels for an increasing number of countries. According to the IMF (2018), LICs with weak debt carrying capacity should limit their debt service to exports at a level of 10 percent. As Figure 11 shows, for 2022, the average level of debt service to exports was 12 percent, compared to 5 percent in 2015. All income groups saw increasing tendencies of external PPG debt service costs since 2008, indicating difficulties in servicing external PPG debt.



Figure 10: EMDEs' (excluding China) debt service on public external debt (contracted debt only), in USD billions, 2008-2030 (estimated from 2023)

Source: Compiled by authors using World Bank (2023).

Note: Estimated from 2023. Estimation does not include debt service projection stemming from expected new contracted debt.

Figure 11: Total debt service as share of exports of goods, services primary income, by income group (EMDEs, excluding China), 2008-2022



Source: Compiled by authors using World Bank (2023).

Note: Primary income refers to earnings arising from the provision of a factor of production: labor (e.g., wages), financial assets (e.g., dividends), land and natural resources.

The current financial situation of EMDEs and the forward-looking tendencies highlight increasing debt pressures for EMDEs. It should be noted that the estimated decline in debt service is due to the fact that these estimations do not include debt service projections stemming from newly contracted debt.

The next section discusses the DRGR Project proposal to alleviate external PPG debt burdens and support EMDEs' economic growth prospects.



THE DEBT RELIEF FOR A GREEN AND INCLUSIVE RECOVERY PROPOSAL

Indebted EMDEs urgently need the G20 Common Framework to be reformed to help them meet their climate and development goals and avoid the high costs of inaction. A systemic approach to debt restructuring that allows for swift and comprehensive debt relief for countries with unsustainable debt burdens—rather than case-by-case solutions with protracted negotiations that put debtor countries in structurally weak positions—should be part of such a reform package so that all governments have the fiscal space to undertake crucial investments in development and climate (Gil 2022, Hagan 2023).

The global community has been doing too little, too late to combat the debt and development crisis. There have been some notable initiatives, including the 2021 issuance of \$650 billion in Special Drawing Rights (SDRs) at the IMF, increased lending at MDBs and initiating a process of evaluating the need to increase overall lending levels, and the creation of two mechanisms for debt relief from the G20—the Debt Service Suspension Initiative (DSSI) that suspended official public debts and the Common Framework for Debt Treatment Beyond the DSSI that was to help insolvent countries restructure their debts.

The issuance of SDRs was deemed to be highly effective in easing pressures on developing countries, despite the fact that the overwhelming majority of SDRs were allocated to advanced economies that did not need them (IMF 2023). To address the inherent asymmetries of SDR allocations, the global community created the Resilience and Sustainability Facility (RSF) within the IMF, increased capital for the IMF's Poverty Relief and Growth Trust (PRGT) and is considering using rechanneled SDRs to supplement the balance sheets of MDBs in order to provide more development finance. These efforts have been very welcome, but they are not at the scale necessary to ease pressures on EMDEs and mobilize the amount of investments needed to avoid the costs of inaction and propel countries onto a green and inclusive growth path. **Executive Summary**

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Appendix II: Guarantee Fund Indebted EMDEs urgently need the G20 Common Framework to be reformed to help them meet their climate and development goals and avoid the high costs of inaction⁹⁹ The DSSI only included official bilateral creditors and thus provided relief for a very small share of overall external public debt. The small amounts of relief granted were used to pay private bondholders who did not participate, and the program was discontinued in December 2021. Since January 2023, after a one-year grace period, the 45 countries that participated in the DSSI have had to repay the debt that was suspended with the corresponding interest rate. Meanwhile, countries that participated in the DSSI saw their currencies depreciate vis-à-vis the US dollar by 22.5 percent on average between the end of 2019 and January 2023 (Brouwer 2023), making repayment of the suspended debt more expensive in terms of domestic currency.

The Common Framework has yet to provide any debt relief and has been plagued by many design inadequacies. Notable inadequacies of the Common Framework include:

- The DSAs that underpin the negotiations for debt relief do not properly account for the propensity of external shocks nor critical investment needs of participating countries.
- There is no mechanism to compel all creditor classes to participate in restructuring, with private bondholders and commercial creditors in China the most reluctant to participate while the MDBs are exempt altogether.
- When all creditors do participate, it appears that there is a lack of fair 'comparability of treatment,' whereby private bondholders provide the least amount of debt relief, even though they are the most apt to have recovered potential losses through high ex-ante capital costs.
- The level of debt relief on the table is not appropriate considering the investment needs to meet the SDGs and Paris Agreement commitments, despite the fact that all G20 countries are signatories to both initiatives.

Launched in 2020, the DRGR Project has developed a proposal for concerted and comprehensive debt relief to free resources in heavily indebted developing countries to foster a just transition to a low-carbon, socially inclusive and resilient economy (Volz et al. 2020; Volz et al. 2021; Ramos et al. 2023). Financing new development pathways should rely on several sources—concessional and affordable lending, SDRs, official development assistance (ODA), among others—and debt relief is a key part of this package. When provided, debt relief not only represents an immediate increase in fiscal space, but with a clean balance sheet, an EMDE can unlock new investments opportunities. Bearing that in mind, the DRGR Project's proposal rests on three pillars, as illustrated in Figure 12:

Financing new development pathways should rely on several sources and debt relief is a key part of this package⁹⁹



Source: DRGR Project 2024.

- Public and multilateral creditors should grant significant debt reductions that not only bring a distressed country back to debt sustainability but put the country on a path to achieving development and climate goals—in a manner that preserves the financial health of multilateral institutions.
- Private and commercial creditors should grant commensurate debt reductions alongside public creditors with a fair comparability of treatment. These creditors must be compelled to enter negotiations through a combination of carrot and stick incentives.
- 3. Credit enhancement should be provided for countries not in debt distress but that lack fiscal space to lower the cost of capital, alongside other forms of support like a temporary debt service suspension to ensure countries remain liquid while increasing fiscal space for investing in a green and inclusive recovery.

The prerequisite for properly assessing which countries need debt relief or liquidity support—balancing debt sustainability and development—is reforming DSAs. DSAs need to be reformed from tools that assess whether a country is able to repay its debt obligations into tools that identify whether a country is able to finance critical investment needs and repay its debt •• DSAs need to be reformed from tools that define what a country's investment trajectory is into tools that identify how to finance a country's investment needs⁹⁹ without compromising social and economic development that is environmentally sustainable. DSAs must use the investment needs of a country as a baseline, as well as scenarios whereby a country may experience various traditional and climate- or nature-related shocks (Maldonado and Gallagher 2022; Kraemer and Volz 2022). Enhanced DSAs will need to be based on a more realistic assessment of the amount of external debt necessary to finance investment needs, and the relative cost of capital necessary to mobilize such investment. In the case of debt restructuring, an enhanced DSA will also provide a more realistic envelope for the level and nature of the needed debt reduction.

For Pillar 1 of the DRGR proposal, if a DSA asserts that the sovereign debt of a country is of significant concern, an official creditor committee should coordinate all bilateral and multilateral official creditors. Although MDB participation could take place in distinct formats (provision of new financial flows or direct haircuts), it is fundamental that their claims are not excluded preemptively from debt relief efforts, as such policy could dissuade countries with high debt to MDBs from pursuing debt relief altogether. Moreover, excluding MDBs from debt relief risks realizing an insufficient debt reduction to restore debt sustainability, especially in the case of LICs. Finally, MDBs will need to provide debt relief in a manner that maintains their financial health and/or provide grants and concessional financing to bring the country to solvency (Zucker-Marques et al. 2023). Countries with outstanding IMF debt should resort to the Catastrophe Containment and Relief Trust.

Pillar 2 of the proposal emphasizes that it is essential that private and commercial creditors be compelled to participate and bear a fair share of the burden. Incentives should be made for Brady-type credit enhancements for new bonds that would be swapped with a significant haircut for old debt. Such a mechanism may have particular appeal to Chinese commercial creditors, where debt obligations are in the form of long-term bank loans that could be swapped for new bonds at a haircut and partially guaranteed, therefore not only providing fiscal space to borrowing countries but allowing Chinese commercial banks to sell the new bonds and alleviate balance sheet pressure. To this end, we propose the creation of a Guarantee Facility for Green and Inclusive Recovery, as illustrated in Figure 13, managed by the World Bank in close cooperation with regional development banks. If a country misses a debt service payment on the new bonds, the Facility would be activated and cover the missed payments, which the sovereign would then repay to the Facility.

In addition to these 'carrots' to bring private and commercial creditors to the negotiating table, history shows that 'sticks' will also be necessary. As
Figure 13: Design of the Guarantee Facility for Green and Inclusive Recovery



Source: DRGR Project 2024.

proposed in previous DRGR Project reports, the IMF should use its lending in arrears policy, and threaten to withhold emergency financing until a restructuring is underway and to be the first to disburse upon a successful restructuring. This move provides an incentive for holdout private creditors to participate in the restructuring process. Moreover, lawmakers and regulators in key jurisdictions-New York and London, in particular-can put pressure and use 'moral suasion' to convince private and commercial creditors to partake in debt restructuring. In the first major debt restructuring under the Brady Plan of the 1990s, senior officials in the US Treasury and Federal Reserve put strong pressure on US banks to reach an agreement with Mexico and took the unusual initiative of "inviting" top-level negotiators of the banks to negotiate a debt reduction agreement with the Mexican economic authorities (ECLAC 1990; Griffith-Jones et al. 2021; Qian 2021). Several countries have also introduced tax incentives for banks to participate in debt restructuring. More recently, the United Kingdom ruled in 2010 in a manner that prevented creditors from acting against nations participating in the Highly Indebted Poor Countries (HIPC) Initiative, and the US has issued executive orders to deal with potential litigation deriving from the 2002 restructuring of Iraqi war debt (Buchheit and Gulati 2019; Hagan 2020). Others have proposed using IMF Article VIII, Section 2 (b) to establish a binding mechanism on private creditors for a sovereign debt standstill (Munevar and Grygoriy 2020). Bucheit and Gulati (2022) propose 'Most Favored Creditor' clauses where "the sovereign grants better terms to a holdout commercial lender: those terms must be offered to all those who signed the original restructuring agreement." Such clauses were included in Poland's Brady bonds. Efforts are now underway to revive the 2010 legislation in the UK and to enact new legislation under New York law that would compel the private sector to provide treatment (Connolly et al. 2024).

What is most important is that the outcome of a restructuring is linked to investment in climate and development goals. Under the DRGR proposal, governments participating in debt restructuring would develop a Green and Inclusive Recovery Strategy, in which they identify actions the country would undertake to advance their development and climate goals. The strategy could be adapted from or supplemented with existing SDG plans, Nationally Determined Contributions or Climate Prosperity Plans, include a spending plan and policy reforms and should be guided by a set of principles to help ensure alignment with the SDGs and the Paris Agreement. Importantly, the strategy plans should address vulnerabilities identified in the DSA, so as to enhance the resilience of the society, economy and public finances.

Governments receiving debt relief will also need to commit to enhancing debt transparency, strengthening public debt management capacity, adopting sustainable borrowing practices and strengthening domestic resource mobilization. The Green and Inclusive Recovery Strategy should define clear targets and performance metrics.

Some portion of the restructured repayments should be channeled into a Fund for Green and Inclusive Recovery (or an existing national fund) for government investment in SDG and climate-aligned spending, in line with the priorities expressed in SDG Country Plans, Nationally Determined Contributions, Climate Prosperity Plans or the newly created Green and Inclusive Recovery strategies. The government should specify the level of investment into such funds and be held accountable by independent steering committees (see Volz et al. 2021).

Pillar 3 of the DRGR proposal recognizes that there are countries that are not in or near debt distress but lack the liquidity and fiscal space to mobilize the financing necessary for a green and inclusive recovery. For these countries, we recommend a mix of policies, most importantly, credit enhancements that provide new financing tied to climate and development goals where the interest rate-growth differential is made to be negative.

It is not simple to distinguish which countries are facing liquidity problems stemming from unfavorable market conditions from those that are in debt distress. Moreover, as discussed in the previous section, under current high interest rate conditions, refinancing at high costs could quickly push illiquid countries into debt distress. For this reason, we recommend that designating countries as solely in need of liquidity and fiscal space should be done with the utmost conservatism. When designing programs to tackle liquidity issues (including programs like the DSSI) and reducing the cost of borrowing, it is fundamental to create tight requirements to avoid situations where countries in need of debt relief end up in an unsustainable limbo for longer

What is most important is that the outcome of a restructuring is linked to investment in climate and development goals⁹⁹ periods. Moreover, it is important to avoid situations where public transfers are used to repay debt to private creditors; therefore, any such program would have to compel all creditor classes to comply.

For countries not facing debt distress but needing to reduce capital costs for sustainable and inclusive development, the DRGR Project recommends a range of policy measures to expand fiscal space. As discussed in the second section of this report, most EMDEs have private borrowing costs that are higher than their expected growth rates. For these nations, establishing credit enhancement is essential. This could be designed in several ways, including guarantees for sovereign bond issuances or hedging foreign exchange risks. Policy design should focus on ensuring affordable financing through two strategies: customizing finance to reduce borrowing costs by at least 1 percent below the growth rate for each country or setting a universal interest rate target for developing countries. Given the high current interest rates and the historically low expected economic growth in developing countries (World Bank 2024), these policies would necessitate subsidies.

Debt service suspension could be another strategy to create fiscal space to invest in social and economic priorities (Diwan and Songwe 2024). For a successful debt service suspension initiative, it should be mandatory for all creditors to participate, ensuring sufficient fiscal relief and preventing non-participating creditors from benefiting at the expense of those who do participate. Like debt relief initiatives, debt suspensions are not a panacea and should be combined with new financing. It is crucial that the new finance work in tandem with the suspension initiative, which would require that creditors provide a fast disbursement of new growth enhancing financing. It should be noted though that mandatory participation of private creditors in debt suspension may trigger a default rating by credit rating agencies. Moreover, a repayment of suspended debt at a later stage carries the risk that the debt payments in terms of domestic currency will rise if the home currency depreciates. To enhance economic resilience, debt service suspensions need to be accompanied by national growth plans to boost the country's ability to manage future debt payments without compromising its long-term debt sustainability. Linking debt service suspensions to fiscal consolidation efforts would be highly problematic and must be avoided.

In the next section of the report, we conduct an enhanced DSA that accounts for the climate and development investments deemed necessary according to the G20 Independent Expert group (2023), identifying 19 countries that may be eligible for treatment. Further stress testing is to ensure that treated countries could recover in a manner that does not threaten their longer-run solvency.

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TOWARD A NEW COMMON FRAMEWORK: CRITERIA AND ELIGIBILITY

Building on previous DRGR Project reports (Volz et al. 2020, 2021; Ramos et al. 2023), this section emphasizes that eligibility for debt relief programs must hinge on comprehensive DSAs that account for climate risks, as well as investment requirements linked to the SDGs and climate goals. Our aim is to identify countries that require debt relief to fulfill their climate and SDG commitments. We find that 42 of 66 countries eligible for the IMF and World Bank Debt Sustainability Framework for Low-Income Countries (LIC DSF) would surpass external debt solvency thresholds in the next five years (by 2028) for trying to mobilize financing for climate and development. An additional five countries could surpass thresholds if unexpected climate shocks or prolonged high base interest rates occur. Altogether, 47 countries are identified as in need of debt relief. While the collective GDP of these 47 countries is equivalent to less than 2 percent of the world economy (\$1.6 trillion as of 2022), they are home to 1.11 billion people.

ALIGNING DEBT SUSTAINABILITY ANALYSES WITH 2030 AGENDA AND PARIS AGREEMENT

In our exercise (for detailed methodology, see Appendix I), we analytically follow the IMF and World Bank LIC DSF (IMF 2018a), as well other studies on external debt sustainability (Albinet et al. 2023, Kessler and Albinet 2022). We evaluate countries for a high probability of debt distress under a scenario involving increased external financing for the SDGs and climate action from 2024 on, aligning with the external financing needs highlighted by the G20 Independent Expert Group (2023).

The LIC DSF is aimed at 73 nations (IMF 2023), which typically qualify for concessional lending from the World Bank's International Development Association (IDA) or the IMF's Poverty Reduction and Growth Trust (PRGT). Under the LIC DSF, the risk of debt distress hinges on a country breaching defined their debt threshold as determined by their debt carrying capacity. This capacity is contingent on specific country characteristics, such

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Appendix II: Guarantee Fund 42 of 66 countries eligible for the IMF and World Bank Debt Sustainability Framework for Low-Income Countries (LIC DSF) would surpass external debt solvency thresholds in the next five years (by 2028) for trying to mobilize financing for climate and development⁹⁹ as institutional strength and macroeconomic performance, categorized as weak, medium or strong. Breaching external PPG debt service indicators (referred as "liquidity indicators") may provide ambiguous interpretation. Specially, if breaches are enduring over time, they may signal a "solvency" problem, but as recently highlighted (Diwan et al. 2024) breaches of these indicators may also be a sign of temporary problems stemming from unfavorable market conditions rather than a sign of debt distress. To avoid ambiguity, we focus our analysis on debt stock indicators (referred to as "solvency" indicators"). Table 1 summarizes the main thresholds used in this exercise depending on the countries' debt capacity indicators.

One may argue that these external debt thresholds set by the IMF are somewhat arbitrary and that breaching them—even over a longer period—may not necessarily mean that the debt is unsustainable or that a country should receive debt relief. However, these thresholds are empirically based and useful indicators for identifying solvency problems, even if an in-depth analysis is needed to ascertain that a country does indeed need debt relief. Sustaining high debt burdens hampers efforts to address climate and development goals. To scale up public investment in effective climate action and social progress, governments need fiscal space and preemptive debt relief may be essential to allow countries to promptly allocate resources and avert potential setbacks. Importantly, countries facing sovereign debt problems will fail to attract much-needed private investment to finance climate action and the SDGs. Delayed intervention risks impeding a country's ability to achieve crucial objectives, undermining long-term stability and growth.

Our analysis focuses on 66 of 73 economically vulnerable countries eligible for the LIC DSF, excluding seven countries due to data constraints. Despite being labeled as LICs, this sample includes middle-income countries (MICs), based on the World Bank's GNI per capita classification. Our study does not encompass many LMICs and UMICs, as they qualify for the Sovereign Risk and Debt Sustainability Framework, which accounts for their greater reliance on domestic and market-based finance. Although our scope is limited, the

		indicators" nal debt (in percent of)	"Liquidity indicators" External debt service (in percent of		
Debt Carrying Capacity	GDP	Exports	Government Revenue	Exports	
Weak	30%	140%	14%	10%	
Medium	40%	180%	18%	15%	
Strong	55%	240%	23%	21%	

Table 1: Public and Publicly Guaranteed external debt thresholds, as per country's debt carrying capacity

Source: IMF (2018).

methodology employed offers potential adaptability for broader application in future research. Recent estimates by the World Bank suggest that there are a significant number of LMICs and UMICs that face solvency problems even before considering financing needs (Kenworthy et al. 2024).

Our enhanced DSA follows Albinet et al. (2023) and Kessler and Albinet (2022). Beyond including a fraction of the "business as usual" primary fiscal deficit financed externally, we also include the projected external financing necessary to meet crucial climate and SDGs objectives as outlined in the G20 Independent Expert Group (2023), (highlighted in blue in Figure 14). The G20 Independent Expert Group highlights that EMDEs, excluding China, must invest at least \$3 trillion annually by 2030 for SDG and climate endeavors. Of this, \$2 trillion is expected to come from domestic sources, which can be financed through taxes or domestic debt. The remaining \$1 trillion should be sourced from external financing, including concessional, non-concessional finance (e.g., affordable finance from MDBs) and private sector contributions. As indicated in Figure 14, the distribution of funding between domestic and external sources varies according to income levels, with low-income countries relying more on external financing. Additionally, high-income groups exhibit a greater dependence on non-concessional and private funding, incurring a higher average cost.



Figure 14: Resource mobilization for SDGs and climate action by 2030, by income group

Source: G20 Independent Expert Group (2023).

Note: Climate is defined as energy transition, adaptation and resilience, sustainable infrastructure, and agriculture, forestry and land use. SDGs refers to other SDGs, largely health and education.

While mobilizing domestic and external resources is expected to elevate debt burdens in EMDEs, our enhanced DSA will specifically concentrate on external debt dimensions. This methodological choice stems from the fact that domestic resource mobilization depends on a country's ability to boost tax revenues alongside its capacity to increase domestic debt. Given the diverse nature of tax revenue mobilization in developing countries, estimating the domestic debt dynamics precisely would be highly contentious. In contrast, external resource mobilization, which directly influences debt dynamics, doesn't rely only on a country's ability to increase tax revenues. A country's capacity to sustainably service external debt is contingent upon boosting exports, a more challenging factor to influence than tax mobilization, given its dependence on external factors, such as global growth, foreign exchange movements, commodity prices, geopolitical tensions and more.

However, it is crucial to note that this methodological choice introduces a limitation by potentially underestimating overall debt risks. Consequently, certain countries, even if they do not breach external debt solvency indicators in this study, might be assessed differently when considering domestic debt dynamics. Future research should aim to integrate both external and domestic financing requirements for a more comprehensive evaluation, providing a more accurate identification of countries in need of debt relief.

Drawing on the G20 Independent Expert Group (2023) and depending on income groups, we calculate the annual external financing needs for each country, adjusting for population size in 2022. While adaptation needs are often expressed as a share of GDP (Songwe et al. 2023; Bhattacharya 2022), our approach adjusts financing requirements based on the number of inhabitants rather than GDP. This adaptation is crucial, acknowledging that more populous countries may need to allocate greater resources irrespective of GDP considerations. Per capital financing needs have been calculated by other institutions, like the United Nations Environment Programme (2023) for adaptation gaps and by United Nations Conference on Trade and Development (2023) for the SDGs.

These new debt estimates are expressed in present value terms, factoring in projected market conditions—assuming an easing financing environment in the forthcoming years with gradual decline in FED interest rates and bond spreads for EMDEs—and the historical cost of concessional finance, as detailed in Appendix I. We then compare these present value amounts to the projected GDP and export growth rates of each country to provide a PPG external debt sustainability analysis. GDP and export projections rely on the IMF World Economic Outlook (2023), with upward revisions in GDP growth to account for a multiplier effect of new investments in SDGs and

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climate, given that these can be expected to stimulate economic activity. These revised projections assume that the new investments will be climate oriented. Following the approach of Batini et al. (2022), we incorporate a "green" fiscal multiplier of 1.2, surpassing the multiplier for non-green-related investments. Kharas and Rivard (2022) also find similar orders of magnitude regarding the impact of new investment on growth. Hence, in our model's assumptions, 1 percent of GDP spending results in a 1.2 percent of GDP response in the first year of disbursement.

Identifying counties that need relief to meet the 2030 Agenda and Paris Agreement

As shown in Figure 15, our enhanced DSA reveals that in 2022, a group of 19 countries exceeded solvency thresholds, including 10 LICs, six LMICs and three UMICs. We assume that countries revamp investment levels starting in 2024. Under the baseline scenario—which assumes declining interest rates (FED 2023), revised upwards IMF-projected growth rates (including fiscal multiplier of 1.2 as per Batini et al. 2022), and the gradual accounting for SDG and climate-related external financing needs—an additional 23 countries will surpass solvency indicators. Hence, by 2028, 42 of the 66 countries in our study are projected to surpass solvency indicators, of which 18 are LICs, 19 LMICs and three UMICs.



Figure 15: Number of countries breaching solvency indicators of external debt sustainability, 2022-2028*, by income group

Source: Authors' elaboration.

Note: Estimation from 2023, see Appendix 1 for details. Income group classification as per World Bank FY2023.

Figure 16 maps which countries should receive debt relief, according to our enhanced DSA.



Figure 16: Nominal public external debt stock of NCF countries by creditor (including IMF credit), 2008, 2018, 2022

Source: Authors' elaboration based on World Bank IDS (2023).

Table 2 presents the countries expected to exceed solvency indicator thresholds by the analysis year. By 2028, 17 countries are projected to surpass both solvency thresholds, 18 will exceed the debt-to-GDP ratio and seven countries will breach the debt-to-export ratio. Moreover, 20 countries have already breached thresholds in 2022 and 2023, before new investments in the SDGs and climate are incorporated into the enhanced DSA. Although most of these countries have not defaulted on their external sovereign debt, they are extending a fiscally unsustainable situation that will incur climate and development costs. Table 2: External debt sustainability analysis results under baseline scenario: Countries breaching solvency thresholds, by year

	Country	PV/ GDP	PV/Exports
	Guinea-Bissau	2022	2022
	Mozambique	2022	
	Somalia	2022	2022
	Sudan	2022	2022
	Zambia	2022	
	Bhutan	2022	2022
	Cabo Verde	2022	
	Congo, Rep.*	2022	
2	Djibouti	2022	
2022	Lao PDR	2022	
	São Tomé and Príncipe	2022	2022
	Dominica*	2022	
	Maldives	2022	
	St. Vincent and the Grenadines	2022	
	Ethiopia		2022
	Burundi	2025	2022
	Central African Republic	2025	2022
	Gambia	2026	2022
	Niger	2026	2022
2023	Timor-Leste	2023	2024
	Sierra Leone	2024	2025
24	Nepal		2024
2024	Comoros	2026	2024
	Malawi	2027	2024
	Yemen	2025	
	Lesotho	2025	
2025	Tajikistan	2025	
20	Vanuatu	2025	2027
	Haiti		2025
	Kenya		2025
	Chad	2026	
10	Madagascar	2026	
2026	Benin	2026	
()	Tonga	2027	2026
	Ghana	2026	

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	Country	PV/ GDP	PV/Exports
	Congo, Dem. Rep.	2027	
	Mali	2027	2027
27	Zimbabwe	2027	2027
2027	Myanmar		2027
	Liberia	2027	
	Tanzania		2027
~~~~	Cote d'Ivoire	2028	
2028	Nicaragua	2028	
( )	Nigeria		2028

Source: Authors' elaboration.

**Note:** (*) Under the baseline scenario, the Republic of Congo is projected to fall below the threshold in 2028, while Dominica is expected to drop below it in 2027. Once breached, all other countries remain above the threshold. Note that current methodologies do not account for domestic debt accumulation, outcomes may change when domestic debt is also considered.

Beyond the baseline scenario, our enhanced DSA also includes two stress tests. The first test factors in the impact of climate-induced disasters on GDP, aligning with findings from Fuje et al. (2023). These disasters are becoming more frequent and severe, and they disproportionately affect EMDEs. Historically, a major drought in an EMDE would on average reduce output growth by 1.4 percentage points, and storms would lead to a 1.8 percent reduction in GDP during the disaster year—contrasting with negligible effects in advanced economies. Considering these disproportionate impacts, we adjusted the real GDP growth projections for the second years of the forecast period to accommodate potential economic variability. Specifically, we lowered the real GDP growth rate by 1.6 percent, representing the average impact of both droughts and storms in EMDEs. In a second stress test, we adopted an alternative assumption regarding interest rates, maintaining them at a higher level of approximately 4.75 percent—as projected for 2024—throughout the period until 2026, contrary to the expectation of a gradual decline (3.75 percent in 2025 and 2.75 percent in 2026).² This assumption was implemented to explore the impact of sustained elevated interest rates on our economic projections, offering insight into the potential resilience and vulnerabilities of economies under a scenario of prolonged financial tightening.

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² Expectation of gradual decline as per FED (2023). Under stress test scenario, higher interest rates remain in place for two years longer than expected.

As Table 3 summarizes, in the first stress test, beyond the previously identified 42 countries that are projected to exceed debt solvency thresholds by 2028, an additional two countries—Republic of Congo and Guinea—were found to breach the present value to GDP ratios. In the second stress test, these same two countries once again surpassed debt thresholds, with Togo, Cameroon and Senegal also exceeding debt solvency thresholds. Consequently, under the more severe stress scenario, a total of 47 of the 66 countries analyzed could potentially breach the prescribed thresholds for PPG external debt solvency.

### **Table 3:** External DSA results under stress test: Countries breachingsolvency thresholds, by year

Country	PV/ GDP	PV/Exports	Test
Congo, Rep	2022		Climate & GDP/ Interest rate
Guinea	2028		Climate & GDP / Interest rate
Togo	2028	2028	Interest rate
Cameroon	2028		Interest rate
Senegal	2028		Interest rate

**Source:** Authors' elaboration.

Under our enhanced DSA, the 19 countries listed in Table 4 would not breach external debt solvency indicators, even when subjected to the stress test scenario.

### **Table 4:** External DSA results: Countries remaining above liquiditythresholds

	Country		Country
1	Burkina Faso	11	Papua New Guinea
2	Rwanda	12	Samoa
3	Uganda	13	Solomon Islands
4	Bangladesh	14	Uzbekistan
5	Bolivia	15	Vietnam
6	Cambodia	16	Dominica
7	Honduras	17	Grenada
8	Kyrgyz Republic	18	Guyana
9	Mauritania	19	Moldova
10	Mongolia		

Source: Authors' elaboration.

••Under the more severe stress scenario, a total of 47 of the 66 countries analyzed could potentially breach the prescribed thresholds for PPG external debt solvency⁹⁹ This list presents an initial group of countries that may benefit from programs aimed at reducing the cost of capital and suspending debt service. However, a caveat is essential: the enhanced DSA conducted in this study has not incorporated the domestic debt dynamics of EMDEs, which have been on the rise (Martin et al. 2023). Moreover, we have not assessed breaches in liquidity indicators, which can also indicate a need for debt restructuring if breaches are for a recurring period. Therefore, a definitive list of countries eligible for debt suspension programs should additionally factor in domestic debt dynamics and liquidity indicators.

#### DEBT DYNAMICS: NEW COMMON FRAMEWORK COUNTRIES

This section explores the debt dynamics of the 47 countries identified in our analysis as in debt distress, following "solvency indicators" under stress scenarios. Following a conservative approach to distinguish solvency from liquidity problems, we use the outcomes of the stress test to identify the countries that should participate in a reformed G20 Common Framework. These 47 countries are referred to as the New Common Framework (NCF) countries. Between 2008-2022, the NCF countries' external PPG debt, including IMF credit usage, more than tripled, reaching a nominal amount of \$383 billion, as depicted in Figure 17B. Excluding IMF credits, it accounted for \$357.6 billion. Multilateral creditors remained the primary lenders, holding 39 percent of the total debt in 2022-of which 24 percent (or \$91.5 billion) of total is owed to the World Bank (Including IDA credits). The share of Paris Club creditors in official lending decreased from 26 percent in 2008 to 8 percent in 2022, achieving a total amount of \$28.9 billion. China's stake rose from 6 percent in 2008 to a peak of 18 percent in 2018, before settling at 14 percent (\$55.1 billion). The proportion of debt held by bondholders expanded from 2 percent to 16 percent (\$58.6 billion) over the same period. The IMF's share more than doubled from 3 percent to 7 percent (equivalent to \$25 billion) within four years, reflecting the growing demand for emergency external funding in recent years. Put another way, Figure 18 reflects New Common Framework debt stock by creditor in 2022.

In 2022, the 47 NCF countries collectively paid \$25.3 billion in public external debt service: as Figure 17 shows, \$6.4 billion to multilateral creditors, \$5.6 billion to China, \$5.2 billion to each Paris Club countries and \$4.7 billion to bondholders.

66 Between 2008-2022, the NCF countries' external PPG debt, including IMF credit usage, more than tripled, reaching a nominal amount of \$383 billion⁹⁹ **Figure 17:** Nominal public external debt stock of NCF countries by creditor (including IMF credit), 2008, 2018, 2022



Source: Authors' elaboration based on World Bank IDS (2023).

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Figure 18: Public external debt stock for NCF countries, by creditor, 2022



Source: Authors' elaboration based on World Bank IDS (2023).



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Figure 19: Public external debt service payments for NCF countries, by creditor, 2022

Source: Authors' elaboration based on World Bank IDS (2023).

Figure 20 indicates a significant rise in debt repayments starting in 2023, with a 52 percent increase (\$13 billion) compared to 2022, with high levels expected to continue. The World Bank (2023) attributes this surge to the G20's DSSI, which, although it alleviated constraints during the pandemic, also led to accrued principal, interest and fees. This indicates that debt suspension efforts, particularly in high-interest periods, must be carefully implemented to avoid exacerbating debt burdens and are not an effective substitute for debt relief.

Based on our analysis using the G20 Independent Export Group (2023), the 47 NCF countries are projected to require \$95 billion in 2024 to fund progress on the SDGs and climate initiatives. In the same year, they will also face \$43.3 billion in external debt service payments. Debt relief could unlock significant funding for the SDGs and climate objectives, supplemented by other forms of low cost and concessional financing.

Without debt relief, debt burdens can further crowd out expenditures on socio-economic priorities. Of the 47 NCF countries, 21 allocate more public funds to servicing external and domestic debt interest alone—without even considering principal repayment—than to public health spending, as shown in Figure 21.



**Figure 20:** Public external debt service payments for NCF countries, by creditor (contracted debt only), 2008-2030 (estimated from 2023)

Note: Estimated from 2023. Estimation does not include debt service projection stemming from expected new contracted debt.

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**Source:** Authors' elaboration based on World Bank IDS (2023).

**Figure 21:** Interest payments on public debt and health expenditure as share of GDP for NCF countries (2019-2022 average)





#### B: Lower and upper middle-income countries



Source: UNCTAD World of Debt (2023).

Increasing debt burdens are not only a function of the rise in the level of external debt, but also of the cost of capital. The countries in question previously depended on grants and concessional loans. However, facing reduced levels of ODA and a decline in concessional financing, some of them (so called "frontier markets") have increasingly turned to bond markets to meet their financing needs, which comes with much higher borrowing costs and shorter maturities (UNCTAD 2023). The increasingly reliance of bond markets increases the average borrowing cost for developing countries. Although many EMDEs still borrow from highly concessional sources (like IDA, which offers 0.75 percent interest rate annual), more and more have turned to bondholders, pushing up the average cost of borrowing and contributing to debt vulnerabilities.

Of the 47 NCF countries at risk of solvency issues by 2028, 13 have entered international bond markets, as shown in Figure 22. As of January 2024, bonds from Ethiopia, Zambia, Ghana and the Maldives are trading



**Figure 22:** NCF countries' sovereign bond spreads (change between Jan. 2023-Jan. 2024), cost of borrowing in bond markets (Jan. 2024) and projected growth rates (2023-2028)

Source: Authors' elaboration based on IMF World Economic Outlook (2023) and JP Morgan Emerging Market Bond Index Global Diversified USD.

**Note:** Comparison of financial spreads from January 24, 2023-January 24, 2024. Positive values (signed in red) account for increase in spreads, while negative values (signed in green), represent reduced spreads. Borrowing costs for individual countries factor on their respective spreads in addition to the Federal Reserve's average rate of 5.375 percent. This average rate is derived from the current Federal Reserve target range of 5.25 percent to 5.50 percent.

at spreads exceeding 1,000 basis points, effectively barring them from new issuances. Even those with current market access face borrowing costs between 8.4 percent and 13.6 percent, far exceeding their growth projections. For instance, Kenya's recently issued dollar bond, aimed at refinancing maturing debt, is carrying a 10.375 percent interest rate (Savage and Jones 2024). This issued bond is 6 percent above Kenya's nominal growth forecast according to the IMF World Economic Outlook (2023). This approach, while postponing default, will increase economic risks without generating much needed fiscal space for development and climate goals.

The next section calculates the cost of debt relief for the 47 NCF countries identified as in need of debt relief using a "fair" comparability of treatment rule.

Senegal Photo by Curioso Photography via Unsplash



# A FAIR COMPARABILITY OF TREATMENT PROPOSAL

Among many contentious points delaying debt negotiations (e.g., domestic debt restructuring, sharing information on debt sustainability analyses), the equitable distribution of losses among creditors is a crucial sticking point. For optimum efficiency and effectiveness of sovereign debt restructuring, it is fundamental to have a clear and transparent approach to equitably sharing the burden among creditors. This section draws from Zucker-Marques et. al (2023), Lazard (2022) and Diwan et al. (2023) and calculates the cost of debt relief for the 47 NCF countries identified as in need of debt relief using a "fair" comparability of treatment (CoT) rule. A significant debate on CoT revolves around the participation of multilateral creditors in debt relief. This section demonstrates that, at least for a group of 16 NCF countries facing debt distress, the engagement of MDBs is crucial and should be considered while preserving MDBs' financial health and their ability to expand development finance.

#### COMPARABILITY OF TREATMENT: "FAIR" VERSUS "FLAT RATE"

The most common way to compute the "level of pain" in a debt restructuring process is by reducing each creditor's claims by the same rate based on their present value claims. This is often referred to as "economic" approach (Lazard 2022) or "flat rate" CoT (Zucker-Marques et al. 2023). However, under this approach, creditors with concessional claims may end up subsidizing more expensive creditors (Lazard 2022). A "fair" CoT, in contrast, would consider the different lending terms of creditors to provide a more nuanced (but still direct) approach to burden sharing. In practical terms, creditors that charge higher interest rates "ex ante" would bear a larger share of losses "ex post," given they have already priced in the risk of default. Creditors that offer more concessional lending costs, the "fair" CoT converges the "ex post" debt

**Executive Summary** 

Introduction

External Debt Dynamics in Emerging Market Developing Economies

The Debt Relief for a Green and Inclusive Recovery Proposal

Toward a New Common Framework: Criteria and Eligibility

#### A Fair Comparability of Treatment Proposal

#### Conclusion

References

Technical Appendix I: External Debt Sustainability Analysis

Appendix II: Guarantee Fund ⁶⁶ The equitable distribution of losses among creditors is a crucial sticking point⁹⁹ reduction needed towards a new average level of concessionality common to all creditors in terms of the nominal value of their old debt.

To strike a balanced approach in debt relief negotiations, it is imperative to account for "ex ante" risk pricing in lending practices of private creditors. As Figure 23 shows, bondholders often price for default risk, and the higher the probability of default, the higher the interest rate charged.

However, charging for default risk does not translate into a proportional loss absorption in case of debt restructuring. Historically, private creditors including bondholders—are typically paid first and lose less than bilateral official creditors who often provide concessional loans (Schleg et. al. 2019). As recent negotiations with bondholders under the Common Framework—like Suriname and Zambia—show, bondholders' high remuneration is barely touched even after debt negotiation, while countries in debt distress are left with high debt service obligations that can hamper their economic development. Not only do bondholders' remuneration in their new bonds remain above the remuneration of risk-free assets like US Treasury bonds, but the inclusion of (very high) interest rate arrears can pile up during the negotiation period, substantially increasing the nominal value of their claims (Zucker-Marques 2023). When bondholders are reluctant to accept

#### Figure 23: Five-year spreads (bps) to compensate for historical probability of default by rating



#### Source: Replicated from Bank of America, 2022.

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**Note:** Required spread calculated with simplified formula: Spread =  $[-(1-RR)/T]^{*}[ln(1-PD)]$ , where RR=Recovery Rate (in percent) and PD=Probability of Default (in percent). Calculation uses 25 percent Recovery Rate.

ex-post losses, it is a lose-lose situation for both creditors and debtors in the long-term, as it jeopardizes future economic prospects and increases the probability of a recurring default. What is more, such patterns question the rationale behind charging such steep interest rates in the first place.

#### CALCULATING THE BURDEN SHARING: COMPARING DISTINCT COMPARABILITY OF TREATMENT RULES

In the following sub-section, we estimate the cost for each creditor class to provide debt relief for the 47 NCF countries expected to breach solvency indicators, as identified in Section 4. Of these 47 NCF countries, 39 are IDA eligible and the remaining eight have access to blended conditions (IDA and IBRD). Moreover, eight are Small Island Developing States and extremely vulnerable to the impacts of climate change. Alongside their level of debt distress, special attention should be given to countries that have specific vulnerabilities or are prone to climate risks.

For our estimations, we distinguish six groups of creditors: private lenders, China, Paris Club countries,³ other official bilateral lenders,⁴ MDBs (excluding IDA) and IDA. According to a comprehensive study of past sovereign debt restructurings, the average haircut on sovereign debt with foreign private creditors (comprising bank debt and bonds) in the "modern era" (post-1970) was 39 percent, while under the HIPC Initiative, debt restructuring reached up to 64 percent (Marchesi, Masi & Bomprezzi 2023; Meyer et al. 2022; Ramos et al. 2023; World Bank 2022). We consider these two historical debts reduction benchmarks for our scenarios: a 39 percent reduction and a 64 percent reduction.

As Table 5 shows, the 47 NCF countries hold a total external PPG debt of \$357.6 billion in nominal terms (excluding IMF credit). Given a total grant equivalent of \$83.6 billion, the total external PPG debt accounts for \$273.7 billion in present value terms. A 39 percent "haircut" would imply a total present value reduction of \$106.8 billion, while a 64 percent "haircut" would imply a reduction of \$175.2 billion.

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³ Paris Club permanent members include Australia, Austria, Belgium, Brazil, Canada, Denmark, Finland, France, Germany, Ireland, Israel, Italy, Japan, Korea, Netherlands, Norway, Russian Federation, Spain, Sweden, Switzerland, United Kingdom and the United States (Paris Club 2023).

⁴ Saudi Arabia, Kuwait, India, United Arab Emirates and all other bilateral official creditors, excluding China and Paris Club countries.

#### Table 5: NCF (47) Countries, PPG External Debt, as of 2021

	Nominal Value (outstanding debt as of 2021) (a)	Grant Element (b)	Grant Equivalent (c=a*b)	Present Value (a-c)
All Private creditors	99.9	-5.6%	(5.6)	105.5
China	55.1	19.8%	10.9	44.2
Other Official Bilateral	24.6	26.6%	6.5	18.0
Multilateral excl WB IDA	59.8	31.8%	19.0	40.8
IDA	89.3	44.6%	39.8	49.5
Paris Club	28.9	45.7%	13.2	15.7
Total	357.6	23.4%	83.8	273.7

Source: Authors' calculations based on World Bank IDS 2023.

Note: Estimation of grant element is based on commitment loans and considering a 10-year average (2013-2022).

#### BURDEN SHARING WITH A 39 PERCENT OVERALL HAIRCUT UNDER "FAIR" VERSUS "FLAT RATE" COMPARABILITY OF TREATMENT

Table 6 demonstrates the distribution of \$106.8 billion in debt relief, equivalent to a 39 percent overall reduction, across different creditor groups under varying scenarios of CoT ("flat rate" versus "fair") and with varying participation by MDBs.

In a scenario excluding MDB participation to achieve an overall debt relief of 39 percent, other creditors would face a 58.2 percent haircut on their individual present value claims with a "flat rate" CoT. Paris Club creditors, under these conditions, would bear \$9.1 billion in losses. However, considering the "fair" CoT that accounts for the grant element of their lending (45.7 percent), their required contribution would be significantly lower at a 32.2 percent haircut, amounting to \$5.1 billion. This represents a \$4.1 billion reduction compared to the "flat rate" CoT.

With MDBs excluded, the average grant element of loans to the 47 NCF countries is 12 percent, higher than the negative grant element associated with the private sector. Consequently, under the "fair" CoT rule, private creditors would face a relatively higher haircut compared to the "flat rate." Specifically, private sector contributions to debt relief under a "fair" CoT would be \$68.8 billion, \$7.3 billion more than under the "flat rate" CoT, while contributions from China would be \$23.9 billion, \$1.8 billion less than the "flat rate" CoT.

When MDBs participate, the private sector would incur \$58.9 billion in losses under the "fair" CoT, which is \$17.7 billion more than under the "flat

rate" CoT. Conversely, China, as an official creditor with a grant element below the NCF average, would contribute more under the "fair" CoT (\$18.5 billion) than under the "flat rate" CoT (\$17.2 billion). Other bilateral and Paris Club creditors, whose grant elements exceed the average, would face a reduced burden under the "fair" CoT, with Paris Club contributions amounting to \$2.2 billion, which is \$3.9 billion less than under the "flat rate" CoT, and other bilateral creditors contributing \$6.6 billion, with a \$0.5 billion difference. IDA's responsibility would be \$7.8 billion under the "fair" CoT, which is \$11.5 billion less than the "flat rate," and other MDBs would contribute \$12.9 billion, a reduction of \$3.0 billion from the "flat rate" CoT.

**Table 6:** NCF (47) countries, 39 percent haircut inter-creditor burden sharing according to distinct comparability of treatment rules

			Without Multilateral Creditors				
			Flat Ra	ate CoT	Fair	СоТ	
	Grant element	Present Value	Rate	USD bn	Rate	USD bn	Diff. CoT rules
Private	-5.6%	105.5	58.2%	61.4	65.2%	68.8	7.4
China	19.8%	44.2	58.2%	25.7	54.2%	23.9	(1.8)
Other Bilateral	26.6%	18.0	58.2%	10.5	49.9%	9.0	(1.5)
Paris Club	45.7%	15.7	58.2%	9.1	32.2%	5.1	(4.1)
Total/Average	12.0%	183.5	58.2%	106.8	58.2%	106.8	_

			With Multilateral Creditors				
			Flat Ra	ate CoT	Fair CoT		
	Grant element	Present Value	Rate	USD bn	Rate	USD bn	Diff. CoT rules
Private	-5.6%	105.5	39.0%	41.1	55.8%	58.9	17.7
China	19.8%	44.2	39.0%	17.2	41.8%	18.5	1.2
Other Bilateral	26.6%	18.0	39.0%	7.0	36.4%	6.6	(0.5)
Multilaterals (excl. IDA)	31.8%	40.8	39.0%	15.9	31.5%	12.9	(3.0)
IDA	44.6%	49.5	39.0%	19.3	15.8%	7.8	(11.5)
Paris Club	45.7%	15.7	39.0%	6.1	14.0%	2.2	(3.9)
Total/Average	23.4%	273.7	39.0%	106.8	39.0%	106.8	_

Source: Authors' calculations and elaboration based on World Bank IDS 2023.

#### BURDEN SHARING WITH A 64 PERCENT OVERALL HAIRCUT UNDER "FAIR" VERSUS "FLAT RATE" COMPARABILITY OF TREATMENT

The 47 NCF countries may need higher levels of debt relief to achieve debt sustainability and increase fiscal space for climate and SDG investments. Table 7 replicates the earlier exercise considering a 64 percent debt haircut among various creditors to the 47 NCF countries, totaling \$175.2 billion.

In the absence of MDB involvement, private and commercial creditors would be subjected to a situation of almost entire debt cancelation with a 96.2 percent haircut on their present value claims in a "flat rate" CoT. Paris Club creditors, with a high grant element of 45.7 percent, would face a smaller haircut of 92.7 percent, resulting in a \$14.5 billion loss, which is \$0.4 billion less than under a "flat rate" CoT. Other bilateral creditors would shoulder \$17.1 billion in losses (equivalent to a 94.6 percent haircut) while China would have to write off \$42.0 billion (also equivalent to 95.1 percent haircut).

When MDBs are included, private creditors would shoulder \$78.0 billion in losses using a "fair" CoT approach, which is \$10.4 billion more than under the "flat rate" CoT. This larger contribution from the private sector, which has a grant element of negative 6 percent compared to the 23.4 percent average, reflects their high lending rates. Similarly, China, which has a grant element of 19.8 percent, would contribute \$29.0 billion, marginally higher than under the "flat rate" CoT.

 Table 7: NCF (47) countries, 64 percent haircut inter-creditor burden sharing according to distinct comparability of treatment rules

			Without Multilateral Creditors				
			Flat Ra	Flat Rate CoT		СоТ	
	Grant element	Present Value	Rate	USD bn	Rate	USD bn	Diff. CoT rules
Private	-5.6%	105.5	95.5%	100.8	96.2%	101.5	0.8
China	19.8%	44.2	95.5%	42.2	95.1%	42.0	(0.2)
Other Bilateral	26.6%	18.0	95.5%	17.2	94.6%	17.1	(0.4)
Paris Club	45.7%	15.7	95.5%	15.0	92.7%	14.5	(0.4)
Total/Average	12.0%	183.5	95.5%	175.2	95.5%	175.2	_

			With Multilateral Creditors				
			Flat Ra	ate CoT	Fair CoT		
	Grant element	Present Value	Rate	USD bn	Rate	USD bn	Diff. CoT rules
Private	-5.6%	105.5	64.0%	67.5	73.9%	78.0	10.4
China	19.8%	44.2	64.0%	28.3	65.7%	29.0	0.7
Other Bilateral	26.6%	18.0	64.0%	11.5	62.4%	11.3	(0.3)
Multilaterals (excl. IDA)	31.8%	40.8	64.0%	26.1	59.6%	24.3	(1.8)
IDA	44.6%	49.5	64.0%	31.7	50.3%	24.9	(6.8)
Paris Club	45.7%	15.7	64.0%	10.0	49.2%	7.7	(2.3)
Total/Average	23.4%	273.7	64.0%	175.2	64.0%	175.2	_

Source: Authors' elaboration and calculations based on World Bank IDS 2023.

Other bilateral creditors and Paris Club creditors, with grant elements above the average, would incur smaller losses under the "fair" CoT. The Paris Club's contribution would be \$7.7 billion, a \$2.3 billion reduction compared to the "flat rate CoT. IDA would contribute \$24.9 billion, significantly less by \$6.8 billion compared to the "flat rate" CoT.

#### **DEBT RELIEF FROM MULTILATERAL CREDITORS**

The inclusion or exclusion of MDBs in debt relief negotiations has been at the center of a controversial policy debate. Opinions diverge on whether MDBs should be involved, how and by how much (Zucker-Marques et al. 2023). MDBs enjoy favorable borrowing terms in financial markets—which are then passed on to their clients that could not directly borrow in markets at the same conditions. Among many factors including sovereign shareholder support and conservative lending behavior, an acknowledged practice is that that MDBs enjoy preferred credit status (PCS) and receive priority for repayment, which contributes to their favorable borrowing terms (Humphrey 2023). Moreover, as MDB lending is often very concessional and not anti-cyclical as commercial and bilateral finance (Galindo & Panizza 2018, World Bank IDS 2023), there have been calls to preemptively exclude MDBs claims upfront from debt relief and to limit their participation to the provision of net positive flows (International Monetary Fund 2023c).

MDBs have been exempted from providing debt haircuts under the Common Framework. However, numerous countries are heavily indebted to MDBs, which means that achieving meaningful debt relief without the involvement of MDBs would be practically impossible. Altogether, the 47 NCF countries owe 40 percent of their PPG debt stock to multilateral creditors, with the World Bank (IBRD and IDA) as the largest creditor with 25 percent of total (World Bank IDS 2023). With currently contracted debt, of the 47 NCF countries, 16 are heavily exposed to MDBs and will pay over 50 percent of their external sovereign debt service to multilateral creditors from 2023-2030, as shown in Figure 22. Even though MDBs often offer lower interest rates, effective debt relief efforts that increase fiscal space will hinge upon including this crucial creditor class (Zucker-Marques et al. 2023).

Calling for MDB debt relief is not without precedent. During the 1990s, the HIPC Initiative provided \$76.2 billion in debt relief, of which \$33 billion was from MDBs. An additional \$43 billion (in 2017 present value) was provided by MDBs under the Multilateral Debt Relief Initiative (MDRI) in the 2000s (IMF 2018b). Altogether, MDBs have provided over \$76 billion in debt relief under the HIPC Initiative and MDRI. Moreover, provisions on how to treat

66 Calling for MDB debt relief is not without precedent⁹⁹ loans that cannot be served is included in the IBRD's Articles of Agreement (Article IV).

Avoiding debt relief also comes with a price for MDBs. For example, as part of their concessionally policy, IDA increases grant elements as a country's probability of debt distress increases (World Bank 2023). As the debt crisis is becoming more widespread among developing countries, it is estimated that IDA has spent \$4.9 billion in 2021 (36 percent of their commitment) in grants related to debt distress indicators, which is \$4.3 billion higher than 2012 levels (Zucker-Marques et al. 2023). With debt relief and restored debt sustainability for their clients, IDA would have more repayments and could increase the volume of overall lending. Hence, providing debt relief is not only helpful to countries in debt distress but could also help the concessional arms of MDBs to maintain a balanced business model.

There are discussions on how MDBs should contribute to the current debt crisis and the degree of losses they can absorb without affecting their credit rating (S&P 2023, Global Sovereign Debt Roundtable 2023). Ultimately, the discussion on the format of MDB participation is between providing debt haircuts or increasing net flows. As long as new net flows are 100 percent

Figure 24: Average (2023-2030) debt service to multilateral lenders as share of external sovereign debt service



Avoiding debt relief also comes with a price for MDBs⁹⁹

Source: World Bank IDS 2023.

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grants, both options are financially equivalent, but there are trade-offs in terms of macroeconomic consequence (Zucker-Marques et al. 2023). Opting for grants over debt haircuts could enable new projects but might hinder debt-vulnerable countries from securing other loans. In a scenario of limited new investments, countries may struggle to 'grow out of' their debt. While increasing financial flows is a valid option for MDBs, insisting that they cannot provide debt haircuts may dissuade highly indebted countries from seeking debt relief under the Common Framework. Moreover, new grant or concessional finance by MDBs may be used by overindebted countries to repay other creditors, which effectively constitutes a public finance bailout.

Debt relief by MDBs can be undertaken without threatening their financial health or ability to continue expanding affordable finance. First, Standard and Poor's (2023) assessed that MDBs have headroom to increase arrears significantly, from eight to 44-fold, depending on the institution, and that small restructuring would not necessarily affect their creditworthiness. A preferred solution is for advanced economies and China to replenish the Debt Relief Trust Fund, which back-stopped MDBs' losses during the HIPC Initiative and is currently lacking substantial resources. Similar to the HIPC Initiative, a fraction of the World Bank's surplus could also be designated for the Debt Relief Trust Fund. Finally, MDBs must increase the volume of their capital to tackle the current climate and development challenges; this should happen through shareholder capital increases and innovative solutions such as SDR rechanneling (Plant 2021) and by attracting foreign exchange reserves through Sustainable Future Bonds (Zucker-Marques & Gallagher 2024). In any case, MDBs with a more solid capital base will not only be able to expand their financing but also use a small fraction of it to restore debt sustainability to the most vulnerable countries.

## THE COST OF DEBT RELIEF FOR COUNTRIES HIGHLY EXPOSED TO MDBS

In this section, we analyze a sample of 16 of the NCF countries that were identified in our enhanced DSA as needing debt relief and that will pay over half of their external sovereign debt service to multilateral creditors from 2023-2030. Altogether, these 16 countries have \$58.2 billion in nominal PPG external debt (excluding IMF credits), which accounts for \$35.9 billion in present value as summarized in Table 8. In present value terms, 57 percent of claims are owed to multilateral creditors, including IDA. This highlights the importance of MDB participation in debt relief for this group of countries.

Debt relief by MDBs can be undertaken without threatening their financial health or ability to continue expanding affordable finance⁹⁹

#### Table 8: 16 NCF countries, PPG external debt as of 2022

	Nominal Value (outstanding debt as of 2021) (a)	Grant Element (b)	Grant Equivalent (c=a*b)	Present Value (a-c)
All Private creditors	5.5	14.2%	0.8	4.7
Multilateral excl WB IDA	18.5	32.5%	6.0	12.5
China	3.1	33.2%	1.0	2.1
Other Official Bilateral	9.2	35.0%	3.2	6.0
Paris Club	5.4	51.2%	2.7	2.6
IDA	16.5	51.6%	8.5	8.0
Total	58.2	40.4%	23.5	35.9

Source: Authors' calculations and elaboration based on World Bank IDS 2023.

Note: Estimation of grant element is based on commitment loans and considering a 10-year average (2013-2022).

Table 9 offers an analysis of the distribution of financial burdens between creditor groups when applying uniform and differential cuts in debt ("flat rate" and "fair" CoT) for this group of 16 NCF countries. With a 39 percent reduction in present value across all creditor classes, the total amount of debt that would be written off would amount to \$14 billion. IDA's share would stand at \$3.1 billion and multilaterals' (excluding IDA) would amount to \$4.9 billion.

Under a "fair" CoT, IDA would bear just \$1.8 billion, while the share of other multilaterals' would amount to \$5.5 billion.

Table 9: NCF (16) countries, inter-creditor burden sharing according to distinct comparability of treatment	2
rules and haircut levels	

			39% haircut				64% haircut					
			Flat Rate CoT Fair CoT			Flat Rate CoT		Fair CoT				
	Grant element	Present Value	Rate	USD bn	Rate	USD bn	Diff. CoT rules	Rate	USD bn	Rate	USD bn	Diff. CoT rules
All Private creditors	14%	4.7	39%	1.8	56%	2.7	0.8	64%	3.0	74%	3.5	0.5
Multilateral excl WB IDA	32%	12.5	39%	4.9	44%	5.5	0.7	64%	8.0	67%	8.4	0.4
China	33%	2.1	39%	0.8	44%	0.9	0.1	64%	1.3	67%	1.4	0.1
Other Official Bilateral	35%	6.0	39%	2.3	42%	2.5	0.2	64%	3.8	66%	3.9	0.1
Paris Club	51%	2.6	39%	1.0	23%	0.6	(0.4)	64%	1.7	55%	1.4	(0.2)
IDA	52%	8.0	39%	3.1	22%	1.8	(1.3)	64%	5.1	54%	4.3	(0.8)
Total/Average	40%	35.9	39%	14.0	39%	14.0	_	64%	23.0	64%	23.0	—

Source: Authors' calculations and elaboration based on World Bank IDS 2023.

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The average grant element for loans to this sample of 16 NCF countries is 40 percent, with IDA and Paris Club creditors offering more generous terms than this benchmark (52 percent and 51 percent, respectively). Under the "fair" CoT, the private sector's debt relief contribution would rise from \$0.8 billion to \$2.7 billion, and China's from \$0.1 billion to \$0.9 billion, when the overall haircut is set at 39 percent. Conversely, for creditors like the Paris Club and other official bilaterals, the "fair" CoT method would result in a reduced contribution to debt relief.

Should the 16 NCF countries be granted a debt reduction akin to the HIPC Initiative, equating to a 64 percent overall diminution in net present value, the total debt reduction would be \$23 billion. Even if all claims from the private sector and bilateral official (totaling \$15.4 billion) were cancelled, this would not be sufficient to reduce the debt in the amount needed of \$23 billion. Under that 64 percent present value debt reduction, the "fair" CoT would necessitate IDA to provide \$4.3 billion in relief—\$0.8 billion less compared to the flat rate CoT. This would reflect a 54 percent reduction over the present value, not the full 64 percent. For the MDBs, excluding IDA, the obligation would be adjusted to \$8.4 billion, marking a 67 percent haircut and a \$0.4 billion increase from the flat rate provision. China's share for providing debt relief would be \$1.4 billion, whereas the private sector would contribute \$3.5 billion.

## THE FACILITY FOR GREEN AND INCLUSIVE RECOVERY

The participation of all creditors in debt relief is fundamental. Regarding private and commercial creditor participation, their inclusion would be most effective if there are 'sticks'—debt standstill and legal assurances—and 'carrots' in place. To entice the commercial sector to provide substantial debt relief (at least akin to HIPC levels), the DRGR proposal includes the creation of a Guarantee Facility for Green and Inclusive Recovery.

The idea underlying this approach is that, in exchange for a deep haircut level, private and commercial creditors would receive assurances that their new claims are safe. For this, the proposed facility would provide credit enhancements for new sustainability linked bonds, covering 18 months of interest payments and part of the principal (Volz et al. 2021). If payments on the new bonds are missed, the Facility would cover the missed payments to the benefit of private creditors; the missed payments would have to be repaid by the sovereign to the facility.

⁶⁶ The participation of all creditors in debt relief is fundamental⁹⁹ Table 10 exhibits the size of the capital required to guarantee the new Brady-like bonds. These bonds would be linked to sustainability with key performance indicators rooted in country-owned plans. As in the case of the original Brady bonds, we assume a 10-year maturity for the new bonds and a Secured Overnight Financing Rate +3.5 percent cost (Qian 2021; Buchheit and Lerrick 2023).

We estimate the size of the guarantee facility considering that the 47 NCF countries would receive a debt relief of 64 percent on their overall claims. Considering a "fair" CoT, it means that general relief of 64 percent would translate to 74 percent haircut on private debt and 66 percent for China's commercial creditors. Table 10A shows calculations for the case of 18 months of coupon payments fully guaranteed plus an 80 percent partial guarantee of the principal while Table 10B considers the same 18-month coupon payments with a 50 percent partial guarantee. We also assumed a 1:4 leverage ratio, meaning \$1 in available capital could guarantee up to \$4 in new sustainability-linked bonds in the guarantee facility. This leverage ratio is based on the World Bank's allowance on policy-based guarantees (World Bank 2016), but ratios may vary depending on the involved institutions.

According to our estimates, to guarantee the new Green and Inclusive Recovery Bonds that private and commercial creditors would receive when swapping their old debt of the 47 NCF countries for a HIPC-sized haircut of 64 percent (in overall debt), \$5.8 billion to \$8.5 billion would be required.

A significant benefit of this Brady-like partial guarantee is that the newly issued bonds could be easily traded on financial markets. This feature holds particular appeal for Chinese commercial banks seeking to strengthen their balance sheets, as it allows them to exchange non-performing loans for liquid bonds. Indeed, Zhou Chengjun, the director of the Finance Research Institute at the People's Bank of China, recently put forward a "Shanghai model" of debt restructuring, praising the Brady Plan as a "successful experience" that could be emulated by China (Zhou et al. 2021).

#### Table 10: Size of the Guarantee Facility for the New Common Framework (16) countries (in US\$ billions)

#### A: 64% haircut and 80% guarantee on principal

	Private Creditors	China (Commercial*)	Total
Debt Stock (PV)	105.5	26.5	132.0
With "fair" CoT: Individual haircut	74%	66%	—
Value new bonds	27.4	9.0	36.4
Guarantee (part I, 80% principal)	21.9	7.2	29.2
Guarantee (part II, 18m coupon)	3.7	1.2	4.9
Total Guarantee size	25.6	8.4	34.0
Financing from donors (1/4 of total guarantee size)	6.4	2.1	8.5

#### B: 64% haircut and 50% guarantee on principal

	Private Creditors	China (Commercial*)	Total
Debt Stock (PV)	105.5	26.5	132.0
With "fair" CoT: Individual haircut	74%	66%	—
Value new bonds	27.4	9.0	36.4
Guarantee (part I, 50% principal)	13.7	4.5	18.2
Guarantee (part II, 18m coupon)	3.7	1.2	4.9
Total Guarantee size	17.4	5.7	23.1
Financing from donors (1/4 of total guarantee size)	4.3	1.4	5.8

#### Source: Authors' elaboration.

**Note:** We calculate coupon coverage based on current market conditions, with an average FED rate of 5.375 percent. We consider 60 percent of China's total official bilateral loans as 'commercial' lending, eligible for guarantee fund coverage. This percentage reflects the average proportion of Export-Import Bank of China loans to total loans from Chinese agencies and development finance institutions over the past decade, according to the Chinese Loans to Africa Database (Boston University Global Development Policy Center 2023).



# CONCLUSION
The future of EMDEs is at at a crossroads. If current economic and policy trajectories persist, the international community will see a default on the 2030 Agenda and the Paris Agreement. Moreover, the repercussions of inaction would result in devastating social, economic and environmental costs that could become irreversible.

However, another pathway exists. If countries can accelerate investments on climate and development goals, the world economy can evolve into one that is low-carbon, more equitable, resilient and conducive to growth.

For this to happen, expenditure levels must be ramped up. According to the Independent Expert Group of the G20, EMDEs excluding China must mobilize and invest \$3 trillion annually by the end of the decade: \$1 trillion from external sources and \$2 trillion domestically each year to 2030—to meet the SDGs and commitments under the Paris Agreement (G20 2023).

The economic environment is such that an increasing number of countries are reducing investment at alarming rates in order to service external debt payments. If the international community does not act swiftly and uniformly to provide comprehensive debt relief where needed alongside new liquidity, grants and concessional development finance, the costs of inaction will be monumental. Failing to address sovereign debt crises will have dire consequences for people and the planet: governments lacking fiscal space will fail to undertake critical investments in adaptation and resilience, climate mitigation, education, health and social development. What is more, in the face of an unresolved sovereign debt crisis, it will be impossible to mobilize domestic or international private capital for development and climate action. As a result, countries will become ever more vulnerable to shocks and risk sliding into a vicious cycle of debt, ecological crisis and underdevelopment.

This report shows that external PPG debt stock and service levels are at historic highs, jeopardizing investment in development and growth. **Executive Summary** 

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 and conducive to
 growth⁹⁹

Exacerbating the economic situation, borrowing on private capital markets is out of reach for the majority of EMDEs. Due to bond yields surpassing expected growth rates, EMDEs cannot depend on capital markets to refinance or issue fresh debt without endangering their debt sustainability.

Prioritizing debt relief is essential to striking a balance between debt sustainability and investing in development and climate priorities. This report conducted an enhanced DSA to gauge how well EMDEs can access the recommended G20 Independent Expert Group levels of external financing without compromising their debt sustainability. Among the 66 most economically vulnerable countries surveyed, 47 countries with a combined population of over 1.11 billion people, will confront insolvency challenges for striving to achieve shared climate and development goals.

Moreover, the remaining 19 countries analyzed lack sufficient liquidity and fiscal space for investing in climate and development. While these countries will not likely face imminent solvency issues, they will not be able to finance necessary investments without debt suspensions or new investments at a lower cost of capital than in private capital markets.

Given these stark findings, the DRGR Project calls for three areas of urgent reform:

- **DSAs**, which are under review at the IMF, need to be enhanced and calibrated to account for critical development investment needs, as well as the potential of climate and other shocks.
- The G20 Common Framework needs to be based on enhanced DSAs, compel all creditor classes to participate and deliver a level of debt relief necessary to mobilize financing for climate and development goals.
- Measures need to be taken to support countries not in debt distress but that that face liquidity rather than solvency problems and that lack fiscal space for investments in development. Credit enhancement should be provided to lower the cost of capital, alongside other forms of support like a temporary debt service suspension to ensure countries remain liquid while increasing fiscal space for investing in a green and inclusive recovery.

Additionally, the international community should reform the global financial system by expanding the size of the Global Financial Safety Net to provide greater liquidity, increasing capital for development finance institutions and enhancing the voice and representation of EMDEs within international financial institutions. Time is of the essence in granting the fiscal space to invest in climate and development goals. The international community must change the course of action and prevent a default on development. As a first and essential step, providing debt relief to nations in need will allow advanced economies and EMDEs alike to pave the way for a prosperous and sustainable future.

⁶⁶ Providing debt relief to nations in need will allow advanced economies and EMDEs alike to pave the way for a prosperous and sustainable future⁹⁹



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# TECHNICAL APPENDIX I: EXTERNAL PUBLIC DEBT SUSTAINABILITY ANALYSIS

# **OBJECTIVE OF ANALYSIS**

Estimate the external debt sustainability of developing countries from 2023-2028, taking into consideration external financing needs for the United Nations 2030 Sustainable Development Goals (SDGs) and Paris Agreement climate priorities, with particular attention to indicators for Public and Publicly Guaranteed (PPG) external debt stock as a share of GDP and exports.

# **DATA SOURCES**

- World Bank (WB) International Debt Statistics (2023) for information on 2022 Public and Publicly Guaranteed external debt stock by country (in Present Value).
- International Monetary Fund (IMF) World Economic Outlook (WEO), GDP, exports and Primary net lending/ borrowing (including actual data and projected) by country.
- IMF Article IV reports when projected values are not available by IMF WEO.
- **4.** The G20 Independent Expert Group (2023) report for estimates on external financing needs by income group.
- 5. World Bank population size data for 2022, by country.
- If country-level information not available at WB IDS (2023) or IMF WEO, information from IMF article IV was used.

# **METHODOLOGY**

- **1.** Estimation of GDP and Export Trajectories (2023-2028):
  - Real GDP growth projections are based on IMF WEO estimates. Following the approach of Batini et al. (2022), we incorporate a "green" fiscal multiplier of 1.2. Hence, in our assumptions, an additional 1

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Appendix II: Guarantee Fund percent GDP spending results in a 1.2 percent GDP response in the first year of disbursement.

- Export projections are based on estimations of the volume growth of exports of goods and services by IMF WEO.
- Assumptions include a constant foreign exchange rate and no export tendencies driven by price changes.
- 2. Estimation of PPG external debt trajectories (2023-2028)
  - We assume that the debt stock of a given year depends on the debt stock from the previous year plus the overall government external financing needs of the current year, calculated in terms of present value. This accounting assumes that amortization due on a given year is rolled over for the following years (following approaches adopted by Kessler & Albinet 2022 and Albinet et. al 2023).
  - Overall external financing needs depend on:
    - i. General government primary net lending/borrowing
    - ii. External financing needs for climate adaptation and SDGs

GENERAL GOVERNMENT PRIMARY NET LENDING/BORROWING General government primary borrowing can be financed domestically and internationally. Based on the last 10 years average of external PPG debt stock as share of general government debt stock, we estimate the share of yearly deficit being financed externally between 2023 and 2024.

EXTERNAL FINANCING NEEDS FOR CLIMATE ADAPTATION AND SDGS

External financing needs for climate adaptation and SDGs are derived from Songwe/Stern report (2022) and G20 Independent Expert Group (2023), which posit a gradual increase in external financing needs for LICs and MICs (excluding China) from 2019-2030, reaching an additional \$1 trillion by 2030.

**Table A1:** Yearly increase of external financing needs for climate adaptation and SDGs by income group(billion current USD), 2020-2030

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
LICs	14	27	41	55	68	82	95	109	123	136	150
LMICs	55	109	164	218	273	327	382	436	491	545	600
UMICS (excluding China)	23	45	68	91	114	136	159	182	205	227	250
Total	91	182	273	364	455	545	636	727	818	909	1,000

Source: Authors' calculations based on Triple Agenda (2023).

Given the absence of country-specific external financing needs for climate adaptation and the SDGs, we estimated per capita external financing needs based on the 2022 population size (World Bank data) for each income group. This per capita information then informed the estimates for external financing needs per country.

	Number of people 2022 (billion people)	Annual increase (USD billion)	Per Capital annual increase (USD)
LICs	0.7	13.6	18.5
LMICs	3.4	54.5	15.9
UMICS (excluding China)	1.1	22.7	20.7

**Source:** Authors' calculation based on Triple Agenda (2023).

Based on that information, we calculated government external financing for each country in our sample. For instance, Malawi, a low-income country with 20.41 million inhabitants, will require an annual increase of external financing needs by \$378 million. Hence, by 2024 in the fifth year of the increase, Malawi would reach an investment need of \$1.89 billion. Table A3 compares annual external financing needs in terms of GDP for all countries in our sample.

	Number of people in 2022 (million)	Investments needs in 2024 USD billion (external financed)	Share GDP
Benin	13.35	1.06	5.1%
Bhutan	0.78	0.06	2.1%
Burundi	12.89	1.19	20.6%
Cabo Verde	0.59	0.05	1.8%
Central African Republic	5.58	0.52	16.0%
Chad	17.72	1.64	11.0%
Comoros	0.84	0.07	4.7%
Congo, Dem. Rep.	99.01	9.15	10.9%
Congo, Rep.	5.97	0.47	3.0%
Cote d'Ivoire	28.16	2.24	2.7%

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**Table A3:** Country-specific estimation of externally-financed SDGs and climate investments according to the triple agenda (2023), adjusted for population weighting

	Number of people in 2022 (million)	Investments needs in 2024 USD billion (external financed)	Share GDP
Djibouti	1.12	0.09	2.1%
Ethiopia	123.38	11.40	7.6%
Gambia, The	2.71	0.25	9.3%
Ghana	33.48	2.66	3.3%
Guinea	13.86	1.28	5.3%
Guinea-Bissau	2.11	0.19	9.2%
Haiti	11.58	0.92	4.2%
Kenya	54.03	4.29	3.3%
Lao PDR	7.53	0.60	3.5%
Lesotho	2.31	0.18	6.6%
Liberia	5.30	0.49	9.7%
Madagascar	29.61	2.74	13.8%
Malawi	20.41	1.89	12.0%
Maldives	0.52	0.05	0.8%
Mali	22.59	2.09	8.8%
Mozambique	32.97	3.05	11.8%
Myanmar	54.18	4.31	5.7%
Nepal	30.55	2.43	5.1%
Nicaragua	6.95	0.55	3.2%
Niger	26.21	2.42	11.8%
Nigeria	218.54	17.37	3.3%
Sao Tome and Principe	0.23	0.02	3.0%
Sierra Leone	8.61	0.80	15.0%
Somalia	17.60	1.63	12.3%
St. Vincent and the Grenadines	0.10	0.01	1.0%
Sudan	46.87	4.33	11.1%
Tajikistan	9.95	0.79	6.3%
Tanzania	65.50	5.20	5.6%
Timor-Leste	1.34	0.11	2.0%
Tonga	0.11	0.01	2.1%
Vanuatu	0.33	0.03	2.2%
Yemen, Rep.	33.70	3.11	10.6%
Zambia	20.02	1.85	5.3%
Zimbabwe	16.32	1.30	3.7%

Source: Author's own calculation based on IMF WEO, World Bank and G20 Independent Expert Group (2023).

## 3. Calculating present value of new debt stocks

Once we estimate the value of new debt, we adjust to present value considering different cost of capital to distinct source of finance that can be concessional (below market rates), non-concessional (at market rates, e.g., from multilateral development banks) and private (adjusted to risk premium).

Present value is a critical measure used to assess the current worth of a country's future debt service obligations, considering a specific discount rate (often 5 percent). The present value analysis aids understanding of the debt burden on a country's economy by discounting future debt payments to their equivalent value in today's terms (once contracted interest rate and maturities are considered). Whenever the interest rate charged for a loan is lower than the discount rate (in that case, 5 percent), the present value of the debt is smaller than its face value, with the difference reflecting the (positive) grant element of the loan.

The World Bank's International Debt Statistics (World Bank IDS, 2023) further elaborates on the grant elements of loans, allowing for an alternative PV calculation where the present value is the nominal value less the grant element (PV = NV-GE).

To accurately gauge the present value of total external debt, it is crucial to consider the composition of external financing by source. Broadly, financing can be categorized as concessional, non-concessional and private. According to the G20 Independent Expert Review, the allocation of external financing for climate initiatives and the SDGs varies by the income group of the recipient countries, as outlined in Table A3. We posit that all new external financing requirements—whether allocated for SDGs, climate action or to cover primary deficits—will adhere to this distribution pattern.

**Table A3:** Distribution of sources of external financing needs, per income group (share of total)

	Concessional	Non-concessional	Private
LICs	60%	30%	10%
LMICs	13%	32%	56%
UMICS	6%	34%	60%

Source: Authors' calculation based on G20 Independent Expert Group (2023).

## Present value estimations for concessional sources:

For concessional debt, we calculate present value based on information of grant element as provided by World Bank IDS. Concessional debt is defined

as loans with an original grant element of 35 percent or more. According to the World Bank classification, loans from the World Bank and major regional development banks—the African Development Bank, Asian Development Bank and Inter-American Development Bank—are classified as concessional (World Bank IDS 2023)

For LICs, we assume a 10-year historical average of grant element from IDA—the highest concessional source of finance available—as a benchmark for forthcoming concessional lending terms. According to historical data provided by World Bank IDS (2023), the average grant element is 53 percent for LICs.

For LMICs, we used grant element of concessional lending from the World Bank and other regional development as a benchmark historical average. For LMICs, the weighted 10-year grant element average is 36 percent. For UMICs, we used a 35 percent benchmark, as it is the floor rate to be considered concessional lending.

## Estimations for non-concessional sources:

We assume non-concessional sources are provided at market conditions prevailing at the time. An example of this source of finance would be non-concessional lending from MDBs. For this reason, we use actual projected FED rates as a benchmark, as per Table A4. We then calculate a discounted PV value assuming a discount rate of 5 percent.

Year	Interest Rate
2023 (actual)	5.33%
2024	4.75%
2025	3.5%
2026	2.75%
2027	2.5%
2028	2.5%

#### Table A4: Projection FED rates

Source: FED (2023).

In calculating the present value of debt, it is essential to consider not only the interest rates but also the maturity structure of the debt. For non-concessional lending, we base our assumptions on the premise that new financing will mirror the average maturity profile of official lending observed over the last decade, as detailed in the World Bank International Debt Statistics (World Bank IDS, 2023).

## Table A5: Average Maturity for Official lending

	Average maturity for official lending (considered for non-concessional lending)
LICs	29 years
LMICs	23 years
UMICs	18 years

Source: World Bank International Debt Statistics (2023).

# For private sources

In our financial modeling across all income groups, we base the cost of private lending on Federal Reserve (Fed) interest rates, both actual and forecasted, adjusted by country-specific spreads. Where individual Emerging Market Bond Index (EMBI) spreads for a country are unavailable, we substitute them with the regional average. As a baseline, we utilize the average spread over the last decade. In alignment with Fed rate movements, we apply a proportional decline to these spreads; for instance, a 11 percent reduction in spreads from 2023-2024 mirrors a similar percentage decrease in spreads. Additionally, we establish upper and lower limits for spreads: for countries with spreads exceeding 1,000 basis points, indicating market access issues, we cap the spread at 999 basis points. Conversely, the minimum spread is set based on the lowest figure recorded for the country or its region over the past decade. Regarding maturities, we base our assumptions on the premise that new financing will mirror the average maturity profile of private lending observed over the last decade, as detailed in the World Bank International Debt Statistics (World Bank IDS, 2023).

## Table A6: Average maturity for private lending

Income Group	Maturity
LICs	12 years
LMICs	10 years
UMICs	15 years

Source: World Bank International Debt Statistics (2023).

# Thresholds for debt sustainability

We follow thresholds defined by the IMF's Debt Sustainability Framework (PPG debt stock) for LICs, as per Table A7. We consider debt carrying capacity for LICs as per their last DSA.

**Table A7:** Public and publicly guaranteed external debt thresholds, as perdebt carrying capacity.

	"Solvency indicators" Present value of external debt (in percent of)		
Debt carrying Capacity	GDP	Exports	
Weak	30%	140%	
Medium	40%	180%	
Strong	55%	240%	

Source: IMF (2024).

# **Stress test**

#### a. Real GDP growth

Following IMF (2018), we test different scenarios for real GDP. But instead of calculating the standard deviation over historical and projected averages, we test for impact of GDP steaming from climate-induced disasters. Specifically, aligning with findings from Fuje et al. (2023) on the impact of climate-induced disasters on growth, we reduce output growth by 1.6 percentage points, the average impact of droughts (1.4 percent) and storms (1.8 percent) in EMDE growth in the year of 2026. The impact is accounted for one year.

#### a. Interest rates

We deviated from the baseline assumption of gradually declining interest rates. Instead, we held interest rates constant at an elevated level of approximately 4.75 percent, as forecasted for 2024, and extended this assumption through to 2026, with then declining interest rate, following Table A8. The tendency of decline still follows the trajectory of FED (2023) future expectations on interest rate, but adding two years of postponement.

#### Table A8: Projection FED rates

Year	Interest Rate
2023 (actual)	5.33%
2024	4.75%
2025	4.75%
2026	4.75%
2027	3.5%
2028	2.75%

Source: FED (2023).

# Sample

Our analysis is grounded in the Low-Income Country Debt Sustainability Framework (LIC DSF) methodology. Consequently, our sample comprises countries that qualify for evaluation under the LIC DSF. Due to data availability issues, although 73 countries are eligible for the LIC DSF, our study encompasses 66 of these countries.

**Countries in the sample**: Burkina Faso, Burundi, Central African Republic, Chad, Congo, Dem. Rep., Ethiopia, The Gambia, Guinea, Guinea-Bissau, Liberia, Madagascar, Malawi, Mali, Mozambique, Niger, Rwanda, Sierra Leone, Somalia, Sudan, Togo, Uganda, Yemen, Rep., Zambia, Bangladesh, Benin, Bhutan, Bolivia, Cabo Verde, Cambodia, Cameroon, Comoros, Congo, Rep., Cote d'Ivoire, Djibouti, Ghana, Haiti, Honduras, Kenya, Kyrgyz Republic, Lao PDR, Lesotho, Mauritania, Mongolia, Myanmar, Nepal, Nicaragua, Nigeria, Papua New Guinea, Samoa, Sao Tome and Principe, Senegal, Solomon Islands, Tajikistan, Tanzania, Timor-Leste, Uzbekistan, Vanuatu, Viet Nam, Zimbabwe, Dominica, Grenada, Guyana, Maldives, Moldova, St. Vincent and the Grenadines, Tonga.

**LIC DSF countries excluded given unavailable data:** Afghanistan, Eritrea, South Sudan, Kiribati, Micronesia (Federated States of), Marshall Islands, Tuvalu.



# APPENDIX II: GUARANTEE FUND

As in the case of the original Brady bonds, we assume a 10-year maturity for the new bonds and Financing Rate a Secured Overnight +3.5 percent cost (Qian 2021; Buchheit and Lerrick 2023). We estimate a partial guarantee of the principal (80 percent portion in case 1 and 50 percent in case 2) plus 18 months of interest payments fully guaranteed. We also assumed a 1:4 leverage ratio, meaning \$1 in available capital could guarantee up to \$4 in new sustainability-linked bonds in the guarantee facility. Each institution has a leverage level for guarantees determined by its internal rules. For the proposed facility, a 1:4 leverage ratio is assumed, which the World Bank has allowed on policy-based guarantees (World Bank 2016). We consider 60 percent of China's total official bilateral loans as 'commercial' lending, eligible for guarantee fund coverage. This percentage reflects the average proportion of Export-Import Bank of China loans to total loans from Chinese agencies and development finance institutions over the past decade, according to the Chinese Loans to Africa Database (Boston University Global Development Policy Center 2023).

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