Chapter III.E

Debt and debt sustainability

1. Key messages and recommendations

Debt challenges show no signs of abating for many poor and vulnerable countries, threatening the achievement of the Sustainable Development Goals (SDGs). While the global debt picture was varied in 2022, debt risks have risen in many of the poorest and most vulnerable countries. Debt overhang poses a significant obstacle to sustainable development. Addressing these challenges and improving the international financial and debt architecture remains an urgent priority.

Global public debt as a share of gross domestic product (GDP) fell in 2022, but debt dynamics diverged across countries and debt vulnerabilities worsened in many developing countries. Globally, the debt-to-GDP ratio fell from its high in 2021 due to the rebound in economic activity along with increasing inflation (which lowers the real value of debt). However, this number masks significant differences across countries, with non-fuel-exporting least developed countries (LDCs) and other low-income countries (LICs)[1] seeing further debt increases. Moreover, a range of debt indicators, such as debt service burdens, sovereign spreads and external financing needs, all point to rising debt vulnerabilities and further diminishing fiscal space for investment in the SDGs and climate action. About 60 per cent of countries that use the IMF/World Bank Debt Sustainability Framework (LIC DSF) are assessed at high risk of debt distress or in debt distress, twice the level in 2015; in total, 52 developing countries—home to half the world's population living in extreme poverty—suffer from severe debt problems and high borrowing costs.

Rising debt vulnerabilities were driven by a confluence of global shocks. Most governments adopted fiscal measures to mitigate the impact of rising energy prices following the outbreak of war in Ukraine, and developing countries were also compelled to spend to mitigate the impact of higher food prices. Global monetary policy tightening contributed to increased debt vulnerabilities in developing countries by raising borrowing costs and reversing capital flows, leading to depreciating currencies in many countries.

The trend towards a more heterogeneous creditor landscape also continued. Over the past 25 years, LDCs and other LICs have diversified their creditor base, with the share of borrowing from non-Paris Club official bilateral creditors and private creditors rising significantly. These trends continued in 2021 and 2022. While providing a welcome source of new financing, the greater diversity of creditors has exacerbated creditor coordination challenges in the resolution of debt crises. Most recently, in the face of diminished access to bond markets, many LDCs and other LICs returned to the syndicated loan market, which provides less transparent, shorter maturity funding, in turn increasing debt vulnerabilities.

With rising vulnerabilities and a more heterogeneous debt composition, effective public debt management is essential. Key priorities are the development and implementation of debt management strategies, domestic market development, improved information and transparency, and enhanced capacity support for debt managers. The international community is scaling up the delivery of capacity development to LDCs and other LICs in all areas of public debt management.

Both creditors and debtors have a shared responsibility to increase debt transparency. Borrowers should improve their legal frameworks and upgrade their systems of debt recording and reporting as well as their capacity and information-sharing procedures; creditors should promote transparent financing practices and refrain from confidentiality agreements.

Developing countries need support to enable them to scale up investments in climate action and the SDGs in the face of severe debt challenges. For countries that do not yet have unsustainable debt burdens but have limited fiscal space, innovative financing instruments such as

debt-for-climate swaps could free up resources for sustainable development. For countries with unsustainable debt, early and deep restructurings are needed.

Amid rising debt vulnerabilities, the international debt resolution architecture needs continued improvement to incentivize sufficiently deep and rapid restructurings. Early debt resolutions can help countries to avoid doing "too little too late". The more heterogenous creditor landscape adds complexity to the task. Enhanced collaboration among creditors—including bilateral creditors and private creditors—can contribute to comprehensive and appropriate debt treatment. Contractual improvements in debt agreements—enhanced collective action clauses (CACs), climate resilient debt clauses and majority voting provisions in loan agreements—should continue to help strengthen the debt resolution framework.

The Common Framework should continue to improve and its coordinated approach expanded to other countries. Beyond finalizing the debt treatment of countries that have already applied for the Common Framework, several steps may strengthen implementation, namely: greater clarity on the steps and timelines of the process; debt service suspension for the duration of any negotiations; clarification on how comparability of treatment will be enforced; and an expansion of this coordinated approach to other countries. It is imperative to further strengthen the debt architecture to achieve more predictable, timely and orderly processes for countries under the Common Framework and for those not covered by it.

2. Overview of global debt trends—debt dynamics in the context of multiple crises

2.1 Debt trends across income groups

Global public debt as a share of GDP fell in 2022 but remains above pre-pandemic levels.[2] Global public debt reached 91 per cent of GDP in 2022, falling 4 percentage points compared to 2021, but remaining 7.5 percentage points higher than before the pandemic. Over the past year, debt as a share of GDP fell by 5.5 percentage points of GDP in developed countries. Although most middle-income countries saw comparable declines in public debt-to-GDP ratios, debt increases in China, Thailand, Philippines and Pakistan caused debt for the group to remain unchanged on a weighted-average basis. The debt of LDCs and other LICs was broadly unchanged, falling by less than a percentage point for the group (LDCs' debt decreased by slightly more than 2 percentage points), but this conceals substantial differences within the group. While oil-exporting LDCs and other LICs saw debt fall by 12 percentage points on average, non-oil-exporting LDCs and other LICs saw their debt-to-GDP increase by 2.7 percentage points. Small island developing states (SIDS), which were hit particularly hard by the pandemic, saw their debt fall significantly in 2022, but also remaining above pre-pandemic levels.

Debt levels and vulnerabilities are expected to remain elevated in the face of high borrowing costs and large financing needs. Despite the rebound in economic activity in 2021 and 2022, output is expected to remain below pre-pandemic trends in developing countries, raising financing needs and contributing to revenue shortfalls. This is in contrast with developed countries, which have largely overcome the impact of the pandemic (see *2022 Financing for Sustainable Development Report*). As a result, a range of debt indicators, such as debt service burdens, sovereign spreads, external financing needs and debt sustainability analyses, all point to rising debt vulnerabilities, further diminishing fiscal space for investment in the SDGs and climate action.

Debt service payments claim high shares of public revenue in a growing number of developing countries. In 2022, 25 developing countries had to dedicate more than a fifth of their total revenues to servicing public external debt. This is the highest number of countries crossing that threshold since 2000, which also marked the beginning of the last large-scale debt relief initiative for developing countries, the Heavily Indebted Poor Countries initiative (figure III.E.2). In LDCs and other LICs, interest payments on public external debt resumed their upward trajectory in 2021 after the small respite in 2020 due to the Debt Service Suspension Initiative (DSSI) (figure III.E.3).

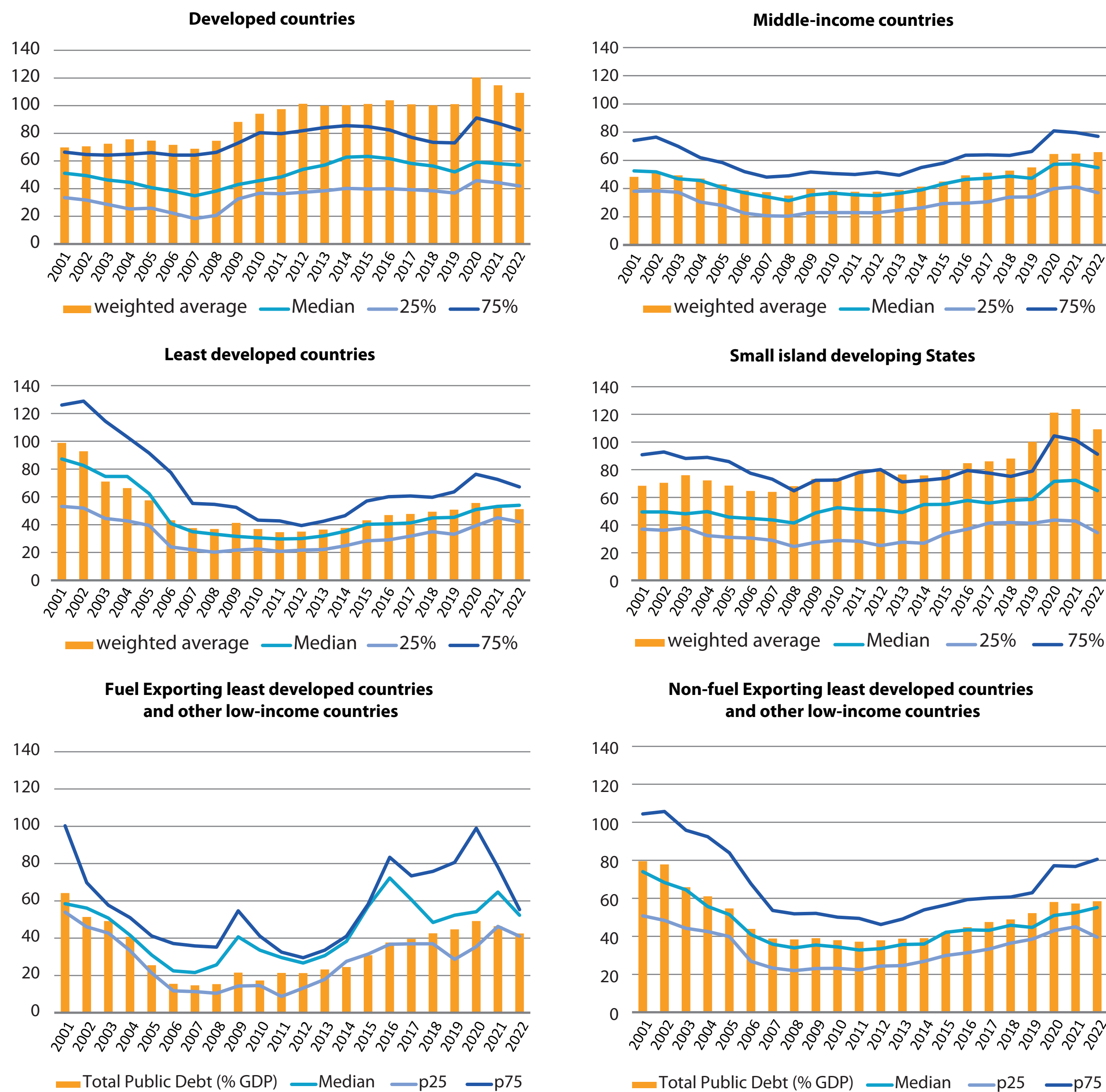
Rising vulnerabilities are reflected in deteriorating financing conditions for developing countries, illustrated by widening sovereign bond yield spreads. At the beginning of 2019, only three countries had spreads at levels that make it prohibitively expensive to access capital markets (over 1,000 basis points above US Treasuries) (figure III.E.4). Average spreads on developing country debt rose steadily throughout 2022, reflecting the tightening of global financial conditions in addition to the fiscal and debt vulnerabilities of individual countries, and peaked around September. At the start of 2023, 14 countries still faced prohibitively high borrowing costs in markets, with a median spread of 2,750 basis points.

External financing needs are projected to increase further, particularly in LDCs and other LICs. The external financing needs of LDCs and other LICs are expected to increase from $172 billion in 2021 to $220 billion in 2027. This includes both fuel- and non-fuel-exporting countries despite different short-term dynamics; the external financing needs of both groups are projected to remain at historically high levels from 2022 to 2027 due to high debt amortizations that need to be refinanced. The average annual amortization falling due in 2022 to 2027 is $120 billion (including around $12.9 billion of payments suspended during DSSI), compared to $55 billion in the pre-crisis period (2010 to 2019) (figure III.E.5). The tightening of global financial conditions may undermine the availability of external financing to meet increasing needs. Estimates of the overall financing needs of LDCs and other LICs to respond to the COVID-19 pandemic, accelerate investment to resume the income convergence path with advanced economies and build adequate external buffers have been around $440 billion over the next five years.[3]

2.2 Debt risk ratings

The risks of fiscal crises and debt distress in developing countries remain elevated, particularly in LDCs and other LICs. In 2022, the short-term risk of a fiscal crisis remained largely stable for developed countries and deteriorated for many middle-income countries and emerging markets. Debt risk ratings for LDCs and other LICs remained elevated. Debt risk ratings for LDCs and other LICs remained elevated. Around 60 per cent of countries that use the IMF/World Bank Debt Sustainability Framework (LIC DSF) are assessed at high risk of debt distress or in debt

Figure III.E.1
Public debt evolution in developed and developing countries, 2000–2022
(Per cent of GDP)



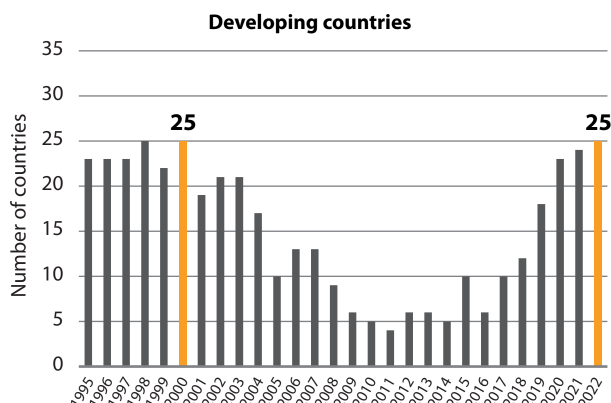
Source: IMF WEO October 2022, IMF staff and UNDP calculations.
Note: Total public debt (percentage of GDP) is calculated as weighted average.

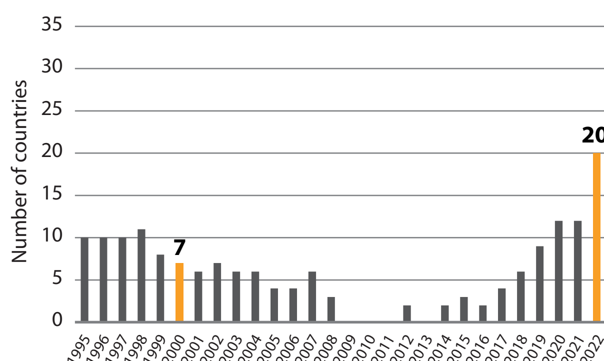
distress, twice the level in 2015 (figure III.E.6). Fifteen countries' debt risk ratings have been downgraded since the beginning of the pandemic: two fuel-exporting and 13 non-fuel-exporting countries. Several countries experienced debt risk rating upgrades, mostly reflecting the positive results from debt restructuring (e.g., Chad, Cabo Verde, the Gambia, Mauritania, Mozambique and South Sudan). Among the countries assessed at high risk of debt distress or in debt distress, four countries have requested a Common Framework debt restructuring: Chad, Ethiopia, Zambia and most recently Ghana. Somalia and Sudan are undertaking debt restructurings under the Heavily Indebted Poor Countries initiative. Several others (e.g., Djibouti, Lao PDR, Malawi) have also recently announced their intention or interest to restructure their debt through bilateral negotiations.

A large number of developing countries face debt challenges and extremely high market-based financing costs; while they

Figure III.E.2

Developing countries with total external debt service payments of more than 20 per cent of revenue





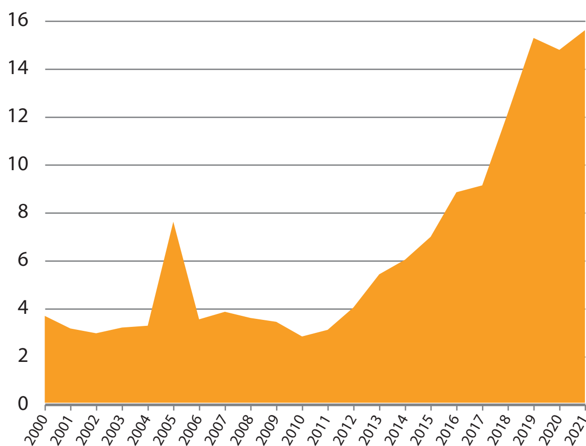
Source: UNDP and IMF staff based on general government revenue data from the IMF's WEO October 2022 and external (public and publicly guaranteed) debt data from the World Bank's IDR 2022.

Note: Debt service here covers both interest and principal. Developing countries here include those low- and middle-income countries covered by the *International Debt Report 2022*.

Figure III.E.3

Interest payments on external public debt of LDCs and other LICs

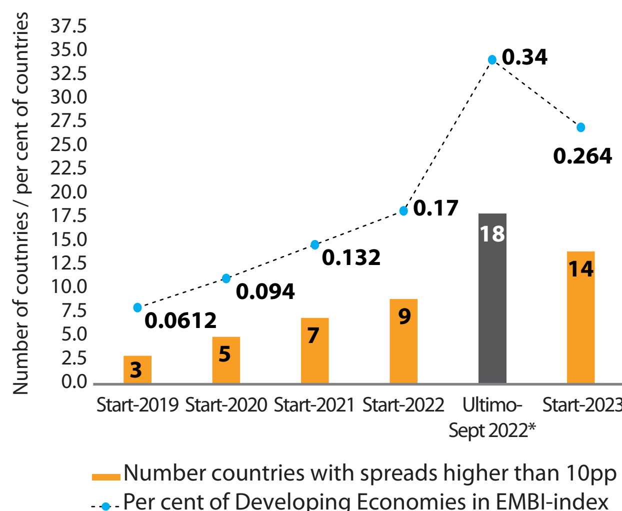
(Billions of United States dollars)



Source: IMF staff calculations based on World Bank International Debt Statistics Database.

Figure III.E.4

Developing countries with bond spreads higher than 1,000 basis points

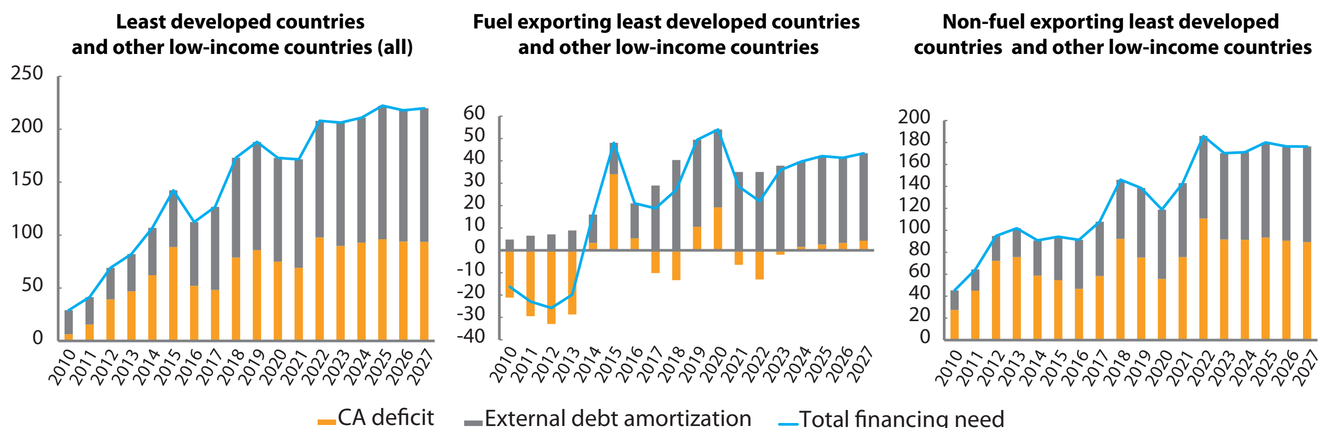


Source: UNDP based on data from Haver Analytics / JPMorgan's Global Emerging Market Bond Index (EMBI).

Note: the EMBI index measures the spread of United States dollars denominated debt to similar maturity US Treasury bonds. Start refers to the first day of reporting in January. *As of 30 September 2022. In 2019, spreads were reported for 49 developing countries, and 53 from and including the start of 2020. Figure only includes low- and middle-income countries in the EMBI.

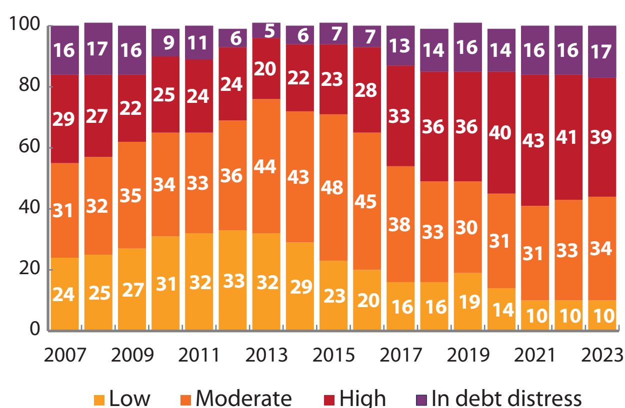
represent only a small share of the global economy and hence may not pose a systemic risk for global financial stability, they are home to 40 per cent of the world's poor, and among the most climate-vulnerable countries.[4] There are different ways to assess the total number of developing countries suffering from severe debt problems or facing a fiscal crisis. According to an IMF methodology for assessing the risk of a fiscal crisis using machine learning, 32 per cent of all emerging markets are at high risk as of end-2022, up from 25 per cent in 2021.[5] When all countries are included that have either a credit rating of *"substantial risk, extremely speculative or default"* and/or a Debt Sustainability Analysis risk rating of *"in distress or at high risk of debt distress"* and/or a bond spread of more than 1,000 basis points, then almost 40 per cent of all developing countries (a total of 52 countries) suffer from severe debt problems and extremely expensive market-based financing.[6] Together, these 52 countries account for only 2.5 per cent of the global economy but 15 per cent of the global population (around 1.2 billion people) and 40 per cent of all people living in extreme poverty. They include more than half of all LDCs (26 LDCs), 16 SIDS and more than half of the world's top 50 most climate vulnerable countries.

Figure III.E.5
Gross external financing needs of LDCs and LICs
(Billions of United States dollars)



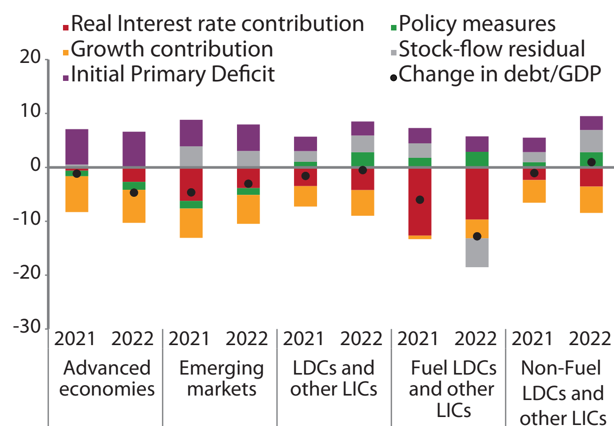
Source: IMF WEO database, October 2022.

Figure III.E.6
External debt distress ratings for LDCs and other LICs using IMF/World Bank LIC DSF, 2007–2023
(Percentage of LDCs and other LICs per risk category)



Source: IMF/World Bank Debt Sustainability Framework, data as of 20 February 2023.
Note: Percentage of LDCs and other LICs in each debt distress risk category.

Figure III.E.7
Drivers of change in public debt, 2020–202
(Percentage of GDP)



Source: MF Fiscal Monitor, October 2021, and IMF staff calculations and update (as of 30 November 2022).
Note: The stock-flow residual is the change in the debt ratio resulting from factors such as bailouts or changes in exchange rates. The drivers of change in each country income group were calculated as simple averages. LICs include DSSI-eligible countries plus Eritrea, Sudan and Zimbabwe.

2.3 Drivers of debt and debt vulnerabilities

Global crises and shocks have been key drivers of the rising debt vulnerabilities of developing countries. While dynamics varied across countries, rising food and energy prices, tightening global financial conditions, US dollar appreciation and a reversal in cross-border capital flows made for an extremely challenging global macro-environment for many countries.

Debt dynamics varied across countries. Debt fell in developed countries, as economic activity and revenues rebounded and governments wound down pandemic era support measures. Rising prices also deflated debt-to-GDP ratios across the board. However, dynamics were more varied in developing countries. Emerging markets and middle-income countries benefited from a stronger recovery, as did fuel-exporting LDCs and other LICs. Debt continued to grow in non-fuel-exporting LDCs and other LICs: this was due to fiscal pressures caused by rising fuel and food prices and currency depreciations that increased US dollar denominated debt. Fuel exporters faced similar inflationary pressures, but these were mitigated by appreciating national currencies (see figure III.E.7).

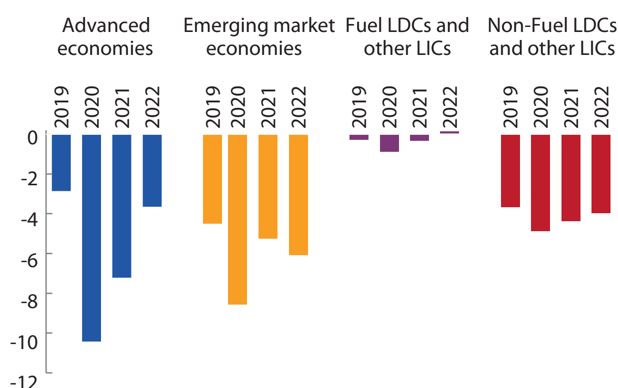
Most governments adopted fiscal measures to mitigate the impact of rising energy prices. LDCs and other LICs were also compelled to spend on food price mitigation, amplifying the impact on fiscal balances and debt. Countries across income groups deployed fiscal support to counter the impact of high food and fuel prices following the war in Ukraine, exerting further upward pressure on public debt. On average, countries spent around 0.4 per cent of GDP to mitigate rising energy costs, with emerging markets spending slightly more than

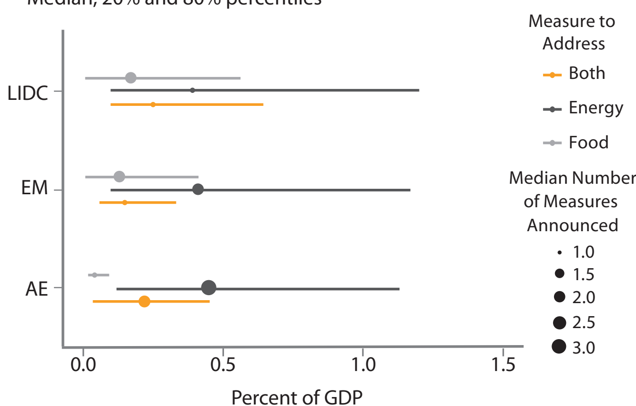
other groups. LDCs and other LICs spent another 0.17 per cent of GDP on food price measures, with middle-income and developed countries spending about 0.13 per cent and 0.04 per cent of GDP on food price mitigation, respectively (figure III.E.8).

The global tightening of monetary policy also contributed to increasing debt vulnerabilities in developing countries by raising domestic and external borrowing costs, depreciating national currencies and draining liquidity. Beyond measures needed to counter inflationary pressures, monetary authorities in developing countries have been compelled to follow the global policy tightening to contain currency movements, regardless of their exchange rate regime, compounding the impact on domestic borrowing costs (figure III.E.9). The current tightening cycle is especially challenging for resource-poor countries, as unlike in previous episodes US dollar appreciation is accompanied by higher commodity prices. Tighter financial conditions and the prospect of lower global demand usually dampen commodity prices, particularly the price of oil, but the war in Ukraine has kept them at elevated levels (figure III.E.10).

Developing countries also saw a sharp reversal in cross-border capital inflows in 2022, exacerbating liquidity constraints and further raising the cost of external refinancing. Such reversals are typically triggered by rising interest rates, global market volatility and risk aversion—but they also put further pressure on domestic interest rates and currencies. Further tightening of global financial conditions may thus elevate the risk of debt distress in many developing countries.[8]

Figure III.E.8
Fiscal support in response to rising fuel and food prices, by income group
(Percentage of GDP)

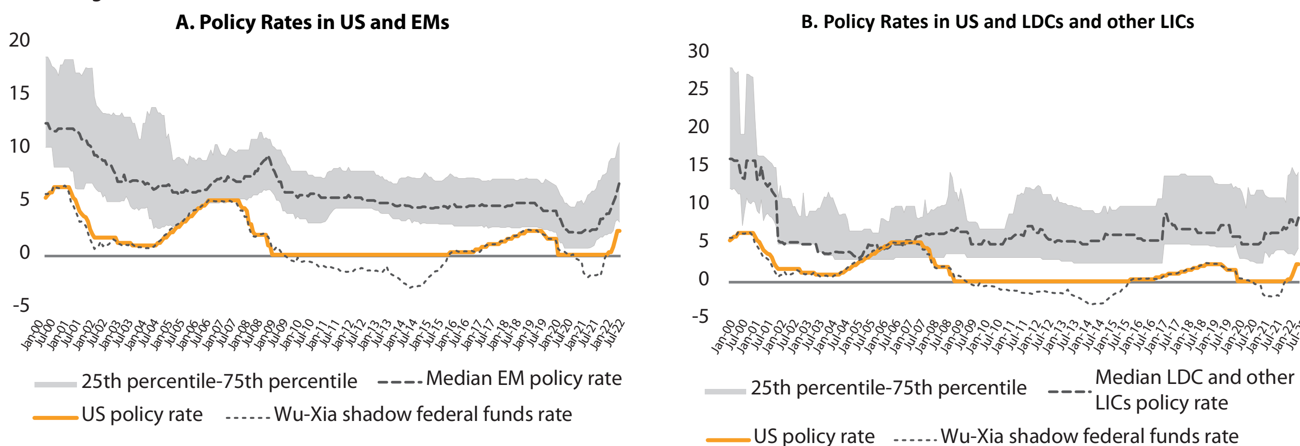




Source: IMF WEO October 2022, IMF staff calculations.

Source: IMF staff calculations based on data from IMF Fiscal Monitor October 2022.
Note: Whiskers reflect the 20th and 80th percentiles. Dots reflect the median and the number of announced measures of each type.

Figure III.E.9
Emerging markets, LDCs and other LICs tracking the US tightening cycle
(Percentage)

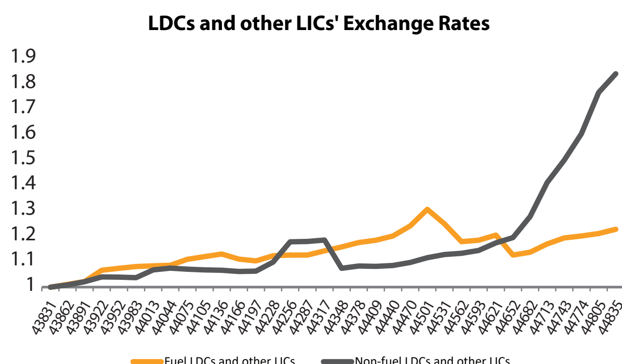


Sources: IMF International Financial Statistics database, Board of Governors of the Federal Reserve System, and Wu and Xia (2016)[7]

Figure III.E.10

Currencies of LDCs and other LICs, especially non-fuel LDCs and LICs, have been under pressure

(domestic currency per United States dollars, Index January 2020=1, mean by country group)



Sources: IMF International Financial Statistics database and Haver Analytics.
Note: The fuel LDCs and other LICs group does not include South Sudan. Underlying series are period average exchange rates.

2.4. Changes in the composition of debt

Over the past two decades, the creditor landscape has become much more heterogeneous, particularly in LDCs. Most notably, the share of total external debt owed to Paris Club official bilateral creditors fell from 41 per cent in 1996 to 10 per cent in 2021, while the share owed to non-Paris Club official bilateral creditors rose from 7 per cent to 19 per cent over the same period. The share of private creditors in total external debt also nearly doubled, from 13 per cent to 24 per cent, due to bond issuances. Only the share of multilateral debt remained steady at a significant 47 per cent in 2021, up from 40 per cent in 1996 (see figure III.E.11).[9]

Financing patterns in 2021 and 2022 continued the trend towards greater heterogeneity in creditor composition. In 2021, the stock of LDC and other LICs' external public debt owed to bondholders grew from approximately $73 billion to $88 billion. The strong bond issuance reflected continued market access during 2021 prior to the tightening of global financial conditions observed in 2022. Credit from official bilateral lenders, including China, continued to grow in 2021, though at a slower pace. Support from multilaterals also increased, although it did not match the increase during 2020, which was driven by the COVID-19 pandemic response[10] (see figure III.E.12).

Faced with diminishing access to bond markets, many LDCs and LICs resorted to syndicated loans, which could be harder to restructure. Issuance of Eurobonds by developing countries fell sharply during the first 10 months of 2022 compared to the same period in 2021:[11] almost by half in emerging markets (from $145 billion to $74.6 billion), and 79 per cent in LDCs and other LICs (from $18.7 billion to $4 billion). The market virtually dried up for non-fuel-exporting LDCs and other LICs. Many countries shifted to syndicated loans instead. Such loans increased significantly across developing countries: Syndicated loans in emerging markets rose by 62 per cent to $39 billion, and borrowing by LDC and other LICs rose by 93 per cent to $12 billion. Syndicated loans usually have shorter maturities and are less transparent than sovereign bonds. They typically include significantly fewer creditors than sovereign bonds (i.e., a consortium of banks compared to many dispersed bondholders), but they also include fewer safeguards against holdouts in debt resolution compared to Eurobonds (although work is currently being carried out to introduce majority voting provisions into syndicate loan contracts, see section 4.6).

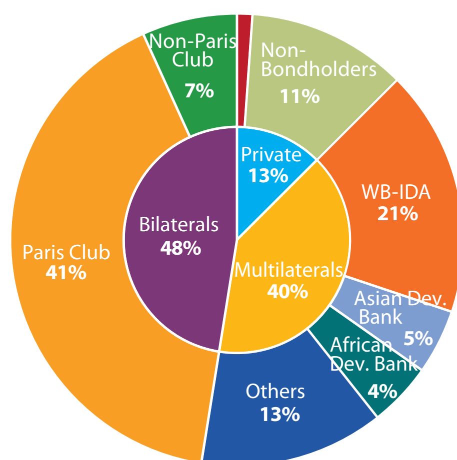
Developing countries continued to increase their local currency borrowing in 2022. Local currency debt financing for the median LDC and other LICs rose from about 11 per cent of GDP in 2010 to almost 21 per cent of GDP in 2021, at a comparable pace to foreign currency debt increases.[12]

Figure III.E.11

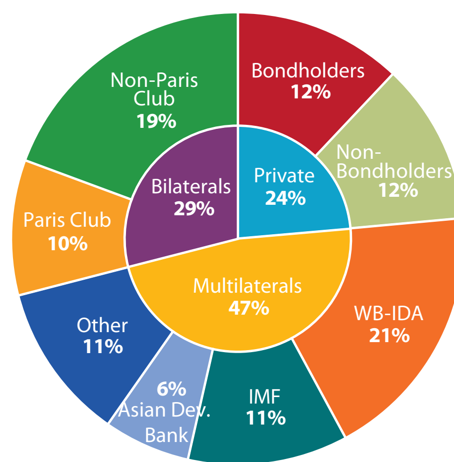
External creditor landscape in LDCs and other LICs

(in per cent of total PPG debt stock)

End-1996: Distribution of LDCs and other LICs Creditors

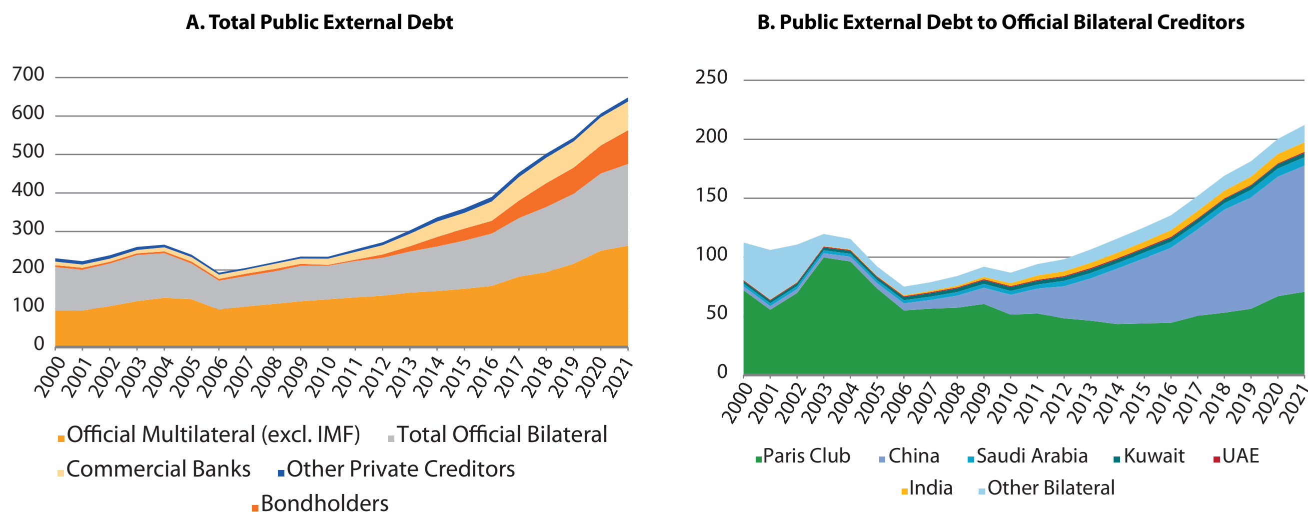


End-2021: Distribution of LDCs and other LICs Creditors



Sources: World Bank IDS and staff calculations.
Note: As of 6 December 2022.

Figure III.E.12
Evolving external public and publicly guaranteed debt composition in LDCs and LICs, 2000–2021
(Billions of United States dollars)



Sources: IMF staff calculations based on World Bank International Debt Statistics database.

Domestic bond markets can contribute to financial resilience and mitigate exchange rate risks at a time of tightening external conditions. At the same time, domestic sovereign borrowing can crowd out credit to the private sector and intensify the sovereign-bank nexus, with larger holdings of domestic sovereign debt at domestic banks. With an increasing number of countries at high risk of debt distress, this exacerbates risks of an adverse feedback loop that could undermine macro-financial stability in these countries.

3. Addressing the crisis

In the wake of multiple global shocks, many countries face difficult trade-offs between maintaining fiscal sustainability and investing in structural transformation, including productive investment, climate action and the SDGs. Domestic efforts must be complemented by international actions to mitigate systemic risks, support quick and fair debt restructurings when necessary and create fiscal space for sustainable development investments.

3.1. Domestic efforts

Effective public financial management, transparency, sound debt management and responsible borrowing help to reduce the likelihood of debt crises. Countries should pursue policies tailored to their risk of debt distress and to the nature of debt vulnerabilities. Countries at low risk of debt distress can maintain development spending while maintaining fiscal sustainability. Those at moderate risk of debt distress have relatively smaller fiscal space to deal with shocks, while countries with high risk of debt distress often face difficult trade-offs between financing sustainable development needs and fiscal consolidation. For example, forgoing investments in sustainable transformations not only undermines development progress but could heighten vulnerabilities—to disasters, other external shocks and ultimately debt sustainability—down the line. Where needed, countries may seek pre-emptive debt restructuring to free up fiscal space. Other pre-emptive, maturity-managing tools that countries can use include debt reprofiling operations, swaps or other liability management operations. Countries facing solvency or large and growing financing constraints may need to restructure their debt, including through the Common Framework where relevant (see below).

3.2 The international crisis response to date

To avoid debt crises and meet large financing needs, international and multilateral financing support remains critical. With external financing needs expected to increase over the coming years amid high global uncertainty, developing countries and vulnerable countries, such as many LDCs, other LICs and SIDS, will continue to need significant international support. Overall, multilateral creditors scaled up support during the acute phase of the COVID-19 pandemic, and disbursements remained slightly above pre-pandemic levels in 2021 (see chapter III.C.). Financial support from the IMF to LDCs and other LICs from 2020 to the end of November 2022 totalled US$32.3 billion. New instruments such as the Resilience and Sustainability Trust and the temporary Food Shock Window were operationalized (see chapter III.F. for more details). Resilience and Sustainability Trust support is conditional on long-term debt sustainability assessments, which take into account climate change and/or health expenditure impact, thus underlining the link between sustainable development and sustainable debt.

In response to the pandemic, the Group of 20 (G20) agreed on a Common Framework for Debt Treatment to support LDCs and other LICs with unsustainable debt in achieving orderly restructurings. Under the Common Framework, G20 and Paris Club creditors agreed to coordinate and cooperate on debt treatments for DSSI-eligible countries that need debt relief in the context of and consistent with the

parameters of an Upper Credit Tranche (UCT) quality IMF programme. The Common Framework requires that participating debtor countries seek debt treatment on terms at least as favourable from other official bilateral and private creditors.

Despite some recent progress, implementation has been slow, undermining confidence and limiting take-up. Since November 2020, four countries have requested treatment, with Ghana, in early 2023, joining Chad, Ethiopia and Zambia. Three countries that initially requested treatment have seen the formation of creditor committees responsible for coordinating a solution among the main actors. In November 2022, Chad reached the first Common Framework agreement with its official bilateral creditors (China, India, Saudi Arabia and France) and its private creditors on a debt restructuring consistent with the parameters of its Fund-supported programme. The agreement will provide Chad with debt service relief (in 2024) and protection against downside risks, including the risk of a drop in oil prices. Zambia's official creditor committee provided financing assurances that have allowed IMF Executive Board approval of an Extended Credit Facility-supported programme in August 2022, but to date there is no agreement among creditors on the debt treatment. The long delays and uncertainties surrounding these treatments, due to significant difficulties and delays in forming creditor committees, reaching agreement among creditors and implementing memorandums of understanding, have been a major challenge. This has undermined confidence in the process, with some debtor countries reluctant to request a debt treatment under the Common Framework. More work needs to be done to accelerate implementation of the Common Framework. Similar challenges in current restructurings outside the Common Framework (such as in regard to Sri Lanka or Suriname) as well as the elevated debt vulnerabilities and the uncertain global environment underscore the importance of improving mechanisms for sovereign debt restructuring (as discussed later in this chapter).

4. Debt transparency and debt management

4.1 Transparency

Against the background of rising public debt vulnerabilities, debt transparency remains a critical challenge. Transparency is important to ensure that governments and creditors take informed decisions and that debt sustainability assessments are based on a comprehensive coverage of the entire public sector debt burden. It is also critical for governments to be able to adequately monitor and mitigate debt-related fiscal risks.

Debt transparency is also essential for ensuring effective debt restructuring. Comprehensive and accurate debt data is necessary to estimate the debt relief needed to restore a borrower's debt sustainability. In addition, only the maximum level of disclosure can generate the trust that creditors need to achieve an equal burden sharing (see also below).

Achieving higher levels of transparency is a shared responsibility of borrowers and creditors. Borrowers should improve their legal frameworks and upgrade their debt recording and reporting systems, their capacity and their information-sharing procedures to facilitate timely and comprehensive reporting. Creditors, on the other hand, should promote transparent financing practices and provide detailed information about their lending portfolios, which can fill in any data gaps in regard to borrowers, and refrain from including confidentially agreements in their lending.

Some progress has been made on both fronts, but many challenges remain. The number of countries eligible to borrow from the International Development Association (IDA) that do not publish any debt data has declined from 40 per cent to 23 per cent in the last two years, in part due to the World Bank's new lending policy that promotes public debt data disclosure. Countries like Benin, Burkina Faso, Madagascar and Nepal have made impressive progress on debt disclosure. On the creditor side, following the G20 recommendations on responsible lending, some countries have started disclosing their lending portfolios. The United States, for instance, started uploading the details of every loan to sovereigns on its Treasury website. The OECD's Debt Transparency Initiative has established a data repository that allows private creditors to publicly disclose financing to developing countries on a voluntary basis. However, progress has been uneven, and some countries have backtracked on their debt-reporting standards either because of inadequate debt recording and reporting systems, weak legal and institutional frameworks or insufficient capacity.[13] Innovative information technology solutions could be explored to improve debt recording, validation and reporting. Such reforms could further improve the quality and the coverage of existing data collection exercises, including the World Bank's International Debt Statistics, which is the most comprehensive database for external debt.

4.2 Debt management and capacity support

Amid rising vulnerabilities and a more complex debt composition, effective public debt management is essential. Although fiscal policy is the main driver of public debt levels and public debt vulnerabilities, effective debt management is an important element of the toolkit of prudent macroeconomic policies. As the composition of public debt in developing countries has evolved from traditional multilateral and Paris Club borrowing towards non-Paris Club bilateral and commercial creditors, including through a large increase in the volume of domestically issued debt, the challenges facing debt managers have increased in tandem. But while many debt management offices are structured according to international practices of back, middle and front office, several countries face capacity challenges.[14]

Improvements in public debt management are thus critical and can contribute to mitigating debt vulnerabilities. Effective debt management is built on both technical capacity and a strong institutional framework, which requires a clear mandate, resources and political support. While capacity development provision covers all areas of public debt management, specific attention should be given by governments to the basic enabling conditions: governance, resources, information and policy (box III.E.1).

The development and implementation of debt management strategies as well as domestic market development continued to be the main priorities for debt managers. A survey of debt management offices in LDCs and other LICs identified the integration of cash and debt management, and the implementation of debt management strategy through an annual borrowing plan, as the most challenging areas. This is

consistent with other issues revealed by the survey, including challenges in issuing benchmark government bonds and engaging in liability management operations to manage the redemption profile. Moreover, respondents highlighted a strong desire to both deepen the investor base and support the development of the local debt market.

Insufficient resources and inadequate information flows undermine effective debt management. Debt managers noted that resourcing, both in terms of staffing and physical/information technology equipment, and institutional arrangements surrounding data recording, monitoring and receiving debt data (including from other parts of government), are among the main impediments to effective debt management. Resource constraints are more evident among fragile and conflict-affected States and small and developing States.

While public debt management capacity has improved, progress will remain gradual. Improvements can be seen in all aspects of debt management, from the implementation of public debt management strategies to developing local currency bond markets to improvements in debt management frameworks. That said, these achievements have come slowly and with frequent setbacks, e.g., in the context of the pandemic. In this regard, debt management capacity development should be undertaken and assessed over a time horizon of years, not months, and its success relies heavily on strong political support from the authorities.

Box III.E.1
Getting a GRIP on public debt management

Governance. Robust sovereign debt management starts with adequate legal and institutional arrangements and authority for debt management activities, consistent with sound practices. A comprehensive public debt management law that clearly delineates responsibilities and reporting requirements is essential for an effectively operating debt management office.

Resources. The debt management office needs to be provided with adequate human and physical capacity. The resources allocated to public debt management need to be commensurate with the tasks to be fulfilled by the debt office and the complexity of the current (and expected) debt portfolio.

Information. For a debt management office to fulfil its tasks effectively, it must have ongoing access to all relevant data and information. This may include data collected from multiple other parts of government, making it critical that the debt manager has the authority to request this information. Likewise, it must have the necessary capacity to record and manage debt data effectively. In particular, the debt management office needs to be provided with reliable and comprehensive budget and cash management forecasts from the Treasury at high frequency.

Policy. Debt policy should ensure consistency with the overall macroeconomic framework through appropriate coordination mechanisms with fiscal and monetary authorities. Moreover, debt management policy should be supported, and approved, by the highest levels of government and legislature.

Source: IMF.

The IMF delivers capacity development to LICs in all areas of public debt management. The bulk of capacity development has focused on the technical aspects of debt portfolio management and debt strategy formulation and implementation but has also covered capacity development, the institutional aspects of debt management, market development and debt recording. The IMF also provides technical assistance on legal frameworks, strengthening public debt management policy frameworks, tax issues related to public debt, and fiscal risks.

The World Bank has delivered technical assistance to low- and middle-income countries through a range of modalities. A significant amount of assistance is funded by the joint World Bank-IMF administered Debt Management Facility, but support is also provided increasingly in the context of World Bank operations. Debt Management Performance Assessments and customized Reform Plans aim at strengthening debt management institutions and functions. Debt Management Strategy and domestic market development assistance are aimed at helping countries to develop and implement cost-reducing and risk-minimizing debt strategies and develop the local currency bond market. A second trust fund, the Government Debt and Risk Management programme, provides customized advisory services for strengthening public debt and risk management capacity and institutions in select middle-income countries.

The United Nations Conference on Trade and Development (UNCTAD) also supports developing countries in strengthening capacity for effective debt management, focusing on the "downstream" areas of debt recording, monitoring and reporting. These efforts complement the technical assistance in "upstream" areas (including governance, debt sustainability analysis and debt strategy) provided by the IMF, World Bank, other international financial institutions and regional entities. UNCTAD's Debt Management and Financial Analysis System Programme provides support to 60 developing countries to ensure the availability of high-quality debt data needed for reporting and decision-making, the accuracy and completeness of public debt records, and comprehensive and timely reporting. It also aids with the implementation of debt reorganization initiatives.

5. Sustainable debt financing and the SDGs

Large financing needs for climate action and the SDGs have increased interest in financial instruments and analytical approaches that more closely link debt financing to sustainability considerations. Thematic bonds and debt-for-SDG swaps could provide the financing for sustainable development. Countries with additional borrowing space can issue thematic bonds, while debt-for-SDG swaps could be particularly beneficial for countries that have high levels of debt but do not face unsustainable debt situations. (Countries with unsustainable debt generally require a more comprehensive restructuring of debt; debt resolution is discussed in section 6.) Efforts are also under way to improve the understanding of the interplay between long-term investments in the SDGs and climate action, the closing of financing gaps for SDG investments, and long-term debt sustainability. The Secretary-General has put forward a comprehensive SDG Stimulus to scale up SDG and climate investments in support of these and other proposals, while addressing debt overhangs (see box III.E.2).

Box III.E.2
The SDG Stimulus

The SDG Stimulus put forward by the United Nations Secretary-General calls for urgent action to significantly scale up investments in the SDGs. It sets forth three areas for immediate action: (i) reducing the cost of debt for developing countries and addressing the rising risks of debt distress (ii) significantly scaling up affordable long-term financing for development, with multilateral development banks uniquely positioned to accelerate investment; and (iii) expanding contingency financing for countries in need to enhance their ability to respond to shocks.

In the area of debt, the SDG Stimulus calls for both immediate actions and longer-term reforms to the sovereign debt architecture.

The SDG Stimulus proposes: (i) an independent review and evaluation of past debt initiatives, with a view to assess the benefits, impact and shortcomings of the mechanisms, and propose improvements to the Common Framework and debt architecture to arrive at an improved multilateral debt relief initiative; (ii) the development of concrete tools to incentivize or enforce the participation of private creditors in debt restructurings to ensure comparability of treatment; (iii) the expansion of debt swaps where appropriate; and (iv) more systematic use of state-contingent debt instruments. The SDG Stimulus also calls for concrete steps towards a permanent mechanism to address sovereign debt distress.

Scaling up long-term finance must go hand in hand with debt management, as countries that are facing a solvency crisis are unable to increase their borrowings. Several strands of work are ongoing in the United Nations system with a view to better distinguishing solvency and liquidity crises and understanding the interplay between SDG financing needs and debt sustainability, while incorporating the impacts of such long-term investments in the SDGs and resilience (such as through the SDG Stimulus) on debt sustainability.

In his SDG Stimulus, the Secretary-General proposed a "solvency-focused" sustainability analysis, which could complement existing assessments, to help official creditors better distinguish between liquidity and solvency crises. The United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) is developing an approach that considers a country's SDG spending needs, structural development policies and national SDG financing strategies to illustrate trajectories of government debt under different scenarios of public policies, financing strategies and adverse shocks. Application on a pilot Asia-Pacific country (Mongolia) will be discussed in the forthcoming ESCAP Economic and Social Survey of Asia and the Pacific 2023. UNCTAD is developing a Sustainable Development Finance Assessment (SDFA) framework focused on the dual vulnerabilities of debt and climate in developing countries that do not currently have the fiscal space to mobilize sufficient resources to finance a green transition and the achievement of the SDGs. It shows that a range of policy options is available to developing countries to maintain or attain external financial and external and public debt sustainability while also achieving the SDGs. UNCTAD is also working on incorporating climate-related costs into the SDFA framework, and to adapt the tool to the needs of specific country groups (e.g., SIDS).

Source: UN/DESA based on: United Nations Secretary-General's SDG Stimulus to Deliver Agenda 2030. February 2023. ESCAP and UNCTAD.
Note: This box summarizes ongoing work in the United Nations, but the description of the proposals, workstreams and positions in this box have not been endorsed by members of the Inter-agency Task Force on Financing for Development.

5.1 Sovereign green or SDG-linked bonds

Thematic bonds could offer additional resources for sustainable investment. The issuance of sustainable, green or SDG-linked sovereign debt creates new opportunities for sovereign issuers although it comes with challenges. Issuances have expanded, providing greater financing choices for governments; however, this requires an increase in the monitoring and evaluation capacity of authorities.

There is a growing demand for investment in sustainable assets, and sovereign issuers are trying to take advantage of this surge in interest. Green bonds are more oversubscribed on average compared to conventional bonds, which could translate into lower borrowing costs for sovereigns. Some studies have found that green bonds issued by developing countries have benefited from a "greenium", which has been estimated at between 5 and 50 basis points,[15] though with more issuances that premium could disappear over time (see chapter III.B). Sovereign green bond issuances have increased significantly since Poland pioneered them in 2016, but they remain concentrated in developed countries, with European sovereigns accounting for the vast majority of issuances. Countries have also started issuing other types of sustainable bonds, such as social, sustainability and SDG bonds, which tie the use of proceeds to predefined investments, and sustainability-linked bonds. The latter relate debt-service payments to improvements in predefined environmental or social indicators, usually an increase in coupon payments if the promised targets are not being achieved (see chapter III.B).

The objectives for sustainable bond issuance should be well defined and integrated into a sovereign's debt management strategy and issuance plans. Commonly cited objectives for sustainable debt issuance include: (i) raising the issuer's profile in the global arena; (ii) leading the way in building markets for sustainable debt instruments inside a country; and (iii) accessing cost-effective funding and diversifying the investor base. The latter depends on the size of the "greenium" but should also take into account the pre- and post-issuance costs associated with sustainable bonds as well as costs associated with changes to government operations that are needed to issue such bonds credibly and successfully. Cost savings are also not of a scale that would make such bonds a suitable instrument for countries that already have high debt levels and that face high spreads in global markets. In countries that continue to have borrowing space, donors could consider supporting the issuance of sustainability-linked bonds, e.g., by providing support to the development of localized standards and guidelines, or by providing a grant element or a guarantee, essentially allowing them to provide a form of budget support for SDG-linked investments (see also chapter III.B).[16]

5.2 Debt for climate and SDG investment swaps

Debt-for-investment swaps can free up resources for SDG and climate investments and could be further scaled up. Debt for climate and SDG investment swaps, which have attracted growing interest, allow countries to redirect debt service payments towards investments in sustainable development and climate action. They are a useful instrument in countries that do not yet have unsustainable debt burdens but that have limited fiscal space for SDG investments; they are not a means to restore debt sustainability in countries with solvency challenges. There have been more than 100 debt-for-nature swap operations since the late 1980s in Latin America and, after a hiatus, they have regained popularity since 2015. Despite successful examples of such debt swaps—e.g., debt-for-food-security swaps by the World Food Programme that have mobilized $118 million for investments in nutrition, agriculture and school feeding in five African countries (see also *2022 Financing for Sustainable Development Report)*— uptake has remained limited, in part due to high transaction costs. A reference framework, e.g., with template term sheets and performance indicators, could help to standardize contracts. This could be complemented by official financial support, such as partial guarantees or collateralization (see also box III.E.3 on debt-for-climate swaps). Several regional and thematic debt swap initiatives are advancing on these issues, including, for example, the Climate/SDGs Debt Swap and Donor Nexus Initiative launched by the United Nations Economic and Social Commission for Western Asia (see also *2022 Financing for Sustainable Development Report*).

6. Debt crisis resolution

Amid rising debt vulnerabilities, the international debt architecture needs to be improved to allow for sufficiently deep and rapid restructurings. Progress towards an architecture that allows for more effective and fair restructurings is urgently needed, particularly in view of a more heterogenous creditor landscape, greater reliance on commercial finance, especially by LDCs and other LICs, and amid geopolitical uncertainty.[17] Early debt resolutions can help countries to avoid doing "too little too late"; if restructurings are delayed or too shallow, protracted debt crises can ensue, which can set back development progress by up to a decade.[18] The current architecture requires continued improvement to deliver on this objective.

This section discusses options and approaches to improve debt resolution frameworks in the areas of debt transparency and strengthened debt analytics, contractual approaches, domestic debt restructurings, and in the global architecture, for restructurings under the Common Framework and beyond.

6.1 Transparency and timely recognition of debt sustainability problems to support debt resolutions

Improving debt transparency supports cooperation in restructuring negotiations. Comprehensive and detailed information on public debt helps to ensure that all creditors can assess the severity of a country's debt burden and how the reduction in a country's debt service as part of a restructuring is shared among creditors. It allows sovereigns to manage investor relations effectively and build trust among involved actors. In that context, the IMF's role in setting programme parameters and performing debt sustainability analysis (together with the World Bank in the case of countries using the LIC DSF) provides a quantitative anchor to inform restructuring negotiations and consensus-building.

Timely recognition of debt sustainability problems is another priority to support debt restructurings when they are needed. As part of its mandate to foster economic and financial stability, the IMF plays a central role in the prevention and resolution of sovereign debt crises. The IMF (i) conducts surveillance of its members' policies for systemic stability, including through debt sustainability analyses prepared jointly

Box III.E.3
Debt for climate swaps

Climate and public debt risks are intertwined. Climate change negatively impacts productive capacity and revenue potential while increasing the likelihood of costly natural disasters, all of which undermine countries' fiscal and debt sustainability outlook. Public debt risks and vulnerabilities constrain policy space while making borrowing more expensive, limiting investment in climate mitigation and adaptation which exacerbate climate-related risks. Debt-for-climate swaps have emerged as a promising instrument for dealing simultaneously with climate and debt challenges.

While the case for debt-for-climate swaps is strong under some circumstances, other types of climate-conditional financial instruments are preferable at times. Generally, climate-conditional grants (or grant/loan combinations) are a more efficient way of supporting public investment in a recipient country. In addition, debt swaps are not the right tool to address unsustainable debt situations which require more comprehensive restructuring. Debt-for-climate swaps can be beneficial when they catalyse climate action and help to mobilize resources, including through private financing and/or for middle-income countries that are less likely to receive grants.

So far, debt-for-climate swaps have remained a niche instrument due to high transaction costs associated with project identification, structuring and monitoring. In addition, the pool of debt held by creditors that could potentially be interested in debt swaps has remained relatively small.

Policy measures could help to scale up debt-for-climate swaps, supporting climate instruments holistically while leveraging creditors' appetite for financing climate action. Such measures could include bundling related projects and policy reforms, linking debt-for-climate swaps to the budgetary use of funds, and developing standardized climate performance indicators, among other initiatives to reduce transaction and agency costs. The measures could be complemented by official financial support in the form of partial guarantees or Brady-bond style collateral. The recent Belize and Barbados swaps were supported by U.S. International Development Finance Corporation, and the Inter-American Development Bank and The Nature Conservancy, respectively.

Source: IMF, based on Chamon et al. 2022. "Debt-for-Climate Swaps: Analysis, Design, and Implementation", IMF WP/22/162.

with the World Bank Group for those countries using the LIC DSF; (ii) assists members in solving their balance-of-payments problems through IMF-supported programmes to restore the member to medium-term external viability; and (iii) in particular, in cases of unsustainable debt and a request for an IMF-supported programme, assists the member in designing a macroeconomic adjustment framework and setting the debt restructuring envelope that is necessary to put debt on a sustainable path while being consistent with the IMF-supported programme's parameters.[19]

The IMF continues to strengthen the analytical tools to assess debt sustainability. Most recently, it started the roll-out of the new Sovereign Risk and Debt Sustainability Framework for market access countries (SRDSF) that was approved by the Executive Board in January 2021; a guidance note has been prepared (of the LDCs and other LICs covered in this chapter, Angola, Fiji, Kosovo, Mongolia and Pakistan use the SRDSF).[20 21] The SRDSF will help to signal sovereign stress more accurately and better assess debt sustainability in market access countries, which is a prerequisite for most international financial institution lending. Compared to its predecessor, the SRDSF will provide more comprehensive and consistent debt coverage, enhanced debt transparency, clearer signals of sovereign debt risks based on improved analytical methods, and new risk assessments at three different horizons (short, medium and long term). After a pilot phase, the SRDSF roll-out started in September 2022 for all programme countries. All market access countries have been implementing the new framework since December 2022.

Public debt has been established as a cross-cutting theme in the World Bank Group to address vulnerabilities in a comprehensive and integrated manner. The main building blocks of the World Bank's engagement on public debt vulnerabilities have remained consistent over time, including: i) debt sustainability; ii) debt transparency; iii) debt management; and iv) implementing global debt initiatives. They have been implemented through operational engagements, analytical work and technical assistance. The Sustainable Development Finance Policy was instrumental in mainstreaming public debt issues into operations and country-specific work. Under the Sustainable Development Finance Policy's Debt Sustainability Enhancement Program, moderate, high-risk and in-debt-distress countries need to propose annual policy and performance actions to address main debt sustainability and transparency issues. Setting policy and performance actions has been critical to further integrating public debt issues into operations, technical assistance programmes and country dialogue systematically across International Development Association (IDA) countries.

6.2 Contractual approaches

CACs and bond exchanges have helped to speed up restructurings, but challenges remain. Restructurings of sovereign bonds take significantly less time than in the past. Participation rates are also higher than in the past, and more restructurings are pre-emptive (before payments are missed) than in previous periods. This largely reflects the increased use of enhanced CACs, which allow vote pooling across bond series, unlike the first generation of CACs which had to be voted on separately for each bond series. However, a number of outstanding bonds do not include enhanced CACs: While over 90 per cent of issuances of international sovereign bonds since 30 June 2020 have featured enhanced CACs, around 50 per cent of all outstanding bonds still do not include them.[22] Non-bonded debt also currently requires unanimous creditor consent to change payment terms. This increases the potential for a small number of holdout lenders to hinder a restructuring supported by the majority. This issue is becoming more acute, given the increasing heterogeneity of the creditors holding such instruments and the disproportionate impact it has on LDCs. Collateralized debt, which has become more prevalent among LDCs, also poses specific challenges during restructurings.[23]

Other contractual features, such as state-contingent clauses and majority voting provisions, could further strengthen borrower resilience and facilitate restructurings. Contingent features in debt instruments could help to deal with uncertainty and protect the sovereign from downside risk (see previous *Financing for Sustainable Development Reports*). So far, state-contingent debt instruments have mostly been used in restructurings where first-mover problems do not apply. Most state-contingent provisions have taken the form of hurricane or other disaster clauses or conditioned some payments on GDP or commodity prices. A restructuring of Grenada's debt applied a disaster clause, while the 2022 bond issuance by Barbados includes provisions for tropical storms, earthquakes, flooding and pandemics. To facilitate greater uptake of such clauses in issuances, the UK Treasury recently convened a Private Sector Working Group, including members of the Institute of International Finance, to develop a set of climate resilient debt clauses. Such clauses will automatically defer debt payments following the occurrence of certain climate events and natural disasters (such as droughts, earthquakes, flooding and extreme weather). They would free up liquidity to support emergency relief in the aftermath of such events, promoting resilience. Public actors are also well placed to more systematically include such clauses in their lending, and there is some momentum to expand on existing experiences by bilateral (France) and multilateral (Inter-American Development Bank) lenders. For example, the United Kingdom's export credit agency (UKEF) has announced that it will include climate resilient debt clauses in its lending. Public lenders and development banks should discuss including such clauses in their lending where appropriate.

Majority voting provisions in sovereign loans would allow for easier amendment of payment terms. Syndicated loans currently require unanimous creditor consent to change payment terms, which means that one or a small number of holdouts or non-responsive lenders can derail a restructuring supported by a majority of creditors. This increases complications for restructuring such debt and undermines inter-creditor equity. Official and private creditors have cooperated to develop model majority voting provisions for payment terms in syndicated loans and encourage their widespread adoption. The Private Sector Working Group has developed a set of specimen majority voting provisions for sovereign loan agreements, which allow a qualified majority of lenders to amend payment terms in a sovereign loan agreement. The model clauses would offer other complementary provisions, such as clauses to promote efficient and smooth canvassing and communication of voting preferences.

"Most favoured creditor" clauses have been proposed by some legal scholars as a tool to help overcome protracted coordination challenges in restructurings. With creditor coordination in restructurings becoming even more challenging in a more complex debt landscape, there have also been proposals to overcome related impasses in restructuring negotiations through contractual approaches using so-called "most favoured creditor" clauses.[24] Such clauses could in theory be useful to

break the "first mover" prevalent in current sovereign debt restructurings by ensuring comparability of treatment both within and across creditor classes and thus potentially unlock financing necessary to restore debt sustainability. However, they may also present issues, including with respect to enforceability and monitorability.

6.3 Domestic debt restructurings

Rising debt vulnerabilities and the growing share of domestic debt may lead to more domestic debt restructurings. With a high number of countries at risk of debt distress, domestic restructurings may be needed more frequently to restore sustainability. While they avoid some of the costs of external debt restructuring and can be easier to execute, they also pose unique challenges.[25] Sovereigns have considerable flexibility in restructuring domestic debt, including through changes in domestic laws. At the same time, domestic debt is disproportionally held by domestic banks and pension funds—sovereign stress can thus easily spread to other parts of the economy, with potentially serious adverse effects on the economy.

Sound design can help to achieve the required debt reduction while minimizing risks to the domestic financial system and broader economy. Financial stability considerations play an important role in a domestic restructuring—stress tests prior to a restructuring can provide critical information to inform the design of, and need for, policy support. Depending on the severity of spillovers to the financial system, the policy response may need to include liquidity support, regulatory measures, recapitalization and the establishment of a financial sector stability fund. In 2021, the IMF introduced a policy toolkit for analysing and restructuring domestic debt, including a comprehensive dataset of domestic debt restructuring events. It includes a decision framework that allows authorities to adopt a "net benefits" approach to domestic debt restructuring—whereby the benefits of a reduced sovereign debt burden are weighed against the future fiscal and broader economic costs.[26]

6.4 The global architecture

There is a general recognition among the international community that the Common Framework should be more quickly and efficiently implemented.[27] The Common Framework marks a step forward in the global architecture for sovereign debt restructuring, bringing together the key official bilateral creditors, including those that are not members of the Paris Club. However, limited and slow progress for countries that have requested debt treatment have undermined confidence and uptake; in response, several areas for strengthening the Common Framework have been put forward:[28]

- **Greater clarity on the steps and timelines of the process.** Creditors' committees should ideally be formed within four to eight weeks after the request from the debtor country and provide financing assurances within three months of reaching a staff-level agreement with IMF staff;
- **Debt service suspension for the duration of the negotiation.** Such a standstill would be provided by official creditors, upon request, to countries requesting it once they have reached a staff-level agreement with the IMF. The suspension would be maintained until completion of the debt treatment to alleviate liquidity constraints, avoid the accumulation of arrears and incentivize quicker resolutions;
- **Clarification on how comparability of treatment will be enforced.** Official bilateral creditors should provide more clarity on how comparability of treatment will be determined and enforced, beyond the parameters already included in the Common Framework;
- **Expansion of the coordinated approach.** Expanding the coordinated approach to non-DSSI- eligible countries in need of debt treatment (e.g., Sri Lanka) would facilitate more timely and orderly resolutions of these cases.

Legislative actions can in some cases be used to complement the contractual approach. For example, national legislation in key jurisdictions could limit the ability of holdout creditors to recover higher amounts than creditors participating in a Common Framework restructuring or seize assets of a distressed government, akin to similar legislation in the context of the Heavily Indebted Poor Countries initiative. The duty for all creditors to cooperate in a sovereign restructuring in good faith is already embedded in legal frameworks and principles for responsible borrowing and lending. It Some stakeholders have proposed that this be codified in legislation, which would strengthen the ability of judges to curb opportunistic behaviour and reduce incentives for holdouts accordingly.[29] Broader, albeit targeted, domestic or international law options could be necessary to incentivize private sector restructurings (e.g., limits on creditors' asset recovery), but these would be expected to be used only as a last resort and on a time-bound basis to address a systemic crisis.[30] Depending on their design, legislative solutions can raise important legal and policy issues that need to be carefully tailored to accomplish their objectives.

Endnotes

1 On country classifications: This chapter uses UN country classifications for "developing countries", "least developed countries (LDCs)" and "small island developing States (SIDS)"; the term "LDCs and other LICs" denotes the 73 DSSI eligible countries plus Eritrea, Sudan and Zimbabwe; to make use of relevant analysis from Task Force members, in some cases the chapter also uses the categorization of "advanced economies" and "emerging markets" – for a list of countries see for example IMF, World Economic Outlook, October 2022, statistical appendix.

2 IMF World Economic Outlook database, October 2022.

3 International Monetary Fund, "Macroeconomic Developments and Prospects in Low-Income Countries – 2022."

4 ND GAIN index, Notre Dame University. The top 50 most climate vulnerable countries are ranked between 132 and 182 on the ND GAIN list: https://gain.nd.edu/our-work/country-index/rankings/

5 This exercise is distinct from the debt sustainability assessment for market access countries (SRDSF/MAC DSA) and the IMF-World Bank debt sustainability framework for lower income countries (LIC DSF). For more on the machine learning methodology please see "How to Assess Country Risk: The Vulnerability Exercise Approach Using Machine Learning" IMF (2021)

6 As January 10, 2023. For more details see Jensen (2022).

7 Wu and Xia, "Measuring the Macroeconomic Impact of Monetary Policy at the Zero Lower Bound."

8 International Monetary Fund, "World Economic Outlook, October 2022."

9 International Monetary Fund, "Macroeconomic Developments and Prospects in Low-Income Countries – 2022."

10 LICs received SDR 14.7 billion, out of SDR 456.5 billion, in the August 2021 new general allocation of Special Drawing Rights (SDR). The impact of the SDR allocations on debt sustainability will depend on how the SDRs are used and the effects on the member's macroeconomic framework.

11 Source: Bond Radar and Dealogic.

12 Source: IMF WEO October 2022 database, IMF staff estimates.

13 See World Bank, Debt Transparency: Debt Reporting Heat Map, available from: Debt Transparency: Debt Reporting Heat Map (worldbank.org)

14 International Monetary Fund and World Bank Group, "Public Sector Debt Definitions and Reporting in Low-Income Developing Countries."

15 Ando et al., "Sovereign Climate Debt Instruments: An Overview of the Green and Catastrophe Bond Markets."

16 OECD, "Green, Social, Sustainability and Sustainability-Linked Bonds in Developing Countries: How Can Donors Support Public Sector Issuances?"

17 International Monetary Fund, "Macroeconomic Developments and Prospects in Low-Income Countries – 2022."

18 Reinhart and Rogoff, "Recovery from Financial Crises: Evidence from 100 Episodes."

19 International Monetary Fund, "Making Debt Work For Development and Macroeconomic Stability."

20 International Monetary Fund, "Staff Guidance Note on the Sovereign Risk and Debt Sustainability Framework for Market Access Countries."

21 International Monetary Fund, "Review of Debt Sustainability Framework For Market Access Countries."

22 The data also suggests that pari passu clauses are generally incorporated as a package with the enhanced CACs.

23 International Monetary Fund, "The International Architecture for Resolving Sovereign Debt Involving Private-Sector Creditors – Recent Developments, Challenges, and Reform Options."

24 Gulati and Buchheit, "Enforcing Comparable Treatment in Sovereign Debt Workouts."

25 International Monetary Fund, "Issues in Restructuring of Sovereign Domestic Debt."

26 International Monetary Fund.

27 Seventy-three countries are eligible for the G20 Common Framework, for which an IMF-support program is a precondition. Three countries have requested participation so far (Chad, Ethiopia and Zambia).

28 International Monetary Fund, "Making Debt Work For Development and Macroeconomic Stability."

29 Buchheit and Gulati, "The Duty of Creditors to Cooperate in Sovereign Debt Workouts."

30 Talero, "Potential Statutory Options to Encourage Private Sector Creditor Participation in the Common Framework."