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DP16775

## **What Has Been the Impact of COVID-19 on Debt? Turning a Wave into a Tsunami**

M. Ayhan Kose, Peter Nagle, Franziska Ohnsorge  
and Naotaka Sugawara

**INTERNATIONAL MACROECONOMICS AND FINANCE**

**CEPR**

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Discussion Paper DP16775  
Published 04 December 2021  
Submitted 02 December 2021

Centre for Economic Policy Research  
33 Great Sutton Street, London EC1V 0DX, UK  
Tel: +44 (0)20 7183 8801  
[www.cepr.org](http://www.cepr.org)

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## Abstract

This paper presents a comprehensive analysis of the impact of COVID-19 on debt, puts recent debt developments and prospects in historical context, and analyzes new policy challenges associated with debt resolution. The paper reports three main results. First, even before the pandemic, a rapid buildup of debt in emerging market and developing economies—dubbed the “fourth wave” of debt—had been underway. Because of the sharp increase in debt during the pandemic-induced global recession of 2020, the fourth wave of debt has turned into a tsunami and become even more dangerous. Second, five years after past global recessions, global government debt continued to increase. In light of this historical record, and given large financing gaps and significant investment needs in many countries, debt levels will likely continue to rise in the near future. Third, debt resolution has become more complicated because of a highly fragmented creditor base, a lack of transparency in debt reporting, and a legacy stock of government debt without collective action clauses. National policy makers and the global community need to act rapidly and forcefully ensure that the fourth wave does not end with a string of debt crises in emerging market and developing economies as earlier debt waves did.

JEL Classification: E62, H62, H63

Keywords: fiscal balance, Government Debt, private debt, Global recessions, Resolution

M. Ayhan Kose - [akose@worldbank.org](mailto:akose@worldbank.org)

*World Bank, Brookings Institution, Center for Applied Macroeconomic Analysis and CEPR*

Peter Nagle - [pnagle@worldbank.org](mailto:pnagle@worldbank.org)

*The World Bank*

Franziska Ohnsorge - [fohnsorge@worldbank.org](mailto:fohnsorge@worldbank.org)

*The World Bank, Center for Applied Macroeconomic Analysis and CEPR*

Naotaka Sugawara - [nsugawara@worldbank.org](mailto:nsugawara@worldbank.org)

*World Bank*

## Acknowledgements

We thank Carlos Arteta, Erik Feyen, Elena Ianchovichina, Indermit Gill, Sergiy Kasyanenko, Aaditya Mattoo, Franz Ulrich Ruch, Dana Vorisek, and many colleagues at the World Bank Group for helpful suggestions and comments on our background work for this paper. Shijie Shi provided excellent research assistance. The findings, interpretations, and conclusions expressed in this paper are those of the authors. They do not necessarily represent the views of the institutions they are affiliated with.

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M. Ayhan Kose, Peter Nagle, Franziska Ohnsorge, and Naotaka Sugawara\*

*November 2021*

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\* Kose: World Bank, Prospects Group; Brookings Institution; CEPR; and CAMA; akose@worldbank.org. Nagle: World Bank, Prospects Group; pnagle@worldbank.org; Ohnsorge: World Bank, Prospects Group; and CAMA; fohnsorge@worldbank.org. Sugawara: World Bank, Prospects Group; nsugawara@worldbank.org. We thank Carlos Arteta, Erik Feyen, Elena Ianchovichina, Indermit Gill, Sergiy Kasyanenko, Aaditya Mattoo, Franz Ulrich Ruch, Dana Vorisek, and many colleagues at the World Bank Group for helpful suggestions and comments on our background work for this paper. Shijie Shi provided excellent research assistance. The findings, interpretations, and conclusions expressed in this paper are those of the authors. They do not necessarily represent the views of the institutions they are affiliated with.

## I. Introduction

The COVID-19 pandemic and associated global recession in 2020 have caused a surge in global debt levels, both of government debt and private debt. The jump in government debt was broad-based, with a large increase in many emerging market and developing economies (EMDEs). Private sector debt also rose sharply as firms dealt with the fallout of the global recession. Even before the pandemic, however, debt in EMDEs had risen to record levels. Starting in 2010, a new wave of global debt accumulation—dubbed the “fourth wave” of debt—had been underway, with the largest, fastest, and most broad-based increase in debt in EMDEs in five decades.

Against this background, this paper addresses three major questions. First, what has been the impact of the pandemic on the fourth wave of debt? Second, how did global debt evolve after previous global recessions? Finally, why is it more difficult to resolve debt problems now?

Our analysis yields the following conclusions. First, the pandemic has turned the fourth wave into a tsunami by further exacerbating debt-related risks in EMDEs. The debt buildup during the pandemic-induced global recession of 2020 was the largest in several decades. This was true for all types of debt—total, government, and private debt; and advanced-economy and EMDE debt; external and domestic debt. In 2020, *total* global debt reached 263 percent of GDP and global *government* debt 99 percent of GDP, their highest levels in half a century.

In addition, the pandemic has magnified risks associated with debt as some policy interventions, while necessary during the pandemic, may end up weakening fiscal, monetary and financial policy frameworks. For example, in the face of extraordinary fiscal support measures, fiscal rules risk being eroded in some EMDEs. Many governments have also heavily encouraged credit extension and eased regulatory policies. While these prevented a credit crunch during the 2020 recession, the liabilities of the private sector could eventually migrate onto government balance sheets, either in a financial crisis or, indirectly, in a protracted period of low growth. Unprecedented monetary policy accommodation was also necessary to calm financial markets and reduce borrowing costs. However, once global interest rates begin to rise from historically low levels, they may reveal solvency problems. The sharp increase in debt in a short period and looser fiscal controls heighten the risk that not all of it was used for productive purposes.

Second, five years after every global recession prior to the 2020 episode, global government debt continued to climb, rising by 4-15 percentage points of GDP. In general, advanced economies saw significant increases in government debt after global recessions, while the picture was mixed for EMDEs. Furthermore, forecasts for government debt historically tended to under-predict actual debt levels, with errors particularly large during recessions. With the help of post-pandemic growth and withdrawal of fiscal support, some may hope that global government debt will stabilize in the near future. If this hope materializes, however, it would be historically unusual compared with previous episodes, especially given large financing gaps and significant investment needs in many countries.

Third, for those countries which get into debt distress, achieving a successful resolution may be more difficult than it was in the past. Specifically, future debt restructurings will likely be more complicated because of a more fragmented creditor base than in the past and a lack of transparency in debt reporting. Furthermore, a legacy stock of government debt without collective action clauses limits their usefulness in alleviating the issues posed by a more fragmented creditor base. In the past, delays in resolving high debt were associated with weaker output and investment growth, raising the prospect that even slower debt resolution could lead to a lost decade of growth in some countries already facing significant debt problems.

The challenges of resolving record-high debt point to the urgency to act on the parts of both national policy makers and the global community. National policy makers will need to improve policy frameworks to make debt sustainable, as well as to consider the best approaches to resolving

debt if it becomes unsustainable. The global community needs to act rapidly and forcefully to make sure the fourth wave does not end with a string of debt crises in EMDEs, as earlier waves did.

The paper makes three contributions to the literature. First, it presents the first comprehensive assessment of the impact of the pandemic on debt. Some studies have discussed the recent debt buildup in the context of the implications of the interest rate-growth differential for advanced economies (Reis 2021); others have discussed the debt buildup in EMDEs in the context of the need for debt resolution (Bolton et al. 2021; G30 2021; Friedrich-Ebert-Stiftung and Consensus Building Institute 2021); yet others have explored the consequences of the pandemic for corporate debt (Aldasoro, Hardy, and Tarashev 2021; Brunnermeier and Krishnamurthy 2020). IMF (2021a, 2021b) analyzes the government debt buildup caused by the pandemic and its implications for fiscal policies. None of these present a comprehensive assessment of the evolution of different types of debt over time or document the global, group-specific, and regional dimensions of the recent debt buildup.

Second, the paper provides the first analysis of the evolution of debt in the years following global recessions. Typically, debt has risen after recessions. As such, it is critical to avoid complacency among policy makers who may have optimistic views about debt prospects in the near-term after the 2020 global recession. Some policy makers may be tempted to rely on growth alone to lower debt while some others hope that low interest rates would help keep debt service manageable. The study also amplifies the findings of previous work that points to overoptimistic government debt forecasts at the country level (Estefania Flores et al. 2021a).

Third, the paper explains why it is difficult to resolve debt by presenting a detailed discussion of the new challenges posed by record debt levels and changes to the structure of debt markets. A few earlier studies have flagged some of these issues before the pandemic (Essl et al. 2019; Gelpern 2016; Kose et al. 2020, 2021); this paper provides a structured analysis and documents how the pandemic has amplified them. This is important as it helps policy makers to prepare for the potential need to resolve debt by considering these challenges.

The rest of the paper is structured as follows. Section II describes the extent of debt accumulation prior to the pandemic and how the fourth wave of debt differentiated itself from the previous three waves. Sections III and IV explain why the fourth wave has turned into a tsunami because of the sharp increase in debt during the pandemic and a few specific factors that have made the ongoing debt wave more dangerous. Section V discusses some new challenges associated with the current debt wave that have made lasting debt relief more difficult going forward. Section VI analyzes the evolution of debt following the previous global recessions and discusses debt prospects in the near-term after the 2020 global recession. Section VII focuses on the consequences of policy inaction in response to rapid debt accumulation episodes. Section VIII concludes with a summary of policy lessons.

## **II. Prior to the Pandemic: The Fourth Wave of Debt Accumulation**

Prior to the COVID-19 pandemic, starting in 2010, a fourth wave of global debt accumulation was underway, with the largest, fastest, and most broad-based increase in debt in EMDEs in five decades (Figure 1). Global debt had risen to a record high of 233 percent of GDP in 2019 and government debt to a record 84 percent of GDP (Figure 2; Table 1). In EMDEs, total debt had reached 180 percent of GDP, led by private debt which rose to 126 percent of GDP. This increase was mainly, but not solely, driven by China: in four-fifths of EMDEs, debt was higher in 2019 than in 2010 and, in two-fifths of them, debt was 20 percentage points of GDP higher.

In low-income countries (LICs), total debt increased by 20 percentage points of GDP over 2010-19, to 72 percent of GDP at end-2019. Total external debt rose by 12 percentage points of GDP

over 2010-19, to 36 percent of GDP in 2019. In 2019, more than 85 percent of public external debt were owed to official creditors, including multilateral institutions.

By EMDE region, the fastest increase in debt was in East Asia and Pacific (EAP), where total debt rose by 78 percentage points of GDP to 238 percent of GDP between 2010-19, mainly driven by China (Table 2).<sup>1</sup> Even excluding China, where the debt buildup was most pronounced, total debt in the region increased by 21 percentage points of GDP to 114 percent of GDP over 2010-19. Across EMDE regions, the largest increase in government debt was in Sub-Saharan Africa (SSA) where it rose by 25 percentage points of GDP to 53 percent of GDP, while Latin America and the Caribbean (LAC) and Middle East and North Africa (MNA) also saw increases in government debt of more than 20 percentage points of GDP. This increase primarily occurred after 2014, and was due, in large part, to the sharp decline in commodity prices during this period, which led to significant fiscal deficits in commodity-exporting countries, particularly in these three regions.

In contrast, government debt in Europe and Central Asia (ECA) rose the least, increasing by just two percentage points of GDP to 29 percent of GDP during 2010-19. The only region to see a decrease in total debt was South Asia (SAR) where it declined by 5 percentage points of GDP, driven by a decline in private sector debt. SSA also saw a small decrease in private sector debt, although this was offset by a much larger increase in government debt.

While the buildup of total debt in EMDEs was mostly with domestic creditors, this was heavily driven by China, whose total debt buildup was almost all domestic. In contrast, in EMDEs excluding China, external and domestic creditors contributed more equally and one-third of total debt is to external creditors. External debt in EMDEs excluding China rose by 9 percentage points of GDP between 2010 and 2019, to 38 percent of GDP at end-2019, and domestic debt also rose by 15 percentage points of GDP, to 82 percent of GDP at end-2019.<sup>2</sup>

The fourth wave was preceded by three previous debt waves since the 1970s, all of which ended with widespread financial crises. The first global wave of debt spanned the 1970s and 1980s, with borrowing by governments in Latin America and in LICs, particularly in Sub-Saharan Africa. This wave saw a series of financial crises in the early 1980s. The second wave ran from 1990 until the early 2000s as banks and corporations in EAP and governments in ECA borrowed heavily and ended with a series of crises in these regions in 1997-2001. The third wave was a runup in private sector borrowing in ECA (as well as in advanced economies), which ended when the global financial crisis disrupted bank financing in 2007-09 and tipped many economies into sharp recessions. The fourth wave of debt was the largest, fastest, and most broad-based yet among EMDEs (Kose et al. 2021; Figure 3).

The fourth wave of debt shared several features with the previous three waves: a low interest rate environment and the emergence of new financial instruments or financial market actors. Of particular concern was that the fourth wave had seen a protracted period of weak investment and slowing growth despite surging debt. In other respects, the fourth wave differed from its predecessors: policy frameworks were stronger in some EMDEs and debt in advanced economies was broadly flat. Yet, even before the pandemic, there was no room for complacency. Previous crises had frequently been triggered by exogenous shocks that resulted in a sharp increase in

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<sup>1</sup> This study follows the World Bank classification of six EMDE regions: East Asia and Pacific (EAP), Europe and Central Asia (ECA), Latin America and the Caribbean (LAC), Middle East and North Africa (MNA), South Asia (SAR), and Sub-Saharan Africa (SSA).

<sup>2</sup> Domestic debt is estimated as the residual after the reduction from total debt (as reported in Kose et al. 2021) of external debt as reported by the World Bank.

investor risk aversion and sudden stops of capital flows. Global growth slowdowns were often catalysts for crises.

### III. Impact of the Pandemic on Debt: The Fourth Wave Turning into a Tsunami

The pandemic has turned the fourth wave into a tsunami by increasing its risky features. The sheer magnitude and speed of the debt buildup heightens the risks associated with the ongoing debt accumulation.

#### *Sharp increase in debt*

In 2020, *total* global debt rose by 30 percentage points of GDP, to 263 percent of GDP—the largest single-year increase since at least 1970 (Figure 1; Table 1). This increase was broad-based, evident across government and private debt, across domestic and external debt, and across the majority of countries. In EMDEs, total debt reached 205 percent of GDP. The increase was mainly, but not solely, driven by China: in about nine-tenths of EMDEs, debt was higher in 2020 than in 2010 and, in one-half of EMDEs, more than 20 percentage points of GDP higher. In advanced economies, total debt exceeded 300 percent of GDP in 2020.

In 2020, as output plummeted in the worst global recession since World War II and governments enacted unprecedented fiscal stimulus, global *government* debt registered its fastest single-year jump since 1970 to its highest level in half a century, 99 percent of GDP.<sup>3</sup> The increase was near-universal. Government debt rose in almost nine-tenths of countries and at its fastest pace in half a century in around one-quarter of countries. It reached 123 percent of GDP in advanced economies, the highest since 1970, and 63 percent of GDP in EMDEs, the highest since 1987.

*Private* debt also rose at a record pace and to an unprecedented high in 2020 as output collapsed, lockdowns closed businesses, and fiscal, monetary, and regulatory policy measures supported credit extension. Globally, it jumped by 15 percentage points of GDP to 165 percent of GDP in 2020, its highest level since records started in 1970. Similar to government debt, the jump in private debt was broad-based, affecting more than four-fifths of countries with available data. In advanced economies, the 14 percentage points increase, to 179 percent of GDP, was the largest since 1970, more than reversing the decline during the preceding decade. In EMDEs, private debt rose by 17 percentage points of GDP, the largest single-year increase on record, to a record high of 142 percent of GDP.

About half of *LICs* entered the pandemic either in or near debt distress, defined as the accumulation of arrears, restructuring, large IMF program disbursements, or default (World Bank 2019; IMF and World Bank 2017). In LICs, government debt rose by 9 percentage points, to 68 percent of GDP, in 2020. Private debt remained broadly stable at around 13 percent of GDP in these economies. External debt reached 39 percent of GDP, its highest level since 2005, when debt relief efforts for these countries were accelerated with the approval of the *Multilateral Debt Relief Initiative* (MDRI).

Among *EMDE regions*, the largest increase in total debt in 2020 was in EAP where it rose by 26 percentage points of GDP, followed by MNA where it rose by 24 percentage points of GDP (Table 2). For both regions around one-third of the increase was due to government debt and two-thirds to private debt. The largest increase in government debt was in SAR where it rose by 13 percentage points of GDP to 84 percent of GDP, while SSA saw the smallest increase of 8

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<sup>3</sup> The increase in government debt in 2020 reflected both output collapses and sharp deteriorations in primary fiscal balances. On average, global primary fiscal deficits widened by 7 percentage points of GDP, to 9 percent of GDP—the steepest single-year deterioration in the past four decades. They reflected severe revenue losses amid a deep recession as well as large-scale fiscal stimulus packages. By comparison, the contribution of the output collapse to the government debt buildup in 2020 was less than half of that of primary fiscal deficits, in advanced economies and EMDEs alike.



percentage points of GDP. Countries in SSA entered the pandemic with less fiscal space and were less able to access international financial markets than other regions (Gill and Karakulah 2019). SSA also saw no increase in private sector debt, in contrast to the other regions.

The bulk of the increase in total debt in 2020—globally, in advanced economies, and in EMDEs—was accounted for by rising *domestic* debt (Figure 4). In advanced economies, rising domestic debt accounted for about one-half of the increase in total debt in 2020; in EMDEs, for nine-tenths; and globally for three-fifths (for these economies, much of the buildup in domestic debt is accounted for by corporate borrowing in China). In EMDEs, total debt remains predominantly domestic (85 percent of total debt), especially for private debt, which is nine-tenths domestic. In advanced economies, less than one-half of total debt (and less than one-third of private debt) is domestic.

Global *external* debt rose by 12 percentage points of GDP in 2020, to 114 percent of GDP in 2020, the second highest level since 1990. As a result, the stock of external debt at the global level now exceeds its 2010 level (106 percent of GDP), after a decade of decline. The jump in 2020 mainly reflected a rise in advanced economies by 18 percentage points of GDP, to a record high (since 1990) of 170 percent of GDP in 2020. As a result, external debt in advanced economies is now more than 20 percentage points of GDP higher than in 2010. In EMDEs, external debt rose by 3 percentage points of GDP in 2020, to 31 percent of GDP in 2020. While this is still below levels in the late 1990s, it is 7 percentage points of GDP higher than in 2010.

In LAC, large fiscal deficits were partly financed through the issuance of domestic debt. However, countries also took advantage of the leniency of international capital markets to issue more government bonds in 2020 than they had in 2019, with lower average interest rates (World Bank 2021a). In MNA, one-third of countries borrowed externally, and favorable financing conditions allowed countries to increase maturities of investment-grade bonds, with external debt accounting for around one-fifth of total financing (IMF 2021c). However, a few countries with limited external financing resorted to central bank financing. In SSA, governments are more heavily reliant on financing support from the international community, as opposed to domestic or international markets, relative to other EMDE regions (World Bank 2020a).

### ***Fragile composition of debt***

The composition of creditors has become more complex over time (Figure 5). In advanced economies, the ownership of sovereign debt holdings has changed materially over the past two decades in a shift towards the official sector due to central bank asset purchases (Arslanalp and Tsuda 2014a). During 2010-20, the share of debt held by domestic central banks rose by 14 percentage points, to 18 percent of sovereign debt, on average. On average, the share of debt held by the foreign official sector increased by 12 percentage points from 2004, to 20 percent of sovereign debt at end-2020. This increase in official sector debt holdings was accompanied by a decline in the share of private—bank and nonbank—debt holdings.

While the composition of government debt in EMDEs has not materially worsened during the pandemic, it remains fragile and tilted toward debt held by nonresidents, issued on non-concessional terms, or at shorter maturity (Kose, Ohnsorge, and Sugawara 2021). EMDE debt held by nonresidents or denominated in foreign currency accounted for 42 and 49 percent, respectively, of EMDE government debt in 2020, on median, making them vulnerable to a deterioration in global investor sentiment and exchange rate risk (Arslanalp and Tsuda 2014b; Kose et al. 2017).

The composition of government debt also varies by EMDE region. In SSA, debt has shifted toward a riskier profile over the past decade: the share of debt denominated in foreign currency and held by nonresidents have both increased since the early 2010s and exceeded 50 percent in the median SSA country in 2020. In contrast, other regions have not seen a similar increase in the riskiness

of debt. In the median country in LAC, the share of government debt denominated in foreign currency has declined since the early 2010s to around 42 percent of government debt in 2020, while debt held by nonresidents has hovered at around 50 percent of debt over 2010-20. In the median country in ECA, the share of government debt denominated in foreign currency increased to 57 percent in 2020, but debt held by nonresidents has declined to around 40 percent since the early 2010s.

The composition of LIC debt has become increasingly non-concessional over the past decade as LICs have accessed global capital markets and borrowed from non-Paris Club creditors (Figure 5; World Bank 2019). In many EMDEs, the largest part of official bilateral debt is now to non-Paris-Club creditors while the share of bilateral debt to Paris Club creditors and multilateral creditors has declined (Bredenkamp et al. 2019). China, in particular, is now the largest official creditor to some of these countries (Horn, Reinhart, and Trebesch 2020).

EMDE corporate sectors' vulnerability to financial market disruptions has also increased over time. While still accounting for one-third of corporate debt, foreign currency-denominated corporate debt in the 17 EMDEs with available data amounted to 16 percent of GDP by 2020—3 percentage points of GDP more than in 2010—and, in one-quarter of these EMDEs, to more than 20 percent of GDP. A greater share of corporate debt than before the global financial crisis was owed by firms with riskier financial profiles, as supportive financing conditions have allowed firms to issue more debt despite weaker credit quality (Beltran and Collins 2018; Feyen et al. 2017). The rise in lower-quality corporate credit has amplified debt concerns. However, the largest increase in risky debt has been among sectors least affected by the pandemic (utilities and telecommunications), and the share of such debt issued by the sector hardest hit by the pandemic (consumer services) is small (OECD 2021a).

#### **IV. Why Is the Fourth Wave of Debt More Dangerous Now?**

For now, unprecedented monetary and fiscal policy accommodation has calmed financial markets, reduced borrowing costs, and supported credit extension. However, amid the economic disruption caused by the pandemic, historically low global interest rates may conceal solvency problems that will surface in the next episode of financial stress or capital outflows. Some policy interventions during the pandemic, while necessary, may erode fiscal, monetary and financial policy frameworks in EMDEs. In addition, the sharp increase in debt in a short period heightens the risk that not all of it has been used for productive purposes.

##### **IV.1. Low global interest rates**

At the onset of the pandemic, financial markets came under considerable strain, with sharply rising sovereign bond spreads for highly indebted EMDEs, a historic flight to safety, and record capital outflows from EMDEs (World Bank 2020b). Financial conditions have since eased due to unprecedented central bank easing in major advanced economies and many EMDEs (Figure 6). All major advanced economy central banks launched or expanded asset purchase programs, and several EMDE central banks joined them (Ha and Kindberg-Hanlon 2021). Real policy rates are negative in advanced economies, as in the first wave of debt, although longer-term nominal U.S. interest rates have risen significantly since their 2020 lows.

Low global interest rates can make additional debt-financed government support seem attractive, especially when growth rates are expected to be above interest rates. However, fiscal expansion still entails significant risks, as real interest rates are likely below their long-term trend, and there is no guarantee that any future economic shocks will lead to lower interest rates (Rogoff 2021). This is particularly true when debt stocks are high, as countries with high levels of public debt tend to see larger increases in interest rates following an economic shock than those with lower debt levels (Lian, Presbitero, Wiridinata 2020). Indeed, the increase in interest rates at the onset

of the pandemic was higher for countries with higher public debt (Presbitero and Wiriadinata 2020). Furthermore, EMDEs are at greater risk of a sudden reversal of interest rates than advanced economies, especially if there are other vulnerabilities like foreign currency debt, overvalued exchange rates, financial system fragilities and commodity dependence (Gnimassoun and Do Santos 2021).

## **IV.2. Shifts in policy frameworks**

Fiscal, monetary, and financial policy frameworks in EMDEs improved significantly in the 2000s, helping these countries weather the global recession of 2009 and bouts of volatility over the subsequent decade (Kose and Ohnsorge 2019). While a variety of policy moves were necessary to soften the impact of the pandemic-induced recession in 2020, some of these may erode underlying policy frameworks: fiscal support measures have required a relaxation of fiscal rules; the reach of central banks into new financial market segments has broadened; governments have heavily encouraged credit extension; and regulators and supervisors have eased restrictions.

### **IV.2.1. Fiscal policies**

In the face of unprecedented fiscal support measures, fiscal rules risk being eroded. Many fiscal rules have escape clauses intended to be invoked in times of major economic stress, and a large number of countries activated these clauses as a result of the pandemic (Budina et al. 2012; IMF 2020a, 2021b; World Bank 2021b). It is important, however, that the use of this flexibility is temporary and transparent. While exact timelines for a return to normal will vary, clear communication will be critical: if countries fail to reverse their path to these escape clauses as the recovery gains traction, investors may begin to question the long-term sustainability of government finances, undermining the credibility of fiscal rules (IMF 2021b). Broader temporary fiscal interventions in response to COVID should also have timelines for their removal as pre-crisis economic activity levels are restored (OECD 2021b; World Bank 2021c).

Government support packages have also encouraged continued credit extension to corporates. During the 2020 global recession, about 40 percent of the fiscal support from governments in EMDEs constituted liquidity support measures such as loans, equity injections, and guarantees (IMF 2020b).<sup>4</sup> Some governments have also encouraged banks to make use of available capital and liquidity buffers to support lending (Feyen et al. 2020a; IMF 2020a, 2020c). While these were necessary to avoid widespread bankruptcies, they may support nonviable “zombie” firms if maintained far into the recovery. In addition, these contingent liabilities could eventually migrate onto government balance sheets, either in a financial crisis or, indirectly, in a period of sustained low growth (Mbaye, Moreno-Badia, and Chae 2018).

### **IV.2.2. Monetary and financial policies**

*Central bank credibility.* In 2020, several EMDE central banks expanded their remit by starting asset purchase programs to stabilize financial markets (Arslan, Drehmann, and Hofmann 2020; IMF 2020d). These have helped ease borrowing conditions in financial market segments that would otherwise only be indirectly affected by monetary policy rate cuts. While appropriate in the midst of a deep recession, the prolonged use of these tools could dampen investor confidence and risk de-anchoring inflation expectations if central bank credibility is undermined by extended funding of large fiscal deficits (Ha and Kindberg-Hanlon 2021).

In some countries, central banks have also supported small and medium-size enterprises directly via back-stops for bank lending, such as by purchasing corporate securities (Borio 2020). This has

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<sup>4</sup> Despite the size of these packages there are concerns about their effectiveness: in a survey of firms in 51 countries (between May and August 2020) only around one-fifth of firms reported that they had received any type of policy support (World Bank 2021e).

ensured continued access to finance in the midst of the recession, but it may crowd out private sector investors if sustained over a prolonged period in illiquid EMDE financial markets. Abundant liquidity also raises the risk of stretching credit valuations further or allowing non-viable firms to survive (IMF 2021d; Feyen et al. 2020b).

*Prudential policies.* In addition to regulators easing capital and liquidity requirements, the global banking industry asked regulators to relax, or delay the tightening of, rules on capital, liquidity, and accounting standards during the pandemic, with some countries agreeing to delays or postponement of new regulations (IMF 2020b). Regulatory forbearance increased, for example, some regulators allowed the freezing the classification status of all credit exposures prior to COVID-19, and in some extreme cases, allowed banks to postpone adequate provisioning (World Bank and IMF 2020). High risk forbearance measures accounted for a larger share of the overall policy response in LICs compared to other economies (World Bank 2021d) Unless comprehensive reporting of asset quality is assured, these measures risk eroding the transparency regulators and investors need to assess financial institutions' balance sheets.

*Corporates.* The fiscal, monetary, and financial support policies outlined above have reduced credit spreads and contributed to very favorable financial conditions for corporates. Corporate debt issuance has reached a record high as large firms with market access have used this availability of credit to increase their liquidity buffers (IMF 2021d). In contrast, smaller corporates with less market access have been more constrained and have instead been more reliant on policy support. There has also been a noticeable difference between advanced economies and EMDEs, with small and medium-sized corporates in advanced economies more able to access capital markets, while corporates in EMDEs (including larger firms), have been more heavily reliant on traditional bank lending. The policy support provided to corporates has helped keep insolvency levels low, in marked contrast to previous crises (World Bank 2021f).

### **IV.2.3. Regional dimensions of policies**

Government support packages were largest in LAC and ECA, and smallest in MNA and SSA (Figure 6). However, the split between direct spending and equity and loan guarantees varied widely between regions, with governments in EAP providing the most direct support, and governments in SAR and ECA providing more support via equity, loans, and guarantees.

Asset purchase programs varied significantly among different EMDEs, but in general programs were larger, as a share of GDP, in ECA, EAP, and LAC (World Bank 2021g). Regulatory forbearance was common in most regions, including through delayed nonperforming loan recognition and provisioning, debt servicing holidays, and delayed introduction of capital and other Basel III requirements (World Bank 2021a, 2021b, 2021f, 2021g, 2021h). This forbearance is now starting to be phased out in some regions (LAC, SSA; IMF 2021e; World Bank 2021a).

In MNA, limited access to international financial markets meant governments were heavily dependent on domestic banks for financing in 2020, increasing the sovereign-bank nexus, and also raising the risk of crowding out private sector credit (IMF 2021c). A couple of MNA countries with limited external financing also resorted to central bank financing.

In SSA, limited fiscal space restricted the ability of sovereigns to support to firms (World Bank 2020a; IMF 2021e). However, deteriorations in the balance sheets of state-owned enterprises have increased the contingent liabilities of several governments. Some countries in SSA resorted to monetary financing of fiscal deficits to fund crisis spending (IMF 2021e; World Bank 2021g; Ha and Kindberg-Hanlon 2021).

### **IV.3. Use of debt**

Rising debt is less of a concern if it is used to finance growth-enhancing investments, particularly if they boost exports (World Bank 2017). During the first three waves of debt, borrowing was

often used to finance productive investments. However, there are also many examples where debt was employed for less productive uses, including favoring domestic industries, or financing construction and property booms that did not raise productivity. A surge in debt without an increase in growth-enhancing investment projects is one of the factors that led to debt crises (Kose et al. 2021).

The COVID-19 pandemic necessitated large-scale borrowing to finance many critical fiscal support measures, which helped cushion the size of the shock and prevent a more severe downturn (Chudik, Mohaddes, and Raissi 2021; World Bank 2020b, 2021d). However, the scale and speed at which these measures were introduced creates considerable potential for diversion and misuse of funds (IMF 2021b; World Bank 2020c). Many countries set up dedicated COVID-19 extrabudgetary funds to accelerate emergency spending, however, these extrabudgetary funds typically have independent spending authority, which can allow them to bypass normal fiscal controls, creating significant fiscal risks and opportunities for corruption (IMF 2020e). Some countries also saw significant increases in debt arising from state-owned enterprises and public-private partnerships, which can be prone to distorted incentives, operational inefficiencies, and substandard management of risks (Melecky 2021).

To try and prevent government stimulus being wasted, many countries have implemented measures to track and audit COVID-19 spending and ensure transparency in use of funds (IMF 2021b). Preserving sufficient records can also permit an accurate stock-take and review of expenditure by auditors after the crisis is over (World Bank 2020d). However, there are other actions governments can take in this regard, focused on fiscal transparency, citizen engagement, and social accountability (Bajpai and Myers 2020; World Bank 2020e). To foster greater accountability, governments need to clearly articulate their actions, enforce rules, address violations, and remedy problems as quickly as possible in a transparent manner (Anderson et al. 2019). In the medium term, governments should restore the systems that are critical for integrity and not do lasting damage to the systems of checks and balances that have been put in place.

## **V. Debt Prospects: What Happens to Debt after Global Recessions?**

*Evidence from previous global recessions.* Historically, global government debt has tended to increase after global recessions. The global economy experienced four global recessions before the 2020 pandemic global recession: in 1975, 1982, 1991, and 2009. Global government debt rose by a cumulative 4-15 percentage points of GDP over the five years following these global recessions—by 4 percentage points of GDP over 1975-80, 15 percentage points over 1982-87, 9 percentage points over 1991-96, and 4 percentage points over 2009-14 (Figure 7; Table 3).

In general, advanced economy debt has seen a more consistent increase after recessions, with an increase of 3-14 percentage points after the global recessions prior to 2020, while that of EMDEs has been more erratic. Indeed, government debt in EMDEs excluding China saw small declines in the five years after the 1991 and 2009 recessions. For the 1991 recession, debt rose in the immediate aftermath of the recession, but then decreased rapidly as growth recovered, while in the 2009 recession government debt saw a modest increase during the recession but stabilized thereafter, as EMDEs were less affected and recovered more rapidly from the recession than advanced economies.

Government debt also tended to be higher after recessions in a majority of countries. On average in the five years after a global recession, two-thirds of countries had the same or higher debt levels. The period after the 1991 recession had the smallest number of countries with higher debt (around one-half), while the five years after the 1982 recession had the highest share of countries (nearly 85 percent of all countries). On average, a slightly larger share of advanced economies saw higher levels of debt after recessions than EMDEs (70 percent versus 66 percent), while LICs had the highest share at 76 percent.

Regionally, the evolution of government debt after global recessions was more varied (Figure 8; Table 4). Almost all regions saw an increase in debt following the first two recessions (which coincided with the first wave of debt accumulation) with particularly large increases in EAP, LAC, and SSA. EAP and LAC saw an unwinding of this debt in the period after the 1991 recession as debt was reduced, including due to the provision of debt relief (via the issuance of Brady bonds), while debt in SSA rose further as many countries did not receive debt relief until the late 1990s (Kose et al. 2021). Debt was broadly stable in most regions following the 2009 recession which mainly affected advanced economies. Overall, all regions other than SSA saw at least one global recession episode in which government debt declined.

*Near-term prospects.* In the medium term, global government debt stocks are expected to stabilize at current levels because of the post-pandemic surge in growth and withdrawal of fiscal support measures.<sup>5</sup> National forecasts for G20 countries suggest a small (2 percentage points of GDP) increase in 2021; for the half of G20 countries with publicly available data, government debt is expected to stabilize in 2022-23. These projections imply that a decade of rapid debt accumulation would end in the next five years. If such a stabilization materialized, it would present a significant departure from developments in the aftermath of previous recessions.

While a stabilization or decline in debt-to-GDP ratios following a global recession is not unprecedented for most regions, it is unprecedented in SSA, where debt has increased following each previous recession. Over the past 40 years, government debt in SSA only declined during the late 1990s and 2000s as a result of the Heavily Indebted Poor Countries (HIPC) initiative and MDRI. The largest declines, historically, occurred in EAP (excluding China) and LAC after the 1991 recession, with government debt in these regions falling by 16 percent and 13 percent, respectively. This period saw a number of countries in those regions issue Brady bonds, which provided an average debt reduction of about one-third of the eligible debt stock (Arslanalp and Henry 2005; Reinhart and Trebesch 2016).

The expected stabilization in debt-to-GDP ratios, together with current low interest rates, may alleviate some concerns about elevated debt levels at present, even if some countries face significant debt challenges. However, forecasts of government debt tend to suffer from optimism bias: actual government debt was about 10 percentage points of GDP higher after five years than initial forecasts (Estefania Flores et al. 2021a, 2021b).<sup>6</sup> In addition, forecast errors during recessions can be larger than for non-recession periods, particularly in advanced economies.<sup>7</sup> Similarly, among euro area countries, studies have shown that national forecasts and those of the European Commission suffer from optimism bias in forecasting fiscal balances, especially when they are close to the 3 percent deficit rule (Frankel and Schreger 2013; Gilbert and de Jong 2017).

In light of this historical record, and given large financing gaps and significant investment needs, debt levels will likely continue to rise in the near future. An upward surprise to government debt ratios of the magnitude reported in earlier studies (10 percentage points of GDP), if it were to occur, could see many more countries facing even deeper debt payment difficulties. Such an

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<sup>5</sup> Forecasts by both the IMF and S&P indicate a slight decline and stabilization in global debt. The IMF projects a gradual decline in advanced economies and a small increase in EMDEs, while forecasts for EMDEs excluding China show a slight decline and stabilization over 2021-25. The S&P forecast is similar and implies a small increase in EMDE debt over the next four years and a small decrease in advanced economy debt. Data are available for 39 advanced economies and 153 EMDEs from the IMF's October 2021 *World Economic Outlook*. Data are available for 36 advanced economies and 85 EMDEs from S&P's *Sovereign Risk Indicators, 2021 Estimates*.

<sup>6</sup> The study used government debt forecasts made by the IMF for the period 1995-2020 and the Economist Intelligence Unit (EIU) for the period 2007-2020, covering an unbalanced panel of 174 countries.

<sup>7</sup> A forecast evaluation exercise by the U.S. Congressional Budget Office also found debt forecast errors were larger following recessions (CBO 2019). The average error of forecasts five years after a U.S. budget year was -0.6 percentage points of GDP (an underestimate), and the average absolute error was 7.1 percentage points of GDP.

increase could also be driven by the rapid accumulation of indirect debt during the pandemic by state-owned commercial banks, state-owned enterprises, and public-private partnerships (Melecky 2021).<sup>8</sup>

Similar to government debt, private debt has also tended to increase after global recessions in both advanced economies and EMDEs (Figure 9; Table 3). Private debt has risen after all global recessions across both country groups, with the exception of advanced economies following the 2009 recession. The period after the 2009 recession, which resulted from a massive build-up in household and financial sector debt, saw substantial private sector deleveraging. EMDEs were less heavily affected than advanced economies in this recession.

## VI. New Policy Challenges

The COVID-19 pandemic has exacerbated existing debt-related challenges for policy makers by simultaneously increasing the risks from excessive debt and limiting the policy tools available to them respond to shocks. While some hope for a benign ending to the COVID-induced buildup in debt, any number of factors—a sudden rise in interest rates, a larger-than-forecast increase in debt, or other financial market disruptions—could result in additional countries getting into debt distress (G30 2021; Friedrich-Ebert-Stiftung and Consensus Building Institute 2021). Several countries, particularly LICs, are already in, or at risk of, debt distress (IMF 2020f; Kose, Ohnsorge, and Sugawara 2021; World Bank 2021g). In addition, the characteristics of the debt buildup of the fourth wave also raise new challenges and again highlight the major difficulties in achieving lasting debt relief.

*Debt service costs.* Many countries, particularly LICs, face large debt-servicing costs, with several already in debt distress. Debt service standstills can provide a temporary solution by providing breathing room to continue critical spending while allowing time for a comprehensive assessment of debt sustainability that can lead to more lasting changes (Buchheit and Gulati 2021). By avoiding short-term cash shortages, they can prevent a liquidity crisis becoming a solvency crisis. The Debt Service Suspension Initiative (DSSI) is one example. As of September 2021, 48 of the world’s poorest countries have applied for the DSSI and benefited from more than \$5 billion in debt service relief from official bilateral creditors, complementing emergency financing provided by the World Bank and the International Monetary Fund.

However, these policies are only temporary measures to make space until permanent solutions can be secured, and the DSSI is set to expire at the end of 2021. Debt standstills defer payments of interest and principal, but do not reduce debt levels. During the Latin American debt crisis, repeated debt reschedulings prolonged debt crises without resolving them, and resulted in additional debt buildup and long-term debt overhangs. In addition, there can be hurdles to implementing debt standstills. For example, only 47 of the 73 countries eligible for the DSSI have requested assistance, held back by concerns that applying for the DSSI would affect their sovereign credit rating and restrict their access to new borrowing.<sup>9</sup>

*Fragmented creditor base.* In the event of a debt crisis, its resolution will likely be more complex than earlier crises since there are many creditors with diverse motivations (international financial institutions, Paris Club bilateral lenders, non-Paris Club bilateral lenders including publicly owned

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<sup>8</sup> Melecky (2021) estimated the fiscal cost incurred by early termination of PPPs arising from a macroeconomic crisis could be between 1 to 4.3 percentage of government revenues among South Asian countries. The fiscal cost from distressed SOEs is expected to be even larger.

<sup>9</sup> Lang, Mihalyi, and Presbitero (2021) show that countries eligible for DSSI have a larger decline in borrowing costs than ineligible countries and argue that the participation does not cause negative perceptions against participating countries by financial markets.

policy institutions like the China Development Bank, and private sector lenders). The importance of bilateral non-Paris Club lenders has increased significantly, and China is now the largest official creditor to developing countries (Horn, Reinhart, and Trebesch 2020; G30 2021). The growing number of private creditors and range of financial instruments further complicates debt resolution, although credit enhancements by MDBs could encourage private creditor participation in restructuring (Friedrich-Ebert-Stiftung and Consensus Building Institute 2021).

*Lack of debt and investment transparency.* The growing diversity of creditors and complexity of debt instruments has been associated with greater uncertainty about the level and composition of debt, as not all creditors are bound by a single set of reporting standards and loan terms are often confidential. In 2019, of the 17 LICs with available data, minimum requirements in debt recording were met by only eight, and monitoring guarantee requirements were met by only four. Due to shortcomings in accuracy, timeliness, coverage, and completeness of debt records, only four of these 17 countries met the minimum requirements for debt reporting and evaluation (Essl et al. 2019; World Bank 2019). Of 59 countries eligible for IDA borrowing, only one-third reported private sector external debt statistics (World Bank and IMF 2018). This raises the risk that public sector debt is higher in some EMDEs than reported. This risk is compounded by indirect and hidden debt, especially debt incurred by state-owned enterprises and public-private partnerships (Melecky 2021).

In addition, a lack of clarity about commitments encumbers debt restructuring negotiations, scrutiny of borrowing decisions, and efforts to ensure that borrowed funds are well spent (World Bank, 2021i; Friedrich-Ebert-Stiftung and Consensus Building Institute 2021). Debt sustainability can be undermined by policies that impose strict nondisclosure clauses on government borrowers, require major liens and collateralization, and place guaranteed debt repayments in state-owned enterprises (G30 2021). For example, since 2015, Chinese lenders have made heavy use of confidentiality clauses in their debt contracts (Gelpern et al. 2021). From 2015 onwards, all of the more than 30 debt contracts by Chinese lenders to EMDE sovereigns that Gelpern et al. (2021) examined included unusually restrictive confidentiality clauses.

Some commodity traders or large financial firms lending to EMDE governments similarly fail to share contract information (G30 2021). Opaque lending is compounded by contractual obligations that preclude restructuring of some debts. For example, of 100 debt contracts by Chinese lenders to 24 EMDE sovereigns since the early 2000s examined by Gelpern et al. (2021), three-quarters included clauses that explicitly exclude the debt from Paris Club restructuring agreements.

*Governance shortcomings.* Many EMDEs, particularly LICs, still fall short in the strength of institutions that create distance between borrowing decisions and political pressures, as reflected in the low share of LICs that meet minimum requirements for debt administration, legal frameworks, and audit practices (World Bank 2019). This increases the risk that borrowing is excessive and not used for productive purposes. The perceptions of quality of public services are the worst in SSA, where most LICs reside. An index of government effectiveness suggests that the effectiveness of government services in SSA is almost twice as bad as that in MNA and SAR, on median (Kaufmann, Kraay, and Mastruzzi 2010). ECA and LAC are the best performers in terms of the perceptions of service quality, but they are still well behind advanced economies.

*Global debt resolution practices.* In several dimensions, the playing field is currently tilted in favor of creditors and discourages prompt and comprehensive debt resolution. For example, financial centers that adjudicate disputes related to debt restructuring—especially New York, where two-thirds of outstanding sovereign bonds are governed—have provisions that favor hold-out bond holders. These include prejudgment penalties, large exemptions for buying bonds at steep discounts before default with the intent of suing subsequently, and modest taxes on excess capital gains (Stiglitz and Rashid 2020). While 91 percent of sovereign bond issuance since 2014 has



included collective action clauses that facilitate restructuring, a large legacy stock without such clauses remains: about 50 percent of outstanding international debt does not include collective action clauses (IMF 2020f). In addition to sovereign debt, the rise of private debt, especially as a response to the pandemic, highlights the importance of comprehensive resolution framework to mitigate the risk of private debt overhang (Bauer et al. 2021; Demmou et al. 2021).

## **VII. Consequences of Inaction: Risks Associated with Elevated Debt Levels**

The previous waves of debt ended with widespread financial crises. When debt resolution was protracted, growth was often slow to recover or even resulted in a lost decade of growth.

*Financial crises.* Since 1970, about half of all countries that experienced a rapid buildup of debt also experienced a financial crisis. Where debt accumulation episodes were accompanied by crises, output and investment were significantly lower even several years after the end of the episode than in countries without crises (Figure 10). There is a risk that the fourth wave, like its predecessors, also ends with a major financial crisis, with some countries already experiencing debt distress. Of particular concern is that the current buildup is spread across both private and public sector debt, as well as across advanced economies, EMDEs, and LICs.

*Protracted resolution.* During the first wave of debt, widespread sovereign debt defaults in Latin America and LICs in the early 1980s took many years to be resolved, with debt continuing to rise after the initial default. Debt relief only occurred in Latin America with the Brady Plan in 1989, while in LICs, meaningful debt relief did not occur until the HIPC initiative and MDRI in 1996 and 2005, respectively. In contrast, during the second and third waves of debt, which mainly involved the private sector, debt resolution occurred more rapidly, but at a substantial cost to governments that frequently assisted through bank recapitalization and other support schemes.

*Lost decade of growth.* Prolonged periods of debt restructuring were associated with a lost decade of growth in Latin America and, in LICs, negative per capita income growth over several years. The COVID-19 pandemic is likely to deepen and prolong a slowdown in output, productivity, and investment growth that has been underway for a decade (Dieppe 2020; Kilic Celik, Kose, and Ohnsorge 2020). Weak growth will likely further increase debt burdens and erode borrowers' ability to service debt. For some countries in debt distress, the economic outlook may only improve once debt relief via debt write-offs occurs, rather than rescheduling (Reinhart and Trebesch 2016). Preemptive debt restructurings have generally been associated with better macroeconomic outcomes rather than restructurings that occur after a default has occurred (Asonuma et al. 2020).

## **VIII. Conclusions**

The COVID-19 pandemic has caused a surge in debt levels and exacerbated existing debt-related risks and vulnerabilities. While global government debt is expected to stabilize over the next five years, such a stabilization would be unusual by historical standards. Furthermore, forecasts for government debt often suffer from optimism bias, and end up under-predicting actual government debt levels. Even if debt does stabilize, it remains at exceptionally elevated levels by historical standards, and current low interest rates are not a panacea. Several countries are already in debt distress, and additional ones are likely to follow, especially some LICs.

In the past, excessive debt has been resolved in one or more of six ways: three orthodox policy choices including growth, fiscal austerity, and privatization, and three heterodox approaches including unexpected inflation, often in combination with financial repression, debt relief, and taxing wealth (Kose et al. 2021). Each of these approaches is associated with challenging trade-offs such that choices need to be carefully tailored to country circumstances. Where debt restructurings prove necessary, both creditors and debtors should aim for ambitious restructurings.

Shallow agreements that avoid face value reductions can usher in, or extend, a protracted series of modest restructurings that last for many years until a more permanent resolution is found.<sup>10</sup>

The consequences of inaction to address debt challenges point to the urgency to act on the parts of both national policy makers and the global community. National policy makers need to act to provide space to assess debt sustainability, as well as to consider the best approaches to resolving debt if it becomes unsustainable. The global community needs to act rapidly and forcefully to make sure the fourth wave does not end with a string of debt crises in EMDEs, as earlier waves did.

The Group of Twenty Common Framework that was established in November 2020 is a step beyond the DSSI (G20 2020). The objective of the framework is to facilitate timely and orderly debt treatment for DSSI-eligible countries, and encourage broad creditor participation, including the private sector. However, the Framework primarily focuses on offering debt flow relief in the form of maturity extensions and interest rate adjustments, rather than face-value reductions. It also faces numerous challenges, including the reluctance of creditors to grant major substantial debt relief quickly and uncertainty about the willingness or ability of borrowing countries to commit to credible multi-year action plans, as well as new challenges, notably the complex nature of the creditor base which inhibits quick restructuring. A particular difficulty will be ensuring private sector participation, since at present the Common Framework has no mechanism to either encourage or mandate the private sector to provide comparable debt relief.

Encouraging private sector participation could be achieved via incentives, similar to the Brady Plan (IMF 2020f; World Bank 2021i). However, this is subject to availability of financing. IFIs can also use lending conditionality to incentivize sovereign debtors and their creditors to aim for more ambitious restructurings (IMF 2020f; World Bank 2021g). The IMF’s “lending into arrears” (LIA) program, which had its origins in the Brady Plan in 1989, is one such lever (Truman 2020).<sup>11</sup> The LIA is conditional on a member “pursuing appropriate policies and making a “good faith effort” to reach a collaborative agreement with its private creditors,” which incentivizes the debtor to reach an agreement (IMF 2013). At the same time, the program neutralizes the possibility that private sector creditors could use the IMF’s “no arrears” rule as negotiating leverage over debtors (Buchheit and Lastra 2007). In addition, financial centers that adjudicate disputes related to debt restructuring could level the playing field, which is currently tilted in favor of creditors (Stiglitz and Rashid 2020).

Measures are also needed to strengthen the transparency of borrowing processes, borrowing amounts and terms, and spending of borrowed funds. Improved debt transparency can accelerate the provision of debt relief, and is also associated with lower borrowing costs and improves debt management practices (Kubota and Zeufack 2020). Several countries have made progress in this regard, including increased access to data on SOE debt and collateralized loans (World Bank 2020b). However, further progress is needed, especially in the context of transparency of debt contracts. Creditors can help by refraining from confidentiality clauses, allowing borrowers to publish detailed information, and themselves disseminating data on their lending. Beyond debt transparency, reforms to make debt management more effective can be complemented by other policy measures that develop the institutional capacity and good governance to identify and monitor risks as well as conduct strategic planning (World Bank 2021i).

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<sup>10</sup> There is historical precedent for centrally orchestrated debt restructurings, including the London Debt Agreement of 1953; numerous Paris Club restructurings since its creation in 1956; the Brady Plan in 1989-1994; and the HIPC initiative and MDRI in 1996 and 2005 (Guinnane 2015; Kaiser 2013; Kose et al. 2021; Reinhart and Trebesch 2016).

<sup>11</sup> “Lending into arrears” describes the situation where the IMF extends financial assistance to a member country that is in arrears to private creditors. Ordinarily, the IMF does not lend to countries in arrears.

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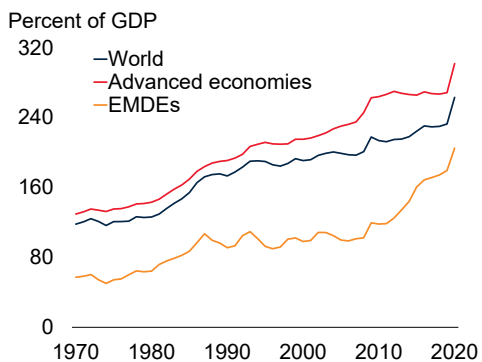
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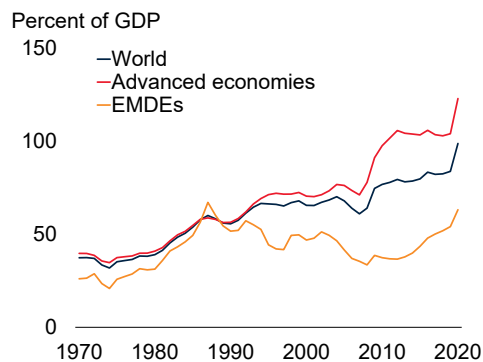


**Figure 1. Debt developments during COVID**

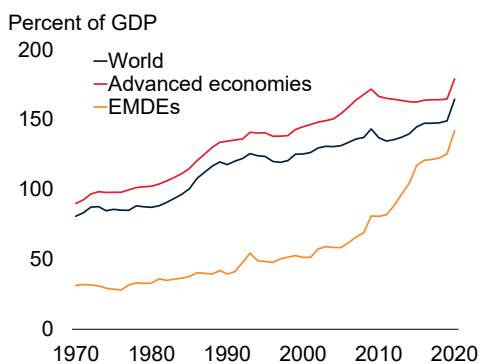
**A. Total debt**



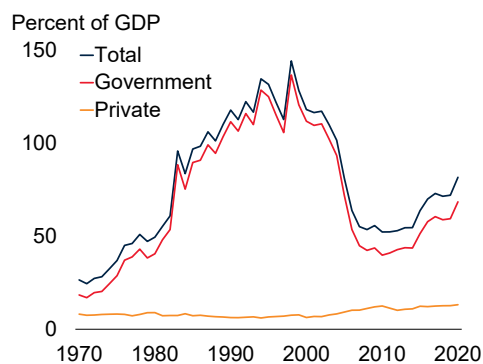
**B. Government debt**



**C. Private debt**



**D. Debt in LICs**

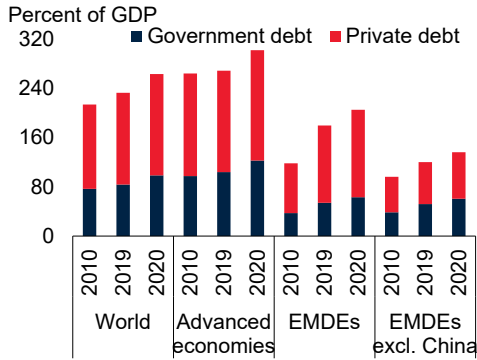


Source: Kose et al. (2021).

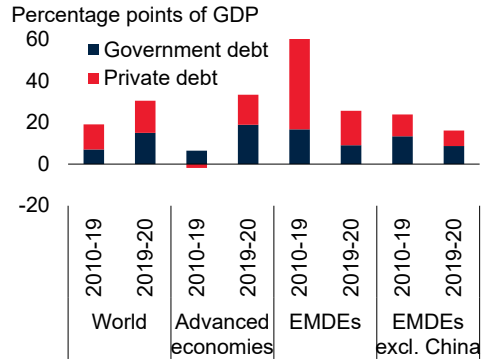
Note: Data are available for up to 192 countries, including 39 advanced economies, 153 EMDEs, and 24 LICs. Nominal GDP weighted averages.

Figure 2. Debt developments during the fourth wave

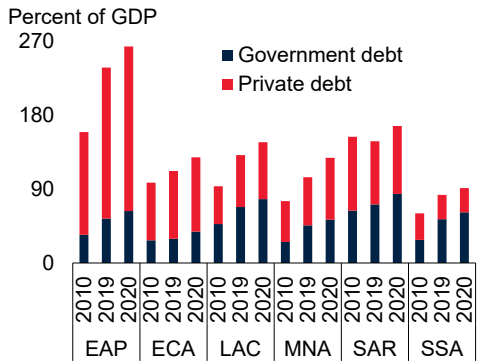
**A. Debt**



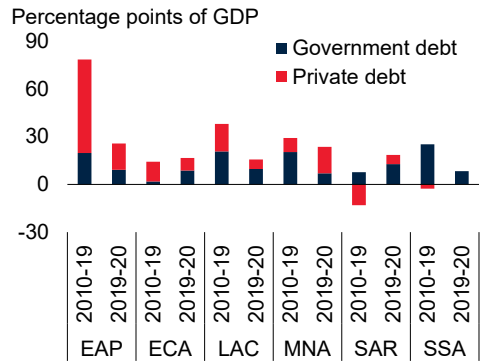
**B. Change in debt**



**C. Debt, by region**



**D. Change in debt, by region**

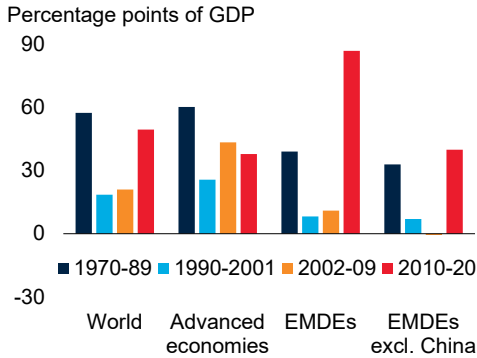


Source: Kose et al. (2021).

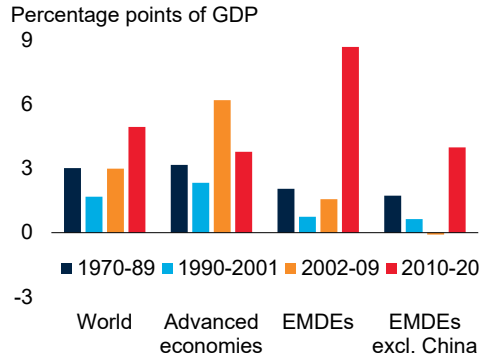
Note: Data are available for up to 192 countries, including 39 advanced economies, 153 EMDEs, and 23, 24, 33, 18, 8, and 47 countries in EAP, ECA, LAC, MNA, SAR, and SSA, respectively. Nominal GDP weighted averages.

**Figure 3. Waves of debt, 1970-2020**

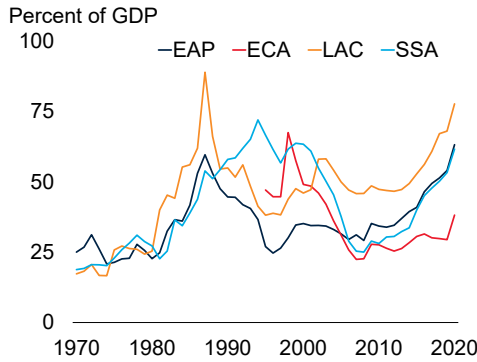
**A. Change in total debt**



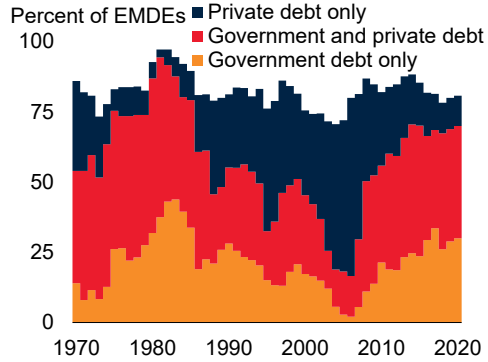
**B. Annual average change in total debt**



**C. Government debt in selected regions**



**D. Share of EMDEs in rapid debt accumulation episodes**



Sources: Kose et al. (2021); World Bank.

A,B First wave covered the period 1970-1989; second wave from 1990-2001; third wave from 2002-2009; and fourth wave from 2010 onwards. Data are available for up to 191 countries, including 39 advanced economies and 152 EMDEs.

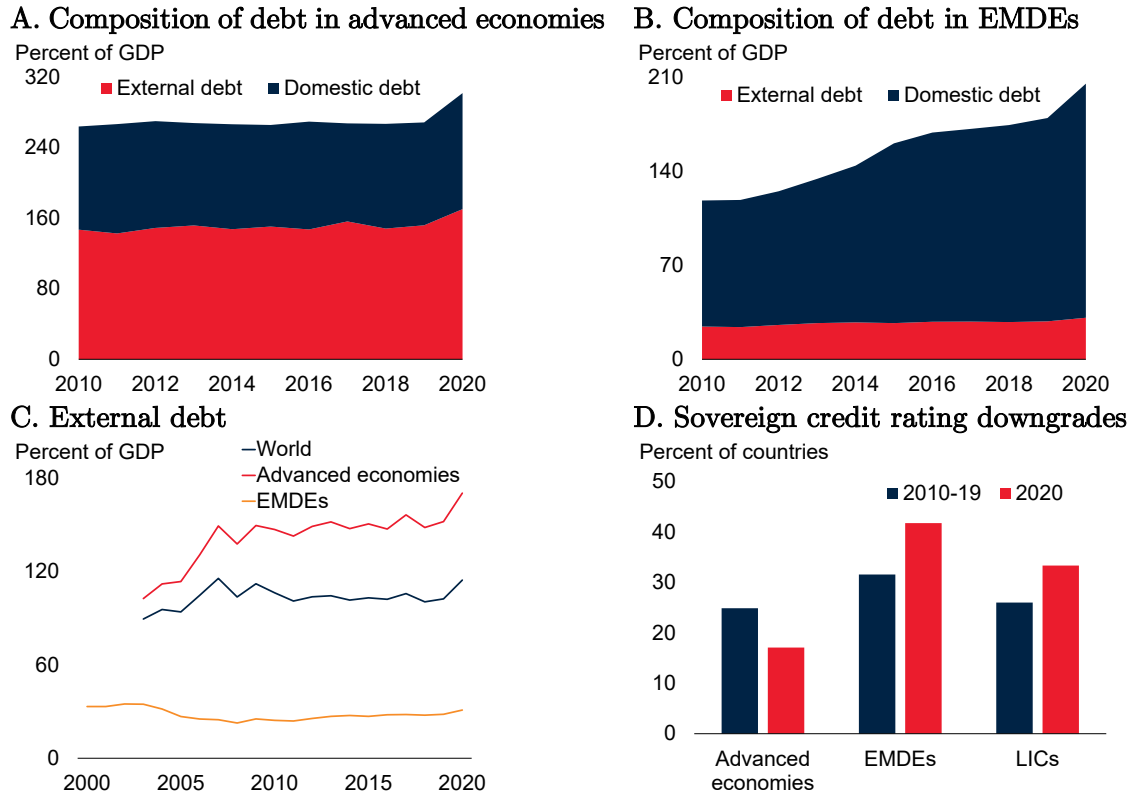
A. Change in total debt-to-GDP ratios from the start to the end of each wave.

B. Rate of change calculated as total increase in debt-to-GDP ratios over the duration of a wave, divided by the number of years in a wave.

C. Averages computed with current U.S. dollar GDP as weight. Line for ECA starts in 1995 due to smaller sample size prior to that year.

D. Share of EMDEs which are in rapid debt accumulation episodes, as discussed in Kose et al. (2021).

Figure 4. Composition of debt, external debt and credit ratings



Sources: Kose et al. (2017, 2021); World Bank.

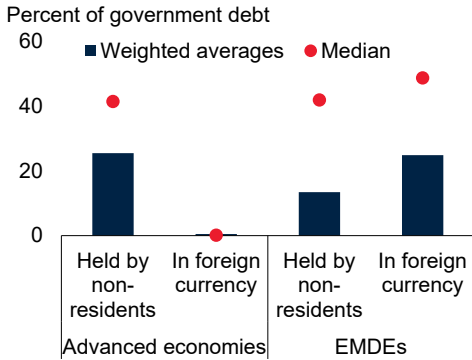
A.B. Nominal GDP weighted averages for up to 39 advanced economies and 152 EMDEs with available data for government, private, and external debt. Domestic debt is defined as a difference between total (i.e., government and private) debt and external debt.

C. Nominal GDP weighted averages for up to 174 countries, including 35 advanced economies and 139 EMDEs.

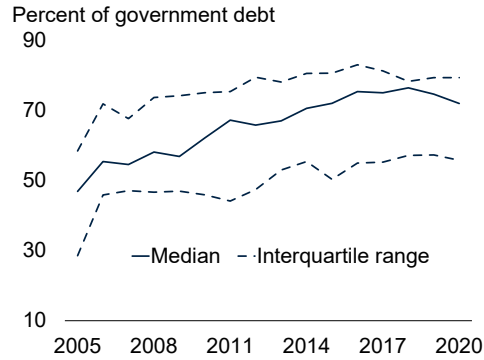
D. Share of countries in each country group with sovereign credit downgrades during 2010-19 (average downgrade per year) and in 2020 (i.e., downgrade from 2019). Sample includes up to 144 countries, including 41 advanced economies, 103 EMDEs, and 6 LICs, with available data for foreign currency long-term sovereign debt ratings in two consecutive years.

Figure 5. Debt composition

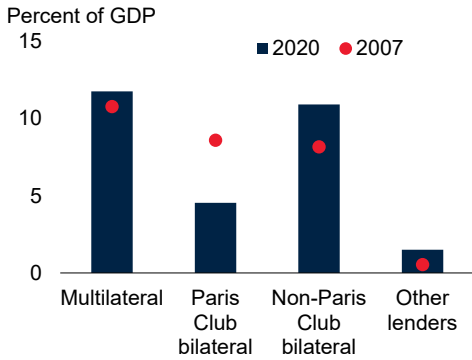
**A. Composition of government debt, 2020**



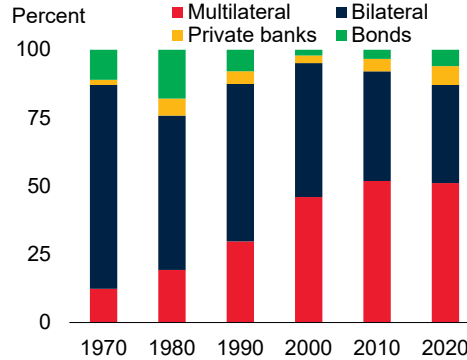
**B. Non-concessional external debt in LICs**



**C. Composition of LIC external debt, by creditors**



**D. Composition of LIC external debt since 1970**



Sources: Kose et al. (2017); World Bank.

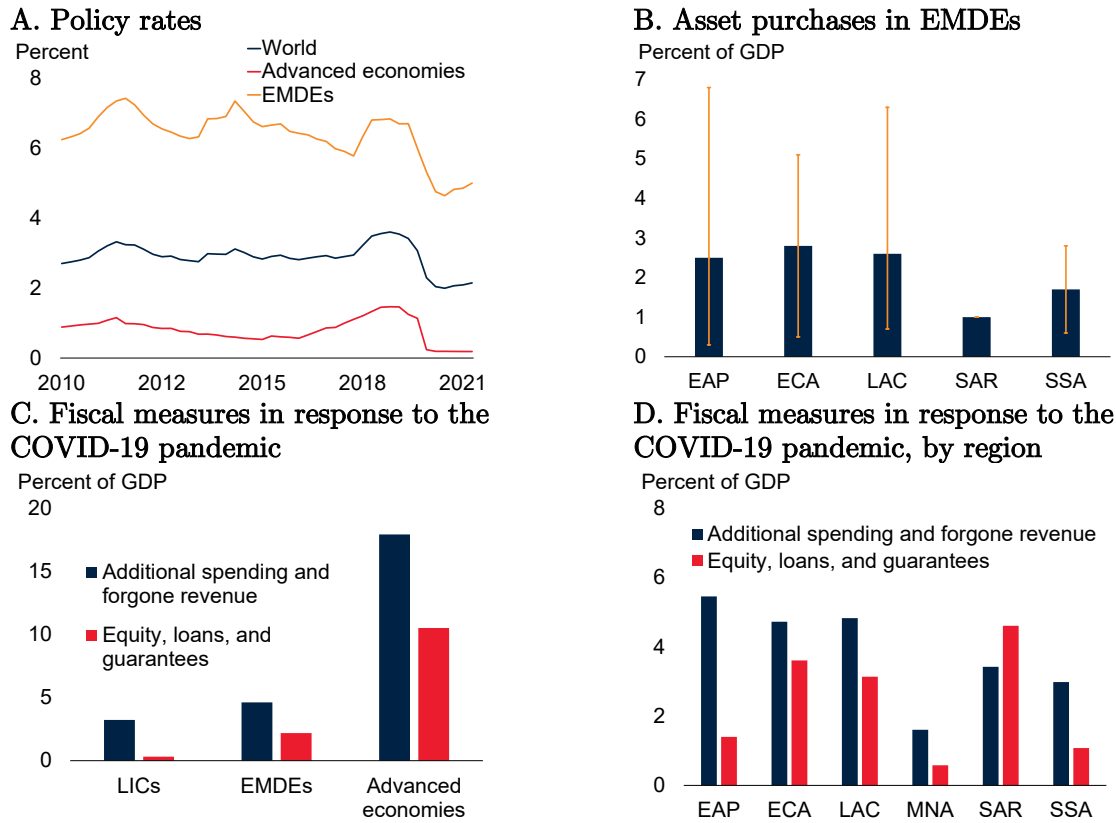
A. Data are available for 29 advanced economies and 44 EMDEs for government debt held by nonresidents and 16 advanced economies and 32 EMDEs for government debt denominated in foreign currency. Weighted averages are computed with government debt in nominal U.S. dollars as weights.

B. Data are available for up to 24 LICs.

C. Public and publicly guaranteed external debt is considered. Other lenders include bondholders and multiple lenders. GDP-weighted average across 23 LICs.

D. Public and publicly guaranteed external debt is considered. Bonds include other private sector creditors. Data are available for up to 25 LICs.

**Figure 6. Policy measures during the pandemic**



Sources: Bank for International Settlements; Haver Analytics; International Monetary Fund; Kose et al. (2021); Kose, Sugawara, and Terrones (2020); Organisation for Economic Co-operation and Development; World Bank.

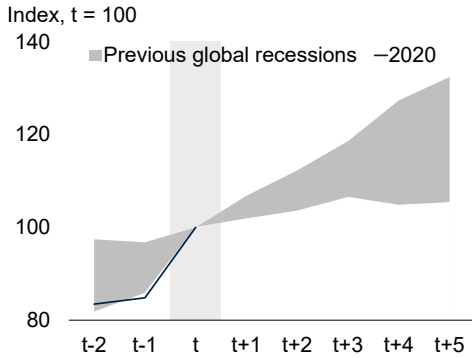
A. Quarterly nominal policy rates. Aggregates are calculated using real GDP in U.S. dollars as a weight. Sample includes 153 countries, consisting of 36 advanced economies and 117 EMDEs. Last observation is 2021Q2.

B. Announced or completed purchases (where no announcement exists) relative to 2019 nominal GDP as of November 2020. Bar shows average in each region. Orange whiskers show regional range. Red line shows average of advanced economy programs launched in 2020.

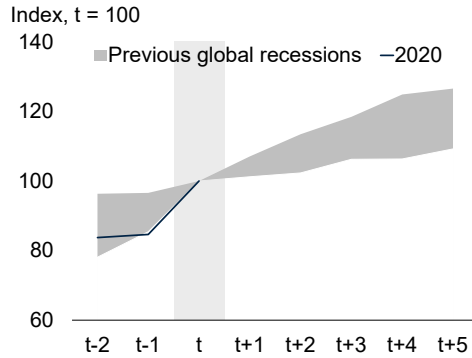
C.D. Country-level data are as reported in October 2021 *Fiscal Monitor* by the International Monetary Fund. Country groups are weighted by GDP in U.S. dollars for 2019. Revenue and spending measures exclude deferred taxes and advance payments.

Figure 7. Government debt after recessions

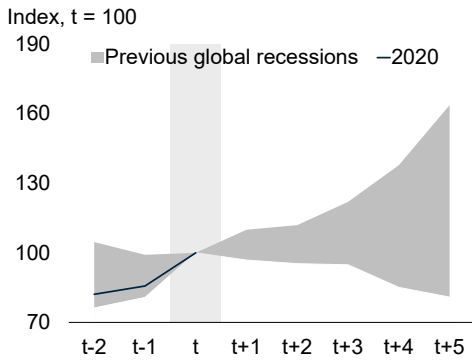
**A. Global government debt**



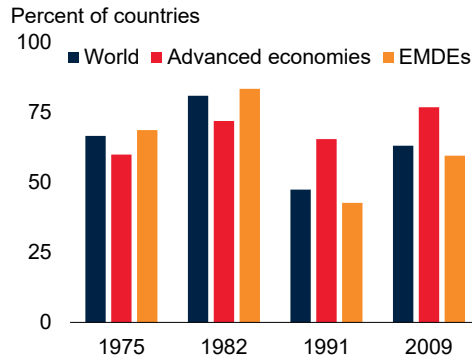
**B. Government debt in advanced economies**



**C. Government debt in EMDEs**



**D. Countries with higher government debt five years after global recession**



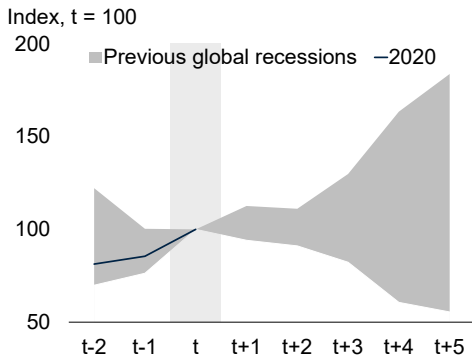
Source: Kose et al. (2021).

A.-C. Swathe indicates the evolution of government debt in percent of GDP, indexed at 100 in the year of the global recession (year “t”). The previous global recessions include four global recessions: 1975, 1982, 1991, and 2009. The solid blue line is for the 2020 global recession. Data are available for up to 192 countries, including 39 advanced economies and 153 EMDEs.

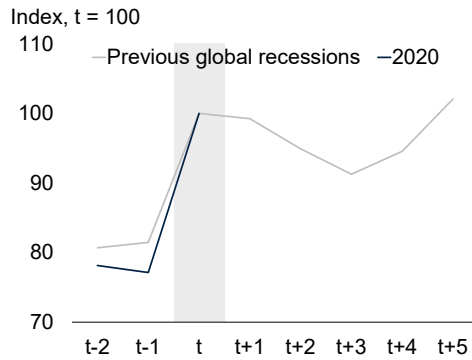
D. Chart shows the share of countries with government debt higher by 1 percentage point of GDP or more in five years after a recession (e.g., 1975 refers to the share of countries with higher government debt in 1980 than in 1975).

Figure 8. Government debt after global recessions, by region

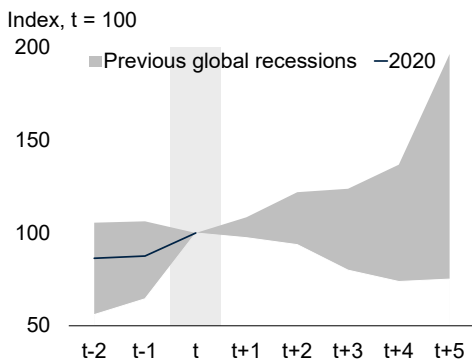
**A. EAP**



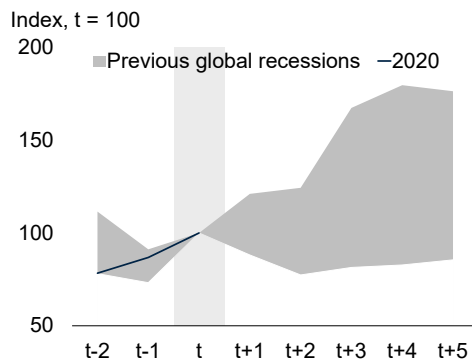
**B. ECA**



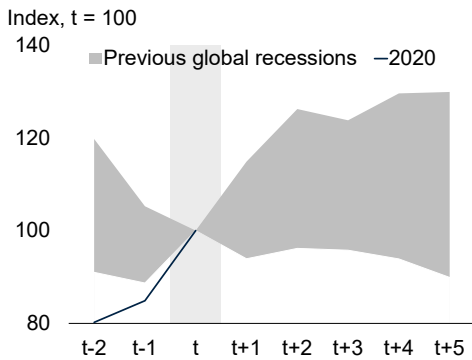
**C. LAC**



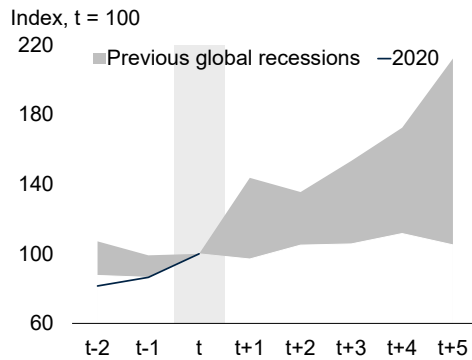
**D. MNA**



**E. SAR**



**F. SSA**



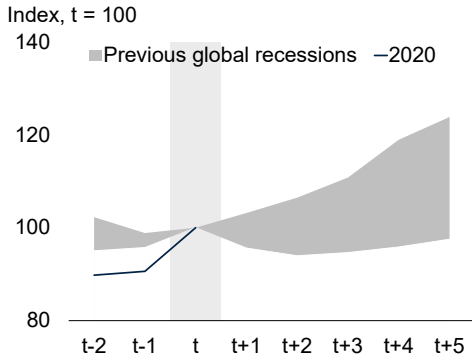
Source: Kose et al. (2021).

Note: Swathe indicates the evolution of government debt in percent of GDP, indexed at 100 in the year of the global recession (year “t”). The previous global recessions include four global recessions: 1975, 1982, 1991, and 2009. For ECA, due to the data availability, only the global recession in 2009 is considered. The solid blue line is for the 2020 global recession. Data are available for up to 153 EMDEs, including 23, 24, 33, 18, 8, and 47 countries in EAP, ECA, LAC, MNA, SAR, and SSA, respectively.

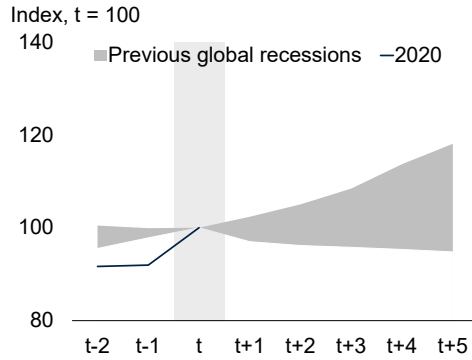


**Figure 9: Private debt after global recessions**

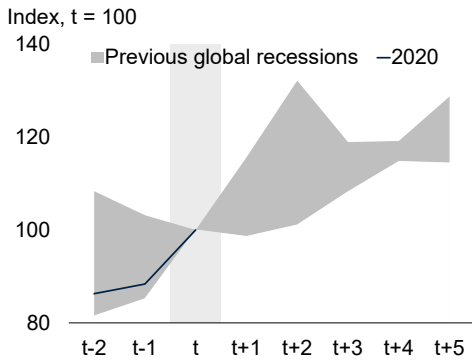
**A. Global private debt**



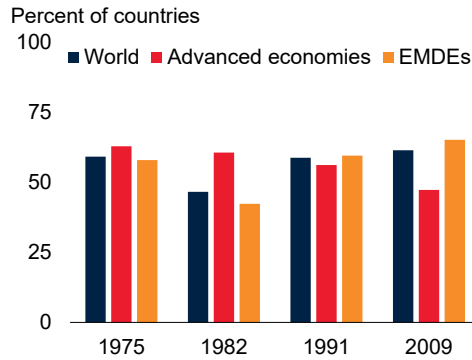
**B. Private debt in advanced economies**



**C. Private debt in EMDEs**



**D. Countries with higher private debt five years after global recession**



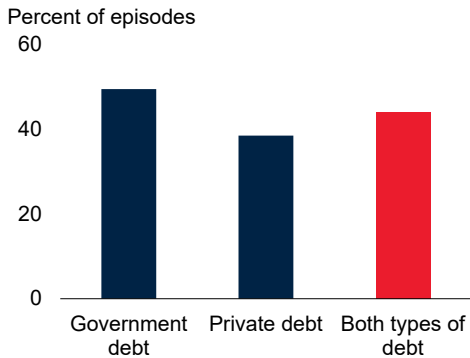
Source: Kose et al. (2021).

A.-C. Swathe indicates the evolution of private debt in percent of GDP, indexed at 100 in the year of the global recession (year “t”). The previous global recessions include four global recessions: 1975, 1982, 1991, and 2009. Data are available for up to 184 countries, including 38 advanced economies and 146 EMDEs.

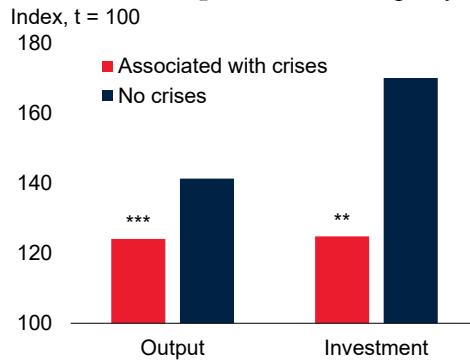
D. Chart shows the share of countries with private debt higher by 1 percentage point of GDP or more in five years after a recession (e.g., 1975 refers to the share of countries with higher private debt in 1980 than in 1975).

Figure 10. Cost of inaction, new challenges

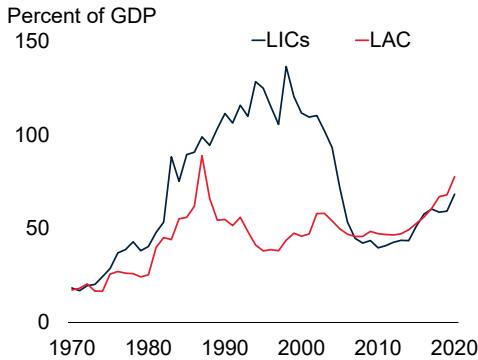
**A. Rapid debt accumulation episodes associated with financial crises**



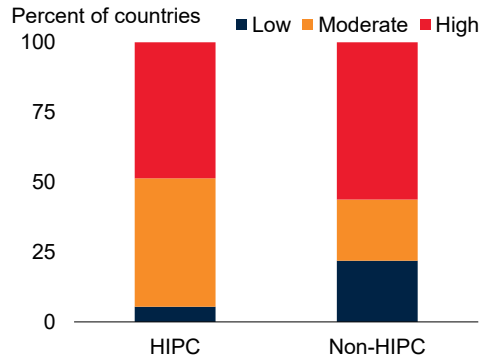
**B. Outcomes of rapid government debt accumulation episodes after eight years**



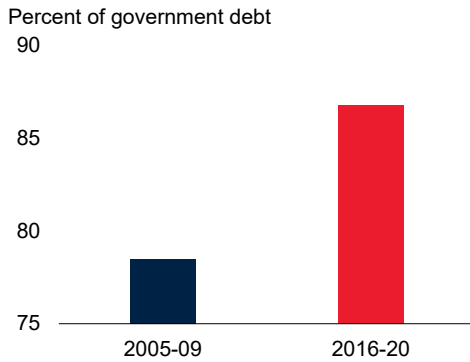
**C. Government debt in LICs and LAC**



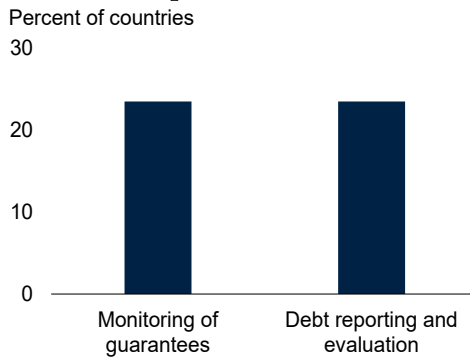
**D. Risk of external debt distress in selected countries**



**E. Non-concessional external debt in EMDEs**



**F. Countries meeting selected DeMPA minimum requirements**



Sources: Essl et al. (2019); Haver Analytics; International Monetary Fund; Kose et al. (2017, 2021); Kose, Ohnsorge, and Sugawara (2021); World Bank.

A.B. A rapid debt accumulation episode is defined as a period during which the debt-to-GDP ratio rises from trough to peak by more than one (country-specific) ten-year rolling standard deviation. The trough-peak years are identified with the algorithm in Harding and Pagan (2002). There are a total of 283 government debt booms and 291 private debt booms in 101 EMDEs over 1970-2020. Episodes associated with crises are those which experienced financial crises (banking, currency, and debt crises, as in Laeven and Valencia, 2020) during or within two years after the end of episodes. For definition of episodes and sample, see Kose et al. (2021) and Kose, Ohnsorge, and Sugawara (2021).

B. Medians of cumulative output and investment eight years after the beginning of rapid debt accumulation episodes (in year “t”). Ongoing episodes, as of 2020, are excluded. \*\*\* and \*\* denote that medians between episodes associated with crises and those with no crises are different with statistical difference at the 1 percent and 5 percent levels, respectively, based on Wilcoxon rank-sum tests.

C. Data are available for up to 24 LICs and 33 LAC countries. Nominal GDP weighted averages.

D. Based on a sample of 69 countries, by HIPC (Heavily Indebted Poor Countries) status, with available data as of June 30, 2021, as defined in a list of LIC DSAs by the International Monetary Fund.

E. Non-concessional external debt as a share of general government debt. Median of up to 118 EMDEs. Averages over the denoted periods on the horizontal axis.

F. Figure shows share of 17 LICs meeting minimum standards as defined by Debt Management Performance Assessments (DeMPA) in December 2018 (Essl et al. 2019).

Table 1. Debt in major country groups

	Levels (Percent of GDP)					Changes (Percentage points of GDP)	
	2010	2015	2018	2019	2020	2010-15	2015-20
<b>World</b>							
Government debt	76.7	79.7	82.3	83.7	98.7	3.0	19.0
Private debt	137.0	144.9	147.8	149.1	164.6	7.8	19.7
Total debt	213.7	224.5	230.1	232.8	263.3	10.8	38.7
<b>Advanced economies</b>							
Government debt	97.4	103.2	102.8	103.9	122.8	5.8	19.5
Private debt	166.6	162.6	164.2	164.8	179.2	-4.1	16.6
Total debt	264.1	265.8	267.0	268.7	302.0	1.7	36.2
<b>EMDEs</b>							
Government debt	37.4	43.5	51.8	54.0	63.1	6.1	19.6
Private debt	80.8	117.3	122.6	125.5	142.1	36.5	24.8
Total debt	118.2	160.8	174.4	179.6	205.2	42.6	44.4
<b>EMDEs excluding China</b>							
Government debt	38.6	44.7	50.4	51.9	60.6	6.1	15.9
Private debt	57.7	67.7	67.9	68.2	75.6	10.1	7.9
Total debt	96.3	112.4	118.3	120.1	136.2	16.2	23.8
<b>LICs</b>							
Government debt	39.8	51.3	58.7	59.3	68.4	11.6	17.0
Private debt	12.5	12.3	12.6	12.6	13.2	-0.1	0.9
Total debt	52.2	63.6	71.4	72.0	81.5	11.4	17.9

Source: Kose et al. (2021).

Note: Data are available for up to 192 countries, including 39 advanced economies, 153 EMDEs, and 24 LICs.

**Table 2. Regional debt**

	Levels (Percent of GDP)					Changes (Percentage points of GDP)	
	2010	2015	2018	2019	2020	2010-15	2015-20
<b>East Asia and Pacific</b>							
Government debt	34.3	40.9	51.4	54.0	63.2	6.6	22.3
Private debt	125.1	176.4	180.2	183.8	200.3	51.3	23.9
Total debt	159.3	217.3	231.5	237.8	263.5	58.0	46.2
<b>East Asia and Pacific excluding China</b>							
Government debt	35.5	38.0	38.8	38.7	46.3	2.6	8.2
Private debt	58.0	72.8	75.8	75.6	81.6	14.7	8.8
Total debt	93.5	110.8	114.5	114.2	127.9	17.3	17.1
<b>Europe and Central Asia</b>							
Government debt	27.6	30.6	29.8	29.4	38.2	3.0	7.6
Private debt	70.1	88.0	85.1	82.5	90.4	17.8	2.4
Total debt	97.7	118.5	114.9	111.9	128.5	20.8	10.0
<b>Latin America and the Caribbean</b>							
Government debt	47.3	52.8	67.1	68.0	77.7	5.5	24.9
Private debt	46.0	58.5	62.0	63.3	69.3	12.5	10.8
Total debt	93.3	111.3	129.1	131.3	147.0	18.0	35.7
<b>Middle East and North Africa</b>							
Government debt	25.5	36.4	41.3	45.8	52.8	10.9	16.3
Private debt	49.7	60.1	58.0	58.5	75.2	10.4	15.0
Total debt	75.2	96.6	99.3	104.3	127.9	21.4	31.4
<b>South Asia</b>							
Government debt	63.6	65.4	67.4	71.3	84.0	1.7	18.6
Private debt	89.9	83.0	75.8	76.9	82.7	-7.0	-0.3
Total debt	153.6	148.3	143.2	148.2	166.7	-5.2	18.4
<b>Sub-Saharan Africa</b>							
Government debt	28.1	40.0	50.2	53.3	61.6	11.9	21.6
Private debt	32.2	30.4	29.9	29.6	29.5	-1.9	-0.9
Total debt	60.3	70.3	80.1	82.9	91.1	10.0	20.8

Source: Kose et al. (2021).

Note: Data are available for up to 153 EMDEs, consisting of 23, 24, 33, 18, 8, and 47 countries in East Asia and Pacific, Europe and Central Asia, Latin America and the Caribbean, Middle East and North Africa, South Asia, and Sub-Saharan Africa, respectively.

**Table 3. Debt in major country groups during global recessions**

	Government debt (percent of GDP)					Private debt (percent of GDP)					Total debt (percent of GDP)				
	t-1	t	t+3	t+5	t+10	t-1	t	t+3	t+5	t+10	t-1	t	t+3	t+5	t+10
<b>World</b>															
1975	31.8	35.2	38.2	39.0	53.7	84.8	85.8	88.3	87.3	100.5	116.6	121.0	126.5	126.2	154.3
1982	41.3	45.3	53.7	60.0	61.2	88.3	90.7	100.5	112.4	122.2	129.6	136.0	154.3	172.3	183.4
1991	55.6	57.4	66.5	66.0	65.4	117.8	120.3	124.2	120.1	126.5	173.4	177.7	190.7	186.1	191.9
2009	63.9	74.5	79.3	78.5	83.7	137.2	143.3	135.7	139.8	149.1	201.2	217.9	215.0	218.3	232.8
2020	83.7	98.7				149.1	164.6				232.8	263.3			
<b>Advanced economies</b>															
1975	34.7	37.4	39.7	40.9	54.7	97.9	98.0	101.4	102.4	115.1	132.6	135.4	141.2	143.2	169.7
1982	42.8	46.4	54.7	58.7	61.9	103.9	106.1	115.1	125.3	136.1	146.7	152.5	169.7	184.0	198.0
1991	56.4	58.4	69.1	71.9	70.1	134.6	135.4	140.4	138.1	146.5	191.0	193.8	209.5	210.0	216.7
2009	77.7	91.0	105.6	103.7	103.9	168.1	171.8	164.5	162.8	164.8	245.8	262.8	270.2	266.6	268.7
2020	103.9	122.8				164.8	179.2				268.7	302.0			
<b>EMDEs</b>															
1975	20.8	25.8	31.4	31.2	49.3	29.4	28.6	33.2	33.1	37.8	50.2	54.4	64.6	64.3	87.1
1982	35.9	41.0	49.3	67.0	57.2	36.0	34.9	37.8	40.0	47.7	71.9	75.9	87.1	107.0	104.9
1991	51.6	52.0	52.5	42.1	47.8	39.5	41.2	49.0	47.8	51.5	91.1	93.3	101.6	89.9	99.3
2009	33.5	38.6	36.6	39.8	54.0	69.0	81.0	88.5	104.3	125.5	102.5	119.6	125.1	144.1	179.6
2020	54.0	63.1				125.5	142.1				179.6	205.2			
<b>EMDEs excluding China</b>															
1975	20.8	25.8	31.4	31.2	49.3	29.4	28.6	30.2	30.2	33.4	50.2	54.4	61.7	61.5	82.7
1982	35.9	41.0	49.3	67.0	57.2	33.6	32.0	33.4	34.5	42.6	69.4	73.0	82.7	101.6	99.8
1991	51.6	52.0	52.5	45.4	53.2	34.5	35.7	45.2	42.7	39.9	86.1	87.7	97.7	88.0	93.1
2009	35.4	40.0	37.5	39.8	51.9	56.2	59.2	58.8	64.8	68.2	91.5	99.2	96.3	104.6	120.1
2020	51.9	60.6				68.2	75.6				120.1	136.2			

Source: Kose et al. (2021).

Note: Year “t” denotes the year of global recessions: 1975, 1982, 1991, 2009, and 2020. Data are available for up to 192 countries, including 39 advanced economies, 153 EMDEs.

**Table 4. Regional debt during global recessions**

	Government debt (percent of GDP)					Private debt (percent of GDP)					Total debt (percent of GDP)				
	t-1	t	t+3	t+5	t+10	t-1	t	t+3	t+5	t+10	t-1	t	t+3	t+5	t+10
<b>East Asia and Pacific</b>															
1975	20.8	21.4	27.8	22.7	41.7	25.7	27.8	42.2	42.4	55.3	46.5	49.2	70.0	65.0	97.0
1982	24.8	32.4	41.7	59.6	41.9	44.5	46.2	55.3	63.9	76.6	69.3	78.7	97.0	123.5	118.5
1991	44.6	44.5	36.6	24.7	34.4	75.8	77.4	78.4	86.8	91.4	120.4	121.9	115.0	111.5	125.9
2009	29.2	35.2	34.6	39.4	54.0	98.3	122.2	137.9	161.5	183.8	127.5	157.4	172.5	201.0	237.8
2020	54.0	63.2				183.8	200.3				237.8	263.5			
<b>Europe and Central Asia</b>															
1975															
1982															
1991				44.7	48.5				29.4	34.3				74.1	82.8
2009	22.6	27.8	25.4	28.4	29.4	72.5	76.3	72.2	87.0	82.5	95.2	104.0	97.6	115.3	111.9
2020	29.4	38.2				82.5	90.4				111.9	128.5			
<b>Latin America and the Caribbean</b>															
1975	16.6	25.8	26.0	25.4	56.0	43.5	41.2	41.7	43.4	32.1	60.1	67.0	67.7	68.8	88.1
1982	40.0	45.3	56.0	88.9	56.0	42.7	38.6	32.1	34.2	50.1	82.7	83.9	88.1	123.2	106.2
1991	54.9	51.7	41.3	38.8	47.2	35.2	35.8	54.1	41.0	37.1	90.1	87.4	95.4	79.9	84.3
2009	45.8	48.5	46.6	49.4	68.0	43.6	45.7	50.6	55.6	63.3	89.4	94.2	97.2	105.0	131.3
2020	68.0	77.7				63.3	69.3				131.3	147.0			
<b>Middle East and North Africa</b>															
1975	16.4	22.4	37.4	39.4	41.6	11.2	15.0	19.6	18.0	25.6	27.6	37.4	57.0	57.4	67.2
1982	44.3	50.5	41.6	59.9	60.8	19.6	21.9	25.6	26.7	23.3	64.0	72.4	67.2	86.6	84.1
1991	45.8	50.2	67.1	57.1	49.7	24.4	23.3	25.9	25.3	36.0	70.2	73.5	92.9	82.4	85.8
2009	22.4	28.9	23.6	24.7	45.8	46.2	53.5	43.3	48.7	58.5	68.6	82.4	66.9	73.4	104.3
2020	45.8	52.8				58.5	75.2				104.3	127.9			
<b>South Asia</b>															
1975	41.7	39.6	49.0	51.4	60.6	22.0	23.0	32.9	35.0	41.6	63.7	62.6	81.9	86.4	102.2
1982	50.1	56.5	60.6	68.3	72.0	36.0	38.6	41.6	43.0	41.5	86.1	95.1	102.2	111.3	113.6
1991	70.9	70.7	70.6	63.6	76.0	44.0	39.6	39.5	40.2	49.3	115.0	110.4	110.2	103.8	125.3
2009	68.5	67.8	64.9	64.0	71.3	83.8	84.4	89.9	85.9	76.9	152.3	152.2	154.7	149.8	148.2
2020	71.3	84.0				76.9	82.7				148.2	166.7			
<b>Sub-Saharan Africa</b>															
1975	20.2	22.9	31.0	27.2	38.9	22.3	23.4	22.2	24.1	25.1	42.5	46.3	53.3	51.3	64.0
1982	22.6	25.4	38.9	53.9	61.9	18.8	19.2	25.1	26.8	30.0	41.4	44.6	64.0	80.7	91.9
1991	57.9	58.5	72.0	61.5	60.9	29.1	30.2	29.4	27.7	27.1	87.1	88.7	101.4	89.2	88.0
2009	25.0	28.9	30.6	33.6	53.3	31.4	33.7	30.1	28.7	29.6	56.4	62.6	60.7	62.3	82.9
2020	53.3	61.6				29.6	29.5				82.9	91.1			

Source: Kose et al. (2021).

Note: Year “t” denotes the year of global recessions: 1975, 1982, 1991, 2009, and 2020. Data are available for up to 153 EMDEs, consisting of 23, 24, 33, 18, 8, and 47 countries in East Asia and Pacific, Europe and Central Asia, Latin America and the Caribbean, Middle East and North Africa, South Asia, and Sub-Saharan Africa, respectively.