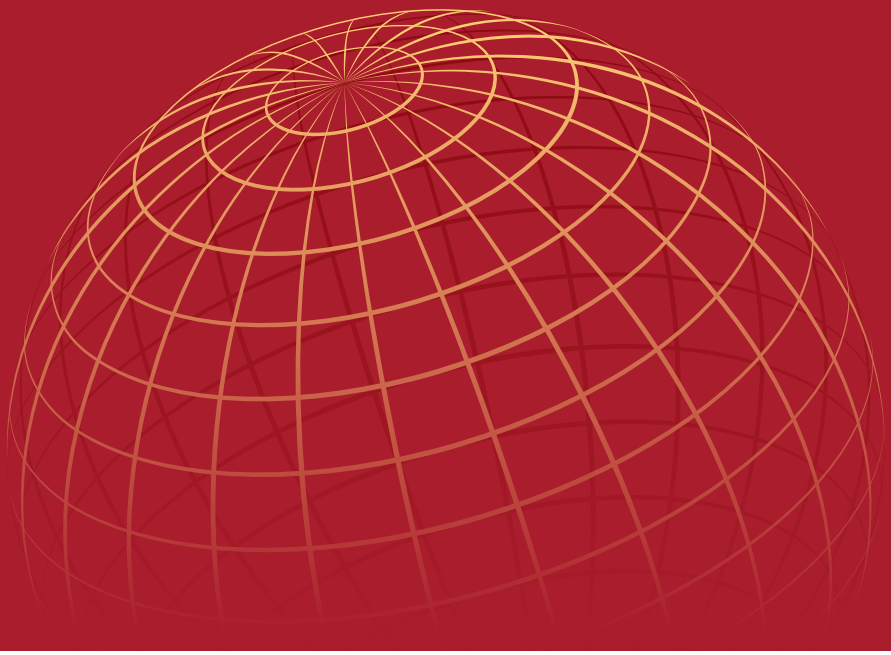


CHAPTER 1

GLOBAL OUTLOOK

Global growth is expected to decelerate sharply to 1.7 percent in 2023—the third weakest pace of growth in nearly three decades, overshadowed only by the global recessions caused by the pandemic and the global financial crisis. This is 1.3 percentage points below previous forecasts, reflecting synchronous policy tightening aimed at containing very high inflation, worsening financial conditions, and continued disruptions from the Russian Federation's invasion of Ukraine. The United States, the euro area, and China are all undergoing a period of pronounced weakness, and the resulting spillovers are exacerbating other headwinds faced by emerging market and developing economies (EMDEs). The combination of slow growth, tightening financial conditions, and heavy indebtedness is likely to weaken investment and trigger corporate defaults. Further negative shocks—such as higher inflation, even tighter policy, financial stress, deeper weakness in major economies, or rising geopolitical tensions—could push the global economy into recession. In the near term, urgent global efforts are needed to mitigate the risks of global recession and debt distress in EMDEs. Given limited policy space, it is critical that national policy makers ensure that any fiscal support is focused on vulnerable groups, that inflation expectations remain well anchored, and that financial systems continue to be resilient. Policies are also needed to support a major increase in EMDE investment, which can help reverse the slowdown in long-term growth exacerbated by the overlapping shocks of the pandemic, the invasion of Ukraine, and the rapid tightening of global monetary policy. This will require new financing from the international community and from the repurposing of existing spending, such as inefficient agricultural and fuel subsidies.

Summary

Global growth has slowed to the extent that the global economy is perilously close to falling into recession—defined as a contraction in annual global per capita income—only three years after emerging from the pandemic-induced recession of 2020. Very high inflation has triggered unexpectedly rapid and synchronous monetary policy tightening around the world to contain it, including across major advanced economies (figure 1.1.A). Although this tightening has been necessary for price stability, it has contributed to a significant worsening of global financial conditions, which is exerting a substantial drag on activity. This drag is set to deepen given the lags between changes in monetary policy and its economic impacts, and the fact that real rates are expected to continue to increase.

Asset prices have been in broad, synchronous decline, investment growth has weakened substantially, and housing markets in many countries are worsening rapidly. Shockwaves continue to emanate from the Russian Federation's invasion of Ukraine, especially in energy and other commodity markets. Against this backdrop, confidence has fallen precipitously. The world's three major engines of growth—the United States, the euro area, and China—are undergoing a period of pronounced weakness, with adverse spillovers for emerging market and developing economies (EMDEs), many of which are already struggling with weakening domestic conditions.

Global inflation has been pushed higher by demand pressures, including those from the lagged effects of earlier policy support, and supply shocks, including disruptions to both global supply chains and the availability of key commodities. In some countries, inflation has also been spurred by large currency depreciations relative to the U.S. dollar, as well as tight labor market conditions.

Inflation remains high worldwide and well above central bank targets in almost all inflation-targeting economies. Although inflation is likely to gradually moderate over the course of the year, there are signs that underlying inflation pressures could be becoming more persistent. In response, central banks around the world have been tightening policy faster than previously expected. Monetary policy tightening in advanced economies, a strong U.S. dollar, geopolitical tensions, and high inflation have dampened risk appetite and led to widespread capital outflows and slowing bond issuance across EMDEs. Financial conditions have particularly worsened

Note: This chapter was prepared by Carlos Arteta, Samuel Hill, Jeetendra Khadan, Patrick Kirby, Nikita Perevalov, and Collette Wheeler, with contributions from Jongrim Ha, Osamu Inami, Sergiy Kasyanenko, Phil Kenworthy, Peter Nagle, and Ekaterine Vashakmadze.

TABLE 1.1 Real GDP[1]

(Percent change from previous year unless indicated otherwise)

	2020	2021	2022e	2023f	2024f	Percentage point differences from June 2022 projections: 2022e	2023f	2024f
World	**-3.2**	**5.9**	**2.9**	**1.7**	**2.7**	**0.0**	**-1.3**	**-0.3**
Advanced economies	**-4.3**	**5.3**	**2.5**	**0.5**	**1.6**	**-0.1**	**-1.7**	**-0.3**
United States	-2.8	5.9	1.9	0.5	1.6	-0.6	-1.9	-0.4
Euro area	-6.1	5.3	3.3	0.0	1.6	0.8	-1.9	-0.3
Japan	-4.3	2.2	1.2	1.0	0.7	-0.5	-0.3	0.1
Emerging market and developing economies	**-1.5**	**6.7**	**3.4**	**3.4**	**4.1**	**0.0**	**-0.8**	**-0.3**
East Asia and Pacific	1.2	7.2	3.2	4.3	4.9	-1.2	-0.9	-0.2
China	2.2	8.1	2.7	4.3	5.0	-1.6	-0.9	-0.1
Indonesia	-2.1	3.7	5.2	4.8	4.9	0.1	-0.5	-0.4
Thailand	-6.2	1.5	3.4	3.6	3.7	0.5	-0.7	-0.2
Europe and Central Asia	-1.7	6.7	0.2	0.1	2.8	3.2	-1.4	-0.5
Russian Federation	-2.7	4.8	-3.5	-3.3	1.6	5.4	-1.3	-0.6
Türkiye	1.9	11.4	4.7	2.7	4.0	2.4	-0.5	0.0
Poland	-2.0	6.8	4.4	0.7	2.2	0.5	-2.9	-1.5
Latin America and the Caribbean	-6.2	6.8	3.6	1.3	2.4	1.1	-0.6	0.0
Brazil	-3.3	5.0	3.0	0.8	2.0	1.5	0.0	0.0
Mexico	-8.0	4.7	2.6	0.9	2.3	0.9	-1.0	0.3
Argentina	-9.9	10.4	5.2	2.0	2.0	0.7	-0.5	-0.5
Middle East and North Africa	-3.6	3.7	5.7	3.5	2.7	0.4	-0.1	-0.5
Saudi Arabia	-4.1	3.2	8.3	3.7	2.3	1.3	-0.1	-0.7
Iran, Islamic Rep.[2]	1.9	4.7	2.9	2.2	1.9	-0.8	-0.5	-0.4
Egypt, Arab Rep.[3]	3.6	3.3	6.6	4.5	4.8	0.5	-0.3	-0.2
South Asia	-4.5	7.9	6.1	5.5	5.8	-0.7	-0.3	-0.7
India[2]	-6.6	8.7	6.9	6.6	6.1	-0.6	-0.5	-0.4
Pakistan[3]	-0.9	5.7	6.0	2.0	3.2	1.7	-2.0	-1.0
Bangladesh[3]	3.4	6.9	7.2	5.2	6.2	0.8	-1.5	-0.7
Sub-Saharan Africa	-2.0	4.3	3.4	3.6	3.9	-0.3	-0.2	-0.1
Nigeria	-1.8	3.6	3.1	2.9	2.9	-0.3	-0.3	-0.3
South Africa	-6.3	4.9	1.9	1.4	1.8	-0.2	-0.1	0.0
Angola	-5.8	0.8	3.1	2.8	2.9	0.0	-0.5	-0.3
Memorandum items:								
Real GDP[1]								
High-income countries	-4.3	5.3	2.7	0.6	1.6	0.0	-1.6	-0.4
Middle-income countries	-1.2	6.9	3.2	3.4	4.3	-0.1	-0.8	-0.2
Low-income countries	1.6	3.9	4.0	5.1	5.6	0.0	-0.1	0.0
EMDEs excl. China	-3.9	5.7	3.8	2.7	3.6	1.1	-0.7	-0.4
Commodity-exporting EMDEs	-3.7	4.9	2.8	1.9	2.8	1.6	-0.7	-0.4
Commodity-importing EMDEs	-0.4	7.6	3.6	4.1	4.8	-0.8	-0.8	-0.2
Commodity-importing EMDEs excl. China	-4.2	6.8	5.0	3.8	4.5	0.4	-0.7	-0.4
EM7	-0.4	7.4	3.0	3.5	4.5	-0.3	-0.8	-0.2
World (PPP weights)[4]	-2.8	6.1	3.1	2.2	3.2	0.0	-1.2	-0.3
World trade volume[5]	**-8.2**	**10.6**	**4.0**	**1.6**	**3.4**	**0.0**	**-2.7**	**-0.4**
Commodity prices[6]						Level differences from June 2022 projections		
Energy price index	52.7	95.4	151.7	130.5	118.3	7.1	4.4	7.2
Oil price (US$ per barrel)	42.3	70.4	100.0	88.0	80.0	0.0	-4.0	0.0
Non-energy commodity price index	84.4	112.0	123.7	113.7	113.0	-8.4	-7.6	-4.6

Source: World Bank.

Note: e = estimate; f = forecast. World Bank forecasts are frequently updated based on new information. Consequently, projections presented here may differ from those contained in other World Bank documents, even if basic assessments of countries' prospects do not differ at any given date. For the definition of EMDEs, developing countries, commodity exporters, and commodity importers, please refer to table 1.2. EM7 includes Brazil, China, India, Indonesia, Mexico, the Russian Federation, and Türkiye. The World Bank is currently not publishing economic output, income, or growth data for Turkmenistan and República Bolivariana de Venezuela owning to lack of reliable data of adequate quality. Turkmenistan and República Bolivariana de Venezuela are excluded from cross-country macroeconomic aggregates.

1. Headline aggregate growth rates are calculated using GDP weights at average 2010-19 prices and market exchange rates. The aggregate growth rates may differ from the previously published numbers that were calculated using GDP weights at average 2010 prices and market exchange rates.

2. GDP growth rates are on a fiscal year basis. Aggregates that include these countries are calculated using data compiled on a calendar year basis. The column labeled 2022 refers to FY2022/23.

3. GDP growth rates are on a fiscal year basis. Aggregates that include these countries are calculated using data compiled on a calendar year basis. Pakistan's growth rates are based on GDP at factor cost. The column labeled 2022 refers to FY2021/22.

4. World growth rates are calculated using average 2010-19 purchasing power parity (PPP) weights, which attribute a greater share of global GDP to emerging market and developing economies (EMDEs) than market exchange rates.

5. World trade volume of goods and nonfactor services.

6. Energy price index is in nominal U.S. dollars (2010=100) and it includes coal (Australia), crude oil (Brent), and natural gas (Europe, Japan, and the United States). Oil price refers to the Brent crude oil benchmark. The non-energy index is in nominal U.S. dollars (2010=100) and it is the weighted average of 39 commodity prices (7 metals, 5 fertilizers, and 27 agricultural commodities). For additional details, please see https://www.worldbank.org/commodities.

for less creditworthy EMDEs, especially if they are also energy importers (figure 1.1.B).

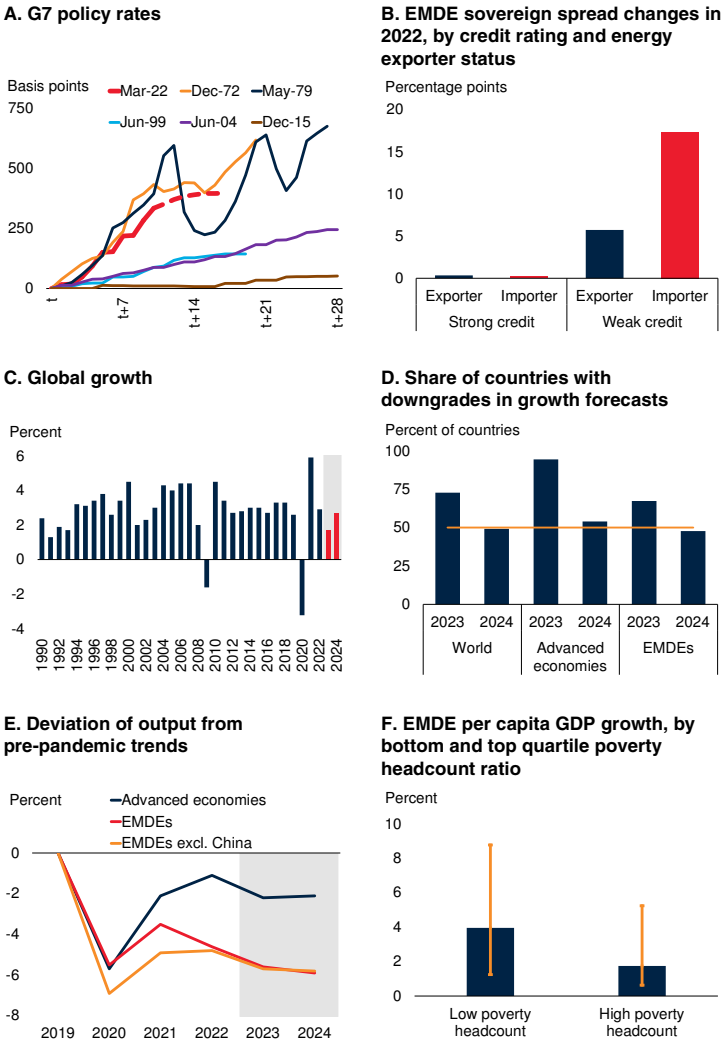
Fiscal space has narrowed considerably, and concerns over debt sustainability in many countries have risen as global financial conditions have made it more difficult to service debt loads that have accumulated rapidly in recent years, particularly during the pandemic. Nonetheless, many governments have announced new support measures to shield households and firms from the effects of sharply rising prices, slowing the pace of fiscal consolidation as pandemic-related stimulus is withdrawn.

Most commodity prices have eased, to varying degrees, largely due to the slowdown in global growth and concerns about the possibility of a global recession. By historical standards, however, they remain elevated, prolonging challenges associated with energy and food insecurity. Crude oil prices have steadily declined from their mid-2022 peak; meanwhile, natural gas prices in Europe soared to an all-time high in August but have since fallen back toward pre-invasion levels. Non-energy prices, particularly metal prices, have declined alongside weak demand. While food prices have eased from earlier peaks, food price inflation remains very high in some EMDEs.

Against this backdrop, global growth is forecast to slow to 1.7 percent in 2023 (figure 1.1.C). This pace of growth would be the third weakest in nearly three decades, overshadowed only by the global recessions caused by the pandemic in 2020 and the global financial crisis in 2009. This forecast is 1.3 percentage points lower than in June, largely reflecting more aggressive monetary policy tightening, deteriorating financial conditions, and declining confidence. Growth projections have been downgraded for almost all advanced economies and about two-thirds of EMDEs in 2023, and for about half of all countries in 2024 (figure 1.1.D). Global trade is also expected to slow sharply alongside global growth, despite support from a continued recovery in services trade. Downgrades to growth projections mean that global activity is now expected to fall even further below its pre-pandemic trend over the forecast horizon, with EMDEs accounting for

FIGURE 1.1 Global prospects

High global inflation has prompted rapid, synchronous monetary tightening. This has contributed to worsening financial conditions, particularly for less creditworthy emerging market and developing economies (EMDEs). Global growth in 2023 is expected to be the third weakest in nearly three decades, overshadowed only by global recessions. Most country forecasts have been downgraded. The recovery from the pandemic recession is far from complete, especially in EMDEs, and the per-capita income outlook is particularly subdued for poverty-stricken countries.



Sources: BIS (database); Bloomberg; Haver Analytics; Moody's; JP Morgan; World Bank.

Note: EMBI = Emerging Markets Bond Index; EMDEs = emerging market and developing economies. Unless otherwise indicated, aggregate growth rates are calculated using real U.S. dollar GDP weights at average 2010-19 prices and market exchange rates. Shaded areas indicate forecasts.

A. Short-term policy rate weighted by nominal GDP in current U.S. dollars. "t" is the month before the U.S. policy rate increases. Cycle ends when the G7-weighted policy rate peaks. Judgement used to define "double-peak" cycles. March 2022 cycle extended using market-implied interest rate expectations from January 2023 onward, observed on December 16, 2022.

B. Change in EMBI spreads since January 2022, using Moody's sovereign foreign currency ratings. Sample includes 11 EMDE energy exporters and 35 EMDE energy importers. Strong credit defined as ratings from Aaa to Baa3. Weak credit defined as ratings from Caa to Ca. Sample excludes Belarus, the Russian Federation, and Ukraine. Last observation is December 13, 2022.

C. Sample includes up to 37 advanced economies and 144 EMDEs.

D. Figure shows share of countries with forecast downgrades since the June 2022 *Global Economic Prospects*.

E. Figure shows deviation between current forecasts and January 2020 *Global Economic Prospects*. January 2020 baseline extended into 2023 and 2024 using projected growth for 2022.

F. "Low poverty headcount" are EMDEs with poverty headcount in the 25th percentile, and "high poverty headcount" are those in the 75th percentile. Bars show average per capita GDP growth over 2023-24 for 39 EMDEs. Whiskers show minimum-maximum range. Sample excludes Belarus and the Russian Federation. Poverty data are the poverty headcount ratio at $2.15 a day (2017 PPP).

most of the shortfall from trend (figure 1.1.E). This suggests that the negative shocks of the past three years—namely the pandemic, the invasion of Ukraine, and the rapid increase in inflation and associated tightening of monetary policy worldwide—are having a lasting impact on economic prospects.

In advanced economies, conditions have deteriorated sharply, owing to declining confidence alongside high inflation and rapid monetary policy tightening. In the United States, one of the most aggressive monetary policy tightening cycles in recent history is expected to slow growth sharply. The euro area is also contending with severe energy supply disruptions and price hikes associated with the Russian Federation's invasion of Ukraine. In all, growth in advanced economies is forecast to slow from 2.5 percent in 2022 to 0.5 percent in 2023.

In EMDEs, growth prospects have worsened materially, with the forecast for 2023 downgraded 0.8 percentage point to a subdued 3.4 percent. The downward revision results in large part from weaker external demand and tighter financing conditions. EMDE growth is anticipated to remain essentially unchanged in 2023 relative to last year, as a pickup in China offsets a decline in other EMDEs. Excluding China, EMDE growth is forecast to decelerate from 3.8 percent in 2022 to 2.7 percent in 2023 as significantly weaker external demand is compounded by high inflation, tighter financial conditions, and other domestic headwinds. The deviation between EMDE investment and its pre-pandemic trend is expected to remain substantial. EMDE investment growth is envisaged to remain below its 2000-21 average pace, dampened significantly by weakening activity, heightened uncertainty, and rising borrowing costs. Low-income countries (LICs) are expected to grow 5.1 percent in 2023, with forecasts downgraded in about 65 percent of countries. Cost-of-living increases and a deterioration in the external environment are weighing heavily on activity in many LICs and compounding weakness in LICs with fragile and conflict affected situations (FCS).

As a result of the sharp slowdown in global growth, per capita income is not expected to surpass 2019 levels until at least 2024 in about one-third of EMDEs. Per capita income growth is expected to be slowest where poverty is highest (figure 1.1.F). In Sub-Saharan Africa—which accounts for about 60 percent of the world's poor—growth in per capita income over 2023-24 is forecast to average only 1.2 percent, far less than the pace that would be needed over the remainder of the decade to reach a 3 percent poverty rate by 2030.

Soaring inflation reflects a combination of supply and demand factors, including large price increases for food and energy products priced in U.S. dollars. Inflation has risen particularly rapidly in poorer countries, partially due to the greater share of food in consumer spending. Relative to previous projections, global inflation is assumed to remain higher for longer. After peaking at 7.6 percent in 2022, global headline CPI inflation is expected to remain elevated at 5.2 percent in 2023 before easing to 3.2 percent in 2024, above its 2015-19 average of 2.3 percent.

Risks to the growth outlook are tilted to the downside. In light of high inflation and repeated negative supply shocks, there is substantial uncertainty about the impact of central bank policy in terms of both magnitude and timing. As a result, the risk of policy missteps is elevated. Global inflation may be pushed higher by renewed supply disruptions, including to key commodities, and elevated core inflation may persist. To bring inflation under control, central banks may need to hike policy rates more than is currently expected. Financial stress among sovereigns, banks, and nonbank financial institutions may result from the combination of additional monetary tightening, softer growth, and falling confidence in an environment of elevated debt. Given already-weak global growth, a combination of sharper monetary policy tightening and financial stress could result in a more pronounced slowdown or even a global recession this year (figures 1.2.A and 1.2.B). Weaker-than-expected activity in China amid pandemic-related disruptions and stress in the real estate sector, rising geopolitical tensions and trade fragmentation, and climate change could also result in markedly slower growth.

The weak global outlook and the heightened downside risks highlight the challenges facing

policy makers around the world. Urgent action is needed to attenuate the risk of global recession stemming, in part, from the fastest and most synchronized monetary tightening in decades. As they focus on reducing record-high inflation, central banks in advanced economies and EMDEs need to take into account the possibility that cross-border spillovers from other monetary authorities' actions may tighten financial conditions more than expected. Discussions among central banks can help mitigate risks associated with financial stability and avoid an excessive global economic slowdown in the pursuit of inflation objectives.

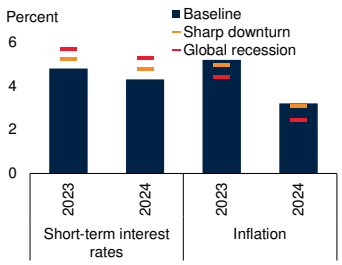
The international community needs to intensify its support to large numbers of displaced people and others affected by conflict or food insecurity, particularly in LICs (figure 1.2.C). In responding to food and energy shocks, governments need to avoid imposing export restrictions and instead attenuate the impact on the poor through support measures targeted at low-income groups. The international community also needs to reduce the risk of debt crises in EMDEs, including by supporting timely debt restructuring. Given the rising human and economic costs of more frequent climate-related disasters, particularly in small states, speedy action to foster the energy transition is critical for mitigating climate change.

Global efforts need to be complemented by decisive policy action at the national level. While monetary policy cycles are peaking in some EMDEs, further tightening may be needed in others to rein in inflation. Financial stability risks stoked by global and domestic policy tightening can be mitigated by strengthening macroprudential regulation and promptly addressing financial vulnerabilities such as rising nonperforming loans. Preemptively alleviating currency mismatches in EMDE corporate and financial sectors with proper financial policy can also reduce crisis risks. EMDE policy makers can take steps to bolster foreign exchange buffers as appropriate, which can be utilized in episodes of excessive volatility. Deployed appropriately, foreign exchange interventions can help stem temporary exchange rate pressures.

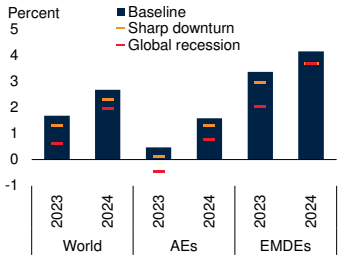
FIGURE 1.2 Global risks and policy challenges

Risks are tilted to the downside. Central banks may need to tighten more than expected to bring inflation under control. Given already-weak global growth, this could result in a sharper slowdown or even a global recession this year. A rising number of people are affected by food insecurity, especially in low-income countries. Fiscal challenges in emerging market and developing economies (EMDEs) have become more acute, as exemplified by a precipitous drop in bond issuance. The long-term effects of the adverse shocks of the past three years have led to substantial losses, particularly for EMDE investment and output, which could grow larger if downside scenarios materialize.

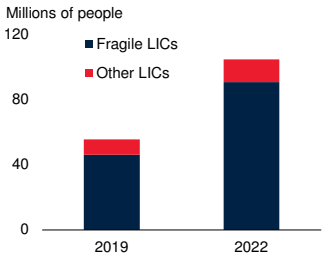
A. Global interest rates and inflation under different scenarios



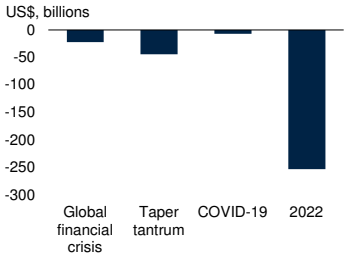
B. Global growth under different scenarios



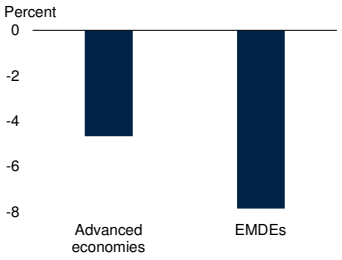
C. Food insecurity in LICs



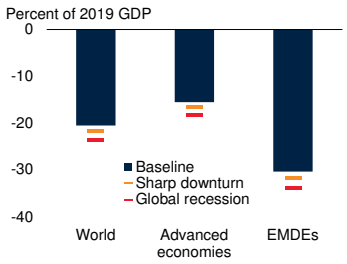
D. Change in bond issuance in EMDEs



E. Deviation of investment from pre-pandemic trends in 2024



F. Cumulative output losses, 2020-24



Sources: Bloomberg; Consensus Economics; Dealogic; FSIN and GNAFC (2022); GNAFC (2022); Guenette, Kose, and Sugawara (2022); Haver Analytics; Oxford Economics; World Bank.
Note: AEs = advanced economies; EMDEs = emerging market and developing economies; LICs = low-income countries; Fragile LICs = LICs with fragile and conflict affected situations. Unless indicated, aggregate growth rates calculated using real U.S. dollar GDP weights at average 2010-19 prices and market exchange rates. Data are estimates for 2022 and forecasts for 2023-24.
A.B. Scenarios use Oxford Economics *Global Economic Model*.
B. Growth aggregates computed by Oxford Economics using 2015 market exchange rates and prices.
C. Bars show the number of people in food crisis as classified by the Integrated Food Security Phase Classification (IPC/CH) Phase 3, that is, in acute food insecurity crisis or worse. Data for 2022 are estimates adapted from GNAFC (2022).
D. Bars indicate the change in public and private bond issuance during the ten months after the start of the event compared to the same period one year prior. The starting dates are August 2008 for Global financial crisis, June 2013 for Taper tantrum, March 2020 for COVID-19, and February 2022 for 2022.
E. Deviation between current forecasts and those of the January 2020 *Global Economic Prospects* report. For 2024, the January 2020 baseline is extended using projected growth for 2022.
F. Figure shows expected losses over 2020-24 relative to pre-pandemic trend as a percentage of 2019 GDP. Pre-pandemic trend based on January 2020 baseline extended using 2022 projections.

Tighter financing conditions, weaker growth, and elevated debt levels create significant fiscal challenges for EMDEs, exemplified by the recent precipitous fall in bond issuance (figure 1.2.D). Timely and carefully calibrated fiscal consolidation needs to be guided by credible medium-term frameworks, with a focus on reducing wasteful spending, such as inefficient agricultural and fuel subsidies, and ensuring that support for the poor and most vulnerable is well-targeted. Although increasing tax rates may be a challenge in the near term given weak growth prospects, revenues can nonetheless be bolstered by broadening the tax base through removing exemptions, progressively expanding coverage of under-taxed activities, and strengthening collection and administration mechanisms.

The long-term scarring effects of the overlapping adverse shocks of the past three years have led to large cumulative losses, especially with respect to EMDE output and investment (figure 1.2.E). These losses would be even larger in a sharper global downturn or recession (figure 1.2.F). To offset these losses and bolster green, resilient, and inclusive growth, EMDEs will need to make substantial investments in all forms of capital—human, physical, social, and natural. Given limited fiscal space, these investments will require private-sector involvement and new concessional financing from the international community. This can be complemented by structural reforms that improve the investment climate and reallocate public expenditures toward growth-enhancing investment. Such efforts will need to be accompanied by measures to strengthen social protection systems, foster gender equality, promote investments in human capital, and facilitate more resilient food systems.

Global context

Weakening global demand is weighing on global trade. Most commodity prices have eased, to varying degrees, although they are expected to remain well above their average of the past five years. High inflation is expected to persist for longer than previously expected. Monetary tightening and risk aversion have led to widespread currency depreciations and steep capital outflows from EMDEs.

Global trade

Global trade growth decelerated in the second half of 2022, in tandem with deteriorating activity in major economies. Weakening trade mirrored the slowdown in global industrial production, as demand shifted toward its pre-pandemic composition and away from goods. Despite this moderation, goods trade surpassed pre-pandemic levels last year; meanwhile, services trade continued to recover, supported by the gradual shift in demand toward services. Tourism flows rebounded as many countries eased travel restrictions but remained well below pre-pandemic levels and uneven across regions (WTO 2022).

Although global supply chain pressures are still above pre-pandemic levels, they have eased since mid-2022, as reflected in lower transportation costs and normalization of inventories (figures 1.3.A and 1.3.B). Weakening demand for goods is expected to reduce these pressures further in 2023.

After softening to 4 percent in 2022, global trade growth is expected to decelerate further to 1.6 percent in 2023, largely reflecting weakening global demand (figure 1.3.C). Trade is envisaged to be particularly subdued in EMDEs with strong trade linkages to major economies where demand is expected to slow sharply. In all, the current post-recession rebound in global trade is on course to be among the weakest on record (figure 1.3.D). Travel and tourism are expected to pick up further but will be constrained by slower global activity and high input costs. Goods trade is expected to moderate owing to subdued demand and a gradual shift in consumption toward services.

Weaker-than-expected global demand and renewed supply chain bottlenecks pose downside risks to the global trade outlook. In addition, an intensification in trade protectionism, fragmentation of trade networks, and security concerns about supply chains could increase trade costs and slow trade growth (Góes and Bekkers 2022; Rubínová and Sebti 2021).

Commodity markets

Most commodity prices have eased since June, to varying degrees, due to slowing global growth (figure 1.4.A; World Bank 2022a). Oil prices

declined from their mid-2022 peak amid demand concerns; for the year as a whole, the price of Brent crude oil averaged $100/bbl. European natural gas prices surged to an all-time high in August but have since fallen back toward pre-invasion levels as inventories filled and mild weather reduced demand for natural gas for heating. Coal prices reached a record high in the third quarter before starting to soften in the fourth.

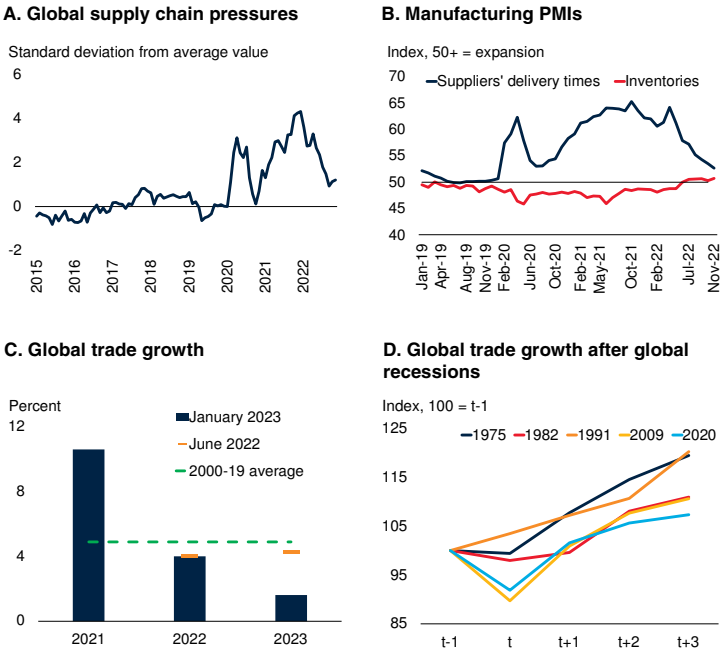
Meanwhile, metal prices fell in the second half of 2022 owing to slowing demand, particularly from China (figure 1.4.B; Baumeister, Verduzco-Bustos, and Ohnsorge 2022). Agricultural prices remain high but have also declined, particularly for wheat and vegetable oils, reflecting higher-than-expected crop yields, as well as a resumption of some exports from Ukraine. Concerns about food availability due to the invasion of Ukraine prompted many countries to impose export bans and other trade restrictions (figure 1.4.C). The extent of these restrictions, in both absolute numbers and as a share of caloric intake, have been comparable with those during the 2008 food price spike. However, because recent restrictions have been applied to a broad set of commodities, they have not affected global markets as much as those imposed in 2008 (which were applied mostly to rice and wheat and were also accompanied by large purchases from major importers).

Currency depreciations in many countries have resulted in higher commodity prices in local currency terms compared to the price in U.S. dollars. For instance, from February to November 2022, the price of Brent crude oil in U.S. dollars fell nearly 5 percent, but rose by 7 percent in domestic currency terms, on average, in advanced economies (excluding the United States) and by 5 percent in oil-importing EMDEs. As a result, commodity-driven inflationary pressures in many countries may be more persistent than indicated by recent declines in global commodity prices.

Going forward, energy prices are expected to ease in 2023 but remain higher than previously forecast, primarily reflecting an upward revision to coal prices. Crude oil prices are projected to moderate to an average of $88/bbl in 2023, $4/bbl below previous projections. The downward revision is primarily due to slower global growth and the subsequent weakness in oil demand in 2023, particularly in Europe. Russian oil exports are expected to fall in 2023 due to additional EU sanctions that started in December 2022 for crude oil and will begin in February 2023 for oil products. The overall reduction in Russia's exports is likely to be smaller than initially expected, however, as the G7 oil price cap will enable countries that import oil from Russia to continue

FIGURE 1.3 Global trade

Supply chain pressures continue to ease and are returning to historical averages amid rising inventories and falling shipping costs, while supplier delivery times are increasing at a slower pace. Global trade growth has been revised down substantially, in part reflecting deteriorating global demand. The recovery of global trade following the 2020 global recession is on course to be substantially weaker than the rebounds seen after previous global recessions.



Sources: Federal Reserve Bank of New York; Haver Analytics; Kose, Sugawara, and Terrones (2020); World Bank.

A. Figure shows the Global Supply Chain Pressure Index, as produced by the Federal Reserve Bank of New York. The index is normalized such that zero indicates the average value for the period January 1998-November 2022, while positive (negative) values represent how many standard deviations the index is above (below) the average value. Last observation is November 2022.

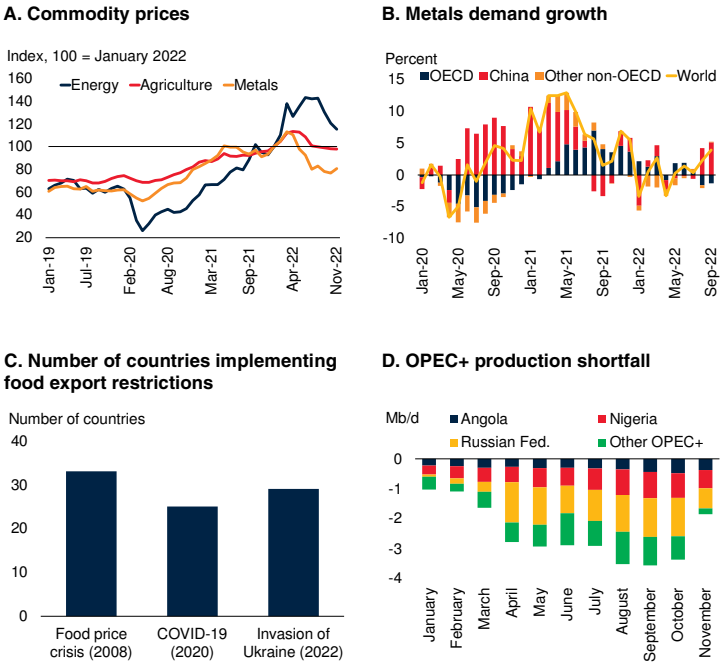
B. Figure shows manufacturing Purchasing Managers' Index (PMI) subcomponents. PMI data for delivery times are inverted by subtracting data from 100; therefore, increasing (decreasing) PMI data indicate faster (slower) delivery times. Last observation is November 2022.

C. Trade is measured as the average of export and import volumes. June 2022 refers to forecasts presented in the June 2022 edition of the *Global Economic Prospects* report.

D. Figure shows global trade recoveries after global recessions (1975, 1982, 1991, 2009, and 2020). Global recession is defined as a contraction in global per capita GDP, as described in Kose, Sugawara, and Terrones (2020).

FIGURE 1.4 Commodity markets

Most commodity prices have eased due to slowing global growth. Metals demand growth has seen a particularly marked slowdown. Concerns about food availability due to the invasion of Ukraine resulted in a number of countries implementing food export restrictions in 2022. OPEC+ announced a 2 mb/d reduction in their production target; however, the group is already producing below their official target.



Sources: Bloomberg; IEA (2022a); Laborde and Mamun (2022); World Bank; World Bureau of Metal Statistics.
Note: OPEC = Organization of the Petroleum Exporting Countries.
A. Last observation is November 2022.
B. Figure shows percent change in metal demand relative to same period in previous year. Last observation is September 2022.
C. Bars show the peak of number of countries during each period implementing food export restrictions.
D. Figure shows the difference in crude oil production compared to the target set by OPEC+ countries for 2022 based on IEA (2022a).

to access EU and UK insurance services, provided they adhere to the price cap (IEA 2022a). Beyond Russia, oil supply will increase modestly, mainly from the United States, while OPEC+ output will remain subject to their production agreement.

For natural gas, annual average prices are forecast to moderate in 2023. Demand for natural gas is expected to decline in 2023 as households and industrial users reduce consumption, while rapid growth in renewable energy generation will help moderate demand for natural gas for electricity generation. Nonetheless, further price spikes are possible. Exports from Russia are envisaged to remain significantly lower than before the onset of the war in Ukraine. In addition, competition for liquefied natural gas (LNG) will remain intense at the global level, as European countries continue to import large volumes of LNG to replace lower imports from Russia. Coal prices will ease from extremely elevated levels as production rises, especially in China and India.

The main downside risk to the energy price forecast is weaker-than-expected global growth. Oil consumption could also be lower as a result of more persistent pandemic-related restrictions in China. Upside risks chiefly relate to supply factors. U.S. shale oil production could disappoint as producers focus on returning cash to shareholders rather than increasing production. Disruption to Russia's exports could be larger than expected, while a cessation of the war in Ukraine could ease supply issues. Spare capacity among OPEC members is minimal, and OPEC+ members continue to produce well below target, in part because of low levels of investment in new production in recent years (figure 1.4.D). In addition, strategic inventories have been drawn down, leaving limited buffers in the event of unexpected new shocks. For natural gas and, to a lesser extent, coal, a cold winter in Europe could cause natural gas inventories to fall to very low levels, requiring additional refilling in 2023, and Europe could struggle to refill inventories ahead of the 2023 winter season.

Agricultural prices are projected to decline 5 percent in 2023 after rising 13 percent in 2022, largely reflecting better global production prospects and easing input costs, particularly for fertilizers. However, prices are expected to remain above pre-pandemic levels. Upward risks to food prices include the possibility that fertilizer prices will rise in response to higher natural gas prices and the closure of several fertilizer manufacturers in Europe, as well as the effects of a third consecutive year of La Niña in 2022.

Food insecurity remains a critical challenge in some EMDEs, reflecting the high number of food trade restrictions imposed last year, weather-related events, and the impact of the invasion of Ukraine and conflict elsewhere. As a result, about 220 million people are projected to face severe food insecurity in 2022, a number which

could rise further if upward risks to food prices materialize.

Metal prices are expected to decline 15 percent in 2023 reflecting slowing global growth. Weakness in China's property market will weigh on demand, though this may be tempered by infrastructure spending. Demand for metals from the renewable energy sector—made more competitive by high fossil fuel prices—is likely to remain strong in 2023. Metal prices may be higher than expected if elevated energy costs cause smelters to close and reduce production of refined metals. Conversely, weaker-than-expected growth, particularly in China, is a downside risk to prices.

Global inflation

Inflation rose throughout 2022 in almost all economies. Median global headline inflation exceeded 9 percent in the second half of the year, its highest level since 1995. Inflation reached almost 10 percent in EMDEs, its highest level since 2008, and in advanced economies just over 9 percent, the highest since 1982. Inflation was above target in virtually all countries that have adopted inflation targeting.

Soaring inflation in 2022 reflected a combination of demand and supply factors (Ha, Kose, and Ohnsorge 2022; Shapiro 2022). On the demand side, the acceleration of growth during the initial rebound from the 2020 global recession, as well as the lagged effects of earlier macroeconomic support, contributed to persistent price pressures. Price increases were particularly large in sectors such as shipping and air travel, where compositional shifts in demand encountered ongoing capacity constraints and supply chain disruptions (Kalemli-Özcan et al. 2022). On the supply side, shortages of key commodities, exacerbated by Russia's invasion of Ukraine, contributed substantially to higher energy and food prices. In some countries, tight conditions and mismatches in labor markets further added to rising wages and higher input and production costs. Finally, many countries experienced large currency depreciations that passed through into higher import, producer, and consumer prices. The higher share of food in consumer spending has caused inflation to accelerate more in low-income countries compared to other EMDEs.

Inflation has risen across a broad range of goods and services (Ball, Leigh, and Mishra 2022). Global core inflation has risen markedly, reaching over 6 percent late last year, its highest level since 1992. As a result, short-term (one-year-ahead) inflation expectations have risen in most economies (figure 1.5.A). In contrast, long-term (five-year-ahead) inflation expectations have been relatively more stable, edging up by only about 0.15 percentage point in both advanced economies and EMDEs since the onset of the pandemic. This stability may reflect the credibility of the commitment of most central banks to confront inflation, reinforced by recent policy tightening.

Inflationary pressures started to abate toward the end of 2022, reflecting weakening demand and easing commodity prices. The share of countries where inflation is accelerating is trending down (figure 1.5.B). In the face of substantial monetary tightening, slowing activity, easing supply chain disruptions, and moderating prices for many non-energy commodities, both core and headline inflation are expected to decline over the forecast horizon. In many countries, however, high core inflation has been unexpectedly persistent, suggesting that global inflation will remain elevated for longer than previously envisaged.

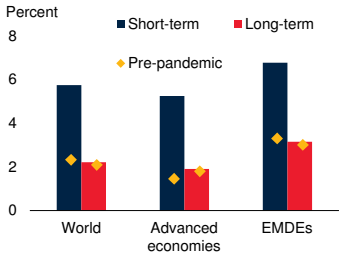
Financial developments

Global financial conditions have tightened sharply, with risk appetite dampened by slowing global growth, persistently elevated inflation, and faster-than-expected monetary tightening (figure 1.5.C). Long-term government bond yields in the United States and Germany increased at their fastest pace in nearly three decades in 2022, reaching their highest levels since 2007 and 2011, respectively, in October. In the United Kingdom, a sharp deterioration in liquidity related to collateral calls on pension fund derivative positions prompted central bank intervention in gilt markets for financial stability purposes. Equity markets worldwide saw substantial declines—by December, the MSCI World equity index had

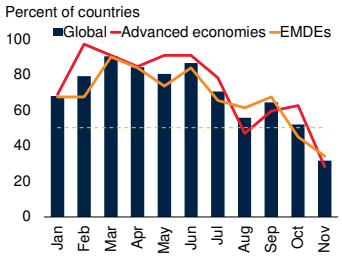
FIGURE 1.5 Global inflation and financial developments

Global inflation surged in 2022. Short-term inflation expectations have risen in most countries; however, long-term expectations have been more stable. Global inflation has started to abate as fewer countries experience accelerating price increases. Amid faster-than-expected advanced-economy monetary policy tightening, the currencies of emerging market and developing economies (EMDEs) with large fiscal deficits have depreciated sharply. Bond issuance in EMDEs has also declined markedly, while sovereign borrowing spreads have risen particularly sharply in energy importers with weak credit ratings.

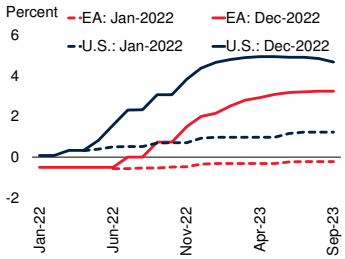
A. Inflation expectations



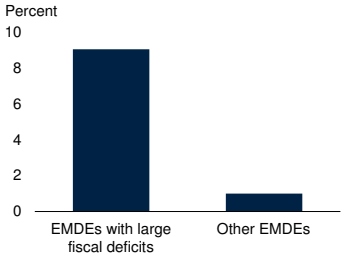
B. Share of economies with rising inflation



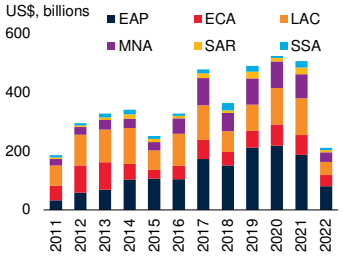
C. U.S. and euro area interest rate expectations



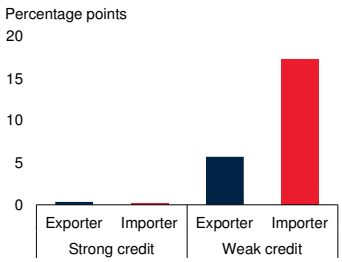
D. EMDE currency depreciation against the U.S. dollar in 2022



E. EMDE bond issuance, by region



F. EMDE sovereign spread changes in 2022, by credit rating and energy exporter status



Sources: BIS (database); Bloomberg; Consensus Economics; Dealogic; Haver Analytics; JP Morgan; Moody's; WEO (database); World Bank.

Note: EAP = East Asia and Pacific, ECA = Europe and Central Asia, LAC = Latin America and the Caribbean, MNA = Middle East and North Africa, SAR = South Asia, SSA = Sub-Saharan Africa; EA = Euro area; EMBI = Emerging Markets Bond Index; EMDEs = emerging market and developing economies.

A. Median one-year-ahead (short-term) and five-year-ahead (long-term) CPI inflation expectations for up to 33 advanced economies and 50 EMDEs, based on December 2022 surveys. Yellow diamonds indicate pre-pandemic levels based on January 2020 surveys.

B. Last observation is November 2022. Median inflation for 32 advanced economies and 48 EMDEs.

C. Policy rate expectations, starting on January 2023, derived from futures curves observed on December 16, 2022.

D. Simple average of change in U.S. dollar exchange rates for 114 EMDEs with estimated fiscal deficits greater (less) than 3 percent of GDP in 2022. Last observation is December 16, 2022.

E. Sovereign and corporate bond issuance, January to November. Unbalanced sample of up to 76 EMDEs (9 EAP, 16 ECA, 17 LAC, 10 MNA, 4 SAR, and 20 SSA).

F. Change in EMBI spreads since January 2022, using Moody's sovereign foreign currency ratings. Sample includes 11 EMDE energy exporters and 35 EMDE energy importers. Strong credit defined as ratings from Aaa to Baa3. Weak credit defined as ratings from Caa to Ca. Sample excludes Belarus, the Russian Federation, and Ukraine. Last observation is December 13, 2022.

declined nearly 20 percent since the start of the year, with equity market indexes down more than 15 percent (in U.S. dollar terms) in about half of countries.

As in past tightening episodes, tighter monetary policy in advanced economies weighed on EMDE capital flows. China experienced sizable debt market outflows in 2022, while other EMDEs remained in a protracted period of generally weak debt and equity flows that started in 2021. The U.S. dollar also appreciated markedly in 2022, by about 14 percent on a GDP-weighted basis by October, before moderating somewhat later in the year. Most EMDE currencies depreciated against the U.S. dollar, but economies with fiscal deficits greater than 3 percent of GDP saw eight times more depreciation, on average, than other EMDEs (figure 1.5.D).

Dollar strength has squeezed a wide range of borrowers with net dollar exposures and has contributed to inflation in countries with depreciating currencies. To forestall more acute capital outflows and currency depreciation pressures, many EMDE monetary authorities extended domestic tightening cycles or used foreign exchange reserves to lean against currency pressures. Increasingly difficult market conditions led EMDE bond issuance in 2022 to fall to its lowest level in 10 years (figure 1.5.E). Investors increasingly shied away from the debt of the most vulnerable EMDEs, where financial crisis risks are mounting. Energy importers with weak credit ratings saw especially sharp increases in sovereign spreads, adding to the difficulty of financing large current account deficits (figure 1.5.F). Spreads on dollar-denominated debt exceed 10 percentage points in about one-in-five EMDEs, effectively locking them out of global debt markets. This is up from less than one-in-fifteen in 2019.

Major economies: Recent developments and outlook

Conditions in advanced economies have deteriorated sharply since mid-2022 amid high inflation, rapid monetary tightening, reduced fiscal support, and major energy disruptions in Europe. The monetary tightening cycle and continued energy supply pressures

are projected to slow growth further in 2023, especially in the euro area. In China, activity weakened last year and remains vulnerable to a prolonged drag from the real estate sector and continued pandemic-related disruptions.

Advanced economies

Advanced economy growth slowed from 5.3 percent in 2021 to an estimated 2.5 percent in 2022—the fourth fastest deceleration of the past five decades. Economic conditions deteriorated substantially in the second half of 2022 as high inflation eroded household purchasing power and dented confidence, while rapid monetary policy tightening weighed on demand. Housing prices and property-related activity have cooled. Gas supply to the euro area was disrupted by Russia's invasion of Ukraine, pushing up energy prices and inflation, hampering industrial production, and stoking uncertainty.

Growth in advanced economies is projected to slow sharply in 2023, to 0.5 percent, as central banks continue to tighten monetary policy to contain inflationary pressures, labor markets soften, and energy market disruptions in Europe persist. Growth is expected to pick up modestly in 2024, as policy headwinds abate and energy markets stabilize. Persistent high inflation requiring an even more aggressive monetary policy response represents a major downside risk, as do prolonged energy supply disruptions in Europe.

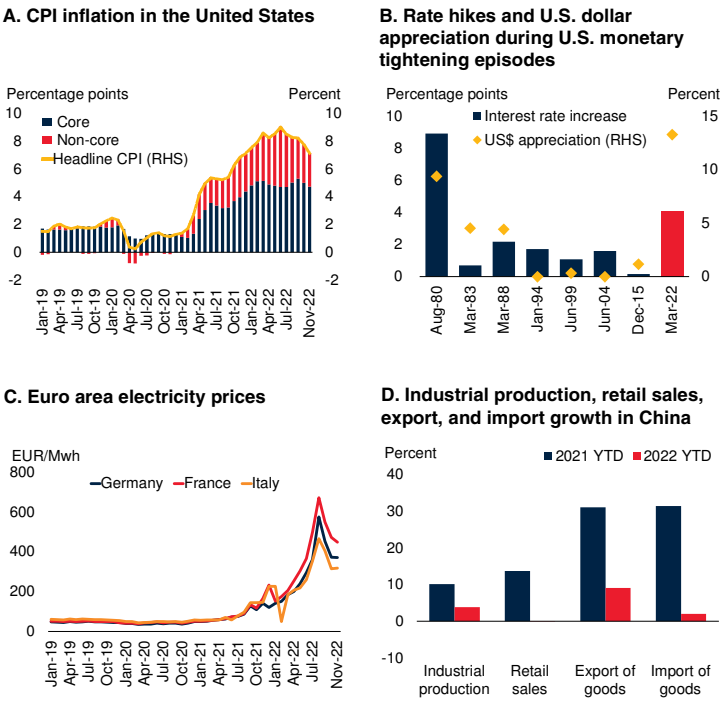
In the **United States**, rising food and energy prices, together with a tight labor market, pushed inflation to multi-decade highs in 2022, before price pressures began easing toward the end of the year (figure 1.6.A). This has prompted the most rapid monetary policy tightening in more than 40 years (figure 1.6.B). Activity contracted in the first half of 2022, and domestic demand remained weak in the second half, with particular softness in residential investment. In all, growth for 2022 is estimated to have slowed to 1.9 percent as substantial fiscal consolidation—worth about 5 percent of GDP—added to monetary policy headwinds.

Continued macroeconomic policy tightening to contain inflationary pressures this year is envisaged to compound the lagged effects of substantial interest rate increases in 2022 and further weigh on U.S. activity. Growth is projected to slow to 0.5 percent in 2023—1.9 percentage points below previous forecasts—the weakest performance outside official recessions since 1970. Inflation is expected to moderate in 2023 as labor markets soften and wage pressures abate.

In the **euro area**, activity in the first half of 2022 exceeded expectations, resulting in annual growth being revised up to 3.3 percent. In the second half

FIGURE 1.6 Major economies: Recent developments and outlook

In the United States, inflation rose to multidecade highs, prompting the most rapid tightening of monetary policy in more than 40 years. In the euro area, energy prices soared as natural gas supplies were severely disrupted. Activity in China slowed due to pandemic-related restrictions and ongoing stress in the property sector.



Sources: BIS (database); Bloomberg; Federal Reserve Economic Data; Haver Analytics; U.S. Bureau of Labor Statistics; World Bank.

A. CPI refers to consumer price index. Bars show contributions to year-on-year headline CPI inflation. Line shows year-on-year headline CPI inflation. Last observation is November 2022.

B. Bars represent the extent of the U.S. interest rate increase in the first 9 months of tightening cycle. Yellow diamonds represent the peak appreciation in the U.S. dollar nominal effective exchange rate in the first 9 months of tightening cycle. U.S. dollar depreciations during tightening cycles starting in 1994 and 2004 not shown. Horizontal axis represents the start of each tightening cycle since 1980. Last observation for nominal effective exchange rate is October 2022.

C. Figure shows one-year-forward baseload electricity prices. Last observation is November 2022.

D. Bars denote the year-to-date real growth of industrial production from January to November and year-to-date nominal growth of retail sales and goods exports and imports from January to November. Last observation is November 2022.

of the year, however, activity weakened substantially as a result of soaring energy prices and supply uncertainty, compounded by rising borrowing costs. Inflation rose to record highs as Russia's invasion of Ukraine led to natural gas supply cuts and surging energy prices—which, despite some recent moderation, remain well above pre-invasion levels (figure 1.6.C). Broad-ranging fiscal measures introduced by European governments, estimated at 1.2 percent of GDP in 2022 and up to almost 2 percent of GDP in 2023, aimed to cushion the impact of energy price increases on households and businesses (European Commission 2022).

In 2023, euro area growth is forecast at zero percent—a downward revision of 1.9 percentage points, owing to ongoing energy supply disruptions and more monetary policy tightening than expected. Activity is expected to contract in the first half of 2023 before stabilizing later in the year. Inflation is envisaged to moderate as labor markets cool and energy prices decline.

In **Japan**, growth slowed in 2022 as high energy prices and supply bottlenecks eroded household purchasing power and dampened consumption. Deteriorating terms of trade and weakening global demand added to these headwinds. Growth is expected to slow further to 1 percent in 2023, alongside a slowdown in other advanced economies.

China

Economic activity in China deteriorated markedly in 2022 (figure 1.6.D). COVID-19 related restrictions, unprecedented droughts, and ongoing property sector stress restrained consumption, production, and residential investment (World Bank 2022b). Property sales, housing starts, and new-home prices have continued to decline, and several property developers have defaulted on their debt obligations. Infrastructure-focused fiscal support, policy rate and reserve requirement ratio cuts, and regulatory easing measures—including cash subsidies and lower down payment requirements—have only partially offset these headwinds. In all, growth is estimated to have slowed to 2.7 percent in 2022, 1.6 percentage points below previous forecasts—and, with the exception of 2020, the weakest pace of growth since the mid-1970s.

Growth is projected to pick up to 4.3 percent in 2023 as the lifting of pandemic restrictions releases pent-up consumer spending. This is 0.9 percentage point below previous forecasts, primarily due to longer-than-expected pandemic-related disruptions, weaker external demand, and protracted weakness in the real estate sector. Continued disruptions from COVID-19, extreme weather events, and prolonged real estate sector stress are key downside risks.

Emerging market and developing economies

The outlook for EMDEs has deteriorated markedly due to tighter financial conditions and weaker external demand. High inflation, monetary policy tightening, and adverse effects from the Russian Federation's invasion of Ukraine are expected to weigh on EMDE activity. LICs are being particularly affected by high prices and shortages of food.

Recent developments

Activity in EMDEs decelerated sharply in 2022 as global financial conditions tightened, high inflation weighed on consumer spending, weakness in the world's largest economies dampened external demand, and spillovers from the Russian Federation's invasion of Ukraine persisted. Growth nearly halved from 6.7 percent in 2021 to an estimated 3.4 percent in 2022—the sharpest deceleration in EMDE growth outside of the 2009 and 2020 global recessions (figure 1.7.A). A steep fall in activity in the second half of the year contributed to downgrades in growth estimates for 2022 in many EMDEs and is set to be a drag on growth in 2023 (figure 1.7.B).

Inflation in many EMDEs has outpaced nominal wage growth. Price increases have dented real incomes, particularly for vulnerable households, and weighed on consumption (figure 1.7.C; Argente and Lee 2021; Ha, Kose, and Ohnsorge 2019a). Private investment has been feeble, reflecting higher borrowing costs, weakened confidence, and elevated uncertainty. Decelerating global demand has weighed on EMDE export growth, especially in economies with strong trade linkages with the United States, the euro area, and

China. However, a rebound in tourism led to stronger-than-expected growth in tourism-reliant economies, including many small states (figure 1.7.D).

Growth estimates for 2022 in energy-exporting EMDEs were revised up, as the positive effects of high energy prices offset domestic demand weakness (figure 1.7.E). The improvement, however, was held back by supply constraints in some oil exporters, owing to a prolonged period of subdued investment (chapter 3). Activity among metal exporters was weaker than expected in 2022, reflecting softening external demand, especially from China, and the high cost of production, which tends to be energy intensive (World Bank 2022a). Estimated growth last year in many agricultural exporters was revised down as a result of supply disruptions, high input costs, and unfavorable weather. In commodity importers, growth is estimated to have fallen from 7.6 percent in 2021 to 3.6 percent in 2022, partly reflecting the impact from high food and energy prices.

Activity in LICs deteriorated over the course of the year as food insecurity and poverty worsened, with inflation in the median LIC doubling since early 2022. Cost-of-living increases and surging import bills have weighed on growth, particularly in LICs without the policy space to shield vulnerable populations from rising food and fuel prices. Activity in LICs is also suffering from slowing external demand, debt distress, and ongoing conflict and fragility (figure 1.7.F).

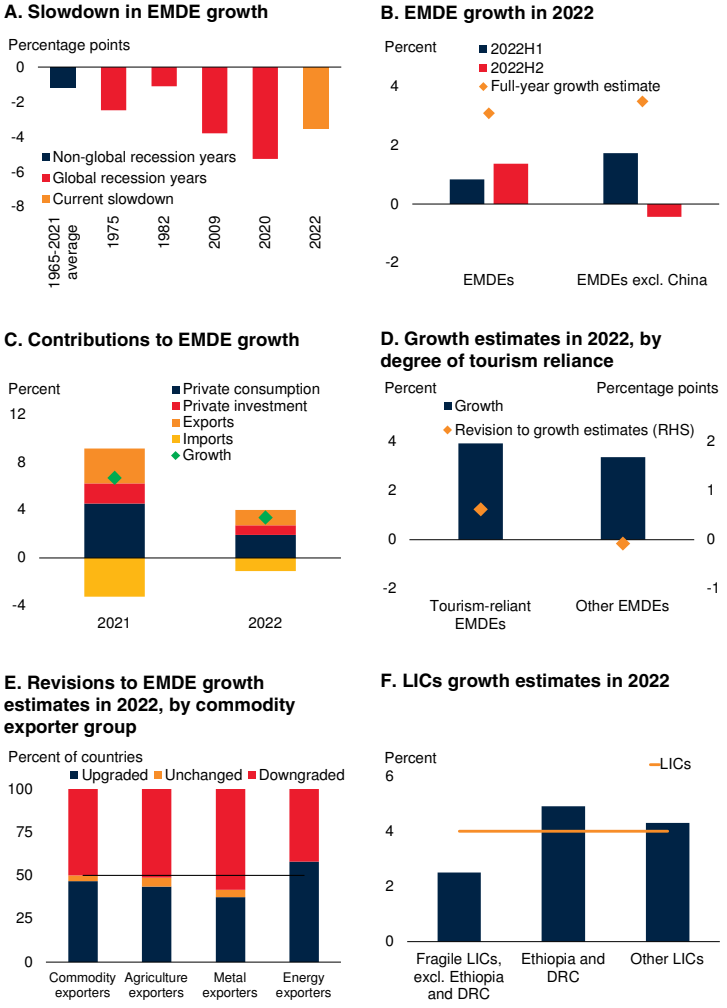
Outlook

EMDE outlook

Following last year's sharp deceleration, growth in EMDEs is forecast to remain essentially unchanged at 3.4 percent in 2023. However, excluding China—where growth is expected to partially recover after a weak 2022—EMDE activity is forecast to again slow markedly this year, to 2.7 percent (figure 1.8.A). Spillovers from weaker growth in the euro area and the United States are expected to dampen activity in EMDEs, especially those with tighter economic linkages to these major economies (ECA, LAC, SSA; box 1.1).

FIGURE 1.7 Recent developments in emerging market and developing economies

Growth in emerging market and developing economies (EMDEs) slowed significantly in 2022, particularly in the second half of the year, owing to tighter global financial conditions and ongoing effects of the Russian Federation's invasion of Ukraine. The acceleration in inflation dampened private consumption, while weak external demand weighed on EMDE exports. Growth estimates for 2022 have been revised up for many energy exporters and tourism-reliant economies; in contrast, downgrades have been particularly prevalent in non-energy commodity exporters. In low-income countries, conflict and fragility have weighed on activity.



Sources: Haver Analytics; Kose, Sugawara, and Terrones (2020); United Nations World Tourism Organization; World Bank.

Note: DRC = Democratic Republic of Congo; EMDEs = emerging market and developing economies; LICs = low-income countries; Fragile LICs = LICs with fragile and conflict affected situations. Unless otherwise indicated, aggregate growth rates are calculated using real U.S. dollar GDP weights at average 2010-19 prices and market exchange rates. Forecast revisions are the change in 2022 growth forecasts between the June 2022 and January 2023 editions of *Global Economic Prospects*. Growth rates may differ than what is presented in table 1.1 due to sample size.

A. Blue bar denotes the average EMDE growth slowdown in non-global recession years since 1962. Red bars denote EMDE growth slowdowns that coincided with global recession years (1975, 1982, 2009, and 2020). Global recession is a contraction in global per capita GDP, as described in Kose, Sugawara, and Terrones (2020). Sample includes 101 EMDEs.

B. Growth for period averages is calculated from quarterly growth rates, which are seasonally adjusted annual rates. Balanced sample includes 31 EMDEs.

D. "Tourism-reliant" EMDEs are those in the top quartile of inbound tourism expenditures as a share of GDP (2015-19 average). Sample size includes 35 tourism-reliant economies and 109 other EMDEs.

E. Sample includes 90 EMDE commodity exporters.

F. Sample includes 23 LICs, including 13 fragile LICs.

BOX 1.1 Regional perspectives: Outlook and risks

The forecast for growth in 2023 and 2024 combined has been downgraded for every emerging market and developing economy (EMDE) region. Monetary policy tightening, and restrictive global financial conditions are slowing growth, especially in LAC, SAR, and SSA. Persistently elevated energy prices are expected to dampen outlooks for energy importers in all regions, while falling metals prices will weigh on terms of trade in LAC and SSA. The projected slowdown in advanced economy import demand is expected to especially impact EAP and ECA. Added to the pandemic-induced recession and incomplete recovery, the outlook implies feeble per capita income growth in LAC, MNA, and SSA in the half decade to 2024. Risks to the baseline forecasts are skewed to the downside in all regions. They include the possibility of financial stress and greater spillovers from major advanced economy weakness (especially in EAP, ECA, LAC, and SSA), commodity price shocks (especially in ECA, EAP, and SAR), conflict (particularly in ECA, MNA, and SSA), and natural disasters (with elevated risk in subregions in EAP, LAC, and SAR).

Introduction

Emerging market and developing economy (EMDE) regions are contending with varied headwinds. These include spillovers from subdued conditions in major economies; the repercussions of the Russian Federation's invasion of Ukraine, including high food and energy prices; tightening financial conditions; and continued fiscal consolidation. These factors are expected to hinder EMDE growth in 2023 and 2024, to varying degrees across the regions. Growth is expected to be weakest in ECA, where the effects of the war and a sharp slowdown in the euro area are greatest, and in LAC, where commodity tailwinds are unwinding amid sharp policy tightening to contain inflation. MNA is projected to experience rapid slowing from a decade-high growth rate in 2022, driven by surging oil prices. The outlook remains comparatively resilient in SAR, due to limited spillovers to India from a projected global slowdown, but growth is nonetheless expected to decelerate notably in 2023. Growth is set to gradually firm in EAP and SSA in 2023 and 2024, but from low starting points due to weakness in large regional economies. The baseline projection of broadly lackluster growth leaves EMDE regions vulnerable to further negative shocks. These could take the form of balance of payments difficulties, debt crises, weaker external demand, food and energy price shocks, and climate-related natural disasters.

Against this backdrop, this box considers two questions:

- What are the cross-regional differences in the outlook for growth?
- What are the key risks to the outlook for each region?

Note: This box was prepared by Phil Kenworthy

Outlook

EMDE regions face numerous spillovers from the darkening global economic outlook, along with weakening domestic conditions. The forecast for growth in 2023 and 2024 combined has been downgraded for every EMDE region since June (figure B1.1.1.A). Growth is projected to be weakest in ECA, with output virtually flat in 2023 for a second consecutive year, reflecting a deep contraction in Russia and weak growth elsewhere. The outlook in LAC is also for anemic growth in 2023, as a recovery boosted by commodity tailwinds unwinds, with only a limited rebound in 2024. After growth at a decade-high rate in 2022, driven by surging energy prices, MNA's economy is expected to decelerate rapidly toward its average 2010s growth rate. Weakness in China weighed on activity in EAP in 2022, though expansion was firmer in the rest of the region. Some improvement in activity is forecast in 2023 and 2024, underpinned by a partial recovery in China, but growth overall is projected to remain slower than in the pre-pandemic decade.

In SSA, a firming but still mediocre growth outlook suggests only limited progress with poverty reduction. Though set to decelerate, SAR is expected to remain the fastest growing EMDE region accross the forecast horizon, driven by India. Nonetheless, Pakistan faces mounting economic difficulties and Sri Lanka remains in crisis. In all regions, improvements in living standards over the half-decade to 2024 are expected to be slower than from 2010-19 (figure B1.1.1.B). In LAC and SSA, per capita incomes are expected to further diverge from those in advanced economies, rather than catching up.

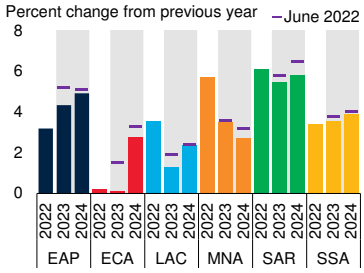
Restrictive global financial conditions and domestic monetary tightening are weighing on most regional outlooks by discouraging investment and raising debt

BOX 1.1 Regional perspectives: Outlook and risks (*continued*)

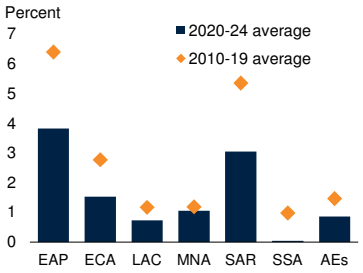
FIGURE B1.1.1 Regional outlooks

Growth forecasts have been downgraded in all EMDE regions since June, reflecting external headwinds as well as weakening domestic conditions. In almost all regions, per capita income growth in 2020-24 is expected to be far below 2010-19 averages. Monetary policies have been tightened in many EMDEs to combat inflation and stave off external financing pressures. Amid high inflation, real effective exchange rates have appreciated in most EMDE regions.

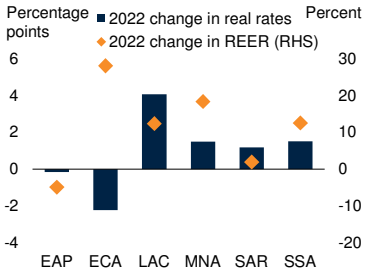
A. Output growth



B. Average annual per capita GDP growth



C. Changes in real policy interest rates and real effective exchange rates in 2022



Sources: BIS (database); Bloomberg; Consensus Economics; Haver Analytics; International Monetary Fund; United Nations Population Division; World Bank.
Note: AEs = advanced economies; EAP = East Asia and Pacific, ECA = Europe and Central Asia, LAC = Latin America and the Caribbean, MNA = Middle East and North Africa, SAR = South Asia, SSA = Sub-Saharan Africa; REER = real effective exchange rate.
A.B. Aggregate growth rates are calculated using GDP weights at average 2010-19 prices and market exchange rates.
A. June 2022 refers to forecasts presented in the June 2022 edition of the *Global Economic Prospects* report. Shaded areas indicate forecasts.
C. Real interest rates are policy rates minus one-year-ahead inflation expectations. One-year-ahead expectations are calculated as a weighted average of Consensus Economics or Bloomberg private forecasters median expectations for annual inflation in 2022 and 2023. Regional values are GDP-weighted averages of the three largest economies in each region, excluding economies where inflation is above 50 percent year-on-year (Argentina and Türkiye). The change in real interest rates is from the end of 2021 to November, 2022. Change in real effective exchange rate is a GDP-weighted average of the change from December 31, 2021, to December 16, 2022. REERs are based on consumer price inflation. Sample contains 54 EMDEs (9 in EAP, 12 in ECA, 14 in LAC, 7 in MNA, 2 in SAR, and 10 in SSA).

service costs, with the most pronounced effects in LAC, SAR, and SSA. Many EMDEs are also pursuing necessary fiscal adjustments, which nonetheless dampen near-term growth prospects. The sharpest tightening of monetary policy has taken place in LAC, where inflation-targeting central banks reacted to accelerating prices with steep rate hikes earlier than in other regions. Higher interest rates, in real as well as nominal terms, may help to limit currency depreciations and ensure macroeconomic stability in the medium-term, but are expected to dampen domestic demand in 2023 and 2024 (figure B1.1.1.C).

In SAR and SSA, fiscal and monetary policies have become less accommodative more recently, as authorities seek lower fiscal deficits and higher real interest rates to stem external financing pressures and bear down on rising inflation. In MNA, monetary policy has tightened in both net oil importers and exporters—in the former, to curb soaring inflation and current account deficits; in the latter, in line with pegged exchange rates and in recognition of substantial price pressures on households. In ECA, nominal policy rates have risen to multidecade highs in many countries but have been outstripped by soaring prices; real rates have fallen sharply as a result. Many ECA authorities have also implemented emergency fiscal measures to support populations facing plummeting real incomes due to war-related energy supply disruptions. Monetary and fiscal policy has eased somewhat in China, where activity has been weak and inflation below target. Elsewhere in EAP, policy has started to tighten due to mounting inflation and price pressures, albeit with inflation still lower than in other regions.

As growth in advanced economies slows sharply, EMDE export growth will weaken. The projected contraction in the euro area is set to weigh on ECA and net oil importers in MNA. A subdued global growth outlook also implies limited demand growth for primary commodity exports, including from LAC and SSA, though gradually firming import demand in China should provide some offset. Producers of manufactured goods in EAP and LAC are heavily exposed to the sharp

BOX 1.1 Regional perspectives: Outlook and risks (*continued*)

deceleration projected for the United States. In SAR, in contrast, limited trade openness reduces direct vulnerability to trade spillovers. High inflation and substantial weakening of several advanced economy currencies have also contributed to appreciating real effective exchange rates in most EMDE regions, eroding competitiveness. In ECA, real appreciation reflects falls in the euro and sterling, the appreciation of the Russian ruble, and broad-based double-digit domestic inflation. In LAC, high inflation has been paired with resilient domestic currencies, reflecting strong commodity exports and rising real interest rates. Energy producers in MNA and SSA have also seen large real appreciations due to export windfalls (combined with fixed exchange rates, in many cases). EAP and SAR are the only regions where real effective exchange rates did not strengthen significantly in 2022, due to the weakening Chinese renminbi and sharp nominal currency depreciations in Pakistan and Sri Lanka, respectively.

Diverging commodity prices are another key factor driving regional prospects. Despite slowing global growth, energy prices are expected to remain elevated. In contrast, most metal prices fell appreciably in 2022 and are expected to decline by a further 15 percent (in U.S. dollar terms) in 2023 (World Bank 2022a). The only EMDE region where growth is bolstered by the commodity price outlook is MNA, due to the preponderance of energy exporters. In LAC and SSA, while fossil fuel exporters are benefitting from high energy prices, exporters of industrial metals are suffering from worsening terms of trade that are expected to weaken investment and output growth. The effects of commodity price movements are also mixed in ECA. Energy exporters are likely to continue seeing elevated export earnings, but sharply higher energy and food prices will suppress regionwide consumption. Most large economies in EAP and SAR depend on imported energy, with heavy use of coal and gas for which prices are expected to remain especially elevated. In some countries this implies a continued squeeze in consumer spending; in others, price controls and subsidies may initially shield households, but fiscal burdens and distortions associated with such policies will grow (World Bank 2022b).

Risks

The baseline projection is subject to a range of downside risks, stemming from additional global policy tightening, adverse geopolitical developments, and varied domestic challenges. Additional tightening of global financial conditions poses substantial risks in ECA, LAC, and SSA, given the size and composition of regional debt stocks. Further increases in energy and food prices, potentially linked to an intensifying war in Ukraine, would weigh heavily on SAR and SSA, and on energy importers in ECA and MNA. Trade spillovers from weaker-than-anticipated economic activity in advanced economies could undermine manufacturing output in EAP and LAC. On the domestic front, EMDE regions also face risks from worsening conflicts (in ECA, MNA, and SSA), and extreme climate-related weather events (especially in small states in EAP and LAC).

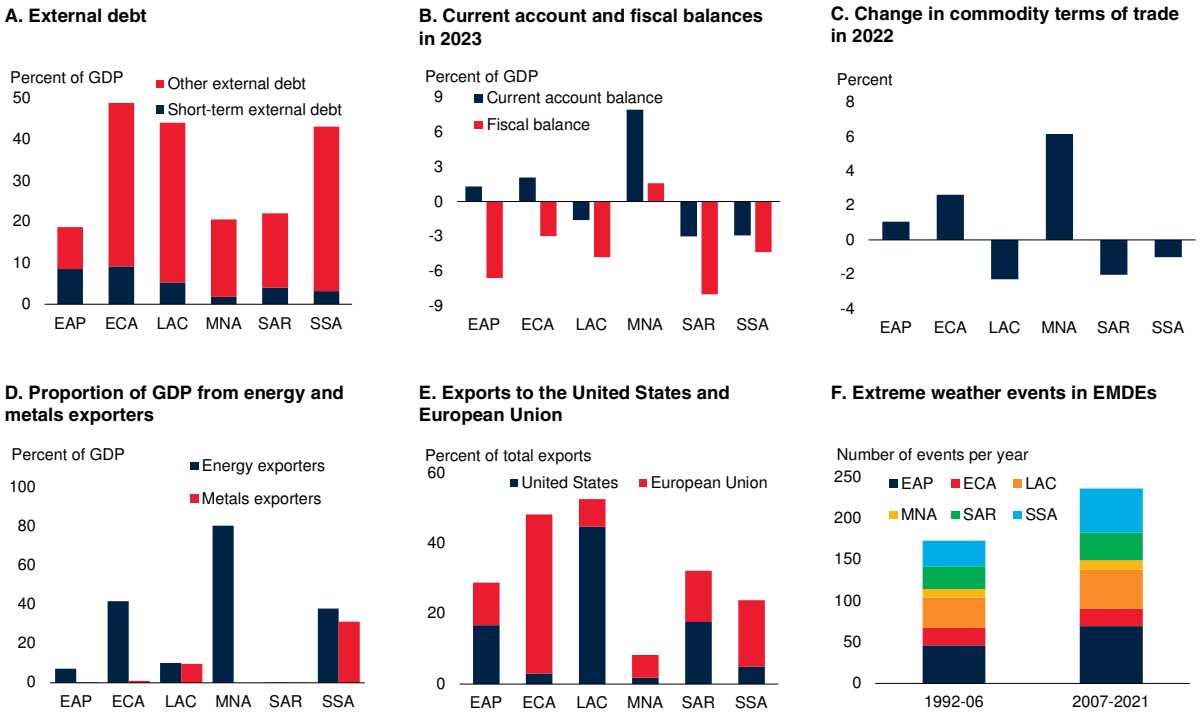
A disorderly tightening of financial conditions is a key risk facing EMDEs. It could be triggered by further increases in advanced-economy interest rates in response to persistent elevated inflation, combined with deteriorating global risk sentiment (Obstfeld 2022a). The EMDEs at greatest risk of financial stress are those with large stocks of externally held debt, especially at short maturities or denominated in foreign currency. These liabilities could become increasingly costly to service and roll over, generating stress in sovereign, corporate, or financial sectors. Risks appear greatest in ECA, LAC, and SSA, owing to different combinations of high corporate indebtedness (ECA and LAC), large sovereign debts (ECA and SSA), and sizable currency depreciations against the U.S. dollar (SSA; figure B1.1.2.A). Difficulties accessing external credit are especially likely in countries with large fiscal and current account deficits. In LAC, SAR, and SSA, there are large regional economies where these risks are substantial, though all regions contain some countries where they are elevated (figure B1.1.2.B).

If energy prices are higher than projected, several EMDE regions could see further commodity-driven deterioration in their terms of trade (figure B1.1.2.C). A broad range of factors could prompt an energy price spike, including a spell of unusually cold weather in Europe, continued sluggish supply responses from U.S. shale producers, and further geopolitical turmoil involving energy exporters. The resulting impacts on regionwide import prices and current account balances could be large in EAP and SAR, where energy importers make up the vast majority of regional GDP (figure B1.1.2.D). In ECA, though there could be windfall

BOX 1.1 Regional perspectives: Outlook and risks (*continued*)

FIGURE B1.1.2 Regional risks

Against a backdrop of tightening financial conditions and a strong U.S. dollar, regions with large external debts or wide fiscal and external deficits are at particular risk of financial stress. Further increases in energy prices could weigh on EMDEs that rely on energy imports, while weakening global demand could have outsized effects on metal exporters. Weaker-than-expected growth in advanced economies would dampen EMDE export demand. Weather-related natural disasters are an ever-present risk, especially for parts of SAR and small states in EAP and LAC, and climate change is increasing their frequency.



Sources: Comtrade (database); EM-DAT (database); International Monetary Fund; Kose et al. (2022); World Bank.

Note: AEs = advanced economies; EAP = East Asia and Pacific, ECA = Europe and Central Asia, EMDE = emerging market and developing economy, LAC = Latin America and the Caribbean, MNA = Middle East and North Africa, SAR = South Asia, SSA = Sub-Saharan Africa.

A. GDP-weighted average of gross debt held by nonresidents as a share of GDP. Short-term external debt is external debt maturing is less than one year. Data for 2021, except for SSA (2020 data). Debt holdings across different countries within a region are counted as external.

B. GDP-weighted averages of forecast current account and general government balances in 2023.

C. GDP-weighted average of regional change in commodity terms of trade between December 2021 and October 2022. Commodity terms of trade is based on commodity net export price index, constructed from commodities weighted by ratio of net exports to total commodity trade, with rolling weights. Sample includes 146 EMDEs (20 in EAP, 22 in ECA, 32 in LAC, 18 in MNA, 8 in SAR, and 46 in SSA).

D. An economy is defined as an exporter of energy or metals when, on average in 2017-19, exports of that commodity category accounted for 20 percent or more of total exports. Economies for which the thresholds were met as a result of re-exports are excluded. When data are not available, judgment is used. This taxonomy results in the exclusion of some well-diversified economies with a broad range of exports, even if they are exporters of certain commodities. Data for 2023, based on forecasts.

E. Sources of export demand for 2019 and 2020 combined. Percent of gross regional exports (that is, total regional exports include intraregional exports).

F. Simple average of events per year throughout the specified time periods. Storms, droughts, floods, and extreme heat episodes are classified as extreme weather events.

gains for energy exporters, the already intense pressure on terms of trade in Central and Eastern Europe would worsen, and negative trade spillovers from the euro area could intensify. The adverse implications for global growth could also prompt sharper than assumed falls in metals prices, which would widen external imbalances and exacerbate downside risks for metal exporters in LAC and SSA (Baumeister, Verduzco-Bustos, and Ohnsorge 2022; Di Pace, Juvenal, and Petrella 2020).

The headwinds facing EMDEs would intensify if the materialization of global downside risks resulted in

BOX 1.1 Regional perspectives: Outlook and risks (*continued*)

additional economic weakness in advanced economies and China. This would weigh heavily on export-oriented EMDEs, particularly those in ECA and LAC which have the greatest direct exposure (figure B1.1.2.E; Bems, Johnson, and Yi 2010). Even in regions where direct export exposures are less pronounced, the effects of reduced consumer spending would propagate through supply chains, reducing demand for intermediate goods and primary commodities.

EMDEs are increasingly vulnerable to shocks from natural disasters, including extreme weather events such as floods, storms, and droughts (Mallucci 2020). With climate change, such events are becoming more common (figure B1.1.2.F). Extreme weather presents a severe economic threat in small states in EAP and LAC: as a group, EMDE small states experience annual average disaster-related losses amounting to close to 5 percent of GDP. Some areas of SAR also face particularly elevated risks, as illustrated by the damage wrought by recent flooding in Pakistan.

A broad range of social and political challenges could also worsen in the context of rising food insecurity in EMDEs, proliferation of armed conflict in some regions, and slow progress on poverty reduction (World Bank 2022a). In parts of SSA, violence and armed conflict has recently increased, with dire implications for safety, food security, and childhood development. Food insecurity is also rising in MNA among net oil importers and several economies that have long grappled with fragility and conflict. In LAC, stagnating living standards could heighten risks of disruptive social unrest and make it harder for authorities to combat elevated crime and corruption in some countries. Meanwhile, the ECA region faces the profound uncertainty and extreme downside risks of a protracted war.

The forecast for 2023 EMDE growth has been downgraded 0.8 percentage point, reflecting weaker external demand and tighter financing conditions than previously assumed (figure 1.8.B). The overlapping adverse shocks of recent years are expected to keep output in EMDEs 5.6 percent below pre-pandemic trends in 2023—considerably worse than in advanced economies, where output is expected to be only 2.2 percent below pre-pandemic trends this year (figure 1.8.C).

Despite weakening demand and negative output gaps, inflation is expected to remain above central bank targets in most EMDEs, including large economies (figure 1.8.D). High prices for food, energy, and other inputs—especially in local currency terms, given the strength of the U.S. dollar—will remain a burden for households and businesses. Investment will be restrained by higher borrowing costs, weak sentiment, expectations of slow growth, and elevated policy and geopolitical uncertainty (chapter 3). Higher borrowing costs are envisaged to be particularly disruptive among EMDEs with debt that is largely denominated in foreign currency, issued with short maturities, and already facing high servicing costs.

Exports are not expected to provide much support to activity, especially in economies closely linked to the United States, the euro area, or China. High inflation has outpaced currency depreciation in some EMDE regions, which may weigh on export competitiveness. The recovery in international tourism, however, should buoy tourism-reliant economies (WTTC 2022).

EMDE energy exporters will generally benefit from elevated energy prices over the near-term. In contrast, subdued demand from China, which imports more than half of global metal exports, is likely to dampen activity in metal exporters this year. Agricultural exporters will need to contend with high fertilizer costs during planting season. In commodity importers, growth is forecast to remain subdued in 2023 as a result of high prices for many commodities, inflation, tightening monetary policy, and limited fiscal space. EMDE growth is projected to firm to 4.1 percent in 2024 as external demand gradually improves, price pressures abate, and the drag from policy tightening eases.

EMDE potential growth is expected to continue to decelerate as recent output losses exacerbate the

slowdown in the underlying drivers of long-term growth, including investment growth and human capital accumulation. Even prior to the pandemic, earlier gains from increases in human and physical capital had faded while reform momentum slowed. Learning and job losses from the pandemic have interrupted the accumulation of skills and human capital and are likely to weigh on incomes and potential growth for years to come (Schady et al. forthcoming). High food prices have increased food insecurity, including for children, which could lower long-term productivity as malnutrition early in life can permanently impair learning abilities. The adverse effects of the pandemic and the invasion of Ukraine on confidence and uncertainty are expected to linger and weigh on investment (figure 1.8.E; Dieppe 2021). Projected investment growth is below the individual country trend of the past 20 years in about three-fifths of EMDEs, which will reduce long-term growth and the ability to reach key development goals (chapter 3).

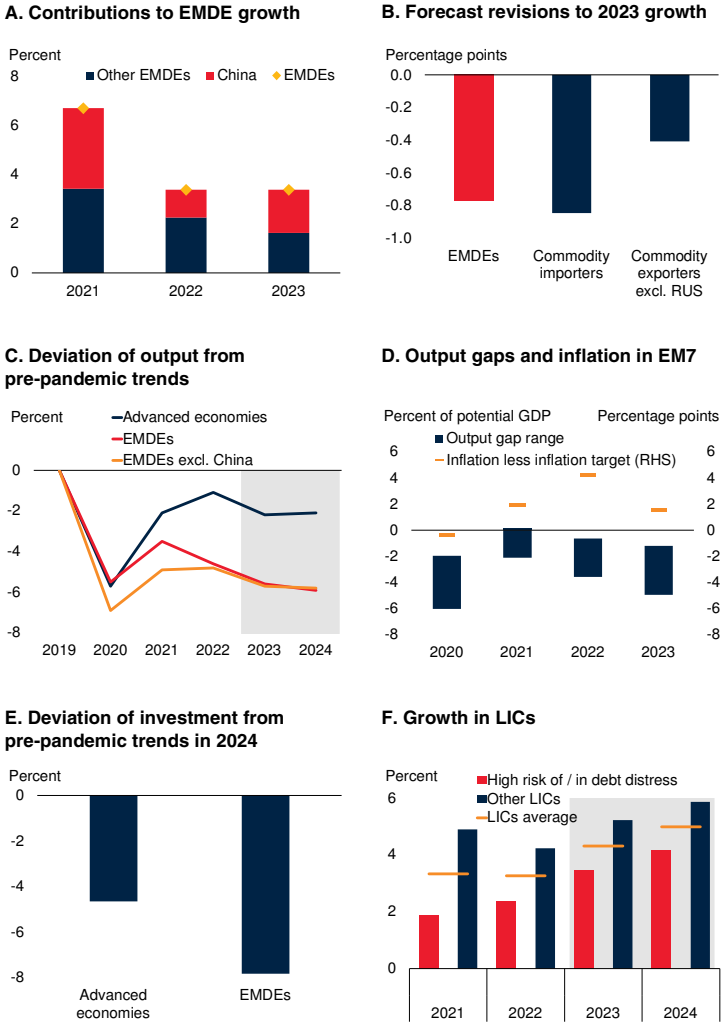
LICs outlook

LICs are forecast to grow 5.1 percent this year. However, projections have been revised down in nearly two-thirds of LICs due to worsening external conditions and rising domestic vulnerabilities (box 1.2). The deterioration of growth prospects in key trading partners is projected to weaken external demand, while high inflation, tighter global financing conditions, and debt distress are anticipated to restrain domestic consumption and investment (figure 1.8.F). Subdued activity in many economies—particularly in LICs with fragile conflict affected situations (FCS)—will further delay the reduction of poverty and food insecurity to pre-pandemic levels.

A substantial share of the LIC population is on the brink of famine and starvation due to various factors, including the effects of climate change, an intensification of conflict and violence, reduced food affordability, and a decline in foreign aid (Afghanistan, South Sudan, Somalia). LICs' food supplies are likely to remain stressed due to limited grain imports, reduced fertilizer use, and persistent and severe drought conditions in several countries (Ethiopia, Madagascar, Malawi). In

FIGURE 1.8 Outlook in emerging market and developing economies

Growth in emerging market and developing economies (EMDEs) excluding China is expected to slow further in 2023. Widespread downgrades reflect weaker external demand and much tighter financial conditions. As a result of overlapping shocks over the past three years, aggregate output and investment in EMDEs are anticipated to remain well below pre-pandemic trends. Despite negative output gaps and weak demand, inflation is likely to remain elevated, including in large EMDEs. The outlook remains challenging for low-income countries, particularly those nearing or facing debt distress.



Sources: Haver Analytics; IMF (2022a); World Bank.
Note: EMDEs = emerging market and developing economies; LICs = low-income countries; RUS = Russian Federation; UKR = Ukraine. Unless otherwise indicated, aggregate growth rates are calculated using real U.S. dollar GDP weights at average 2010-19 prices and market exchange rates. Shaded areas indicate forecasts.
A. Figure shows the contributions to EMDE growth estimates and forecasts.
B. Forecast revisions are the change in 2023 growth forecasts between the June 2022 and January 2023 editions of *Global Economic Prospects*.
C.E. Figure shows the percent deviation between the current estimates and forecasts released in the January 2020 edition of *Global Economic Prospects*. For 2023 and 2024, the January 2020 baseline is extended using projected growth for 2022.
D. EM7 includes Brazil, China, India, Indonesia, Mexico, the Russian Federation, and Türkiye. "Output gap range" reflects one standard deviation range.
F. Sample size includes 23 LICs, of which 12 are in high risk of debt distress, and 11 in debt distress, as of November 2022 (IMF 2022a). Aggregates calculated using simple averages.

BOX 1.2 Recent developments and outlook for low-income countries

Growth in low-income countries (LICs) is forecast to be 5.1 percent in 2023. Despite this year's aggregate pickup, projections have been revised down for about two-thirds of LICs. Moreover, per capita income growth is expected to be a more subdued 2.2 percent in 2023. LICs are facing severe cost-of-living pressures, worsened by disruptions to global commodity markets—particularly for energy and staple cereals—following Russia's invasion of Ukraine. Many more people have fallen into extreme poverty and food insecurity due to soaring food and fuel prices. The outlook for many LICs has deteriorated amid surging inflation, tightening financial conditions, fiscal and debt pressures, slowing activity in key trading partners, and heightened fragility. Risks to the baseline projections are mainly to the downside, including high inflation, resurgence of violence, debt distress in several countries, new COVID-19 outbreaks, and adverse weather events owing to climate change.

Introduction

Although, the recovery in low-income countries (LICs) from the COVID-19 pandemic is expected to continue this year, many countries are facing substantial headwinds as prices of fuel and staple foods have increased further following Russia's invasion of Ukraine. Food affordability, especially for poorer households, has deteriorated sharply and many more people have fallen into extreme poverty (World Bank 2022c). Weakening global demand has dampened activity in many LICs, while tightening global financial conditions have worsened existing fiscal vulnerabilities. In several LICs, rising violence and adverse weather events have led to more disruptions, especially in farming, deepening food insecurity and heightening famine risks.

The baseline projections are subject to many downside risks. Deteriorating living standards for many, and increased poverty, may stoke social unrest in some countries, while already tight fiscal space to support the poor may shrink further with many governments facing unfavorable debt dynamics. A deeper and more protracted global economic slowdown than currently envisaged could further weigh on growth in many LICs through lower export demand and global commodity prices.

Against this backdrop this box addresses the following questions.

- What have been the main recent economic developments in LICs?
- What is the outlook for LICs?
- What are the risks to the outlook?

Note: This box was prepared by Sergiy Kasyanenko.

Recent developments

Output in LICs grew by an estimated 4.0 percent in 2022—only marginally faster than in 2021 even as the pandemic continued to abate and vaccination rates increased. Although revised 2022 growth estimates are on par with the June projections, they are sharply below the 5.4 percent average growth rate that LICs registered in 2000-19. Despite some large exporters benefitting from elevated global commodity prices, costlier imports and declining metal prices have led to a deterioration in LICs' terms of trade (figure B1.2.1.A). Activity in non-resource sectors strengthened in several large LICs (Democratic Republic of Congo, Uganda) spurred by the removal of COVID-19 restrictions. But the boost from economic reopening failed to deliver strong growth in many other countries: surging inflation, slowing global activity, increasing borrowing costs, limited fiscal space, and rising debt prompted growth downgrades for about 60 percent of LICs.

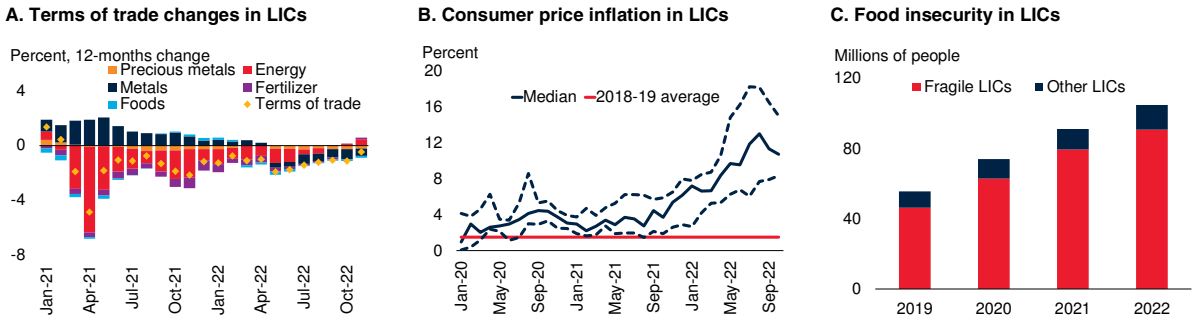
There is a large degree of heterogeneity among the growth revisions for individual countries. Small upgrades to previous projections for 2022 growth in larger resource-rich LICs (Democratic Republic of Congo, Mozambique), countries with less dependence on imported food (Uganda), and oil exporters (Chad) have been offset by large downgrades for many smaller LICs (Central African Republic, Eritrea, The Gambia, Mali), where cost-of-living and terms-of-trade shocks were amplified by high levels of fragility, soaring inflation and import bills, debt distress, and limited fiscal space. In addition, adverse weather events, such as severe floods in South Sudan and Sudan, have dampened activity in agriculture and mining.

With food accounting for over 40 percent of consumer spending, accelerating inflation is eroding domestic demand across many LICs; consumer prices in LICs

BOX 1.2 Recent developments and outlook for low-income countries (*continued*)

FIGURE B1.2.1 LICs: Recent developments

The sharp slowdown in global growth and the surge in global inflation have dampened economic recoveries across low-income countries (LICs). Terms of trade across LICs worsened further last year amid a sharp weakening of demand for industrial metals in key trading partners. The cost-of-living crisis has pushed many more people into poverty and food insecurity, especially in LICs where fragility was already elevated before Russia's invasion of Ukraine.



Sources: Haver Analytics; FSIN and GNAFC (2022); World Bank.

Note: EMDEs = emerging market and developing economies; Fragile LICs = LICs with fragile and conflict-affected situations; LICs = low-income countries.

A. Similar to Gruss and Kebhaj (2019), commodity terms-of-trade are calculated as changes in real commodity prices weighted by each commodity's net export share in GDP. Figure calculated using median net export shares for the sample of 15 non-oil exporting LICs. A negative change indicates deterioration in the terms of trade. Last observation is November 2022.

B. Sample includes 9 LICs. Dashed lines indicate interquartile range. Last observation is October 2022.

C. Bars show the number of people in food crisis as classified by the Integrated Food Security Phase Classification (IPC/CH) Phase 3, that is, in acute food insecurity crisis or worse. Data for 2022 are estimates as of September 2022.

increased more than five times faster in 2022 than before the COVID-19 pandemic (figure B1.2.1.B). Food affordability deteriorated considerably last year and millions more people fell into acute food insecurity, especially in LICs where poverty rates were already elevated because of the pandemic and fragility (figure B1.2.1.C; FSIN and GNAFC 2022). Several countries (Afghanistan, Somalia, South Sudan, Yemen) are facing catastrophic conditions with the shares of populations facing famine or starvation rising substantially as the negative impact of food price inflation is amplified by disruptions to humanitarian aid, droughts and flooding, and insecurity (WFP and FAO 2022). Violence and conflict escalated in a number of LICs last year, further disrupting farming, exacerbating food insecurity, and contributing to sharp growth slowdowns in several countries (Ethiopia, Mali, South Sudan). A recent ceasefire agreement in Ethiopia should facilitate the resumption of humanitarian aid to the Tigray region where millions of people were displaced by the two-year conflict.

Fiscal and debt sustainability pressures worsened in many LICs—budget deficits widened last year in almost half of all countries amid rising borrowing costs and muted growth. Additional measures to protect the poor—including subsidies, cuts to consumption taxes and custom duties, and transfers to vulnerable populations—have further strained fiscal budgets in some countries (The Gambia, Madagascar, Rwanda). Government debt in the median LIC, excluding energy-exporting Chad and South Sudan, hit almost 60 percent of GDP in 2022, its highest level since 2007. As a result, nearly 60 percent of all LICs were in, or at high risk of, debt distress at the end of 2022.

Outlook

Growth in LICs is projected to firm gradually to 5.1 percent in 2023 and 5.6 percent in 2024 as cost-of-living increases moderate, post-pandemic recoveries regain strength, and several countries complete the expansion of large extractive projects (figure B1.2.2.A). A small downward revision to this year's aggregate growth forecast masks a wide range of downward forecast revisions. The negative impact from high inflation is anticipated to persist in many smaller countries, being further amplified by the expected sharp

BOX 1.2 Recent developments and outlook for low-income countries (*continued*)

global economic slowdown and tight global financing conditions. Although, growth in the three largest LICs—Democratic Republic of Congo, Ethiopia, and Uganda, which account for over a half the group output—was revised upward slightly; projections for 2023 and 2024 had been revised down for about 65 and 50 percent of LICs, respectively. As a result, aggregate growth projections for LICs, excluding three largest economies, were revised down by 0.5 percentage point for 2023 and by 0.3 percentage point for 2024.

Among energy and metal exporters, growth prospects are mixed. The boost from elevated energy prices is envisaged to fade in some countries (Chad, South Sudan) where high levels of insecurity and policy uncertainty, adverse weather events, and aging oil fields are likely to deter oil output expansion. Increased demand for Africa's liquified natural gas is expected to lift growth in Mozambique, albeit with a delay because elevated insecurity in the northern part of the country has interrupted the development of a large offshore natural gas project; similarly, growth is anticipated to firm in Niger as oil production and exports take off. In contrast, a sharp slowdown in key trading partners, particularly China, which accounts for over a third of all exports in some LICs, is anticipated to weigh on recoveries in many countries, especially in metal exporters, as most commodity prices continue to ease (World Bank 2022a). In some countries (the Democratic Republic of Congo, Zambia) the negative impact of the global slowdown is expected to be partly offset by the continuing expansion of production in mining.

Growth in fragile and conflict-affected LICs is projected to average 5.4 percent in 2023-24, broadly in line with previous forecasts. However, if Ethiopia (the largest fragile LIC) and several fragile states that are expected to complete large mining projects (Democratic Republic of Congo, Mozambique) are excluded from the growth forecast, the outlook for fragile LICs has substantially worsened, with downgrades of 0.4 percentage point both in 2023 and 2024. Insecurity, elevated levels of debt—nearly 70 percent of fragile LICs are in, or at high risk of, debt distress—policy uncertainty, and a sharp deterioration in food affordability are expected to dampen activity in many fragile LICs (Eritrea, Mali, South Sudan). Growth in Ethiopia is anticipated to remain under 6 percent on average in 2023-24—well below its pre-pandemic average—amid debt distress, continued fragility in the Tigray region, currency depreciation, and soaring inflation.

Conflict, adverse weather events, and rising production costs are anticipated to keep LIC food supplies tight. Reduced use of fertilizer and other farming inputs whose costs have risen sharply is envisaged to result in below-average agricultural production this year. Severe drought conditions are expected to persist in some countries, while high levels of violence are projected to disrupt farming activities, access to food markets and humanitarian aid (Eritrea, Ethiopia, Somalia). Some countries, however, may benefit from improved rainfall—production of coffee in Uganda, SSA's biggest coffee exporter, could increase to record levels in the 2022-23 crop year.

Fragility, conflict, and climate change are set to continue to drive poverty and food insecurity and restrain growth in many countries by amplifying the weakness in domestic demand. Progress with poverty alleviation, which has already stalled prior to the start of the COVID-19 pandemic, is anticipated to remain slow as subdued per-capita income growth persists in many LICs (World Bank 2022c). Although per capita income growth in LICs is forecast to increase at 2.5 percent on average in 2023-24, it is expected to remain slow in LICs with more prevalent poverty further delaying the reversal of pandemic-induced poverty increases. In LICs where over half of the population live in extreme poverty, average per capita income growth has been falling behind other LICs, a trend that began before the pandemic. For this group of countries, per capita incomes will only barely return to 2019 levels in 2024. In LICs with less prevalent poverty, per capita incomes never fell below 2019 levels, but they are still projected to remain 7 percent below the 2000-19 trend through 2023 (figure B1.2.2.B).

Risks

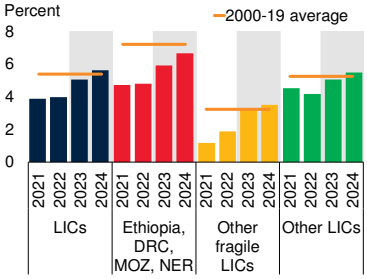
Risks to the outlook are mainly to the downside. Although growth is expected to firm this year and next as price pressures ease somewhat, a sharper-than-expected global economic deceleration could lead to further declines in commodity prices and export revenues, adversely affecting activity in many LICs, particularly energy and metal exporters.

BOX 1.2 Recent developments and outlook for low-income countries (*continued*)

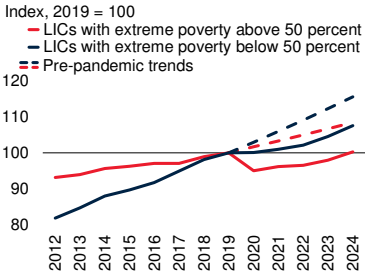
FIGURE B1.2.2 LICs: Outlook and risks

Activity in low-income countries (LICs) is expected to firm somewhat in the forecast horizon, albeit with substantial heterogeneity among individual countries. Weaker per capita income growth, together with elevated levels of violence, would make it particularly challenging to rapidly reverse recent increases in food insecurity and poverty.

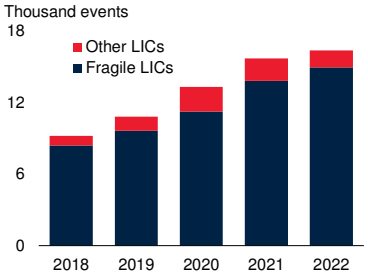
A. GDP growth



B. Per capita income in LICs



C. Reported violent events in LICs during the first 11 months of each year



Source: Armed Conflict Location & Event Data Project (ACLED), https://www.acleddata.com; World Bank.
Note: Shaded area indicates forecast. Fragile LICs = LICs with fragile and conflict-affected situations; LICs = low-income countries.
A. DRC = Democratic Republic of Congo, MOZ = Mozambique, and NER = Niger; Democratic Republic of Congo, Ethiopia, Mozambique, and Niger age fragile LICs. Average GDP growth rates calculated using constant GDP weights at average 2010-19 prices and market exchange rates. Sample comprises 22 LICs, which include 13 fragile LICs.
B. Extreme poverty rate is measured as the share of people living on less than $2.15 per day. Per capita income is calculated as each group's GDP divided by each group's population. Dashed lines indicate per capita income assuming its growth rate equals to 2000-19 average after 2019. Sample excludes Democratic Republic of Congo and Niger—both with over half of population experiencing extreme poverty.
C. Violent events include battles, explosions, violence against civilians, riots, and protests reported since the start of the year. Last observation is December 2, 2022.

Debt sustainability risks have escalated for many LICs last year, as current account deficits widened and debt service costs surged. If global economic activity is weaker than projected, or if global interest rates rise further than assumed because of persistent inflation and faster-than-expected policy tightening, fiscal, currency, and debt sustainability pressures for many LICs could intensify sharply, with more countries pushed to the brink of debt distress.

LICs remain vulnerable to further deteriorations in food security, including from additional disruptions to already tight food supplies, especially of staple grains. Weak income growth also weighs on food security. Uncertainty surrounding the Black Sea Grain Initiative could lead to more volatility in global food prices, with possible price spikes further reducing food affordability (World Bank 2022d). Greater intensity, frequency, and duration of adverse weather events because of climate change could continue to disrupt farming and livelihoods in many LICs (OSCDS and UNHCR 2022; UNDRR 2022). Soaring import bills, shortages of foreign exchange reserves, and debt distress could further constrain imports of staple food, fuel, and fertilizer. Agricultural productivity, already stressed by soaring production costs and climate change, could suffer lasting damage because of reduced use of fertilizer. Increased violence and fragility could exacerbate the impact of these developments on poverty and food security (figure B1.2.2.C; Maino and Emrullahu 2022).

Healthcare systems in LICs, severely stressed by the two years of the COVID-19 pandemic, could be further strained by new outbreaks of infectious diseases (for example, a recent Ebola outbreak in Uganda). Furthermore, even as the COVID-19 pandemic abates across LICs, very low vaccination rates, emerging variants, and waning immunity could lead to new virus outbreaks and disruptions in activity. Only 25 percent of the LIC population had been fully vaccinated against COVID-19 as of end-December and an even lower proportion in fragile LICs.

BOX 1.2 Recent developments and outlook for low-income countries (*continued*)

TABLE B1.2.1 Low-income country forecasts[a]

(Real GDP growth at market prices in percent, unless indicated otherwise)

	2020	2021	2022e	2023f	2024f	Percentage point differences from June 2022 projections: 2022e	2023f	2024f
Low-Income Country, GDP[b]	**1.6**	**3.9**	**4.0**	**5.1**	**5.6**	**0.0**	**-0.1**	**0.0**
Afghanistan[c]	-2.4	-20.7	..	..	..	..	..	..
Burkina Faso	1.9	6.9	4.3	5.0	5.3	-0.5	-0.4	0.0
Burundi	0.3	1.8	2.1	3.0	4.0	-0.4	-0.3	-0.1
Central African Republic	1.0	1.0	1.5	3.0	3.8	-1.7	-0.4	-0.2
Chad	-1.6	-1.2	3.1	3.3	3.3	0.3	-0.2	-0.6
Congo, Dem. Rep.	1.7	6.2	6.1	6.4	6.6	0.1	0.0	0.5
Eritrea	-0.5	2.9	2.5	2.7	2.9	-2.2	-0.9	-0.8
Ethiopia[d]	6.1	6.3	3.5	5.3	6.1	0.2	0.1	0.2
Gambia, The	0.6	4.3	3.5	4.0	5.5	-2.1	-2.2	-1.0
Guinea	4.9	3.9	4.6	5.3	5.6	0.3	-0.6	-0.2
Guinea-Bissau	1.5	5.0	3.5	4.5	4.5	0.0	0.0	0.0
Liberia	-3.0	5.0	3.7	4.7	5.7	-0.7	-0.1	0.5
Madagascar	-7.1	4.4	2.6	4.2	4.6	0.0	0.0	0.0
Malawi	0.8	2.8	1.5	3.0	3.4	-0.6	-1.3	-0.8
Mali	-1.2	3.1	1.8	4.0	4.0	-1.5	-1.3	-1.0
Mozambique	-1.2	2.3	3.7	5.0	8.0	0.1	-1.0	2.2
Niger	3.6	1.4	5.0	7.1	10.1	-0.2	0.0	-0.3
Rwanda	-3.4	10.9	6.0	6.7	7.0	-0.8	-0.5	-0.4
Sierra Leone	-2.0	4.1	3.7	3.7	4.4	-0.2	-0.7	-0.4
South Sudan[d]	9.5	-5.1	-2.8	-0.8	2.1	-2.0	-3.3	-1.9
Sudan	-3.6	-1.9	0.3	2.0	2.5	-0.4	0.0	0.0
Syrian Arab Republic	-3.9	-2.9	-3.5	-3.2	..	-0.9	..	..
Togo	1.8	5.3	4.8	5.6	6.4	-0.2	-0.2	0.0
Uganda[d]	3.0	3.5	4.7	5.5	6.1	1.0	0.4	-0.4
Yemen, Rep.	-8.5	-1.0	1.0	1.0	..	0.2	-1.5	..
Zambia	-3.0	3.6	3.0	3.9	4.1	-0.3	0.3	0.1
Memorandum items:								
GDP per capita (U.S. dollars)								
LICs	-1.3	1.0	1.1	2.2	2.8	-0.1	-0.2	0.1
LICs, poverty rate below 50 percent[g]	0.1	0.9	1.2	2.4	2.8	0.0	-0.1	-0.1
LICs, poverty rate above 50 percent[g]	-5.3	1.0	0.2	1.4	2.2	-0.4	-0.4	0.2

Source: World Bank.

Note: e = estimate; f = forecast. World Bank forecasts are frequently updated based on new information and changing (global) circumstances. Consequently, projections presented here may differ from those contained in other Bank documents, even if basic assessments of countries' prospects do not significantly differ at any given moment in time.

a. The Democratic People's Republic of Korea and Somalia are not forecast on account of data limitations.

b. Aggregate growth rates are calculated using GDP weights at average 2010-19 prices and market exchange rates.

c. Forecasts for Afghanistan (beyond 2021), the Syrian Arab Republic (beyond 2023), and the Republic of Yemen (beyond 2023) are excluded because of a high degree of uncertainty.

d. GDP growth rates are on a fiscal year basis. For example, the column labeled 2022 refers to FY2021/22.

g. Extreme poverty rate is measured as the share of people living on less than $2.15 per day. Per capita income is calculated as each group's GDP divided by each group's population. Sample excludes Democratic Republic of Congo and Niger—both with over half of population experiencing extreme poverty.

LICs with fragile and conflict-affected situations, increasing levels of violence will continue to disrupt farming activities and limit access to markets and humanitarian aid (Central African Republic, Ethiopia, Mali). Local food prices will be kept high by elevated global prices for fuel and fertilizer, which have become more costly due to weaker currencies, reducing food affordability, real incomes, and growth, and possibly worsening some countries' security situation.

Per capita income growth

EMDE per capita income growth is anticipated to average 2.8 percent over 2023-24—1 percentage point weaker than its 2010-19 average—with wide variation across countries. In most energy exporters, per capita income growth over 2023-24 is expected to exceed its 2010-19 average, largely reflecting windfall gains from high energy prices. In commodity importers and non-energy exporters, high food and fuel prices have dented real incomes, with per capita income growth expected to fall short of long-term trends. In both metal and agricultural exporters, per capita income growth is forecast to be well below 1 percent over 2023-24, reflecting tepid global demand for metals and elevated input costs for agriculture. In almost 40 percent of LICs, per capita income growth in 2024 is projected to remain below its 2010-19 average.

EMDE catch-up with per capita incomes of advanced economies will remain slow—EMDE per capita income growth is anticipated to exceed that of advanced economies by only 1.9 percentage points on average over 2023-24 compared to 2.8 percentage points in 2000-19. Furthermore, income per capita is expected to remain below its 2019 level in over 40 percent of EMDEs this year and in more than 30 percent in 2024.

The subdued near-term outlook, combined with weakness in the long-term drivers of growth, suggests that EMDEs will make limited progress at reducing poverty. Per capita income growth is expected to be especially subdued in countries with high levels of extreme poverty, leaving poverty rates above pre-pandemic trends (figures 1.9.A and 1.9.B; World Bank 2022c). In Sub-Saharan Africa (SSA)—home to almost 60 percent of the world's extreme poor—output growth will only slightly outpace population growth; as a result, per capita income growth over 2023-24 is forecast to be among the weakest of the EMDE regions, at 1.2 percent, and lag the EMDE average by about 1.5 percentage points. As such, the goal of eradicating extreme poverty by 2030 appears well out of reach (World Bank 2022c).

Global outlook and risks

Global growth is slowing sharply in the face of high inflation, synchronous policy tightening to contain it, worsening financial conditions, disruptions resulting from Russia's invasion of Ukraine, and feeble confidence. The world's major engines of growth are undergoing a period of pronounced weakness, and the ensuing spillovers are exacerbating other headwinds faced by EMDEs. Elevated debt burdens and already-weak growth indicate that a further negative shock—in the form of higher inflation, additional policy tightening, or financial stress—could push the global economy into recession.

Global outlook

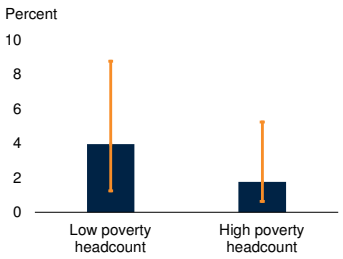
Global growth prospects have darkened substantially since June amid the continued effects of negative shocks. To rein in high inflation and address concerns about diminished inflation-fighting credibility, major central banks have pivoted toward tighter policy at the fastest pace in more than 40 years (figure 1.10.A). This has contributed to a significant tightening of global financial conditions. At the same time, fiscal support policies introduced earlier in the pandemic have been scaled back in a context of rising borrowing costs and fears of stoking inflation. Despite wide variation across countries, fiscal policy is expected to be a slight drag on global growth (figure 1.10.B). The adverse effects of Russia's invasion of Ukraine persist, particularly those related to commodity supply disruptions. The weakening outlook has been accompanied by consumer sentiment falling to lows not seen since the global financial crisis (figure 1.10.C).

The magnitude and synchronous nature of policy tightening is exerting a significant drag on the recovery from the 2020 global recession. Global growth is forecast to slow from 2.9 percent in

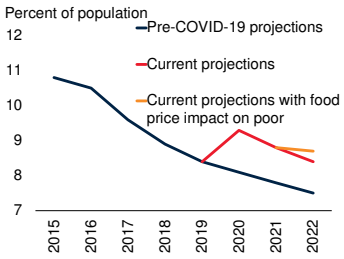
FIGURE 1.9 Per capita income growth

Per capita income growth is expected to be anemic in economies with high poverty rates, placing poverty reduction goals further from reach.

A. EMDE per capita GDP growth, by bottom and top quartile poverty headcount ratio



B. Global population in poverty



Sources: Mahler, Yonzan, and Lakner (2022); WDI (database); World Bank (2022c); World Bank.
Note: EMDE = emerging market and developing economies. Unless otherwise indicated, aggregate growth rates are calculated using real U.S. dollar GDP weights at average 2010-19 prices and market exchange rates.
A. "Low poverty headcount" are EMDEs with poverty headcount in the 25th percentile, and "high poverty headcount" are those in the 75th percentile. Bars show average per capita GDP growth over 2023-24 for 39 EMDEs. Whiskers indicate the minimum-maximum range. Sample excludes Belarus and the Russian Federation. Poverty data are the poverty headcount ratios at $2.15 a day (2017 PPP).
B. Data show the global poverty headcount rates at the $2.15 per day poverty line. Pre-COVID-19 projections are based on per capita GDP growth forecasts published in the January 2020 edition of the *Global Economic Prospects* report; current projections reflect the estimated impact of COVID-19 on poverty in 2020 and the distribution-neutral per capita GDP-based poverty projections for 2021 and 2022; the orange line indicates the scenario that accounts for the differential short-run impact of food price inflation on poorer households relative to richer ones (Mahler, Yonzan, and Lakner 2022; World Bank 2022c).

2022 to 1.7 percent in 2023, substantially weaker than expected in June, before rebounding to 2.7 percent in 2024. Projected growth in 2023 is the third weakest in nearly three decades, overshadowed only by the global recessions caused by the pandemic and the global financial crisis. The world's major engines of growth—the United States, the euro area, and China—are all expected to grow substantially below potential, and their contributions to global growth will be far below recent norms (figure 1.10.D). The associated spillover effects will compound the challenges facing EMDEs already struggling with weakening domestic conditions. The slowdown has been especially pronounced for interest-rate sensitive activities. In particular, residential investment is in outright contraction in many countries amid a sharp rise in mortgage rates, while business investment has slowed substantially.

Growth projections have been downgraded for almost all advanced economies and about two-thirds of EMDEs in 2023, and about half of all countries in 2024 (figure 1.10.E). These markdowns are substantial, averaging 1.3 percentage points in 2023 and 0.8 percentage point in 2024, and tend to be larger among countries with lower credit ratings, which are more vulnerable to tightening financial conditions.

Globally, inflation has proven more persistent than previously assumed, and the rise in core inflation, wages, and short-term inflation expectations suggests that inflation may remain above pre-pandemic averages and central bank targets in many countries for an extended period. Both model- and survey- based inflation forecasts suggest that core and non-core components of global CPI inflation peaked in late 2022 and will gradually slow as activity softens and the price of many commodities moderates. Inflation is expected to fall from 7.6 percent in 2022 to 5.2 percent in 2023 and 3.2 percent in 2024, still above the 2015-19 average of 2.3 percent (figure 1.10.F). The deceleration in headline inflation this year is envisaged to be primarily driven by moderating prices for many commodities; furthermore, core inflation is expected to slow substantially next year but remain above pre-pandemic levels.

Risks to the outlook

The combination of slowing growth, persistently high inflation, and tightening financial conditions amid high levels of debt increases the risks of stagflation, financial strains, continued fiscal pressures, and weak investment in many countries. The baseline forecasts assume that central banks tighten monetary policy broadly in line with market expectations and are able to bring inflation down without triggering significant financial stress. These assumptions may prove optimistic in two ways. First, more persistent inflation could prompt significantly more monetary tightening. Second, sharper monetary tightening and rising global borrowing costs, in a context of weak growth prospects, could prompt investors to reassess the sustainability of large and rising debt burdens in many countries. This could trigger a broad-based flight to safety and substantial capital outflows, leading to financial stress affecting a large swath of EMDEs. If these risks were to materialize, model simulations suggest that the global economy could fall into recession in 2023,

defined as a contraction in per capita income—which, currently, is equal to annual global GDP growth of less than about 0.9 percent.

In addition to the risks around monetary tightening and global financial conditions, a number of other developments could worsen the trajectory of the global economy. First, activity in China could be weaker than expected as a result of worsening disruptions from COVID-19 or stress in the real estate sector. Second, geopolitical tensions, which rose markedly after Russia's invasion of Ukraine, could increase further and encompass a larger set of countries. In addition to their humanitarian implications, escalating tensions could hasten the trend toward unproductive re-shoring of supply chains, put the financial system under strain, and disrupt the supply of commodities (Caldara and Iacoviello 2022). Finally, the risks associated with climate change are growing, as changing weather patterns contribute to increasingly disruptive events, such as heat waves and floods. In the near term, climate-related disasters can substantially weigh on activity; in the longer term, climate change can render some populated area uninhabitable, lower productivity, and worsen global poverty.

High inflation and additional monetary tightening

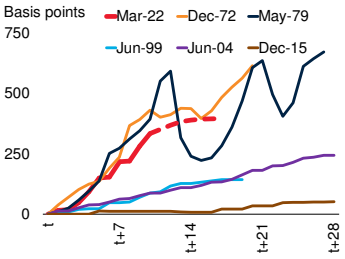
Repeated negative shocks to both global supply chains and the supply of key commodities have played an important role in driving up global inflation. Some of these shocks have started to wane, especially those related to supply chain bottlenecks; however, they may reemerge in various forms. Worsening geopolitical tensions—most notably those related to Russia's invasion of Ukraine—or additional export cutoffs may lead to shortages and higher prices for food, fertilizers, and energy. These shocks could again exacerbate inflation pressures and prompt additional monetary tightening.

In the context of these shocks and the elevated level of inflation, there is unusually high uncertainty about the impact of central bank policy in terms of both magnitude and timing (Doh and Foerster 2022). As a result, the risk of policy missteps is elevated, and market expec-

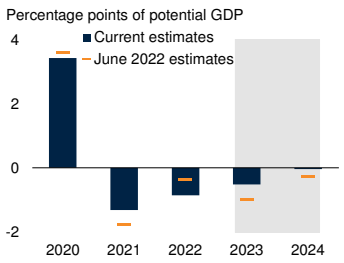
FIGURE 1.10 Global outlook

Ongoing monetary tightening among major advanced economies is the fastest in recent history. Fiscal policy is expected to be a slight drag on global activity, with wide variations across countries. Confidence has fallen to lows not seen since the global financial crisis. Global growth is forecast to slow sharply in 2023, with weakness in all major engines of activity and downgrades in most economies. Elevated inflation is expected to persist for longer than previously anticipated, even as it slows due to weak activity and moderating commodity prices.

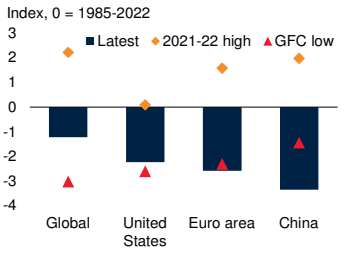
A. G7 policy rates



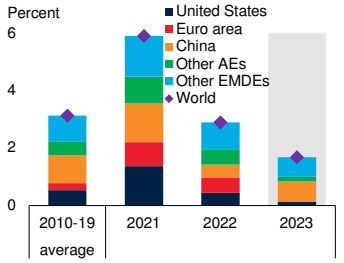
B. Global fiscal impulse



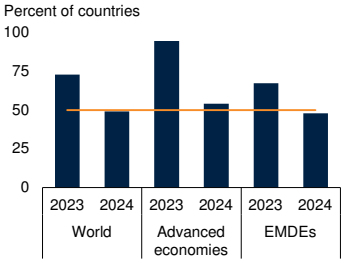
C. Consumer confidence and economic expectations



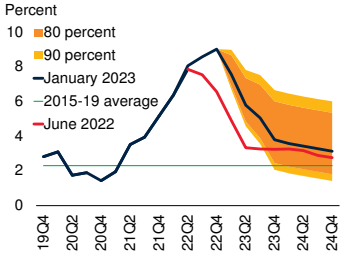
D. Contributions to global growth



E. Share of countries with downgrades in growth forecasts



F. Model-based global CPI inflation projections



Sources: BIS (database); Bloomberg; Consensus Economics; European Commission (2022); Federal Reserve Economic Data; Haver Analytics; IMF (2022b; 2022c); Oxford Economics; World Bank.
Note: AEs = advanced economies; EMDEs = emerging market and developing economies; G7 = Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States. CPI = consumer price index. GFC = global financial crisis. Shaded areas indicate forecasts. Unless otherwise indicated, aggregates are calculated using real U.S. dollar GDP weights at average 2010-19 prices and market exchange rates.

A. Increases in short-term policy interest rate weighted by nominal GDP in current U.S. dollars. "t" is the month before the U.S. federal funds rate starts to increase. A cycle ends when the weighted policy rate peaks. Judgement used to define "double-peak" cycles (1972 and 1979). The March 2022 cycle is extended using market-implied interest rate expectations from January 2023 onward, observed on December 16, 2022. Prior to 1999, German and Italian rates are discount rates; French rates are interest rates on French treasury bills.

B. Fiscal impulse is the negative annual change in the structural balance for 80 countries, using data from the IMF (2022b, 2022c) and the European Commission (2022).

C. Figure shows z-scores. Last observation is December 2022 for global, November 2022 for euro area, and October 2022 for China and United States.

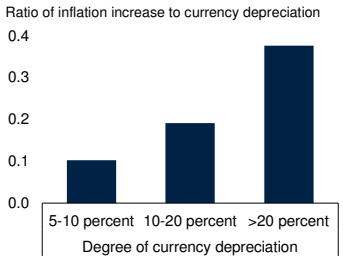
E. Figure shows share of countries with forecast downgrades since the June 2022 *Global Economic Prospects*.

F. Model-based projections of year-on-year global CPI inflation using Oxford Economics' Global Economic Model, using global oil price forecasts presented in table 1.1. Uncertainty bands constructed from distribution of forecast errors for total CPI from Consensus Economics for an unbalanced panel of 18 countries.

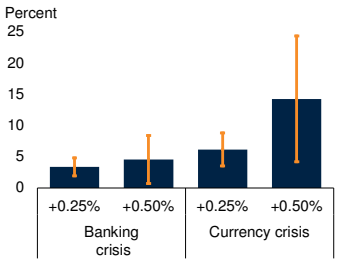
FIGURE 1.11 Risks to the outlook

Large exchange rate depreciations have the potential to cause unexpectedly rapid increases in inflation. Rising U.S. interest rates arising from a perceived pivot by the Federal Reserve toward a more hawkish stance materially increase the probability of financial crises in emerging market and developing economies (EMDEs). Already, the volume of bond issuance in EMDEs has fallen precipitously. A high share of riskier types of debt makes some countries particularly vulnerable to financial stress.

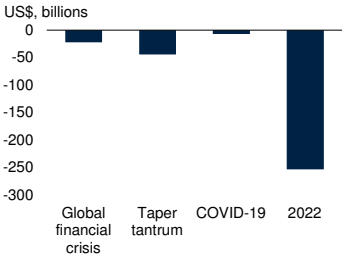
A. Unconditional pass-through during significant currency depreciations, 1998-2017



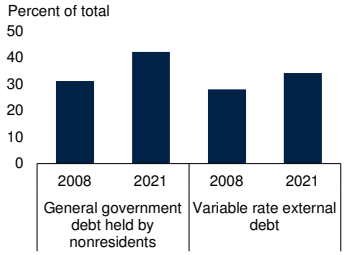
B. Likelihood of EMDE crises due to changes in the Federal Reserve's reaction function



C. Change in bond issuance in EMDEs



D. EMDE debt characteristics



Sources: Arteta, Kamin, and Ruch (2022); Bloomberg; Caselli and Roitman (2016); Dealogic; Ha, Kose, and Ohnsorge (2019a); International Debt Statistics (database); Kose et al. (2022); Laeven and Valencia (2020); World Bank.

Note: EMDEs = emerging market and developing economies.

A. Currency depreciations are defined as negative quarterly changes in the nominal effective exchange rate. The sample includes 138 EMDEs from 1998 to 2017. Pass-through to inflation is defined as the change in consumer prices after one quarter divided by the depreciation of the nominal effective exchange rate, as described in Ha, Kose, and Ohnsorge (2019a). Sample includes 34 advanced economies and 138 EMDEs.

B. Figure shows impact on crisis probability of an increase in 2-year U.S. yields due to a "reaction-function" shock—a change in perceptions of how the Federal Reserve reacts to incoming information. It is based on a sign-restricted Bayesian VAR and a panel logit model as described in Arteta, Kamin, and Ruch (2022). "+0.25%" and "+0.50%" indicate the crisis probabilities in the case of 25 and 50 basis point increase in the 2-year U.S. yield driven by a reaction-function shock. Whiskers reflect 95 percent confidence intervals. Crisis events based on Laeven and Valencia (2020).

C. Bars indicate the change in public and private bond issuance during the ten months after the start of the event compared to the same period one year prior. The starting dates are August 2008 for Global financial crisis, June 2013 for Taper tantrum, March 2020 for COVID-19, and February 2022 for 2022.

D. Bars indicate the EMDE median. Unbalanced sample includes 42 EMDEs for the general government debt held by nonresidents and 114 EMDEs for the variable rate external debt. For details, refer to Kose et al. (2022) and the World Bank's *International Debt Statistics*.

tations about the necessary degree of tightening are likely to continue being revised (Reis 2022). Historically, at the start of policy tightening episodes, market-based interest rate expectations in the United States have underestimated the subsequent cumulative rate increases by an average of 85 basis points (Wessel 2022). The shift in expectations during the current policy tightening cycle has been considerably larger—between the beginning and the end of 2022, the average policy rate expectation for 2023 was revised up by more than 325 basis points, and further upward revisions remain possible.

These uncertainties are magnified by the possibility of non-linear relationships between key macroeconomic parameters. As inflation declines, the marginal degree of monetary tightening to bring it down further may increase, which may manifest as inflation remaining stubbornly above target and requiring unanticipated additional tightening (Forbes, Gagnon, and Collins 2022). In the context of large currency movements this year, the possible non-linearities in the relationship between currency depreciations and inflation are important, with larger depreciations causing proportionally larger increases in prices (Ha, Kose, and Ohnsorge 2019b). If the pass-through from a substantial currency depreciation is many times larger than expected, this could drive inflation far above target in some countries (figure 1.11.A). In either of these circumstances, the persistence of high inflation increases the risk that it becomes embedded in expectations.

If inflation remains persistently above target, central banks would likely raise interest rates more quickly and to higher levels than currently expected, and keep them elevated for longer to re-anchor expectations and return inflation to target (Ha, Kose, and Ohnsorge 2022; World Bank 2022e). Particularly tight monetary policy in the United States could result in a stronger U.S. dollar, which has substantial spillovers given its role as the primary currency for trade and finance. As the invoicing currency for many commodities and traded goods, a strong dollar can drive up prices in local currencies and cause inflation to persist. The dollar is also the funding currency for global banking and capital markets, and a higher value is associated with greater constraints on many institutions' balance sheets, resulting in deleveraging in the banking sector and tighter global credit conditions (Hofmann, Mehrotra, and Sandri 2022).

Financial stress across EMDEs

Several EMDEs have experienced financial stress featuring rapid capital outflows, currency depreciation, and difficulty servicing debt. Unlike during the global financial crisis, the countries affected thus far have been frontier markets with limited cross-border spillovers, and markets have been discerning about individual country risks. In a global economy characterized by slowing growth and rising borrowing costs, however, the growing pressures on EMDEs could result in currency crises or widespread private and public defaults, with potential cross-border spillovers. Historically, the probability that EMDEs experience a banking crisis or, especially, a currency crisis in a given year has increased when the market perceives that the Federal Reserve's reaction function is shifting toward a more hawkish policy stance, as has occurred recently (figure 1.11.B; Arteta, Kamin, and Ruch 2022; Kose et al. 2021a).

Rising interest rates and falling EMDE currencies add to the cost of refinancing debt for both private and sovereign borrowers (Obstfeld and Zhou 2022). Already, the value of bond issuance in EMDEs has dropped by an unprecedented amount (figure 1.11.C). More countries may lose access to international capital markets if creditors become increasingly concerned that large, growing debt burdens are unsustainable. Current record-high debt levels and sizable fiscal and current account deficits make EMDEs vulnerable to financial stress and balance of payments difficulties in the event of further capital outflows and sharp currency depreciation (Hoek, Kamin, and Yoldas 2022). In the private sector, tightening credit conditions and slowing growth could lead to loan losses, impaired balance sheets, and liquidity problems among both banks and nonbank financial institutions (IMF 2022d).

Risks of financial stress are particularly acute among those EMDEs with large current account deficits and heavy reliance on foreign capital inflows, as well as EMDEs with high levels of short-term or foreign-currency denominated government or private debt. The shares of government debt held by nonresidents and of external debt with variable rates have both risen in many EMDEs since the global financial crisis (figure 1.11.D). These characteristics increase the risk that some countries may lose the confidence of global capital markets and struggle to refinance debt as it rolls over (Rogoff 2022). EMDEs are also rendered more vulnerable where they have shallow and illiquid local currency debt markets and excessive reliance on domestic bank financing of sovereign entities. In contrast, EMDEs with more developed local currency financial markets, and which implemented reforms following the global financial crisis to enhance financial stability, are likely to be more resilient.

Weaker growth in China

Growth in China slowed sharply last year as a result of recurrent pandemic-related restrictions and strains in the real estate market (World Bank 2022f). The recent shift toward reopening has been faster than expected, and there is significant uncertainty about the trajectory of the pandemic and how households, businesses, and policy makers in China will respond. The economic recovery may be delayed if reopening results in major outbreaks that overburden the health sector and sap confidence.

The real estate sector is particularly important in China, as it accounts for about 25 percent of both gross value added and fixed asset investment, a far higher share than in other countries. A number of major property developers have defaulted or are at risk of doing so amid a significant decline in housing prices and the pace of new construction. Financial vulnerabilities in the country are a long-standing concern. Since 2008, corporate credit has increased by nearly 60 percentage points of GDP to 160 percent of GDP in 2022, well above the increase of about 18 percentage points in the average EMDE. This pace of credit growth is well above the rate typically associated with credit booms and well above thresholds identified as early warning indicators for financial stress. State-owned enterprises are estimated to account for about two-thirds of corporate debt. Although policy buffers are likely sufficient to prevent systematic market stress, continued defaults by heavily leveraged real estate developers and a broadening downturn in the real estate sector may trigger domestic financial strains and weigh on household balance sheets, consumer confidence,

local government finances, and growth. Financial strains may also be channeled through linkages with non-traditional financial intermediaries that play an important role in the financial system. Even if financial stress is avoided, longer-term growth may be affected if a substantial share of the credit expansion were allocated to unproductive uses.

A slowdown in China would add further headwinds to global activity, with adverse spillovers to global trade, commodity markets, and financial markets (Ahmed et al. 2019). Direct trade spillovers would be most significant for the EAP region, including for countries integrated into China's supply chains, and some trade-reliant advanced economies. Falling demand in China, which accounts for half of global metals demand and one-third of global energy demand, could also have particularly adverse impacts on commodity exporters in South America, where China is the single largest export market. Outbound lending, investment, and remittances from China could come under pressure, compromising an important financing source for many EMDEs (Horn, Reinhart, and Trebesch 2021).

Geopolitical turmoil and trade fragmentation

Geopolitical tensions are at a high level. An intensification of the war in Ukraine, or rising conflict elsewhere, could have significant economic repercussions through commodity and financial markets, trade and migration linkages, uncertainty, confidence, and increased likelihood of financial stress in affected countries.

Following the trade and financial dislocations due to the pandemic, the current level of geopolitical tensions has led some policy makers to take further steps to delink from global financial and trade networks, which has heightened global trade policy uncertainty. Many countries are seeking to re-orient supply chains such that key inputs are produced either domestically or with a narrow set of partners. Similarly, some countries are seeking ways to reduce the vulnerability of their financial systems and foreign assets to policy actions by other nations. Energy markets, in particular those in Europe, are going through major disruptions as a result of sanctions due to Russia's invasion of Ukraine and related spillovers.

In the near term, geopolitical turmoil and the possible segmentation of finance, trade, and commodity markets into regional blocks could lead to a new wave of production disruptions and higher prices for globally traded goods and commodities—as occurred during the pandemic and the invasion of Ukraine—with global spillovers through supply chains. Even if the war does not worsen, persistent uncertainty and a push toward trade reshoring through domestic subsidies and import barriers have the potential to slow investment, trade, productivity, and progress against poverty (Brenton, Ferrantino, and Maliszewska 2022; Caldera et al. 2020).

Worsening effects of climate change

The world is experiencing an increasing number of costly, record-breaking weather events linked to climate change. For instance, recent severe heat waves, including in Europe and China, have imposed a significant human cost and strained power systems. Major rivers have run dry in Europe, North America, and China, impeding transport and water supplies. Floods in Pakistan have inundated one-third of the country, while droughts in South America threaten agricultural production and larger ecosystems. Such extreme events are become increasingly likely as global warming heightens the expected losses and damages related to climate change (IPCC 2022).

The global climate may be approaching "tipping points" at which changes become self-perpetuating and accelerate in damaging ways (McKay et al. 2022). These include rising sea levels from melting ice sheets, the rapid collapse of major biomes such as the Amazon rainforest or coral reefs, or runaway carbon release from thawing permafrost.

In the near term, these or other climate-related disasters can inflict substantial human costs, damage infrastructure, and disrupt activity. Disasters can also add to the number of displaced people, with disproportionate impacts on the poor. They can also worsen government fiscal

positions through lower tax receipts and lower productivity alongside increased spending on reconstruction and public services. They may prove especially disruptive at the current juncture by interrupting the supply of already-scarce commodities, disrupting supply chains, or increasing the need for heating or cooling in an environment of already-high energy prices. Changes in climate may further increase food insecurity in regions with large numbers of subsistence farmers that lack the resources to easily adjust production. In the longer term, climate change may render some populated areas uninhabitable, lower productivity, and worsen global poverty.

Alternative downside scenarios

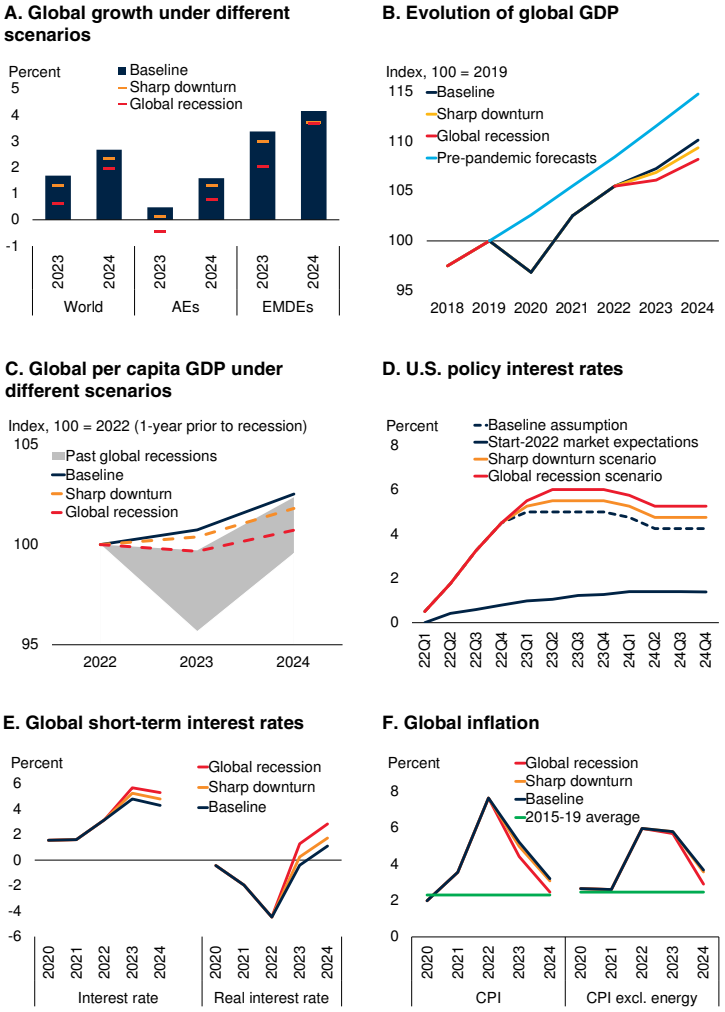
In the baseline forecast, global activity is expected to grow by only 1.7 percent in 2023 before rebounding to a still subdued 2.7 percent in 2024. The baseline forecast for global inflation is 5.2 percent in 2023 and 3.2 percent in 2024. A global macroeconomic model is used to quantify the downside risks to growth of higher anticipated inflation, additional monetary tightening in response, and the potential resultant financial stress. Two downside scenarios are considered—a *sharp downturn* scenario and a *global recession* scenario (figure 1.12.A).[1] These alternative scenarios would imply even more persistent losses relative to the pre-pandemic trend of global activity—and, in the case of global recession, an outright contraction in per capita GDP (figures 1.12.B and 1.12.C).

In the first scenario, central banks tighten monetary policy more quickly and to a rate above the market expectations embedded in the baseline forecast in response to rising inflation expectations. This comes at a substantial cost to output, even absent significant and broad financial stress in EMDEs. In this scenario, 5-year inflation

[1] Each scenario is prepared using the Oxford Economics Global Economic Model, a global semi-structural macro projection model which includes 81 individual country blocks, most of which are available at a quarterly frequency, with behavioral equations governing domestic economic activity, monetary and fiscal policy, global trade, and commodity prices (Oxford Economics 2019).

FIGURE 1.12 Alternative downside scenarios

The materialization of downside risks would lead to substantially weaker growth and further widen the gap between global GDP and its pre-pandemic trend, potentially leading to a global recession. In a sharp downturn scenario, central banks hike policy rates more than is currently expected to bring inflation under control; in a global recession scenario, this triggers widespread financial crises and a sharper fall in inflation.



Sources: Bloomberg; Consensus Economics; Federal Reserve Bank of St. Louis; Haver Analytics; Guenette, Kose, and Sugawara (2022); Oxford Economics; World Bank.

Note: AEs = advanced economies; EMDEs = emerging market and developing economies. CPI = consumer price index. Scenarios produced using the Oxford Economics *Global Economic Model*. Unless otherwise indicated, aggregate growth rates are calculated using real U.S. dollar GDP weights at average 2010-19 prices and market exchange rates. Data are estimates for 2022 and forecasts for 2023-24.

A. Global growth aggregate is computed by Oxford Economics using 2015 market exchange rates and prices.

B. The pre-pandemic forecasts are based on the January 2020 long-term Consensus forecasts over 2020-24.

C. For past global recessions, the range shows the minimum-maximum range of past five global recessions, and the values one year prior to each global recession (for example, 1974 for the 1975 global recession, and 2019 for the 2020 global recession) are equal to 100.

D. Start-2022 market expectations are derived from future overnight index swaps (OIS) curves, observed on December 31, 2021. Baseline interest rate assumptions consistent with market expectations through 2023Q3. Beyond 2023 baseline assumptions are broadly in line with Federal Reserve's summary of economic projections as of December 14th, 2022.

E. Global nominal short-term interest rate is measured as GDP-weighted averages of national rates. The baseline assumptions are broadly in line with Consensus expectations 3 months and 12 months ahead.

F. Model-based projection of annual global year-on-year CPI inflation using Oxford Economics *Global Economic Model*. Projection embeds global oil price forecast presented in table 1.1.

expectations rise by an average of 0.7 percentage points in 2023Q1-Q2 (equivalent to half of the standard deviation of realized inflation in major economies from 2010 to 2019). This further increases the persistence of the global inflation shock. In response, central banks in the United States, other advanced economies, and major EMDEs are assumed to raise their benchmark policy rates by 50 basis points above market assumptions over 2023Q1-Q2 and sustain this differential through 2024 (figure 1.12.D). This additional policy tightening, alongside slowing inflation, causes the global real short-term interest rate to rise from -4.5 percent in 2022 to an average of 1.0 percent over 2023-24, slightly over 60 basis points higher than in the baseline scenario and the fastest pace since the global oil shock of the late 1970s (figure 1.12.E).[2] The higher global policy rates are sufficient to offset the initial shock to inflation and keep both total global inflation and inflation excluding energy from deviating significantly from the baseline (figure 1.12.F).

While the global economy avoids a recession, global GDP growth falls to 1.3 percent in 2023—comparable to the global downturn of 1991. Activity in this scenario rebounds in 2024, but the projected GDP growth rate of 2.3 percent remains 0.4 percentage point below baseline, largely reflecting the lagged impacts of additional monetary tightening. The downturn is more severe for EMDEs, particularly those that are heavily exposed to the United States via trade and financial channels, as well as commodity-exporting EMDEs affected by substantially lower commodity prices.

In the second scenario, not only are major central banks' policy rates even more restrictive, but tighter financial conditions are assumed to lead to widespread and significant financing difficulties across EMDEs, leaving the world in a *global recession*. In this scenario, policy makers in major economies observe signs of an even larger increase in inflation expectations than assumed in the first risk scenario and respond by raising policy rates by 100 basis points above the baseline over 2023Q1-2023Q2, keeping them there until the end of 2024. This raises concerns that debt in a growing number of EMDEs is becoming unsustainable, leading to heightened investor risk aversion in the form of widening borrowing spreads, capital outflows, and currency depreciations. EMDE governments, particularly those with limited fiscal space, are forced to further tighten fiscal policy by reducing expenditures, while the ability of central banks to provide relief to stressed financial markets is limited by the need to focus on containing inflation. Uncertainty about the extent of exposure to widespread market losses prompts a surge in financial volatility and a sharp fall in consumer and business confidence. Most economies face markedly negative spillovers from abroad via financial, trade, and commodity price channels.

In this scenario, global GDP grows by only 0.6 percent in 2023, comparable to the global recession of 1982. This translates into a contraction of 0.3 percent in per capita terms. Weak growth is widespread in this scenario, with EMDE growth slowing to 2.0 percent in 2023, the lowest rate of expansion since the early 1990s, excluding the pandemic. Meanwhile, advanced economies contract by 0.5 percent in 2023. A gradual recovery begins in 2024, hampered by limited countercyclical policy support in major economies.

The global recession modeled in this scenario would also lead to severe disruptions in labor markets. The scenario-consistent model-based path for the global unemployment rate would rise about 0.5 percentage point above the baseline in 2024, slightly less than the change during the global financial crisis. Worsening unemployment would push even more people into poverty. In addition, the reduction in per capita incomes in the global recession scenario is likely to be more severely felt by those at the lower end of the global income distribution, resulting in further increases in global income inequality (Mahler, Yonzan, and Lakner 2022).

Global inflation falls to 2.5 percent in 2024, close to the 2015-19 average of 2.3 percent, as

[2] Global real short-term interest rate is measured as a GDP-weighted average of national rates, minus the global headline CPI inflation rate.

unexpected weakness in demand pulls inflation down globally. Part of the deceleration in headline inflation is explained by inflation excluding energy, which slows to 2.9 percent in 2024 in this scenario, compared to 3.7 percent in the baseline. The sharp tightening of global financial conditions in this scenario is especially damaging for EMDEs with large current account deficits that rely heavily on foreign capital inflows, as well as those with high levels of short-term or foreign-currency-denominated debt.

Policy challenges

Urgent global policy efforts are needed to mitigate the risk of global recession and debt distress in EMDEs, address climate change, and support people affected by crises and hunger. EMDEs will need to pursue a carefully calibrated macroeconomic policy mix that reins in inflation without triggering financial stress, ensures any additional fiscal support is targeted to vulnerable groups, restores fiscal sustainability, and preserves financial stability. To offset the long-term damage from the adverse shocks of the past three years, EMDEs need to substantially increase investment. Given limited fiscal space, this will require new financing from the international community and from the repurposing of existing spending, such as inefficient agricultural and fuel subsidies.

Key global challenges

The key challenge for policy makers around the world is to lower the likelihood of a global recession, especially one that could result from rapid and synchronous monetary policy tightening that causes widespread financial stress. The unexpected rise in inflation last year highlights the uncertainties about the relationship between changes in central bank policy rates, growth, and inflation. The unusual pace and synchronous nature of the current tightening cycle has heightened these uncertainties. To mitigate them, central banks need to fully factor in the cross-border effects of their decisions to ensure policy is not tightened more than is needed to return inflation to target. Discussions among national monetary policy makers are needed to mitigate financial stability risks associated with synchronous tightening of policies and avoid undue economic costs.

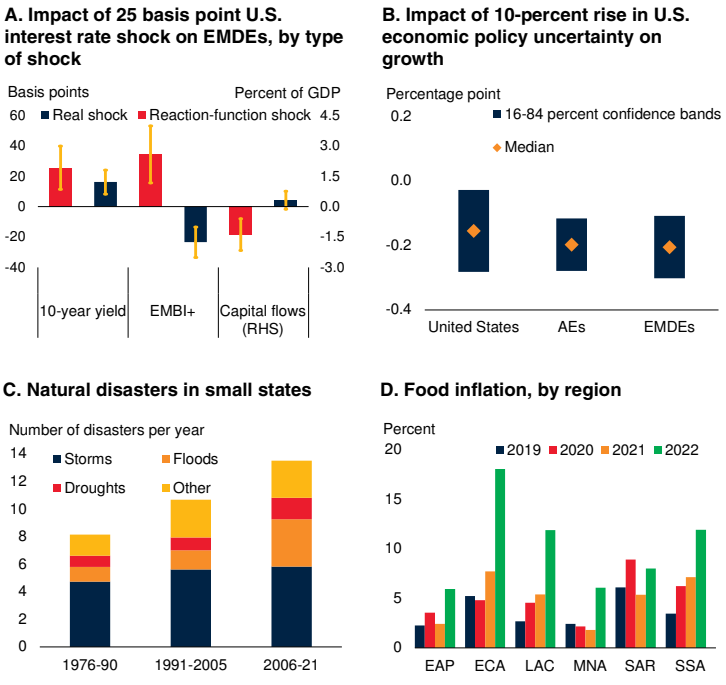
EMDEs are particularly vulnerable to spillovers from sharply higher policy rates in the United States and other advanced economies. Unlike increases in U.S. interest rates that result from changes in real economic activity, increases due to perceived shifts in the Federal Reserve's reaction function, such as a move toward a more hawkish position, can have particularly damaging effects on the financial conditions of EMDEs (figure 1.13.A; Arteta et al. 2015; Arteta, Kamin, and Ruch 2022). These can lead to higher bond yields and sovereign risk spreads in EMDEs, alongside capital outflows and currency depreciation, which can render dollar-denominated external debt unsustainable. In addition, higher import prices can worsen already high inflation. In this context, the risks to EMDEs of unprecedented global monetary tightening can be mitigated by a range of tools, including enhanced communication among central banks aimed at mitigating financial stability risks, monitoring cross-border spillovers, and increased support from international financial institutions (Avdjiev et al. 2020; Obstfeld 2022b).

Minimizing the probability of crisis will also require a sound macroeconomic policy mix where fiscal policy does not add to inflationary pressures and prompt additional monetary policy tightening. This risk can be mitigated by ensuring that fiscal support is carefully targeted toward the poor. Above all, macroeconomic authorities need to avoid heightening policy uncertainty, which could add further pressure to global financial markets already threatened by rising borrowing costs and generate additional adverse spillovers to growth (figure 1.13.B; Kose et al. 2017a).

In a context of rising global borrowing costs, slower growth, and already-limited fiscal space, the international community needs to bolster efforts to reduce debt distress and attenuate the risk of debt crises in EMDEs. Access to timely, fair, and adequate debt restructuring is essential, particularly among the growing share of LICs at high risk of debt distress. The G20 Common Framework can help countries overcome debt re-

FIGURE 1.13 Global policy challenges

To reduce the risk of global recession, global policy efforts are needed to address the potential spillovers from pivots toward more aggressive monetary policy tightening or heightened uncertainty. Global action is needed to respond to the adverse consequences of increasingly frequent and severe natural disasters on vulnerable countries, such as small states, as well as the substantial rise in food insecurity amid high inflation.



Sources: Arteta, Kamin, and Ruch (2022); EM-DAT (database); Haver Analytics; International Monetary Fund; JP Morgan; Kose et al. (2017a); World Bank.
Note: AEs = advanced economies; EMBI + = Emerging Markets Bond Index Plus; EMDE = emerging market and developing economies; EAP = East Asia and Pacific, ECA = Europe and Central Asia, LAC = Latin America and the Caribbean, MNA = Middle East and North Africa, SAR = South Asia, SSA = Sub-Saharan Africa. Small states are EMDEs with populations less than 1.5 million.
A. Figure shows impulse responses after one quarter from panel local projection models with fixed effects and robust standard errors, to reaction-function shocks (for example, a pivot toward a more hawkish monetary policy stance) and real shocks (for example, positive news about U.S. activity). Shocks are estimated from a sign-restricted Bayesian VAR. Positive "capital flow" values reflect an increase in net liabilities of portfolio and other investments for EMDEs. Whiskers reflect 90 percent confidence intervals.
B. Figure shows the cumulative impulse responses after one year on output growth in the United States, 23 other AEs, and 18 EMDEs to a 10-percent increase in the U.S. Economic Policy Uncertainty Index.
C. Disasters are counted as the total number in all small states per year. Other disasters include earthquakes, landslides, and volcanic activity. Sample includes 26 EMDE small states.
D. Figure shows annual averages of food consumer price inflation. Sample includes 46 EMDEs. Regional inflation rates are based on median across countries.

structuring challenges resulting from unaffordable debt owed to a diverse set of creditors. Decisive debt restructuring at an early stage can help avoid the long and costly adjustment process that sometimes accompanies more incremental efforts and can result in more favorable outcomes for both borrowers and lenders (Kose et al. 2021b; World Bank 2022g).

Climate change is a key global challenge, as it is increasing the frequency and severity of natural disasters and can exacerbate extreme poverty by reducing agricultural productivity, increasing food prices, and worsening food and water insecurity in EMDEs. Climate-related disasters are becoming more common, and they weigh particularly heavily on vulnerable countries such as small states (chapter 4; figure 1.13.C). Strong global cooperation is essential to meet the goals of the Paris Agreement on Climate Change. After falling in 2020, global carbon dioxide emissions rebounded in 2021, with early estimates pointing to further increases in 2022 (IEA 2022b; WMO et al. 2022). Disruptions to natural gas flows related to the war in Ukraine have temporarily set back efforts to transition away from coal in both advanced economies and EMDEs.

EMDEs will need to make substantial investments in all forms of capital—human, physical, social and natural—to bolster green, resilient, and inclusive growth. Substantial resources can be redeployed from expensive and, in many cases, inefficient subsidies, which work against global development objectives—for example, agriculture and fuel subsidies alone amount to $1.2 trillion globally (World Bank 2022h). However, given the lack of fiscal space and the scale of the investment needs in many countries, strong global cooperation is needed to increase access to official financing for EMDEs, in addition to supporting reforms that encourages private finance (World Bank 2021a, 2022i).

Sustained international cooperation is also needed to accelerate the clean energy transition, help countries improve both energy security and affordability, and incentivize renewable energy and energy efficiency. For example, carbon pricing instruments can incentivize new investment and dampen fossil fuel demand while generating government revenue; however, they remain underutilized (World Bank 2022j). Border carbon adjustment mechanisms can also help reduce global emissions, but they must not be used as a form of trade protectionism.

Food price inflation has increased substantially across all EMDE regions (figure 1.13.D). Soaring

food prices have worsened food insecurity and increased the number of people affected by hunger. In particular, Russia's invasion of Ukraine led to disruptions in exports of key food commodities, which exacerbated food price inflation in many poor and vulnerable countries. Although the Black Sea Grain Initiative has helped to facilitate exports of food and agricultural products from Ukraine since August, uncertainty remains about its continuation. Global cooperation is needed on several fronts to overcome global food insecurity.

The international community needs to safeguard the global commodity trading system by avoiding restrictive measures, such as export bans on food and fertilizer. Such protectionist policies often amplify volatility in prices and worsen food insecurity and nutrition globally (Laborde, Lakatos, and Martin 2019). Enhancing the resilience of the trading system to shocks, including from intensifying geopolitical tensions, requires stronger international cooperation to support diversification of products and markets and improve access to trade finance, especially for the most vulnerable countries. Sustained collective action is also required to enhance resilience to food systems, including adopting measures to limit shortages of key agricultural inputs such as fertilizer, supporting fertilizer innovations and methods to improve fertilizer use efficiency, and by coordinating research to develop and implement agricultural innovations that are climate-resilient (Voegele 2022).

Greater international efforts are needed to mitigate humanitarian crises stemming from war and conflict. International coordination of relief efforts can help to limit humanitarian costs in affected areas, especially through the delivery of food, water, medicine, shelter, and financial aid. Coordinated efforts by multilateral institutions can support countries hosting refugees and those affected by the direct and indirect economic impacts of war and conflict. In addition, COVID-19 remains a global health challenge, highlighting the need for improved vaccination coverage and strengthened pandemic preparedness, especially in LICs (Glennerster, Snyder, and Tan 2022). International financial and technical assistance is needed to buttress the ability of health care systems in the poorest countries to confront current and future health crises.

Challenges in emerging market and developing economies

EMDE monetary and financial policy challenges

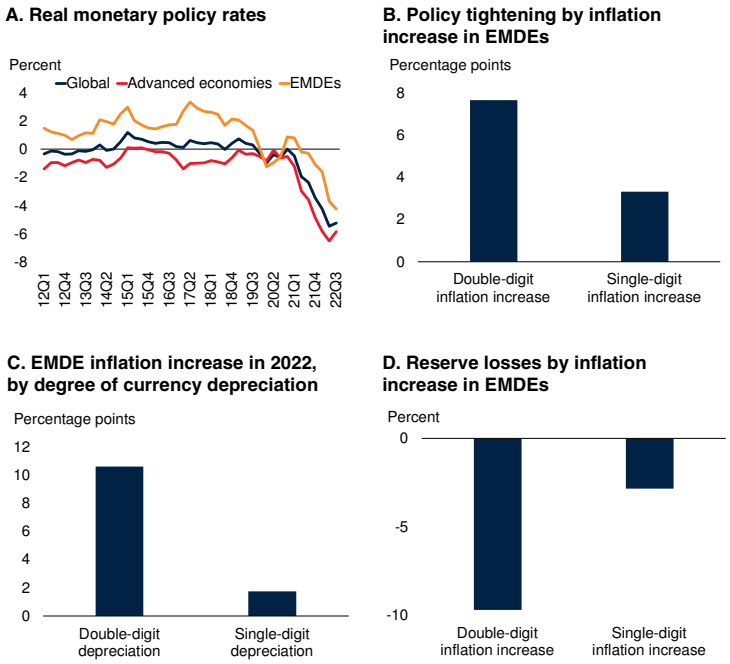
Monetary policy is expected to continue tightening as slowing inflation causes global real policy rates to gradually rise from their current deeply negative levels (figure 1.14.A). Elevated inflation tends to inflict the greatest harm on low- and middle-income households. Inflation often outstrips growth in wages, which these households disproportionately rely on. Poorer households also suffer more when high inflation is driven by rising prices for food and fuel, which take up a greater share of their income—in EMDEs, the lowest-income households spend roughly 50 percent of their income on food (Gill and Nagle 2022).

EMDE monetary and financial authorities will need to continue to calibrate domestic monetary conditions taking into account the effects of both domestic tightening and cross-border spillovers from higher policy rates in advanced economies (Guénette, Kose, and Sugawara 2022; Obstfeld 2022a). A shifting policy mix in advanced economies, where more supportive fiscal policy could add to inflation pressures, represents a potential added challenge. Tightening financial conditions and depreciation pressures are likely to lead to a further rise in EMDE financial volatility and an increased probability of balance of payments strains, financial crises, and economic downturns. Some EMDE monetary authorities may have limited the rise in inflation and averted disruptive exchange rate dynamics through relatively early and swift increases in policy rates. In countries where inflation remains elevated, however, authorities may have to continue tightening monetary policy to support macroeconomic stability and to prevent inflation expectations from becoming de-anchored (figure 1.14.B).

Critically, communicating monetary policy decisions clearly, leveraging credible monetary frameworks, and safeguarding central bank in-

FIGURE 1.14 Monetary policy challenges in emerging market and developing economies

Monetary policy is expected to continue tightening as slowing inflation causes global real policy rates to gradually rise from their current deeply negative levels. Among emerging market and developing economies, monetary policy has been tightening more markedly in response to larger inflation increases, which were generally accompanied by large currency depreciations. Foreign exchange reserve buffers, which have been used to cushion depreciation amid high inflation, need to be rebuilt.



Sources: Haver Analytics; International Financial Statistics (database); Oxford Economics; World Bank.

Note: EMDEs = emerging market and developing economies.

A. Figure shows nominal 3-month government rates deflated by realized consumer price inflation for a sample of 27 EMDEs and 26 advanced economies, sourced from Oxford Economics' *Global Economic Model*.

B.D. Data are average cumulative changes in policy interest rates and increases in inflation rates since 2021. Foreign reserve losses are since end-2021. "Single-digit inflation increase" includes some countries where inflation declined. Sample include 71 EMDEs, of which 22 EMDEs faced double-digit and 49 EMDEs faced single-digit inflation increases.

C. Average rise in headline consumer price index inflation in 2022. "Double-digit depreciation" and "Single-digit depreciation" are relative to the U.S. dollar in 2022. Balanced sample includes 84 EMDEs.

dependence will help EMDEs anchor inflation expectations and avoid disruptive capital outflows. This would help limit the adverse economic impacts of tightening cycles. Falling currencies have contributed to domestic inflation in many EMDEs, and this would likely accelerate if monetary policy credibility were eroded (figure 1.14.C).

EMDEs can also reduce their vulnerability to volatile capital flows and exchange rate fluctuations by strengthening macroprudential regulation. In 2022, about one-fifth of EMDEs liquidated more than 15 percent of gross official reserves to cushion the fall in domestic currencies, with larger losses among countries contending with higher inflation (figure 1.14.D). To smooth disruptive short-term volatility in currency markets and bolster investor sentiment, EMDEs can consider foreign exchange interventions where reserves are judged to be adequate. While these actions may alleviate immediate pressures, policy makers will eventually need to rebuild foreign exchange reserve buffers and realign prudential policy to prepare for the possibility of financial stress. Prudential policy efforts will need to prioritize, among other things, adequate bank capital and liquidity, better currency alignment of assets and liabilities, and appropriate levels of leverage in the household and corporate sectors.

Banking system exposures to exchange rate risk and rollover risk need to be monitored carefully and contained through macro- and micro-prudential policies. Credit quality, nonperforming loans, and currency mismatches need to be reported transparently such that prompt corrective action can be taken. There is an elevated risk of episodes of market dislocation in response to adverse events, given the sharp increase in interest rates after a prolonged period of low borrowing costs. The buffers of both banks and non-bank financial institutions therefore need to be sufficient to absorb sizable shocks, and should be stress-tested where institutions pose potentially systemic risks. In addition, risks from highly indebted corporate sectors can be allayed through insolvency reform and rapid, transparent treatment of nonperforming loans.

EMDE fiscal policy challenges

Governments face the difficult task of supporting vulnerable households and meeting other public spending needs while shoring up fiscal sustainability. EMDE debt levels rose sharply during the pandemic, with the median rising from 49 percent of GDP in 2019 to 55 percent of GDP in 2022, compounding earlier increases. With fiscal deficits that are still above pre-pandemic averages, debt levels are set to remain elevated, and many economies are vulnerable to rising borrowing costs, especially those with already high debt servicing costs and sizable external or foreign-

currency denominated debt (figure 1.15.A; Rogoff 2022). LICs have also become more vulnerable, as their debt has increasingly shifted from concessional to market financing. More broadly, commodity importers—particularly those heavily reliant on food and fuel imports for domestic consumption and production—have experienced a sharp drawdown of their fiscal buffers. In contrast, many energy exporters have taken advantage of high energy prices to replenish revenues and stabilization funds.

After a sharp fiscal adjustment in 2021, when nearly 80 percent of EMDE pandemic-related fiscal support was unwound, fiscal consolidation paused in many EMDEs in 2022. The aggregate EMDE fiscal stance turned expansionary in 2022, with fiscal policy becoming more supportive in about half of EMDEs, especially in large economies (figures 1.15.B and 1.15.C). The EMDE fiscal stance is expected to be slightly contractionary in 2023. In all, about 70 percent of EMDEs are expected to consolidate fiscal balances in both 2023 and 2024.

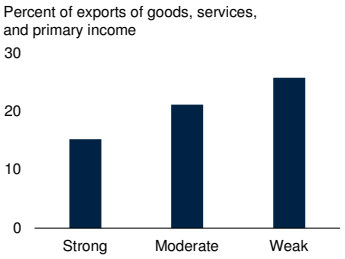
Last year's pause in fiscal consolidation efforts reflected the fact that many EMDEs responded to higher food and fuel prices by implementing tax cuts, subsidies, loans, and trade measures to mitigate the impact on households and firms (figures 1.15.D and 1.15.E; Amaglobeli et al. 2022). In many cases, support to households has been largely untargeted and may add to inflationary pressures and work against monetary policy tightening. In addition to being costly, untargeted tax cuts and subsidies on fossil fuels support demand for environmentally-damaging and carbon-intensive energy sources, eroding incentives for energy conservation and creating tension with longer-term climate goals.

Reprioritizing fiscal support away from broad and costly subsidies can free up resources that can be redirected to low-income households and viable firms (Bridle et al. 2018). In particular, governments can provide vulnerable households with means-tested cash transfers, which tend to be less costly than food and fuel subsidies, especially when implemented with automatic sunset clauses (World Bank 2022k). Protecting spending in categories such as health, climate, and education is

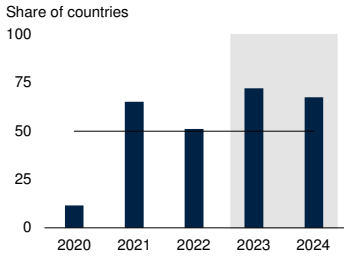
FIGURE 1.15 Fiscal policy challenges in emerging market and developing economies

Many emerging market and developing economies (EMDEs) are vulnerable to rising borrowing costs, especially those with already high debt servicing costs and sizable external or foreign-currency denominated debt. In some EMDEs, fiscal consolidation efforts in 2022 slowed or were further delayed due to government support in response to high food and energy prices. Tax revenues in many EMDEs fall short of the amount needed to make progress toward development goals, highlighting the need for greater domestic revenue mobilization.

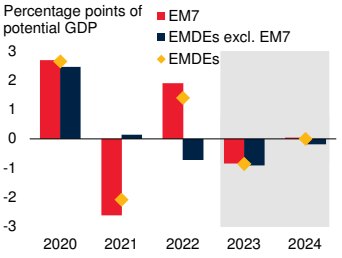
A. EMDE debt service costs, by credit rating



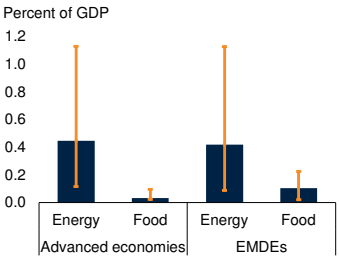
B. Share of EMDEs with tightening fiscal policy



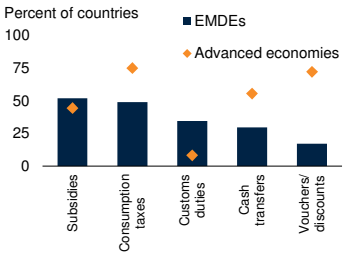
C. Fiscal impulse



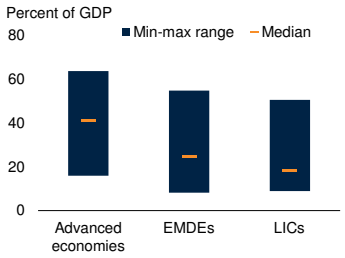
D. Government support packages in response to high food and energy prices, 2022 survey



E. Government measures in response to high energy and food prices, 2022 survey



F. Government revenues, 2022



Sources: IMF (2022b); Kose et al. (2022); Moody's Corporation; WEO (database); World Bank.
Note: EMDEs = emerging market and developing economies; EM7 = Brazil, China, India, Indonesia, Mexico, the Russian Federation, and Türkiye; LICs = low-income countries. Shaded areas indicate forecasts. Unless otherwise indicated, aggregates are calculated using real U.S. dollar GDP weights at average 2010-19 prices and market exchange rates.
A. Bars show median debt service for each category and whiskers indicate the minimum-maximum range. Strong credit is defined as countries with investment grade ratings (ratings from AAA to BBB). Moderate credit is defined as countries with ratings between BB and B. Weak credit is defined as countries with ratings between CCC and C. Sample size includes 72 EMDEs.
B.C. Fiscal impulse is calculated as the negative change in the structural balance from previous year. Sample includes 43 EMDEs.
B. Tightening fiscal policy shows the share of countries with a negative fiscal impulse.
D.E. Survey of 174 countries on the measures taken during the period from January to June 2022 in response to rising food and energy prices, as described in IMF (2022b).
D. Bars show the median and whiskers show the 20th and 80th percentile, based on IMF (2022b).
F. Sample size includes 137 EMDEs, 37 advanced economies, and 23 LICs.

critical given setbacks from the pandemic, increased costs due to inflation, and large investment gaps.

EMDEs can also renew their adherence to fiscal rules, as appropriate, which may set debt on a more sustainable path and help buttress market confidence. Improvements to the expenditure review process—such as strengthening mechanisms that prioritize and evaluate the efficacy of public projects—can enhance the quality and efficiency of public spending. Policies that aim at strengthening public procurement practices, administrative capacity, and transparency can also bolster public investment efficiency, foster a more favorable business climate for private investment, and help reinvigorate productivity. Several EMDEs (Malaysia, Namibia, Russia) activated escape clauses, modified fiscal rule limits, and suspended fiscal rules in response to the pandemic (Davoodi et al. 2022). It is critical to re-establish rules and strengthen medium-term expenditure frameworks to create a predictable policy environment.

EMDE government revenue as a share of GDP is expected to remain below pre-pandemic levels until at least 2024 in over half of EMDEs—particularly commodity importers. Even prior to the pandemic, EMDE government revenues trailed advanced-economy levels by about 15 percentage points of GDP; since then, the gap has widened, particularly in LICs (figure 1.15.F). Much of the challenge reflects weak domestic revenue mobilization. Tax revenues in nearly half of EMDEs fell short of the amount needed to provide basic services, increasing the challenge of financing the Sustainable Development Goals (SDGs; OECD 2018).

Increasing tax rates may be difficult to pursue in the near term given weak growth prospects, but EMDEs have a variety of other options to bring government revenues closer to advanced-economy levels. They can broaden tax bases and curb revenue leakages by reducing exemptions and closing loopholes, adopting tax expenditure analysis, and aligning policy with international rules such as the OECD/G20 Inclusive Framework on Base Erosion and Profit Shifting. To this end, international tax agreements that improve automatic information sharing can also help combat revenue losses. Governments can also focus on ensuring under-taxed activities are appropriately taxed and explore options to better utilize taxes that can be both progressive and efficient, including property taxes. Tax administration and collection mechanisms can be strengthened to reduce avoidance and ensure revenue is collected efficiently. This can be complemented by efforts to bolster taxpayers' intrinsic willingness to pay taxes by improving the fairness and efficiency of taxes and public spending (Hoy 2022). Revenue reforms, where appropriate, should be carefully sequenced to avoid macro-economic instability. For example, restructuring tax rates, particularly on capital, in tandem with a pronounced tightening in global financing conditions, could exacerbate portfolio outflows and deter investment.

EMDE structural policy challenges

The longer-term challenges facing EMDEs have been aggravated by the pandemic, Russia's invasion of Ukraine, and the sharp deceleration in global growth. These developments have weighed on investment growth in EMDEs, worsened food insecurity in the world's poorest countries, and stalled progress in promoting gender equality. Reversing the impact of these negative shocks and better preparing vulnerable groups for future crises will require structural reforms that bolster long-term growth prospects. This will involve policies that boost investment and human capital development, as well as those that buttress resilience and crisis preparedness, especially in agriculture and food systems.

Bolstering investment

The lasting damage inflicted by the pandemic, the invasion of Ukraine, and other negative shocks over the past three years has led to substantial and growing cumulative output losses in EMDEs (figure 1.16.A). In particular, the recovery in investment—a key driver of long-term growth—after these negative shocks is expected to be substantially weaker than the one that followed the 2009 global recession (figure 1.16.B; Kose et al. 2017b). Weak investment growth can worsen potential growth, weaken trade growth, and

hamper the ability of countries to achieve the SDGs (chapter 3). Absent reforms, investment growth in EMDEs will likely continue falling during the next decade, reflecting trends in fundamental drivers along with scarring from the negative shocks of recent years.

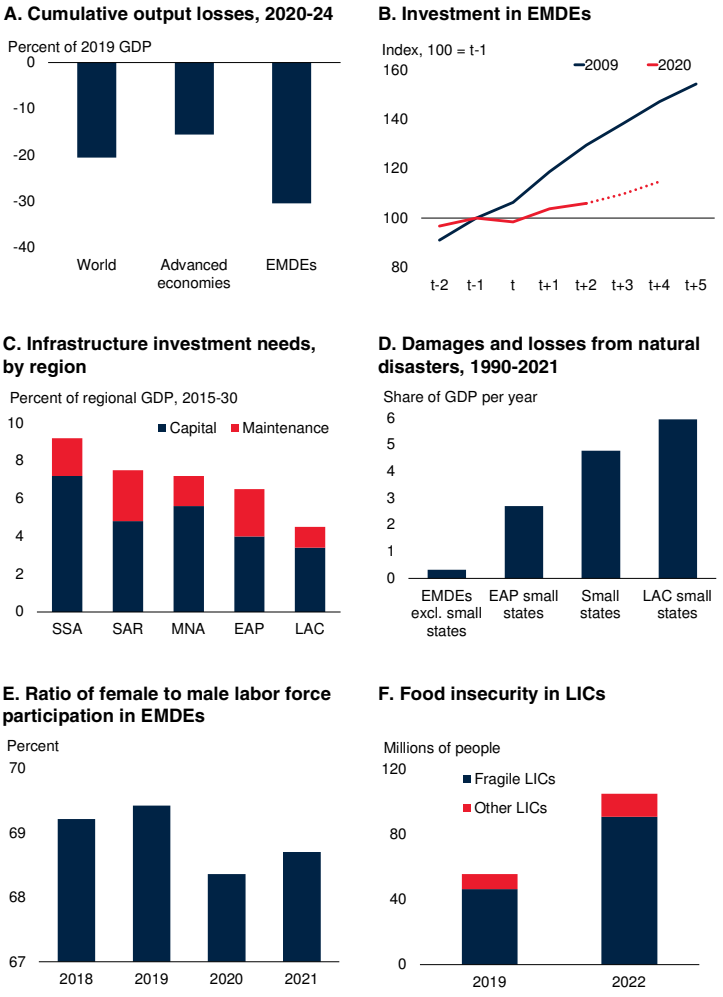
Well-targeted investments can create jobs, lower income inequality, and boost productivity.[3] Substantial investment is also needed to help EMDEs meet the SDGs in education, health, and infrastructure (Vorisek and Yu 2020). For example, low- and middle-income countries need to invest $1.5-2.7 trillion per year (about 5-8 percent of their combined annual GDP) during 2015-30 to close SDG-related infrastructure gaps (figure 1.16.C; Rozenberg and Fay 2019). These gaps are reflected in low school enrollment and completion rates, poor health indicators, low female labor force participation, product and labor market distortions, and high rates of informality. Disruptions to schooling during the pandemic have worsened learning outcomes, especially among poorer households and countries, and have likely damaged future productivity, earnings, and innovation (Moscoviz and Evans 2022). Similarly, while better health outcomes are associated with higher growth rates, EMDEs require significant investment to reverse stubbornly poor health outcomes and achieve the health-related SDGs targets. Given the scale of these investments, EMDE efforts will need to be supported by the global community through greater access to official financing and measures to leverage private finance.

Sound investments aligned with climate goals in priority areas—such as transport and energy, climate-smart agriculture and manufacturing, and land and water systems—can all boost long-term growth, while also enhancing EMDE resilience to future natural disasters, especially in small states (chapter 4; figure 1.16.D; Agrawala, Dussaux, and Monti 2020; IEA 2020; World Bank 2021a). While green transitions need to be carefully

[3] Other factors beyond investment that also drive long term growth—such as productivity, governance and institutions, gender equality, human capital and labor force participation—are discussed in previous editions of the *Global Economic Prospects* report; please see World Bank (2021b; 2021c; 2022e).

FIGURE 1.16 Structural policy challenges in emerging market and developing economies

The negative shocks of the past three years have led to large cumulative losses, especially for output and investment in emerging market and developing economies (EMDEs), highlighting the need for structural policy responses. Substantial investments are needed to close SDG-related infrastructure gaps and enhance EMDE resilience to natural disasters. A persistent gender gap in labor participation and higher food insecurity, particularly in low-income countries, also require decisive policy action.



Sources: Consensus Economics; EM-DAT (database); FSIN and GNAFC (2022); GNAFC (2022); Guénette, Kose, and Sugawara (2022); Kose et al. (2017b); Rozenberg and Fay (2019); WDI (database); World Bank.

Note: EMDEs = emerging market and developing economies; LICs = low-income countries; Fragile LICs = LICs with fragile and conflict affected situations; EAP = East Asia and Pacific, LAC = Latin America and the Caribbean; MNA = Middle East and North Africa, SAR = South Asia, SSA = Sub-Saharan Africa. SDG = sustainable development goals. Small states are EMDEs with a population of less than 1.5 million. Unless otherwise indicated, aggregate growth rates are calculated using real U.S. dollar GDP weights at average 2010-19 prices and market exchange rates.

A. Figure shows total output losses, relative to the pre-pandemic trend, over 2020-24, in percent of GDP in 2019. The pre-pandemic trend is based on the January 2020 baseline, which is extended using projected growth for 2022.

B. Investment refers to gross fixed capital formation. Sample includes 69 EMDEs. Year "t" on the horizontal axis refers to the year of global recessions in 2009 and 2020. Dotted portion of the line is a forecast.

C. Bars show average annual spending needs during 2015-30, as estimated by Rozenberg and Fay (2019). Estimates are generated using policy assumptions that cap investment needs at 4.5 percent of GDP per year.

D. Aggregates are calculated using nominal GDP weights.

E. Figure shows the ratio of female to male labor force participation rate for 142 EMDEs.

F. Bars show the number of people in food crisis as classified by the Integrated Food Security Phase Classification (IPC/CH) Phase 3, that is, in acute food insecurity crisis or worse. Data for 2022 are estimates adapted from GNAFC (2022).

managed, sustainable investments, including from the private sector, offer significant opportunities. Alongside their broader benefits, green investments may represent an important engine for job creation as they tend to be more labor-intensive (Jaeger et al. 2021).

Improving governance frameworks can bolster private investment and investor confidence. This can be accomplished through regulatory and governance reforms that improve the investment climate (World Bank forthcoming). Investment can also be boosted by establishing appropriate and predictable rules for investment decisions. For public-private partnerships and state-owned enterprises, this includes strengthening governance arrangements and harmonizing public investment management frameworks (Engel, Fischer, and Galetovic 2020; Herrera Dappe, Melecky, and Turkgulu 2022). In relation to green investments, policy makers need to incentivize the adoption of low-carbon technologies through carbon taxes and emission trading schemes, as well as reform fuel subsidies. In addition, clear and credible climate change commitments can reduce the perceived risks and financing costs of green technologies (World Bank 2022l).

Reforms to strengthen the business climate are also critical for attracting private investment. Depending on country circumstances, policy makers need to strengthen property rights, improve access to finance, and broaden financial inclusion, all of which have been found to stimulate private investment in EMDEs (Sahay et al. 2015; World Bank forthcoming). These measures can be complemented by labor and product market policies that promote investment. In addition, eliminating unnecessary duties and simplifying trade facilitation and cross-border procedures can help countries bolster trade and benefit from the higher investment flows, given the strong interdependencies between trade and foreign direct investment (Brenton, Ferrantino, and Maliszewska 2022).

Promoting resilience

The overlapping shocks of the past three years have disproportionately hurt women and vulnerable groups—notably children, disabled people, and the elderly. The pandemic worsened health and education outcomes, with the largest losses among the poor (Schady et al. forthcoming). The war in Ukraine and conflicts elsewhere have increased the number of refugees, eroded social conditions, and upended gains in human development. The recent surge in energy and food prices, combined with a sharp deceleration in global activity, are increasing hunger, malnutrition and poverty in many EMDEs. These shocks have pushed out of reach the global goal of ending extreme poverty by 2030 (World Bank. 2022c).

Policy makers need to foster social protection systems that are pro-growth, agile, and sufficiently broad-based to prepare vulnerable groups for major shocks (World Bank 2022m). These measures can be complemented with policies to improve financial inclusion and credit access and reduce the cost of remittance flows, which provide vulnerable populations with short-term buffers to mitigate the effects of crises. In the medium term, EMDEs need to prioritize human capital investment—which came under pressure during the pandemic—to bolster capacity and better harness technology for improved service delivery (Bashir et al. 2021; World Bank and UNESCO 2022). Measures are needed to improve early childhood development and nutrition, as well as to accelerate efforts to achieve universal health coverage and access to quality education. Improving education programs at all levels, and promoting youth employment and entrepreneurship, can help recover learning losses caused by the pandemic, reduce education inequalities, and enhance resilience to labor market shocks (Schady et al. forthcoming). These may include measures that accelerate the teaching of fundamentals, promote catch-up learning, and improve the well-being of children (World Bank et al. 2022).

Progress in gender equality in EMDEs is stalling and is at risk of reversal. The pandemic had a disproportionate economic impact on women, as they were more likely to stop working than men, and subsequently returned to the labor market more slowly (De Paz, Gaddis, and Muller 2021; ILO 2022). More women-led businesses closed due to the pandemic, and they received less government support (Torres et al. 2021). As a result, women have lost ground in the workforce,

as reflected by high female unemployment rates and a persistent gap in labor force participation relative to men (figure 1.16.E; Braunstein 2021; Djankov, Goldberg, and Hyland 2021). Policy makers in EMDEs can implement a wide range of policies to close existing gaps and enhance women's ability to prepare for future shocks. These include policies that increase female labor force participation and productivity, such as promoting childcare services (Cali et al. 2022). They also encompass active labor market programs addressing social norms and gender-based violence, while promoting girls' aspirations and socio-emotional skills (Halim, O'Sullivan and Sahay 2022). Ensuring that women have equal access to key financial products, especially those with lower collateral requirements, can enhance their productive and entrepreneurial capacity, including in times of crisis (Hess, Klapper, and Beegle 2021; Ubfal 2022).

Fostering food security requires policy action at both the global and national policy level. Hunger and food insecurity have increased in many of the world's poorest regions because of pandemic-related supply disruptions, higher input costs, and shortages, partly due to Russia's invasion of Ukraine (figure 1.16.F; World Bank 2022d). Extreme weather events such as droughts and floods, localized pest outbreaks, and conflict have also played a role. Food insecurity can also be worsened by market distortions from domestic policy responses to rising food and fertilizer prices, such as food export bans and price controls (Guénette 2020; Laborde, Lakatos, and Martin 2019). In the near term, targeted interventions, such as nutrition programs and direct income support, can help the most in need. In the longer term, well-targeted investments in agricultural R&D, green innovations, measures that improve the uptake of new technology, and diversification of food sources and food supply chain systems are all key to boosting food production and building resilient food systems in EMDEs (Gautam et al. 2022; World Bank 2022c).

TABLE 1.2 Emerging market and developing economies[1]

Commodity exporters[2]		Commodity importers[3]	
Algeria*	Kyrgyz Republic	Afghanistan	Samoa
Angola*	Lao PDR	Albania	Serbia
Argentina	Liberia	Antigua and Barbuda	Sri Lanka
Armenia	Libya*	Bahamas, The	St. Kitts and Nevis
Azerbaijan*	Madagascar	Bangladesh	St. Lucia
Bahrain*	Malawi	Barbados	St. Vincent and the Grenadines
Belize	Mali	Belarus	Thailand
Benin	Mauritania	Bosnia and Herzegovina	Tonga
Bhutan*	Mongolia	Bulgaria	Tunisia
Bolivia*	Mozambique	Cambodia	Türkiye
Botswana	Myanmar*	China	Tuvalu
Brazil	Namibia	Djibouti	Vanuatu
Burkina Faso	Nicaragua	Dominica	Vietnam
Burundi	Niger	Dominican Republic	
Cabo Verde	Nigeria*	Egypt, Arab Rep.	
Cameroon*	Oman*	El Salvador	
Central African Republic	Papua New Guinea	Eswatini	
Chad*	Paraguay	Georgia	
Chile	Peru	Grenada	
Colombia*	Qatar*	Haiti	
Comoros	Russian Federation*	Hungary	
Congo, Dem. Rep.	Rwanda	India	
Congo, Rep.*	São Tomé and Príncipe	Jamaica	
Costa Rica	Saudi Arabia*	Jordan	
Côte d'Ivoire	Senegal	Kiribati	
Ecuador*	Seychelles	Lebanon	
Equatorial Guinea*	Sierra Leone	Lesotho	
Eritrea	Solomon Islands	Malaysia	
Ethiopia	South Africa	Maldives	
Fiji	South Sudan*	Marshall Islands	
Gabon*	Sudan	Mauritius	
Gambia, The	Suriname	Mexico	
Ghana*	Tajikistan	Micronesia, Fed. Sts.	
Guatemala	Tanzania	Moldova	
Guinea	Timor-Leste*	Montenegro	
Guinea-Bissau	Togo	Morocco	
Guyana*	Uganda	Nauru	
Honduras	Ukraine	Nepal	
Indonesia*	United Arab Emirates*	North Macedonia	
Iran, Islamic Rep.*	Uruguay	Pakistan	
Iraq*	Uzbekistan	Palau	
Kazakhstan*	West Bank and Gaza	Panama	
Kenya	Zambia	Philippines	
Kosovo	Zimbabwe	Poland	
Kuwait*		Romania	

* Energy exporters.
1. Emerging market and developing economies (EMDEs) include all those that are not classified as advanced economies and for which a forecast is published for this report. Dependent territories are excluded. Advanced economies include Australia; Austria; Belgium; Canada; Cyprus; Czechia; Denmark; Estonia; Finland; France; Germany; Greece; Hong Kong SAR, China; Iceland; Ireland; Israel; Italy; Japan; the Republic of Korea; Latvia; Lithuania; Luxembourg; Malta; the Netherlands; New Zealand; Norway; Portugal; Singapore; the Slovak Republic; Slovenia; Spain; Sweden; Switzerland; the United Kingdom; and the United States. Since Croatia became a member of the euro area on January 1, 2023, it has been removed from the list of EMDEs, and related growth aggregates, to avoid double counting.
2. An economy is defined as commodity exporter when, on average in 2017-19, either (1) total commodities exports accounted for 30 percent or more of total exports or (2) exports of any single commodity accounted for 20 percent or more of total exports. Economies for which these thresholds were met as a result of re-exports were excluded. When data were not available, judgment was used. This taxonomy results in the classification of some well-diversified economies as importers, even if they are exporters of certain commodities (for example, Mexico).
3. Commodity importers are EMDEs not classified as commodity exporters.

References

Agrawala, S., D. Dussaux, and N. Monti. 2020. "What Policies for Greening the Crisis Response and Economic Recovery? Lessons Learned from Past Green Stimulus Measures and Implications for the Covid-19 Crisis." OECD Environment Working Paper 164, OECD, Paris.

Ahmed, S., R. Correa, D. A. Dias, N. Gornemann, J. Hoek, A. Jain, E. Liu, and A. Wong. 2019. "Global Spillovers of a China Hard Landing." International Finance Discussion Papers 1260, Board of Governors of the Federal Reserve System, Washington, DC.

Amaglobeli, D., E. Hanedar, G. H. Hong, C. Thevenot. 2022. "Fiscal Policy for Mitigating the Social Impact of High Energy and Food Prices." International Monetary Fund, Washington, DC.

Argente, D., and M. Lee. 2021. "Cost of Living Inequality During the Great Recession." *Journal of the European Economic Association* 19 (2): 913-52.

Arteta, C., S. Kamin, F. U. Ruch. 2022. "How Do Rising U.S. Interest Rates Affect Emerging and Developing Economies? It Depends." Policy Research Working Paper 10258, World Bank, Washington, DC.

Arteta, C., M. A. Kose, F. Ohnsorge, and M. Stocker. 2015. "The Coming U.S. Interest Rate Tightening Cycle: Smooth Sailing or Stormy Waters?" Policy Research Note, World Bank, Washington, DC.

Avdjiev, S., E. Eren, and P. McGuire. 2020. "Dollar funding costs during the COVID-19 crisis through the lens of the FX swap market." BIS Bulletin 1, Basel, Switzerland.

Ball, L., D. Leigh, P. Mishra. 2022. "Understanding U.S. Inflation During the COVID Era." BPEA Conference Drafts, Brookings Paper on Economic Activity, Washington, DC.

Bashir, S., C. J. Dahlman, N. Kanehira, K. Tilmes. 2021. *The Converging Technology Revolution and Human Capital: Potential and Implications for South Asia. South Asia Development Forum*. Washington, DC: World Bank.

Baumeister, C., G. Verduzco-Bustos, F. Ohnsorge. 2022. "Special Focus: Pandemic, War, Recession: Drivers of Aluminum and Copper Prices" In *Commodity Markets Outlook*, October. Washington, DC: World Bank.

Bems, R., R. C. Johnson, and K. M. Yi. 2010. "Demand Spillovers and the Collapse of Trade in the Global Recession." *IMF Economic Review* 58 (2): 295-326.

BIS (database). Bank for International Settlements. Accessed on November 20, 2022. https://www.bis.org/statistics/.

Braunstein, E. 2021. "Gender and The Future of Industrialization in a Post- Pandemic World." Inclusive and Sustainable Industrial Development Working Paper Series 10/2021, United Nations Industrial Development Organization, Vienna.

Brenton, P., M. J. Ferrantino, M. Maliszewska. 2022. *Reshaping Global Value Chains in Light of COVID-19: Implications for Trade and Poverty Reduction in Developing Countries*. Washington, DC: World Bank.

Bridle, R., L. Merrill, M. Halonen, A. Zinecker, and P. Tommila. 2018. "Swapping Fossil Fuel Subsidies for Sustainable Energy." Nordic Council of Ministers, Denmark.

Caldara, D., and M. Iacoviello. 2022. "Measuring Geopolitical Risk." *American Economic Review* 112 (4): 1194-1225.

Caldara, D., M. Iacoviello, P. Molligo, A. Prestipino, and A. Raffo. 2020. "The Economic Effects of Trade Policy Uncertainty." *Journal of Monetary Economics* 109: 38-59.

Cali, M., H. C. Johnson, E. Perova, N. R. Ryandiansyah. 2022. "Caring for Children and Firms: The Impact of Preschool Expansion on Firm Productivity." Policy Research Working Papers10193, World Bank, Washington, DC.

Caselli, F., and A. Roitman. 2016. "Non-Linear Exchange Rate Pass-Through in Emerging Markets." IMF Working Paper 16/1, International Monetary Fund, Washington, DC.

Comtrade (database). United Nations. Accessed on December 15, 2022. https://comtrade.un.org.

Davoodi, H. R., P. Elger, A. Fotiou, D. Garcia-Macia, X. Han, A. Lagerborg, W. R. Lam et al. 2022. "Fiscal Rules and Fiscal Councils: Recent Trends and Performance during the COVID-19 Pandemic." International Monetary Fund, Washington, DC.

De Paz, N. C., I. Gaddis, and M. Muller. 2021. "Gender and COVID-19: What Have We Learnt, One

Year Later. Policy Research Working Paper 9709, World Bank, Washington, DC.

Dieppe, A., ed. 2021. *Global Productivity: Trends, Drivers, and Policies*. Washington, DC: World Bank.

Di Pace, F., L. Juvenal, and I. Petrella. 2020. "Terms-of-Trade Shocks Are Not All Alike." IMF Working Paper 280, International Monetary Fund, Washington, DC.

Djankov, S., P. K. Goldberg, and M. Hyland. 2021. "The Evolving Gender Gap in Labor Force Participation During COVID-19." Policy Brief 21-8, Peterson Institute for International Economics, Washington, DC.

Doh, T., and A. T. Foerster. 2022. "Have Lags in Monetary Policy Transmission Shortened?" Economic Bulletin, Federal Reserve Bank of Kansas City, Kansas City, Missouri.

EM-DAT (database). The International Disaster Database. Accessed on November 20, 2022. https://www.emdat.be/.

Engel, E., R. Fischer, and A. Galetovic. 2020. "When and How to Use Public-Private Partnerships in Infrastructure: Lessons from the International Experience." NBER Working Paper 26766, National Bureau of Economic Research, Cambridge, MA.

European Commission. 2022. "European Economic Forecast." Institutional Paper 187, European Commission, Brussels.

Forbes, K., J. E. Gagnon, and C. G. Collins. 2021. "Low Inflation Bends the Phillips Curve Around the World: Extended Results." PIIE Working Papers 21-15, Peterson Institute for International Economics, Washington, DC.

FSIN (Food Security Information Network), and GNAFC (Global Network Against Food Crises). 2022. "Global Report on Food Crises." Food Security Information Network, Rome.

Gautam, M., D. Laborde, A. Mamun, W. Martin, V. Pineiro, and R. Vos. 2022. "Repurposing Agricultural Policies and Support: Options to Transform Agriculture and Food Systems to Better Serve the Health of People, Economies, and the Planet." World Bank, Washington, DC.

Gill, I., and P. Nagle. 2022. "Inflation Could Wreak Vengeance on The World's Poor." *Future Development Blog.* March 18, 2022. https://www.brookings.edu/blog/future-development/2022/03/18/inflation-could-wreak-vengeance-on-the-worlds-poor/.

Glennerster, R., C. M. Snyder, and B. J. Tan. 2022. "Calculating the Costs and Benefits of Advance Preparations for Future Pandemics." NBER Working Paper 30565, National Bureau of Economic Research, Cambridge, MA.

GNAFC (Global Network Against Food Crises). 2022. "Financing Flows and Food Crises Report." Food Security Information Network, Rome.

Góes, C., and E. Bekkers. 2022. "The Impact of Geopolitical Conflicts on Trade, Growth, and Innovation." WTO Staff Working Paper ERSD-2022-9, World Trade Organization, Geneva.

Gruss, B., and S. Kebhaj. 2019. "Commodity Terms of Trade: A New Database." IMF Working Paper 2019/021, International Monetary Fund, Washington, DC.

Guénette, J. D. 2020. "Price Controls: Good Intentions, Bad Outcomes." Policy Research Working Paper 9212, World Bank, Washington, DC.

Guénette, J. D., M. A. Kose, and N. Sugawara. 2022. "Is a Global Recession Imminent?" EFI Policy Note 4, World Bank, Washington, DC.

Ha, J., M. A. Kose, and F. Ohnsorge. 2019a. *Inflation in Emerging and Developing Economies: Evolution, Drivers, and Policies*. Washington, DC: World Bank.

Ha, J., M. A. Kose, and F. Ohnsorge. 2019b. "Inflation and Exchange Rate Pass-Through." In *Inflation in Emerging and Developing Economies Evolution, Drivers, and Policies*. Washington, DC.: World Bank.

Ha, J., M. A. Kose, F. Ohnsorge. 2022. "Global Stagflation." Koç University-TUSIAD Economic Research Forum Working Papers 2204, Istanbul, Türkiye.

Halim, D., M. B. O'Sullivan, and A. Sahay. 2022. "Thematic Policy Brief on Increasing Female Labor Force Participation." World Bank, Washington, DC.

Herrera Dappe, M., M. Melecky, and B. Turkgulu. 2022. "Fiscal Risks from Early Termination of Public-Private Partnerships in Infrastructure." Policy Research Working Paper 9972, World Bank, Washington, DC.

Hess, J., L. Klapper, and K. Beegle. 2021. "Financial Inclusion, Women, and Building Back Better." World Bank, Washington, DC.

Hoek, J., S. Kamin, and E. Yoldas. 2022. "Are Higher U.S. Interest Rates Always Bad News for Emerging Markets?" *Journal of International Economics* 137: 103-585.

Hofmann, B., A. Mehrotra, D. Sandri. 2022. "Global Exchange Rate Adjustments: Drivers, Impacts and Policy Implications." BIS Bulletin No. 62, Bank of International Settlement, Basel, Switzerland.

Horn, S., C. M. Reinhart, C. Trebesch. 2021. "China's Overseas Lending." *Journal of International Economics* 133: 103-539.

Hoy, C. A. 2022. "How Does the Progressivity of Taxes and Government Transfers Impact People's Willingness to Pay Tax?" Policy Research Working Paper 10167, World Bank, Washington, DC.

IEA (International Energy Agency). 2020. "Sustainable Recovery." World Energy Outlook Special Report in Collaboration with the International Monetary Fund, International Energy Agency, Paris.

IEA (International Energy Agency). 2022a. "Oil Market Report." November. International Energy Agency, Paris.

IEA (International Energy Agency). 2022b. "Defying Expectations, CO2 Emissions from Global Fossil Fuel Combustion are Set to Grow in 2022 by Only a Fraction of Last Year's Big Increase." International Energy Agency, Paris.

ILO (International Labour Organization). 2022. *World Employment and Social Outlook: Trends 2022*. Geneva, Switzerland: International Labour Organization.

IMF (International Monetary Fund). 2022a. "Debt Sustainability Analysis Low-Income Countries." International Monetary Fund, Washington, DC.

IMF (International Monetary Fund). 2022b. *Fiscal Monitor: Helping People Bounce Back*. Washington, DC: International Monetary Fund.

IMF (International Monetary Fund). 2022c. *Fiscal Policy: From Pandemic to War*. Washington, DC: International Monetary Fund.

IMF (International Monetary Fund). 2022d. "Global Financial Stability Report: Navigating the High-Inflation Environment." International Monetary Fund, Washington, DC.

International Debt Statistics (database). World Bank. Accessed on November 1, 2022. https://databank.worldbank.org/source/international-debt-statistics.

IPCC (Intergovernmental Panel on Climate Change). 2022. "Climate Change 2022: Impacts, Adaptation and Vulnerability." IPCC Sixth Assessment Report, Geneva, Switzerland.

Jaeger, J., G. Walls, E. Clarke, J.C. Altamirano, A. Harsono, H. Mountford, S. Burrow, et al. 2021. "The Green Jobs Advantage: How Climate Friendly Investments Are Better Job Creators." Working Paper, World Resources Institute, Washington, DC.

Kalemli-Özcan, Ş., di Giovanni, J., A. Silva, M. Yildirim. 2022. "Challenges for Monetary Policy in a Rapidly Changing World." ECB Forum on Central Banking, European Central Bank, Frankfurt.

Kose, M. A., L. Csilla, F. Ohnsorge, and M. Stocker. 2017a. "Special Focus: The U.S. Economy and the World." In *Global Economic Prospects*, January. Washington, DC: World Bank.

Kose, M. A., S. Kurlat, F. Ohnsorge, and N. Sugawara. 2022. "A Cross-Country Database of Fiscal Space." World Bank, Washington, DC.

Kose, M. A., P. Nagle, F. Ohnsorge, and N. Sugawara. 2021a. *Global Waves of Debt: Causes and Consequences*. Washington, DC: World Bank.

Kose, M. A., P. Nagle, F. Ohnsorge, and N. Sugawara. 2021b. "What Has Been the Impact of COVID-19 on Debt? Turning a Wave into a Tsunami." Policy Research Working Paper 9871, World Bank, Washington, DC.

Kose, M. A., F. Ohnsorge, L. S. Ye, E. Islamaj. 2017b. "Weakness in Investment Growth: Causes, Implications and Policy Responses." Policy Research Working Paper 7990, World Bank, Washington, DC.

Kose, M. A., N. Sugawara, and M. E. Terrones. 2020. "Global Recessions." Policy Research Working Paper 9172, World Bank, Washington, DC.

Laborde, D., C. Lakatos, and W. J. Martin. 2019. "Poverty Impact of Food Price Shocks and Policies." Policy Research Working Paper 8724, World Bank, Washington, DC.

Laborde, D., and A. Mamun. 2022. "Food Export & Fertilizer Restrictions Tracker." Database funded by USAID and FCDO. https://public.tableau.com/app/profile/laborde6680/viz/ExportRestrictionsTracker/FoodExportRestrictionsTracker.

Laeven, L., and F. Valencia. 2020. "Systemic Banking Crises Database II." *IMF Economic Review* 68: 307-361.

Mahler, D. G., N. Yonzan, and C. Lakner. 2022. "The Impact of COVID-19 on Global Inequality and Poverty." Policy Research Working Papers 10198, World Bank, Washington, DC.

Maino, R., and D. Emrullahu. 2022. "Climate Change in Sub-Saharan Africa Fragile States: Evidence from Panel Estimations." IMF Working Paper 22/54, International Monetary Fund, Washington, DC.

Mallucci, E. 2020. "Natural Disasters, Climate Change, and Sovereign Risk." International Finance Discussion Papers 1291, Board of Governors of the Federal Reserve System, Washington, DC.

McKay, A. D. I., A. Staal, J. F. Abrams, R. Winkelmann, B. Sakschewski, S. Loriani, I. Fetzer, et al. 2022. "Exceeding 1.5°C Global Warming Could Trigger Multiple Climate Tipping Points." *Science* 377 (6611).

Moscoviz, L., and D. Evans. 2022. "Learning Loss and Student Dropouts during the COVID-19 Pandemic: A Review of the Evidence Two Years after Schools Shut Down." Working Paper 609, Center for Global Development, Washington, DC.

Obstfeld, M. 2022a. "Emerging-Market and Developing Economies Need Support Amid Rising Interest Rates." *Peterson Institute for International Economics* (blog). October 6, 2022. https://www.piie.com/blogs/realtime-economics/emerging-market-and-developing-economies-need-support-amid-rising-interest.

Obstfeld, M. 2022b. "Uncoordinated Monetary Policies Risk a Historic Global Slowdown." Peterson Institute for International Economics, Washington, DC.

Obstfeld, M., and H. Zhou. 2022. "The Global Dollar Cycle." Brookings Papers on Economic Activity, BPEA Conference Drafts, Washington, DC.

OECD (Organisation for Economic Co-operation and Development). 2018. "Countries Must Strengthen Tax Systems to Meet Sustainable Development Goals." Organisation for Economic Co-operation and Development, Paris.

Ohnsorge, F. L., M. Stocker, M. Y. Some. 2016. "Quantifying Uncertainties in Global Growth Forecasts." Policy Research Working Paper 7770, World Bank, Washington, DC.

OSCDS (United Nations Office of the Special Coordinator for Development in the Sahel) and UNHCR (United Nations High Commissioner for Refugees). 2022. *Moving from Reaction to Action - Anticipating Vulnerability Hotspots in the Sahel. A synthesis report from the Sahel Predictive Analytics project in support of the United Nations Integrated Strategy for the Sahel (UNISS).* Geneva: United Nations.

Oxford Economics. 2019. "Global Economic Model." July. Oxford Economics, Oxford.

Reis, R. 2022. "What Can Keep Euro Area Inflation High?" 76th Economic Policy Panel Meeting, Federal Ministry of Finance, Berlin, Germany.

Rogoff, K. 2022. "Emerging Market Sovereign Debt in the Aftermath of the Pandemic." *Journal of Economic Perspectives* 36 (4): 147-66.

Rozenberg, J., and M. Fay, eds. 2019. *Beyond the Gap: How Countries Can Afford the Infrastructure They Need While Protecting the Planet*. Washington, DC: World Bank.

Rubínová, S. and M. Sebti. 2021. "The WTO Global Trade Costs Index and Its Determinants." WTO Staff Working Paper ERSD-2021-6, World Trade Organization, Geneva.

Sahay, R. M. Cihak, P. N'Diaye, A. Barajas, S. Mitra, A. Kyobe, Y. N. Mooi, and S. R. Yousefi. 2015. "Financial Inclusion: Can It Meet Multiple Macroeconomic Goals?" Discussion Note, International Monetary Fund, Washington, DC.

Schady, N., A. Holla, S. Sabarwal, J. Silva, A. Y. Chang. Forthcoming. *Collapse and Recovery: How the COVID-19 Pandemic Eroded Human Capital and What to Do about It*. Washington, DC: World Bank.

Shapiro, A. H. 2022. "How Much Do Supply and Demand Drive Inflation?" FRBSF Economic Letter, Federal Reserve Bank of San Francisco, San Francisco.

Torres, J., F. Maduko, I. Gaddis, L. Iacovone, and K. Beegle. 2021. "The Impact of the COVID-19 Pandemic on Women-Led Businesses." Policy Research Working Paper 9817, World Bank, Washington, DC.

Ubfal, D. 2022. "What Works in Supporting Women-led Businesses?" Thematic Policy Brief for Gender Strategy Update 2024-2030, World Bank, Washington, DC.

UNDRR (United Nations Office for Disaster Risk Reduction). 2022. *Global Assessment Report on Disaster Risk Reduction 2022: Our World at Risk: Transforming Governance for a Resilient Future.* Geneva: United Nations Office for Disaster Risk Reduction.

Voegele, J. 2022. "How to Manage the World's Fertilizers to Avoid a Prolonged Food Crisis." *World Bank Blog*. July 22, 2022. https://blogs.worldbank.org/voices/how-manage-worlds-fertilizers-avoid-prolonged-food-crisis.

Vorisek, D., and S. Yu. 2020. "Understanding the Cost of Achieving the Sustainable Development Goals." Policy Research Working Paper 9146, World Bank, Washington, DC.

WDI (database). World Development Indicators. Accessed on November 20, 2022. https://databank.worldbank.org/source/world-development-indicators.

WEO (database). "World Economic Outlook Databases." Accessed on October 30, 2022. https://www.imf.org/en/Publications/WEO/weo-database/2022/October.

Wessel, T. 2022. "Terminally Underpriced." July. Rates Special Report, Deutsche Bank Research, Deutsche Bank, Frankfurt.

WFP (World Food Program and Food) and FAO (Agriculture Organization of the United Nations). 2022. "Hunger Hotspots. FAO-WFP Early Warnings on Acute Food Insecurity: October 2022 to January 2023 Outlook." Rome.

WMO, UNEP, GCP, UK Met office, IPCC, and UNDRR. 2022. "United in Science 2022." World Meteorological Organization, Geneva, Switzerland.

World Bank. Forthcoming. *Potential Growth*. Washington, DC: World Bank.

World Bank. 2021a. "World Bank Group Climate Change Action Plan 2021-2025: Supporting Green, Resilient, and Inclusive Development." World Bank, Washington, DC.

World Bank. 2021b. *Global Economic Prospects*. January. Washington, DC: World Bank.

World Bank. 2021c. *Global Economic Prospects*. June. Washington, DC: World Bank.

World Bank. 2022a. *Commodity Markets Outlook.* October. Washington, DC: World Bank.

World Bank. 2022b. *Reforms for Recovery*. East Asia and the Pacific Economic Update October. Washington, DC: World Bank.

World Bank. 2022c. *Poverty and Shared Prosperity 2022: Correcting Course*. Washington, DC: World Bank.

World Bank. 2022d. *Food Security Update*. Washington, DC: World Bank.

World Bank. 2022e. *Global Economic Prospects*. June. Washington, DC: World Bank.

World Bank. 2022f. "East Asia and Pacific Sustaining Growth, Restraining Inflation, but Facing Risks Ahead." Press release, World Bank, Washington, DC.

World Bank. 2022g. *Global Economic Prospects*. January. Washington, DC: World Bank.

World Bank. 2022h. "The Food and Energy Crisis - Weathering the Storm." Development Committee Meeting DC2022-0005, Washington, DC.

World Bank. 2022i. "Achieving Climate and Development Goals: The Financing Question." Development Committee Meeting DC2022-0006, Washington, DC.

World Bank. 2022j. "State and Trends of Carbon Pricing 2022." World Bank, Washington DC.

World Bank. 2022k. *MENA Economic Update: A New State of Mind*. October. Washington, DC: World Bank.

World Bank. 2022l. "Consolidating the Recovery: Seizing Green Growth Opportunities." April. LAC Semiannual Report, World Bank, Washington, DC.

World Bank. 2022m. *Social Protection for Recovery*. Europe and Central Asia Economic Update October. Washington, DC: World Bank.

World Bank and UNESCO (United Nations Educational, Scientific and Cultural Organization). 2022. "Education Finance Watch 2022." World Bank, UNESCO, Washington, DC., Paris.

World Bank, the Bill & Melinda Gates Foundation, FCDO, UNESCO, UNICEF, and USAID. 2022. "Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better." World Bank, Washington, DC.

WTO (World Tourism Organization). 2022. *World Tourism Barometer*. Madrid, Spain: World Tourism Organization.

WTTC (World Travel and Tourism Council). 2022. "Travel & Tourism Economic Impact: Global Trends." World Travel and Tourism Council, London.