



CHAPTER 1

GLOBAL OUTLOOK

After rebounding to an estimated 5.5 percent in 2021, global growth is expected to decelerate markedly to 4.1 percent in 2022, reflecting continued COVID-19 flare-ups, diminished fiscal support, and lingering supply bottlenecks. The near-term outlook for global growth is somewhat weaker, and for global inflation notably higher, than previously envisioned, owing to pandemic resurgence, higher food and energy prices, and more pernicious supply disruptions. Global growth is projected to soften further to 3.2 percent in 2023, as pent-up demand wanes and supportive macroeconomic policies continue to be unwound. Although output and investment in advanced economies are projected to return to pre-pandemic trends next year, in emerging market and developing economies (EMDEs)—particularly in small states and fragile and conflict-afflicted countries—they will remain markedly below, owing to lower vaccination rates, tighter fiscal and monetary policies, and more persistent scarring from the pandemic. Various downside risks cloud the outlook, including simultaneous Omicron-driven economic disruptions, further supply bottlenecks, a de-anchoring of inflation expectations, financial stress, climate-related disasters, and a weakening of long-term growth drivers. As EMDEs have limited policy space to provide additional support if needed, these downside risks heighten the possibility of a hard landing. This underscores the importance of strengthening global cooperation to foster rapid and equitable vaccine distribution, calibrate health and economic policies, enhance debt sustainability in the poorest countries, and tackle the mounting costs of climate change. EMDE policy makers also face the challenges of heightened inflationary pressures, spillovers from prospective advanced-economy monetary tightening, and constrained fiscal space. Despite budgetary consolidation, debt levels—which are already at record highs in many EMDEs—are likely to rise further owing to sustained revenue weakness. Over the longer term, EMDEs will need to buttress growth by pursuing decisive policy actions, including reforms that mitigate vulnerabilities to commodity shocks, reduce income and gender inequality, and enhance preparedness for health- and climate-related crises.

Summary

Global growth is estimated to have surged to 5.5 percent in 2021—its strongest post-recession pace in 80 years, as a relaxation of pandemic-related lockdowns in many countries helped boost demand. Notwithstanding this annual increase, resurgences of the COVID-19 pandemic and widespread supply bottlenecks weighed appreciably on global activity in the second half of last year. Moreover, emerging market and developing economies (EMDEs) are experiencing notably weaker and more fragile recoveries compared to those in advanced economies as a result of slower vaccination progress, a more limited policy response, and the pandemic's scarring effects (figure 1.1.A). In particular, these scarring effects on potential output reflect the pandemic's adverse impact on EMDE physical and human capital. Among the most vulnerable countries, the impact of the pandemic will reverse several years of income gains.

Global COVID-19 infection rates have soared, driven by the rapid spread of the Omicron variant. Advanced economies and a growing number of EMDEs have fully vaccinated a majority of their populations. But despite expansive vaccine coverage, some countries have been forced to reintroduce strict lockdown measures recently to alleviate acute pressures on their health systems. Vaccine coverage remains highly uneven around the world, and stubbornly limited across low-income countries (LICs). At recent vaccination rates, only about a third of the LIC population will have received even one vaccine dose by the end of 2023 (figure 1.1.B).

Recent data point to solid but moderating global growth. The surge in infections in 2021 related to the Delta variant sapped consumer demand, but to a much more limited degree than previous waves. Persistent supply bottlenecks have weighed on global production and trade. In advanced economies, high vaccination rates and sizable fiscal support have helped cushion some of the adverse economic impacts of the pandemic. In EMDEs, however, the pace of recovery has been further dampened by waning policy support and a tightening of financing conditions.

Note: This chapter was prepared by Carlos Arteta, Justin-Damien Guénette, Lucia Quaglietti, and Collette Wheeler, with contributions from Jongrim Ha, Osamu Inami, Sergiy Kasyanenko, Peter Nagle, and Ekaterine Vashakmadze.

TABLE 1.1 Real GDP¹

(Percent change from previous year)

| | | | | | | Percentage point differences from June 2021 projections | | |
|---|------------|-------------|------------|------------|------------|---|-------------|------------|
| | 2019 | 2020 | 2021e | 2022f | 2023f | 2021e | 2022f | 2023f |
| World | 2.6 | -3.4 | 5.5 | 4.1 | 3.2 | -0.2 | -0.2 | 0.1 |
| Advanced economies | 1.7 | -4.6 | 5.0 | 3.8 | 2.3 | -0.4 | -0.2 | 0.1 |
| United States | 2.3 | -3.4 | 5.6 | 3.7 | 2.6 | -1.2 | -0.5 | 0.3 |
| Euro area | 1.6 | -6.4 | 5.2 | 4.2 | 2.1 | 1.0 | -0.2 | -0.3 |
| Japan | -0.2 | -4.5 | 1.7 | 2.9 | 1.2 | -1.2 | 0.3 | 0.2 |
| Emerging market and developing economies | 3.8 | -1.7 | 6.3 | 4.6 | 4.4 | 0.2 | -0.1 | 0.0 |
| East Asia and Pacific | 5.8 | 1.2 | 7.1 | 5.1 | 5.2 | -0.6 | -0.2 | 0.0 |
| China | 6.0 | 2.2 | 8.0 | 5.1 | 5.3 | -0.5 | -0.3 | 0.0 |
| Indonesia | 5.0 | -2.1 | 3.7 | 5.2 | 5.1 | -0.7 | 0.2 | 0.0 |
| Thailand | 2.3 | -6.1 | 1.0 | 3.9 | 4.3 | -1.2 | -1.2 | 0.0 |
| Europe and Central Asia | 2.7 | -2.0 | 5.8 | 3.0 | 2.9 | 1.9 | -0.9 | -0.6 |
| Russian Federation | 2.0 | -3.0 | 4.3 | 2.4 | 1.8 | 1.1 | -0.8 | -0.5 |
| Turkey | 0.9 | 1.8 | 9.5 | 2.0 | 3.0 | 4.5 | -2.5 | -1.5 |
| Poland | 4.7 | -2.5 | 5.1 | 4.7 | 3.4 | 1.3 | 0.2 | -0.5 |
| Latin America and the Caribbean | 0.8 | -6.4 | 6.7 | 2.6 | 2.7 | 1.5 | -0.3 | 0.2 |
| Brazil | 1.2 | -3.9 | 4.9 | 1.4 | 2.7 | 0.4 | -1.1 | 0.4 |
| Mexico | -0.2 | -8.2 | 5.7 | 3.0 | 2.2 | 0.7 | 0.0 | 0.2 |
| Argentina | -2.0 | -9.9 | 10.0 | 2.6 | 2.1 | 3.6 | 0.9 | 0.2 |
| Middle East and North Africa | 0.9 | -4.0 | 3.1 | 4.4 | 3.4 | 0.6 | 0.8 | 0.1 |
| Saudi Arabia | 0.3 | -4.1 | 2.4 | 4.9 | 2.3 | 0.0 | 1.6 | -0.9 |
| Iran, Islamic Rep. ³ | -6.8 | 3.4 | 3.1 | 2.4 | 2.2 | 1.0 | 0.2 | -0.1 |
| Egypt, Arab Rep. ² | 5.6 | 3.6 | 3.3 | 5.5 | 5.5 | 1.0 | 1.0 | 0.0 |
| South Asia | 4.4 | -5.2 | 7.0 | 7.6 | 6.0 | 0.1 | 0.8 | 0.8 |
| India ³ | 4.0 | -7.3 | 8.3 | 8.7 | 6.8 | 0.0 | 1.2 | 0.3 |
| Pakistan ² | 2.1 | -0.5 | 3.5 | 3.4 | 4.0 | 2.2 | 1.4 | 0.6 |
| Bangladesh ² | 8.2 | 3.5 | 5.0 | 6.4 | 6.9 | 1.4 | 1.3 | 0.7 |
| Sub-Saharan Africa | 2.5 | -2.2 | 3.5 | 3.6 | 3.8 | 0.7 | 0.3 | 0.0 |
| Nigeria | 2.2 | -1.8 | 2.4 | 2.5 | 2.8 | 0.6 | 0.4 | 0.4 |
| South Africa | 0.1 | -6.4 | 4.6 | 2.1 | 1.5 | 1.1 | 0.0 | 0.0 |
| Angola | -0.6 | -5.4 | 0.4 | 3.1 | 2.8 | -0.1 | -0.2 | -0.7 |
| Memorandum items: | | | | | | | | |
| Real GDP¹ | | | | | | | | |
| High-income countries | 1.7 | -4.6 | 5.0 | 3.8 | 2.4 | -0.3 | -0.2 | 0.2 |
| Developing countries | 4.0 | -1.4 | 6.5 | 4.6 | 4.5 | 0.2 | -0.2 | 0.0 |
| EMDEs excluding China | 2.5 | -4.2 | 5.2 | 4.2 | 3.8 | 0.8 | 0.0 | 0.1 |
| Commodity-exporting EMDEs | 1.8 | -3.9 | 4.5 | 3.3 | 3.1 | 0.9 | 0.0 | 0.0 |
| Commodity-importing EMDEs | 4.9 | -0.5 | 7.2 | 5.2 | 5.0 | -0.1 | -0.2 | 0.0 |
| Commodity-importing EMDEs excluding China | 3.3 | -4.5 | 6.1 | 5.3 | 4.6 | 0.7 | 0.0 | 0.1 |
| Low-income countries | 4.6 | 1.3 | 3.3 | 4.9 | 5.9 | 0.2 | 0.0 | 0.0 |
| EM7 | 4.5 | -0.6 | 7.2 | 4.8 | 4.7 | 0.0 | -0.3 | 0.0 |
| World (PPP weights) ⁴ | 2.9 | -3.0 | 5.7 | 4.4 | 3.6 | 0.0 | -0.1 | 0.1 |
| World trade volume⁵ | 1.1 | -8.2 | 9.5 | 5.8 | 4.7 | 1.2 | -0.5 | 0.3 |
| Commodity prices⁶ | | | | | | | | |
| Oil price | -10.2 | -32.8 | 67.2 | 7.2 | -12.2 | 16.9 | 7.2 | -13.1 |
| Non-energy commodity price index | -4.2 | 3.0 | 31.9 | -2.0 | -4.0 | 9.4 | 0.5 | -1.3 |

Source: World Bank.

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. Data for Afghanistan and Lebanon are excluded.

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. Pakistan's growth rates are based on GDP at factor cost. The column labeled 2019 refers to FY2018/19.

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. The column labeled 2019 refers to FY2019/20.

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. Oil price is the simple average of Brent, Dubai, and West Texas Intermediate prices. The non-energy index 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>.

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 Turkey. The World Bank is currently not publishing economic output, income, or growth data for Turkmenistan and República Bolivariana de Venezuela owing to lack of reliable data of adequate quality. Turkmenistan and República Bolivariana de Venezuela are excluded from cross-country macroeconomic aggregates.

Global energy prices surged in the second half of 2021, particularly for natural gas and coal, owing to recovering demand and constrained supply. Meanwhile, non-energy commodity prices have stabilized, with some at or close to record highs. After rising briskly earlier last year, global trade has plateaued, owing to softening growth of demand for traded goods and supply bottlenecks caused by pandemic-related factory and port shutdowns, weather-induced logistical obstacles, and shortages of semiconductors and shipping containers. Reflecting these bottlenecks, as well as the recovery in global demand and rising food and energy prices, global consumer price inflation and its near-term expectations have increased more than previously anticipated (figure 1.1.C). Labor markets in advanced economies have tightened, supporting a rebound in wage inflation, in contrast to their uneven recovery in EMDEs. Although financial conditions continue to be broadly accommodative at the global level, they have tightened for EMDEs as risk sentiment has deteriorated.

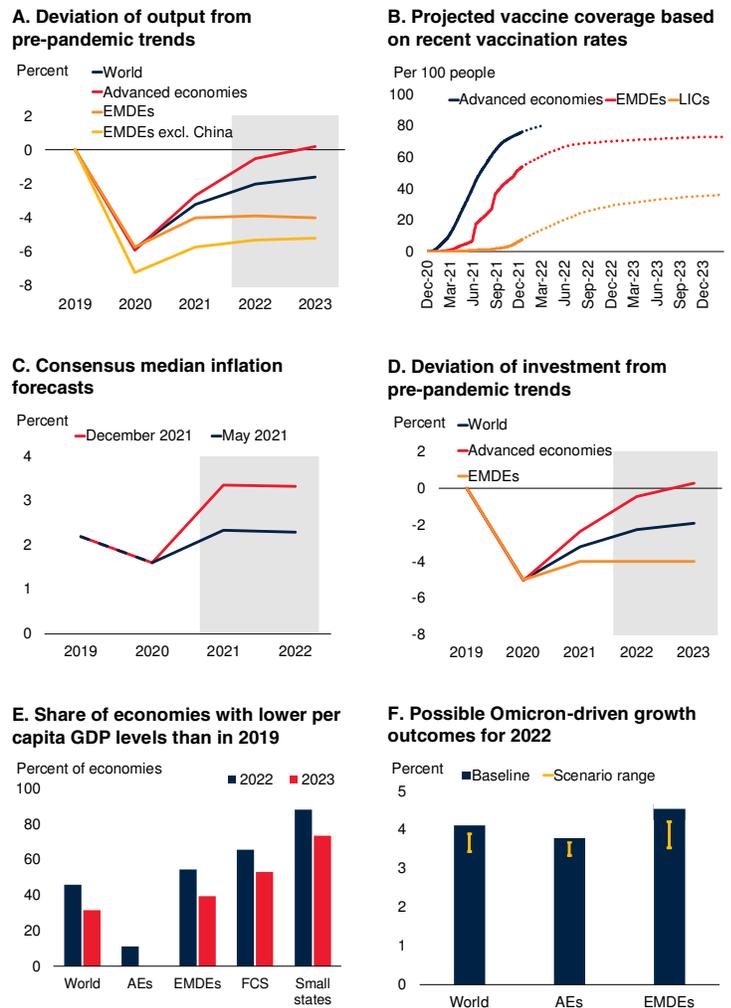
Against this backdrop, the global economy is set to experience its sharpest slowdown after an initial rebound from a global recession since at least the 1970s. Global growth is projected to decelerate from 5.5 percent in 2021 to 4.1 percent in 2022, reflecting continued COVID-19 flare-ups, diminished policy support, and lingering supply disruptions. Growth is envisioned to slow further in 2023, to 3.2 percent, as pent-up demand is depleted and supportive macroeconomic policies continue to be unwound.

Growth in advanced economies is forecast to decelerate from 5 percent in 2021 to 3.8 percent in 2022 as the unwinding of pent-up demand only partly cushions a pronounced withdrawal of fiscal policy support. Growth is projected to moderate further in 2023 to 2.3 percent as pent-up demand is exhausted. Despite the slowdown, the projected pace of expansion will be sufficient to return aggregate advanced-economy output to its pre-pandemic trend in 2023 and thus complete its cyclical recovery. A solid rebound is projected for investment, based on sustained aggregate demand and broadly favorable financing conditions.

In contrast to advanced economies, most EMDEs are expected to suffer substantial scarring to

FIGURE 1.1 Global prospects

Emerging market and developing economies (EMDEs) are experiencing a weaker recovery than advanced economies, owing to slower vaccination progress, more muted policy support, and more pronounced scarring effects from the pandemic. Vaccine access remains unequal, with very low rates in low-income countries. After surprising to the upside in 2021, global inflation is expected to remain above its pre-pandemic rate this year. Investment is expected to be sharply more subdued in EMDEs than in advanced economies. In 2023, per capita incomes in nearly 40 percent of EMDEs will remain below their 2019 levels. Omicron-related economic disruptions could substantially reduce growth in 2022.



Sources: Consensus Economics; Our World in Data (database); Oxford Economics; World Bank. Note: AEs = advanced economies; EMDEs = emerging market and developing economies; FCS = fragile and conflict-affected situations; LICs = low-income countries. Small states are EMDEs with a population of less than 1.5 million. Unless otherwise noted, aggregates are calculated using real U.S. dollar GDP weights at average 2010-19 prices and market exchange rates. Data for 2021 are estimates.

A.C.D. Shaded areas indicate forecasts.
 A.D. Figure shows the percent deviation between the latest projections and forecasts released in the January 2020 edition of the *Global Economic Prospects* report (World Bank 2020a). For 2023, the January 2020 baseline is extended using projected growth for 2022.
 B. Number of people who received at least one COVID-19 vaccine dose per 100 people. Projections based on 14-day moving averages of daily vaccination rates. Data through December 23, 2021.
 C. Figure shows the *Consensus* forecast for median headline CPI inflation for 2021-22 based on December 2021 and May 2021 surveys of 32 advanced economies and 50 EMDEs.
 E. Sample includes 36 AEs, 145 EMDEs, 32 FCS, and 34 small states. The small states sample excludes commodity-reliant Guyana which is experiencing a growth boom due to rapid offshore oil industry development.
 F. Yellow lines denote the range of the downside scenario in which economies (18 advanced economies and 22 EMDEs) face a range of unanticipated pandemic shocks, scaled from about one-tenth to about two-tenths of the size of those from the first half of 2020.

output from the pandemic, with growth trajectories not strong enough to return investment or output to pre-pandemic trends over the forecast horizon of 2022-23 (figure 1.1.D). EMDE growth is projected to slow from 6.3 percent in 2021 to 4.6 percent in 2022, as the ongoing withdrawal of macroeconomic support, together with COVID-19 flare-ups amid the spread of the Omicron variant and continued vaccination obstacles, weigh on the recovery of domestic demand. In one-third of EMDEs, many of which are tourism-reliant economies or small states, output this year is expected to remain lower than in 2019. Growth in China is expected to ease to 5.1 percent this year, reflecting the lingering effects of the pandemic and additional regulatory tightening. Growth in LICs is anticipated to firm to 4.9 percent in 2022—below its historical average, as limited policy space constrains the recovery and as high inflation, including of food prices, and continued conflict in some cases dampen consumption.

In 2023, EMDE growth is forecast to edge further down to 4.4 percent—notably below the 5.1 percent average of the past decade—as domestic demand stabilizes and commodity prices moderate. Despite the continued recovery, the pandemic is expected to scar EMDE output for a prolonged period, in part through its adverse effects on human and physical capital accumulation. Aggregate output in 2023 is expected to be about 4 percent below its pre-pandemic trend—and, in fragile and conflict-affected EMDEs, over 7 percent below, as they face heightened uncertainty, security challenges, weak investment prospects, and anemic vaccination progress.

The near-term global outlook is a touch below previous forecasts, with a modest downgrade to growth in both advanced economies and EMDEs. Although the forecast for EMDE growth in 2022 is only slightly weaker than previous projections, this masks notable divergences across regions. Downgrades in Europe and Central Asia and Latin America and the Caribbean, due to faster removal of policy support, are accompanied by upgrades in the Middle East and North Africa and Sub-Saharan Africa amid higher-than-expected oil revenues.

This forecast assumes that COVID-19 will continue to flare up across the globe this year—including in EMDEs where substantial proportions of the population remain unvaccinated—but that the virus will cause outbreaks of steadily diminishing economic impact. Supply bottlenecks and labor shortages are assumed to gradually dissipate through 2022, while inflation and commodity prices are assumed to gradually decline in the second half of the year. Wage pressures are assumed to moderate thereafter in advanced economies while remaining contained in most EMDEs. Monetary policy is assumed to be tightened at a measured pace in advanced economies over the forecast horizon, but at a faster pace in EMDEs. These shifts are expected to result in a steady tightening of EMDE financing conditions. The withdrawal of fiscal support around the world is expected to continue, with fiscal policy being tightened in the vast majority of countries over 2022-23.

These forecasts imply that per capita income growth in EMDEs will decelerate from an estimated 5.1 percent in 2021 to 3.4 percent in 2022 and 3.3 percent next year. In 2023, per capita incomes in nearly 40 percent of EMDEs will remain below their 2019 levels—including over half of countries facing fragile and conflict-affected situations and three-fourths of small states (figure 1.1.E). Average growth of per capita income during 2021-23 will be insufficient to allow progress in catching up with advanced economies in nearly 70 percent of EMDEs. Rising food prices will hit the poorest populations the hardest, increasing food insecurity and accentuating the pandemic's impact on income inequality.

The global outlook is subject to various downside risks. Critically, the continued spread of COVID-19 amid unequal distribution of vaccines across countries opens the door to new concerning strains, as exemplified by the Omicron variant first detected in November. While Omicron infections may cause less severe disease, the variant's ability to spread quickly through vaccinated populations could overwhelm exhausted health systems and force governments to tighten control measures, causing a significant slowdown in near-term growth (figure 1.1.F).

Moreover, continued supply strains could lead to additional disruptions to international trade and contribute to further inflation surprises, increasing the risk that inflation expectations become de-anchored (figures 1.2.A and 1.2.B). Increases in private as well as public debt to unprecedented levels have left many EMDEs vulnerable to financial stress. Climate-related disasters such as floods, droughts, and heatwaves could also substantially weigh on activity. As EMDEs have limited policy space to provide additional support if needed, these downside risks heighten the possibility of a hard landing—a much sharper slowdown in growth than currently envisioned.

A concerted effort to deepen international policy cooperation will be needed to tackle mounting global challenges, including low vaccination rates in LICs, unsustainable debt loads in many EMDEs, and climate change. This cooperation could lead to richer countries expanding vaccine donations to poorer countries to redress vaccination inequities, helping to reduce debt burdens in EMDEs lacking fiscal space, and accelerating their green energy transitions. Meanwhile, ending the pandemic will require the continued calibration of health and economic policies, including the ongoing use of growth-friendly control measures such as masking requirements and expanded testing.

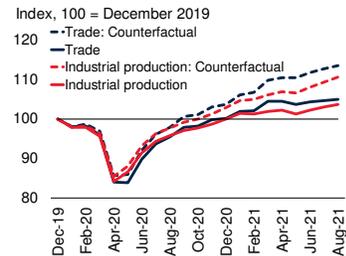
EMDE policy makers have not been able to provide the same degree of support as their counterparts in advanced economies because of their narrower policy space. In fact, a growing number of EMDEs have tightened monetary policies in recent months to help contain inflationary pressures and ensure inflation expectations remain anchored (figure 1.2.C). As central banks in advanced economies begin to reduce monetary policy accommodation, capital flow volatility and currency depreciation may pose additional challenges to EMDE policy makers.

After a substantial amount of pandemic-related fiscal support in EMDEs expired last year, remaining support is expected to be largely unwound by 2023 (figure 1.2.D). Despite these actions, government debt is expected to continue to rise over the forecast horizon, on account of the persistent loss in revenues. Although fiscal space

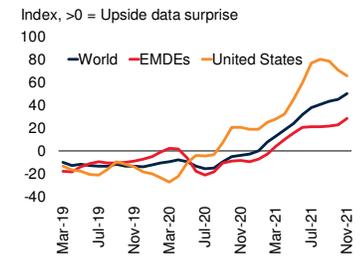
FIGURE 1.2 Global risks and policy challenges

In addition to the possibility of new pandemic resurgences, other risks cloud the outlook: persistent supply bottlenecks could further disrupt global activity and trade, and continued inflation surprises could de-anchor inflation expectations. Many EMDEs have tightened monetary policy to contain inflationary pressures. Pandemic-related fiscal support in EMDEs is expected to be largely unwound by 2023. Policy action is needed to tackle the rising costs of climate-related disasters. With vulnerable groups having disproportionately suffered job losses during the pandemic, policy efforts are also needed to reverse increases in gender and income inequality.

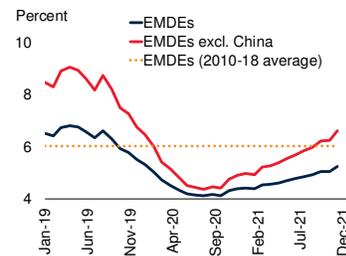
A. Impact of supply bottlenecks on global trade and industrial production



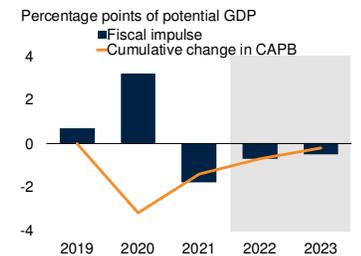
B. Inflation surprises



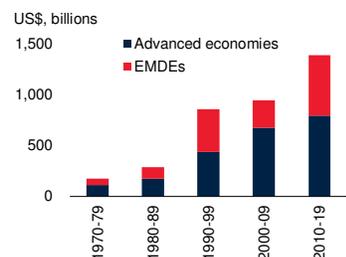
C. Policy rates in EMDEs



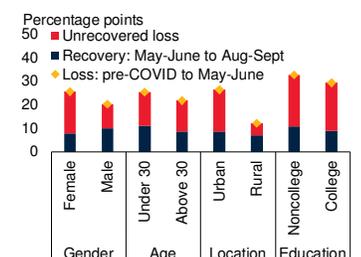
D. Fiscal stance in EMDEs



E. Economic losses from weather and climate disasters



F. Job losses and recoveries between May-June and August-September 2020



Sources: BIS (database); Bloomberg; Citigroup; CPB Netherlands Bureau for Economic Policy Analysis; EM-DAT, CRED/UCLouvain, <https://www.emdat.be>; Haver Analytics; International Monetary Fund; Mahler (r) et al. (forthcoming); Narayan et al. (forthcoming); World Bank; World Meteorological Organization.

Note: EMDEs = emerging market and developing economies.

A. The effect of supply bottlenecks is derived from OLS regressions. Dotted lines show counterfactual scenarios produced by assuming that the PMI supply delivery times indicator (a proxy for supply bottlenecks) in the January 2020-August 2021 period remains at the average 2019 level. Estimations are performed over the period 2000-19.

B. Citigroup Inflation Surprise Index. A positive (negative) index reading means inflation was higher (lower) than expected. Last observation is November 2021.

C. Aggregates are calculated using real U.S. dollar GDP weights at average 2010-19 prices and market exchange rates. Sample includes 22 EMDEs. Last observation is December 2021.

D. Figure shows the GDP-weighted cumulative change since 2019 in the cyclically-adjusted primary balance (CAPB), based on data from IMF (2021b). Fiscal impulse is the negative change in the CAPB from the previous year. Sample is limited to 50 EMDEs because of data availability. Shaded area indicates forecasts.

E. Figure shows the sum of all damages and economic losses directly or indirectly related to weather, climate, and water-related hazards. Hazards are associated with natural, geophysical, meteorological, climatological, hydrological, and biological events.

F. Figure shows the decline in the average share of employed among surveyed households from pre-pandemic to May-June 2020, as described in chapter 4. Sample includes 14-17 EMDEs.

will thus remain constrained in EMDEs, steps can be taken to improve fiscal sustainability and rebuild policy buffers. Actions to prioritize expenditures, particularly growth-enhancing investment projects, can boost underlying potential output. Meanwhile, policies that strengthen spending efficiency and improve domestic revenue mobilization, including by introducing new tax instruments such as carbon taxes, can help replenish fiscal buffers.

EMDE policy makers also continue to face critical longer-term policy challenges. The pandemic's severe human and economic costs underscore the importance of policy actions to prevent, prepare for, and respond to future crises as part of a comprehensive approach to pursue green, resilient, and inclusive development paths. Policies to accelerate the transition to low-carbon renewable energy sources are needed to help reduce greenhouse gas emissions and curb the rising costs associated with climate change (figure 1.2.E). Recent volatility in commodity prices, coupled with the fact that commodities represent a key source of export revenues for most EMDEs, underscores the importance of reforms to foster resilience in the face of commodity price shocks (chapter 3).

The pandemic has also exacerbated inequality as it has disproportionately affected vulnerable groups, leading to lasting employment losses for many (figure 1.2.F; chapter 4). In particular, women have suffered outsized job and income losses due to their over-representation in hard-hit sectors. Decisive policy efforts to reduce income and gender inequality and protect vulnerable groups need to be prioritized, especially in EMDEs with large informal sectors and elevated levels of poverty.

Global context

Despite a steady, albeit uneven, rise in vaccination rates, global COVID-19 cases have been increasing sharply again, most recently driven by the highly-transmissible Omicron variant. Global activity has continued to recover, and trade in goods has reached new highs despite persistent supply bottlenecks. Global financial conditions have remained benign; however, portfolio flows to EMDEs have declined,

and many of them have experienced mounting inflationary pressures, which have triggered monetary tightening in some cases. Energy prices increased rapidly in the second half of 2021 reflecting strong demand and constrained supply, while non-energy commodity prices have mostly stabilized at multi-year highs.

Pandemic developments

COVID-19 caseloads have been surging yet again at the global level in recent months, with massive outbreaks of the fast-spreading Omicron variant following in the footsteps of Delta-variant outbreaks (figure 1.3.A). In most cases, the recent resurgences of COVID-19 have had more muted impacts on economic activity than earlier ones. So far, most governments have shied away from reimposing lockdowns, relying instead on accelerated vaccinations in concert with widespread masking, expanded testing, and limits on large gatherings. Nevertheless, the Omicron variant's ability to spread rapidly through vaccinated populations points to the possibility of additional restrictions in the near term.

Vaccination has been proceeding at the global level, with the number of doses administered exceeding 9 billion. Nonetheless, it remains highly uneven across countries. Over 75 percent of people in advanced economies have received at least one vaccine dose compared to about 55 percent in EMDEs. In contrast, only 8 percent of people in LICs have received at least one dose. At recent vaccination rates, and unless they accelerate, only about a third of the LIC population would be inoculated by the end of 2023 (figure 1.3.B). While the low vaccination rate in LICs primarily reflects procurement obstacles, efforts to rapidly scale up inoculations are also being hampered by logistical challenges associated with distributing COVID-19 vaccines, including insufficient cold chain capacity (Hall et al. 2021).

Global trade

Global trade has rebounded in tandem with global economic activity. The recovery has been swift for goods trade. Services trade has firmed; however, it is still lagging, with travel services particularly subdued. Depressed tourism flows have weighed

on activity in tourism-reliant economies, including many small-island developing states.

The recovery in global trade has reflected a rotation of global demand toward highly trade-intensive manufactured goods—especially durable goods. The increase in industrial production has been mirrored almost one for one by solid trade growth, in line with historical evidence that they are driven by a common factor (figure 1.4.A). Significant strains in global supply chains emerged in 2021; however, they seem to have originated mostly from factors that are likely to be temporary, including pandemic-related factory and port shutdowns, weather-induced logistics bottlenecks, and an acute shortage of semiconductors and shipping containers.

The bottlenecks that have propagated through global supply chains have led to a surge in the backlog of orders for traded goods and to record-high shipping prices, which at their peak in October 2021 were six times their 2019 levels. At the same time, inventories have been depleted by businesses seeking to meet the rebound in demand. Supply chain strains may be easing slightly, as suggested by the recent deceleration of supply delivery times and declining shipping prices in November (figure 1.4.B).

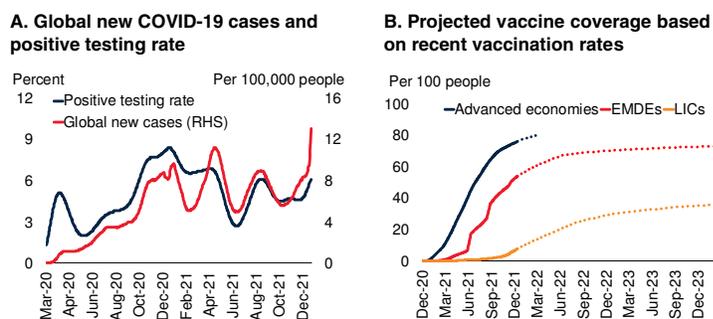
After reaching 9.5 percent in 2021, global trade is expected to slow to 5.8 percent in 2022 and to 4.7 percent in 2023, as demand moderates. International travel is likely to remain subdued in the near term but gradually recover over the forecast horizon, supported by improvements in international mobility as vaccination proceeds. Downside risks to the global trade outlook include, in the near term, worsening supply bottlenecks due to the Omicron-driven pandemic surge, and, in the longer-term, rising protectionism.

Commodity markets

Energy prices surged in the second half of 2021 and are currently projected to be much higher in 2022 than previously expected (figure 1.5.A). Non-energy commodity prices generally stabilized in 2021, with many at or close to all-time highs; however, soaring energy costs have negatively

FIGURE 1.3 Pandemic developments

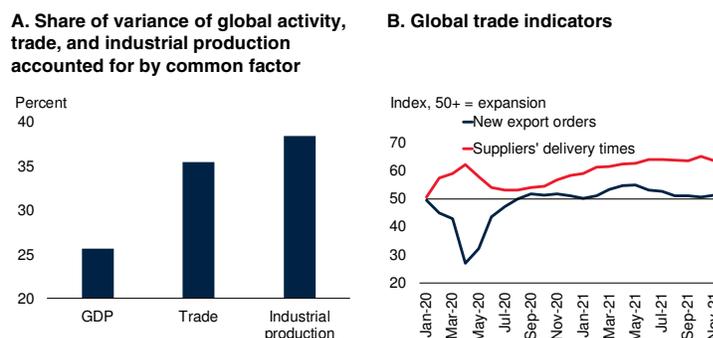
The world is experiencing an unprecedented surge in COVID-19 cases, driven by the Omicron variant. At recent vaccination rates, only about a third of the population in low-income countries will have received at least one dose by the end of 2023.



Sources: Our World in Data (database); World Bank.
 Note: EMDEs = emerging market and developing economies; LICs = low-income countries.
 A. Figure shows global median COVID-19 positive rate and global new daily cases per 100,000 people. Positive rate is the smoothed daily share of tests returning a positive result. Global new daily cases series is 14-day moving average. Last observation is December 30, 2021.
 B. Figure shows the number of people who received at least one dose of COVID-19 vaccine per 100 people. Projections based on 14-day moving averages of daily vaccination rates. Data through December 23, 2021.

FIGURE 1.4 Global trade

Global goods trade has recovered swiftly, driven by a rotation of demand toward trade-intensive manufactured goods, as suggested by the close comovement of global trade and industrial production. Incoming data suggest that significant strains on supply chains may be easing slightly.



Sources: CPB Netherlands Bureau for Economic Policy Analysis; Haver Analytics; World Bank.
 A. Share of variation in quarterly growth of global trade, global GDP, and global industrial production, accounted for by a common factor estimated through a three-variables dynamic factor model over the period 2000-2019.
 B. Figure shows new export orders sub-component from manufacturing Purchasing Managers' Index (PMI) and inverted global PMI supply delivery times. 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 2021.

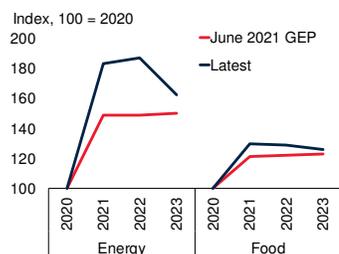
affected the production of non-energy commodities including metals and fertilizers.

Natural gas and coal prices rose particularly sharply in 2021, even though coal prices

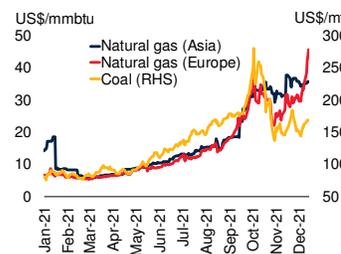
FIGURE 1.5 Commodity markets

Energy prices surged in the second half of 2021, and their projected path has been revised up markedly. Natural gas and coal prices increased particularly sharply, driven by a rebound in demand and supply constraints, although coal prices receded toward the end of the year. Oil demand is expected to regain its pre-pandemic level in 2022. Metal prices have diverged, with iron ore peaking and then falling amid China's restrictions on steel production, and most base metal prices boosted by robust demand. Food prices are expected to decline slightly from recent levels, although high fertilizer prices are an upside risk.

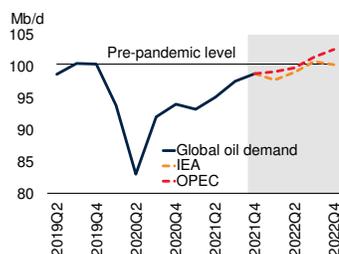
A. Commodity price forecast changes



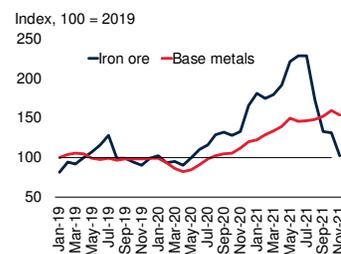
B. Natural gas and coal prices



C. Oil demand



D. Base metal and iron ore prices



Sources: Bloomberg; IEA (2021a); OPEC (2021); World Bank.

A. Red line corresponds to the forecast at the time of the June 2021 edition of the *Global Economic Prospects* (GEP) report (World Bank 2021a). Blue line refers to the current forecast.

B. Last observation is December 16, 2021.

C. Horizontal black line indicates pre-pandemic level. Dashed lines are forecasts, taken from the IEA's December Oil Market Report (IEA 2021a) and OPEC's December Monthly Oil Market Report (OPEC 2021).

D. Base metals are a weighted average of aluminum, copper, lead, nickel, tin, and zinc. Last observation is November 2021.

moderated toward the end of the year (figure 1.5.B). Natural gas prices in Europe saw particularly steep increases, reaching record highs in December 2021. Demand has been lifted by firming global activity as well as adverse weather, which, in some countries, increased energy use for heating and cooling, disrupted coal production, and reduced hydroelectric power (World Bank 2021b). Reflecting these developments, the cost of electricity in many countries has also risen sharply, especially in Europe. Natural gas and coal prices are expected to ease from their current levels in 2022 as supply constraints ease, but to remain higher than their pre-pandemic levels.

Oil prices rose to an average of \$69/bbl in 2021—an increase of 67 percent over 2020 and \$7/bbl higher than previously expected as oil demand recovered, boosted by higher natural gas prices which encouraged the use of oil as a substitute (figure 1.5.C). Despite a planned increase in production by the member countries of OPEC+, global oil output rebounded more slowly than expected owing to supply outages and production constraints, in addition to a muted response to higher prices by U.S. shale oil production. Oil prices are expected to average \$74/bbl in 2022 before declining to \$65/bbl in 2023 as global production recovers. The surge in COVID-19 infections caused by the Omicron variant is currently expected to have a modest, temporary impact on oil demand, largely because pandemic-control measures have become less restrictive (IEA 2021a). Nonetheless, additional economic disruptions from pandemic resurgence, including due to new variants, remain a key downside risk to oil demand. An upside risk to energy prices is low investment in new production capacity, which may prove insufficient to keep pace with demand. To avoid future energy price spikes, investment in low-carbon sources of energy would need to increase markedly, or growth in energy demand would need to slow.

Metal prices stabilized in the second half of 2021 following sharp increases in the first, but with significant divergence between most base metals and iron ore (figure 1.5.D). Tin prices reached an all-time high, supported by continued strong demand from the electronics sector and supply disruptions. Aluminum prices were lifted by China's decision to limit production amid electricity shortages. In contrast, iron ore prices sharply declined from mid-year highs, as China curtailed steel production to reduce pollution, while copper prices also fell slightly from all-time highs, partly driven by slowing activity in China. After surging in 2021, metal prices are expected to soften over the next two years.

Agricultural prices rose by 23 percent, on average, in 2021. Some food prices were boosted by record-high imports by China, including grains and vegetable oils, while weather-induced supply disruptions boosted wheat, cocoa, and coffee

prices. Fertilizer prices rose strongly owing to the rise in energy prices. Agricultural prices, including food, are expected to decline modestly over the next two years, but the projected level of prices is higher than previously expected. A critical upside risk to food prices is posed by the possibility that the sharply increased prices of agricultural inputs, notably energy and fertilizers, do not ease in 2022 as projected.

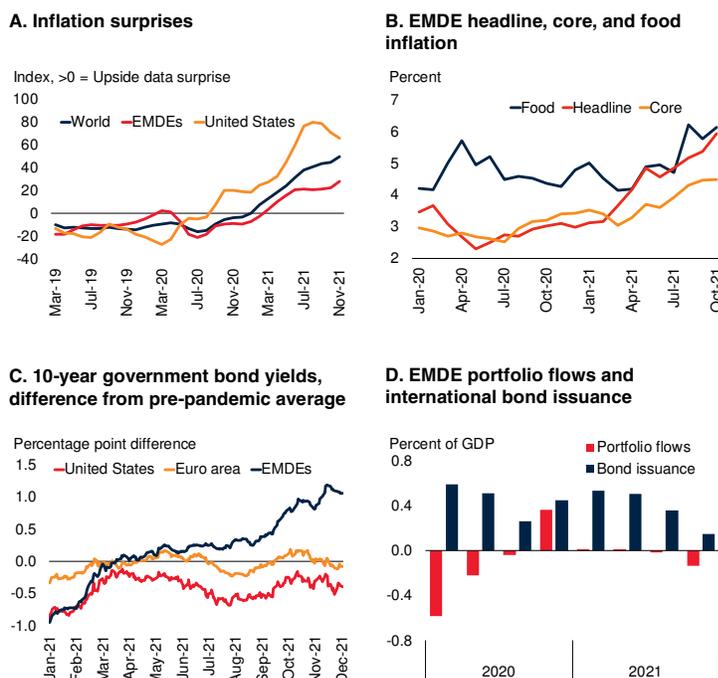
Global inflation and financial developments

Global inflation surprised continuously to the upside in recent months, with median headline consumer price inflation reaching 4.6 percent on a 12-month basis in October 2021, up from a pandemic-related trough of 1.2 percent in May 2020 (figure 1.6.A). The rebound in global demand and activity since mid-2020, together with supply disruptions and rising food and energy prices, have pushed headline inflation to decade highs across many countries. Core consumer price inflation—excluding food and energy—has also increased globally; in some economies, this has in part reflected rising housing-price inflation. The increase in inflation has led various central banks to partially unwind their accommodative monetary policies.

In EMDEs, increases in inflation have been broad-based across countries and components: four fifths of EMDEs—mainly in Europe and Central Asia (ECA), Latin America and the Caribbean (LAC), and Sub-Saharan Africa (SSA)—experienced an uptick in inflation in 2021, with rises in food, energy, and core components (figure 1.6.B). In particular, around a third of EMDEs experienced double-digit food inflation in 2021. Wage pressures have remained contained in many EMDEs, largely reflecting ample slack in labor markets; however, some large economies in ECA and LAC are notable exceptions (ILO 2021). In advanced economies, inflation has also risen appreciably, albeit with differences across countries. Market-based measures of medium-term inflation expectations have edged up, although investors still appear to expect inflation to moderate gradually over time toward central banks’ targets. Wages have accelerated in advanced economies, especially in sectors experiencing persistent labor shortages.

FIGURE 1.6 Global inflation and financial developments

In recent months, inflationary pressures across the world have intensified at a faster-than-anticipated pace. Like advanced economies, emerging market and developing economies (EMDEs) have experienced broad-based increases in headline and core inflation since mid-2020. EMDE government bond yields have also increased. Although international bond issuance has remained robust, portfolio flows to EMDEs have declined, reflecting concerns about growth prospects and pandemic risks.



Sources: Bloomberg; Citigroup; Dealogic; Haver Analytics; Institute of International Finance; World Bank.

Note: EMDEs = emerging market and developing economies.

A. Figure shows the 3-month moving average of the Citigroup Economic Surprise Index. Index measures price surprises relative to market expectations. A positive (negative) index reading means inflation was higher (lower) than expected. Last observation is November 2021.

B. Figure shows median year-on-year food, headline, and core consumer price index (CPI) inflation for 50 EMDEs. Last observation is October 2021.

C. Figure shows the difference in nominal yields on 10-year government bonds from December 2019 averages (5.7 percent for EMDEs, 1.9 percent for the United States, and -0.3 for the euro area). EMDEs calculated as the average yield for 18 EMDEs, excluding Turkey. Last observation is December 13, 2021.

D. Figure shows cumulative quarterly portfolio inflows and bond issuance. Sample includes 14 EMDEs. Last observation is December 15, 2021.

Financial conditions in advanced economies have remained very accommodative even as some major central banks have begun to reduce long-term asset purchases and signaled plans to raise policy rates. The emergence of the Omicron variant triggered an episode of substantial market volatility in late 2021; however, equity prices rapidly returned to near historically high levels, boosted by strong corporate earnings. Meanwhile, house prices surged to record highs, supported by low borrowing costs. Although corporate credit spreads have edged up, they remain compressed

even for riskier borrowers. Government bond yields remained subdued at the turn of the year, having pared back sizable increases since mid-2021.

In contrast, EMDE financing conditions have tightened, reflecting policy rate hikes in a number of large countries—including Brazil, Mexico, and the Russian Federation—as central banks grapple with rising inflation and currency depreciation (BIS 2021). Of the nearly two dozen EMDEs whose central bank announced or implemented asset purchase programs in 2020, one-third have raised policy rates in 2021. In many countries, government bond yields have increased and sovereign credit spreads vis-à-vis advanced-economy benchmarks have widened slightly, albeit with some differentiation across issuers (figure 1.6.C).

EMDE international bond issuance has remained generally robust. Nonetheless, portfolio flows to EMDEs declined in 2021, reflecting a broader deterioration in EMDE risk sentiment as well as uncertainty about prospects for monetary policies of major central banks (figure 1.6.D). After a strong rebound, the growth of remittances has moderated. Foreign direct investment inflows to EMDEs have resumed, albeit with notable variations across countries and industries, with pandemic-related uncertainties amplifying pre-COVID weaknesses, particularly in LICs (UNCTAD 2021).

Major economies: Recent developments and outlook

Resurgence of the pandemic, widespread supply constraints, and rising inflation have dampened the pace of recovery in advanced economies. Growth is expected to moderate further as policy support is gradually withdrawn and pent-up demand is depleted. In China, macroeconomic policy support is envisioned to partly mitigate the near-term effects of regulatory tightening and deleveraging of the real estate sector.

Advanced economies

Growth in most advanced economies slowed unexpectedly in the second half of last year as a

result of pandemic resurgence and supply bottlenecks. A recovery in demand, supply constraints, and earlier commodity price increases have contributed to notable inflationary pressures in most countries. After bouncing back to an estimated 5 percent in 2021, growth in advanced economies is projected to moderate to 3.8 percent in 2022 as the Omicron-driven pandemic resurgence weighs on activity at the start of the year, pent-up demand is gradually reduced, fiscal and monetary support is withdrawn, and supply strains ease only gradually (figure 1.7.A). Sustained consumer demand and still-favorable financing conditions are expected to underpin a strong recovery in investment (figure 1.7.B). GDP growth is forecast to slow to 2.3 percent in 2023, as pent-up demand is exhausted and policy support is further withdrawn; despite this deceleration, advanced-economy output is projected to exceed its pre-pandemic trend next year. In the near term, more substantial economic dislocations from the rapid spread of the Omicron variant represent a key downside risk to the outlook.

In the **United States**, activity grew at a softer-than-expected pace in the second half of 2021, with material slowdowns in private consumption and manufacturing production. Activity faced several unanticipated headwinds, including COVID-19 outbreaks, mounting supply shortages, and rising energy prices, as well as a fading boost to incomes from pandemic-related fiscal support. Meanwhile, inflation surprised markedly to the upside and broadened across components, and a tightening labor market applied upward pressure to wages (figure 1.7.C). In all, U.S. output is estimated to have expanded by 5.6 percent in 2021—1.2 percentage points below previous forecasts.

Growth is expected to slow to 3.7 percent in 2022 and 2.6 percent in 2023 as excess savings are spent, support from fiscal and monetary policy wanes, and supply bottlenecks gradually dissipate. The 10-year \$1.2 trillion infrastructure plan signed into law in November is expected to provide only a small boost to activity in the near term, with most of its effect envisioned to take place beyond this year. The growth outlook for 2022 has been revised down by 0.5 percentage

point relative to previous forecasts, in part reflecting an Omicron-driven pandemic resurgence, a persistent drag from supply bottlenecks, higher inflation, and a faster withdraw of monetary policy support than previously expected. Nonetheless, output is still projected to regain its pre-pandemic trend by the end of 2022. The possibility of additional fiscal support, such as more expansive social safety nets, poses an upside risk to the outlook. On the downside, tenacious inflation and an even faster tightening of monetary policy could lead to weaker-than-expected growth.

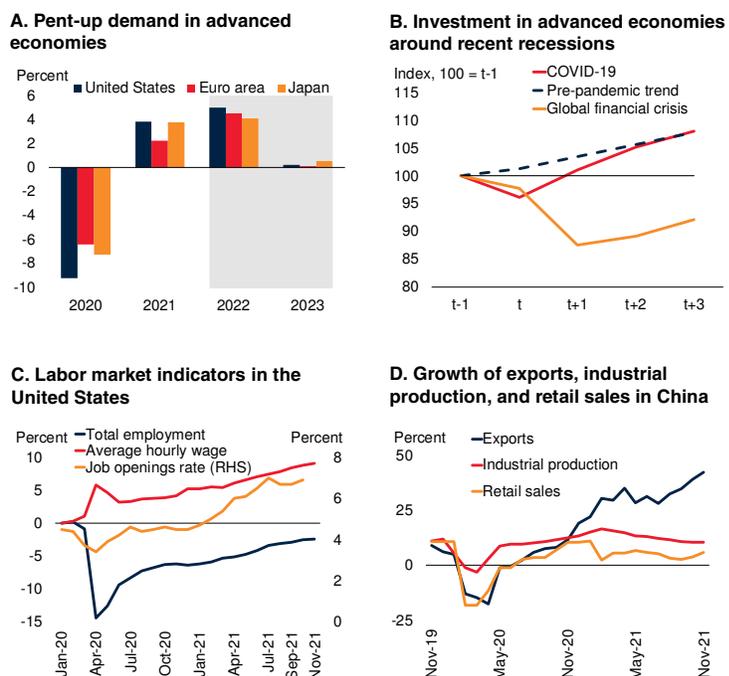
After a remarkable rebound in the second and third quarters of 2021, growth in the euro area is estimated to have slowed in the fourth quarter owing in part to a sharp resurgence of COVID-19, a persistent drag on production from supply bottlenecks in economies heavily exposed to global supply chains, and sharply higher energy prices. Still, growth is likely to have remained solid at the turn of the year.

After reaching an estimated 5.2 percent in 2021, euro area growth is projected to slow to 4.2 percent in 2022, 0.2 percentage point below previous projections, reflecting a somewhat softer-than-expected recovery in services consumption due to the emergence of the Omicron variant. Growth is forecast to decelerate further to 2.1 percent in 2023. Notwithstanding the expected slowdown, output is projected to be back to its pre-pandemic trend next year. The surge in natural gas and electricity prices, if sustained into 2022, would present a notable downside risk to the near-term euro area outlook, particularly for industrial production.

In Japan, activity remained subdued through 2021, but it is likely to have picked up toward the end of the year as high vaccination rates allowed for the relaxation of pandemic-control measures. After an estimated 1.7 percent expansion in 2021, growth is set to firm to 2.9 percent in 2022—0.3 percentage point above previous projections—given the delay in the release of pent-up demand following last year’s pandemic resurgence and additional fiscal stimulus legislated in December. Activity is expected to slow to 1.2 percent in 2023 as the boost from pent-up demand gradually fades.

FIGURE 1.7 Major economies: Recent developments and outlook

Growth is expected to slow in the United States and the euro area, as pent-up demand is depleted and policy support is gradually withdrawn. Benign financial conditions and sustained consumer demand are expected to support a continuing solid recovery in investment. Supply bottlenecks and tight labor markets have contributed to inflationary pressures, most notably in the United States. China’s growth has moderated appreciably, reflecting recurring mobility restrictions and regulatory tightening; however, export growth remains solid.



Sources: Haver Analytics; Oxford Economics; U.S. Bureau of Labor Statistics; World Bank. A. Shaded area indicates forecasts. Pent-up demand refers to the annual change in excess personal savings. Data are expressed as the share of personal disposable income in excess of pre-pandemic projections prepared by Oxford Economics. B. Figure shows yearly investments indexed to 100 at t-1, the year before the onset of each event. "t-1" refers to 2019 for COVID-19 and pre-pandemic trend and to 2007 for the global financial crisis. For COVID-19, "t+1" and "t+2" are World Bank forecasts from January 2020. The January 2020 baseline has been extended using projected growth for 2022 to obtain "t+3" forecast. C. Blue and red lines show the percentage deviation from the number of employees on nonfarm payrolls and average hourly wage, in January 2020. Last observation is November 2021 for the number of employees on nonfarm payrolls and average hourly wage, and October 2021 for the job openings rate. D. Figure shows 3-month moving average of two-year growth rate. Exports data show seasonally adjusted value of goods exports. Industrial production and retail sales data show real seasonally adjusted data. Last observation is November 2021.

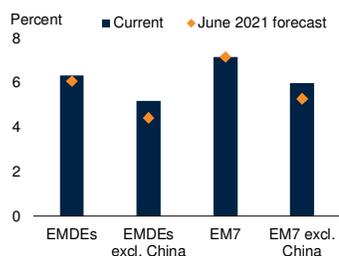
China

Growth in China has decelerated more markedly than previously envisioned. Recurring mobility restrictions related to the pandemic and regulatory curbs on the property and financial sectors have restrained consumer spending and residential investment. In contrast, and despite supply disruptions and electricity shortages, manufacturing activity has been generally solid and export

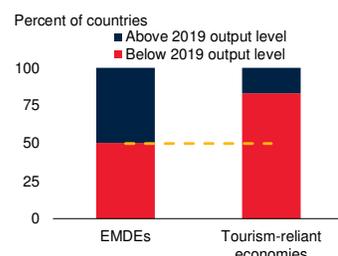
FIGURE 1.8 Recent developments in emerging market and developing economies

Activity in emerging market and developing economies (EMDEs) is estimated to have expanded 6.3 percent in 2021, bolstered by a generally favorable external environment. The pace of expansion, however, was not sufficient to return output to its 2019 level, especially in tourism-reliant economies. EMDE industrial production has decelerated and manufacturing new export orders remain subdued, reflecting moderating external demand and lingering supply bottlenecks. In contrast to the experience in previous global recessions, consumption remains well below its pre-crisis trend.

A. EMDE growth in 2021



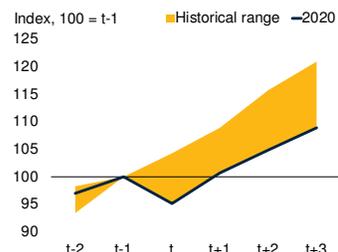
B. Share of EMDEs with 2021 output above/below 2019 levels



C. EMDE industrial production and manufacturing new export orders



D. Private consumption around recessions in EMDEs excluding China



Sources: Haver Analytics; World Bank.

Note: EMDEs = emerging market and developing economies.

A.D. Aggregates are calculated using real U.S. dollar GDP weights at average 2010-19 prices and market exchange rates.

A. EM7 includes Brazil, China, India, Indonesia, Mexico, the Russian Federation, and Turkey. Data for 2021 are estimates.

B. Tourism-reliant EMDEs are defined as EMDEs with average 2015-19 inbound tourism expenditures as a share of GDP in the fourth quartile. Sample includes 142 EMDEs, including 35 tourism-reliant economies. Data for 2021 are estimates.

C. Figure shows the manufacturing Purchasing Managers' Index (PMI) for new export orders. PMI readings above 50 indicate expansion in economic activity; readings below 50 indicate contraction. Last observation is October 2021 for industrial production and November 2021 for new export orders.

D. Figure shows World Bank data and forecasts. Yellow area indicates the range of global recessions in 1975, 1982, 1991, 2009, and 2020. "t" indicates the year of the recession.

growth has accelerated (figure 1.7.D). Macroeconomic policy action has helped prevent a sharper economic slowdown and mitigated financial stress. The People's Bank of China has provided short-term liquidity injections and cut reserve requirements, and the government has accelerated infrastructure investment and has stepped up efforts to support homeowners and creditworthy developers.

After reaching an estimated 8 percent in 2021, growth in China is expected to moderate to 5.1 percent in 2022, amid the lingering effects of the pandemic and tighter regulations on certain sectors of the economy. The forecast for this year has been revised down by 0.3 percentage point, with policy support assumed to only partly offset the impact of regulatory tightening and a downturn in the real estate sector, which is expected to further weigh on residential investment. The possibility of a marked and prolonged downturn in the highly leveraged property sector—and its potential effects on house prices, consumer spending, and local government financing—is a notable downside risk to the outlook.

Emerging market and developing economies

EMDE growth rebounded to an estimated 6.3 percent in 2021 but is projected to decelerate to 4.6 percent in 2022, as macroeconomic policy support is withdrawn and external demand moderates. Higher energy prices are expected to shift growth momentum from energy importers to exporters. Per capita income growth is expected to trail that of advanced economies in 70 percent of EMDEs over the forecast horizon.

Recent developments

EMDE output is estimated to have expanded 6.3 percent in 2021, 0.2 percentage point higher than previously anticipated (figure 1.8.A). Many countries in ECA and LAC benefitted from a pickup in domestic demand driven by a recovery in labor markets, as well as robust external demand and resilient remittances (Kpodar et al. 2021). Meanwhile, high commodity prices helped stabilize industrial activity in large commodity exporters in both ECA and LAC, as well as in the Middle East and North Africa (MENA) and SSA.

Despite this improvement, the rebound in growth last year was not sufficient to return output to 2019 levels in many EMDEs (figure 1.8.B). Resurgences of new COVID-19 cases and related mobility restrictions held back economic recoveries in many countries. This was most evident in some large economies in EAP, where

several indicators of real activity contracted, as well as in tourism-reliant EMDEs—including a number of small island states—amid sustained weakness in international tourist arrivals.

More recently, the recovery in EMDEs has lost momentum. EMDE industrial production has decelerated and manufacturing new export orders remain subdued, reflecting moderating external demand and lingering supply bottlenecks (figure 1.8.C). Private consumption has been constrained by a marked acceleration in inflation in many economies (figure 1.8.D). The pandemic has also continued to disrupt activity in many EMDEs, and the rapid spread of the Omicron variant—including in ECA, LAC, and SSA, as well as some large economies in MENA and SAR—may weigh further on EMDE near-term growth.

In LICs, growth is estimated to have risen to 3.3 percent in 2021, as firming external demand and elevated commodity prices helped buoy activity. Nonetheless, domestic demand has remained subdued, as sustained income and job losses from the pandemic have exacerbated poverty and food insecurity. Limited progress with vaccination amid supply constraints and distribution challenges has also weighed on the recovery. In some LICs, activity has been also held back by elevated levels of violence and armed conflict (Burkina Faso, Ethiopia) or increasing political instability (Chad, Mali).

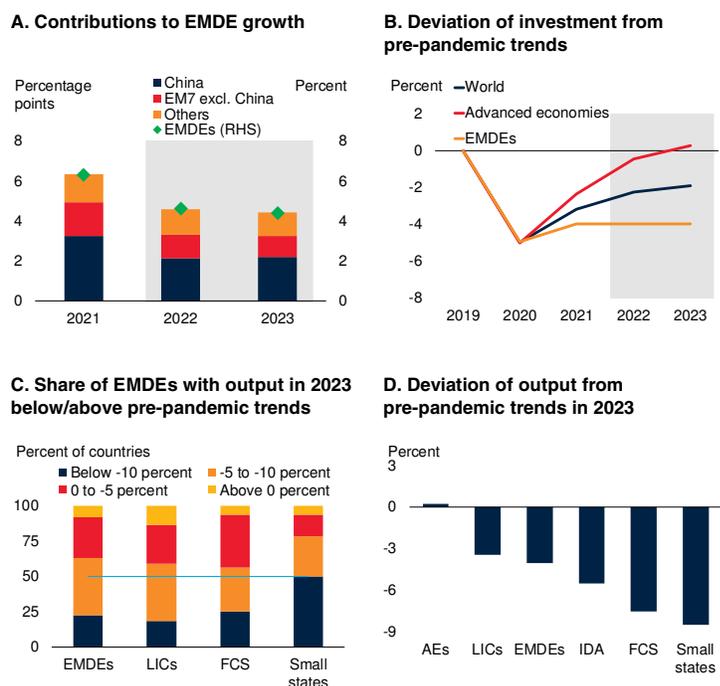
Outlook

EMDE outlook

As growth in China decelerates and as EMDE domestic demand is dampened by the continued effects of the pandemic, including from the recent spread of the Omicron variant, aggregate EMDE growth is projected to moderate to 4.6 percent in 2022 (figure 1.9.A). The outlook is further dampened by the withdrawal of macroeconomic policy support, including the removal of fiscal support in more than four-fifths of EMDEs. Elevated inflation and tighter monetary policy are expected to weigh on private consumption in 2022. EMDEs are also anticipated to face a less favorable external environment in 2022, as external demand from major economies plateaus

FIGURE 1.9 Outlook in emerging market and developing economies

Growth in emerging market and developing economies (EMDEs) is forecast to moderate to 4.6 percent in 2022, as macroeconomic policy support continues to be withdrawn and the rebound in China eases. The pace of recovery in EMDEs is likely to remain uneven, with output and investment remaining well below pre-pandemic trends in many economies, particularly small states and those facing fragile and conflict-affected situations.



Source: World Bank.
 Note: AEs = advanced economies; EMDEs = emerging market and developing economies; FCS = fragile and conflict-affected situations; IDA = International Development Association countries; LICs = low-income countries. Small states are EMDEs with a population of less than 1.5 million.
 A.B.D. Aggregates are calculated using real U.S. dollar GDP weights at average 2010-19 prices and market exchange rates.
 A.B. Shaded areas indicate forecasts. Data for 2021 are estimates.
 A. "EM7 excl. China" includes Brazil, India, Indonesia, Mexico, the Russian Federation, and Turkey.
 B.D. Figure shows the percent deviation between the levels released in the January 2020 edition of the *Global Economic Prospects* report (World Bank 2020a). For 2023, the January 2020 baseline is extended using projected growth for 2022.
 C.D. The small states sample is limited to 32 EMDEs because of data availability; the aggregate excludes commodity-reliant Guyana, which is experiencing a growth boom due to rapid offshore oil industry development.
 C. Share of countries with output in 2023 above or below pre-pandemic trends compared to the January 2020 edition of the *Global Economic Prospects* report (World Bank 2020a). For 2023, the January 2020 baseline is extended using projected growth for 2022.
 D. IDA includes countries eligible to IDA support, including blend economies, which are IDA-eligible based on per capita income levels and are also creditworthy for some IBRD borrowing.

and, in the case of commodity exporters, as non-oil commodity prices edge down. In this context, growth in some EMDE regions with particularly tight global trade and financial linkages is forecast to decelerate following stronger-than-expected growth outturns last year (ECA, LAC; box 1.1; chapter 2). In EMDEs excluding China, growth is

forecast to decelerate to 4.2 percent in 2022—a pace insufficient to return output to pre-pandemic trends.

Although aggregate EMDE growth in 2022 is only slightly below previous projections, growth forecasts have been downgraded for about a third of EMDEs, and the recovery continues to show considerable divergence. Despite higher oil prices and a gradual rise in oil production, the near-term outlook for oil-exporting EMDEs remains mixed, reflecting the need for earlier policy support to be unwound (Azerbaijan, Russia) or for sharp fiscal consolidation (Angola, Bolivia, Colombia). For other EMDEs, the outlook is dampened by sustained weakness in international tourism (the Maldives, the Philippines, Thailand), armed conflict (Ethiopia), a sharp rise in policy uncertainty (Turkey), and an escalation in geopolitical tensions (Belarus). In all, output this year is expected to remain below 2019 levels in about a third of EMDEs—mostly tourism-reliant economies or small states.

The strength of the recovery is anticipated to shift across EMDE regions in 2022. The rebounds in MENA and SSA are now expected to be stronger than previously forecast, partly as a result of improved prospects for energy prices and the continued easing of OPEC+ oil production cuts in large energy exporters. In contrast, while ECA and LAC contributed more than half of aggregate growth in EMDEs excluding China last year—roughly double the 2010-19 average for both regions—the growth forecast for these two regions has been downgraded. This reflects a faster-than-expected withdrawal of macroeconomic policy support in these regions, especially in large economies where inflationary pressures have prompted policy rate hikes (Brazil, Chile, Mexico, Russia). In ECA, it also reflects the recent sharp acceleration in new COVID-19 cases and accompanying mobility restrictions.

Aggregate EMDE output growth is forecast to ease to 4.4 percent in 2023—in line with previous projections—as domestic demand stabilizes alongside moderating private consumption growth and still-subdued investment, and as commodity prices continue to edge down. Activity in some countries in 2023 will continue to benefit from a

gradual recovery in international tourism, helped by more widespread vaccination in EMDEs. The drag on growth from the unwinding of macroeconomic policy support is also anticipated to wane toward the end of the forecast horizon. Nevertheless, tighter macroeconomic policy, combined with a sluggish recovery in investment, is expected to leave the recovery incomplete in many large EMDEs even in 2023.

The pandemic has likely scarred potential output because of its protracted effects on human and physical capital, and it will leave EMDE output and investment still below pre-pandemic trends by the end of 2023 (figure 1.9.B). However, there is wide variation across countries, with output in 2023 in about a quarter of EMDEs and nearly 50 percent of small states expected to remain more than 10 percent below pre-pandemic trends (figures 1.9.C and 1.9.D). The projected shortfall is relatively limited in the ECA region, with output expected to be only about 1.5 percent below pre-pandemic trends in 2023. In contrast, the projected gap is nearly 8 percent in South Asia (SAR) and 4.5 percent in SSA—the two EMDE regions that are home to more than 85 percent of the world's poor—reflecting the effects of more muted policy support and uneven labor market recoveries (ILO 2021).

LICs outlook

Growth in LICs is projected to reach 4.9 percent in 2022—in line with previous forecasts but below its 2000-19 annual average of 5.5 percent—as the recovery in domestic demand gathers pace (box 1.2). High commodity prices are expected to help underpin recoveries in agriculture and mining in some countries. Still, the rebound in activity will be tempered by trailing vaccination rates; earlier increases in poverty; and heightened food insecurity, partly owing to rising food prices. The space for more policy support has been narrowed by elevated inflation and high levels of public debt. In several LICs, especially fragile and conflict-affected ones, wars, violence, and political uncertainty have dampened activity (Ethiopia, Mali).

The recovery in LICs is projected to firm in 2023, with growth rising to 5.9 percent. Services activity

BOX 1.1 Regional perspectives: Outlook and risks

Growth in most emerging market and developing economy (EMDE) regions in 2022-23 is projected to revert to the average rates during the decade prior to the pandemic. This pace of growth will not be enough to recoup output setbacks during the pandemic. By 2023, annual output is expected to remain below the pre-pandemic trend in all regions. Europe and Central Asia will be the region closest to its pre-pandemic trajectory and South Asia the farthest from it. All regions will stand in contrast to advanced economies, where the gap is projected to close. Risks to EMDE regional outlooks are tilted to the downside, including continued COVID-19 outbreaks, sluggish progress on vaccination, financial stress, lower-than-expected commodity prices, geopolitical tensions and social unrest, food insecurity, and disruptions and damages from extreme weather.

Introduction

As the recovery from the pandemic-induced global recession continues, it is evident that there are commonalities and differences in conditions across emerging market and developing economy (EMDE) regions. In all regions, output is projected to remain below the pre-pandemic trend through the forecast horizon, and all regions face downside risks from resurgences of COVID-19, tightening financial conditions, and extreme weather and other natural disasters. The degree of shortfalls from the pre-pandemic trend varies widely across and within regions, however. Other risks—such as sluggish COVID-19 vaccination, lower-than-expected commodity prices, geopolitical tensions, social unrest, and food insecurity—stand to impact some regions more than others.

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?

Outlook

Following cyclical rebounds in 2021, growth rates in most EMDE regions are projected to revert in 2022-23 to about the average during the decade prior to the pandemic, although East Asia and Pacific (EAP) will fall short (figure B1.1.1.A). In EAP, downshifting growth in China, reflecting additional regulatory tightening and rapid deleveraging of the real estate sector, will account for most of the 2 percentage-point gap with the pre-pandemic average.

Growth in the Middle East and North Africa (MENA), by contrast, is projected to be faster in 2022-23 than on average during 2010-19, reflecting a broad-based growth acceleration relative to 2021 as disruptions from the pandemic and oil production cuts both wane and the policy environment remains supportive. None of the EMDE regions will approach the post-pandemic growth acceleration in advanced economies, where average growth in 2022-23 is projected to be more than 1 percentage point higher than in 2010-19, as substantial pent-up demand continues to boost growth.

Nor will the pace of growth in EMDEs from 2021 to 2023 be sufficient to make up for the output losses inflicted by pandemic-related shocks. On an annual basis, GDP in all regions is expected to remain below the pre-pandemic trend, while advanced economies are projected to nearly reach that benchmark in 2022, and slightly exceed it in 2023 (figure B1.1.1.B). Europe and Central Asia (ECA) will come the closest, at 1.7 percent below the level projected on the eve of the pandemic, reflecting larger fiscal support than in other EMDE regions in 2020 (except EAP) and positive spillovers from a recovery in the euro area and rising commodity prices in 2021 (World Bank 2021c).

Other regions face substantially larger output gaps with the pre-pandemic trend. In SAR, relatively limited macroeconomic support during the pandemic and obstacles to COVID-19 vaccination in 2021, together with lingering financial challenges in India, will contribute to a shortfall in output of nearly 8 percent relative to the pre-pandemic trend. The gap in 2023 relative to the pre-pandemic trend is projected to more than 4 percent for Sub-Saharan Africa (SSA), Latin America and the Caribbean (LAC), and MENA, and nearly 4 percent for EAP.

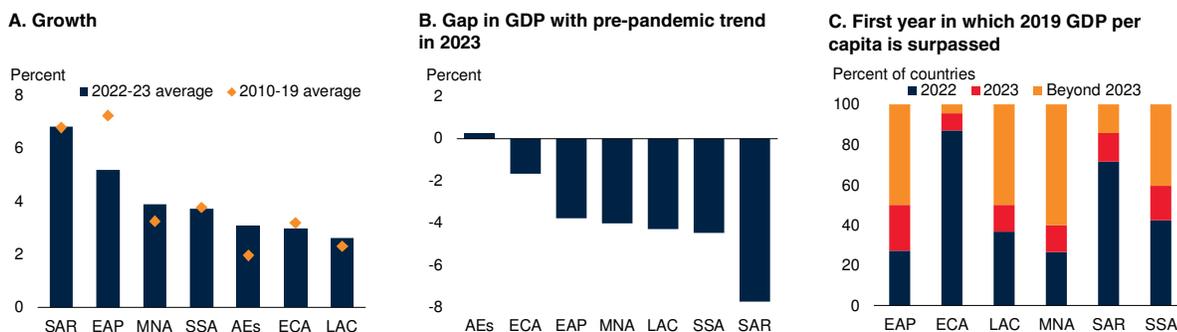
Moreover, the pace of recovery will be uneven within regions, and on a per capita basis may leave behind those in economies that experienced the deepest

Note: This section was prepared by Dana Vorisek.

BOX 1.1 Regional perspectives: Outlook and risks (continued)

FIGURE B1.1.1 Regional outlooks

Growth in 2022 and 2023 is expected to be about the average during decade prior to the pandemic in most emerging market and developing economy regions, although East Asia and Pacific (EAP) will fall short. This pace of growth will not be enough to recoup GDP setbacks during the pandemic, however. By 2023, output in all regions is expected to remain below pre-pandemic trends, with Europe and Central Asia the closest to its pre-pandemic trajectory and SAR the farthest. The pace of recovery will be uneven within regions. More than half of economies in EAP, Latin America and the Caribbean, and the Middle East and North Africa will still be below their 2019 per capita GDP levels by 2023.



Source: 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.

A.-C. Regional country samples are consistent with those used in chapter 2.

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

B. Figure shows percent deviation between the levels of January 2020 and January 2022 baseline World Bank projections for 2020 to 2022. For 2023, the January 2020 baseline is extended using projected growth for 2022. Aggregate growth rates calculated using GDP weights at average 2010-19 prices and market exchange rates.

contractions in 2020, such as tourism-reliant island economies. Half or more of economies in EAP, LAC, and MENA will still be below their 2019 per capita GDP levels by 2023, and two-fifths in SSA (figure B1.1.1.C).

Risks

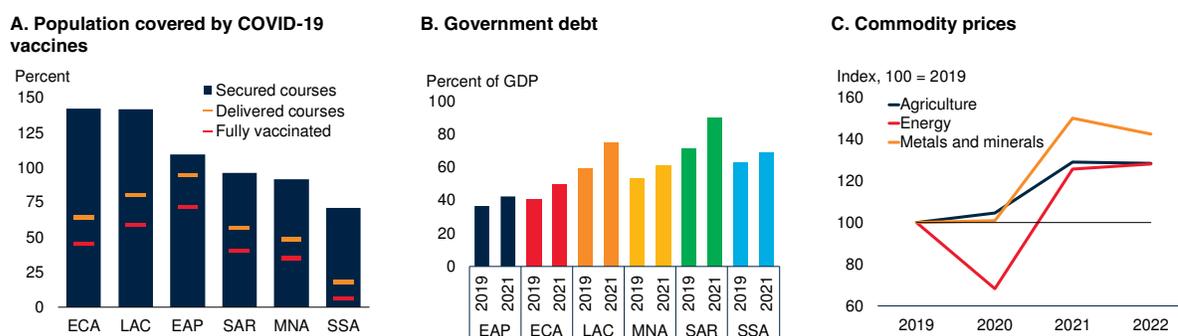
Risks to the baseline forecasts in EMDEs are primarily to the downside. All regions are vulnerable to continued outbreaks of COVID-19 and the spread of new variants of the virus, including the recently discovered and highly transmissible Omicron variant, which as contributed to a spike in new cases in ECA, LAC, and SSA. In the regions where vaccination rates are the lowest—especially SSA—pronounced delivery delays stand to prolong the pandemic (figure B.1.1.2.A). All regions except EAP still have large gaps between the number of vaccines they have secured and the number that have been delivered—and in EAP, the gap is much larger in most countries other than China. Although

economic disruptions related to COVID-19 appear to have become less severe during successive waves of cases as businesses and consumers have adapted, restrictions to slow the spread and preserve health care capacity may need to be implemented during resurgences in new cases.

Risks related to financial stress have increased in most EMDE regions as rising inflation, driven by demand and supply factors, has triggered domestic monetary policy tightening in an environment of elevated debt. A sudden deterioration in investor sentiment, or faster-than-expected reversal of accommodative policy in advanced economies, could drive up debt refinancing and servicing costs to unsustainable levels in some countries and trigger capital outflows. The accumulation of debt by firms and households and of nonperforming loans by banks have risen to record levels in EAP, for example. In ECA, LAC, SAR, and SSA, the largest debt-related risks lie in the public sector, and in some cases the realization of contingent liabilities from fiscal

BOX 1.1 Regional perspectives: Outlook and risks (continued)**FIGURE B1.1.2 Regional risks**

Downside risks to regional outlooks emanate from a range of sources, including sluggish progress on COVID-19 vaccination in several regions and financial stress, the latter of which has become more binding in an environment of elevated debt. Lower-than-expected commodity prices are a particular risk for Europe and Central Asia, Latin America and the Caribbean, the Middle East and North Africa, and Sub-Saharan Africa.



Sources: International Monetary Fund; Multilateral Leaders Task Force on COVID-19; Our World in Data (database); UNICEF COVID-19 Vaccine Market Dashboard (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.

A. A vaccine course is defined as full vaccination for one person. Country sample includes 19 EAP, 22 ECA, 30 LAC, 18 MNA, 7 SAR, and 47 SSA economies. Last observation is January 2, 2022.

B. Bars show simple averages among countries in each region. Sample includes 22 EAP, 24 ECA, 31 LAC, 15 MNA, 7 SAR, and 47 SSA economies.

support provided during the pandemic (figure B1.1.2.B).

The outlook for several regions (ECA, LAC, MENA, SSA) is subject to downside risks to commodity prices stemming from a possible slower-than-expected recovery in global output, including in countries that contribute substantially to commodity demand, such as China (figure B1.1.2.C). Worse-than-expected global activity is a downside risk for highly export-reliant regions (EAP, ECA), and could be exacerbated by further prolonged global value chain disruptions.

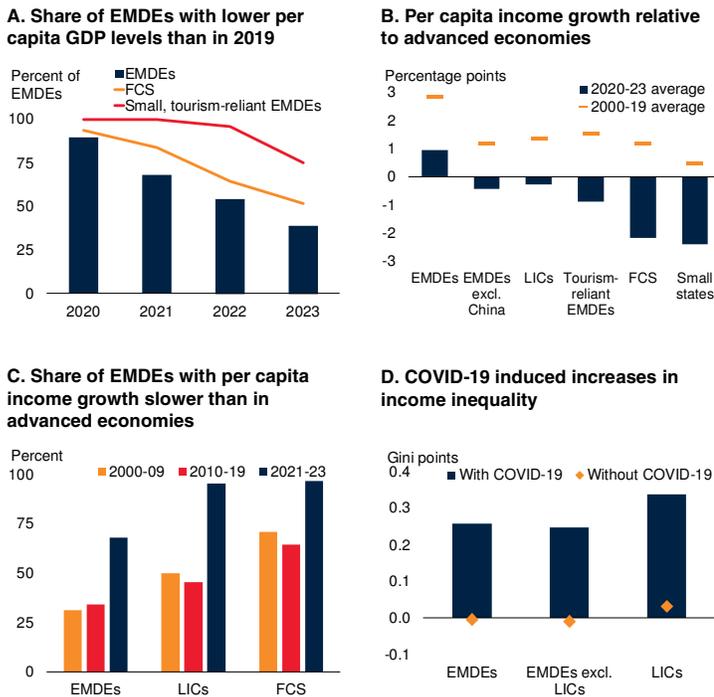
Geopolitical tensions and violence could hinder growth by dampening consumer and business sentiment and deterring investment. Deteriorating security conditions in Afghanistan, for instance, could generate instability in nearby countries, while conflict and violence in several countries in SSA (for example, Ethiopia, Mali, Nigeria, and Sudan) could escalate. Low levels of trust in the government and frustration with economic and social conditions in LAC could trigger social unrest and

hinder regional growth through similar channels. In SAR and SSA, the effects of food insecurity on the ability of people to work at full capacity are a downside risk to growth in the near term, and an acute challenge for households.

Disruptions and damages resulting from natural disasters and weather-related events associated with climate change are an important short- and medium-term downside risk to growth for most EMDE regions, and a severe risk for the livelihoods of populations affected by these events. For instance, island countries, concentrated in EAP and LAC, face increasingly extreme storms, coastal flooding and erosion, and rising sea levels, and can experience dramatic losses as proportion of their GDP from a single event. The incidence of cyclones, floods, and droughts has risen in SAR, and half of the population lives in areas that will become climate hot spots. MENA faces more severe heatwaves and floods, with particularly adverse effects on agriculture-producing economies.

FIGURE 1.10 Per capita income, poverty, and inequality

Per capita income in about 40 percent of emerging market and developing economies (EMDEs) is not expected to return to its 2019 level over the next two years—most notably in small, tourism-reliant economies. Gaps in per capita income relative to advanced economies are expected to widen in many EMDEs, especially in those facing fragile and conflict-affected situations, reversing progress made in previous years. The pandemic is estimated to have worsened inequality trends in all EMDE regions.



Sources: Narayan et al. (forthcoming); World Bank.

Note: EMDEs = emerging market and developing economies; FCS = fragile and conflict-affected situations; LICs = low-income countries; Tourism-reliant EMDEs are EMDEs with average 2015-19 inbound tourism expenditures as a share of GDP in the fourth quartile. Small states are EMDEs with a population of 1.5 million or less.

A.-C. Sample includes 144 EMDEs, 22 LICs, 31 FCS, 37 tourism-reliant EMDEs, and 24 small, tourism-reliant EMDEs.

B. Aggregates are calculated using real U.S. dollar GDP weights at average 2010-19 prices and market exchange rates. Per capita GDP levels calculated using the total GDP for each subgroup divided by its total population. The small states sample includes 34 EMDEs; the aggregate excludes commodity-reliant Guyana, which is experiencing a growth boom due to rapid offshore oil industry development.

B.C. Relative per capita income growth is computed as difference of the period average annual per capita GDP growth between EMDE groups and advanced economies. Data for 2022-23 are forecasts.

D. The simulations show the increase in the average within-country income inequality (as measured by the Gini index) from 2019 to 2020. The "Without COVID-2019" counterfactual Gini index for 2020 is calculated using the pre-pandemic sectoral output growth forecast, as described in chapter 4. The exercise is conducted for 34 EMDEs including 10 LICs. The simulations are based on country-specific sectoral growth projections and harmonized high-frequency phone survey data as of July 2021.

is expected to strengthen on widening access to vaccinations and a gradual recovery of tourism. The outlook assumes improvements in investor sentiment, with political uncertainty remaining in check. Elevated commodity prices will continue to support extractive activity in commodity exporters (Guinea, Sudan). The start of production at

completed large extractive projects is expected to boost output in some LICs by the end of the forecast horizon (Niger, Mozambique), though growth may be subject to volatility related to commodity discovery and production (World Bank 2016). The outlook for fragile and conflict-affected LICs is weaker than for other LICs, with heightened uncertainty, weak investment climates, setbacks with vaccinations, and elevated public debt expected to constrain growth (Chad, South Sudan).

Per capita income growth, poverty, and inequality

EMDE per capita income growth is expected to weaken from an estimated 5.1 percent in 2021 to 3.4 percent on average in 2022-23. Excluding China, per capita income growth is set to slow from 3.8 percent in 2021 to 2.5 percent in 2023. The deceleration partly reflects slow labor market recoveries, reduced policy support, and elevated inflation, including of food items, which is expected to erode real incomes. Even by 2023, output per capita is envisioned to be below its 2019 levels in about 40 percent of EMDEs (figure 1.10.A). In particular, about half of fragile and conflict-affected EMDEs will not regain their pre-pandemic level of per capita income by the end of the forecast horizon. The pandemic has also had a particularly pronounced impact on per capita income in small-island developing states reliant on tourism and, to a lesser extent, some oil-exporting EMDEs facing subdued prospects for extractive investment.

More broadly, the pandemic has unwound decades of progress in narrowing the gap between EMDE per capita incomes and those of advanced economies. In nearly 70 percent of EMDEs, average per capita income growth over 2021-23 will lag the advanced-economy pace, with substantial ground lost in LICs, especially those in fragile and conflict-affected situations (figures 1.10.B and 1.10.C). This uneven recovery in per capita incomes could return between-country income inequality to the levels of the early 2010s.

The pandemic could also contribute to a modest rise in within-country inequality in EMDEs (figure 1.10.D; chapter 4). Inequality could be

further exacerbated by rising food prices, which hit poorer households particularly hard given the large share of food in their consumption baskets (World Bank 2021a). The challenge of sustaining progress in inclusive development has been heightened by the protracted effects of the pandemic on the incomes, employment, and human capital accumulation of vulnerable populations, including low-income households, low-skilled and informal workers, and women.

Global outlook and risks

The pace of global economic recovery is expected to slow in the near term as recurring pandemic waves disrupt domestic activity, supply bottlenecks continue, and policy support is gradually withdrawn. At the same time, the recent emergence of the Omicron variant underscores how the further spread of COVID-19 and continued uneven access to vaccines could contribute to more persistence in the economic damage from the pandemic. The recovery is also at risk from more persistent supply disruptions, mounting inflationary pressures, financial stresses, climate-related disasters, and weaker-than-anticipated long-term growth drivers.

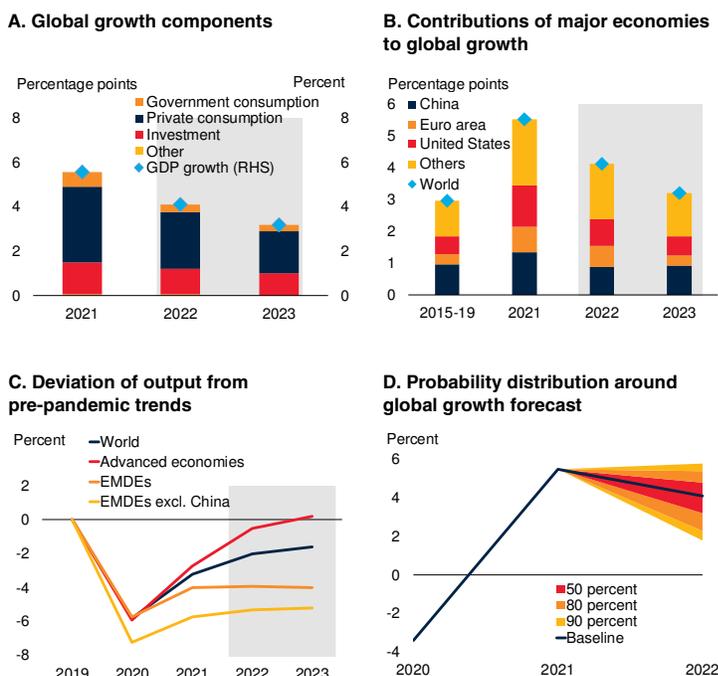
Global outlook

The pace of global recovery has diminished from its strong pace in the second half of 2020. Recurring surges in the COVID-19 pandemic have sapped consumer demand, while continued supply bottlenecks and a tightening of EMDE financing conditions have also weighed on global activity. Growth in major economies, including the United States and China, has slowed, contributing to the headwinds facing many EMDEs. Global inflationary pressures have continued to build, in part reflecting rapid recoveries of demand, supply bottlenecks, and earlier increases in food and energy prices.

After surging to an estimated 5.5 percent in 2021, global growth is expected to slow markedly, to 4.1 percent in 2022 and 3.2 percent in 2023, as the initial rebound in private consumption and investment fades and macroeconomic support is withdrawn (figure 1.11.A). These factors are expected to be only partly mitigated by the eventual removal of pandemic control measures,

FIGURE 1.11 Global outlook

Global growth is set to moderate as the initial rebound in consumption and investment fades and macroeconomic support is withdrawn. Much of the global slowdown over the forecast horizon is accounted for by major economies. The cyclical recovery in advanced economies is envisioned to outpace that in emerging market and developing economies (EMDEs). The global outlook is clouded by various risks, which are tilted to the downside.



Sources: Bloomberg; Ohnsorge, Stocker, and Some (2016); World Bank.
 Note: EMDEs = emerging market and developing economies. Shaded areas indicate forecasts.
 A. Figure shows the contribution of government consumption, private consumption, and investments to global growth using World Bank data and forecasts. "Other" category includes net exports, inventory accumulation, and statistical discrepancies. The sample includes 138 economies.
 B. Figure shows the contribution to global growth forecasts over 2021-23, while the first bar shows the average contribution to growth in the 2015-19 period.
 C. Figure shows percent deviation between the levels of the January 2020 and January 2022 baseline World Bank projections for 2020 to 2022. For 2023, the January 2020 baseline is extended using projected growth for 2022. Aggregate growth rates are calculated using real U.S. dollar GDP weights at average 2010-19 prices and market exchange rates. Data for 2021 are estimates.
 D. Probabilities for the forecast distribution of global growth are generated using time-varying estimates of the standard deviation and skewness extracted from the forecast distribution of oil price futures, S&P 500 equity price futures, and term spread forecasts, as described in Ohnsorge, Stocker, and Some (2016). Values for 2022 and 2023 are based on 12-month-ahead and 24-month-ahead forecast distributions, respectively. Last observation for S&P 500 and oil price futures is December 20, 2021, whereas term spread forecasts are from December 2021.

the drawdown of excess private savings, and rising real wages amid a steady tightening of labor markets. Investment, particularly in advanced economies, is projected to contribute appreciably to global growth throughout the forecast horizon. As demand softens, supply bottlenecks are also expected to dissipate. Much of the expected slowdown in global growth reflects a moderation in the contribution from major economies (figure 1.11.B). The projected rate of global growth will be insufficient for output to regain its pre-

BOX 1.2 Recent developments and outlook for low-income countries

Growth in low-income countries (LICs) is projected to strengthen in 2022 and 2023, to 4.9 percent and 5.9 percent, respectively. However, income per capita in about 50 percent of LICs—including more than 60 percent of fragile and conflict-affected countries—is forecast to remain below pre-pandemic levels this year. The recovery is constrained by recurrent COVID-19 outbreaks, very low vaccination rates, rising poverty, and limited policy space. Deteriorating security situations and elevated policy uncertainty have curtailed growth in some countries as well. Risks to the outlook are tilted to the downside. Many LICs remain reliant on extractive industries and are vulnerable to the volatility in commodity prices.

Introduction

Last year, the recovery in low-income countries (LICs) was supported by a substantial improvement in global trade and commodity prices. It was, however, slower than in advanced economies and other emerging markets and developing economies (EMDEs) reflecting very low vaccination rates, limited availability of policy support, and deteriorating security situation in some countries.

This box considers recent developments in, and the outlook for, LICs by examining the following questions.

- What are recent pandemic and economic developments in LICs?
- What are the outlook and risks in LICs?

The outlook in LICs is highly uncertain with substantial downside risks. A stronger rebound requires overcoming hurdles to vaccine distribution, rebuilding policy space, and reversing sharp increases in poverty and food insecurity. In many LICs, however, per capita income is envisioned to remain below pre-pandemic levels even in 2023.

Recent developments

A rebound in commodity prices and an easing of national mobility restrictions supported an estimated 3.3 percent growth in LICs last year—0.2 percentage points faster than projections in June. This is still merely a little over half the 2000-19 average growth rate, as the recovery continues to be restrained by very low vaccination rates, pandemic-induced increases in poverty, rising food insecurity, and elevated violence in some countries. In per capita terms, incomes edged up by only 0.5 percent in 2021, remaining 1 percent below pre-pandemic levels (figure B1.2.1.A).

Output in metals exporters increased by an estimated 3.8 percent as strong gains in the prices of several metals supported activity in many economies (Democratic Republic of Congo, Guinea, Mozambique, Niger). Output in exporters of agricultural commodities excluding Ethiopia and Sudan—which account for almost one-half of the group—expanded by an estimated 4.3 percent, as countries benefited from rising agricultural commodity prices (Burkina Faso, Madagascar), as well as favorable weather (Burundi, Malawi, Rwanda). In oil-exporting LICs, output only inched up by an estimated 0.3 percent amid declining oil production from aging oil fields (South Sudan) and elevated policy uncertainty (Chad).

Ethiopia, the largest LIC, saw a sharp deceleration of growth to an estimated 2.4 percent in 2020/21 fiscal year, or nearly two-thirds below the pre-pandemic average, with COVID-19 uncertainty compounded by worsening security situation in the Tigray region. Output in Sudan grew at just 0.1 percent last year with COVID-19-related uncertainties, soaring inflation, and a surge in policy uncertainty dampening the recovery.

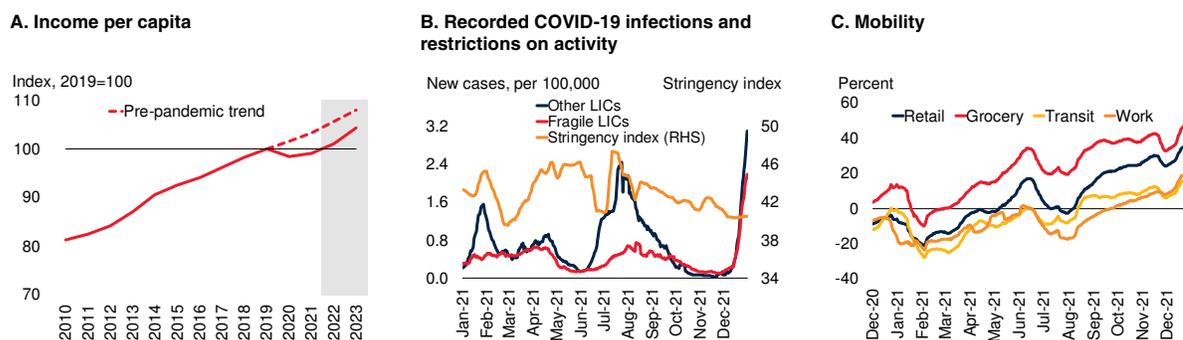
Growth in fragile and conflict-affected LICs, excluding Ethiopia, stood at an estimated 2.8 percent in 2021. In per capita terms, income in this group of countries is estimated to have declined by a 0.1 percent last year and remained almost 3.3 percent below its 2019 level. Deteriorating security situations and increases in political instability in some countries (Central African Republic, Chad, Sudan) and armed conflicts in the Sahel's tri-border area (Burkina Faso, Mali, Niger) weighed on the economic recovery.

In many LICs where vulnerable groups—such as women, youth, and workers with low levels of education—are relatively large, employment and income losses were only partly reversed following the relaxation of stringency measures (Agrawal et al. 2021; Kugler et al. 2021). Some countries facing recurring COVID-19 flare-ups reinstated lockdown measures (Mali, Madagascar, Sudan, Uganda) which caused

Note: This section was prepared by Sergiy Kasyanenko.

BOX 1.2 Recent developments and outlook for low-income countries (continued)**FIGURE B1.2.1 LICs: Recent developments**

A post-pandemic rebound in commodity prices helped support a recovery in low-income countries (LICs) in 2021; income per capita, however, remained below pre-pandemic levels. Continued COVID-19 flare-up led to re-tightening of lockdown measures in some LICs, weighing on the recovery and mobility.



Source: Blavatnik School of Government, University of Oxford; Google COVID-19 Community Mobility Reports; Johns Hopkins University (database); World Bank. Note: EMDEs = emerging market and developing economies; Fragile LICs = fragile and conflict-affected LICs; LICs = low-income countries.

A. Pre-pandemic trends are based on output growth forecasts from the January 2020 *Global Economic Prospects* edition. For 2023, the January 2020 baseline is extended using projected growth for 2022. Aggregate growth rates calculated using GDP weights at average 2010-19 prices and market exchange rates. Shaded area indicates forecasts.

B. C. LICs aggregate stringency and mobility indexes are calculated using constant GDP weights at average 2010-19 prices and market exchange rates.

B. "Stringency Index" is the COVID-19 Government Response Stringency Index — a simple average of nine response indicators including school closures, workplace closures, and travel bans, rescaled to values ranging from 0 to 100 (100 = strictest). New case count shows the 7-day moving average of daily new infections. "Other LICs" excludes Uganda. Last observation is December 31, 2021.

C. The data shows mobility changes relative to a baseline day represents of the week - the median value from the 5-week period January 3 to February 6, 2020. Three-week moving averages. Last observation is December 31, 2021.

intermittent interruptions of economic activity earlier in 2021 and dented the recovery in mobility (figures B1.2.1.B and B1.2.1.C).

Consumer price inflation in LICs exceeded 5.5 percent last year, reflecting rising food and energy prices, while substantial currency weakness in some led to significant additional price pressures (Ethiopia, Sudan). Several LICs have begun to adopt less-accommodative monetary policy stances to reduce inflationary pressures.

Government debt in the median LIC surpassed 58 percent of GDP in 2021—roughly double its level a decade ago—constraining fiscal space and leading to an increase in debt service costs, particularly in fragile and conflict-affected countries. By late 2021, over half of all LICs were either in, or at high risk of, debt distress.

Outlook

Growth in LICs is forecast to strengthen to 4.9 percent in 2022 and 5.9 percent in 2023 (figure B1.2.2.A). This assumes a more widespread rollout of vaccinations—albeit still well below that of other EMDEs—a

continued global recovery, and a modest acceleration in investment growth. Further relaxation of COVID-related restrictions is also expected to support stronger activity in services sectors, including tourism.

The forecast for LICs in 2022-23 is broadly unchanged from previous projections, as still limited progress with COVID-19 vaccinations along with increased political instability and violence in some countries, impede a faster rebound in activity.

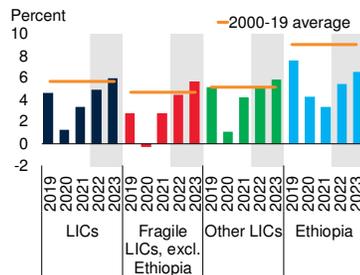
Non-energy commodity prices are forecast to edge lower but will still support growth in industrial commodity-exporting LICs (Central African Republic, Guinea, Democratic Republic of Congo). Stronger exports and fiscal revenues are expected to help rebuild foreign exchange reserves and support a moderate recovery in public spending. Nevertheless, policy uncertainty, social unrest, and insecurity are likely to hold back or delay investments in extractive sectors, as well as in agriculture, in some LICs (Chad, Ethiopia, Guinea, Mozambique, Niger, Sudan).

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

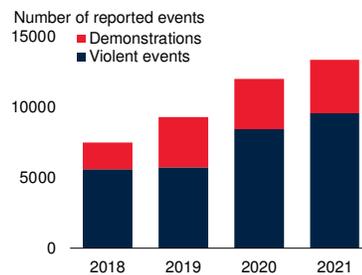
FIGURE B1.2.2 LICs: Outlook and risks

Growth in low-income countries (LICs) is projected to strengthen further in 2022-23, but by less in fragile and conflict-affected countries than in other LICs. Pandemic-related income losses will be only partly reversed, leaving many millions in acute food insecurity and extreme poverty. There is a risk that the pandemic may become endemic in LICs without a significant rise in vaccination rates. Vulnerabilities to climate change and debt distress remain elevated, particularly in fragile LICs.

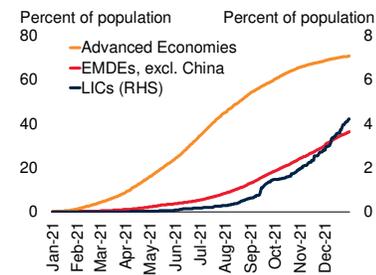
A. GDP growth



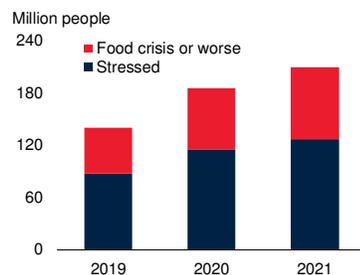
B. Violence and conflict



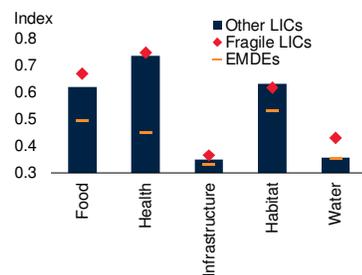
C. Vaccine rollout



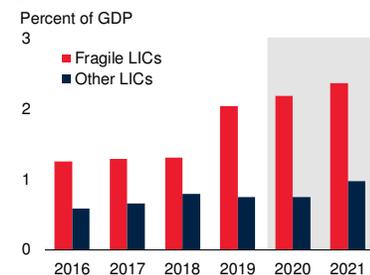
D. Food security



E. Vulnerabilities to adverse climate events



F. Debt service on public and publicly guaranteed external debt



Sources: Armed Conflict Location & Event Data Project (ACLED), <https://www.acleddata.com>; International Monetary Fund; Our World in Data (database); UNWFP (2021); ND-GAIN (database); World Bank.

Note: Shaded area indicates forecasts. Fragile LICs = fragile and conflict-affected LICs; LICs = low-income countries.

A. Aggregate GDP growth rates calculated using constant GDP weights at average 2010-19 prices and market exchange rates. Sample includes 22 LICs, including 13 Fragile LICs.

B. Violent events include battles, explosions, and violence against civilians; demonstrations include riots and protests. Last observation is December 2021.

C. Share of population who received all doses prescribed by the vaccination protocol. Last observation is December 31, 2021.

D. Number of people facing food security stress, or food security crisis (or worse). Based on Integrated Food Security Phase Classification with "stressed" referring to minimally adequate food consumption. Sample includes 19 LICs. 2021 are estimates by the United Nations World Food Programme.

E. A higher value indicates greater vulnerability to climate disruptions. Sectoral exposures are based on projected change to cereal yields, annual runoff and groundwater recharge, deaths from "climate change-induced diseases," flood hazards, sea level rise, and hydropower generation.

F. Aggregates calculated as total debt service divided by total GDP for each group. Sample includes 16 LICs, 9 of which are fragile LICs. Debt service is the sum of principal repayments and interest; 2020-2021 are projected debt service payments from the Debt Service Suspension Initiative (DSSI) extension of the World Bank's International Debt Statistics database.

In fragile and conflict-affected LICs, excluding Ethiopia, the recovery is also expected to firm, with growth projected at 4.5 percent in 2022 and 5.6 percent in 2023. The threat of COVID-19 outbreaks and their adverse effects continues to be amplified by governments' weak capacity to address pandemic-related challenges amid elevated levels of violence and insecurity (figure B1.2.2.B). Growth in some commodity producers is projected to accelerate above

its long-term trend, driven by extractive investment with new production from large projects expected to be brought on stream over the forecast horizon (Democratic Republic of Congo, Mozambique, Niger).

Per capita growth in LICs is forecast to pick up to 2.1 percent in 2022 and 3.1 percent in 2023. Nevertheless, per capita incomes are projected to remain below their pre-pandemic levels this year in over half of LICs and

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)

Percentage point differences from June 2021 projections

| | 2019 | 2020 | 2021e | 2022f | 2023f | 2021e | 2022f | 2023f |
|--|------------|------------|------------|------------|------------|------------|------------|------------|
| Low-income Country, GDP^b | 4.6 | 1.3 | 3.3 | 4.9 | 5.9 | 0.2 | 0.0 | 0.0 |
| Afghanistan ^c | 3.9 | -1.9 | .. | .. | .. | .. | .. | .. |
| Burkina Faso | 5.7 | 1.9 | 6.7 | 5.6 | 5.3 | 3.6 | 0.6 | -0.4 |
| Burundi | 1.8 | 0.3 | 2.0 | 2.5 | 3.0 | 0.0 | 0.0 | 0.0 |
| Central African Republic | 3.1 | 0.8 | -0.8 | 3.5 | 4.5 | -1.5 | 0.7 | 0.1 |
| Chad | 3.2 | -0.9 | 0.9 | 1.8 | 2.9 | -0.1 | -0.7 | 0.0 |
| Congo, Dem. Rep. | 4.4 | 1.7 | 3.6 | 4.8 | 5.1 | 1.1 | 1.8 | 1.0 |
| Eritrea | 3.8 | -0.6 | 2.9 | 4.8 | 3.8 | 0.9 | -0.1 | 0.0 |
| Ethiopia ^d | 9.0 | 6.1 | 2.4 | 4.3 | 6.5 | 0.1 | -1.7 | -1.0 |
| Gambia, The | 6.2 | -0.2 | 4.0 | 6.0 | 6.5 | 0.5 | 0.5 | -0.5 |
| Guinea | 5.6 | 7.1 | 5.2 | 6.1 | 5.9 | -0.3 | 0.9 | 0.7 |
| Guinea-Bissau | 4.5 | -1.4 | 3.3 | 4.0 | 5.0 | 0.3 | 0.0 | 0.0 |
| Liberia | -2.5 | -3.0 | 3.6 | 4.7 | 5.0 | 0.3 | 0.5 | 0.3 |
| Madagascar | 4.4 | -6.2 | 1.8 | 5.4 | 5.1 | -0.2 | -0.4 | -0.3 |
| Malawi | 5.4 | 0.8 | 2.4 | 3.0 | 4.4 | -0.4 | 0.0 | -0.1 |
| Mali | 4.8 | -1.6 | 4.0 | 5.2 | 5.0 | 1.5 | 0.0 | 0.0 |
| Mozambique | 2.3 | -1.2 | 2.3 | 5.1 | 9.6 | 0.6 | 1.0 | 3.3 |
| Niger | 5.9 | 3.6 | 5.5 | 6.2 | 9.4 | 0.8 | -2.7 | -2.7 |
| Rwanda | 9.5 | -3.4 | 10.2 | 7.1 | 7.8 | 5.3 | 0.7 | 0.3 |
| Sierra Leone | 5.3 | -2.0 | 4.2 | 6.0 | 4.3 | 1.2 | 2.3 | 0.3 |
| South Sudan ^d | 3.2 | 9.5 | -5.4 | 1.2 | 3.5 | -2.0 | -0.3 | 0.5 |
| Sudan | -2.2 | -3.6 | 0.1 | 3.5 | 5.0 | -0.3 | 2.4 | 2.4 |
| Togo ^e | 5.5 | 1.8 | 5.1 | 5.6 | 6.2 | 1.7 | 1.0 | 1.2 |
| Uganda ^d | 6.4 | 3.0 | 3.4 | 3.7 | 5.5 | 0.1 | -1.0 | -0.9 |

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, Somalia, the Syrian Arab Republic, and the Republic of Yemen 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. Forecast for Afghanistan beyond 2020 are excluded because of a high degree of uncertainty.

d. GDP growth rates are on a fiscal year basis. For example, the column labeled 2019 refers to FY2018/19.

e. For Togo, growth figures in 2019 are based on pre-2020 rebased GDP estimates.

62 percent of fragile and conflict-affected LICs, while in 2023 this is expected still to be the case in over a quarter of LICs leading to lasting increases in poverty and inequality (chapter 4; Aoyagi 2021).

Risks

Risks to the outlook remain tilted to the downside. Many LICs may continue to struggle to distribute enough vaccine doses. The gap between vaccination rates in LICs with those in other EMDEs and advanced economies persists as challenges with vaccine delivery

and distribution are also amplified by vaccine hesitancy in some countries (Kanyanda et al. 2021; figure B1.2.2.C). Ultimately, there is substantial risk that the pandemic may become an endemic public health problem in LICs leading to recurrent and extended interruptions to activity.

There is a risk that persistent poverty and rising food insecurity can delay a sustained recovery in household consumption. Acute food insecurity has been severely exacerbated by the pandemic and, more recently, by rapidly increasing food prices (World Bank 2021d). In

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

LICs, the number of people in stressed or critical food security situations surged in 2020 and continued to grow in 2021, surpassing 200 million people or about 40 percent of the total LIC population.

Partly because of increasing food prices, nearly 30 million additional people in LICs have experienced food shortage since the start of the pandemic (UNWFP 2021; figure B1.2.2.D). Food security could deteriorate, especially in fragile and conflict-affected LICs, as a result of currency depreciations, prolonged supply disruptions, overlaps of mobility restrictions with crucial planting periods, conflict-induced population displacements and trade disruptions.

Frequent adverse weather events and growing vulnerabilities to climate change could severely disrupt agriculture in many countries (Burkina Faso, Burundi, Eritrea, Madagascar), where farming remains a vital source of income for many people (figure B1.2.2.E; Zeufack et al. 2021).

The projected moderation in global activity could lead to a deeper-than-expected decline in commodity prices affecting LICs reliant on extractive sectors, intensifying fiscal revenue shortfalls and debt distress, especially in LICs that are already under pressure to undergo fiscal consolidations or debt restructuring (Ethiopia, The Gambia, Guinea-Bissau, Sudan), and those that increasingly rely on non-concessional borrowing (figure B1.2.2.F).

Some commodity-exporting LICs may struggle to increase production if elevated policy uncertainty or growing insecurity deters investment or disrupts unfinished investment projects (Mozambique, Guinea). Social unrest could also result in recurrent blockades and closures of key transport infrastructure, for example ports and roads (Central African Republic, Sudan).

Many LICs lack access to international financial markets despite broadly favorable global financing conditions. Lingering pandemic effects on growth and fiscal balances, as well as political risks have kept borrowing costs elevated (Chad, Ethiopia, Mozambique). More countries could require substantial future assistance if debt sustainability and access to external funding suddenly deteriorates. Tighter funding constraints could significantly undercut efforts to accelerate green, resilient, and inclusive development in LICs.

There is also a risk that past challenges amplified by the pandemic could lead to lower long-term growth. A prolonged pandemic could derail efforts to improve investment climates and may slow the implementation of structural and fiscal reforms. Sustained disruptions to the delivery of adequate healthcare and access to education, poverty and insecurity could result in lasting human capital losses.

pandemic trend over the forecast horizon because of the relatively subdued recovery in EMDEs (figure 1.11.C).

Global consumer price inflation is envisioned to peak in the first half of 2022 and then decline gradually through 2023, helped by well-anchored expectations in most economies. Price pressures from shortages of key inputs and the recent runup in commodity prices are expected to ease as global growth moderates and commodity supplies expand. Most commodity prices are expected to soften slightly over the forecast horizon, allowing the pass-through to domestic prices from recent increases to abate. As a result of cooling demand and moderating inflation, wage pressures are

expected to ease in advanced economies while remaining contained in most EMDEs.

The global outlook for 2022 is somewhat weaker than envisioned in previous forecasts. Although the pandemic has worsened somewhat relative to previous expectations, the economic impact of renewed outbreaks has been modest amid widespread vaccination in major economies. By contrast, widespread supply bottlenecks have proven more pernicious than expected, contributing to slowing momentum in many economies, including the United States and China. The current projections also feature some shifts in the regional distribution of growth. Among advanced economies, the euro area is

expected to make a stronger contribution to growth than in 2021. Among EMDE regions, growth is shifting from ECA and LAC which experienced relatively strong recoveries in 2021, toward MENA and SAR, where the recovery is expected to pick up steam in 2022.

The near-term outlook assumes that the world experiences continued COVID-19 flare-ups but with steadily diminishing economic and health impacts overall. However, those flare-ups are more likely to have more serious effects in countries where substantial shares of the population remain unvaccinated. Monetary policy is expected to gradually tighten in advanced economies, as long-term asset purchases are unwound and policy rates are raised in several of them. In EMDEs, monetary policy support is assumed to be withdrawn at a faster pace. These developments are expected to result in an orderly tightening of financing conditions in EMDEs over the forecast horizon.

Risks to the outlook

Following the substantial growth rebound of 2021, the global outlook continued to be highly uncertain with risks to growth tilted to the downside (figure 1.11.D). Omicron-driven pandemic resurgence could overwhelm health systems and trigger the simultaneous imposition of additional pandemic control measures across the globe. The associated dislocations could in turn aggravate supply bottlenecks, raise actual and expected inflation, and force an earlier and sharper tightening of monetary policy in many economies. These same headwinds to global growth could also trigger and be compounded by financial stress, given public and private sector balance sheet vulnerabilities. The recovery in many EMDEs could also be derailed by severe natural disasters and climate-related events that could intensify humanitarian crises in some countries. As EMDEs have limited policy space to provide additional support if needed, these downside risks heighten the possibility of a hard landing—a much sharper slowdown in growth than currently envisioned over the forecast horizon.

In the longer run, the global economy faces the risk of a more pronounced softening of the

fundamental drivers of growth. This risk is especially acute in EMDEs, as their subdued economic recovery, particularly the weakness of fixed investment and the dislocation of much employment and education, may well lead to more severe scarring of potential output. The pandemic's adverse impact on human capital accumulation could be greater than expected if skills and education were to atrophy as a result of prolonged unemployment and extended school closures. Moreover, subdued aggregate demand and tighter financial conditions could weigh heavily on business confidence, further sapping investment and curtailing productivity growth by reducing the willingness to adopt new technologies.

Conversely, there is also the possibility of stronger growth outcomes. In particular, additional fiscal support in advanced economies and the continued rapid adoption of digital technologies could help sustain a more robust global economic recovery than projected.

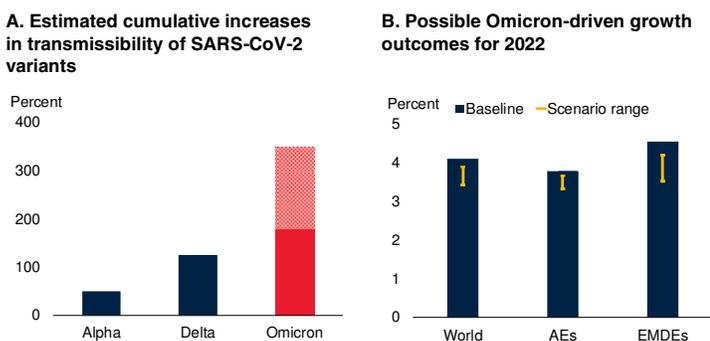
Simultaneous Omicron-driven economic disruptions

The world is in the midst of the largest wave of COVID-19 to date, with the new daily case count surging into the millions as the highly-transmissible Omicron variant rapidly spreads. As of late December, Omicron has been detected in more than 80 countries, and case counts are estimated to be doubling every 2-3 days in many of them. The emergence of Omicron adds to previous surges related to the Delta variant, particularly in Europe, which have led to increases in hospitalizations, and, in some countries, the reintroduction of pandemic control measures.

Preliminary evidence suggests that the Omicron variant may be much more transmissible than Delta, as it seems to be better able to evade protection from vaccinations or prior infections (figure 1.12.A; Pulliam et al. 2021). This points to a much larger threat to health systems, given that Delta has been found to be 40 to 60 percent more transmissible than the earlier Alpha variant, which was itself about 50 percent more transmissible than the original virus (Liu and Rocklöv 2021).

FIGURE 1.12 Downside risks: Simultaneous Omicron-driven economic disruptions

The Omicron variant appears to be much more transmissible than the Delta variant, which was itself more transmissible than previous strains. The slowdown in global growth from 2021 to 2022 could be sharper if the fast spread of Omicron overwhelms health systems and prompts a reimposition of strict pandemic control measures in major economies.



Sources: Liu and Rocklöv (2021); Mueller (2021); Oxford Economics; Pulliam et al. (2021); UK Health Security Agency (2021); World Bank.

Note: AEs = advanced economies; EMDEs = emerging market and developing economies.

A. Figure shows cumulative increase in transmissibility over the original SARS-CoV-2 strain. The shaded area of the red bar is a range of estimates.

B. Yellow lines denote the range of the downside scenario in which economies (18 advanced economies and 22 EMDEs) face a range of unanticipated pandemic shocks, scaled from about one-tenth to about two-tenths of the size of those from the first half of 2020.

It is possible that Omicron may cause a milder form of COVID-19, especially in vaccinated individuals, as fatalities have not yet surged as they did in previous waves. Nonetheless, even if a lower share of the infected population were to be hospitalized relative to previous surges, the sheer volume of new Omicron cases could overwhelm exhausted health systems and force governments to extend or impose additional control measures (Barnard et al. 2021; Ghebreyesus 2021).

A reimposition of lockdown measures would weigh heavily on domestic economic activity as contact-intensive activities are sharply curtailed. While these restrictions could be short-lived, their simultaneous introduction in major economies would weigh significantly on global growth. Meanwhile, an Omicron surge could compound logistical bottlenecks, exacerbating ongoing supply chain disruptions and contributing to global inflationary pressures. The effects of severe Omicron outbreaks would likely be felt most acutely by those countries that can least afford a further slowing of growth—including EMDEs with limited policy space or a notable reliance on tourism. In general, many EMDEs could face

heightened risks due to weaker growth, depleted fiscal buffers, and a downturn in global risk sentiment.

Model-based scenario analysis suggests that simultaneous Omicron-driven economic disruptions could reduce global growth further this year—anywhere from 0.2 to 0.7 percentage point, depending on the underlying assumptions (figure 1.12.B).¹ In EMDEs, growth could be further reduced, from 0.4 to 1 percentage point, in part reflecting more limited policy space to cushion Omicron's impact. In these scenarios, the vast majority of the shock would be felt in the first quarter of 2022, followed by a notable bounce back in the second quarter.

Over the medium term, the threat of new more transmissible or virulent variants will persist as long as a substantial share of the global population remains unvaccinated. At the same time, the protection afforded by vaccination could continue to wane over time, especially in the face of new variants similar to Omicron (Khoury et al. 2021; Zhang et al. 2021). The need to periodically revaccinate populations would likely perpetuate global inequities in access to vaccines.

Worsening supply bottlenecks

The rapid recovery in global goods consumption since mid-2020 has put acute pressure on the global manufacturing sector. At the same time, COVID-19 outbreaks have disrupted production at many points along complex global value chains, creating significant obstacles to final goods production. COVID-19 outbreaks have also shut down some key port facilities and played havoc with air transportation, severely disrupting ocean shipping and air freight and compounding bottlenecks caused by pre-existing trucking shortages. In addition, commodity market disruptions—including widespread shortages of

¹ Model-based Omicron scenarios are constructed using the Oxford Economics Global Economic Model. The scenarios assume that advanced economies and EMDEs are faced with a range of unanticipated pandemic shocks to private consumption, scaled from a tenth to a fifth of the size of the pandemic shocks from the first half of 2020. The reduced magnitude of the shocks for the Omicron scenarios reflects the sharp observed decline in the growth impacts of subsequent waves of COVID-19 in most countries.

natural gas and coal—have throttled the production of electricity in several countries, curbing energy-intensive manufacturing activities. The resulting global supply bottlenecks have restricted global goods trade and industrial production (figure 1.13.A).

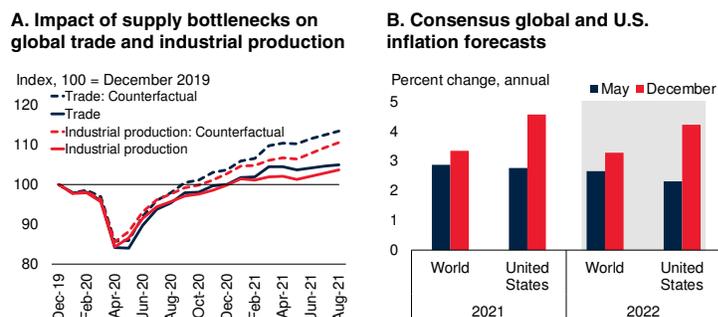
There is a risk that renewed COVID-19 surges, such as the latest Omicron-driven wave, could engender new trade disruptions and aggravate global supply shortages. If they persist over a prolonged period, shortages of key inputs, such as semiconductors and computer chips, could severely affect the production of downstream products, while disruptions in ports and limited shipping capacity could delay international transportation further. Such disruptions to global trade and production could both weigh on growth and increase inflationary pressures (Goel, Saunoris, and Goel 2021). They could also cause firms to re-arrange their supply and production networks, increasing the risks of inefficient on-shoring, reduced trade-driven productivity growth, and increased production costs (Perla, Tonetti, and Waugh 2021). Moreover, the resulting dislocation of labor could add to the sharp declines in employment caused by the pandemic, leading to labor market hysteresis and prolonged scarring of potential output (Ball and Onken 2021).

De-anchored inflation expectations

Global inflation has risen at a faster pace than anticipated in recent months, resulting in steady upward revisions to consensus inflation forecasts (figure 1.13.B). Further rises in commodity prices; continued strong demand for goods amid more persistent supply constraints; and, in some economies, sustained currency depreciation could compound inflationary pressures (Ha, Stocker, and Yilmazkuday 2020; Kose et al. 2019). In particular, large outbreaks of the Omicron variant could further disrupt global supply chains and transportation logistics, potentially contributing to global inflation pressures. A renewed surge in energy prices could also result in sharply higher food prices if it were to cause a sustained increase in the cost of agricultural inputs such as fertilizers. Meanwhile, more pronounced labor shortages,

FIGURE 1.13 Downside risks: Worsening supply bottlenecks and de-anchored inflation expectations

Supply bottlenecks could prove more persistent than expected, weighing on growth and contributing to global inflation. Global inflation has risen more than previously anticipated, resulting in steady upward revisions to Consensus inflation forecasts, especially for the United States. If sustained, inflationary pressures could de-anchor inflation expectations, potentially forcing a sharp tightening of monetary policy.



Sources: Consensus Economics; CPB Netherlands Bureau for Economic Policy Analysis; Haver Analytics; World Bank.

A. The effect of supply bottlenecks is derived from OLS regressions. Global industrial production (Global goods trade) is regressed on the manufacturing PMI new export orders, the manufacturing PMI suppliers' delivery times, and relevant lags. Dotted lines show counterfactual scenarios produced by assuming that the PMI suppliers' delivery times indicator (a proxy for supply bottlenecks) in the January 2020-August 2021 period remains at the average 2019 level. Estimations are performed over the 2000-19 period.

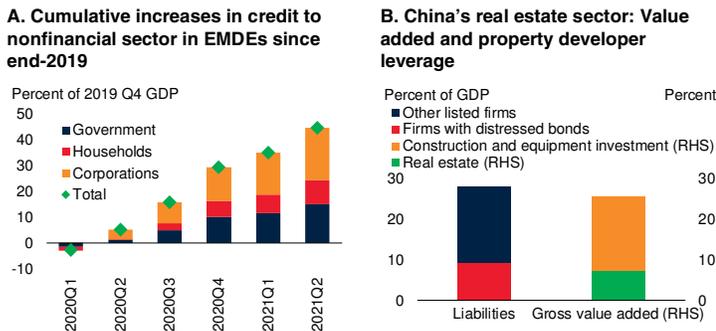
B. Figure shows *Consensus Economics* consumer price inflation. World includes 59 countries and is aggregated using 2020 GDP at market exchange rates. Shaded area indicates *Consensus Economics* forecasts.

particularly in sectors facing strong demand and tight supply, could further accentuate wage pressures which could, in turn, pass through to consumer price inflation. Advanced economies such as the United States, the United Kingdom, and Canada are particularly at risk, as they are experiencing significant inflationary pressures that could persist well into 2022. Among EMDEs, inflationary pressures have been rising in many economies, in particular in ECA, LAC, and SSA.

A prolonged period of upward surprises to inflation could cause consumers and firms to re-assess their inflation expectations. In EMDEs, a one percentage point surprise to headline annual inflation has been found to raise medium-term inflation expectations by 0.2 percentage point a year (Kose et al. 2019). Higher inflation, once embedded in inflation expectations, could weigh on consumer confidence and erode real earnings (Braumann 2004; Rudd 2021). If inflation expectations rise above central bank objectives, they could also lead to a potentially sharp

FIGURE 1.14 Downside risks: Financial stress

A further sharp increase in debt in emerging market and developing economies as a result of the pandemic has heightened the risks of financial stress, which could lead to capital flight, corporate defaults, and, ultimately, financial crises. Financial stress could also trigger a disorderly deleveraging of China's highly-leveraged property sector, potentially resulting in significant adverse domestic and global spillovers.



Sources: BIS (database); Haver Analytics; Rogoff and Yang (2021); Wind Information, Co.; World Bank.

Note: EMDEs = emerging market and developing economies.

A. Government refers to general government, households include nonprofit institutions serving households, and corporations cover nonfinancial corporations only. Credit to government is at nominal value, and credit to households and corporations at market value. Sample includes 16 EMDEs.

B. Left bar shows liabilities of real estate firms as a share of GDP. Firms with distressed bonds refer to those whose USD-denominated bond spreads exceed 20 percentage points. Right bar shows gross value added based on 2017 input-output tables. Gross value added of construction and equipment investment are estimates.

adjustment of monetary policy aimed at a re-anchoring of expectations, causing a sudden rise in borrowing costs, particularly for EMDEs (Arteta et al. 2015).

Financial stress

Given high and rising global debt, financial markets and institutions have become increasingly vulnerable to financial stress. The pandemic has exacerbated unprecedented debt booms in most EMDEs, which have lasted longer and featured greater fiscal deteriorations than previous episodes (Kose, Ohnsorge, and Sugawara 2021). From the onset of the pandemic to mid-2021, EMDE governments, households, and corporations cumulatively increased their borrowing by 45 percent of pre-pandemic GDP (figure 1.14.A).

Many unanticipated developments could precipitate financial stress. For instance, an inadequately forewarned acceleration in the tapering of long-term asset purchases by major central banks could unsettle financial markets and

abruptly raise longer-term interest rates. This tightening of financial conditions could make debt financing more difficult for many borrowers, including EMDE governments facing reduced fiscal space. Another possibility is a more protracted or severe pandemic: this could further damage business and consumer confidence, dampen corporate profits and strain the ability of many companies to stay solvent, resulting in bankruptcies that could spill over to bank balance sheets. In many EMDEs, weak government fiscal positions and high sovereign debt levels mean that there is now much more limited scope for an effective public sector response to private sector debt crises.

In China, financial stress could trigger a disorderly deleveraging of the property sector. Property developers such as China Evergrande have collectively accumulated financial liabilities approaching 30 percent of GDP (figure 1.14.B). Moreover, corporate bonds issued by property developers accounting for a third of the sector's liabilities have recently been trading at distressed prices. A turbulent deleveraging episode could cause a prolonged downturn in the real estate sector, with significant economy-wide spillovers through lower house prices, reduced household wealth, and plummeting local government revenues. The banking sector—local banks in particular—would be significantly impaired, raising borrowing costs for corporations and households.

Worsening financial stress would reverberate across EMDE markets, increasing the risk of sudden stops of capital inflows and currency crises, especially in countries dependent on short-term inflows to finance elevated current account deficits. These types of financial dislocations could cause major, persistent output losses if they were to evolve into full-fledged financial crises (Laeven and Valencia 2018; World Bank 2020b). EMDE output losses could be magnified if financial stress were to cause a sharp additional slowdown in China, as it could result in markedly lower demand for traded goods and commodities.

Climate-related disasters

Climate change is increasing the likelihood, severity, and costs of climate-related disasters such

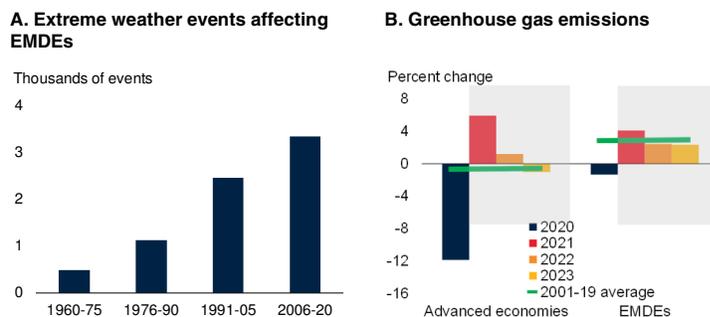
as floods, storms, heatwaves, and droughts. Losses due to these natural disasters are likely to be particularly pernicious for vulnerable groups in poorer countries with a more limited capacity to respond (Ohnsorge and Yu 2021; World Bank 2021e). Climate-related disasters could exacerbate debt burdens and erode fiscal space, rendering affected countries more vulnerable to sovereign debt crises. Moreover, damage to supply chains and lost jobs and incomes could exacerbate food insecurity (World Bank 2020b). In the longer run, more frequent climate-related shocks—in part exacerbated by the continued rise in greenhouse gas emissions—could potentially push millions of people into extreme poverty (figures 1.15.A and 1.15.B; Jafino et al. 2020). At the same time, global warming could threaten the existence of rainfed agricultural systems upon which large populations in Sub-Saharan Africa and other regions depend (Serdeczny et al. 2016).

Region-specific downside risks

Various countries and regions are susceptible to a host of particular downside risks to growth. EMDEs, especially poorer countries, are disproportionately vulnerable to these risks, as their ability to prevent, prepare for, and respond to related crises is limited. Although all EMDE regions are at risk of a rapid spread of the Omicron variant, economic activity in regions with weak or strained health systems or a heavy reliance on tourism could be especially affected. An escalation of armed conflict or geopolitical tensions could lead to a sharp deterioration in consumer and business sentiment, particularly in some regions (ECA, SAR, SSA). A geopolitically driven interruption to energy supplies could exacerbate existing energy price pressures and have a significant negative impact on economic activity. Increasing migration pressures could exacerbate political discord (ECA). Low levels of trust, political instability, and heightened frustration with government responses to the pandemic could trigger social unrest (ECA, LAC). Rising food insecurity is an acute challenge for many poor households (SAR, SSA). Cyber-attacks could become more frequent and disruptive in all countries, paralyzing vital national infrastructure.

FIGURE 1.15 Downside risks: Natural disasters and climate change

Increasingly frequent and costly extreme weather events have been due in part to global warming associated with increases in greenhouse gas emissions.



Sources: Climate Watch (database); EM-DAT, CRED/UCLouvain, <https://www.emdat.be>; Oxford Economics; World Bank.

Note: EMDEs = emerging market and developing economies.

A. Extreme weather events include droughts, floods, and storms. Sample includes 123 economies for droughts, 144 for floods, and 125 for storms.

B. Greenhouse gas (GHG) emissions projections assume constant GHG emissions per unit of GDP over 2019-23. Sample includes 34 advanced economies and 107 EMDEs. Advanced-economy forecasts obtained from the Oxford Global Economy Model. Shaded areas indicate forecasts.

Moreover, a sharp growth slowdown in countries that contribute substantially to global commodity demand, most notably China, could lower commodity prices, slowing economic recoveries in regions with large numbers of commodity exporters (ECA, LAC, MENA, SSA). Lastly, all regions remain susceptible to new health crises caused by communicable diseases given continuing encroachment on wild ecosystems, climate change, and ever greater connectivity (World Bank 2021e). The pandemic has shown that many countries are ill-prepared to tackle the large human and economic costs of such crises.

Upside risks: Fiscal support and global productivity boom

There is also the possibility that global growth could be stronger than expected. Additional fiscal support to renew domestic infrastructure in efficient ways could help raise growth in the medium term and bolster potential output (Ramey 2020). Moreover, if supplementary large-scale fiscal support is enacted in the United States, many EMDEs would stand to benefit from positive spillovers via trade, financial, and commodity price channels (World Bank 2017).

Global growth could also benefit from a prolonged period of accelerated technological change, which may, over time, become a positive side-effect of the pandemic. Many corporations were forced to innovate in order to survive the initial pandemic shock, rapidly adopting new digital technologies and shifting some of their business activities online. If sustained, the acceleration of digitalization brought on by the pandemic could contribute to faster productivity growth (Hallward-Driemeier et al. 2020; IMF 2021a; Mischke et al. 2021). The installation of new productive capital such as telecommunications equipment could contribute to a rise in total factor productivity, in contrast to the declines experienced after some past global recessions (World Bank 2018). Labor-saving digital technologies could spur the reallocation of labor toward higher-growth sectors, provided it is accompanied by proper labor and social protection policies, helping to raise potential output and sustain the global recovery (Dieppe 2020). Meanwhile, rapid adoption of digital financial technologies could reduce financing costs and expand access to credit among small- and medium-sized firms. Realizing the benefits to global growth from accelerated technological adoption depends crucially on achieving a faster pace of technological diffusion across firms and countries (Andrews, Nicoletti, and Timiliotis 2018; DeStefano and Timmis, forthcoming).

Policy challenges

The latest Omicron-driven pandemic resurgence underscores the need for globally coordinated efforts to control the pandemic and ensure more equitable worldwide access to vaccines. Further cooperation will also be required to foster debt sustainability in the poorest countries and tackle the mounting cost of climate change. Meanwhile, policy makers face the challenges of sustaining the recovery in the face of the possibility of persistent inflation, while acting to buttress public debt sustainability. Over the longer term, EMDEs will need to bolster growth prospects by enhancing crisis preparedness, while putting in place reforms to reduce the costs of commodity price shocks, tackle climate change, and reduce inequality.

Key global challenges

Strengthened global cooperation is essential to fully controlling the COVID-19 pandemic. The top global policy priority is to accelerate vaccinations—particularly in LICs—not least because of the need to limit the downside risks of new variants, as starkly demonstrated by the latest Omicron-driven resurgence. This requires an expansion of vaccine shipments to poorer countries, with surplus nations working through the COVID-19 Vaccines Global Access (COVAX) initiative to ensure a more even and extensive rollout of rapidly expanding global supplies. Richer countries can also help poorer ones scale up their vaccine delivery and manufacturing infrastructures by channeling additional financial resources through international financial institutions and regional development banks. At the same time, additional support is required to help lower-income EMDEs design and implement growth-friendly pandemic control policies, expand access to personal protective equipment, and improve COVID-19 detection—particularly in Africa where sparse testing is obscuring the scale of local outbreaks (WHO 2021).

Apart from action to control the pandemic, international cooperation is also needed to ensure that economic conditions improve in all countries—especially LICs. Whereas policy support has enabled advanced economies to emerge from the pandemic-induced recessions relatively unscathed, with output expected to return to its pre-pandemic trend in the near term, most EMDEs are likely to suffer protracted scarring to potential output (World Bank 2021c). Concerted global efforts to expand the fiscal resources available to EMDEs—including the replenishment of International Development Association funds—are needed. Moreover, initiatives to restructure the external debt of countries where it is unsustainable are essential to mitigate the risks that the financial burdens of the pandemic could lead to financial crises and lower longer-term growth. Success in this area will require the broad participation of diverse creditors. The G20 Common Framework is a step in this direction, as it includes both Paris Club members

and non-Paris Club G20 members; however, further progress is needed to ensure private sector participation (special focus).

The increasing frequency and severity of climate-related disasters in recent years highlights the escalating costs of climate change. Governments, civil society, and businesses need to work together to accelerate progress toward meeting the goals of the Paris Agreement on Climate Change (UKCOP 2021). Such action needs to be accompanied by attention to the need to reduce the economic, health, and social costs of climate change, many of which are born disproportionately by vulnerable populations, particularly in LICs. Most pressing, the international community can help to expand the financing and capacity building needed to foster green and resilient economic recoveries in EMDEs, including by scaling up climate change adaptation, increasing green investments, and facilitating a green energy transition.

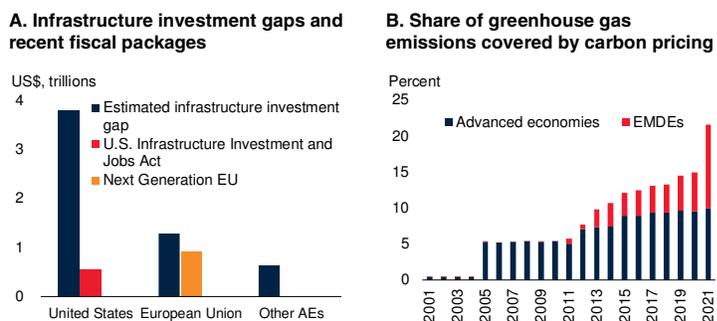
Challenges in advanced economies

Firming demand and rising inflation amid exceptional monetary policy support, including policy rates near zero and the continued accumulation by central banks of long-duration assets, have refocused attention on the timing of the prospective unwinding of policy support. Central banks would be confronted with a particularly challenging environment if inflation were to remain elevated for a prolonged period. Clear and consistent central bank communication of policy intentions will continue to be critical to minimize the risks of triggering a disorderly tightening of domestic and global financial conditions.

Although financial conditions remain benign in most advanced economies, rising asset valuations, overheating housing markets, and in some cases elevated household debt levels have all contributed to a rise in financial vulnerabilities (BIS 2021). As such, enhancing the resilience of financial systems through macroprudential regulations that encompass both banks and nonbank financial institutions will continue to be paramount to foster financial stability and reduce the likelihood of costly financial crises (Ampudia et al. 2021).

FIGURE 1.16 Policy challenges in advanced economies

Policy actions are needed to close infrastructure investment gaps and foster productivity-enhancing investment. Carbon emissions have risen, and only a small share are covered by carbon-pricing measures, which underscores the continued need for policies that discourage emissions.



Sources: Carbon Pricing Dashboard; Global Infrastructure Hub and Oxford Economics (2017); Haver Analytics; World Bank.

Note: EMDEs = emerging market and developing economies.

A. Blue bars show the infrastructure investment gap between 2017 and 2040, calculated as the difference between (1) baseline forecasts of infrastructure investment under the assumption that countries continue to invest in line with the pre-2015 trend and (2) the estimated investment needs if countries were to match the performance of their best performing peers, after controlling for differences in the characteristics of each country. Infrastructure investment gap in European Union includes Croatia, France, Germany, Poland, Romania, and Spain. "Other AEs" refers to other advanced economies, including: Australia, Canada, France, Germany, Italy, Japan, Republic of Korea, New Zealand, Singapore, Spain, United Kingdom, and United States. Red bar shows the planned new federal spending under the U.S. Infrastructure Investment and Jobs Act.

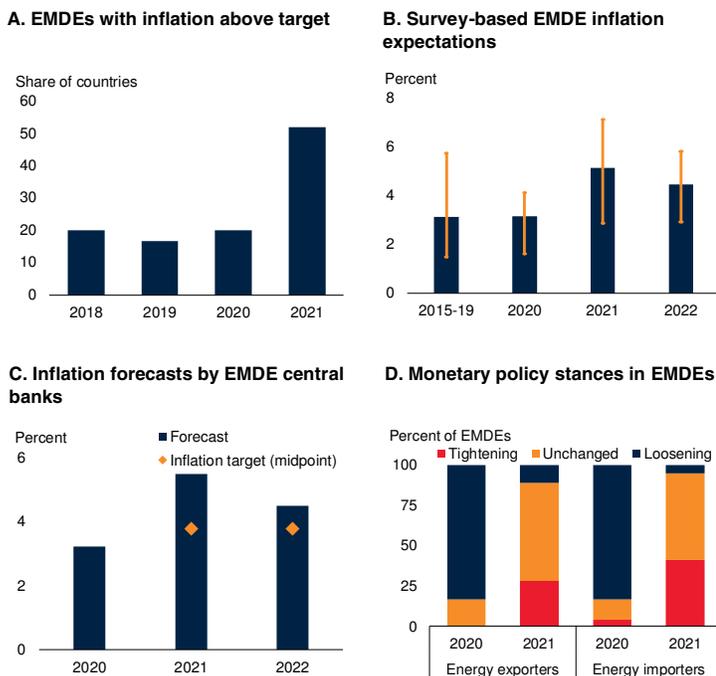
B. Figure shows the proportion of global greenhouse gas emissions covered by carbon-pricing measures. Sample includes 9 EMDEs and 24 advanced economies.

As the pandemic is brought under control, fiscal support will need to be gradually withdrawn. However, the course of the pandemic has highlighted the need to strengthen social safety nets and job retention schemes in many countries. Moreover, in those economies where additional fiscal support is under consideration, efficient and transparent productivity-enhancing investment can be prioritized—for example, to reduce large infrastructure investment gaps (figure 1.16.A). It can encompass investment in physical and digital infrastructure and human capital, as well as green investment (Dieppe 2020; Hallward-Driemeier et al. 2020).

Steering growth toward a green, resilient, and inclusive direction requires a menu of structural policies that facilitate digital transformation, expedite the green transition, and increase labor mobility. To cement productivity gains related to the accelerated adoption of digital technologies, policy makers can foster competition among digital firms including by reducing barriers to entry. Scaling up policies that discourage carbon

FIGURE 1.17 Monetary policy challenges in emerging market and developing economies

Inflation in 2021 was above target ranges in more than half of inflation-targeting emerging market and developing economies (EMDEs). Although rising price pressures have pushed up near-term inflation expectations in many EMDEs, medium-term expectations have remained broadly stable in most cases. In response to inflationary pressures and currency depreciation, central banks in more than a third of EMDEs, particularly in energy importers, have increased policy rates.



Sources: Central bank websites; Consensus Economics; Haver Analytics; World Bank.

Note: EMDEs = emerging market and developing economies.

A. Figure shows share of inflation-targeting EMDEs that experienced inflation above the target range for each year. 2021 inflation is based on average of January–October 2021.

B. Figure shows median headline 2021–22 CPI inflation expectations for 48 EMDEs derived from the December 2021 *Consensus Economics* survey. Data for 2015–20 indicate actual inflation rates. Orange whiskers indicate interquartile ranges.

C. Figure shows median headline 2021–22 CPI inflation forecasts by 13 EMDE central banks as of December 2021. Data for 2020 indicate actual inflation rates. Orange diamonds indicate inflation targets (midpoint). Sample includes Brazil, Chile, Colombia, the Arab Republic of Egypt, India, Mexico, Philippines, Poland, Romania, the Russian Federation, South Africa, Thailand, and Turkey.

D. Figure shows share of countries that experienced a policy rate hike (tightening monetary policy rate) and cut (loosening monetary policy rate). Data for 2021 are through December 15, 2021. Sample includes 74 EMDEs.

emissions such as taxes on energy use, carbon taxes, and tradable emission permit pricing are also important to secure a smooth green transition (figure 1.16.B; Nachtigall et al. 2021; World Bank 2021f, 2021g).

In addition, recent experiences of asymmetric sectoral shocks and increased demand-supply mismatches in the labor market underscore the need for policies that facilitate labor reallocation, particularly in countries with limited labor market

flexibility. This can be achieved through active labor market policies that target the upskilling and reskilling of workers (OECD 2021). Trade liberalization, improved education systems, and product market reforms can also facilitate labor reallocation (ElFayoumi et al. 2018; Gal and Hijzen 2016).

Challenges in emerging market and developing economies

A growing number of EMDEs have tightened monetary policies to respond to inflationary pressures and currency depreciation. The removal of pandemic-related fiscal support may not be sufficient to stabilize debt levels in light of persistently weak revenues, and softer-than-projected growth or an abrupt tightening of financing conditions could trigger a deterioration in fiscal sustainability gaps. To bolster green, resilient, and inclusive development over the longer term, it will be essential to implement policies that enhance crisis prevention, preparedness, and response; that help countries cope with commodity price shocks, and that address rising inequality.

EMDE monetary and financial policy challenges

Inflation in 2021 was above central bank target ranges in over half of inflation-targeting EMDEs (figure 1.17.A). Rising inflationary pressures have pushed up near-term inflation expectations in many EMDEs; however, medium-term expectations have remained broadly stable in the majority of the countries for which there are data (figures 1.17.B and 1.17.C). To preempt the possibility of longer-lasting inflationary pressures, central banks in more than a third of EMDEs—particularly in energy importers—increased policy rates last year (figure 1.17.D).

Concerns over currency depreciation or weakly anchored inflation expectations may compel more EMDE central banks to tighten monetary policy earlier or more strongly than warranted by their cyclical positions (Végh et al. 2017; Végh and Vuletin 2013). In EMDEs with high shares of food in their consumption baskets, such as LICs, a sharp rise in agricultural prices could exacerbate inflationary pressures and heighten monetary

policy challenges. In addition, further increases in advanced-economy interest rates may result in sizable cross-border effects on EMDE yields and financial conditions, which could weigh on the recovery (Hoek, Kamin, and Yoldas 2020, 2021).

The financial market effects of policy tightening by major central banks on EMDEs are likely to be manageable if this tightening is gradual and takes place in an environment of robust economic recovery in advanced economies. Still, in light of reduced portfolio inflows in 2021 and the tightening of domestic financing conditions in many cases, EMDEs need to continue rebuilding their foreign exchange reserves, bolster foreign currency risk monitoring, and strengthen macroprudential policies. Such measures will be particularly helpful if advanced-economy monetary policy accommodation is quickly unwound (Arteta et al. 2015; Samano Penalzoza 2021). Measures to strengthen central bank credibility and independence—including clearer communication about inflation targets and enhanced policy transparency—would help anchor inflation expectations in EMDEs (Kose et al. 2019; Rogoff 2021; World Bank 2021c).

Although banking system indicators appear generally solid across EMDEs, financial sector vulnerabilities, including those related to non-performing loans, have risen in some countries. Given the long-term repercussions of financial crises, the benefits of well-designed macroprudential policies that reduce the likelihood of crises are likely to significantly outweigh any immediate costs (Bonciani, Gauthier, and Kanngiesser 2021; Kilic Celik, Kose, and Ohnsorge 2020). Among LICs in particular, the lack of adequate risk monitoring and policy frameworks to prevent, prepare, and respond to financial crises increases the probability of outsized crisis-related output losses (World Bank 2021e).

EMDE fiscal policy challenges

Fiscal support packages implemented since the start of the pandemic have averaged 6.8 percent of 2019 GDP in EMDEs and 3.5 percent of 2019 GDP in LICs—less than one-quarter and one-eighth, respectively, of the average advanced-

economy package. For many EMDEs, especially LICs, these packages were largely funded by cuts in other expenditures, as governments reprioritized spending in both 2020 and 2021 (figure 1.18.A). Despite ongoing disruptions and incomplete recoveries from COVID-19, EMDEs—except for some economies in LAC and SAR—have removed fiscal policy support faster than previously envisioned, with many support measures having already expired by late 2021 (figure 1.18.B).

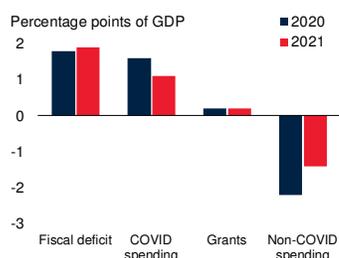
Following the marked withdrawal of fiscal policy support in 2021, remaining accommodation is expected to be largely unwound by 2023 to set public finances on a more sustainable path. Although the pace of fiscal adjustment over the forecast horizon is likely to be more gradual than in 2021, the share of EMDEs with tightening fiscal policy is expected to rise from over 60 percent in 2021 to more than 80 percent over 2022-23. As a result, government spending as a share of GDP is expected to fall below 2019 levels in nearly half of EMDEs by 2023. Despite these consolidation efforts, average government debt-to-GDP ratios are not expected to return to pre-pandemic levels; instead, they are projected to continue to rise to around 66 percent by end-2023. Deteriorating debt dynamics appear to reflect the impact of persistent revenue losses on fiscal deficits. By 2023, revenues are expected to be below 2019 levels in over 55 percent of EMDEs, with the EMDE average stabilizing around 25 percent of GDP—1.5 percentage points of GDP lower than the 2019 average.

Fiscal sustainability gaps could deteriorate further if growth disappoints, or if global financing conditions tighten substantially. In either case, there could be little room for many EMDEs to respond to negative shocks, especially given depleted fiscal buffers and the possibility of higher debt servicing costs. In EMDEs, particularly those with elevated short-term external debt, tighter financing conditions could trigger a materialization of debt rollover and currency mismatch risks. Public balance sheets could be further strained by the realization of contingent liabilities, which have historically incurred large fiscal costs (figure 1.18.C; Bova et al. 2016; Moreno Badia, Gamboa-Arbelaez, and Xiang 2021).

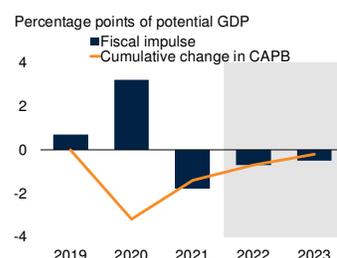
FIGURE 1.18 Fiscal policy challenges in emerging market and developing economies

Despite reprioritized public spending and a faster removal of fiscal support than previously envisioned, fiscal space in emerging market and developing economies will remain narrow amid elevated public debt levels. In past fiscal crises, the realization of contingent liabilities and valuation effects associated with currency depreciation amplified public balance sheet pressures. Further debt relief initiatives may be needed to address weak fiscal positions in low-income countries, especially given the sharp rise in debt-service burdens over the past decade.

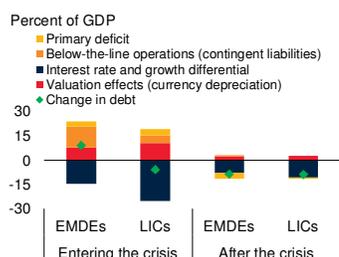
A. Change in EMDE fiscal indicators from pre-pandemic projections



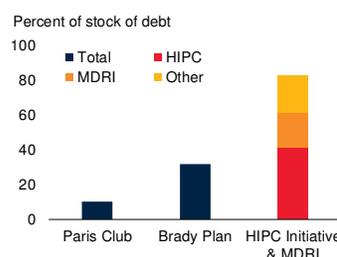
B. Fiscal stance in EMDEs



C. Changes in debt decomposition around sovereign fiscal crises



D. Debt relief granted under umbrella initiatives



Sources: Arslanalp and Henry (2005); Cheng, Diaz-Cassou, and Erce (2019); Gamarra, Pollock, and Braga (2009); International Monetary Fund; IMF and World Bank (2021); Moreno Badia, Gamboa-Arbelaez, and Xiang (2021); World Bank.

Note: EMDEs = emerging market and developing economies; LICs = low-income countries.

A. Simple average for 43 countries participating in the DSSI (Debt Service Suspension Initiative) program, as estimated in IMF and World Bank (2021).

B. Figure shows the GDP-weighted cumulative change since 2019 in the cyclically-adjusted primary balance (CAPB), based on data from IMF (2021b). Fiscal impulse is the negative change in the CAPB from the previous year. Sample is limited to 50 EMDEs because of data availability. Shaded area indicates forecasts.

C. Reported numbers are average cumulative changes as estimated in Moreno Badia, Gamboa-Arbelaez, and Xiang (2021). Fiscal crises are budgetary distress episodes that result in a credit risk (sovereign default or restructuring), large official financing, domestic debt default, and/or loss of market confidence, as defined in Moreno Badia et al. (2020). "Entering the crisis" refers to the period three years before the start of the crisis to its peak. "After the crisis" is the period between the peak and the end of the crisis. Peak is defined on the basis of debt levels. Interest payment data correspond to actual interest payments.

D. "Stock of debt" refers to stock of eligible debt treated by the Paris Club or eligible for restructuring under the Brady Plan, and total stock of debt for the HIPC countries which received HIPC/MDRI debt relief. Paris Club includes 188 restructuring episodes and excludes debt restructuring under the "Classic" terms which did not offer debt relief, and the HIPC episodes taken from Cheng, Diaz-Cassou, and Erce (2019). Brady Plan includes 16 Brady Plan deals, taken from Arslanalp and Henry (2005). For HIPC/MDRI, debt relief is split into debt relief under the HIPC Initiative (which includes debt relief provided by the Paris Club), MDRI (which includes debt relief on debt held by the multilateral institutions) and "Other" which refers to traditional debt relief outside of HIPC/MDRI.

interest payments doubling over 2011-19. As such, further episodes of debt distress could occur, and achieving sustainable debt levels might only be possible through debt relief or default (figure 1.18.D; CBI and FES 2021; Kose et al. 2021). The G20 Common Framework is a positive development in this regard, particularly as it includes major non-Paris Club bilateral creditors. However, it largely focuses on providing debt maturity extensions and interest rate reductions rather than outright face-value debt reductions, even if it recognizes that, in exceptional circumstances, debt stock reductions may be needed (special focus). In addition, the lack of measures to encourage private sector participation may limit the effectiveness of any negotiated agreement.

As negative output gaps narrow over the medium term, authorities will need to balance the trade-off between addressing development needs and restoring fiscal space. However, this difficult policy choice can be ameliorated by prioritizing expenditures on projects that boost growth and potential output, including those that help narrow sizable investment gaps (Izquierdo et al. 2019). To this end, expenditure review processes can help authorities better identify projects that yield higher growth dividends and ensure spending efficiency.

It will also be critical for EMDEs to improve domestic revenue mobilization to replenish fiscal buffers following the pandemic-related collapse in revenues. For some EMDEs, this can include broadening revenue bases with new tax instruments, such as carbon taxes. This can be complemented with other efforts that integrate climate considerations with fiscal policy, including the reduction of still sizable energy subsidies. For the nearly 100 EMDEs that have backed the OECD/G20 Inclusive Framework on Base Erosion and Profit Shifting, including the agreement on the global minimum corporate income tax rate, continued coordination on global tax rules and transparency could help stem the revenue losses from tax avoidance. These losses are estimated to amount to more than 0.5 percent of 2019 GDP annually in EMDEs (Cobham and Janský 2018; Crivelli, de Mooij, and Keen 2015; Shaxson 2019).

In LICs, these challenges could be magnified by elevated debt-servicing costs following the rise that occurred before the pandemic, with average

EMDE longer-term policy challenges

The pandemic has highlighted the human and economic losses associated with large adverse shocks in EMDEs and their long-term repercussions. The effects on the most vulnerable groups have been particularly severe, setting back progress toward key development goals (World Bank 2020b). The pandemic has also exacerbated income, gender, and learning inequalities. Moreover, many EMDEs continue to be susceptible to the near- and longer-term effects of large swings in commodity prices.

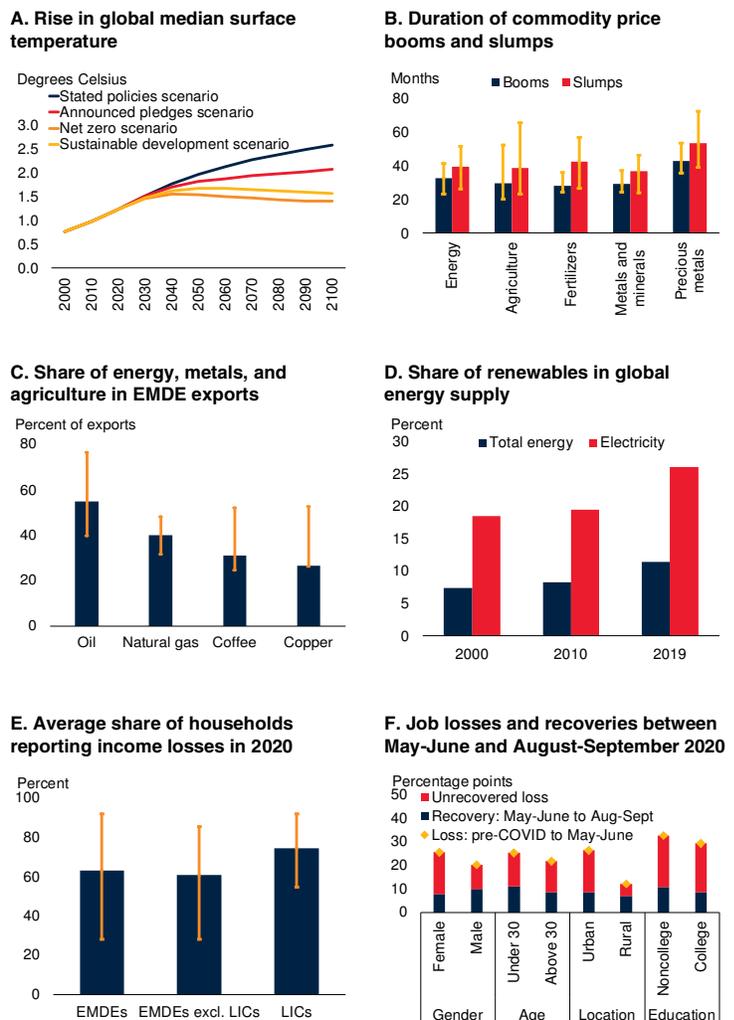
Policy makers have an opportunity to address both the near-term challenges raised by the pandemic as well as the longer-term challenges associated with the pursuit of a green, resilient, and inclusive development path. To these ends, authorities can prioritize growth-enhancing reforms that increase preparedness for future crises, better equip countries to tackle terms-of-trade shocks, enable a smooth transition toward clean energy, and durably tackle poverty and inequality. These include policies that strengthen social safety nets and unemployment benefits, enhance investment in education and in digital infrastructures, and improve the functioning of labor markets.

Enhancing crisis prevention, preparedness, and response

The COVID-19 pandemic, increasingly common extreme weather events, and elevated financial vulnerabilities all highlight the dangers of crises (World Bank 2021e). These crises can inflict significant economic losses and often reverse development gains. For example, about one quarter of financial crises have been associated with output contractions of more than 5 percent in affected countries. Health crises can also inflict severe economic losses, as the COVID-19 pandemic painfully demonstrated. In the face of steadily rising global temperatures, the long-run economic consequences of inaction against climate change can be severe (figure 1.19.A). The impact of weather and climate disasters tends to fall disproportionately on vulnerable groups, with a resultant worsening of poverty and inequality (Bundervoet, Davalos, and Garcia 2021; Ohnsorge and Yu 2021).

FIGURE 1.19 Longer-term policy challenges in emerging market and developing economies

Rising global temperatures underscore the need to tackle climate change. Commodity prices experience recurrent cycles, with price slumps lasting somewhat longer than booms. Since commodities represent a key source of revenues for many emerging market and developing economies (EMDEs), large swings in commodity prices pose important policy challenges. The transition to renewable energy sources will be particularly difficult for some commodity exporters. Inequality has been exacerbated by the pandemic, with over 60 percent of EMDE households reporting a drop in income. Vulnerable groups, including women, have been acutely affected, in part due to lasting job losses.



Sources: BP (database); Comtrade (database); IEA (2021b); Mahler (r) et al. (forthcoming); Narayan et al. (forthcoming); WITS (database); World Bank.
 Note: EMDEs = emerging market and developing economies; LICs = low-income countries.
 A. Data show the global median surface temperature rise over time in the scenarios in IEA (2021b).
 B. Figure shows the duration of booms and slumps in commodity price indexes, as described in chapter 3. Yellow whiskers indicate minimum and maximum range. Data are from January 1970 to October 2021.
 C. Figure shows the median share of exports accounted for by oil, natural gas, copper, and coffee, for EMDE exporters of that commodity. Oil includes 20 EMDEs, copper 6, natural gas 5, and coffee 4.
 Blue bars show medians and orange whiskers show interquartile range.
 D. Renewables includes biomass, geothermal, hydro-electric, solar, tidal, wave, and wind.
 E. Calculations based on the Harmonized High-Frequency Phone Survey (HFPS) data from the COVID-19 Household Monitoring Dashboard for wave 1. Simple average. Sample consists of 36 EMDEs, including 6 LICs. Orange whiskers indicate minimum and maximum range.
 F. Figure shows the decline in the average share of employed among surveyed households from pre-pandemic to May-June 2020, as described in chapter 4. Sample includes 14-17 EMDEs.

Policy makers need to ensure that they are better prepared to handle future crises as part of a commitment to a comprehensive approach to bolster green, resilient, and inclusive development. While different crises require well-tailored policy responses, evidence from past crises suggests that countries with stronger public institutions, more competitive private sectors, and stronger digital infrastructures are in general better equipped to limit the negative effects of crises and recover faster (World Bank 2013). At the same time, inclusive development and poverty reduction are essential to protecting vulnerable groups from crises, including those associated with climate change (Malpass 2021).

Policy makers can enhance the ability of countries to tackle and cope with crises by implementing well-designed social safety nets and effective counter-cyclical buffers to support to poorest and most vulnerable in society (World Bank 2015). For example, adaptive social protection systems and cash transfer programs have been critical to smooth consumption in the face of adverse shocks (Bowen et al. 2020). Resilience to crises can also be bolstered by stronger health and education systems. Investing in digital infrastructure and technological diffusion is also key, as it enables better access to jobs, finance, and schooling during crises. To this end, policies need to be geared to ensuring that firms can leverage the COVID-19 digital dividend, including through the provision of training for small firms and policies that support e-commerce, fintech, and business-to-business digital technologies. Enhancing regulatory frameworks that favor innovation and competition in the telecommunications market is also important (World Bank 2021h).

Confronting commodity shocks

Commodity prices have experienced repeated boom and slump cycles over the past few decades. Price slumps tend to last somewhat longer than booms, while price booms tend to be more pronounced (figure 1.19.B; chapter 3). Continued price swings underscore the susceptibility of EMDEs to large terms-of-trade shocks, which account for as much as half of the fluctuations in economic activity (Di Pace, Juvenal, and Petrella 2020; Kose 2002). Commodities are critical

sources of export revenues for more than 60 percent of EMDEs, and more than half of the global poor live in commodity-exporting EMDEs (figure 1.19.C; World Bank 2018).

The transition away from fossil fuels toward low-carbon technologies is likely to have significant long-run consequences for commodity prices and exporters. Consumption of renewable energy, largely solar and wind power, has increased sharply over the past two decades (figure 1.19.D). Producers of fossil fuels, especially coal and crude oil, are likely to see demand for their exports plateau and experience a continued decline over time, which could lead to a fall in their fiscal revenues and deteriorating terms of trade. In contrast, producers of commodities used as inputs in emerging green sectors are likely to benefit—particularly some metal exporters, given that renewable technologies are metal intensive. Large and persistent movements in energy prices can also affect the transition toward low-carbon technologies. The surges in crude oil, natural gas, and coal prices in 2021 have increased the relative price competitiveness of renewables such as solar and wind, thereby providing an incentive to invest in low-carbon energy sources. However, they can also encourage investment in the production of fossil fuels in energy exporters (Peszko, Van der Mensbrugge, and Golub 2020).

These developments suggest that countries that are exporters of commodities used as inputs in emerging green sectors need to ensure that any windfall gains are used to provide a permanent boost to incomes by investing in productive infrastructure and technologies that encourage development across a wider range of economic sectors. Exporters of clean energy could also benefit from new export opportunities associated with the transition, for example by exporting clean electricity to neighboring countries.

Exporters of fossil fuels can seek to diversify their economic base, including through investments in renewable energy and infrastructure and the promotion of technological development (Manley, Cust, and Cecchinato 2017). A broader diversification of national asset portfolios—including human and physical capital, as well as natural resources—also needs to be pursued,

including by fostering investment in infrastructure and strengthening economic institutions (Gill et al. 2014). Measures that help workers acquire and improve skills, including through vocational education and retraining, are also key—not only to improve productivity but also to reduce income inequality and poverty (Callen et al. 2014; Peszko, Van der Mensbrugge, and Golub 2020; Wheeler et al. 2020). In the near term, policy makers can respond to the adverse effects of higher energy prices on real incomes and poverty by extending targeted support to vulnerable groups, avoiding more distortive measures that subsidize carbon energy consumption on a large scale.

Urban areas are at the forefront of climate change and the energy transition as over two-thirds of the world's energy consumption and over 70 percent of global CO₂ emissions occur within cities (Moran et al. 2018; UN Habitat 2020). The urban population is expected to continue to grow in EMDEs over the long term, which is likely to further boost energy consumption and greenhouse gas emissions. Strategic urban planning can help limit the impact of urbanization on greenhouse gas emissions (World Bank 2021b). This can include actions to enhance capacity, affordability, and access to public transport systems; investment in building retrofits; and policies such as zoning laws that preserve green spaces and limit urban sprawl.

Addressing the rise in inequality

In general, income inequality among and within countries declined steadily over the two decades before the COVID-19 pandemic. However, the pandemic has led to a worsening of income inequality, particularly between countries (chapter 4). Recent survey data show that more than 60 percent of households in surveyed EMDEs experienced a loss of income in 2020, with households in LICs and SSA being the hardest hit (figure 1.19.E).

In addition to its effect on incomes, the pandemic has led to a broader surge in inequality across several dimensions. Children's learning has been severely interrupted as a result of pandemic-related containment measures, leading to higher educational inequality (World Bank 2020c). Since

the ability to work remotely is highly positively correlated with education, the pandemic has also exacerbated inequality in the labor market, with lasting job losses concentrated among low-skilled and female workers (figure 1.19.F; Mondragon and Tavares 2021). As women have suffered disproportionate job and income losses because of their over-representation in hard-hit sectors such as accommodation, health care, and food services, gender inequality has also increased. Finally, the pandemic has exacerbated the digital divide as telecommuting opportunities and remote education have not been equally accessible by low-income households.

Evidence from past epidemics indicates that income inequality increases steadily about half a decade following each event, with particularly pernicious effects when epidemics lead to economic contraction, as in the case of COVID-19 (Hill and Narayan 2020). To prevent a further worsening of inequality, decisive policy action is essential. The scope and need for action is highlighted by the fact that, despite various policies implemented to mitigate the impact of the pandemic, only one-third of households and about one quarter of firms in EMDEs have received government support (World Bank 2021h).

A comprehensive strategy combining national reforms and support from the global community can be targeted at mitigating the increase in within-country and between-country inequality, helping to steer EMDEs onto an inclusive development path. Social safety nets and income transfers can be enhanced further, especially in countries characterized by large informal sectors and elevated levels of poverty (Bracco et al. 2021). Enhancing unemployment benefits, which remain limited in many EMDEs, can also lower inequality by cushioning job losses for formal workers. Redistributive policies aimed at maintaining or increasing progressivity in the tax system, while reducing social security contributions and payroll taxes on low-income workers, can further reduce income inequality (Bachas, Gadenne, and Jensen 2020).

Policies aimed at preventing a further rise of income inequality in the long run should also be implemented. These include investments in health

and education, including through policies that reduce the number of school dropouts, promote universal access to health and education, and provide learning support to those who need it. In

addition, the re-entry of women and low-skilled workers into the labor market can be facilitated by active labor market policies and training.

TABLE 1.2 Emerging market and developing economies¹

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

* 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; the Czech Republic; 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. Developing countries are EMDEs classified as middle-income countries and low-income countries.

2. An economy is defined as commodity exporter when, on average in 2017-19, either (1) total commodity 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 reexports 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

- Amputia, M., M. Lo Duca, M. Farkas, G. Perez-Quiros, M. Pirovano, G. Rünstler, and E. Tereanu. 2021. “Avoiding a Financial Epidemic—The Role of Macroprudential Policies.” *European Central Bank, Research Bulletin* 87.
- Andrews, D., G. Nicoletti, and Ch. Timiliotis. 2018. “Digital Technology Diffusion: A Matter of Capabilities, Incentives or Both?” Economics Department Working Paper 1476, Organisation for Economic Co-Operation and Development, Paris.
- Aoyagi, C. 2021. “Effects of COVID-19 on Regional and Gender Equality in Sub-Saharan Africa: Evidence from Nigeria and Ethiopia.” IMF Working Paper 169, International Monetary Fund, Washington, DC.
- Arslanalp, S., and P. B. Henry. 2005. “Is Debt Relief Efficient?” *Journal of Finance* 60 (2): 1017-1051.
- Arteta, C., M. A. Kose, F. Ohnsorge, and M. Stocker. 2015. “The Coming U.S. Interest Rate Tightening Cycle: Smooth Sailing or Stormy Waters?” Working Paper 1522, Koç University-TUSIAD Economic Research Forum.
- Bachas, P., L. Gadenne, and A. Jensen. 2020. “Can Taxes on Consumption Help Reduce Inequality?” *Let’s Talk Development* (blog). June 18. <https://blogs.worldbank.org/developmenttalk/can-taxes-consumption-help-reduce-inequality>.
- Ball, L. M., and J. Onken. 2021. “Hysteresis in Unemployment: Evidence from OECD Estimates of the Natural Rate.” NBER Working Paper 29343, National Bureau of Economic Research, Cambridge, MA.
- Barnard, R. C., N. G. Davies, C. A. B. Pearson, M. Jit, and E. W. John. 2021. “Modelling the Potential Consequences of the Omicron SARS-CoV-2 Variant in England.” Centre for Mathematical Modelling of Infectious Diseases, London School of Hygiene & Tropical Medicine, London.
- BIS (Bank for International Settlements). 2021. “Capital Flows, Exchange Rates and Monetary Policy Frameworks in Latin American and Other Economies.” <https://www.bis.org/publ/othp37.pdf>.
- BIS (database). Bank for International Settlements. Accessed on January 4, 2022. <https://www.bis.org/statistics/>.
- Bonciani, D., D. Gauthier, and D. Kanngiesser. 2021. “Slow Recoveries, Endogenous Growth and Macroprudential Policy.” Staff Working Paper 917, Bank of England, London.
- Bova, E., M. Ruiz-Arranz, F. Toscani, and H. E. Ture. 2016. “The Fiscal Costs of Contingent Liabilities: A New Dataset.” IMF Working Paper 16/14, International Monetary Fund, Washington, DC.
- Bowen, T., C. del Ninno, C. Andrews, S. Coll-Black, U. Gentilini, K. Johnson, Y. Kawasoe, et al. 2020. *Adaptive Social Protection: Building Resilience to Shocks*. Washington, DC: World Bank.
- BP (database). Statistical Review of World Energy 2021. Accessed on December 16, 2021. <https://www.bp.com/en/global/corporate/energy-economics/statistical-review-of-world-energy.html>.
- Bracco, J., L. Galeano, P. Juarros, D. Riera-Crichton, and G. Vuletin. 2021. “Social Transfer Multipliers in Developed and Emerging Countries: The Role of Hand-to-Mouth Consumers.” Working Paper, World Bank, Washington, DC.
- Braumann, B. 2004. “High Inflation and Real Wages.” *IMF Staff Papers* 51 (1): 1-25.
- Bundervoet, T., M. E. Davalos, and N. Garcia. 2021. “The Short-Term Impacts of COVID-19 on Households in Developing Countries: An Overview Based on a Harmonized Data Set of High-Frequency Surveys.” Policy Research Working Paper 9582, World Bank, Washington, DC.
- Callen, T., R. Cherif, F. Hasanov, A. Hegazy, and P. Khandelwal. 2014. “Economic Diversification in the GCC: Past, Present, and Future.” *IMF Staff Discussion Notes* 14 (12): 1.
- Carbon Pricing Dashboard | Up-to-Date Overview of Carbon Pricing Initiatives (database). World Bank. Accessed on December 15, 2021. https://carbonpricingdashboard.worldbank.org/map_data.
- CBI (Consensus Building Institute) and FES (Friedrich-Ebert-Stiftung). 2021. “Responding to Risks of COVID Debt Distress.” Roundtable Report.
- Cheng, G., J. Diaz-Cassou, and A. Erce. 2019. “The Macroeconomic Effects of Official Debt Restructuring: Evidence from the Paris Club.” *Oxford Economic Papers* 71 (2): 344-63.
- Climate Watch (database). World Resources Institute. 2019. Accessed on December 15, 2021. <https://www.climatewatchdata.org/>
- Cobham, A., and P. Janský. 2018. “Global Distribution of Revenue Loss from Corporate Tax

- Avoidance: Re-estimation and Country Results.” *Journal of International Development* 30 (2): 206-32.
- Comtrade (database). United Nations. Accessed on December 16, 2021. <https://comtrade.un.org>.
- COVID-19 High-Frequency Monitoring Dashboard (database). Accessed on December 15, 2021. <https://www.worldbank.org/en/data/interactive/2020/11/11/covid-19-high-frequency-monitoring-dashboard>.
- Crivelli, E., R. de Mooij, and M. Keen. 2015. “Base Erosion, Profit Shifting and Developing Countries.” IMF Working Paper 15/118, International Monetary Fund, Washington, DC.
- DeStefano, T., and J. Timmis. Forthcoming. “Firm Digital Adoption during COVID-19.” Policy Research Working Paper, World Bank, Washington, DC.
- Dieppe, A. ed. 2020. *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 2020/280, International Monetary Fund, Washington, DC.
- ElFayoumi, K., A. Ndoye, M.S. Nadeem, and A. Gregory. 2018. “Structural Reforms and Labor Reallocation: A Cross-Country Analysis.” IMF Working Paper 18/64, International Monetary Fund, Washington, DC.
- EM-DAT (database). “The International Disaster Database.” Centre for Research on the Epidemiology of Disasters (CRED), UClouvain, Brussels. Accessed on December 15, 2021. <https://www.emdat.be>.
- Gal, P., and A. Hijzen. 2016. “Product Market Reforms under the Microscope.” VoxEU.org, CEPR Policy Portal, September 27, <https://voxeu.org/article/product-market-reforms-under-microscope>.
- Gamarra, B., M. Pollock, and C. A. P. Braga. 2009. “Debt Relief to Low Income Countries: A Retrospective.” In *Debt Relief and Beyond*, edited by C. Braga and D. Dömeland, 11-35. Washington, DC, World Bank.
- Ghebreyesus, T. A. 2021. “WHO Director-General’s Opening Remarks at the Media Briefing on COVID-19 - 14 December 2021.” Transcript of speech delivered at Media Briefing on COVID-19, December 14, 2021. <https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---14-december-2021>.
- Gill, I. S., I. Izvorski, W. van Eeghen, and D. De Rosa. 2014. *Diversified Development: Making the Most of Natural Resources in Eurasia*. Washington, DC: World Bank.
- Global Infrastructure Hub and Oxford Economics. 2017. “Global Infrastructure Outlook: Infrastructure Investment Needs 50 countries, 7 sectors to 2040.” <https://outlook.gihub.org/>.
- Goel, R. K., J. W. Saunoris, and S. S. Goel. 2021. “Supply Chain Performance and Economic Growth: The Impact of COVID-19 Disruptions.” *Journal of Policy Modeling* 43 (2): 298-316.
- Google LLC (database). “Google COVID-19 Community Mobility Reports.” Accessed on January 3, 2022. <https://www.google.com/covid19/mobility/>.
- Ha, J., M. Stocker, and H. Yilmazkuday. 2020. “Inflation and Exchange Rate Pass-through.” *Journal of International Money and Finance* 105 (July): 102-187.
- Hale, T., N. Angrist, R. Goldszmidt, B. Kira, A. Petherick, T. Phillips, S. Webster, et al. 2021. “A Global Panel Database of Pandemic Policies (Oxford COVID-19 Government Response Tracker).” *Nature Human Behaviour* 5 (4): 529-38.
- Hall, S., L. Kaplow, Y. S. Sun, and T. Z. Holt. 2021. “None Are Safe until All Are Safe: COVID-19 Vaccine Rollout in Low- and Middle-Income Countries.” McKinsey & Company. <https://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/none-are-safe-until-all-are-safe-covid-19-vaccine-rollout-in-low-and-middle-income-countries>.
- Hallward-Driemeier, M., G. Nayyar, W. Fengler, A. Aridi, and I. Gill. 2020. *Europe 4.0: Addressing the Digital Dilemma*. Washington, DC: World Bank.
- Hill, R. V., and A. Narayan. 2020. “COVID-19 and Inequality: A Review of the Evidence on Likely Impact and Policy Options.” Working Paper 3, Centre for Disaster Protection, London.
- Hoek, J., S. Kamin, and E. Yoldas. 2020. “When is Bad News Good News? U.S. Monetary Policy, Macroeconomic News, and Financial Conditions in Emerging Markets.” International Finance Discussion Paper 1269, Board of Governors of the Federal Reserve System, Washington, DC.
- Hoek, J., S. Kamin, and E. Yoldas. 2021. “Are Rising U.S. Interest Rates Destabilizing for Emerging Market Economies?” FEDS Notes, Board of Governors of the Federal Reserve System, Washington, DC.

- IEA (International Energy Agency). 2021a. "Oil Market Report—November 2021." International Energy Agency, Paris.
- IEA (International Energy Agency). 2021b. *World Energy Outlook 2021*. Paris: International Energy Agency.
- ILO (International Labour Organization). 2021. "ILO Monitor: COVID-19 and the World of Work. Eighth edition." Briefing Note, International Labour Organization, Geneva.
- IMF (International Monetary Fund) 2021a. *Boosting Productivity in the Aftermath of COVID-19*. June. Washington, DC: International Monetary Fund.
- IMF (International Monetary Fund). 2021b. *Fiscal Monitor: Strengthening the Credibility of Public Finances*. October. Washington, DC: International Monetary Fund.
- IMF (International Monetary Fund) and World Bank. 2021. "Joint IMF-WBG Staff Note: DSSI Fiscal Monitoring Update." IMF Policy Paper 2021/062, International Monetary Fund, Washington, DC.
- Izquierdo, A., R. Lama, J.P. Medina, J. Puig, D. Riera-Crichton, C. Végh, and G.J. Vuletin. 2019. "Is the Public Investment Multiplier Higher in Developing Countries? An Empirical Exploration." IMF Working Paper, International Monetary Fund, Washington, DC.
- Jafino, B., B. Walsh, J. Rozenberg, and S. Hallegatte. 2020. "Revised Estimates of the Impact of Climate Change on Extreme Poverty by 2030." Policy Research Working Paper 9417, World Bank, Washington, DC.
- Johns Hopkins University (database). "Coronavirus Resource Center." Accessed on January 3, 2022. <https://coronavirus.jhu.edu/>.
- Kanyanda, S., Y. Markhof, P. Wollburg, and A. Zezza. 2021. "Acceptance of COVID-19 Vaccines in Sub-Saharan Africa - Evidence from Six National Phone Surveys." Policy Research Working Paper 9739, World Bank, Washington, DC.
- Khoury, D. S., D. Cromer, A. Reynaldi, T. E. Schlub, A. K. Wheatley, J. A. Juno, K. Subbarao, et al. 2021. "Neutralizing Antibody Levels Are Highly Predictive of Immune Protection from Symptomatic SARS-CoV-2 Infection." *Nature Medicine* 27 (7): 1205-11.
- Kilic Celik, S., M. A. Kose, and F. Ohnsorge. 2020. "Subdued Potential Growth: Sources and Remedies." In *Growth in a Time of Change: Global and Country Perspectives on a New Agenda*, edited by H.-W. Kim and Z. Qureshi. Washington, DC: Brookings Institution.
- Kose, M. A. 2002. "Explaining Business Cycles in Small Open Economies: How Much Do World Prices Matter?" *Journal of International Economics* 56 (2): 299-327.
- Kose, M. A., H. Matsuoka, U. Panizza, and D. Vorisek. 2019. *Inflation Expectations: Review and Evidence*. Policy Research Working Paper 8785, World Bank, Washington, DC.
- Kose, M. A., F.L. Ohnsorge, C.M. Reinhart, and K.S. Rogoff. 2021. "The Aftermath of Debt Surges." NBER Working Paper 29266, National Bureau of Economic Research, Cambridge, MA.
- Kose, M. A., F. Ohnsorge, and N. Sugawara. 2021. "A Mountain of Debt: Navigating the Legacy of the Pandemic." Policy Research Working Paper 9800, World Bank, Washington, DC.
- Kpodar, K., M. Mlachila, S. Quayyum, and V. Gammadigbe. 2021. "Defying the Odds: Remittances Held up during the COVID-19 Pandemic." VoxEU.org, CEPR Policy Portal, September 27. <https://voxeu.org/article/defying-odds-remittances-held-during-covid-19-pandemic>.
- Kugler, M., M. Viollaz, D. Duque, I. Gaddis, D. Newhouse, A. Palacios-Lopez, and M. Weber. 2021. "How Did the COVID-19 Crisis Affect Different Types of Workers in the Developing World?" Policy Research Working Paper 9703, World Bank, Washington, DC.
- Laeven, L., and F. Valencia. 2018. "Systemic Banking Crises Revisited." IMF Working Paper 18/206, International Monetary Fund, Washington, DC.
- Liu, Y., and J. Rocklöv. 2021. "The Reproductive Number of the Delta Variant of SARS-CoV-2 is Far Higher Compared to the Ancestral SARS-CoV-2 Virus." *Journal of Travel Medicine*, 28 (7): taab124.
- Mahler, D. G., (r) N. Yonzan, and (r) C. Lakner. Forthcoming. "The Impacts of COVID-19 on Global Inequality and Poverty." Mimeograph. World Bank, Washington, DC.
- Malpass, D. 2021. "We Can Do More to Help Countries Deal with Climate Disasters." *Voices* (blog). November 12. <https://blogs.worldbank.org/voices/we-can-do-more-help-countries-deal-climate-disasters>.
- Manley, D., J. F. Cust, and G. Cecchinato. 2017. "Stranded Nations? The Climate Policy Implications

- for Fossil Fuel-Rich Developing Countries.” SSRN Scholarly Paper, Social Science Research Network, Rochester, NY.
- Mischke, J., J. Woetzel, S. Smit, J. Manyika, M. Birshan, E. Windhagen, J. Schubert, et al. 2021. *Will Productivity and Growth Return after the COVID-19 Crisis?* McKinsey & Company.
- Mondragon, J., and M. M. Tavares. 2021. “How to Reduce COVID-19’s Unequal Effects Across Workers.” *IMF Blog* (blog). June 1. <https://blogs.imf.org/2021/06/01/how-to-reduce-covid-19s-unequal-effects-across-workers/>.
- Moran, D., K. Kanemoto, M. Jiborn, R. Wood, J. Tobben, and K. Seto. 2018. “Carbon Footprints of 13,000 Cities.” *Environmental Research Letters* 13 (6): 4041.
- Moreno Badia, M., A. Gamboa-Arbelaez, and Y. Xiang. 2021. “Debt Dynamics in Emerging and Developing Economies: Is R-G a Red Herring?” IMF Working Paper 229, International Monetary Fund, Washington, DC.
- Moreno Badia, M., P. Medas, P. Gupta, and Y. Xiang. 2020. “Debt is Not Free.” IMF Working Paper 1, International Monetary Fund, Washington, DC.
- Mueller, Benjamin. 2021. “British Studies Warn of Omicron’s Speed, and One Notes the Need for Boosters.” *The New York Times*. <https://www.nytimes.com/2021/12/12/health/britain-omicron.html>.
- Multilateral Leaders Task Force on COVID-19 (database). Accessed on December 14, 2021. <https://data.covid19taskforce.com/data>.
- Nachtigall, D., J. Ellis, S. Peterson, and S. Thube. 2021. “The Economic and Environmental Benefits from International Coordination on Carbon Pricing: Insights from Economic Modelling Studies.” OECD Environment Working Paper 173, Organisation for Economic Co-Operation and Development, Paris.
- Narayan, A., A. Cojocaru, S. Agrawal, T. Bundervoet, M. Davalos, N. Garcia, C. Lakner, et al. Forthcoming. “COVID-19 and Economic Inequality: Short-Term Impacts with Long-Term Consequences.” World Bank, Washington, DC.
- ND-GAIN (database). Notre Dame Global Adaption Initiative. Accessed on December 15, 2021. <https://gain.nd.edu/>.
- OECD (Organisation for Economic Co-operation and Development). 2021. “Business Dynamism During the COVID-19 Pandemic: Which Policies for an Inclusive Recovery?” OECD Policy Responses to Coronavirus (COVID-19). February 18. Organisation for Economic Co-Operation and Development, Paris, France.
- Ohnsorge, F. L., M. Stocker, M. Y. Some. 2016. “Quantifying Uncertainties in Global Growth Forecasts.” Policy Research Working Paper 7770, World Bank, Washington, DC.
- Ohnsorge, F., and Sh. Yu, eds. 2021. *The Long Shadow of Informality: Challenges and Policies*. Washington, DC: World Bank.
- OPEC (Organization of the Petroleum Exporting Countries). 2021. “OPEC Monthly Oil Market Report.” Organization of the Petroleum Exporting Countries, Vienna.
- Our World in Data (database). “Coronavirus Pandemic (COVID-19).” Accessed on January 3, 2022. <https://ourworldindata.org/coronavirus>.
- Perla, J., C. Tonetti, and M. E. Waugh. 2021. “Equilibrium Technology Diffusion, Trade, and Growth.” *American Economic Review* 111 (1): 73-128.
- Peszko, G., D. van der Mensbrugge, A. Golub. 2020. *Diversification and Cooperation in a Decarbonizing World: Climate Strategies for Fossil Fuel-Dependent Countries*. Washington, DC: World Bank.
- Pulliam, J. R. C., C. V. Schalkwyk, N. Govender, A. V. Gottberg, C. Cohen, M. J. Groome, J. Dushoff, et al. 2021. “Increased Risk of SARS-CoV-2 Reinfection Associated with Emergence of the Omicron Variant in South Africa.” medRxiv. <https://www.medrxiv.org/content/10.1101/2021.11.11.21266068v2>.
- Raleigh, C., A. Linke, H. Hegre, and J. Karlsen. (2010). “Introducing ACLED-Armed Conflict Location and Event Data.” *Journal of Peace Research* 47 (5): 651-60.
- Ramey, V. A. 2020. “The Macroeconomic Consequences of Infrastructure Investment.” NBER Working Paper, National Bureau of Economic Research, University of California, San Diego, CA.
- Rogoff, K. 2021. “Back to the Seventies.” *Project Syndicate*. August 31. <https://www.project-syndicate.org/commentary/america-facing-1970s-style-stagflation-threat-by-kenneth-rogooff-2021-08>.
- Rogoff, K., and Y. Yang. 2021. “Has China’s Housing Production Peaked?” *China and the World Economy* 21 (1): 1-31.
- Rudd, J. B. 2021. “Why Do We Think That Inflation Expectations Matter for Inflation? (And Should We?).”

- Finance and Economics Discussion Series* 2021 (060): 1-27.
- Samano Penaloza, A. 2021. "International Reserves and Central Bank Independence." Policy Research Working Paper 9832, World Bank, Washington, DC.
- Serdeczny, O., S. Adams, F. Baarsch, D. Coumou, A. Robinson, W. Hare, M. Schaeffer, M. Perrette, and J. Reinhardt. 2016. "Climate Change Impacts in Sub-Saharan Africa: From Physical Changes to Their Social Repercussions." *Regional Environmental Change* 17 (6): 1585-1600.
- Shaxson, N. 2019. "Tackling Tax Havens." *Finance and Development Magazine* 56 (3): 1-5.
- UK Health Security Agency. 2021. "SARS-CoV-2 Variants of Concern and Variants under Investigation." Technical briefing, U.K. Health Security Agency, London, UK.
- UKCOP (U.N. Conference of Parties). 2021. "UN Climate Change Conference UK 2021." COP26. <https://ukcop26.org/wp-content/uploads/2021/07/COP26-Explained.pdf>.
- UN Habitat. 2020. *World Cities Report 2020: The Value of Sustainable Urbanization*. Nairobi, Kenya: United Nations Human Settlements Programme.
- UNCTAD (United Nations Conference on Trade and Development). 2021. "Global Investment Trend Monitor 39." World Investment Forum Factsheet Edition. October. https://unctad.org/system/files/official-document/diaeiainf2021d2_en.pdf.
- UNICEF COVID-19 Vaccine Market Dashboard (database). UNICEF. Accessed on January 3, 2022. <https://www.unicef.org/supply/covid-19-vaccine-market-dashboard>.
- UNWFP (United Nations World Food Program). 2021. "Global Report on Food Crises—2021." World Food Programme, Rome.
- UNU-WIDER (database). United Nations University. Accessed on December 20, 2021. <https://www.wider.unu.edu/data>.
- U.S. Bureau of Labor Statistics (database). "Job openings rate." Accessed on December 15, 2021. <https://data.bls.gov/cgi-bin/surveymost>.
- Végh, C. A., L. Morano, D. Friedheim, and D. Rojas. 2017. "Between a Rock and a Hard Place: The Monetary Policy Dilemma in Latin America and the Caribbean." LAC Semiannual Report, October. World Bank, Washington DC.
- Végh, C. A., and G. Vuletin. 2013. "Overcoming the Fear of Free Falling: Monetary Policy Graduation in Emerging Markets." In *The Role of Central Banks in Financial Stability How Has It Changed?*, edited by D. D. Evanoff, C. Holthausen, G. G. Kaufman, and M. Kremer, 105-29. World Scientific Publishing Co. Pte. Ltd, Singapore.
- Veldhoen, M., and J. P. Simas. 2021. "Endemic SARS-CoV-2 Will Maintain Post-pandemic Immunity." *Nature Reviews Immunology* 21 (3): 131-32.
- Wheeler, C. M., J. Baffes, A. Kabundi, G. Kindberg-Hanlon, P. S. Nagle, and F. Ohnsorge. 2020. "Adding Fuel to the Fire: Cheap Oil during the COVID-19 Pandemic." Policy Research Working Paper 9320, World Bank, Washington, DC.
- WHO (World Health Organization). 2021. "Six in Seven COVID-19 Infections Go Undetected in Africa." <https://www.afro.who.int/news/six-seven-covid-19-infections-go-undetected-africa>.
- WITS (database). World Integrated Trade Solution. Accessed on December 15, 2021. <https://wits.worldbank.org/>.
- WMO Catalogue for Climate Data (database). World Meteorological Organization. Accessed on October 20, 2021. <https://climatedata-catalogue.wmo.int/>.
- World Bank. 2013. *World Development Report 2014: Risk and Opportunity—Managing Risk for Development*. Washington, DC: World Bank.
- World Bank. 2015. *Global Economic Prospects*. January. Washington, DC: World Bank.
- World Bank. 2016. *Global Economic Prospects, January 2016: Spillovers amid Weak Growth*. January. Washington, DC: World Bank.
- World Bank. 2017. *Global Economic Prospects: Weak Investment in Uncertain Times*. June. Washington, DC: World Bank.
- World Bank. 2018. "The Role of Major Emerging Markets in Global Commodity Demand." In *Global Economic Prospects: The Turning of the Tide?*, 61-90. Washington, DC: World Bank.
- World Bank. 2020a. *Global Economic Prospects*. January. Washington, DC: World Bank.
- World Bank. 2020b. *Global Economic Prospects*. June. Washington, DC: World Bank.
- World Bank. 2020c. "The World Bank's Education Response to COVID-19." World Bank, Washington, DC.

- World Bank. 2021a. *Global Economic Prospects*. June. Washington, DC: World Bank.
- World Bank. 2021b. *Commodity Markets Outlook*. October. Washington, DC: World Bank.
- World Bank. 2021c. *Global Economic Prospects*. January. Washington, DC: World Bank.
- World Bank. 2021d. *Food Security and COVID-19*. Washington, DC: World Bank.
- World Bank. 2021e. "Prevention, Preparedness, and Response: The WBG's Role in Future Crises." Development Committee Paper. October. World Bank, Washington, DC.
- World Bank. 2021f. *State and Trends of Carbon Pricing 2021*. Washington, DC: World Bank.
- World Bank. 2021g. "Carbon Pricing for Climate Action." World Bank, Washington, DC.
- World Bank. 2021h. *Supporting Firms in Restructuring and Recovery*. Washington, DC: World Bank.
- Zeufack, A., C. Calderon, M. Kubota, V. Korman, C. Cantu Canales, and A. Kabundi. 2021. "Africa's Pulse, No. 22, October 2020: An Analysis of Issues Shaping Africa's Economic Future." World Bank, Washington, DC.
- Zhang, L., Q. Li, Z. Liang, T. Li, S. Liu, Q. Cui, J. Nie, et al. 2021. "The Significant Immune Escape of Pseudotyped SARS-CoV-2 Variant Omicron." *Emerging Microbes & Infections* 0 (ja): 1-11.