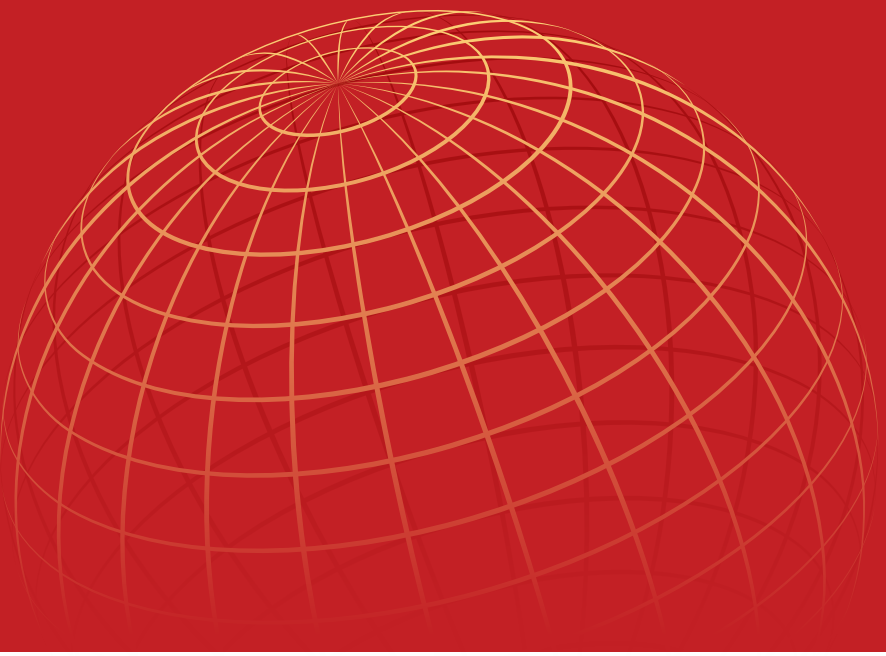

CHAPTER 1

GLOBAL OUTLOOK

Pandemic, Recession: The Global Economy in Crisis

The COVID-19 pandemic has, with alarming speed, delivered a global economic shock of enormous magnitude, leading to steep recessions in many countries. The baseline forecast envisions a 5.2 percent contraction in global GDP in 2020—the deepest global recession in eight decades, despite unprecedented policy support. Per capita incomes in the vast majority of emerging market and developing economies (EMDEs) are expected to shrink this year, tipping many millions back into poverty. The global recession would be deeper if bringing the pandemic under control took longer than expected, or if financial stress triggered cascading defaults. The pandemic highlights the urgent need for health and economic policy action—including global cooperation—to cushion its consequences, protect vulnerable populations, and improve countries' capacity to prevent and cope with similar events in the future. Since EMDEs are particularly vulnerable, it is critical to strengthen their public health care systems, to address the challenges posed by informality and limited safety nets, and, once the health crisis abates, to undertake reforms that enable strong and sustainable growth.

Summary

The COVID-19 pandemic has spread with astonishing speed to every part of the world and infected millions (Figure 1.1.A). The health and human toll is already large and continues to grow, with hundreds of thousands of deaths and many more suffering from diminished prospects and disrupted livelihoods. The pandemic represents the largest economic shock the world economy has witnessed in decades, causing a collapse in global activity (Figures 1.1.B and 1.1.C). Various mitigation measures—such as lockdowns, closure of schools and non-essential business, and travel restrictions—have been imposed by most countries to limit the spread of COVID-19 and ease the strain on health care systems. The pandemic and associated mitigation measures have sharply curbed consumption and investment, as well as restricted labor supply and production. The cross-border spillovers have disrupted financial and commodity markets, global trade, supply chains, travel, and tourism.

Financial markets have been extremely volatile, reflecting exceptionally high uncertainty and the worsening outlook. Flight to safety led to a sharp tightening of global and EMDE financial conditions. Equity markets around the world plunged, spreads on riskier categories of debt widened considerably, and EMDEs experienced large capital outflows in much of March and April that bottomed out only recently. Commodity prices have declined sharply as a result of falling global demand, with oil particularly affected (Figure 1.1.D).

Many countries have provided large-scale macroeconomic support to alleviate the economic blow, which has contributed to a recent stabilization in financial markets. Central banks in advanced economies have cut policy rates and taken other far-reaching steps to provide liquidity and to maintain investor confidence. In many EMDEs, central banks have also eased monetary policy (Figure 1.1.E). The fiscal policy support that has been announced already far exceeds that enacted during the 2008-09 global financial crisis.

In all, the pandemic is expected to plunge a majority of countries into recession this year, with per capita output contracting in the largest fraction of countries since 1870 (Figure 1.1.F). Advanced economies are projected to shrink by 7 percent in 2020, as widespread social-distancing measures, a sharp tightening of financial conditions, and a collapse in external demand depress activity. Assuming that the outbreak remains under control and activity recovers later this year, China is projected to slow to 1 percent in 2020—by far the lowest growth it has registered in more than four decades.

Due to the negative spillovers from weakness in major economies, alongside the disruptions

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Note: This chapter was prepared by Carlos Arteta, Justin-Damien Guénette, Patrick Kirby, and Collette Mari Wheeler, with contributions from Rudi Steinbach and additional inputs from John Baffes, Sergiy Kasyanenko, Peter Nagle, Franz Ulrich Ruch, and Ekaterine Vashakmadze. Research assistance was provided by Yushu Chen, Hrisyana Doytchinova, Fuda Jiang, Maria Hazel Macadangdang, Julia Renee Roseman Norfleet, Ipek Ceylan Oymak, Vasiliki Papagianni, Shijie Shi, Kaltrina Temaj, Jinxin Wu, and Juncheng Zhou.

TABLE 1.1 Real GDP[1]

(Percent change from previous year)

	2017	2018	2019e	2020f	2021f	Percentage point differences from January 2020 projections: 2020f	2021f
World	**3.3**	**3.0**	**2.4**	**-5.2**	**4.2**	**-7.7**	**1.6**
Advanced economies	**2.5**	**2.1**	**1.6**	**-7.0**	**3.9**	**-8.4**	**2.4**
United States	2.4	2.9	2.3	-6.1	4.0	-7.9	2.3
Euro Area	2.5	1.9	1.2	-9.1	4.5	-10.1	3.2
Japan	2.2	0.3	0.7	-6.1	2.5	-6.8	1.9
Emerging market and developing economies	**4.5**	**4.3**	**3.5**	**-2.5**	**4.6**	**-6.6**	**0.3**
Commodity-exporting EMDEs	2.2	2.1	1.5	-4.8	3.1	-7.4	0.2
Other EMDEs	6.1	5.7	4.8	-1.1	5.5	-6.2	0.3
Other EMDEs excluding China	5.4	4.8	3.2	-3.6	3.6	-7.6	-0.8
East Asia and Pacific	6.5	6.3	5.9	0.5	6.6	-5.2	1.0
China	6.8	6.6	6.1	1.0	6.9	-4.9	1.1
Indonesia	5.1	5.2	5.0	0.0	4.8	-5.1	-0.4
Thailand	4.1	4.2	2.4	-5.0	4.1	-7.7	1.3
Europe and Central Asia	4.1	3.3	2.2	-4.7	3.6	-7.3	0.7
Russia	1.8	2.5	1.3	-6.0	2.7	-7.6	0.9
Turkey	7.5	2.8	0.9	-3.8	5.0	-6.8	1.0
Poland	4.9	5.3	4.1	-4.2	2.8	-7.8	-0.5
Latin America and the Caribbean	1.9	1.7	0.8	-7.2	2.8	-9.0	0.4
Brazil	1.3	1.3	1.1	-8.0	2.2	-10.0	-0.3
Mexico	2.1	2.2	-0.3	-7.5	3.0	-8.7	1.2
Argentina	2.7	-2.5	-2.2	-7.3	2.1	-6.0	0.7
Middle East and North Africa	1.1	0.9	-0.2	-4.2	2.3	-6.6	-0.4
Saudi Arabia	-0.7	2.4	0.3	-3.8	2.5	-5.7	0.3
Iran	3.8	-4.7	-8.2	-5.3	2.1	-5.3	1.1
Egypt[2]	4.2	5.3	5.6	3.0	2.1	-2.8	-3.9
South Asia	6.5	6.5	4.7	-2.7	2.8	-8.2	-3.1
India[3]	7.0	6.1	4.2	-3.2	3.1	-9.0	-3.0
Pakistan[2]	5.2	5.5	1.9	-2.6	-0.2	-5.0	-3.2
Bangladesh[2]	7.3	7.9	8.2	1.6	1.0	-5.6	-6.3
Sub-Saharan Africa	2.6	2.6	2.2	-2.8	3.1	-5.8	0.0
Nigeria	0.8	1.9	2.2	-3.2	1.7	-5.3	-0.4
South Africa	1.4	0.8	0.2	-7.1	2.9	-8.0	1.6
Angola	-0.1	-2.0	-0.9	-4.0	3.1	-5.5	0.7
Memorandum items:							
Real GDP[1]							
High-income countries	2.4	2.2	1.7	-6.8	3.8	-8.3	2.3
Developing countries	4.8	4.4	3.7	-2.4	4.7	-6.7	0.2
Low-income countries	5.4	5.8	5.0	1.0	4.6	-4.4	-0.9
BRICS	5.3	5.3	4.7	-1.7	5.3	-6.6	0.4
World (2010 PPP weights)[4]	3.9	3.6	2.9	-4.1	4.3	-7.3	1.0
World trade volume[5]	5.9	4.0	0.8	-13.4	5.3	-15.3	2.8
Commodity prices[6]							
Oil price	23.3	29.4	-10.2	-47.9	18.8	-42.5	16.9
Non-energy commodity price index	5.5	1.8	-4.2	-5.9	3.0	-6.0	1.3

Source: World Bank.

1. Headline aggregate growth rates are calculated using GDP weights at 2010 prices and market exchange rates.

2. GDP growth rates are on a fiscal year basis. Aggregates that include these countries are calculated using data compiled on a calendar year basis. Pakistan's growth rates are based on GDP at factor cost. The column labeled 2019 refers to FY2018/19.

3. The column labeled 2018 refers to FY2018/19.

4. World growth rates are calculated using purchasing power parity (PPP) weights, which attribute a greater share of global GDP to EMDEs than market exchange rates.

5. World trade volume of goods and non-factor 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, 27 agricultural commodities). For additional details, please see http://www.worldbank.org/commodities.

Note: PPP = purchasing power parity; 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. Country classifications and lists of emerging market and developing economies (EMDEs) are presented in Table 1.2. BRICS include: Brazil, Russia, India, China, and South Africa. Due to lack of reliable data of adequate quality, the World Bank is currently not publishing economic output, income, or growth data for Venezuela, and Venezuela is excluded from cross-country macroeconomic aggregates.

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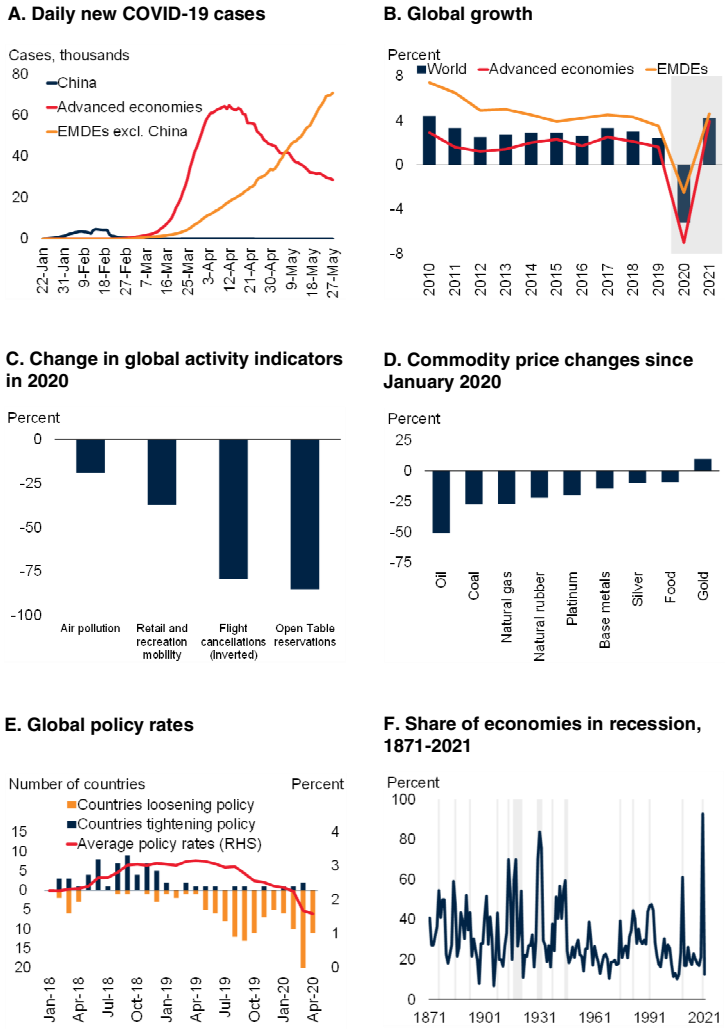
associated with their own domestic outbreaks, EMDE GDP is forecast to contract by 2.5 percent in 2020. This would be well below the previous trough in EMDE growth of 0.9 percent in 1982, and the lowest rate since at least 1960, the earliest year with available aggregate data. EMDEs with large domestic COVID-19 outbreaks and limited health care capacity; that are deeply integrated in global value chains; that are heavily dependent on foreign financing; and that rely extensively on international trade, commodity exports, and tourism will suffer disproportionately. Commodity-exporting EMDEs will be hard hit by adverse spillovers from sharply weaker growth in China, and by the collapse in global commodity demand, especially for oil. With more than 90 percent of EMDEs expected to experience contractions in per capita incomes this year, many millions are likely to fall back into poverty.

With advanced economies contracting, China experiencing record-low growth, and EMDE growth savaged by external and domestic headwinds, the global economy is expected to shrink by 5.2 percent this year in a baseline forecast. This would be the deepest global recession since World War II, and almost three times as steep as the 2009 global recession (Box 1.1). The forecast assumes that the pandemic recedes in such a way that domestic mitigation measures can be lifted by mid-year, adverse global spillovers ease during the second half of the year, and dislocations in financial markets are not long-lasting. Although a moderate recovery is envisioned in 2021, with global growth reaching 4.2 percent, output is not expected to return to its previously expected levels (Figure 1.2.A).

Since uncertainty around the outlook remains exceptionally high, alternative scenarios help illustrate the range of plausible global growth outcomes in the near term (Figure 1.2.B). In particular, the baseline forecast for 2020 could prove optimistic (Box 1.3). If COVID-19 outbreaks persist longer than expected, restrictions on movement and interactions may have to be maintained or reintroduced, prolonging the disruptions to domestic activity and further setting back confidence. Disruptions to activity would weaken businesses' ability to remain in operation

FIGURE 1.1 Global growth prospects

The COVID-19 pandemic has resulted in a collapse of global economic activity. EMDE financial conditions have tightened and commodity prices, especially oil prices, have plunged. Despite unprecedented macroeconomic policy support, the share of countries experiencing contractions in per capita GDP will reach its highest level since 1870.



Source: Air Quality Open Data Platform; Airportia; Bank for International Settlements; Bloomberg; European Central Bank; Google COVID-19 Community Mobility Reports; Johns Hopkins University; J.P. Morgan; OpenTable; University of Oxford; World Bank.

Note: EMDEs = emerging market and developing economies.

A. Figure shows 7-day moving averages. Last observation is May 27, 2020.

B. Shaded areas indicate forecasts. Data for 2019 are estimates. Aggregate growth rates calculated using GDP weights at 2010 prices and market exchange rates.

C. Air pollution is the change in NO2 emissions over January 1 to May 28 in 2019 and 2020. Retail and recreation mobility is the percent change for May 21, 2020 from baseline, which is the median value for the corresponding day of the week during the 5-week period January 3-February 6, 2020, based on data from Google. Flight cancelations shows the cancelations relative to total planned flights based on comparing currently operating flights in 2020 with flights that were operating 52 weeks ago in 2019 as of May 27, 2020. Open Table reservations shows the change in seated diners at restaurants on the OpenTable network on May 27 in 2019 and 2020. For more information on flight cancelations data, go to https://www.airportia.com/coronavirus/.

D. Figure shows the change in the monthly average of commodity prices between January 2020 and the last observation, which is May 2020. Price changes for "Base metals" and "Food" show World Bank Pink Sheet indexes. Oil price is unweighted average of Brent, WTI and Dubai prices.

E. Average policy rates are weighted using 2018 U.S. dollar GDP. Sample includes 13 advanced economies and the Euro Area and 21 EMDEs. Bars show the number of central banks lowering or raising their policy rate in a given month. Last observation included is April 2020.

F. Share of economies in recession, defined as an annual contraction in per capita GDP.

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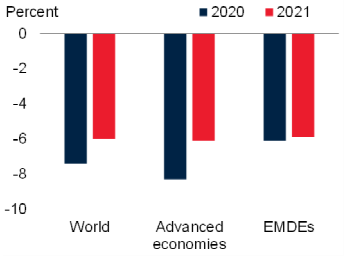
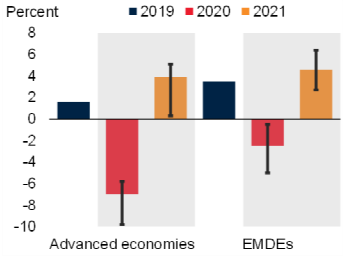
FIGURE 1.2 Global risks and policy challenges

The 2020 global recession is expected to be the deepest in eight decades, and the subsequent recovery will be insufficient to bring output to previously projected levels. Amid heightened uncertainty, worse outcomes could arise if the pandemic and economic disruptions persist or cascading defaults amid high debt lead to financial crises. A lack of space is constraining fiscal responses in many EMDEs. Building resilient health care systems is critical to prevent similar crises. With ongoing recessions exerting scarring effects on potential output, pursuing reforms that bolster long-term growth prospects will be essential.

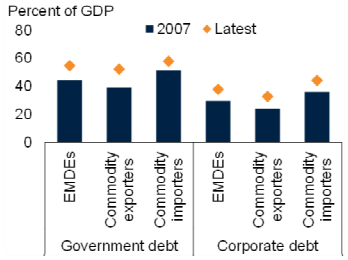
A. Level of output relative to January 2020 projections



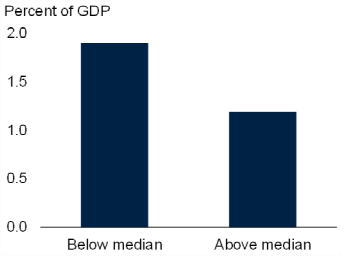
B. Growth in advanced economies and EMDEs



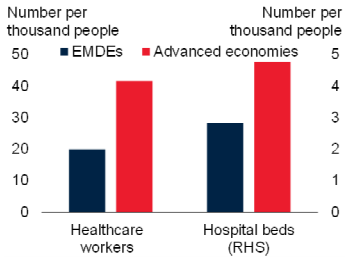
C. Government and non-financial corporate debt



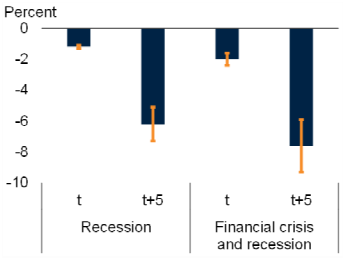
D. EMDE discretionary fiscal support measures in 2020, by debt levels



E. Health indicators in 2017



F. Cumulative EMDE potential output response after recessions



Source: Bank for International Settlements; Ha, Kose and Ohnsorge (2019); International Monetary Fund; Johns Hopkins University; Organisation for Economic Co-operation and Development; World Bank.

A. Figure shows the percent difference between the level of output in the January and June 2020 editions of *Global Economic Prospects*.

B. Shaded area indicates forecasts. Black lines indicate ranges based on the lower and upper bounds of growth in the scenarios described in Box 1.3.

C. Unweighted averages. Sample includes 88 commodity exporters and 65 commodity importers for government debt and 27 commodity exporters and 21 commodity importers for corporate debt. Latest available data is 2018 for government debt, and 2019Q4 for 16 economies and 2017 or 2018 for 31 economies for corporate debt.

D. Figure shows median values. Total measures either planned or under consideration as of May 29, 2020 as a share of 2019 nominal GDP. Above (below) median indicates countries with government debt-to-GDP ratios above (below) a median of 51 in 2018. Sample includes 48 EMDEs.

E. Unweighted averages. Sample includes 26 advanced economies and 11 EMDEs as data are available.

F. Data and methodology are detailed in Chapter 3 Box 3.1 and Annex 3.4. Charts show impulse responses for 75 EMDEs from a local projections model. Dependent variable is cumulative slowdown in potential output after a recession, financial crisis, or oil price plunge event. Year t is the year of the event. Bars show coefficient estimates; vertical lines show 90 percent confidence bands.

Click here to download data and charts.

and service their debt, while the increase in risk aversion could raise interest rates for higher-risk borrowers. With debt levels already at historic highs, this could lead to cascading defaults and financial crises across many economies (Figure 1.2.C). Under this downside scenario, global growth would shrink almost 8 percent in 2020. The recovery that follows would be markedly sluggish, hampered by severely impaired balance sheets, heightened financial market stress and widespread bankruptcies in EMDEs. In 2021, global growth would barely begin to recover, increasing to just over 1 percent.

In contrast, in an upside scenario, a sharp economic rebound would begin promptly if pandemic-control measures could be largely lifted in the near term, and fiscal and monetary policy responses succeed in supporting consumer and investor confidence, leading to a prompt normalization of financial conditions and the unleashing of pent-up demand. However, even with these positive developments, the near-term contraction in global activity of more than 3 percent in 2020 would still be much larger than during the global recession of 2009, and EMDE growth would also be negative. Once pandemic-control measures are fully lifted, global growth would rebound markedly in 2021, to above 5 percent.

Policymakers face formidable challenges as they seek to contain the devastating health, macroeconomic, and social effects of the pandemic. During the last global recession, in 2009, many EMDEs were able to implement large -scale fiscal and monetary responses. Today, however, many EMDEs are less prepared to weather a global downturn and must simultaneously grapple with a severe public health crisis with heavy human costs. Particularly vulnerable EMDEs include those that have weak health systems; those that rely heavily on global trade, tourism, and remittances; those that are prone to financial market disruptions; and those that depend on oil and other commodity exports. EMDEs where poverty and informality are widespread, including many low-income countries, are also vulnerable, since their poor have limited access to proper sanitation and

adequate social safety nets, and often suffer greater food insecurity (Box 1.2).

An arsenal of macroprudential support policies has been deployed in EMDEs to maintain financial sector resilience and promote lending during the crisis. These include relaxing capital and liquidity coverage requirements, allowing banks to draw down capital and liquidity buffers, and encouraging banks to offer temporary loan repayment holidays to distressed borrowers. Further, many countries have initiated debt moratoria and government guarantees on bank loans to strengthen bank balance sheets and support distressed borrowers. Policymakers would, however, need to carefully balance some of these actions against jeopardizing the future stability of the financial sector. Once economic activity begins to normalize, they will also need to prudently withdraw the large-scale policy stimulus provided during the crisis without endangering the recovery.

Meanwhile, many EMDEs have introduced fiscal measures to expand social safety nets and protect those most vulnerable, including wage support to preserve jobs, increased access to unemployment benefits, and targeted cash transfers to low-income households. In EMDEs with wider fiscal space, the policy response has been markedly greater than in those more constrained by higher debt levels (Figure 1.2.D). For many energy-exporting EMDEs, fiscal balances are deteriorating as oil prices have fallen below fiscal break-even prices. Elevated debt burdens in some low- and middle-income countries also underscore the need for temporary debt relief. In this context, global coordination and cooperation—of the measures needed to slow the spread of the pandemic, and of the economic actions needed to alleviate the economic damage, including international support—provide the greatest chance of achieving public health goals and enabling a robust global recovery.

In the near term, COVID-19 has underscored the need for governments to prioritize the timely and transparent dissemination of accurate information in order to stem the spread of the disease, and to build public trust. In the long term, the pandemic has laid bare the weaknesses of national health care and social safety nets in many countries. It has also exposed the severe consequences of widespread informality and financing constraints for small and medium enterprises (SMEs) in many EMDEs (Box 1.4). There is a critical need to invest in resilient health care systems that prioritize national health security, in order to prevent and mitigate similar crises (Figure 1.2.E).

It is also necessary to put in place social benefit systems that can provide an effective, flexible, and efficient safety net during disasters. Such systems can be augmented by measures to deliver income support and emergency financing to vulnerable groups such as the poor, urban slum dwellers, migrants, and informal firms. In particular, digital technologies can enhance the provision of cash transfers and other critical support measures, as well as facilitate the flow of remittances.

In many countries, deep recessions triggered by COVID-19 will likely weigh on potential output for years to come (Figure 1.2.F; Chapter 3). Governments can take steps to alleviate the adverse impact of the crisis on potential output by placing a renewed emphasis on reforms that can boost long-term growth prospects.

Major economies: Recent developments and outlook

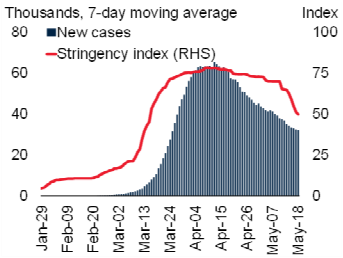
All major economies have experienced COVID-19 outbreaks, of varying intensity. Output in advanced economies is set to contract sharply in 2020, as domestic demand and supply, trade, and finance have all been severely disrupted. Assuming that the pandemic does not lead to lasting damage to financial systems, growth is expected to rebound in 2021, aided by unprecedented support from fiscal, monetary, and financial sector policies. In China, output appears to be recovering from the large drop at the start of the year, but the strength of the expected rebound is uncertain.

Advanced economies have faced a very substantial slump in activity as they grapple with the far-reaching consequences of the pandemic. As a result, advanced-economy output is now projected to slow dramatically, from an expansion of 1.6 percent in 2019 to a contraction of 7 percent in

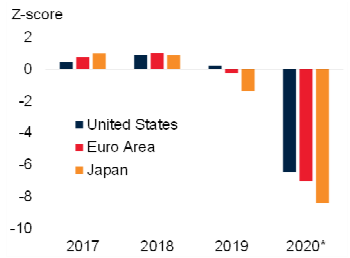
FIGURE 1.3 Advanced economies

As the number of confirmed COVID-19 cases soared in advanced economies, governments implemented far-reaching lockdowns and other restrictions to slow the spread of the virus and ease the burden placed on health care systems. Consumer confidence has plummeted, as these measures have dramatically reduced economic activity.

A. Daily new cases and stringency index



B. Consumer confidence in major advanced economies



Source: Haver Analytics; Johns Hopkins University; University of Oxford; World Bank.
A. Figure shows day-on-day cumulative confirmed cases and containment measures. The stringency index refers to the average sub-indices of nine mitigation measures: School closings, workplace closings, cancelation of public events and public transport, restriction on gatherings, stay-home requirements and restrictions to international and domestic travel and public information campaigns. The stringency index range is between 0 and 100, with 100 being the most stringent. Sample includes 32 advanced economies as data are available. Last observation is May 18, 2020.
B. Confidence data are normalized across countries using the mean and standard deviation from 2015 to 2019. Asterisk indicates that 2020 data are as of the most recent monthly observation, which is May 2020.
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2020—8.4 percentage points below January forecasts.

As the number of infections soared in advanced economies, governments implemented restrictions to slow the spread of the outbreak and ease the burden on health care systems (Figure 1.3.A). These represent a combination of demand and supply shocks to activity. On the demand side, these measures—coupled with elevated uncertainty and falling confidence—have caused declines in consumption and investment. In some countries, heightened risk aversion and a flight to safety have led to tighter credit conditions for normally eligible borrowers.

On the supply side, the shutdown of many businesses has disrupted supply chains, increased unemployment, and sharply reduced production. As a result, consumer confidence has plummeted (Figure 1.3.B). Policymakers have promptly provided an unprecedented degree of fiscal and monetary support to households, firms, and financial markets, but conditions in advanced economies remain at considerable risk. Despite steps toward gradually relaxing restrictions in some countries, activity remains very weak.

United States

The domestic COVID-19 outbreak and associated large-scale pandemic-control measures have massively disrupted activity. High-frequency service sector indicators point to an unprecedented collapse, especially for services and travel (Figures 1.4.A and 1.4.B). Compared to the global financial crisis, weekly unemployment claims have risen much faster, while industrial production and retail sales have fallen much more sharply (Figure 1.4.C). Meanwhile, the collapse in oil prices has depressed investment in the highly leveraged U.S. shale oil sector (Figure 1.4.D; Gevorkyan and Semmler 2016). The Federal Reserve has cut rates to near-zero, and announced far-reaching measures to stabilize the financial system. The latter include unlimited purchases of U.S. government debt and mortgage-backed obligations, as well as large-scale purchases of corporate bonds and of securities issued by lower levels of government. The U.S. government has also provided fiscal support approaching $3 trillion, including over $1 trillion in loans to firms and to state and local governments. Further measures, such as another round of direct transfers to households, are under consideration.

U.S. GDP is expected to contract by 6.1 percent in 2020—7.9 percentage points below previous forecasts, reflecting the severe consequences of the pandemic in the first half of the year, and an assumed gradual recovery in the second half. It is subsequently projected to rebound to 4 percent in 2021, as large-scale policy support gains traction, amid an assumed recovery in consumer and investor confidence.

Euro Area

Widespread virus outbreaks throughout the Euro Area have prompted governments to impose various mitigation measures such as nationwide lockdowns, extended school closures, and border restrictions (Figure 1.5.A). These have significantly disrupted domestic economic activity (Figure 1.5.B). Many Euro Area members are

heavily reliant on tourism, a sector virtually shut down by government policies, and particularly prone to slow recoveries (Figure 1.5.C; Mann 2020). In contrast to the United States, the rise in unemployment has been modest so far, in large part due to the widespread use of short-time work policies (Figure 1.5.D).

In response, the European Central Bank has offered low-interest loans to banks, significantly boosted asset purchases, and allayed fears of member-country defaults by lifting distributional restrictions on its bond-buying program. Member governments have rolled out significant fiscal support packages. For example, Germany provided stimulus worth 4.5 percent of GDP—about twice the support it provided in 2009—in addition to an envelope of over 20 percent of GDP in loan guarantees for the corporate sector. Italy, although constrained by existing elevated debt levels, announced fiscal stimulus in excess of 4 percent of GDP. Large member countries are also advancing a major recovery plan for the European Union, including grants for economies hardest hit by the crisis.

Euro Area output is expected to contract by 9.1 percent in 2020—10.1 percentage points below previous projections—with all major member countries experiencing recessions before a gradual recovery gets underway late in the year. Growth is forecast to rebound to 4.5 percent in 2021, reflecting fading pandemic-related drag, and the eventual effects of accommodative fiscal and monetary policy.

Japan

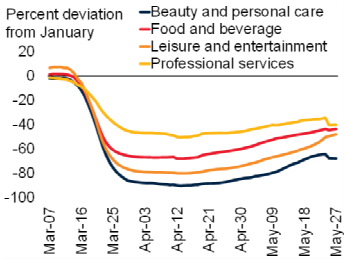
In Japan, preventive measures were able to slow the spread of the virus, but triggered a fall in economic activity, magnifying acute adverse spillovers via trade and financial channels. The postponement of the Tokyo 2020 summer Olympics has compounded the adverse economic effects of the pandemic. To help support growth, the Bank of Japan has ramped up its securities and corporate bond purchases, expanding the size of its balance sheet by over 10 percent of GDP since January. The government has also announced fiscal support packages cumulatively worth about 40 percent of GDP—in addition to repurposing funds from the December 2019 stimulus—to cushion the outbreak's domestic impact.

Output is projected to shrink by 6.1 percent in 2020, 6.8 percentage points below previous expectations. Weaker-than-expected outcomes earlier in the year, as well as the severe effects of the pandemic, contribute to the downgrading. Growth is expected to recover to 2.5 percent in 2021, aided by fiscal and monetary support.

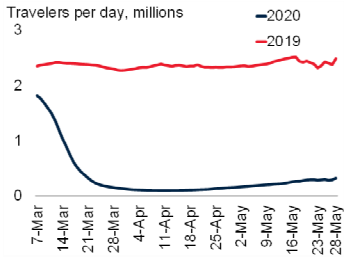
FIGURE 1.4 United States

High-frequency indicators point to an unprecedented collapse in services and travel. Industrial production and retail sales have fallen much more sharply than during the global financial crisis. Meanwhile, the collapse in oil prices has substantially reduced investment in the highly leveraged U.S. shale oil sector.

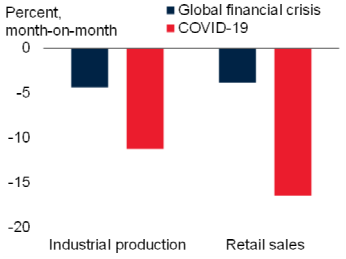
A. Reduction in hours worked



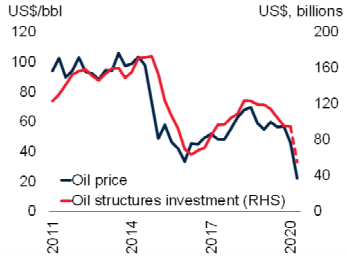
B. TSA passenger traffic



C. Industrial production and retail sales



D. U.S. oil prices and oil structures investment



Source: Bloomberg; Haver Analytics; Homebase; Federal Reserve Bank of St. Louis; Transportation Security Administration; World Bank.

A. Figure shows 7-day moving average. Sample covers 60,000 small businesses and 1 million hourly employees in the U.S. The data compare the hours worked for the observed day against the median hours worked for the same day of the week during the period January 4, 2020 to January 31, 2020 in order to compare the level of activity to pre-COVID-19 levels. Last observation is May 27, 2020. For more information on the data, go to https://joinhomebase.com/data/covid-19/.

B. TSA = Transportation Security Administration. Figure shows 7-day moving average. Last observation is May 28, 2020.

C. Figure shows April 2020 for COVID-19 and the largest one-month decline over the period 2007-09 for the global financial crisis, which is September 2008 and November 2008 for industrial production and retail sales, respectively.

D. Figure shows quarterly data. Oil price is the quarterly average of the West Texas Intermediate benchmark. Oil structures investment reflects the real private fixed investment in mining exploration, shafts, and wells structures. Last observation for investment is 2020Q1 with forecast for 2020Q2 based on a regression of oil structures investment on oil price. Last observation for oil price is 2020Q2, which is based on data through May 28, 2020.

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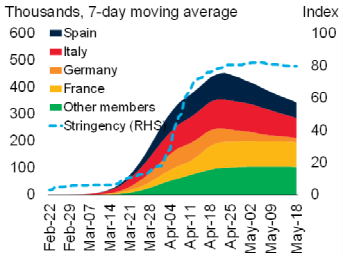
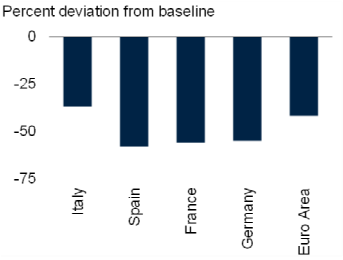
FIGURE 1.5 Euro Area

Widespread COVID-19 outbreaks throughout the Euro Area have prompted governments to impose nationwide lockdowns, extended school closures, and other restrictions, leading to severe disruptions in economic activity. Many Euro Area members are heavily reliant on tourism, a sector that has been acutely affected by travel restrictions and consumer risk aversion. The rise in Euro Area unemployment has been below that of the United States, in large part because of the widespread use of shorter work-time policies.

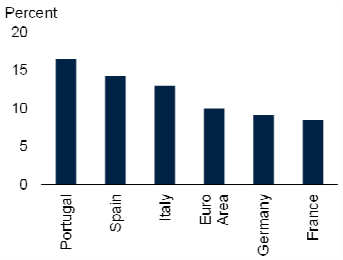
A. Cumulative confirmed COVID-19 cases and mitigation measures across Euro Area member countries



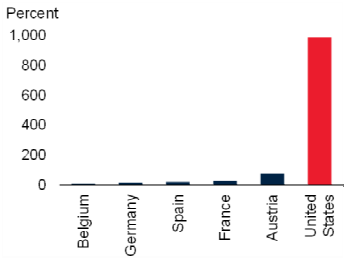
B. Google mobility trends for retail and recreation



C. Share of tourism in GDP in 2019



D. Change in continuing unemployment insurance claims



Source: Google COVID-19 Community Mobility Reports; Haver Analytics; Johns Hopkins University; University of Oxford; World Bank; World Travel and Tourism Council.

A. "Stringency" refers to daily number of measures implemented across advanced economies and include the following policy actions: School closings, workplace closings, cancelation of public events and public transport, restrictions to gatherings, and to international and domestic travel, and stay at home requirements. Last observation is May 18, 2020.

B. Data refer to May 21, 2020.

C. Data represents the sum of direct and indirect impacts of the travel and tourism sector estimated by the World Travel and Tourism Council. Euro Area is calculated using 2019 U.S. dollar GDP weights at 2010 prices and market exchange rates.

D. Figure shows percent change between the monthly average of 2019 and the last observation for 2020. Last observation is April 2020.

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China

Output contracted sharply in the first quarter, with private consumption and non-financial services being especially hard-hit by the pandemic and an extended period of restrictions to stem it. Exports plunged, more than imports, as a result of temporary factory closures. Activity has been normalizing gradually in the second quarter following the relaxation of lockdowns (Figures 1.6.A-1.6.C). However, companies continue to face funding shortages and depressed external demand (Figure 1.6.D). The authorities have implemented monetary and fiscal policies to cushion the economic impact of the outbreak. These have included the provision of significant liquidity injections, tax relief, emergency health and welfare spending worth approximately 2.8 percent of GDP, and the authorization of additional special central and local government bond issuances equivalent to about 2.6 percent of GDP (World Bank 2020a).

Reflecting the major disruptions caused by the pandemic, growth is projected to decelerate sharply, from 6.1 percent in 2019 to 1 percent in 2020. This is 4.9 percentage points below previous projections, and the lowest growth rate in more than four decades. Growth is expected to rebound in 2021, reaching 6.9 percent, partly reflecting a projected recovery in global demand.

Global trends

The spread of the pandemic has essentially halted international travel and disrupted global value chains, resulting in a sharp contraction in global trade. A flight to safety has triggered sharp falls in global equity markets, unprecedented capital outflows from EMDEs, rising credit-risk spreads, and depreciations for many EMDE currencies. Falling demand has led to a sharp decline in most commodity prices, with a particularly substantial plunge in oil prices.

Global trade

Recent indicators suggest that global trade is on track to fall more in 2020 than it did during the global financial crisis, partly owing to the disruptions the COVID-19 pandemic has caused to international travel and global value chains (Figures 1.7.A and 1.7.B). Trade is typically more volatile than output, and tends to fall particularly sharply in times of crisis (Figure 1.7.C; Freund 2009; Bussière et al. 2013; Bems, Johnson, and Yi 2010; Kose and Terrones 2015). Investment, which is more cyclical and more trade-intensive than other categories of expenditure, has declined worldwide as firms face financing problems and

delay expansion. Exporting firms tend to be particularly active in credit markets, and more adversely affected when the cost of credit increases (Ahn, Amiti, and Weinstein 2011; Chor and Manova 2012). Disruptions in credit markets played an important role in the contraction in global trade during the global financial crisis and the subsequent weakness of the rebound. This pattern is at risk of being repeated.

The fall in activity has been concentrated in services sectors that are typically stable (Figure 1.7.D). Travel restrictions and concerns about COVID-19 have led to a precipitous fall in tourism—a sector that in recent years has accounted for about 6.5 percent of global exports of goods and services—with sharp declines in economies with the most severe outbreaks (Figure 1.7.E).

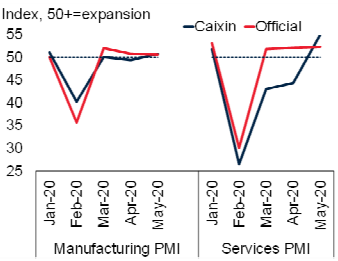
As the pandemic has spread, stringent border controls and production delays have weighed on trade. Measures to slow the outbreak have limited or delayed the supply of critical inputs, particularly in the automotive and electronics industries (Haren and Simchi-Levi 2020; Baldwin and Tomiura 2020). The collapse of air traffic has resulted in a steep rise in air freight costs, putting further strain on industries that rely on just-in-time delivery of foreign-sourced intermediate goods. Supplier delivery times have lengthened considerably and inventories have been depleted (Figure 1.7.F).

The sharp fall in activity in the first half of this year is expected to contribute to a contraction in global trade of about 13.4 percent in 2020. A gradual recovery is assumed to start during the second half of the year as controls are lifted, travel returns to more typical levels, and manufacturers rebuild inventories. This recovery is expected to be historically feeble, however, reflecting the exceptional character of the present crisis, as well as the length of time that it will take to restore confidence, to replace bankrupted firms, and to establish virus-safe working and entertainment environments. In particular, services do not benefit as much as manufacturing when inventories are restocked, and when purchases of durables pick up after a period of being deferred.

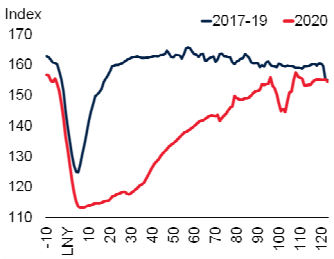
FIGURE 1.6 China

Economic activity collapsed in the first quarter as a result of the COVID-19 outbreak and related lockdowns and closures, although there is evidence of a bottoming out. PMIs have generally rebounded, and road congestion and traded area of commercial buildings in major cities are approaching their normal levels. However, industrial profits and government revenues have declined markedly.

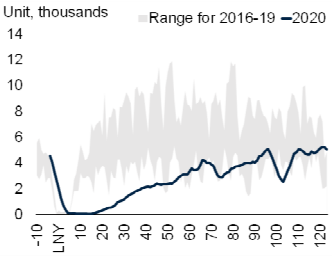
A. Purchasing Managers' Index



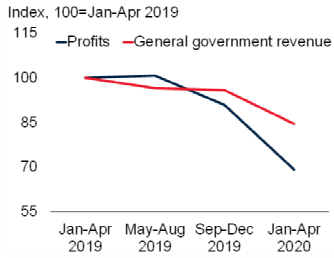
B. Congestion delay index, 100-city average



C. Commercial real estate sales in 30 large- and medium-sized cities



D. Industrial profits and revenue



Source: Baidu; China National Bureau of Statistics; Haver Analytics; Wind; World Bank.
Note: LNY = Lunar New Year.
A. Official and Caixin Purchasing Managers' Index (PMI). PMI readings above (below) 50 indicate expansion (contraction) in economic activity. Last observation is May 2020.
B. Baidu's traffic congestion data is derived from Baidu's real-time traffic information map application. The traffic congestion delay index evaluates the degree of urban congestion, specifically the ratio of the average actuarial travel time to free travel time of urban residents. The congestion index ranges from 1 to 4, where 1 indicates smoothness, 2 indicates slow movement, 3 indicates congestion, and 4 indicates severe congestion. Number on the x-axis indicate days before and after Chinese Lunar New Year. 7 day moving average. Last observation is May 27, 2020.
C. Commercial real estate refers to commercial residential buildings (excluding affordable housing), office buildings, and buildings for commercial businesses. Hangzhou, Nanchang, Wuhan, Harbin, Kunming, Yangzhou, Anqing, Nanning, Lanzhou, Jiangyin, and Foshan provide commercial buildings' sales data (including residential, office and commercial building sales data). Beijing, Shanghai, Guangzhou, Shenzhen, Nanjing, Qingdao, Suzhou, Xiamen, Dalian, Wuxi, Fuzhou, Dongguan, Huizhou, Baotou, Changchun, Yueyang, Shaoguan, Chengdu, Changsha, Shijiazhuang, Tianjin provide only partial sales data on commercial residential buildings. Numbers on the x-axis indicate days before and after Chinese Lunar New Year. Figure shows 7-day moving average. Last observation is May 27, 2020.
D. Figure shows seasonally adjusted profits for all industrial enterprises. Data for January and February are not published by the statistical source due to the Chinese New Year. Haver Analytics calculates figures for January and February by allocating the published February year-to-date figures to January and February using the number of working days as weights. Last observation is April 2020.
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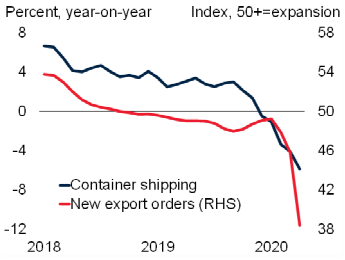
International air travel may take a very long time to re-attain the levels of recent years, as businesses and tourists make fundamental reassessments of the trade-off between foreign trips and infection risks, airlines reduce passenger loads to increase spacing, and governments maintain tighter border controls.

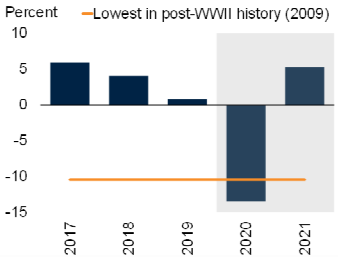
FIGURE 1.7 Global trade

Based on incoming indicators, global trade is on track to fall more in 2020 than it did during the global financial crisis. Trade growth tends to fall much more than activity during crises. The extent of the downturn is magnified by particularly severe disruptions to trade in services, such as tourism, and by global value chains struggling with delayed shipments.

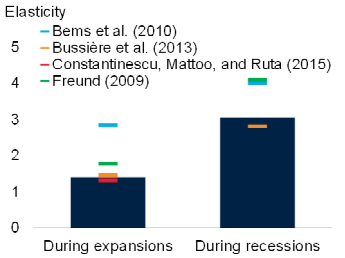
A. Container shipping and new export orders



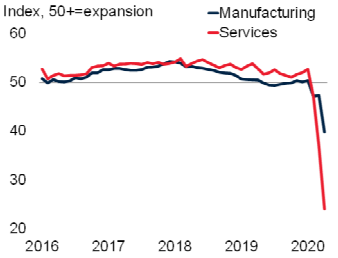
B. Trade growth



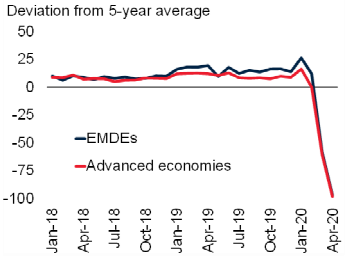
C. GDP elasticity of global trade



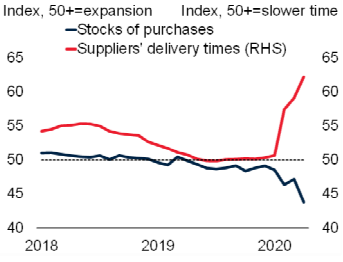
D. Global manufacturing and services PMI



E. Monthly tourist arrivals as a share of average since 2015



F. Subcomponents of the global manufacturing PMI



Source: Haver Analytics; Institute of Shipping Economics and Logistics; World Bank.
Note: PMI = Purchasing Managers' Index.
A.D. PMI readings above (below) 50 indicate expansion (contraction) in economic activity.
A. Figure shows 3-month moving averages. New export orders are for manufacturing and measured by PMI. Last observation is April 2020.
B. Shaded area indicates forecasts. Trade is the average of import and export volumes.
C. Bars show the coefficient of a simple regression of global trade on GDP from 2011-2019 "during expansions" and using 2009, 1991, 1982, and 1975 "during recessions". Recession is defined as defined as a contraction in real per capita GDP. These roughly correspond with more sophisticated estimates such as Bems, Johnson, and Yi (2010); Bussière et al. (2013); Constantinescu, Mattoo and Ruta (2015); and Freund (2009).
D. Manufacturing and services are measured by PMI. Last observation is April 2020.
E. Figure shows the deviation from the unweighted country average for each month since 2015. Sample includes 29 EMDEs and 22 advanced economies. Last observation is April 2020.
F. Figure shows the global stocks of purchases and the suppliers' delivery times PMI. For the stocks of purchases, PMI readings above (below) 50 indicate expansion (contraction) in economic activity; the suppliers' delivery times PMI readings above (below) 50 indicate slower (faster) deliveries. This is reversed from how this subcomponent is normally presented, to reflect that the slowdown in deliveries is a consequence of production disruptions rather than a sign that the economy is working near full capacity. Last observation is April 2020.
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Financial markets

Financial markets witnessed a historic flight to safety as the economic consequences of widespread measures to contain COVID-19 became apparent. Global equity valuations took an unprecedented plunge early in the year, while market volatility spiked to its highest level since 2008 (Figures 1.8.A and 1.8.B). EMDEs suffered from record capital outflows accompanied by a rise in sovereign borrowing spreads, which was especially severe for countries with high government debt (Figures 1.8.C and 1.8.D).

To contain financial stress, central banks injected liquidity into financial markets through a combination of direct credit provision to large investment-grade companies, expansion of the range of assets they accept as collateral, and large-scale asset purchases—including of corporate debt in some countries (Hördahl and Shim 2020). To alleviate the sharp rise in demand for U.S. dollars for currency hedging and dollar-denominated debt financing, the Federal Reserve provided access to its U.S. dollar liquidity swap arrangements to a larger group of countries, including Brazil, Mexico, and the Republic of Korea (Avdjiev, Eren, and McGuire 2020). These measures appear to have successfully averted a severe liquidity crisis that appeared possible earlier in the year. Capital outflows from EMDEs have stabilized, while equity market valuations have retraced a considerable share of their earlier losses.

Nonetheless, financial conditions remain fragile for many market participants. Disruptions in activity have interrupted cash flows and interfered with debt financing around the world. Spreads on high-yield debt have risen substantially amid widespread corporate bond downgrades, suggesting investors may have become more skeptical about the ability of riskier borrowers to finance their debt. Many EMDEs have also experienced significant pressures on their currencies, with depreciations broadly correlated with current account deficits (Figure 1.8.E). Foreign direct investment in many countries is expected to fall considerably (Figure 1.8.F). Remittances—the largest source of foreign exchange earnings for EMDEs in 2019—are also envisioned to contract sharply across most EMDE

BOX 1.1 How deep will the COVID-19 recession be?

"The short-term collapse in global output now underway already seems likely to rival or exceed that of any recession in the last 150 years." Kenneth Rogoff, Professor of Economics, Harvard University

"The scope and speed of this downturn are without modern precedent, significantly worse than any recession since World War II." Jerome Powell, Chair, The U.S. Federal Reserve System

Current projections suggest that the COVID-19 global recession will be the deepest since the end of World War II, with the largest fraction of economies experiencing declines in per capita output since 1870. Output of emerging market and developing economies (EMDEs) is expected to contract in 2020 for the first time in at least 60 years. The current global recession is also unique in that global growth forecasts have been revised down more steeply and rapidly than in any other recessions since at least 1990. The gradual nature of forecast downgrades in previous global recessions suggests that further downgrades may be in store as forecasters absorb new information about the evolution of the pandemic. As such, additional policy measures to support activity may be needed in the coming months.

The COVID-19 pandemic has led to a deep global recession. The pandemic, and the aggressive restrictions and voluntary restraints on human interaction adopted to contain it, have already led to massive downturns in advanced economies, and to increasing disruptions in EMDEs. Global growth forecasts have been downgraded at an unusually rapid pace over the past three months. The uncertain course of the pandemic, in the absence thus far of effective vaccines or treatments, has caused extraordinary economic uncertainty, including about the possible depth and duration of the global recession, and about how different countries will be affected.

Against this background, this box presents the first systematic comparison of the COVID-19 global recession with previous global recession episodes over the past 150 years. It addresses three questions:

- How does the depth of the COVID-19 recession compare with previous episodes?
- How does the current global recession differ from earlier episodes in different groups of economies?
- How does the evolution of growth forecasts during the current global recession differ from previous episodes?

Contributions. The box makes three contributions to earlier work on global recessions.[1] First, it puts the COVID-19 recession in historical context by analyzing the global recessions of the past 150 years. Second, it compares the performance of different groups of economies—advanced economies, EMDEs, low-income countries (LICs), and EMDE regions—during the current episode with their record in previous ones. Third, it compares the evolution of growth projections between the current and previous global recessions to shed light on the likely future trajectory of forecasts.

Methodology and database. The dates of global recessions are identified by two methods: a statistical method and a judgmental method.[2] The former method defines a global recession as a decline in annual global real GDP per capita. The latter method, similar to the one used for the United States by the Business Cycle Dating Committee of the National Bureau of Economic Research, considers whether there is strong evidence for a broad-based decline in key indicators of global economic activity in a given year. These two methods imply that a *global recession* is a contraction in global real GDP per capita accompanied by a broad decline in various other measures of global activity.[3]

Note: This box was prepared by M. Ayhan Kose and Naotaka Sugawara.

[1] Kose, Sugawara, and Terrones (2019) present a review of the relevant literature on global recessions, analyze how different shocks lead to global recessions, and examine the interactions between global and national cycles.

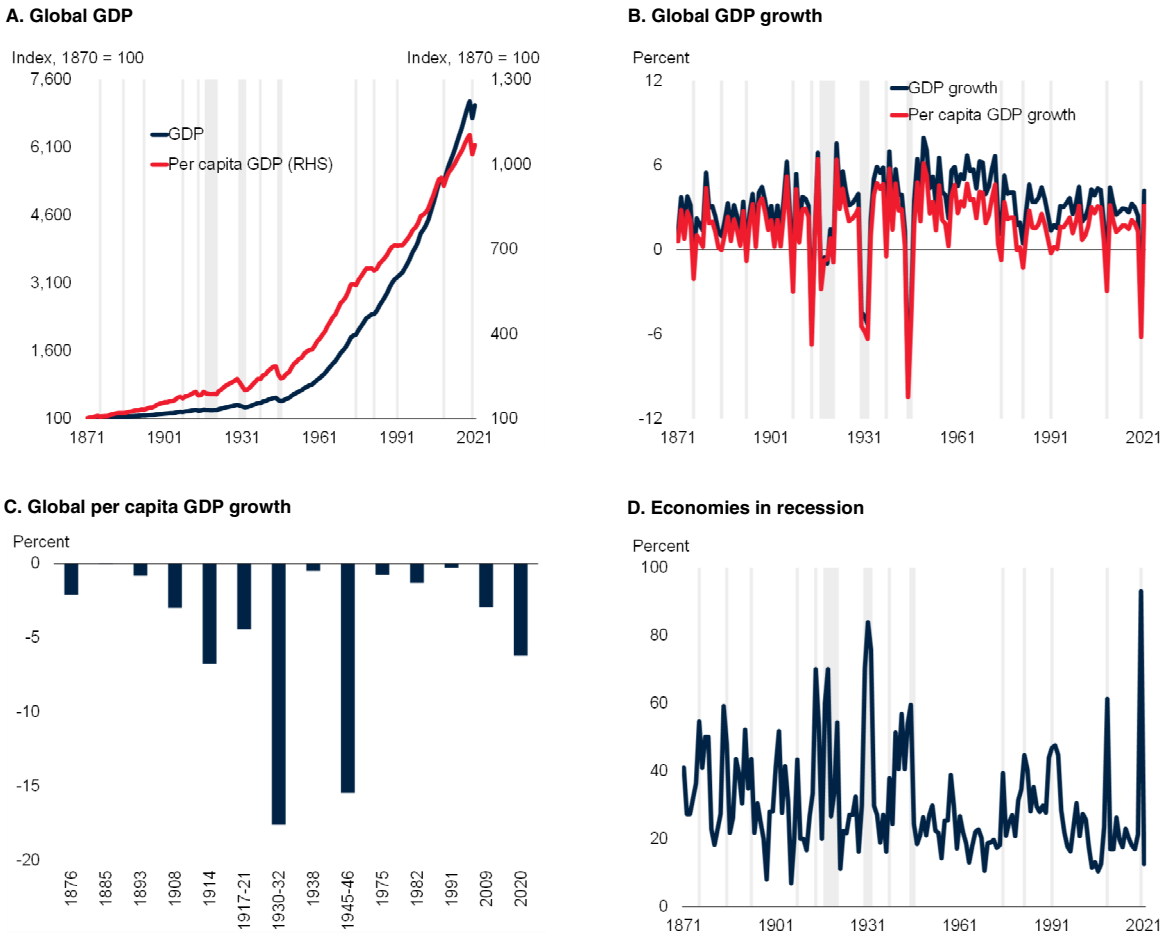
[2] Both methods follow the "classical" definition of a business cycle (Burns and Mitchell 1946), under which business cycle expansions are marked by increases in many measures of economic activity, and contractions by broad declines in activity. Both are widely used in the context of national business cycles, and often arrive at similar turning points (Claessens, Kose, and Terrones 2012).

[3] Some employ a definition of global recession that relies on a simple threshold (*Economist* 2001, 2008; *Financial Times* 2020). The findings here suggest that it is misleading to employ a simple growth threshold (such as below 2.5 percent annual growth in global GDP) to identify global recessions. For example, if one assumes that a global recession takes place whenever world real GDP growth is less than 2.5 percent, there are a total of 54 years under this definition qualifying as global recessions over the period 1870-2020. Over 1960-2020, this definition leads to 16 global recessions.

BOX 1.1 How deep will the COVID-19 recession be? *(continued)*

FIGURE 1.1.1 Global recessions: 1870-2021

Since 1870, the global economy has experienced 14 global recessions. Current projections imply that the COVID-19 global recession will be the fourth deepest in this period and the most severe since the end of World War II. It is expected to involve per capita output contractions in an unprecedently high share of countries.



Source: Bolt et al. (2018); Kose, Sugawara, and Terrones (2019, 2020); World Bank.
Note: Data for 2020-21 are forecasts. Shaded areas refer to global recessions.
C. For multi-year episodes, the cumulative contraction is shown. The per capita growth contraction in 1885 was less than -0.1 percent.
D. Figure shows the proportion of economies in recession, defined as an annual contraction in per capita GDP. Sample includes 183 economies, though the sample size varies significantly by year.
Click here to download data and charts.

Multiple data sources are employed to construct annual world GDP series for a large sample of economies over a long period. The series covers up to 183 economies—36 advanced economies and 147 EMDEs—over the period 1870-2021, though the sample size varies significantly by year.[4] While the 1870-1959 period is critical in providing a historically richer perspective on global recessions, the analysis for this "historical period" is based on only the statistical method (i.e., using per capita GDP) because of data limitations. The study of global recessions during the "modern period" since 1960 relies on both the statistical

[4] The historical dataset covers the periods 1870-1949 (Bolt et al. 2018) and 1950-59 (Kose, Sugawara, and Terrones 2020). The number of countries in the sample increases over time. GDP series for 2020-21 are forecasts. The database also includes quarterly series that covers 106 economies over 1960:1-2019:4.

BOX 1.1 How deep will the COVID-19 recession be? *(continued)*

and judgmental methods and involves a wider range of measures of economic activity, including international trade, retail sales, employment, and oil consumption.

A historical collapse in global output

Another global recession after a decade. Since 1870, the world economy has experienced 14 global recessions: in 1876, 1885, 1893, 1908, 1914, 1917-21, 1930-32, 1938, 1945-46, 1975, 1982, 1991, 2009, and 2020 (Figures 1.1.1.A and 1.1.1.B). In each of these episodes, there was a contraction in global real per capita GDP. The historical period, 1870-1959, saw nine global recessions—at least one in each decade. While there was no global recession during the 1950s and 1960s, the following five decades saw a global recession again in almost every decade.

Deepest recession since World War II. Current projections suggest that the COVID-19 recession will involve a 6.2 percent decline in global per capita GDP, making it the deepest global recession since 1945-46, and more than twice as deep as the recession associated with the global financial crisis (Figure 1.1.1.C). Among the 14 global recession episodes of the past 150 years, it would rank as the fourth deepest (after the 1914, 1930-32, and 1945-46 episodes). The current global recession is expected to register an outright contraction in global GDP (of 5.2 percent) as did eight other episodes.

Duration: One and done? The current global recession is projected to last only one year: in other words, the growth rate of global per capita GDP is projected to turn positive in 2021. This is mostly consistent with experience of prior global recessions: although recoveries took longer to begin in a few deeper recessions prior to 1960, global recessions since then have lasted only one year in terms of annual data. The quarterly data show more variation in the duration of global recessions but the average is still about one year: the durations of the four previous post-1960 global recessions ranged between two quarters (1991 episode) and five quarters (1975 and 1982 episodes) with an average of about four quarters. Many private forecasters expect the COVID-19 global recession to last only two quarters, with major advanced economies returning to growth in the third quarter of 2020 after recording sharp contractions in the first and second quarters of the year.

The first driven solely by a pandemic. The COVID-19 recession is unique as it is the only such episode, at least since 1870, to have been triggered solely by a pandemic and the actions taken to contain it. The prolonged global recession of 1917-21 was partly driven by the 1918-20 Spanish flu pandemic but it also stemmed from the conclusion and aftermath of World War I (Barro, Ursúa, and Weng 2020). In 2009, the Swine flu pandemic was not a contributory factor to the global recession triggered by the financial crisis.

Previous global recessions were driven by confluences of a wide range of factors, including financial crises (1876; the 1930-32 Great Depression; 1982; 1991; 2009), large changes in monetary and fiscal policies (1938; 1982), sharp movements in oil prices (1975; 1982), and wars (1914; 1917-21; 1945-46).[5] During the modern era, the 1975 global recession was mainly the result of a steep increase in oil prices in 1973-74. The 1982 episode was triggered by a combination of factors, including monetary policy responses, particularly by the U.S. Federal Reserve, to the sharp increase in inflation, and the repercussions of the monetary tightening, including the Latin American debt crisis. The 1991 global recession was associated with financial disruptions and exchange rate crises in the European Monetary System and collapses in activity linked to the initial stages of the transition from central planning in many Eastern European countries.

Highest synchronization ever. The fraction of economies experiencing annual declines in national per capita GDP tends to increase sharply during global recessions (Figure 1.1.1.D). Current forecasts suggest that in 2020, the highest share of economies will experience contractions in per capita GDP since 1870—more than 90 percent, even higher than the proportion of about 85 percent of countries in recession at the height of the Great Depression of 1930-32.

Deep recessions in major country groups and regions

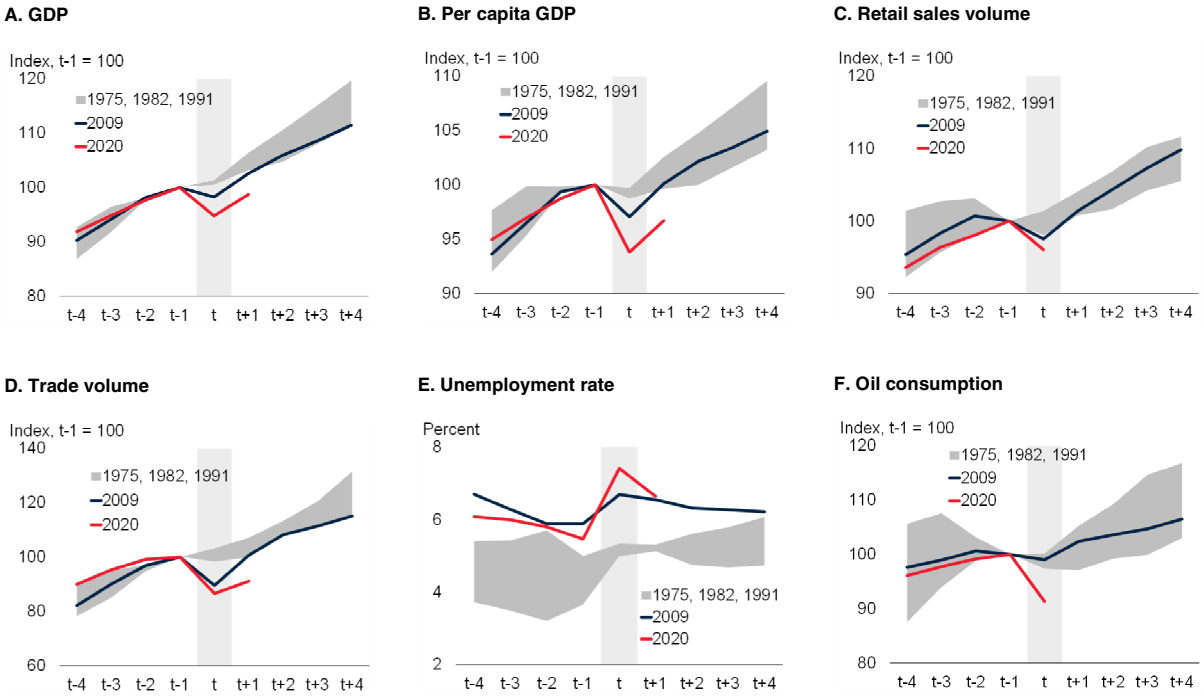
Its highly synchronized nature also means that the COVID-19 global recession will involve most advanced economies and EMDEs (Table 1.1.1). In 2020, both groups will experience the largest declines in their growth rates of the past sixty years. Advanced economies are expected to experience a 7 percent drop in output, while EMDEs will mark their first output contraction, by 2.5 percent, in at least the past sixty years. Per capita output growth in EMDEs will be 6.5 percentage points lower

[5] The events surrounding these episodes are discussed in detail by Allen (2009), Baffes et al. (2015), Eichengreen (2015), Fels (1951, 1952), Hamilton (2013), Knoop (2004), Kose et al. (2020), Kose and Terrones (2015), Reinhart and Rogoff (2009), Roose (1948), and Temin (1989). The sharp drop in global GDP recorded in 1946 reflects the readjustment to a peace-time economy after World War II (De Long 1996; Jones 1972).

BOX 1.1 How deep will the COVID-19 recession be? *(continued)*

FIGURE 1.1.2 Global activity during global recessions: 1960-2021

Current forecasts suggest that the COVID-19 recession will involve the sharpest deterioration in multiple measures of economic activity since 1960.



Source: Haver Analytics; International Energy Agency; International Monetary Fund; Kose, Sugawara, and Terrones (2019, 2020); Organisation for Economic Co-operation and Development; World Bank.
Note: Year "t" denotes the year of global recessions (shaded in light gray). The darker shaded area refers to the range of the three global recessions—1975, 1982, and 1991—with available data. GDP, per capita GDP, retail sales, trade, and oil consumption are index numbers equal to 100 one year before year "t" (i.e., t-1 = 100). Retail sales for 2020 are based on data for the first quarter and shown as a year-on-year percent change. It shows that retail sales declined by around 4 percent in 2020Q1. Unemployment rates for 2020-21 are based on forecasts by the International Monetary Fund in April 2020. Oil consumption for 2020 is taken from forecast data by the International Energy Agency in May 2020.
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than its long-term average during global expansions. These economies are expected to register a much weaker growth performance than in the global financial crisis partly because they entered the current episode with larger external and fiscal imbalances than they had a decade ago, so that they have less room for policy maneuver (Kose and Ohnsorge 2019).

LICs are projected to experience positive GDP growth this year, but at the lowest rate in the past 25 years. Since many of these economies are commodity exporters, in addition to the COVID-19 shock, they are being negatively affected by the sharp drop in prices of industrial commodities. The projected fall in their per capita income growth to -1.6 percent implies that they will see a substantial increase in poverty rates this year.

Although the magnitude will vary across EMDE regions, current projections indicate that all regions will experience sharp growth downturns, and five out of six are projected to fall into outright recession (Table 1.1.2). The majority of EMDE regions will experience the lowest growth in at least sixty years and all of them will see declines in per capita income. EMDE regions with a large number of commodity exporters will see especially deep contractions in 2020. For example, Latin America and the Caribbean is projected to suffer not only the largest growth decline of the six regions, but also its deepest recession of the past sixty years. The contraction in Sub-Saharan Africa is also expected to be the largest over the same period. The two other heavily commodity dependent regions, the Middle East and North Africa region and the Europe and Central Asia region, will also suffer deep recessions this year with

BOX 1.1 How deep will the COVID-19 recession be? *(continued)*

TABLE 1.1.1 Growth of GDP and per capita GDP in global recessions

	Global recession years						All years (1960-2020)	
	1975	1982	1991	2009	2020	Average	Non-recession	Full period
World								
GDP	1.1	0.4	1.3	-1.8	-5.2	-0.8	3.7	3.3
Per capita GDP	-0.8	-1.3	-0.3	-2.9	-6.2	-2.3	2.1	1.7
Advanced economies								
GDP	0.2	0.3	1.3	-3.4	-7.0	-1.7	3.3	2.8
Per capita GDP	-0.7	-0.3	0.6	-4.0	-7.3	-2.3	2.5	2.1
EMDEs								
GDP	4.2	0.9	1.5	1.8	-2.5	1.2	4.8	4.5
Per capita GDP	2.0	-1.2	-0.4	0.4	-3.6	-0.5	2.9	2.7
LICs								
GDP	0.0	1.0	-0.7	5.9	1.0	1.5	3.6	3.4
Per capita GDP	-2.4	-1.6	-3.6	3.0	-1.6	-1.2	0.9	0.7

Note: Percent changes in GDP and per capita GDP in respective groups are presented. "Non-recession" refers to all years excluding the five global recession years.

TABLE 1.1.2 Growth of GDP and per capita GDP in global recessions, by region

	Global recession years						All years (1960-2020)	
	1975	1982	1991	2009	2020	Average	Non-recession	Full period
East Asia and Pacific								
GDP	6.6	6.3	8.3	7.5	0.5	5.9	7.2	7.1
Per capita GDP	4.4	4.6	6.7	6.7	-0.1	4.5	5.6	5.5
Europe and Central Asia								
GDP	6.2	3.0	-5.8	-5.1	-4.7	-1.3	3.5	3.1
Per capita GDP	5.3	2.1	-6.2	-5.4	-5.0	-1.8	2.9	2.5
Latin America and the Caribbean								
GDP	3.8	-0.6	3.3	-1.8	-7.2	-0.5	3.8	3.5
Per capita GDP	1.4	-2.8	1.4	-2.9	-8.1	-2.2	1.9	1.6
Middle East and North Africa								
GDP	-1.3	-6.3	6.9	0.5	-4.2	-0.9	5.0	4.5
Per capita GDP	-3.9	-9.4	4.4	-1.6	-5.8	-3.3	2.5	2.0
South Asia								
GDP	7.5	3.8	2.3	4.8	-2.7	3.1	5.3	5.1
Per capita GDP	5.0	1.3	0.1	3.3	-3.8	1.2	3.2	3.1
Sub-Saharan Africa								
GDP	0.3	0.3	0.2	3.2	-2.8	0.2	3.7	3.4
Per capita GDP	-2.4	-2.6	-2.6	0.5	-5.3	-2.5	1.0	0.7

Note: Percent changes in GDP and per capita GDP in respective regions are presented. Only EMDEs are included. "Non-recession" refers to all years excluding the five global recession years.

BOX 1.1 How deep will the COVID-19 recession be? *(continued)*

per capita growth 7.9 percentage points lower than their historical average.

South Asia, a region composed entirely of commodity importers, will experience its first decline in GDP for more than forty years with per capita growth 7 percentage points below its long-term average. Although still suffering from a sharp decline in per capita GDP, output in East Asia and Pacific is expected to expand this year, as it did in previous global recessions. This outcome is mainly due to the expected recovery in China, which has already started relaxing its lockdown measures and shows early signs of a rebound in activity. However, the region will still end up with its weakest growth performance for more than 50 years because all other major regional economies will experience severe downturns this year.

Broad-based plunge in multiple sectors

The COVID-19 global recession is expected to be reflected in the sharpest contractions in six decades in many indicators of global activity (Figure 1.1.2). Most notably, while services-related activities were often relatively resilient during previous global recessions, high-frequency indicators suggest that the COVID-19 shock has led to a near sudden stop in a large swath of services, reflecting both regulated and voluntary reductions in human interactions that could threaten infection. Current forecasts suggest that, partly owing to an unprecedented weakening in services-related activities, global trade and oil consumption will see record drops this year, and the global rate of unemployment will climb to its highest level since at least 1965, when available data begin. In addition, industrial production and retail sales are likely to register record drops this year.

The current forecasts indicate that global economic recovery is expected to gain momentum next year, with a rebound in world output similar in gradient to those following prior global recessions, and global employment and oil consumption recovering strongly. However, this rebound would not be enough for output to return to its pre-recession trend level (Chapter 3). The delay in return to the trend level of global output is consistent with long-lasting hysteresis effects associated with deep recessions (Cerra, Fatás, and Saxena 2020; Ma, Rogers, and Zhou 2020).

Fastest and steepest growth downgrades

Since mid-March, the speed and size of downgrades in global growth forecasts have been remarkable. These downgrades have reflected record declines in high-frequency indicators of activity as many countries have implemented widespread mitigation measures to get ahead of the health crisis and as many people have undertaken voluntary "social distancing." To shed light on the likely future evolution of growth projections, the pattern of forecast downgrades this year is compared with those of previous global recessions. The analysis here employs forecasts published by Consensus Economics, a firm that surveys professional forecasters.[6]

The COVID-19 recession has seen by far the fastest and steepest downgrades in growth forecasts among all the global recessions for which the consensus forecast data are available—the recessions since 1990 (Figure 1.1.3.A). After staying above 2 percent in February, the 2020 global GDP growth forecast has been downgraded by around 6.6 percentage points since mid-March (Figure 1.1.3.B). As the health crisis has intensified, advanced economies have been subject to much larger forecast downgrades, with their 2020 growth forecasts being reduced in only thirteen weeks by around 8 percentage points (from early March to early June). EMDE growth forecasts for 2020 were also lowered, by about 6.1 percentage points, during the same period.

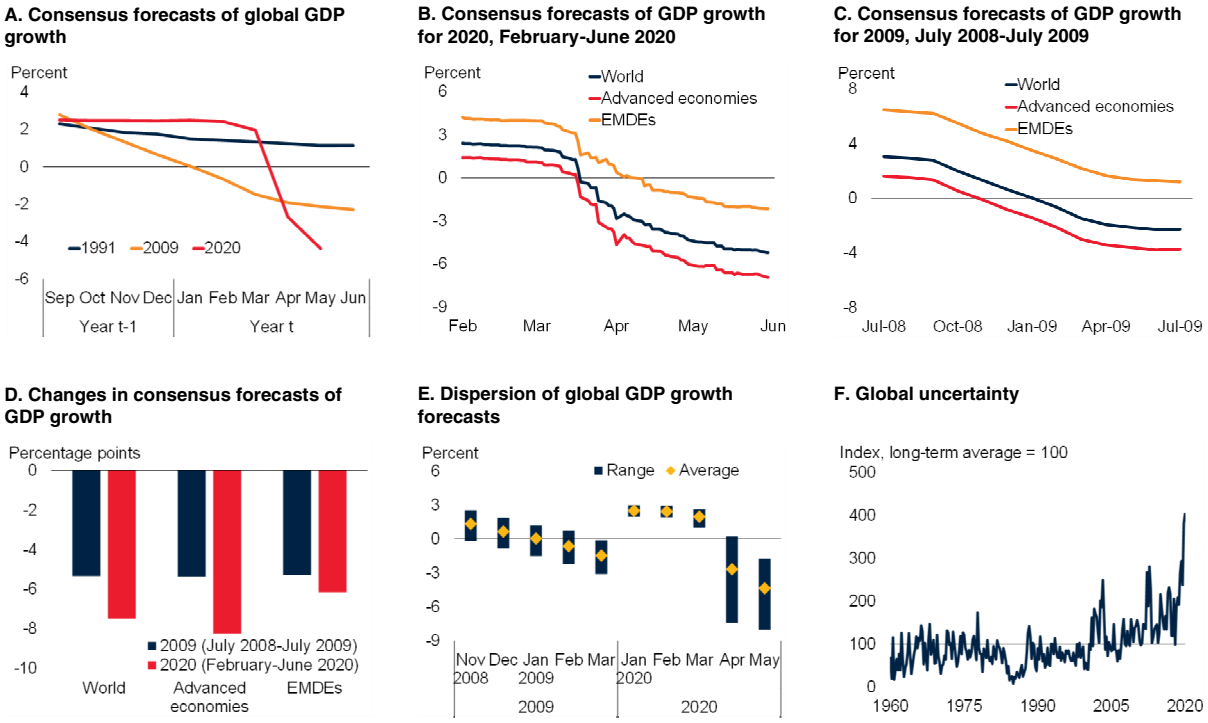
The speed and magnitude of the growth forecast downgrades for both advanced economies and EMDEs have been unprecedented, even compared to those that occurred around the 2009 global recession (Figures 1.1.3.C and 1.1.3.D). In particular, in the current global recession, GDP growth forecasts of three major economies (the United States, Euro Area, and China) were quickly revised downward by significantly more than in previous episodes. For example, the U.S. growth forecast has been downgraded by about 8.7 percentage points over the past three months while it was reduced by about 4 percentage points over 12 months during the 2009 episode. The COVID-19 recession has also seen a record increase in uncertainty surrounding global growth forecasts, measured by the dispersion of individual forecasts, since April as the health crisis deepened in advanced economies (Figure 1.1.3.E). The increase in forecast uncertainty reflects the record increase in worldwide uncertainty over the past

[6] As forecasts by Consensus Economics reflect perspectives of many forecasters using a wide range of methodologies, they tend to be more stable than projections made by a single entity. However, there are also a few shortcomings associated with their information content (Crowe 2010). The data sample covers high-frequency forecasts (daily, monthly) of up to 85 economies—33 advanced economies and 52 EMDEs—over the period 1990-2020.

BOX 1.1 How deep will the COVID-19 recession be? *(continued)*

FIGURE 1.1.3 Evolution of forecasts during global recessions

The COVID-19 recession has seen the fastest and steepest downgrades in growth projections among all the global recessions for which data for consensus forecasts are available, that is, since 1990. In previous such episodes, growth forecasts were gradually downgraded over periods much longer than that which has thus far elapsed in the current recession. Uncertainty around global growth forecasts has increased sharply as the health crisis has intensified over the past three months.



Source: Ahir, Bloom, and Furceri (2018); Consensus Economics; World Bank.

A. Year "t" denotes the year of global recessions. Data for 1991 are for advanced economies only due to data availability.

B. Average GDP growth for 2020, based on 59 economies (including 32 advanced economies and 27 EMDEs) for which data for consensus forecasts are available, weighted by GDP in constant 2010 U.S. dollars for 2019. Growth is computed each business day as a moving average of the latest revised forecasts. Horizontal axis shows month and day. Last observation is June 1, 2020.

C. Average GDP growth for 2009 (based on 84 economies, including 33 advanced economies and 51 EMDEs), weighted by GDP in constant 2010 U.S. dollars for 2008. The July 2008-July 2009 period is selected because of the relative stability of forecasts prior to and after this period.

D. Changes in consensus growth forecasts for 2009 and 2020, in percentage points. For 2009, changes represent differences in forecasts between July 2008 and July 2009 (based on the monthly surveys). For 2020, changes represent differences in forecasts between February 18, 2020, and June 1, 2020. Growth is computed each business day as a moving average of the latest revised forecasts.

E. Consensus global growth forecasts for 2009 and 2020 in denoted months. Ranges show the minimum-maximum of growth forecasts.

F. The index is computed by counting the percent of word "uncertain" (or its variant) in the Economist Intelligence Unit country reports. Long-term average refers to average over 1960-2020. Last observation is 2020Q1.

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three months (Figure 1.1.3.F). If the future trajectory of forecasts follows the typical pattern and worldwide uncertainty remains elevated, there may well be further downgrades in global growth in coming months.

Global recessions: From bad to worse?

The experience of past global recessions suggests that it takes time for forecasters to process incoming data and fully recognize the magnitude of recessions, which are rare episodes.[7] In previous global recessions, an initial adverse development was often followed by a series of disruptions

[7] Forecasters tend to be slow in internalizing adverse developments in their projections and are often unable to correctly predict in advance the duration of national recessions (Ahir and Loungani 2014; An and Loungani 2020; Aromí 2019). In light of the heightened uncertainty about the growth outlook, it is useful to examine alternative scenarios that can illustrate the range of likely growth outcomes in the near term. However, these scenarios are often adjusted in response to the changes in the baseline forecasts.

BOX 1.1 How deep will the COVID-19 recession be? *(continued)*

that spread worldwide through trade, financial, and confidence linkages. A sharp decline in global growth was ultimately an outcome driven by all of these developments. Forecasters gradually downgraded their projections as they better grasped the likely growth consequences of new developments.

The 2009 global recession provides a very good example of the evolving nature of these episodes and its implications for the trajectory of forecasts. The initial trigger for the global financial crisis was problems in certain segments of the mortgage markets in the United States, but dislocations emanating from these markets soon engulfed the entire U.S. financial system. The high degree of interconnectedness between U.S. and other financial markets then caused the crisis to spread to other advanced economies and some EMDEs. As these events progressed, global growth forecasts were downgraded steadily between September 2008 and July 2009.

As in previous global recessions, the early consequences of the initial shock—the pandemic in this case—may be followed by further adverse developments. It may take longer than expected to suppress outbreaks of COVID-19 in different parts of the world (Box 3.3). Initial disruptions triggered by the pandemic could lead to financial crises in vulnerable EMDEs. Moreover, the uniqueness of the COVID-19 global recession brings another challenge: professional forecasters and economists have a more limited understanding of the growth implications of a global recession driven by a pandemic, because of their very limited experience with them, than of previous global recessions, which were triggered by more run-of-the-mill financial and policy shocks.

Conclusion

The COVID-19 recession is unique in many respects. It is the first recession to have been triggered solely by a pandemic during the past 150 years, and current forecasts suggest that it will be the most severe since the end of World War II. The recession this year is likely to be the deepest one in advanced economies since the end of World War II, and the first output contraction in EMDEs in at least the past six decades. Importantly, it is also expected to trigger per capita GDP contractions in the largest share of economies since 1870.

The current episode is also unique because it has been accompanied by the fastest and steepest global growth forecast downgrades in recorded history. In previous global recession episodes, growth projections were gradually downgraded over a longer period as forecasters processed incoming data and reassessed the implications. If the past is any guide, there may be further downgrades in store as forecasters better understand the growth repercussions of this exceptional global recession. Further policy measures to support activity, in addition to the large-scale initiatives already introduced, may be needed in the coming months.

regions as travel restrictions and widespread losses of service sector jobs discourage labor migration and weigh on incomes of migrant workers (World Bank 2020b). In a number of EMDEs, banking system profitability is being eroded by a rise in nonperforming loans.

Commodity markets

Most commodity prices declined in the first half of the year because of the sharp fall in global demand (World Bank 2020c; Figure 1.9.A). Brent crude oil prices fell almost 70 percent from late January to mid-April, before retracing some of these losses in recent weeks (Figure 1.9.B). The decline in oil prices since January has been larger than in the aftermath of the September 11, 2001 attacks or during previous global recessions (Figure 1.9.C). Controls to slow the spread of the pandemic have resulted in a sharp fall in travel and transport, which accounts for two-thirds of oil consumption. Oil demand is expected to fall by 8.6 percent in 2020. Such a decline would be unprecedented, surpassing the previous record fall of 4 percent in 1980 (Figure 1.9.D).

Global oil production is also starting to fall, although at a slower pace than demand. In April, OPEC and its partners agreed to new production cuts, starting with a reduction of 9.7mb/d in May and June, and gradually tapering thereafter. Production in non-OPEC+ countries is also starting to decline. The U.S. Energy Information Administration expects U.S. production to fall by

just under 2 mb/d from current levels to a low of 11mb/d in 2020Q4. Overall, oil prices are expected to average $32 per barrel in 2020 and $38 per barrel in 2021—$26 and $21 per barrel below January forecasts, respectively.

Demand for metals has also fallen. Prices are anticipated to decline 16 percent in 2020 before showing a modest increase in 2021. This forecast is predicated on a recovery of Chinese demand, which accounts for around 50 percent of the consumption of base metals.

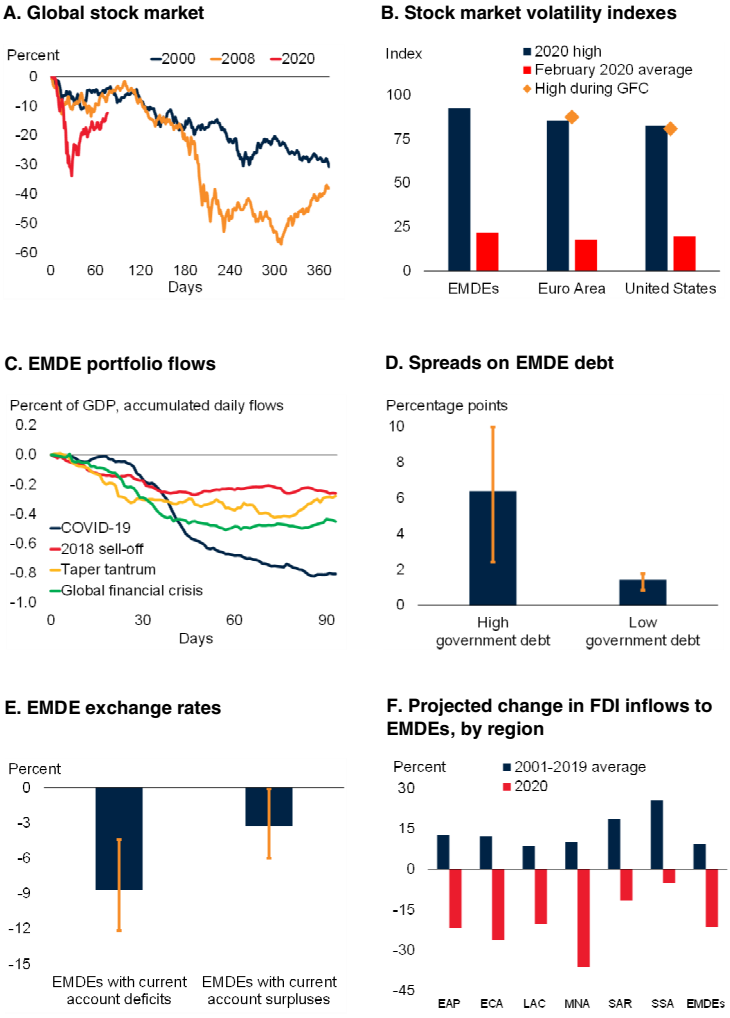
Agricultural prices, which weakened over the first half of the year, are expected to decline only marginally in 2020 as a whole, as they are less sensitive to economic activity than industrial commodities, particularly at higher-income levels (World Bank 2018a). Despite production levels and stocks for most staple foods being near all-time highs, there are growing concerns about food security. Food availability is being strained due to supply chain disruptions and restrictions on movement (FAO 2020a). Further, in EMDEs with a large number of poor, income losses from disruptions in economic activity could increase food insecurity. Some countries have announced temporary restrictive trade policies such as export bans, similar to those that contributed to spikes in international food prices in 2007-08 and 2010-11. While ample supplies mean that prices are likely to remain stable at the global level, localized price spikes could further erode food security.

Emerging market and developing economies

EMDEs are forecast to contract this year due to the COVID-19 pandemic. The impact is expected to be most severe for EMDEs with large domestic outbreaks and those that rely heavily on global trade, tourism, commodity exports, and external financing. Per capita incomes are projected to contract deeply as a result, causing the first net rise in global poverty in more than 20 years. Growth in EMDEs is projected to pick up in 2021, on the back of firming trade and investment as the effects of the pandemic wane. Prospects for subdued commodity prices, however, are expected to temper the recovery in commodity exporters.

FIGURE 1.8 Global finance

A massive flight to safety caused sharp declines in asset valuations and heightened financial market volatility around the world. Earlier in the year, capital flowed out of EMDEs at a pace far exceeding the worst days of the global financial crisis, resulting in higher spreads and weaker currencies, particularly for more vulnerable EMDEs. FDI inflows to EMDEs are expected to slow considerably.



Source: Bloomberg; Dealogic; Haver Analytics; Institute of International Finance; International Monetary Fund; J.P. Morgan; World Bank.

A. Stock market represented by the MSCI ACWI Index, which is a global market capitalization weighted index representing equity markets in 23 advanced economies and 26 EMDEs. Cumulative decline relative to peak. Last observation is May 28, 2020.

B. GFC = Global financial crisis. Figure shows the volatility index for each region. Data during the GFC are available for the Euro Area and the United States. Last observation is May 29, 2020.

C. The dates for the start of each episode are as follows: COVID-19, January 20, 2020; 2018 sell-off, May 2, 2018; Taper tantrum, May 21, 2013; Global financial crisis, September 7, 2008. Sample includes 10 EMDEs due to data availability. Data are calculated using nominal U.S. dollar GDP for the corresponding year of each episode. Last observation is May 28, 2020.

D. Average cumulative change in spreads on government bonds from January 1, 2020 to May 28, 2020. Sample includes 25 EMDEs. High government debt: EMDEs in the top 75 percentile by the level of general government debt in 2019; low government debt: EMDEs in bottom 25 percentile by the level of general government debt in 2019. Orange lines indicate interquartile ranges.

E. Average cumulative changes in exchange rates since January 1, 2020 based on 14 EMDEs with estimated current account deficits in 2019 and eight EMDEs with estimated current account surpluses in 2019. Vertical orange lines indicate the interquartile range. Last observation is May 28, 2020.

F. 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. Data for 2020 are estimates by the Institute for International Finance. Sample includes 56 EMDEs.

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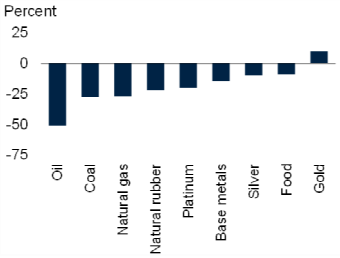
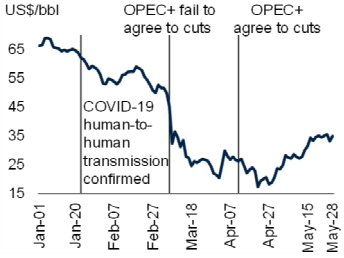
FIGURE 1.9 Commodity markets

Commodity prices fell sharply in the first half of 2020, owing to a collapse in demand resulting from the COVID-19 pandemic. The fall was greatest in oil prices, partly reflecting weaker demand for transport and travel. A renewed OPEC+ agreement in April proved insufficient to bolster prices, which have fallen more than in previous major events. The decline in demand expected for 2020 is unprecedented by historical standards.

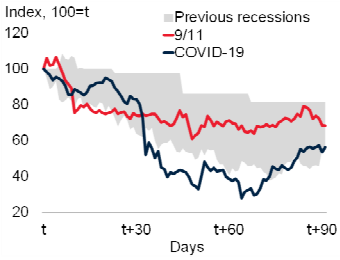
A. Commodity price changes since January 2020



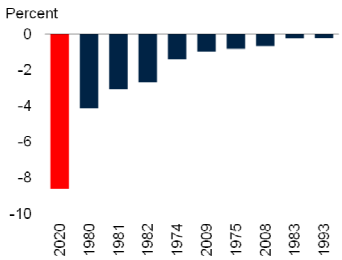
B. Brent crude oil price



C. Oil prices during past episodes of stress



D. Years with the largest declines in oil demand



Source: Bloomberg; BP Statistical Review; Energy Information Administration; International Energy Agency; Organization of Petroleum Exporting Countries; World Bank.

Note: January 22, 2020 is the date that the WHO first observed human-to-human COVID-19 transmission.

A. Figure shows the change in the monthly average of commodity prices between January 2020 and the last observation, which is May 2020. Price changes for "Base metals" and "Food" show World Bank Pink Sheet indexes. Oil price is unweighted average of Brent, WTI and Dubai prices.

B. Vertical lines denote January 22, 2020; March 9, 2020; April 13, 2020. Last observation is May 28, 2020.

C. Start dates for events are the first trading day before a major event occurred: September 10, 2001 for 9/11 and January 22, 2020 for COVID-19. If data are unavailable, the start date is the first day of available data prior to the event date. Shaded area indicates range over the four global recessions: 1974, 1981, 1990, and 2008. Last observation is May 28, 2020.

D. Figure shows the 10 largest declines in oil demand since 1965. Years on the x-axis indicate the year in which the decline occurred. Data for 2020 are IEA estimates.

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Recent developments

The pandemic, and the associated domestic disruptions and global spillovers, has dealt a significant blow to EMDEs. Many have adopted restrictions to stem the pandemic, including economy-wide lockdowns, international border and school closures, and restrictions on domestic travel (Figure 1.10.A). In many EMDEs, efforts to slow the spread of the virus have weighed heavily on private consumption, generated widespread unemployment, and led to a sharp decline in retail sales. Uncertainty over the spread of the virus and the lifting of restrictions have coincided with the erosion of business confidence and a decline in investment. Businesses have also had to contend with delivery delays in intermediate inputs, plunging demand, and limited access to financing. Domestic COVID-19 outbreaks are beginning to overwhelm health care systems in a rising number of EMDEs because of the small size of their health care systems and limited hospital capacity.

EMDEs have also faced unprecedented external headwinds from much weaker activity in major economies, sharp declines in commodity prices, disruptions to global supply chains and tourism, markedly lower remittances, and financial market turmoil. Manufacturing activity and new export orders have sharply contracted, particularly in EMDEs with a large presence of manufacturing or export-oriented firms (EAP, ECA; World Bank 2020a, 2020d). Increasing supply-chain disruptions are likely, as shipments are interrupted by temporary export bans or border restrictions.

Tourist arrivals collapsed in the first half of 2020 alongside widespread international border closures and travel restrictions. EMDEs that rely heavily on tourism faced large declines in services activity, particularly in hospitality, food, entertainment, and retail services. In EMDEs where remittances are an important source of income, private consumption has fallen sharply as migrant workers became idle or furloughed as a result of the downturn in business activity in host countries (Figure 1.10.B; World Bank 2020b).

Commodity exporters

The drastic reduction in demand and prices for oil and industrial metals is a major headwind for commodity exporters, as commodities accounted for more than 75 percent of exports in 2019 in the average member of this group. Extraction investment has fallen sharply, loss of revenues has forced some governments into procyclical fiscal tightening, and the deterioration in terms of trade has weighed on consumption, particularly in regions with large numbers of commodity exporters (LAC, MENA, SSA; World Bank 2020e, 2020f, 2020g).

In addition, commodity exporters are grappling with domestic outbreaks and the side effects of mitigation measures. The number of these measures was initially higher in commodity exporters than in commodity importers, in part reflecting greater fear about the consequences of domestic outbreaks in countries where the capacity of the public health system is low. As a share of GDP, government health care spending among commodity exporters is on average 30 percent lower than in commodity importers (Figure 1.10.C).

Activity indicators in EMDE commodity exporters have declined to multi-year lows. Whereas three-quarters of commodity-exporting EMDEs managed to avoid recession in 2009 despite collapsing commodity prices, more than two-thirds of them are expected to contract in 2020 (Figure 1.10.D). This is largely due to the wider global spread and the larger magnitude of the shock. In addition, it reflects the lingering weakness and eroded buffers from the 2014-16 commodity price collapse (Chapter 4).

Commodity exporters entered this year with weaker external and fiscal positions than before the global financial crisis, as subdued external demand and low commodity prices reduced current account balances, while persistent fiscal deficits contributed to rising debt levels. A number of commodity exporters have announced fiscal stimulus, while some have also partially reallocated spending to provide targeted support. Several central banks have provided monetary support, despite currency depreciations and substantial capital outflows.

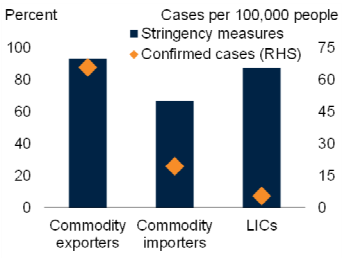
Commodity importers

Growth in most commodity importers has been curtailed by severe domestic virus outbreaks and restrictions to stem the pandemic, all of which have heavily weighed on consumption and investment (World Bank 2020f, 2020g, 2020h). Although commodity importers on average have more developed health care systems than commodity exporters, there is considerable variation across regions. In Central European economies, the number of hospital beds per person is similar to that in the Euro Area, while in

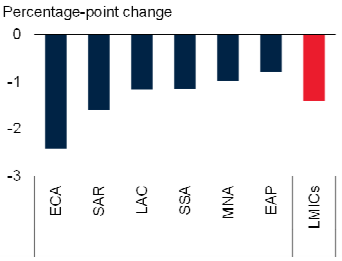
FIGURE 1.10 EMDE recent developments

Activity in EMDEs has markedly declined in response to the pandemic, with necessary measures such as lockdowns and other restrictions weighing heavily on both demand and supply. Private consumption will suffer acutely, including in economies dependent on remittance inflows. EMDEs with weak health systems are particularly vulnerable to the pandemic's impact. Nearly 80 percent of EMDEs are expected to suffer output contractions this year. Activity in LICs has also slowed sharply and financial conditions have tightened in some economies.

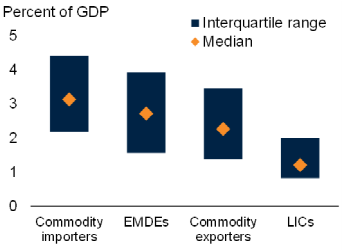
A. Stringency measures and COVID-19 cases in EMDEs and LICs



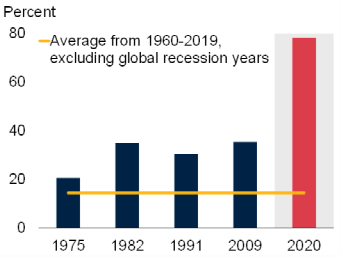
B. Change in remittance inflows in 2020, by EMDE region



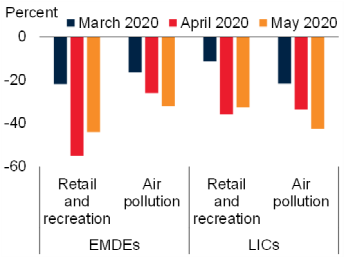
C. Health care spending in EMDEs and LICs in 2016



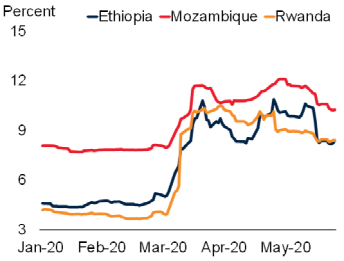
D. Share of economies experiencing annual contractions in activity



E. Change in activity indicators in EMDEs and LICs



F. LIC sovereign borrowing costs



Source: Air Quality Open Data Platform; Bloomberg; Google COVID-19 Community Mobility Reports; Haver Analytics; Johns Hopkins University; Kose, Sugawara, and Terrones (2020); Oxford University; World Bank; World Bank (2020b).

Note: EAP = East Asia and Pacific, ECA = Europe and Central Asia, LAC = Latin America and the Caribbean, LICs = Low-income countries, LMICs= Low- and Middle-Income countries, MNA = Middle East and North Africa, SAR = South Asia, SSA = Sub-Saharan Africa.

A. Sample includes 144 EMDEs, of which 91 are commodity exporters, 64 are commodity importers, and 33 are LICs. Last observation is May 28, 2020.

A.E. Aggregates calculated with U.S. dollar GDP weights at 2010 prices and market exchange rates.

B. Figure shows the simple average of the projected change between 2019 and 2020 remittances as a share of 2019 GDP. Sample includes 141 EMDEs.

C. Sample includes 150 EMDEs, with 58 and 82 commodity importers and exporters, and 25 LICs.

D. The horizontal axis indicates the year of each global recession. Sample includes 86 EMDE commodity exporters and 61 EMDE commodity importers. Shaded area indicates forecasts.

E. Data reflect monthly percent change relative to the baseline period of January 3, 2020 to February 6, 2020. "Retail and recreation" reflect data on visits and length of stay and are calculated by Google. "Air pollution" measured as particle matter (PM2.5) air pollution. Sample includes 93 EMDEs and 15 LICs for "Retail and recreation" and 53 EMDEs and 7 LICs for "Air pollution". The last observation is May 21, 2020 for "Retail and recreation" and May 29, 2020 for "Air pollution".

F. Data for Ethiopia, Mozambique, and Rwanda reflect yields on the 2024, 2031, and 2023 Eurobonds, respectively. Last observation is May 29, 2020.

Click here to download data and charts.

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

The COVID-19 pandemic has exerted a particularly heavy humanitarian and economic toll on low-income countries (LICs), in light of their underlying vulnerabilities. While activity among this group is expected to firm next year, the outlook is subject to substantial downside risks. These include the possibility that mitigation and other control efforts to stem domestic outbreaks are unsuccessful or that measures to slow the spread—such as border closures—induce a food crisis.

Recent developments

The COVID-19 pandemic has spread rapidly and severely disrupted activity in low-income countries (LICs; Figure 1.2.1.A). The virus has infected tens of thousands and taken a heavy human toll, with weak health care capacity in LICs contributing to elevated mortality rates. The necessary measures implemented to slow the domestic spread of the virus have weighed heavily on activity in the first half of this year (Figures 1.2.1.B and 1.2.1.C). With the global economy ravaged by the pandemic, LICs face reduced external demand, falling commodity prices, a dramatic decrease in tourism activity, weakening foreign direct investment, sharply higher borrowing costs, as well as an expected fall in remittances—a key source of foreign funding and support for household incomes in many LICs (Figures 1.2.1.D - 1.2.1.F).

Several LICs have experienced severe domestic outbreaks (Afghanistan, Democratic Republic of Congo, Guinea); however, limited testing capacity is likely understating the intensity of the pandemic. Efforts to slow the spread through social distancing have been difficult, particularly in densely populated urban areas where large populations often live in informal settlements without access to proper sanitation.

More broadly, activity among industrial commodity-exporting LICs has slowed markedly during the first half of this year, reflecting the impact of growing domestic outbreaks, weakening demand in key trading partners, and sharply lower commodity prices (Chad, Mozambique, Tajikistan). Activity in many agricultural commodity exporters has also been severely affected, with its impact amplified in those with large tourism sectors or strong trade links with China, the Euro Area, and the United States (Madagascar, Nepal, Rwanda, Uganda).

Outlook

Economic growth. Growth among the LICs is expected to slow markedly to 1 percent in 2020—the slowest pace in at least 25 years—reflecting the pandemic's broad-based disruption to activity (Figure 1.2.2.A). Aggregate activity in LICs is expected to rebound in 2021, with growth rising to 4.6 percent as headwinds related to the pandemic fade. However, significant uncertainty surrounds the pace and timing of the projected recovery. It rests heavily on the assumption that the pandemic recedes in such a way that mitigation measures are gradually lifted from the middle of this year—and that activity in major trading partners rebounds.

In industrial commodity exporters, growth is expected to contract by 1.3 percent in 2020, as low commodity prices compound domestic disruptions. The projected pickup in 2021 is underpinned by the recovery in demand from key trading partners and firming commodity prices (Central African Republic, Chad, Democratic Republic of Congo, Guinea, Mozambique, Niger). In some countries, growth will be spurred further by investment in new production capacity (Chad, Mozambique, Niger). In Niger, however, lower oil prices risk delaying completion of the country's new oil production infrastructure. In Liberia, activity is forecast to recover from two years of stagnation thanks to the adoption of structural reforms and the achievement of greater price stability.

Growth among other LICs is expected to fall to 1.6 percent in 2020, from 5.2 percent last year, before recovering in 2021. In Ethiopia, growth is expected to fall to a 17-year low of 3.2 percent this year—from 9 percent in 2019. The projected rebound in 2021 is expected to be underpinned by the implementation of reforms, such as addressing foreign exchange shortages, to boost private investment. An assumed improvement in political stability and more stable business environments are projected to further support activity (Guinea-Bissau, Haiti). In others, the recovery from this year's coronavirus pandemic will be aided by increased private sector investment due to continued reforms to improve business environments (Benin, Nepal, Rwanda, Togo).

Prospects for per capita income convergence and poverty alleviation. Per capita GDP in LICs is expected to contract by 1.6 percent in 2020, likely causing a large share of the population to slip back into extreme poverty, while those already in extreme poverty could descend further into destitution (Figure 1.2.2.B). Amid widespread informality,

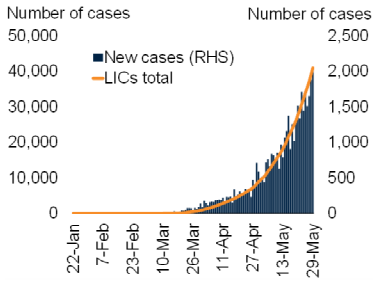
Note: This box was prepared by Rudi Steinbach. Research assistance was provided by Maria Hazel Macadangdang.

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

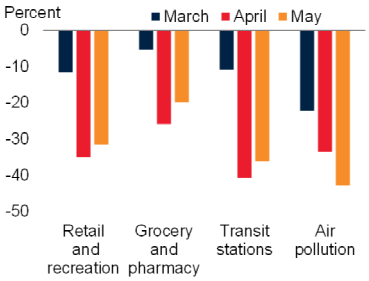
FIGURE 1.2.1 Recent developments in low-income countries

The COVID-19 pandemic has spread to almost all LICs, infecting thousands and exacting a heavy human toll. Activity has slowed sharply this year as countries work to slow the spread of the virus. As the global economy falls into recession, LICs face reduced external demand, sharply higher borrowing costs, and an expected fall in remittance inflows—a key source of foreign funding in LICs.

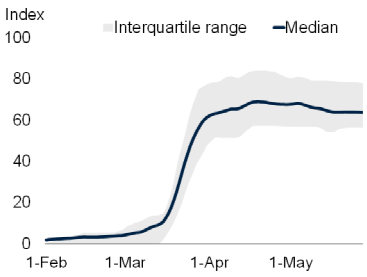
A. Coronavirus infections in LICs



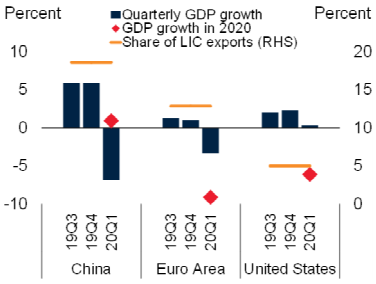
B. Activity in LICs as reflected by changes in community mobility and air pollution



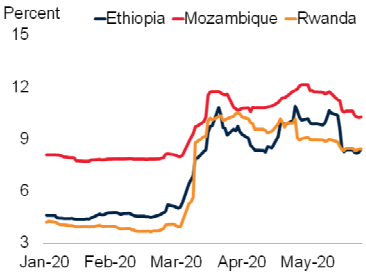
C. Stringency of containment measures in LICs



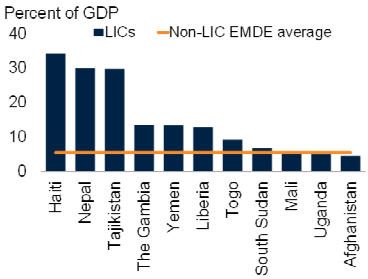
D. GDP growth in major LIC trading partners



E. LIC sovereign borrowing costs



F. Remittances in LICs in 2019



Source: Bloomberg; Google LLC; Direction of Trade Statistics (International Monetary Fund); Johns Hopkins University; Oxford COVID-19 Government Response Tracker (OxCGRT); World Bank.

Note: LICs = low-income countries.

A. Sample includes 29 countries. Last observation is May 29, 2020.

B. "Retail and recreation" reflect how visits and length of stay at places such as restaurants, cafes, shopping centers, theme parks, museums, libraries, and movie theaters have changed relative to the baseline period January 3 to February 6, 2020. "Grocery and pharmacy" reflect places such as grocery markets, food warehouses, farmers markets, specialty food shops, drug stores, and pharmacies. "Transit stations" reflect places such as public transport hubs such as subway, bus, and train stations. The data are calculated by Google based on aggregated and anonymized location history of a subset of its users. Data reflect monthly percent changes relative to the baseline. "Air pollution" reflects monthly percent changes in particle matter (PM2.5) air pollution relative to the baseline period January 3 to February 6, 2020. Sample for "Retail and recreation", "Grocery and pharmacy", and "Transit stations" includes 15 LICs. Sample for "Air pollution" includes 3 LICs.

C. Stringency index records the number and strictness of government policies. It is calculated by OxCGRT based on publicly available information on 13 indicators of government response, including policies such as school closures, travel bans, and fiscal and monetary measures. Sample includes 17 LICs. Last observation is May 28, 2020.

D. "Share of LIC exports" reflects goods exports.

E. Data for Ethiopia, Mozambique, and Rwanda reflect yields on the 2024, 2031, and 2023 Eurobonds, respectively. Last observation is May 29, 2020.

F. Remittances and ODA samples include 31 and 26 LICs, respectively.

Click here to download data and charts.

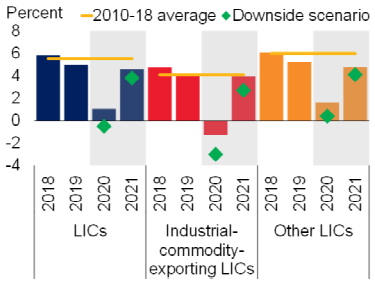
options to buffer temporary income losses are mostly limited. Among fragile LICs—where the incidence of extreme poverty is higher—the fall in incomes is projected to be steeper, with per capita GDP contracting by an estimated 4.6 percent this year (World Bank 2020i). The pandemic could leave long-lasting scars on the poor. Disruptions to education systems as a result of school closures have also brought school feeding programs to a halt in many LICs (WFP, forthcoming; Figure 1.2.2.C). For the most vulnerable populations, these disruptions are likely to exacerbate malnutrition and affect human capital development—exacting losses that may not be recoverable.

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

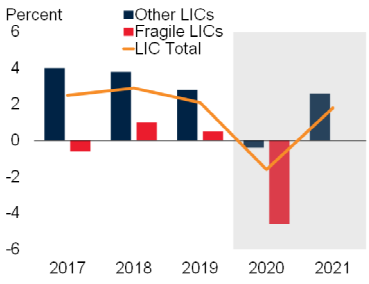
FIGURE 1.2.2 Outlook and risks

Growth this year is forecast to fall to the weakest pace in a generation, but pandemic mitigation measures are expected to support a rebound in 2021. A longer-lasting and more severe pandemic would trigger an even steeper collapse in activity. Per capita growth has decelerated sharply and contracted among fragile LICs, reversing progress in poverty reduction. Disruptions to school feeding programs are likely to exact human losses that may not be recoverable. Health sectors in LICs have limited capacity to respond to larger outbreaks. Food insecurity in several LICs could be exacerbated by an ongoing locust outbreak.

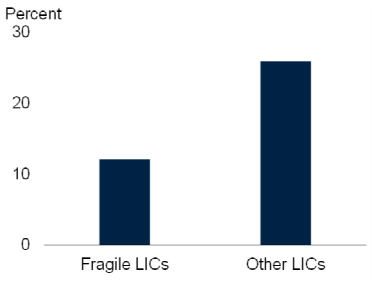
A. GDP growth



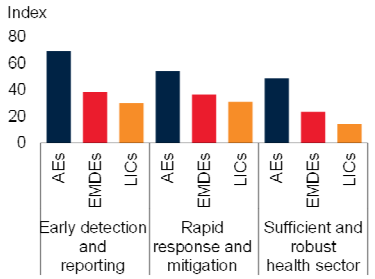
B. Growth per capita



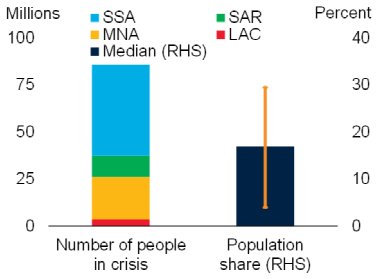
C. Children affected by disruptions to school feeding programs in LICs



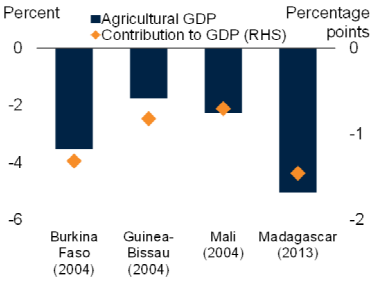
D. Health sector preparedness in LICs



E. Food insecurity in LICs



F. Agricultural GDP growth in years of locust outbreaks



Source: Johns Hopkins Center for Health Security and NTI, Global Health Security Index; World Bank; World Food Programme.
Note: Shaded area indicates forecasts. LICs = low-income countries. Fragile LICs are LICs affected by fragility, conflict, and violence.
A. Aggregate growth rates calculated using GDP weights at 2010 prices and market exchange rates. Other LICs include agricultural commodity exporters and commodity importers. Industrial- commodity exporting LICs include metal and oil exporters.
B. Aggregate per capita growth rates calculated by dividing the total GDP at 2010 prices and market exchange rates for each subgroup by its total population. Sample includes 27 LICs and 14 "Fragile LICs".
C. Calculated based on World Food Programme's implementation plan as of March 2020.
D. "Early detection and reporting" reflects countries' capacity for detecting and reporting epidemics of potential international concern; "Rapid response and mitigation" reflects their ability to respond to and mitigate the spread of an epidemic; and "Sufficient and robust health sector" reflects the capacity of health sectors to treat the sick and protect health workers. Data reflects 2019. Sample includes 31 LICs, 123 EMDEs, and 35 advanced economies. EMDEs exclude LICs.
E. "Number of people in crisis" reflects those classified as Integrated Food Security Phase Classification (IPC/CH) Phase 3, i.e., in acute food insecurity crisis or worse, in 2019. "Population share" reflects the sample median. Whiskers reflect the interquartile range. Sample includes 25 LICs.
F. Brackets reflect years of past locust outbreaks.
Click here to download data and charts.

Risks

Risks to the outlook are firmly to the downside. A major risk is that domestic outbreaks are not brought under control as currently assumed. Instead, they could intensify and affect larger shares of the population. The risk of propagation is high as LICs' ability to cope would be limited, with often weak administrative capacity and insufficient health care systems—government per capita spending on health care that is less than 5 percent of that in EMDEs (Figure 1.2.2.D; Dahab et al. 2020; Fugazzola et al. 2020; Sussman 2020). In addition to the dire human consequences of a larger-scale domestic outbreak, previous epidemics among LICs suggest economic activity could all but collapse (World Bank 2014).

With government debt rising sharply in recent years, most LICs have limited fiscal space to address the current pandemic (Calderón and Zeufack 2020; Kose et al. 2020; World Bank 2020g). Slowing domestic activity is bound

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

TABLE 1.2.1 Low-income country forecasts[a]

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

	2017	2018	2019e	2020f	2021f	Percentage point differences from January 2020 projections: 2020f	2021f
Low Income Country, GDP[b]	**5.4**	**5.8**	**5.0**	**1.0**	**4.6**	**-4.4**	**-0.9**
Afghanistan	2.7	1.8	2.9	-5.5	1.0	-8.5	-2.5
Benin	5.8	6.7	6.9	3.2	6.0	-3.5	-0.7
Burkina Faso	6.3	6.8	5.7	2.0	5.8	-4.0	-0.2
Burundi	0.5	1.6	1.8	1.0	2.3	-1.0	0.2
Central African Republic[c]	4.5	3.7	3.1	0.8	3.5	-4.1	-1.4
Chad	-3.0	2.6	3.2	-0.2	4.7	-5.7	-0.1
Congo, Dem. Rep.	3.7	5.8	4.4	-2.2	3.5	-6.1	0.1
Eritrea[c]	-10.0	13.0	3.7	-0.7	5.7	-4.2	1.7
Ethiopia[d]	10.0	7.9	9.0	3.2	3.6	-3.1	-2.8
Gambia, The	4.8	6.6	6.0	2.5	6.5	-3.8	0.7
Guinea	10.3	6.2	5.6	2.1	7.9	-3.9	1.9
Guinea-Bissau	5.9	3.8	4.7	-1.6	3.1	-6.5	-1.9
Haiti[d]	1.2	1.5	-0.9	-3.5	1.0	-2.1	1.5
Liberia	2.5	1.2	-2.3	-2.6	4.0	-4.0	0.6
Madagascar	3.9	4.6	4.8	-1.2	4.0	-6.5	-0.4
Malawi	4.0	3.5	4.4	2.0	3.5	-2.8	-1.7
Mali	5.3	4.7	5.1	0.9	4.0	-4.1	-0.9
Mozambique	3.7	3.4	2.2	1.3	3.6	-2.4	-0.6
Nepal[d]	8.2	6.7	7.0	1.8	2.1	-4.6	-4.4
Niger	4.9	6.5	6.3	1.0	8.1	-5.0	2.5
Rwanda	6.1	8.6	9.4	2.0	6.9	-6.1	-1.1
Sierra Leone	3.8	3.5	5.1	-2.3	4.0	-7.2	-0.9
South Sudan[c,d]	-6.9	-3.5	3.2	-4.3	-23.6	-14.6	-29.0
Tajikistan	7.6	7.3	7.5	-2.0	3.7	-7.5	-1.3
Tanzania	6.8	5.4	5.8	2.5	5.5	-3.3	-0.6
Togo	4.4	4.9	5.3	1.0	4.0	-4.5	-1.5
Uganda[d]	3.9	6.2	6.5	3.3	3.7	-3.2	-2.2

Source: World Bank.

Note: 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. Democratic People's Republic of Korea, Somalia, Syria, and Yemen are not forecast due to data limitations.

b. Aggregate growth rate calculated using GDP weights at 2010 prices and market exchange rates.

c. Percentage point differences are relative to the World Bank's October 2019 forecast. The January 2020 *Global Economic Prospects* did not include forecasts for Central African Republic, Eritrea, and South Sudan.

d. GDP growth based on fiscal year data. For Nepal and South Sudan, the year 2019 refers to FY2018/19.

Click here to download data.

to dampen fiscal revenues, while spending has increased to buttress health care systems, improve testing infrastructure, enforce containment measures, and provide limited fiscal support for the economy (Steel and Phillips 2020). Few LIC governments, however, have the resources to provide income support for vulnerable businesses and households who are experiencing income losses. For many LICs, these additional fiscal pressures are putting debt sustainability at risk. Absent immediate external assistance, which may involve temporary debt relief from bilateral creditors, the pandemic may push some LICs toward sovereign default. To help alleviate these funding shortfalls, international financial institutions have made emergency support packages available to assist governments in their response to the pandemic. They have also called on both official and private bilateral creditors to suspend debt payments from these fiscally constrained LICs. In response, official creditors among the G20 and the Paris Club have temporarily suspended debt service payments for the poorest countries that request forbearance. This will allow several LICs to concentrate more of their resources on fighting the pandemic. However, given the scale of the pandemic, further external assistance from the international community may be needed.

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

Even before the COVID-19 pandemic hit, almost one-fifth of the LIC population was already experiencing an acute food insecurity crisis (Figure 1.2.2.E; FSIN 2020). The pandemic has further increased food insecurity in many LICs, including through disruptions to imports and the effect of mitigation measures on supply chains and distribution networks (World Bank 2020g, 2020c). These disruptions may also lead to food price spikes that further erode incomes of the poor, with evidence that prices of certain staples have already risen (World Bank 2019a, 2020g, 2020j). Food insecurity could also be prolonged by the lack of access to critical inputs such as seeds and fertilizer, which could weigh on upcoming harvests.

The pandemic has also come on the heels of a locust infestation at the start of this year among several LICs in East Africa that damaged agricultural crops (Democratic Republic of Congo, Eritrea, Ethiopia, Somalia, South Sudan, Uganda, Tanzania). Although the locust infestation was largely confined to more arid areas and also did not coincide with the peak growing season in most countries, the outbreak has not yet been brought under control—partly due to pandemic-related supply chain disruptions delaying delivery of pesticides—and the next wave of locusts is expected to be larger and hatch in the midst of the May-June growing season. Past locust infestations such as the 2003-05 outbreak in North and West Africa have cost harvests equivalent to US$ 2.5 billion—roughly 0.5 percent of LIC aggregate GDP (Figure 1.2.2.F; Shu'aibu et al. 2013). Absent effective intervention, this locust infestation could further weigh on food security, and may have longer-term welfare implications in vulnerable populations (Conte, Piemontese and Tapsoba 2020; Devi 2020).

some other commodity importers it is below the EMDE median.

Commodity importers that are deeply integrated in global trade and value chains are particularly exposed to global developments. Manufacturing firms in ECA have experienced a sustained decline in exports to the Euro Area (Bulgaria, Hungary, Poland, Romania, Turkey). Mexico has been affected by falling exports to the United States, while much of the manufacturing industry in EAP has seen shipments to China decline.

Although the pandemic has contributed to steep declines in oil and other commodity prices, the benefit for commodity importers has been more than offset by the immensely negative impact of COVID-19 on external and domestic demand. Moreover, fiscal space is narrower than it was prior to the global financial crisis. Years of higher spending combined with lower domestic revenue mobilization have led to widening fiscal deficits. At the same time non-financial corporate debt has risen significantly. Despite the deterioration in fiscal positions, a number of commodity importers have announced stimulus packages (India, Pakistan, Poland, Thailand, Turkey). In addition, central banks in many commodity importers have enacted policy rate cuts.

Low-income countries

Growth in low-income countries (LICs) slowed sharply in the first half of 2020 (Box 1.2). The COVID-19 pandemic has spread to almost all LICs, and domestic mitigation measures have severely disrupted activity (Figure 1.10.E). Spillovers from recessions in major economies have added to the problem—particularly in those LICs with strong trade linkages to China and the Euro Area. In the average LIC, commodities account for two-thirds of goods exports, and the deterioration in world markets has weighed heavily on industrial commodity exporters (Chad, Democratic Republic of Congo, Ethiopia, Tajikistan). Reduced tourism amid global travel restrictions has also tempered growth in some countries (Ethiopia, Madagascar, Uganda).

Heightened investor risk aversion has tightened financial conditions for the few LICs that have borrowed from international capital markets, while contractions in major economies have reduced remittance flows—an important source of foreign funding in a number of LICs (World Bank 2020b, 2020d, 2020g; Figure 1.10.F). In addition, already-fragile fiscal positions among several LICs have deteriorated further as decelerating growth and reduced export earnings

have weighed on fiscal revenues, while efforts to buttress health systems and slow the spread of the virus have created new demands for government spending. Multilateral organizations have provided emergency funding packages to support LIC governments in their efforts to protect the lives and livelihoods of those most vulnerable; however, given the scale of the pandemic, further external assistance from the broader global development community may be needed.

Outlook

Growth outlook

Aggregate EMDE activity is expected to contract by 2.5 percent in 2020—6.6 percentage points below previous forecasts, and the worst rate since at least 1960, the earliest year when aggregate GDP data are available (Figure 1.11.A). The projected fall in activity is broad-based, with nearly 80 percent of EMDEs expected to register negative growth this year. All EMDE regions will be affected (Chapter 2; Special Focus). Forecast downgrades are larger and the recessions are deeper in EMDEs with the most severe COVID-19 outbreaks or those most susceptible to global spillovers, such as economies that are heavily dependent on tourism (Croatia, Maldives, Seychelles, Thailand), economies deeply embedded in global value chains (Bulgaria, Mexico, Poland), and major exporters of industrial commodities (Chile, Nigeria, Russian Federation, South Africa; Figure 1.11.B).

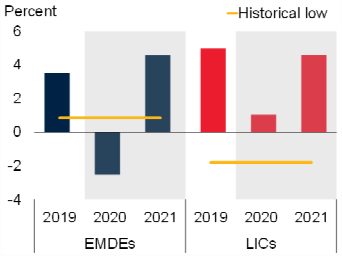
Growth in EMDEs is projected to rebound in 2021, to 4.6 percent, supported by the expected pickup in China and a recovery of trade flows and investment. Excluding China, EMDE growth is envisioned to recover at a more modest pace next year, reflecting headwinds for commodity exporters amid subdued commodity prices and a weak rebound in services. Economies dependent on tourism will be subject to an additional drag on growth (Figure 1.11.C).

Through its effect on investment, as well as the loss of human capital among idled and furloughed workers, COVID-19 is likely to dampen long-term growth prospects and productivity. In many cases, the pandemic is expected to exacerbate the

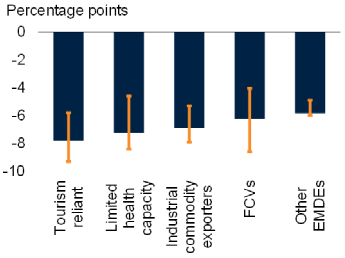
FIGURE 1.11 EMDE outlook

The drop in 2020 aggregate EMDE growth is expected to be the worst on record, with that of LICs also falling sharply. Severe economic contractions are expected in countries that are dependent on tourism, are deeply integrated in global value chains, or rely on industrial commodity exports. The pandemic will exacerbate the weakness in investment, and deep recessions will likely weigh on potential growth for years to come. Prolonged school closures could have lasting implications for poverty.

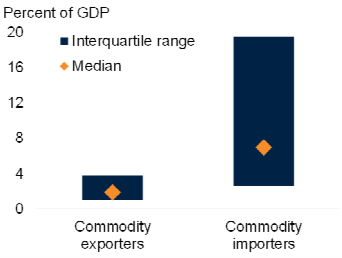
A. Growth in EMDEs



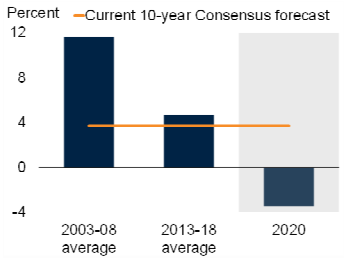
B. Average size of forecast downgrade in 2020, by EMDE group



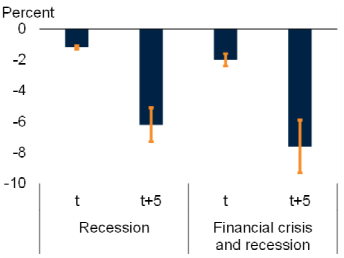
C. Inbound tourism from 2014-18, by EMDE group



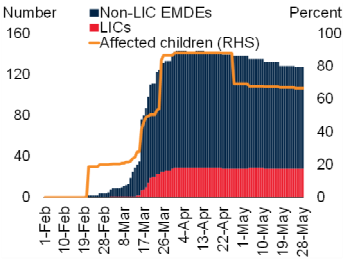
D. Actual and Consensus forecasts for investment growth in EMDEs



E. Cumulative EMDE potential output response after recessions



F. School closures



Source: Consensus Economics; Ha, Kose, and Ohnsorge (2019); Haver Analytics; UNESCO; World Bank; World Tourism Organization.

Note: LICs = Low-income countries, FCVs = fragile, conflict, and violence-affected economies.

A.D. Aggregates are calculated using U.S. dollar GDP weights at 2010 prices and market exchange rates. Shaded areas indicate forecasts.

A. Historical low is calculated over the period 1970-2018.

B. Figure shows the simple average of forecast downgrades expected in 2020. Orange vertical lines indicate the interquartile range. "Tourism reliant" indicates tourism as a share of GDP above the EMDE median value. "Limited health capacity" indicates health expenditure as percent of GDP below EMDE median. "Industrial commodity exporters" are defined in Table 1.2. "Other EMDEs" indicates EMDEs not included in other categories. Sample includes 144 EMDEs, of which 69 rely on tourism, 71 have limited health capacity, 49 are industrial commodity exporters, and 31 are FCVs.

C. Sample includes 146 EMDEs, of which 84 are commodity exporters and 62 are commodity importers.

D. Blue bars denote actual investment growth. Consensus forecasts aggregate calculated as a simple average of surveys based on data availability. Sample includes 48 economies.

E. Data and methodology are detailed in Chapter 3 Box 3.1 and Annex 3.4. Charts show impulse responses for 75 EMDEs from a local projections model. Dependent variable is cumulative slowdown in potential output after a recession, financial crisis, or oil price plunge event. Year t is the year of the event. Bars show coefficient estimates; vertical lines show 90 percent confidence bands.

F. Number of countries that have either recommended or required school closings as part of measures to contain the domestic spread of COVID-19. Last observation is May 28, 2020.

Click here to download data and charts.

BOX 1.3 Scenarios of possible global growth outcomes

Since near-term global growth projections are subject to an unusual degree of uncertainty, this box presents three scenarios to illustrate possible global growth trajectories for 2020-21. In addition to a scenario consistent with baseline forecasts, a downside scenario explores the possibility of a deeper and more protracted global recession, while an upside scenario illustrates a prompt recovery. Even in the upside scenario, the 2020 global recession would be about twice as deep as the 2009 global recession. While the pandemic will have the most severe impact on advanced economies, emerging markets and developing economies (EMDEs) will also be substantially affected, with the magnitude of the downturn and subsequent recovery varying across EMDE regions.

The range of plausible global growth outcomes remains exceptionally wide. The ultimate outcome will depend on the evolution of the pandemic, the extent and duration of measures to stem the pandemic, the size and effectiveness of policy responses, and the spillovers emanating from major economies. This box presents three alternative scenarios to help illustrate the possible growth outcomes.

The first scenario is consistent with the baseline forecast presented in Table 1.1. With risks to the baseline forecast tilted to the downside, a more adverse scenario is also examined. This *downside scenario* assumes that flareups of the virus require stringent control measures—such as lockdowns and school and business closures—to remain in place through the third quarter of 2020 in many countries and includes heightened financial stress in a number of EMDEs. In contrast, an *upside scenario* explores how rapid fiscal and monetary policy responses may succeed in supporting consumer and investor confidence, leading to a prompt normalization of domestic economic activity and financial conditions, and the unleashing of pent-up demand.

Methodology

Scenarios for global growth are developed by layering a set of adverse common shocks related to the COVID-19 outbreak onto the January 2020 *Global Economic Prospects* forecasts for major economies and other economic aggregates. Shocks include restrictions to slow the spread of the virus (measured as number of weeks), a sharp increase in global risk aversion proxied by an exogenous increase in the VIX, and a collapse in inbound tourism, which are cushioned in part by large-scale monetary and fiscal policy support. Moreover, each economy is expected to experience adverse spillovers from its major trading partners. The relative magnitude of each shock is scaled using a variety of quantitative tools, including a suite of global and regional vector autoregression models.[1]

Baseline scenario

Growth paths

The baseline scenario envisions that the global economy will fall into a deep global recession. Global output in 2020 would contract 5.2 percent (Figure 1.3.1). This drop would be roughly three times the rate of decline experienced during the 2009 global recession. Global trade would fall about 13 percent, in part due to the centrality of several of the economies with the largest outbreaks in global value chains (Baldwin and Tomiura 2020).

While advanced economies would be hardest hit, aggregate activity in EMDEs would also contract in 2020—for the first time in decades, in contrast to the continued expansion these economies delivered in 2009. All EMDE regions would be affected, albeit in varying degrees. The impact will be larger and the recessions deeper in EMDE regions with the most severe COVID-19 outbreaks and the most stringent restrictions to stem the pandemic, and those most susceptible to global spillovers, such as economies that are heavily dependent on tourism, economies deeply embedded in global value chains, and major exporters of industrial commodities. In particular, the largest contractions this year are foreseen to be experienced in LAC and ECA given their exposure to spillovers from major economies, followed by MNA and SSA partly reflecting the large fall in commodity prices.

A recovery would get underway in the second half of 2020 once lockdowns and other restrictions are gradually unwound; however, despite large-scale fiscal and monetary policy support, this recovery would be hesitant. Even as employment picks up, households would only slowly increase consumption—particularly when it requires social interaction—amid concerns of possible infection. Firms would hold back on increasing investment until they are confident about a vigorous rebound. International travel

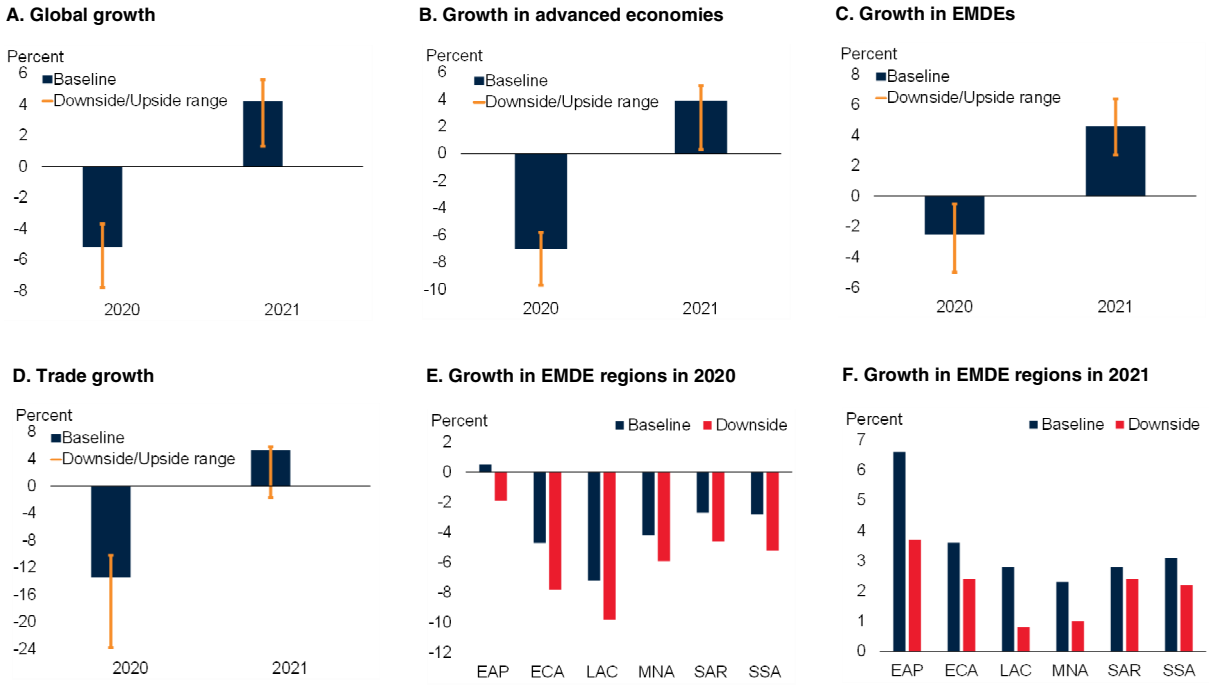
Note: This box was prepared by Carlos Arteta and Justin-Damien Guénette, with contributions from Hideaki Matsuoka, Franz Ulrich Ruch and Sergiy Kasyanenko.

[1] Vector autoregression models based on Huidrom et al. (2020) provide well-grounded rules of thumb for the impact of financial turmoil on output and the magnitude of global spillovers from major economies. In addition, national accounting exercises provide a regional quantification of the economic impact of domestic mitigation measures and other disruptions related to COVID-19. As discussed below, the growth impacts of fiscal and monetary policy actions are quantified using the Oxford Global Economic Model.

BOX 1.3 Scenarios of possible global growth outcomes (*continued*)

FIGURE 1.3.1 Possible global growth outcomes

The ultimate impact of COVID-19 on global, advanced economy, and emerging and developing economy (EMDE) growth, as well as on world trade, will depend primarily on the severity and duration of the necessary pandemic-control measures and related financial turmoil, as well as the ability of policymakers to buffer economic disruptions. All EMDE regions will be affected, albeit to varying degrees.



Aggregate growth rates calculated using GDP weights at 2010 prices and market exchange rates.
Baseline scenario: three months of mitigation measures would be enough to stem the pandemic. A recovery would get underway once mitigation measures are lifted but would be hesitant.
Downside scenario: Three months of stringent lockdowns would prove insufficient and another three months of mitigation would be required before the pandemic can be brought under control.
Upside scenario: Mitigation measures would be lifted after three months, and all major economies would sputter back to life in the third quarter of 2020. Monetary and fiscal stimulus would remain in place and would be highly effective in supporting growth over the next 18 months.
Click here to download data and charts.

would resume only slowly, weighed down by remaining travel restrictions.

Despite lingering social-distancing practices, the lifting of control measures by the end of 2020 would set the stage for a rebound in global growth in 2021. That said, the envisioned global recovery next year is moderate, with the level of global output in 2021 still 5.9 percent below that of January forecasts. This reflects various headwinds that will weigh on activity over the medium term. First, the pandemic will likely cause notable shifts in consumption and work patterns that will dampen aggregate demand. Some social-distancing habits will persist, despite the eventual development and dissemination of a vaccine. Households will be reluctant to undertake many activities that require face-to-face interaction, such as tourism. Where possible, workers will make greater use of teleworking arrangements, reducing the discretionary consumption that arises from daily professional interactions.

Second, households and firms will strive to rebuild precautionary savings and strengthen balance sheets next year, following the precipitous declines in incomes experienced in 2020. Low-income households—which have the highest marginal propensity to consume—will be particularly cautious, as they grapple with lingering unemployment and precarious financial situations. Many

BOX 1.3 Scenarios of possible global growth outcomes (*continued*)

firms, facing sharply higher debt and persistent uncertainty, will opt to cut costs, delay expansion plans, and invest in labor-saving technologies. Moreover, the positive effects from fiscal support to households and firms is expected to fade, as existing stimulus measures are phased out.

Assumptions

The baseline scenario is predicated on several assumptions about the evolution of activity, financial and commodity markets, and policy responses.

Activity. Outbreaks in advanced economies continue to slow, allowing most countries to continue to lift lockdown measures through 2020Q2; however, some control measures remain in place during the third quarter in order to prevent flare-ups. Outbreaks in EMDEs and the stringency of related lockdown measures reach their peaks somewhat later. During the lockdown period, all economies experience a precipitous collapse in a substantial share of domestic private consumption that requires social interactions, as well as of business investment and employment.[2]

For example, even in EMDEs excluding China that are in the least open quartile by trade openness would see output losses of about 8 percent, on average, in 2020— about one-third less than the output losses of those in the most trade-open quartile. These impacts, however, do not yet take into account the extraordinary policy stimulus being implemented, nor any additional spillovers from turmoil in financial or commodity markets as well as country-specific factors.

This would put considerable strain on balance sheets of households and smaller firms that do not have access to capital markets (Islam and Maitra 2012). Moreover, activity is further hampered by a global collapse in tourism. In general, domestic disruptions in EMDEs are magnified by large spillovers from the sharp decline in activity in major economies.

Financial markets. Despite interventions by central banks, bouts of financial market stress persist; financial market volatility is expected to largely subside in the second half of 2020. Past increases in borrowing costs and financial market stress are assumed to weigh on activity throughout the remainder of 2020.

Commodity markets. Amid plunging global growth and financial market stress, oil prices are likely to further decline, on net, reaching a trough in the second quarter, before recovering as activity stabilizes. Non-energy commodity prices would also fall, with a particularly large decline in metals prices.

Policy responses. In most countries, stringent control measures and large-scale support to the health sector should help slow the pandemic but will also accentuate the pandemic's heavy toll on economic activity. Large fiscal support is provided to liquidity-constrained households and firms, but the effectiveness of policy measures is hampered in part by delays and elevated uncertainty.[3] This will help avoid lasting damage from the economic downturn even if it provides only limited immediate boost to output growth. Aggressive monetary and financial sector policy interventions, including conventional and unconventional monetary measures, are expected to alleviate financial market volatility, but not fully control it until outbreaks subside.

Downside scenario: More stringent lockdown measures

In this scenario, global output would shrink by almost 8 percent in 2020, as an additional three months of stringent lockdown measures are assumed to be required before the pandemic can be brought under control, increasing the severity of the impact on global growth. During these additional three months, measures that had previously begun to ease are quickly and aggressively re-introduced. Despite additional fiscal policy support, vulnerable firms would exit, vulnerable households would sharply curtail consumption, and travel would remain deeply depressed. Disruptions to global value chains would exacerbate the collapse in global trade, which is envisioned to contract by about a quarter. These disruptions would also magnify the size of cross-border spillovers and lead to widespread

[2] Simulations of a large-scale global macroeconometric model suggest that the impact of a coincidence of such domestic shocks around the world will be large (Oxford Economics 2019). Relative to the baseline, global output in 2020 would collapse by 12 percent, while that of EMDEs would fall by about 9 percent. In 2020, the impact of these domestic policy shocks would be considerably larger than spillovers from external shocks.

[3] Despite monetary policy at or near the zero-lower bound, fiscal stimulus may be less effective when some sectors are completely shut down (Guerrieri et al. 2020). Fiscal multipliers may be lower due to high debt levels across many advanced and EMDE economies (Huidrom et al. 2019). The effectiveness of fiscal policy may also be hampered by high levels of informality, which can complicate the delivery of supportive measures (Chapter 3). Widespread informality, coupled with low financial inclusion, can also reduce the effectiveness of monetary policy (Alberola-Ila and Urrutia 2019).

BOX 1.3 Scenarios of possible global growth outcomes (*continued*)

interruptions in production. Persistent and severe financial market turmoil would cause a notable spike in bankruptcies worldwide and trigger serious bouts of financial distress in many EMDEs. Simultaneously, a long period of low oil prices would lead to elevated financial stress in some vulnerable oil exporters.

The prolonged period of stringent lockdowns would weigh heavily on advanced economies, with output contracting by nearly 10 percent in 2020. Output in EMDEs would contract by almost 5 percent, with the largest declines in commodity-exporting EMDEs, including those located in the LAC and ECA regions. The recovery that follows would be markedly sluggish, hampered by severely impaired balance sheets, heightened financial market stress and widespread bankruptcies in EMDEs. In 2021, global growth would barely begin to recover, increasing to 1.3 percent, while growth in EMDEs would rise to a modest 2.7 percent.

Upside scenario: Prompt recovery

In this scenario, as in the baseline, pandemic-control measures would be largely lifted by the end of the second quarter in advanced economies, and somewhat later in EMDEs. All major economies would sputter back to life in the third quarter of 2020. During the lockdown period, most of the consumption that requires any social interaction would be suspended, and external tourism would collapse amid temporary border restrictions, as in the baseline case (OECD 2020). Nevertheless, and in contrast to baseline projections, a sharp economic rebound would promptly get underway as businesses re-open, trade and travel barriers are lifted, and confidence rebounds. Financial conditions would ease substantially, and capital would quickly flow back into EMDEs, resuming its pre-pandemic search for yield. Extraordinary monetary and fiscal stimulus would remain in place and, once activity resumes, would be highly effective in supporting growth over the next 18 months. That said, even in this upside scenario, global output would contract in 2020 by about 4 percent—more than twice the pace registered in the 2009 global recession—and EMDE growth would also be negative. Global trade would fall by almost 10 percent, also worse than 2009. Once mitigation measures are fully lifted, global growth would rebound markedly in 2021, above 5 percent.

weakness in private investment that has been a feature of the past decade (Figure 1.11.D; World Bank 2018a). In previous epidemics, investment declined by nearly 10 percent five years following the event, reflecting substantial risk aversion amid heightened economic uncertainty. In many EMDEs, deep recessions will weigh on potential output for a prolonged period (Figure 1.11.E; Chapter 3).

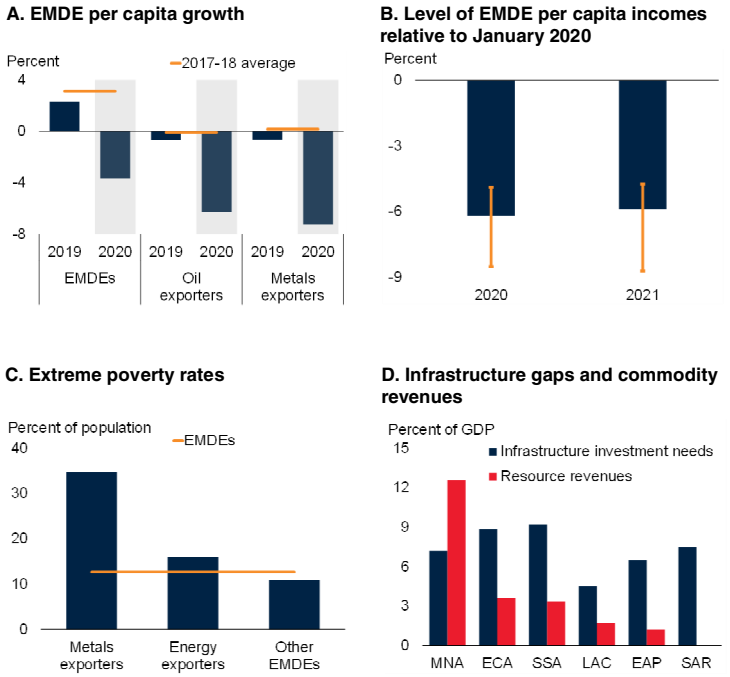
The pandemic has also disrupted schooling at all levels, with many EMDEs having fully or partially closed their education systems in an effort to contain its spread (UNESCO 2020). Extended school closures, along with disruptions to early childhood development programs, are expected to set back learning, raise dropout rates, and slow human capital development (Figure 1.11.F; Armitage and Nellumns 2020; Burgess and Sievertsen 2020; Wang et al. 2020; World Bank 2020k, 2020l). Growing food insecurity, including disruptions to school feeding programs, could also lower long-term productivity, as malnutrition early in life can permanently impair learning abilities.

The fallout from COVID-19 will be particularly severe in countries with widespread informality and limited safety nets (ILO 2020a). In the average EMDE, informal activity accounts for one-third of output and two-thirds of employment. In EMDEs with large informal sectors, workers and firms have limited options to buffer temporary income losses, while also being more vulnerable to adverse health impacts. Additionally, temporary workers in the formal economy suffer from gaps in social safety nets and social protection.

Growth in LICs is projected to fall to 1 percent in 2020—the lowest rate in more than 25 years. Among fragile LICs, activity will slow to a crawl, reflecting the pandemic's severe disruption to activity in countries least equipped to lessen its impact. The expected growth pickup in LICs in 2021 assumes that both domestic activity and external demand recover as the pandemic fades,

FIGURE 1.12 EMDE per capita income growth and poverty

Per capita incomes in EMDEs have fallen sharply amid the pandemic, markedly affecting living standards and tipping many millions back into poverty. Among oil and metals exporters, in which contractions in per capita incomes have been particularly steep, poverty rates tend to be higher. In some regions, lower commodity prices could constrain fiscal revenues needed for critical development spending.



Source: ICTD/UNU-WIDER; Rozenberg and Fay (2019); 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. Sample includes 144 EMDEs, of which 29 are oil exporters and 20 are metal exporters.
B. Bars show the percent difference between the level of per capita GDP in the January and June 2020 editions of *Global Economic Prospects*. Orange whiskers indicate the interquartile range. Sample includes 144 EMDEs.
C. Sample includes 127 EMDEs, of which 24 are oil exporters and 20 are metal exporters.
D. "Infrastructure investment needs" reflect the GDP-weighted average annual cost of investment in the preferred scenario between 2015–30. The preferred scenario minimizes overall costs and relies on what are considered "reasonable" assumptions (Rozenberg and Fay 2019). "Resource revenues" reflect simple averages of total natural resource revenues, including natural resource revenues reported as "tax revenue" or "non-tax revenue" in 2017. Natural resources are here defined as natural resources that include a significant component of economic rent, primarily from oil and mining activities. Sample includes 80 EMDEs.
Click here to download data and charts.

and that commodity prices firm from current levels as global demand recovers. Among exporters of industrial commodities, growth is projected to be spurred further by investment in new production capacity (Chad, Mozambique, Niger), while continued reforms to improve business environments will aid the recovery in some others (Benin, Ethiopia, Nepal, Rwanda, Togo).

Per capita income growth and poverty

Even before the pandemic, it was increasingly unlikely that the Sustainable Development Goal (SDG) of reducing global extreme poverty to 3 percent of the global population over the next decade would be achieved (World Bank 2018b). This goal is now even further out of reach. Household incomes are expected to be weighed down by sharp income losses from diminished employment opportunities and lost earnings due to illness, as well as reduced remittance receipts. As a result, per capita incomes among more than 90 percent of EMDEs are expected to contract in 2020, markedly affecting living standards and causing many millions to fall back into poverty (ILO 2020a; Lakner et al. 2020; World Bank 2020a; Figures 1.12.A and 1.12.B). The crisis is also likely to worsen inequality, as various factors render the poor more vulnerable to the effects of the pandemic, including their limited access to health care and lack of resources to cushion income losses (Furceri, Loungani, and Ostry 2020).

Per capita income losses are forecast to be steepest in ECA, LAC, MENA, and SSA. These four regions are home to many oil exporters, which will be severely affected by the precipitous fall in oil prices. Commodity exporters, particularly those in Sub-Saharan Africa, typically have sizable populations living in extreme poverty (Figure 1.12.C). Falling per capita incomes in Sub-Saharan Africa—home to 60 percent of the world's extreme poor—are likely to further concentrate global poverty in the region (Lakner et al. 2020; World Bank 2020i). In some countries, constrained fiscal revenues due to commodity prices remaining lower over the long term are likely to further weigh on needed development spending—particularly on health, education, and infrastructure—pushing even more SDGs out of reach (Figure 1.12.D).

Global outlook and risks

The pandemic is pushing the global economy into recession, with a projected contraction of 5.2 percent in 2020—the worst rate in post-war history. Any numerical forecast for the period ahead, however, is subject to unprecedented levels of uncertainty. Risks are firmly tilted to the downside and include a more protracted pandemic and hence a prolongation of

mitigation measures, financial crises, a further drop in commodity prices, and a slower recovery due to lasting impacts on consumers and firms and a retreat from global value chains. These factors could lead to a substantially greater loss of output in the near term.

Global outlook

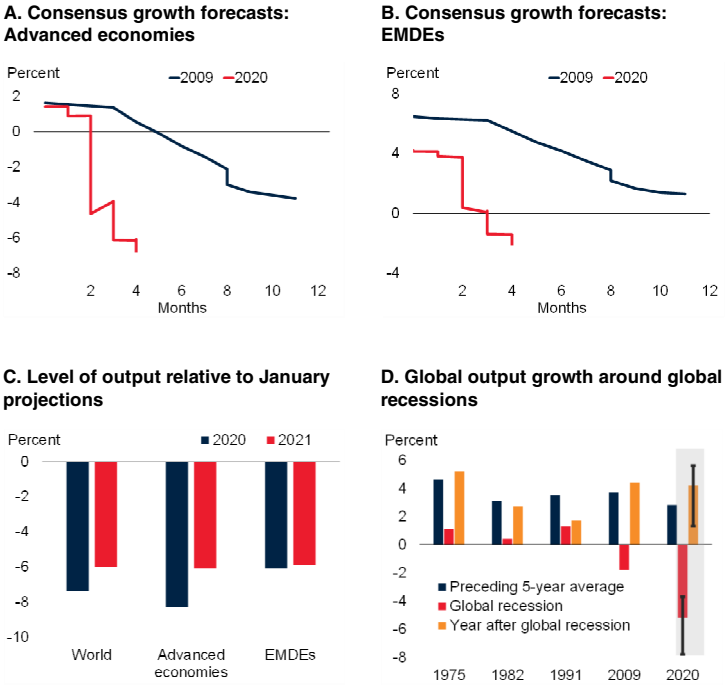
Lockdowns and other restrictions, while necessary to slow the spread of the virus, have been accompanied by a sharp reduction in economic activity (Baldwin and Weder di Mauro 2020; Boissay, Rees, and Rungcharoenkitkul 2020; Eichenbaum, Rebelo, and Trabandt 2020; Gourinchas 2020). Their gradual removal is expected to pave the way for a partial recovery in the second half of the year. On this assumption, the world economy is projected to contract by 5.2 percent in 2020. If this forecast materializes, the fall in global output would be more than double that of the 2009 global recession.

The severity and speed of the disruptions to the global economy have been reflected in the strikingly steep downgrades, for advanced economies and EMDEs, by all major forecasters (Figures 1.13.A and 1.13.B). Within one month, as widespread restrictions were implemented in large segments of the world economy, consensus forecasts for global growth in 2020 were downgraded by more than 5 percentage points—a magnitude of forecast downgrades that took nine months in the wake of the global financial crisis.

The projected depth of the 2020 global recession depends on the weighting methodology used to compute the rate of global growth. Advanced economies account for 60 percent of global activity using market exchange rate weights, as in these baseline projections, while they account for only 40 percent when using purchasing power parity (PPP) weights. Major advanced economies—in particular, the Euro Area—are expected to contract precipitously this year. In contrast, some large EMDEs—most notably China—are projected to continue to expand, albeit more slowly than previously anticipated. As a result, advanced economies are expected to shrink by 7 percent in 2020, while EMDEs are envisioned to contract by 2.5 percent.

FIGURE 1.13 Risks to the outlook

The global economy is experiencing one of the sharpest contractions on record. Forecasts for activity in both advanced economies and EMDEs were downgraded substantially and much more rapidly than in 2009. Even after recovering in 2021, activity is expected to remain far below previously projected levels. Substantial uncertainty surrounds possible growth outcomes, and there remains a heightened probability of even weaker outcomes if downside risks materialize.



Source: Consensus Economics; World Bank.

A.B. Market growth forecasts are based on estimates from Consensus Forecasts. Figure starts in July 2008 for the 2009 global financial crisis and February 2020 for the COVID-19 outbreak. Last observation is May 26, 2020.

C. Figure shows the percent difference between the level of output in the January and June 2020 editions of *Global Economic Prospects*.

D. A global recession is defined as a contraction in real per capita GDP. Output growth in respective years and period. Growth rates in 2020 and 2021 are the baseline forecasts (shaded in gray). Black lines indicate ranges based on the lower and upper bounds of growth in the scenarios described in Box 1.3.

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Since the contraction in advanced economies is much more pronounced than that of EMDEs, the use of PPP weights—which assign greater weight to EMDEs than market exchange rate-based weights—yields a less severe global recession. Global output is projected to shrink 4.1 percent in 2020 using PPP weights, consistent with the baseline contraction of 5.2 percent using market exchange rates. Advanced economies account for essentially all of the 1.1 percentage point difference between the two methods. Regardless of the weighting methodology, this year's contraction will be highly synchronized internationally, with

BOX 1.4 How does informality aggravate the impact of COVID-19?

COVID-19 will take an especially heavy humanitarian and economic toll on emerging markets and developing economies (EMDEs) with large informal sectors. Participants in the informal sector—workers and small enterprises—are often not registered with the government and hence have no access to government benefits. Informality is associated with underdevelopment in a wide range of areas, such as widespread poverty, lack of access to financial systems, deficient public health and medical resources, and weak social safety nets. These vulnerabilities have amplified the economic shock to livelihoods from COVID-19 and threatened to throw large numbers of people into extreme poverty. The impact is likely to be particularly severe on women, due to their outsized participation in sectors that are more affected by the pandemic. While the effects of the crisis continue, it is critical to implement effective delivery channels to quickly provide the support that informal workers and firms need to survive. Unconditional support programs would be advisable in many EMDEs. Given their limited resources, low-income countries will require increased international funding for the effective implementation of such programs.

Informal activity is widespread in emerging markets and developing economies (EMDEs; World Bank 2019a; Figure 1.4.1). Participants generally are not registered with the government and do not have access to social benefits, with their activity largely unmonitored by authorities. The informal sector is often associated with underdevelopment, labor-intensive industry, less educated and poorly paid workers, limited access to financial and medical service, and poor or non-existent coverage by social security. These features are likely to intensify the spread of COVID-19 among informal workers and worsen its adverse health and economic impacts. Confirmed COVID-19 cases have been rising rapidly in EMDEs with extensive informality since the end of March, despite a low level of testing.

Against this background, this box addresses the following questions.

- What is the role of the informal economy in EMDEs?
- How may widespread informality alter the impact of the pandemic?
- How do policies to mitigate the impact of pandemic need to be tailored in the presence of large informal economies?

Informality in EMDEs

Widespread informality in EMDEs. The informal sector, on average, accounts for about a third of official GDP and about 70 percent of total employment in EMDEs (World Bank 2019a; Figure 1.4.1). Informal enterprises account for 8 out of every 10 enterprises in the world (ILO 2020b). The size of the informal economy varies widely across regions and countries. The share of informal output is highest in Sub-Saharan Africa, Europe and Central Asia, and Latin America and the Caribbean, averaging around 40 percent of GDP in those regions between 2010 and 2016. The share of self-employment, another measure of informality, is highest in Sub-Saharan Africa, South Asia, and East Asia and the Pacific, ranging from 50 percent to 62 percent of total employment. Informality is particularly prominent in some EMDEs. For example, in 2016, the informal economy accounted for more than 60 percent of GDP in the Democratic Republic of Congo and Zimbabwe. The sector accounted for 90 percent of total employment in countries like Mali, Mozambique, and Côte d'Ivoire. In Kenya and India, about 8 out of 10 workers were self-employed.[1]

Characteristics of informal workers. Workers in the informal sector tend to be lower-skilled and lower-paid, with less access to finance or social safety nets than workers in the formal sector (Loayza 2018; Perry et al. 2007; World Bank 2019a). They often live and work in crowded conditions and conduct all transactions in cash—factors that enable the spread of disease (Chodorow-Reich et al. 2020; Surico and Galeotti 2020). Informal workers on average have incomes 19 percent lower than formal workers, and have limited savings (World Bank 2019a; Figure 1.4.2). In the one-third of EMDEs with the most pervasive informality, 40 percent of the population would be driven into poverty if they had to cover direct out-of-pocket payments for an unexpected health care emergency. In these economies, unemployment benefits are only available to a miniscule fraction of the population (on average, less than 2.5 percent).

Characteristics of informal firms. Informal firms tend to be labor-intensive and more prevalent in the services sector. These have been hard hit by measures to curtail

Note: This box was prepared by Shu Yu.

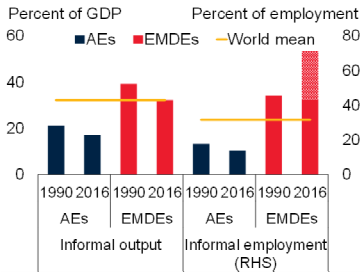
[1] Common employment measures of informality are *self-employment* and *informal employment*, relative to total employment. The *self-employed* work on their own account, or with one or a few partners, or in a cooperative. *Informal employment* comprises all workers of the informal sector and informal workers outside the informal sector (see World Bank 2019a for details).

BOX 1.4 How does informality aggravate the impact of COVID-19? (*continued*)

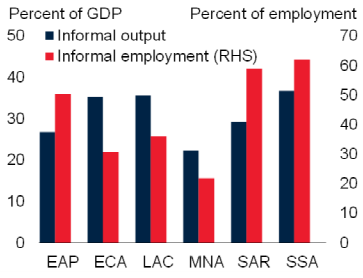
FIGURE 1.4.1 Informality in EMDEs

Informality is prominent in emerging markets and developing economies (EMDEs). In Sub-Saharan Africa, Europe and Central Asia, and Latin America and the Caribbean, the share of informal output averages about 40 percent of GDP. The share of self-employment, another gauge of informality, in Sub-Saharan Africa, South Asia, and East Asia and the Pacific, ranges from 50 to more than 60 percent of total employment. Confirmed COVID-19 cases have been growing rapidly in countries with above-median informality since the end of March, despite the lack of testing.

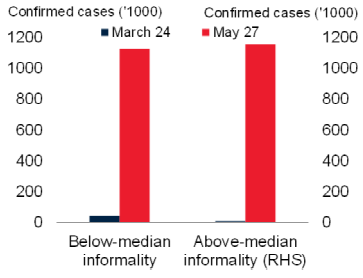
A. Informality in EMDEs



B. Informality across EMDE regions



C. COVID-19 cases and the extent of informality



Source: Elgin et al. (forthcoming); World Bank, World Development Indicators; Haver Analytics; International Labour Organization.
Notes: EAP=East Asia Pacific, ECA=Europe and Central Asia, MNA=Middle East and North Africa, SAR=South Asia, SSA=Sub-Saharan Africa.
A. Unweighted averages. Informal employment (in red) uses self-employment shares (with additional informal employment shares in shaded red) in the closest (latest) available year around 1990 and 2016. World averages between 1990 and 2016 are in yellow.
B. Mean of informal output (DGE-based estimates) and employment estimate (share of self-employment) in each region during 2010-16.
C. Bars show the total number of confirmed COVID-19 cases (in thousands) for EMDEs (excluding China) with above-median informality and EMDEs (excluding China) with below-median informality on March 24, 2020 and on May 27, 2020. Informality is measured by DGE-based informal output in percent of official GDP in 2016.
Click here to download data and charts.

social interactions (Benjamin and Mbaye 2012; Surico and Galeotti 2020). In EMDE service sectors, about 72 percent of firms are informal, compared with 33 percent in manufacturing sectors (see Amin, Ohnsorge, and Okou 2019 for sample coverage). Agricultural employment in EMDEs is roughly 90 percent informal. Epidemic-control measures have already disrupted access to markets and inputs and may also eventually threaten the food security of smallholder farmers (Cullen 2020; FAO 2020b; ILO 2018).

Broader development challenges. A larger informal economy is associated with weaker economic, fiscal, institutional, and developmental outcomes. GDP per capita in countries with above-median informality is about one-third to one-half that of countries below the median informality (World Bank 2019a). Health systems in EMDEs with more informality are relatively underdeveloped, and government capacity to mount an effective policy response to pandemics is limited.

- ***Health and sanitation.*** Although the populations of EMDEs with the most pervasive informality tend to be younger, they also tend to be less healthy, live in less sanitary conditions, and only have access to weak public health and medical systems (Figure 1.4.3).[2] In the one third of EMDEs with the most pervasive informality, sanitation facilities are accessible to only 34 percent of the population, and clean drinking water is available to only 55 percent of the population, compared to 80 percent in the one third where informality is least pervasive. Hand-washing facilities are available for only 40 percent of the population in the former group. Access to medical care is also extremely limited, with only three-fifths the number of doctors and nurses per 1,000 people than the EMDEs with the least informality. In countries like Malawi and Kenya, thousands of people have access to only one or two ICU beds (Murthy, Leligdowicz, and Adhikari 2015).

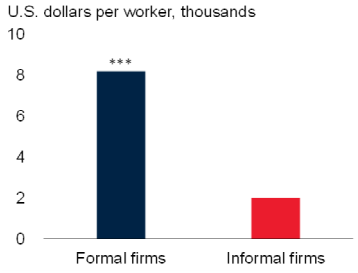
[2] In the one third of EMDEs with the most pervasive informality, 5.3 percent of the population is aged 65 or above, compared with 6.2 percent in the one third of EMDEs with the least pervasive informality. In the one third of EMDEs with the most pervasive informality, the number of deaths per 1,000 people caused by communicable diseases and maternal, prenatal and nutrition conditions are about two times higher than in the one third of EMDEs with the least pervasive informality.

BOX 1.4 How does informality aggravate the impact of COVID-19? *(continued)*

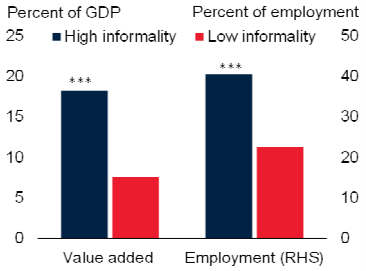
FIGURE 1.4.2 Features of the informal sector

Informal workers are often employed in the agricultural or services sectors, poorly paid, with limited access to social benefits, and at risk of impoverishing health expenditures.

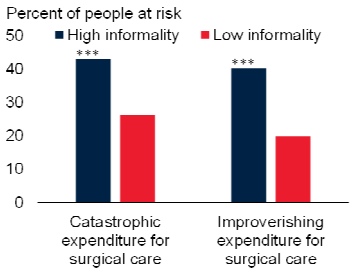
A. Income in the informal sector



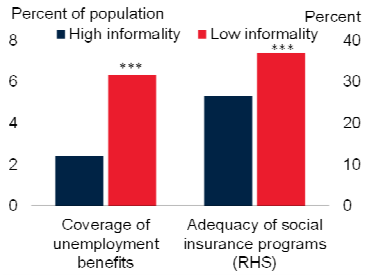
B. Agricultural sector



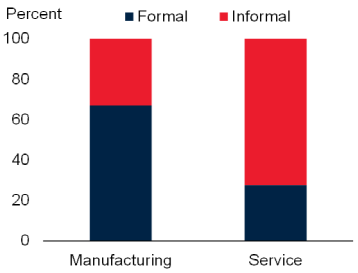
C. Risk of impoverishing expenditure for surgical care



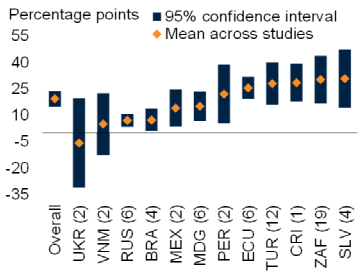
D. Social insurance



E. Informality in manufacturing and services



F. Wage premium for formal over informal employment



Source: Elgin et al. (forthcoming); Amin, Ohnsorge, and Okou (2019), World Bank, Enterprise Survey; World Development Indicators; World Bank (2019a); Global Surgery and Social Change (PGSSC) at Harvard Medical School.

A. Firm productivity is measured as sales per worker. "***" indicates the group differences between formal and informal firms are not zero at 10 percent significance level.

B-D. Bars are group means calculated for EMDEs with "high informality" (i.e., the highest one-third EMDEs by DGE-based informal output measure) and those with "low informality" (i.e., the highest one-third EMDEs by DGE-based informal output measure) over the period 2010-16. "***" indicates the group differences are not zero at 10 percent significance level.

D. Adequacy of social insurance programs are measured in percent of total welfare of beneficiary households.

E. Data coverage of the share of informal (formal) firms in the manufacturing (service) sector is the same in Amin, Ohnsorge, and Okou (2019).

F. The wage premium is obtained from 18 empirical studies on the wage gap between formal and informal workers. See World Bank (2019a) for details. UKR=Ukraine, VNM=Vietnam, RUS=Russia, BRA=Brazil, MEX=Mexico, MDG=Madagascar, PER=Peru, ECU=Ecuador, TUR=Turkey, CRI=Costa Rica, ZAF=South Africa, SLV=El Salvador. The number of studies or estimates for each country is shown in parenthesis; country means are calculated using a random-effects meta-analysis model.

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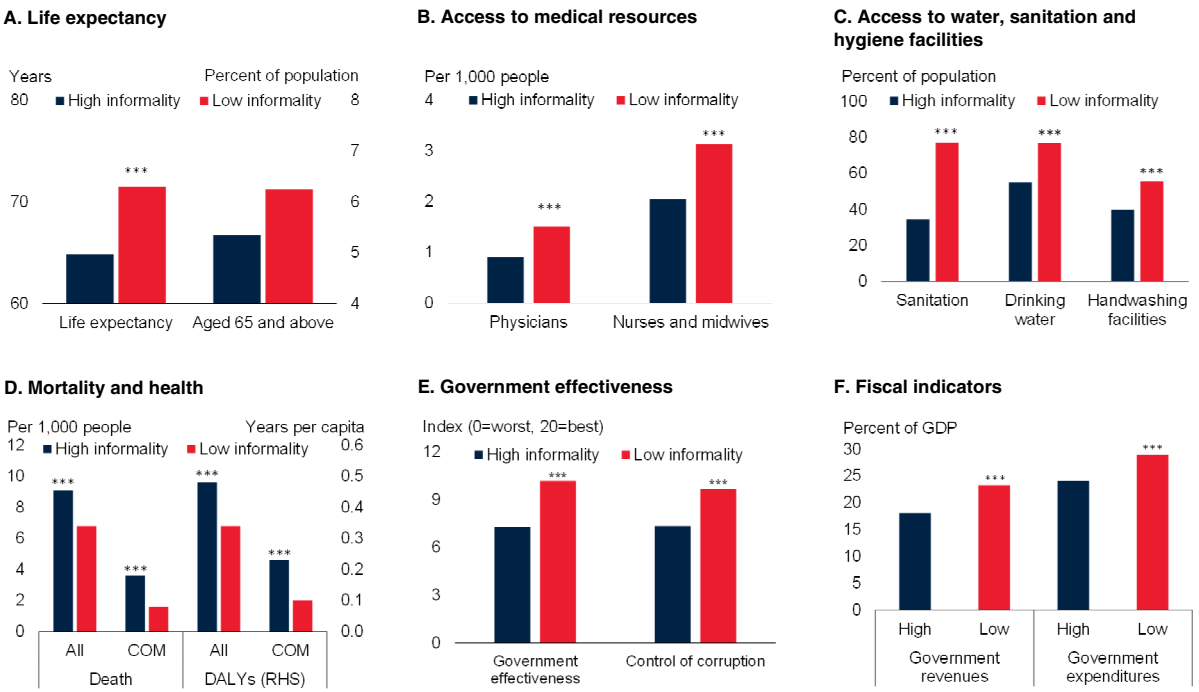
- ***Government policy effectiveness.*** Countries with pervasive informality are less likely to have the institutional and fiscal capacity to mount an effective response to the pandemic. Tax avoidance is prevalent in the informal sector, resulting in limited fiscal resources (Besley and Persson 2014). For example, government revenues and expenditures in the EMDEs with the most pervasive informality are 5-10 percentage points of GDP, on average, below those with the least pervasive informality (World Bank 2019a; Figure 1.4.3). In addition, governments are less effective, and corruption is more rampant, in countries with more pervasive informality (Loayza, Oviedo, and Servén 2006). Moreover, less than a quarter of informal firms use bank accounts and about one-half of small informal firms identified lack of access to finance as a major obstacle to their operations, which makes it difficult to use the financial system to channel support to the informal economy (Farazi 2014; Schneider, Buehn, and Montenegro 2010). The rising availability of digital payments—whether on mobile phones, cards, or online—provided an alternative financial channel for governments to reach the informal sector. However, it

BOX 1.4 How does informality aggravate the impact of COVID-19? *(continued)*

FIGURE 1.4.3 Development challenges

Pervasive informality is associated with short life expectancy, lack of access to medical resources, limited sanitation facilities, and other health-system shortfalls. Countries with high levels of informality have significantly lower government revenues and expenditures, have substantially less effective government, and exhibit greater corruption.



Source: Elgin et al. (forthcoming); World Bank, World Development Indicators, World Bank (2019a), World Governance Indicators; IMF Government Financial Statistics; The Program in Global Surgery and Social Change (PGSSC) at Harvard Medical School; WHO/UNICEF Joint Monitoring Programme (JMP) for Water Supply, Sanitation and Hygiene; WHO.

Note: Here "high informality" are the third of EMDEs with the highest informality by the share of DGE-based informal output while "low informality" are the third of EMDEs with the lowest informality by the share of DGE-based informal output.

A-C. Bars are group means calculated for EMDEs with "high informality" and those with "low informality" over the period 2010-16. "***" indicates the group differences are not zero at 10 percent significance level.

D. Bars are group means calculated for EMDEs with "high informality" and those with "low informality" over the period 2010-16 (2016 for DALY). Death rates are computed for all death causes and deaths caused by communicable diseases and maternal, prenatal and nutrition conditions. DALYS are the number of healthy life years per person lost to diseases ("All" or "COM" for communicable diseases and maternal, prenatal and nutrition conditions).

E. Bars show group means calculated for EMDEs with "high informality" and those with "low informality" over 2010-2016. Government effectiveness index is rescaled to range from 0 to 20, with a higher value indicating a more effective government. "***" indicates the group differences are not zero at 10 percent significance level.

F. The 2000-16 average fiscal indicators among the third of EMDEs with the highest ("high") and lowest ("low") informality by the share of DGE-based informal output averaged during 2000-16. Sample includes 70 non-energy-exporting EMDEs with populations above 3 million people. "***" indicates the group differences are not zero at 10 percent significance level.

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remains in doubt that whether sufficient cash-in and cash-out points are in place to allow people using digital payments to deposit and withdraw cash safely and reliably (World Bank 2017).[3] The lack of registration also makes it a challenge to provide effective support to informal workers and firm via official fiscal measures (such as tax deduction).

Impact of the COVID-19 outbreak

The impact of COVID-19 is likely to be worse in EMDEs with widespread informality, as it is expected to intensify the pandemic's adverse health and economic consequences while weakening the effect of policies.

[3] These cash-in and cash-out points are often in the form of a bank agent, a mobile money agent, or an automated teller machine (ATM; Klapper and Singer 2017).

BOX 1.4 How does informality aggravate the impact of COVID-19? *(continued)*

Health consequences. Health consequences of the pandemic are expected to be more adverse in EMDEs with more pervasive informality. In these countries, lack of an adequate public health system worsens the transmission of infectious disease. Access to clean water and handwashing facilities is often difficult or unfeasible. Living quarters and working environments are often overcrowded and insanitary. In Sub-Saharan Africa where informality is pervasive, 70 percent of city dwellers live in crowded slums (World Bank 2019b). Lack of medical facilities and a generally less healthy population are likely to worsen the severity of infections and to limit the ability to treat those infected (Dahab et al. 2020). The absence of social safety nets will mean that informal market participants will be unable to afford to stay at home, or to adhere to social-distancing requirements, which will undermine policy efforts to slow down the spread of COVID-19 (Loayza and Pennings 2020).

Economic consequences. Lockdowns hit informal market participants especially hard in the service sector, where informal firms and employment are particularly common (Panizza 2020). For instance, in South Asia, about one out of four households currently living in poverty is engaged in informal activities in the service and construction sectors, which have been significantly affected by closures and disruptions (World Bank 2020j). In addition, women are overrepresented in service sectors that are subject to high risks during the pandemic: 42 percent of women workers are working in sectors such as wholesale and retail trade, compared to 32 percent of men (ILO 2020c). Also, about 80 percent of informal firms rely on internal funds and financing from family and moneylenders for working capital, making them especially vulnerable to the disruption to cashflows caused by mitigation and other control measures (Farazi 2014). Informal workers too have limited financial resources to buffer temporary income losses during the containment period, making them more likely to be pushed into poverty.[4] The health crisis also causes immediate revenue losses for firms, forcing them to temporarily or permanently close their businesses. This could trigger an unprecedented surge in unemployment and a potential expansion of the informal economy (ILO 2020b).

Past pandemics, such as the Ebola epidemic in West Africa in 2014-15, provide a stark illustration of the vulnerability of smallholder farmers (World Bank 2015).[5] The agricultural sector has the highest level of informal employment—estimated at more than 90 percent (ILO 2018). Farmers producing for the urban market may experience massive income losses as they are unable to sell their produce during the lockdowns (ILO 2020d).[6] Small informal firms play a critical role in the food supply chain and are likely to run into operational distress and insolvency due to logistical breakdowns during containment periods (FAO 2020b; World Bank 2020g; ILO 2020b). Since they are among the poorest and most vulnerable groups of society, informal workers, especially farmers, may have reduced access to food in the event of sharp income losses.

In countries with wide-spread informality, governments may have neither the resources nor the administrative structures in place to effectively deliver well-targeted relief to those most in need (Muralidharan, Niehaus, and Sukhtankar 2016). In a number of EMDEs with widespread informality, existing social benefit systems, such as ration cards, are plagued by corruption that weakens their capacity to deliver support to the most vulnerable (Peisakhin and Pinto 2010; World Bank 2004).

Policy implications

Informality adds to the challenges of dealing with the pandemic. Fiscal resources need to be used to strengthen the public health system to prevent, contain, and treat the virus, and support the livelihoods of informal participants during the outbreak. As conventional measures—such as wage subsidies and tax relief—would hardly reach informal firms and workers, innovative emergency measures should be considered to deliver income support to informal

[4] It is estimated that in the absence of any alternative income sources, lost labor income during the containment period could result in an increase in relative poverty for informal workers and their families of more than 21 percentage points in upper-middle-income countries and 56 points in lower and low-income countries (ILO 2020c). This could lead to further increase in income inequality among workers (ILO 2020a).

[5] In 2014-2016, the Ebola outbreak was followed by an economic crisis in West Africa, triggered by massive health and social spending to cope with the outbreak and compounded by the almost simultaneous collapse in commodity prices (World Bank 2014; Cangul, Sdralevich, and Sian 2017).

[6] Farmers may be increasingly impacted by the health crisis, if the virus spreads further into rural areas (ILO 2020c). In the case of Senegal and India, the inability of informal (or self-employed) workers to earn a living and gain access to health care has led to migration from urban to rural areas, which may cause the virus to spread further.

BOX 1.4 How does informality aggravate the impact of COVID-19? *(continued)*

workers, and credit support to informal firms (World Bank 2020g).[7] When managing the trade-off between coverage and costs, policymakers need to strive for a maximum reach of informal participants during the crisis, prioritizing temporary and reversable measures to minimize the fiscal burden afterwards. In some situations, however, the crisis has exposed gaps in a patchwork of social security facilities that should be filled, perhaps in the context of a through reform.

- ***Expand existing social safety nets.*** The first line of response includes existing social protection and social assistance programs that could be quickly scaled up and expanded to provide immediate but temporary relief to families whose earnings have been adversely affected by the outbreak (World Bank 2020a, 2020e). Food aid, cash (or in-kind) transfers, rent or utility bill waivers, can be particularly effective in countries with pervasive informality, as they are easy to implement and have wide reach outside the formal sector (Özler 2020).[8]

- ***Utilize flexible platforms and technologies to reach informal workers.*** Cash transfer and other support programs could utilize various existing registries and platforms that have a wider coverage than banking or tax systems (Aker et al. 2016; Aron 2018). Such platforms should have sufficient coverages, provide possibilities to establish identities, and connect accounts with beneficiaries (World Bank 2020m). Examples include existing national social registries (e.g., Brazil), new online platforms (Thailand and Brazil), new mobile payment devices (Morocco), and databases in health (Morocco) and energy (El Salvador) sectors. Public transfers via mobile money have been shown to improve food security and assets as compared to manual cash transfers in the short-term (Aker et al. 2016; Haushofer and Shapiro 2016).[9] "Big data" analyses and geographic (or age-group, social group) targeting may help expand program coverage by identifying vulnerable groups that are not on any existing registry (Loayza and Pennings 2020; World Bank 2019a, 2020a, 2020m).

- ***Facilitate access to finance to informal firms.*** To support informal firms, access to finance should be provided to help firms stay in business, keep jobs, and maintain links to local and global value chains (World Bank 2020a, 2020n). Such support could be provided, potentially under government guarantees, by commercial banks, microfinance institutions, digital lending platforms, corporate supply chains, or other intermediaries. Easier access to credit, collateralization of existing properties, and online or mobile banking should help owners of informal firms to tap the available financial resources, especially with the help of digital technologies.[10]

- ***Consider untargeted and unconditional programs when needed.*** Targeted programs reduce the risk that payments end up with those who do not need it, especially in the absence of effective targeting and delivery systems (Gentilini 2020; Loayza and Pennings 2020). In EMDEs where informality is pervasive and most of the population is either poor or near-poor, simple untargeted transfers may be better. Attempts to exclude the relatively few who are not in need would likely slow relief down and reduce the desired coverage of informal workers (Özler 2020). In practice, support programs that made formalization a condition of assistance have reduced the number of intended beneficiaries and have not offered net benefits to many informal enterprises (Campos, Goldstein, and McKenzie 2018). During the emergency and the potentially weak recovery right afterwards, the need is to quickly reach as many informal workers and firms as possible. To this end, in many EMDEs, unconditional support programs would be advisable. Given their limited resources, low-income countries would require international funding for the effective implementation of such programs.

[7] See the policy section of Chapter 1 for details on the conventional measures. See ILO (2020b) for details on the importance of reducing the exposure of informal workers and their families to the virus and the risks of contagion and while ensuring their access to health care.

[8] Where conditional programs exist, waiving conditionality for a period could ensure wider coverage in the context of a health emergency (World Bank 2020a). See World Bank (2020m) for a summary of country examples.

[9] Cash-in and cash-out points—a bank agent, a mobile money agent, or an automated teller machine—should be provided to ensure the success of public transfers via digital platforms (World Bank 2017).

[10] Moving to digital wage payments can also contribute to women's economic empowerment, which merits special attention from policy makers when promoting formal business participation (Klapper 2017; Klapper, Miller, and Hess 2019).

sharp disruptions to real and financial activity in many economies and across many sectors.

Historically, global recessions have tended to be followed within a year by a global recovery—characterized by a broad-based rebound in activity—as was the case immediately after the global financial crisis. While a global recovery is envisioned in 2021, it is likely to be subdued. Output is not expected to return to its previously expected level (Figure 1.13.C). This reflects the fact that the pandemic will likely lead to a slow and incomplete return to activities that require face-to-face interaction, such as tourism, as some degree of social distancing continues.

Many firms, households, and governments are weathering the 2020 global recession by relying on savings and debt; as a result, a period of deleveraging is likely to follow as they rebuild precautionary savings and strengthen their balance sheets. At the same time, the large and sudden loss of income in 2020 has pushed many individuals into unemployment and companies into bankruptcy, destroying valuable economic relationships that will take time to rebuild. Lower spending and continued uncertainty will likely lead to persistent weakness in investment and the innovation embodied therein, with consequences for growth and productivity. Moreover, the financial turmoil and commodity price collapse engendered by the pandemic will likely have significant long-term effects on potential growth in many economies (Chapter 3).

Risks to the outlook

The global economy is experiencing one of the sharpest recessions on record and, given the unprecedented nature of the shock, forecasts are subject to a large degree of uncertainty. Downside risks could deepen the recession or delay the recovery. In the short run, the contraction would deepen if a protracted pandemic required an extension of control measures. Policy support might fail to soften the economic blow to households and firms to the degree assumed in the forecast. A prolonged disruption to economic activity could exacerbate financial stress, which could lead to widespread financial crises. Lower-for-longer commodity prices could trigger economic and financial distress among commodity producers. It is less likely but also possible that activity is stronger than expected if a combination of positive news on the flattening of the curve, new treatments and vaccine development, and aggressive and effective policy support set the stage for the beginning of a solid rebound in economic activity during the second half of 2020.

In light of the large uncertainties around the near-term outlook, Box 1.3 provides illustrative scenarios that describe how the baseline forecast—which envisions a 5.2 contraction in global activity this year—would be adjusted if various combinations of these risks to near-term activity were to materialize. In all, depending on the ultimate outcome, global output in 2020 might decline by about 4 percent under an upside scenario, but by more than 7 percent under a worst-case scenario (Figure 1.13.D). Even in the best-case scenario, the 2020 global recession will be about twice as deep as the global financial crisis.

There is also a possibility that activity will remain very weak beyond the near term, even after restrictions are lifted. The aftermath of the pandemic may cause lasting changes in consumer and business behavior, and high debt burdens could hold back investment. The crisis could catalyze a retreat from, and fragmentation of, global value chains. Social unrest could erupt. If these risks materialize, long-term growth prospects will be dampened, and goals for development and poverty reduction would be in severe jeopardy.

More protracted pandemic

Despite the best efforts of policymakers, a renewed surge in cases remains a real possibility, especially if there are delays in the development and rollout of test-and-trace measures and vaccines. Recent events and model-based analyses show the toll of uncontained pandemics on human and economic development (McKibbin and Fernando 2020; Verikios et al. 2011; Burns, van der Mensbrugghe, and Timmer 2006). A sharp rise in the number of patients requiring hospitalization amid a second wave of infections could overwhelm even the most robust health care systems in advanced economies, let alone those of EMDEs (Figure 1.14.A).

In these circumstances, the necessary extension of policies to slow the spread of the outbreak and save lives would likely precipitate a renewed collapse in private consumption. The ability of households to procure the funds needed to maintain consumption at a basic level would be further strained, given previous income losses and already low levels of savings (Figure 1.14.B). The ability of welfare systems to cushion income losses varies considerably by country, and is considerably lower in LICs (Figures 1.14.C and 1.14.D).

Meanwhile, domestic investment would grind to a halt amid extreme uncertainty, and development outcomes would worsen appreciably. Prolonged restrictions would severely limit the ability of fiscal or monetary policy to cushion the blow to activity. Firms would be hampered by a chronic lack of demand, by a growing shortage of inputs, and by the need to provide more space and virus safety precautions for employees. Fiscal stimulus may be less effective when some sectors are completely shut down (Guerrieri et al. 2020). In such a case, the result would be a deeper-than-expected global recession, with particularly pernicious effects in economies burdened with more elevated debt-to-GDP ratios.

Financial crises and debt burdens

Thus far, an extraordinary policy response has prevented the slowdown in activity from becoming a financial crisis. In many countries, fiscal measures have replaced a proportion of lost incomes and mitigated default risk, loan guarantees have helped keep businesses afloat, and liquidity provision by central banks have kept the financial system functional. However, should the impact of the pandemic continue to grow, financial crises may follow, resulting in a collapse in lending, a longer global recession, and a slower recovery.

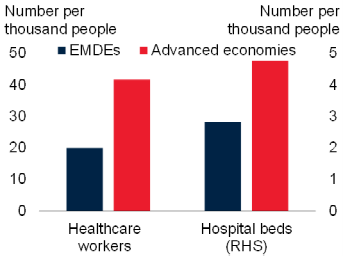
Rising levels of debt have made the global financial system more vulnerable to financial market stress. Since the global financial crisis, global debt has risen to 230 percent of GDP, with EMDE debt reaching a historic high of 170 percent of GDP by 2019 (Figure 1.15.A). In almost 40 percent of EMDEs, government debt is now at least 20 percentage points of GDP higher than it was in 2007 (Kose et al. 2020). In addition, more than a quarter of corporate debt in the average EMDE is denominated in foreign currency.

The need to service and roll over this sizable debt increases EMDEs' vulnerability to spikes in

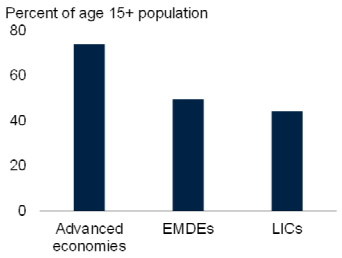
FIGURE 1.14 More protracted pandemic

A sharp rise in the number of patients requiring hospitalization amid a second wave of infections could quickly overwhelm many EMDE health care systems. Many households would struggle to access funds to smooth over a longer period of lost incomes. The ability of welfare systems to cushion such income losses varies considerably by country, and tends to be lower in commodity-exporting EMDEs and, particularly, LICs. This suggests that a protracted pandemic could severely worsen development outcomes.

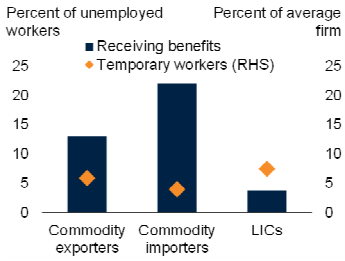
A. Health indicators in 2017



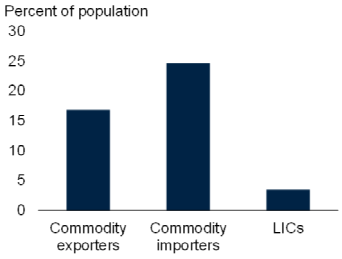
B. Percent of households able to procure emergency funds in 2017



C. Unemployment benefit coverage and share of temporary workers, by EMDE group



D. Coverage of social insurance programs among EMDEs



Source: Demirgüç-Kunt et al. (2018); Organisation for Economic Co-operation and Development; World Bank.

Note: LICs = Low-income countries.

A. Unweighted averages. Sample includes 26 advanced economies and 11 EMDEs—Chile, China, Colombia, Costa Rica, Hungary, India, Indonesia, Mexico, Poland, Russia, and Turkey—as data are available.

B. Figure measures financial resilience by region. Data are based on a household survey on whether or not individuals would be able to procure an amount equal to 1/20 of gross national income (GNI) per capita in local currency within the next month. Aggregates are calculated as simple averages.

C. Figure shows simple averages. Unemployment benefit coverage indicates share of unemployed workers receiving unemployment benefits as reported by the ILO for the most recent year available. Share of temporary workers based on most recent survey in the World Bank's Enterprise Surveys database. Sample includes 27 commodity exporters, 23 commodity importers, and 5 LICs.

D. Aggregates calculated using population weights for the latest available year of data for each country. Sample includes 106 EMDEs, of which 60 are commodity exporters, 46 are commodity importers, and 21 are LICs. Coverage of social insurance programs shows share of population participating in programs that provide old age contributory pensions (including survivors and disability) and social security and health insurance benefits (including occupational injury benefits, paid sick leave, maternity and other social insurance).

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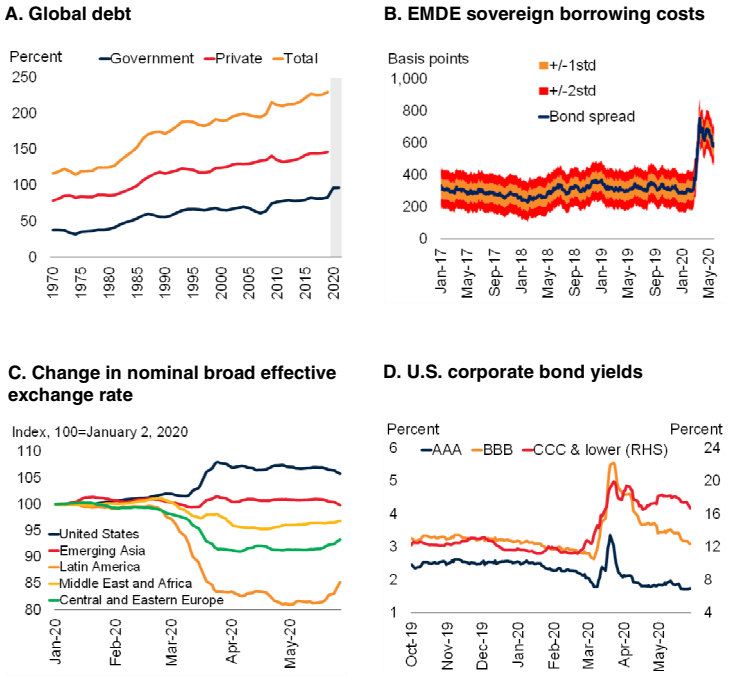
FIGURE 1.15 Financial crises and debt burdens

Prior to the COVID-19 outbreak, many countries had accumulated considerable amounts of public and private debt, much of it denominated in foreign currencies. The need to service and roll over this debt increases countries' vulnerability to spikes in borrowing costs, sharp currency movements, and financial stress. Highly leveraged companies in advanced economies are also vulnerable to rising borrowing costs.



Source: Federal Reserve Bank of St. Louis; Haver Analytics; International Monetary Fund; J.P. Morgan; Kose et al. (2017); World Bank.
A. Shaded area indicates forecasts. Aggregates are calculated using nominal U.S. dollar GDP weights. Sample includes 27 advanced economies and the Euro Area and 153 EMDEs.
B. Sample includes 50 EMDEs. Standard deviation calculated over period from January 2, 2015 to last observation, which is May 27, 2020.
C. Figure shows the 7-day moving average of the J.P. Morgan nominal broad effective exchange rate for each region. Last observation is May 28, 2020.
D. Last observation is May 28, 2020.
Click here to download data and charts.

borrowing costs and falls in domestic currency values, both of which have already taken place (Figures 1.15.B and 1.15.C). Large and prolonged flights to safety, or a series of ratings downgrades, could trigger cascading debt defaults and financial stress. Full-fledged financial crises would cause further declines in consumption and investment.

Financial systems in advanced economies also contain pockets of vulnerability. Yields on lower quality corporate borrowing have surged, reflecting a higher perceived risk of default, particularly on the rapidly growing share of debt issuances in the form of leveraged loans. These are loans to firms that are highly indebted, have high debt service costs relative to earnings, and are typically below investment grade (Figure 1.15.D; BIS 2019).

Even if the global financial system avoids a crisis, the debt accumulated in response to the pandemic may weigh on growth in the longer run. As global activity rebounds, interest rates are likely to rise. Higher debt service costs must be financed through higher taxes, additional borrowing, or by a reduction in other expenditures. In circumstances of scarce domestic savings, and limited access to foreign funds, additional borrowing may crowd out private investment. In addition, the loosening of macroprudential standards to support credit provision during the crisis may reduce balance sheet transparency and weaken market discipline in the longer term, potentially contributing to future financial instability.

Lasting effects on consumers and firms

The damage to economic activity from the pandemic could also extend well beyond the near term through a lasting negative effect on both consumers and producers (Chapter 3). Precipitous losses of income brought on by lockdowns, firm closures, and travel restrictions could erode the confidence of both workers and firms about prospects for future labor income and profits. A protracted erosion in confidence could cause households to cut back on spending and firms to curtail investment, weighing heavily on both aggregate demand and supply (Ilut and Schneider 2014; Bhandari, Borovicka, and Ho 2019).

For workers, recessions can cause a substantial and permanent loss in lifetime earnings (Oreopoulos, von Wachter, and Heisz 2012). Consumption would also be reduced if greater uncertainty and a higher perceived risk of unemployment permanently increase consumers' savings rate (Mody, Ohnsorge, and Sandri 2012). Chronically higher unemployment would dampen human capital accumulation, weighing appreciably on long-term growth.

For firms, greater uncertainty could discourage investment as well as new market entry and

permanently lower productivity (Aghion and Durlauf 2014). Subsidized or government-guaranteed credit provided in response to the pandemic may help unprofitable firms to persist, deterring newer entrants and suppressing aggregate productivity (Caballero, Hoshi, and Kashyap 2008).

Retreat from global value chains

The initial spread of the pandemic was fastest in three economies closely integrated in global value chains: China, the Euro Area, and the United States. Global value chains expanded rapidly until the global financial crisis, and decelerated—in some cases reversed—thereafter as business investment decelerated and the pace of trade reform slowed (Figure 1.16.A; World Bank 2020o). The spread of the pandemic has significantly disrupted the supply of key intermediate inputs and threatened the viability of many transportation companies (Figure 1.16.B). This threatens to lead to a more permanent retreat from global value chains if it bankrupts large numbers of participating companies or causes firms to consider reshoring production (Special Focus).

In addition, global value chains are at risk through financing stress. Export-oriented firms tend to be larger and more dependent on borrowing to finance operations (Bruno, Kim, and Shin 2018). An inability to service debt due to currently high borrowing costs and weak cash flow could cause firms to exit the market, leaving gaps in value chains that new entrants may not be able to fill in a timely manner.

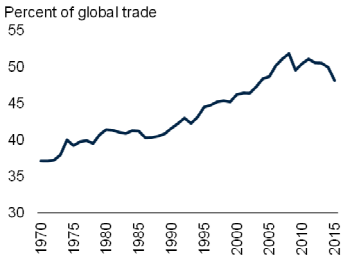
Global value chains could also come under pressure from renewed trade tensions. Before COVID-19, rising tariffs were already straining the networks of companies that undertake U.S.-China trade, only partly alleviated by the Phase One agreement. The centerpiece of this agreement is China's commitment to buy $200 billion in additional products from the United States (Figure 1.16.C). A renewed set of trade restrictions between the two countries, linked to either a shortfall in purchases or policy disagreements, could trigger a rise in uncertainty and a further fall in trade at a time when the global economy is already fragile.

Trade tensions between other countries have also been simmering. Tensions between the Euro Area and the United States have so far affected a small amount of trade, but a tit-for-tat escalation of tariffs could have effects on global trade on a similar scale to the disruptions from previous U.S.-China tensions (Figure 1.16.D). More broadly, many governments concerned about the shortages of essential products revealed by the crisis have imposed trade restrictions to protect domestic supplies of these items.

FIGURE 1.16 Retreat from global value chains

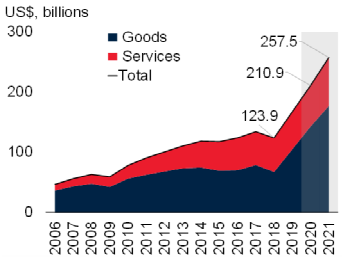
After decades of rapid expansion, the role of global value chains in global trade has stalled over the past decade. COVID-19 has strained them further. Tensions could arise regarding China's purchase commitments under the Phase One U.S.-China trade agreement. A ramping up of tariffs on U.S.-Euro Area trade would affect a sizable share of global trade.

A. Global value chains as a share of global trade



B. Change in container throughput volumes

C. China's purchase commitments



D. Bilateral U.S.-China trade and U.S.-Euro Area trade in 2018

Source: Bown (2020); Institute of Shipping Economics and Logistics; International Monetary Fund; United Nations Comtrade database; World Bank.
A. Data are from *World Development Report 2020*.
B. Last observation is April 2020.
C. Shaded area indicates purchase commitments in the Phase One trade agreement.
D. Trade is the average of import and export values.
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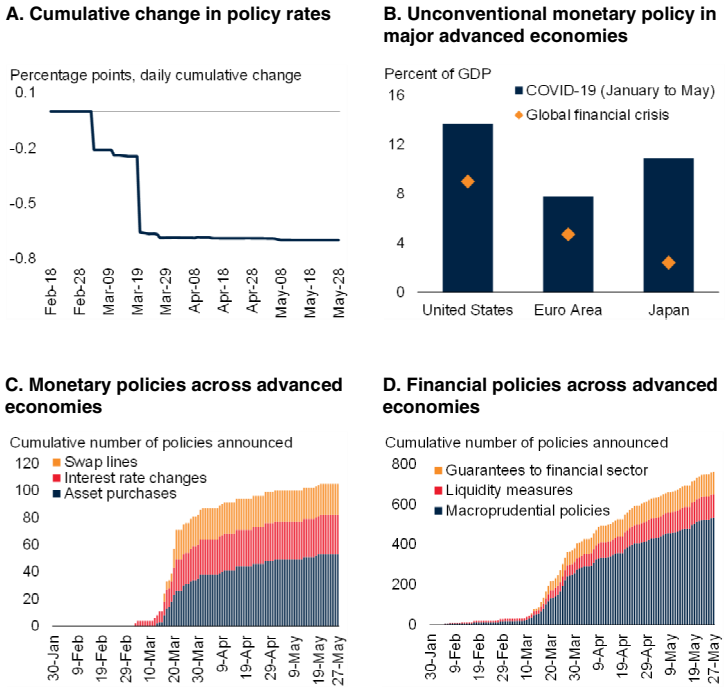
FIGURE 1.17 Monetary and financial policies in advanced economies

In the wake of the COVID-19 outbreak, advanced-economy central banks have moved quickly to cut interest rates. In addition, they have ramped up their use of unconventional instruments, to levels beyond those seen during the global financial crisis. Moreover, authorities have put in place currency swap lines to boost global liquidity and buffers against exchange rate volatility, as well as a slew of financial policies to support financial and banking systems.



Source: Bank for International Settlements; Bloomberg; European Central Bank; Haver Analytics; World Bank; Yale Program on Financial Stability.

A. Average changes in policy rates are weighted by 2018 GDP at 2010 prices and market exchange rates. Sample includes 19 advanced economies. Last observation is May 28, 2020.

B. "COVID-19" reflects recently increases in central bank balance sheets since January 2020 and are expressed as a share of 2019 nominal GDP. "Global financial crisis" asset purchases reflect the increase in central bank balance sheets between August 2008 and December 2009 as a share of 2008 nominal GDP. Last observation is May 2020.

C.D. Sample includes 27 advanced economies and the Euro Area. Last observation is May 27, 2020.

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The experience of pandemic-related disruptions and persistent trade policy uncertainty may cause some businesses to re-assess whether the gains from participation in global value chains are worth the risk of further disruptions. A retreat of export-oriented firms, which tend to be more productive than their domestically oriented counterparts, would have persistent adverse effects on economy-wide productivity (Barattieri, Cacciatore, and Ghironi 2019). A large-scale shrinking from global value chains has the potential to further reduce already-low growth and productivity, by slowing knowledge diffusion and the economies of scale that come with specialization.

Lower-for-longer commodity prices and other region-specific risks

The global economy remains vulnerable to a variety of regional risks, many of them stemming from the pandemic. A persistent period of low oil prices could weigh on activity in regions with a large number of oil exporters, particularly MENA. Current prices are below the fiscal break-even level for many producers. Some oil exporters may be able to maintain spending during a lengthy period of low prices, but many more would be forced into pro-cyclical austerity at the same time the domestic economy needs support. More generally, the combination of more persistent effects of the pandemic at the global level, widening domestic outbreaks, and lower commodity prices could result in severe economic damage in commodity-exporting EMDEs, leading to falling investment, declines in consumption and confidence, and procyclical fiscal tightening (Frankel 2011).

While a wide range of countries have suffered from domestic outbreaks, some regions are vulnerable to more severe outbreaks and macroeconomic effects. This risk is particularly acute for SSA, which lacks the necessary infrastructure, personnel, and government funding to contain a wider outbreak. Should economic costs escalate, simmering social unrest in some regions could worsen.

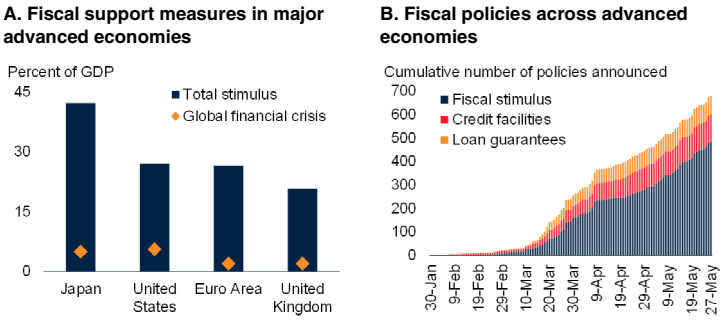
Social unrest could also be triggered by food shortages. The number of people facing acute food insecurity could double to more than 260 million in 2020, with serious consequences for health (WFP 2020a, 2020b). While global food stocks are elevated, the combination of falling household incomes and currency depreciation is contributing to food insecurity in many EMDE regions, particularly SSA. Disruptions to the supply of agricultural inputs such as chemicals, fertilizers, seeds or labor shortages could diminish next season's crop (World Bank 2020c). Natural disasters and climate events could also result in localized shortages, as exemplified by the plague of locusts currently threatening harvests in East Africa.

Upside risk: Swift recovery and unleashed pent-up demand

Although global growth will be sharply negative in 2020, it is possible that the lifting of the aggressive policy measures put in place in response to the pandemic sets the stage for the start of a robust recovery in economic activity at some point in the second half of 2020. A breakthrough in the development of vaccines against COVID-19 is also possible. The promise of an earlier-than-expected end to the pandemic could reinvigorate consumer and investor confidence, unleashing pent-up demand for a broad range of goods and services. This recovery would be boosted by lagged effects from the substantial fiscal and monetary policy support already in place. The resumption of activity could extend across EMDEs, as they benefit from a policy-fueled recovery in major economies, renewed capital inflows, and firming global commodity demand.

FIGURE 1.18 Fiscal policies in advanced economies

Many countries have introduced unprecedented and wide-ranging fiscal support programs to offset the impact of the pandemic. These are providing some relief to vulnerable households and firms, and cushioning the drop in domestic demand and employment.



Source: Bloomberg; International Monetary Fund; Morgan Stanley; Yale Program on Financial Stability; World Bank.
A. Total of measures either planned or under consideration as of May 28, 2020. Share of 2019 nominal GDP. Global financial crisis indicates fiscal measures implemented over the period 2008-09.
B. Sample includes 27 advanced economies and the Euro Area. Last observation is May 27, 2020.
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Policy challenges

Challenges in advanced economies

Authorities in advanced economies face the urgent challenge of containing COVID-19, finding the most effective treatments for this new disease, and developing a vaccine, as well as containing the economic fallout from the pandemic. Monetary authorities in advanced economies are using quantitative easing on an enormous scale and developing new tools to bolster demand and financial market functioning. Large-scale fiscal policy responses have been implemented to support activity and enhance social safety nets. As the world struggles through the health and economic impacts of the pandemic, international policy coordination is critical. In the longer run, advanced economies need to address gaps in epidemic preparedness and social safety nets laid bare by the outbreak. This is especially important in rapidly aging societies.

Monetary and financial policies

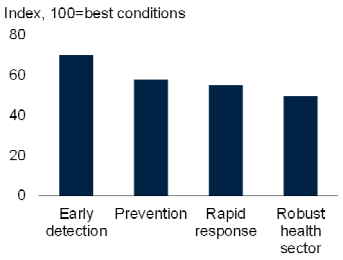
Advanced economy central banks moved quickly to ease monetary policy in the wake of the pandemic, bringing policy rates in most advanced economies close to or below zero (Figure 1.17.A). At the same time, monetary authorities have implemented extraordinary measures to ease tight credit markets. The Federal Reserve has pledged to purchase a wide array of obligations, including corporate and municipal debt. The ECB has lifted distributional restrictions on its bond-buying program (Figures 1.17.B and 1.17.C). The Bank of England has begun directly financing government expenditures. In the medium term, central banks may need to further enhance their toolkit to guard against the possibility of persistently weak growth and below-target inflation (Draghi and Yellen 2020).

Inflation in most advanced economies was already below target at the start of the year. Weaker demand and the fall in oil prices have added deflationary pressure, causing inflation expectations to decline (Conflitti and Cristadoro 2018). Recent analysis suggests that a pandemic significantly depresses the natural rate of interest (Jordà, Singh, and Taylor 2020). With nominal rates at their effective lower bound, a combination of lower inflation expectations and lower natural rates acts as a headwind to growth, further complicating the conduct of monetary policy (Obstfeld, Arezki, and Milesi-Ferretti 2016).

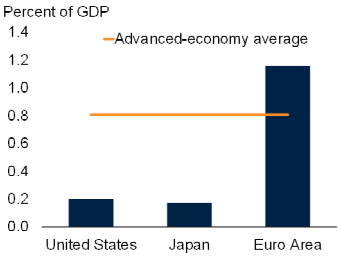
FIGURE 1.19 Structural policies in advanced economies

Bolstering the resilience and pandemic preparedness of health care systems is critical in rapidly aging economies. The introduction of flexible and well-targeted social safety nets, including enhanced unemployment benefits, could help support the recovery and cushion the impact of future severe downturns.

A. Health security in advanced economies



B. Public unemployment spending in 2015



Source: Global Health Index (2019); Organisation for Economic Co-operation and Development; World Bank.
A. All data are normalized through a scale from 0 to 100, where 100 represents the best health security conditions. Prevention refers to preventing the emergence of pathogens and a potential outbreak. Early detection measures the government's capacity to detect and report spread of epidemics. Rapid response indicates the ability of a government to mitigate the spread of an epidemic. The robustness of the health sector indicates the capacity of treating the sick and providing safety for health care workers. Sample includes 34 advanced economies.
B. Aggregates are calculated as simple averages.
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Financial systems are being tested by sharply falling valuations, heightened volatility, and rising risks of default due to lost incomes, especially in locked-down sectors. A number of countries have implemented macroprudential measures—among other financial policies—to provide the liquidity backstop necessary for domestic banks to offer broad loan forbearance to consumers and businesses (Figure 1.17.D). These policies include widespread easing of bank capital requirements, and encouraging banks to work with borrowers to avoid the need for increasing loan-loss provisions. Authorities have also resorted to prudential policies, including an easing of bank liquidity buffers below Basel III liquidity coverage ratios (Benediktsdottir, Feldberg, and Liang 2020).

While temporary regulatory easing may be appropriate to ameliorate the current crisis, policymakers could plan for the appropriate restoration of prudential norms once activity has normalized, lest a combination of sharply higher vulnerabilities and laxer regulation sow the seeds of future crises. In particular, prudential authorities need to step up surveillance and stress testing to better assess risks facing the banking sector, while increasing attention to crisis management policies to swiftly resolve rising bankruptcies. Moreover, payment systems need to be bolstered to ensure the rapid disbursement of relief payments and to ensure a smooth flow of transactions environments of limited physical interactions.

Fiscal policy

Many countries have proposed or implemented large fiscal support packages, covering a wide range of measures aimed at replacing lost household incomes and firm revenues. These include easing or delaying payment obligations for taxes, utilities, rents, or debt service (Figures 1.18.A and 1.18.B; CFRTV 2020). In an environment of exceptionally accommodative monetary policy, fiscal policy has a key role in preventing the pandemic from having a protracted adverse effect on activity (Miyamoto, Nguyen, and Sergeyev 2018).

The temporary support measures for households, and grants and loan guarantees to firms should help mitigate a sharp retrenchment in consumer spending, preserve employment and job-specific human capital, and prevent widespread bankruptcies in key sectors. The expansion of government assistance, in its multiple forms, need to be directed to those with the most pressing needs. To this end, governments need to ensure that its fiscal support reaches those that do not have regular income even in normal times, such as the self-employed, temporary workers, and those in the "gig" economy.

Beyond the short run, deficit-financed increases in government spending can further support activity by averting a decline in the natural rate of interest—thereby increasing the effectiveness of monetary policy—and simultaneously alleviating a shortage of safe financial assets (Goy and van den End 2020). Moreover, countries with borrowing capacity may benefit from additional public investment, which can boost productivity growth and offset some of the output losses from the current recession.

In the Euro Area, the pressing need of fiscally-

constrained sovereigns has renewed calls for an area-wide fiscal response, including the possibility of fiscal burden sharing (Alesina and Giavazzi 2020; Wyplosz 2020). Once the effects of the pandemic have passed and a solid recovery is underway, it will be important for advanced economies to establish credible medium-term plans to ensure the rebuilding of fiscal space for future needs.

Structural policies

The pandemic underscores the critical need to bolster the resilience of health care systems. This is especially important in rapidly aging societies, as older populations face the greatest pandemic-related health risks. In the near term, health policy efforts need to be devoted to mitigating and treating COVID-19, including by supporting the development of a vaccine, providing much needed support to front-line health workers, and building public trust via timely evidence-based messaging.

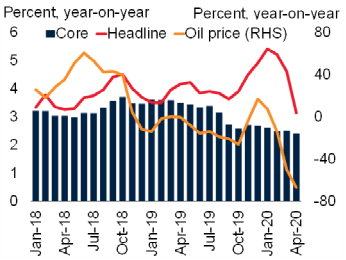
Once the immediate crisis has passed, governments need to strive to meet their collective International Health Regulations obligations "to prevent, protect against, control and provide a public- health response to the international spread of disease" (WHO 2016; GPMB 2019). Gaps in epidemic preparedness—in particular disease prevention, detection, and surveillance—need to be addressed and health care systems need to be stress-tested routinely, to ensure that there is the necessary capacity to take successful action (Figure 1.19.A). For example, several advanced economies—even those ranked highly in their ability to detect and respond to the outbreak—struggled to develop and disseminate testing kits. More broadly, governments need to strengthen clinical and general health care. In the longer run, efforts will be needed to create and maintain a resilient pandemic preparedness system that continuously invests in global surveillance functions, as well as research and development for pandemic vaccines (Johns Hopkins Center for Health Security 2019).

Given the delays associated with the implementation of discretionary fiscal policy and the increasingly constrained role of monetary policy, social safety nets, including enhanced unemployment benefits, need to be designed to be

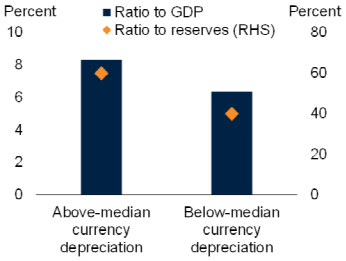
FIGURE 1.20 EMDE monetary and financial policy

The fall in oil prices and collapse in activity have helped lower EMDE inflation, on average. However, some countries have experienced substantial currency weakness. EMDE central banks have introduced unprecedented monetary policy measures to support activity and market liquidity, including unconventional policies such as asset purchases. EMDEs with asset purchase programs have seen sharper declines in government bond yields. An arsenal of macroprudential policies has also been deployed to provide immediate relief to distressed borrowers.

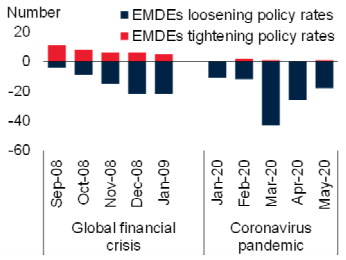
A. EMDE inflation and oil prices



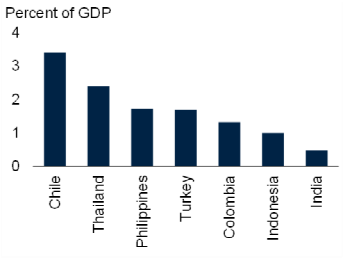
B. External financing needs in 2020, by year-to-date currency depreciation



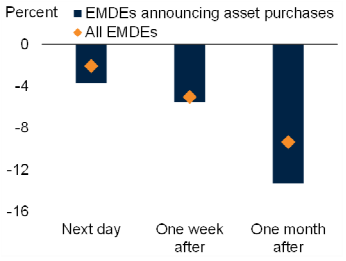
C. Monetary policy in EMDEs



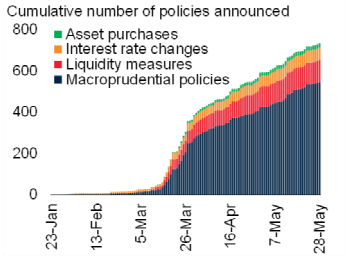
D. Central bank asset purchases in EMDEs



E. Government bond yields following asset purchase program announcements



F. Macroprudential and other monetary policies in EMDEs



Source: Haver Analytics; Institute of International Finance; International Monetary Fund; World Bank; Yale Program on Financial Stability.

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, and SSA = Sub-Saharan Africa.

A. Aggregates calculated using 2019 real U.S. dollar GDP weights. "Headline" and "Core" samples include 15 and 11 EMDEs. Last observation is April 2020.

B. Figure shows median values. External financing needs are calculated as the sum of the current account balance and external debt amortization due in 2020 relative to either GDP or foreign reserves. EMDEs that are "Above median" reflect those who have depreciated against the U.S. dollar by more than the median EMDE. Sample includes 26 EMDEs. Last observation is May 28, 2020.

C. Sample includes 72 EMDEs. Last observation is May 2020.

D. Announced central bank asset purchases, expressed relative to nominal local-currency GDP in 2019. Other EMDEs have also announced similar programs; however, their size is dependent on market conditions (Hungary, Poland, Romania, South Africa). Last observation is May 29, 2020.

E. Bars show the median percent change in 10-year government bond yields for EMDEs that have announced asset purchase programs, one day, one week, and one month after the announcement. Diamonds show the change in the median EMDE yield on corresponding dates. Sample includes 24 EMDEs of which 10 announced asset purchases. Last observation is May 29, 2020.

F. Sample includes 26 EMDEs. Last observation is May 28, 2020.

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flexible, efficiently administered, and well-targeted (Figure 1.19.B). Government-funded policies to encourage firms to retain labor in economic downturns, including by supporting and subsidizing shorter working hours, can play an important role in limiting the human cost of the downturn and accelerating the subsequent recovery (Herzog-Stein, Horn, and Stein 2013; Contessi and Li 2013).

Challenges in emerging market and developing economies

EMDEs face the immediate challenge of providing support to front-line health workers, broadening access to medical services to detect and treat COVID-19, and prioritizing the timely and transparent dissemination of accurate information. Central banks are confronted with the challenge of implementing measures to support the flow of credit and preserve the functioning of financial markets during the crisis, while guarding against the potential buildup of systemic risks in the financial sector. Many EMDEs have limited fiscal space to address the crisis, highlighting the role of international assistance. Spending will need to be reprioritized to the most urgent needs to preserve lives and protect the most vulnerable. In the longer run, the pandemic highlights the urgency of investing in resilient health care systems, addressing the challenges posed by widespread informality, and pursuing growth-enhancing structural reforms. COVID-19 is a global crisis that calls for global solutions focused on protecting the most vulnerable populations.

Policy challenges in China

China's sharp economic slowdown and the ensuing policy response have exacerbated the country's challenge of buttressing economic activity without compounding financial stability risks. However, if short-term cyclical risks intensify, available policy space could be re-deployed to stabilize the economy, while reinforcing the economy's shift toward consumption, services, and private sector growth.

Global economic and trade flow disruptions could complicate the implementation of the U.S.-China Phase One deal. Failure by China to meet its purchasing commitments of U.S. goods and services (US$200 billion above its 2017 levels over the next two years) could lead to renewed trade tensions, unless a comprehensive and durable trade agreement is reached.

In the longer term, a holistic "one health" approach to policies that enhance domestic health security, food safety, and epidemic preparedness and transparency is needed to build resilience and restore confidence (World Bank 2019c; El Zowalaty and Järhult 2020; World Bank 2020a). Those policies could be complemented by productivity-enhancing reforms that encourage investment in human capital, reduce regulatory burdens, and address market distortions given the role of state-owned enterprises in the economy. Reforming the rigid and inefficient "hukou" household registration system could be prioritized (Song 2014; World Bank and DRC 2014).

EMDE monetary and financial policies

Policymakers in many EMDEs have responded swiftly to the pandemic with a variety of monetary and financial policies, including both traditional and novel measures, as supporting the flow of credit and preserving the functioning of financial markets are critical in alleviating its immediate economic impact. The fall in oil prices, along with weak demand in the majority of countries, has dampened a pickup in EMDE inflation that commenced in late-2019 and has helped central banks focus on supporting activity (Figure 1.20.A). In a few economies, however, disruptions to food supply chains or labor shortages are pushing food prices up (Colombia, Ecuador, Philippines, Vietnam). In addition, significant currency weakness following substantial capital outflows could constrain the scope for further conventional monetary policy easing to support growth in some economies, particularly those with large external financing needs and limited foreign reserve buffers (Figure 1.20.B; Hofmann, Shim, and Shin 2020).

In the face of severe economic disruptions and generally contained inflation pressures, EMDE central banks have embarked on monetary policy easing at an unprecedented scale (Figure 1.20.C; Brandao-Marques et al. 2020). A number of

central banks sharply lowered their policy rates, and some have complemented this easing with unconventional monetary policies such as asset purchase programs—a first for most EMDEs (Chile, Colombia, Hungary, India, Indonesia, Philippines, Poland, Romania, Thailand, Turkey, South Africa; Figure 1.20.D). These purchases—which are mostly of government bonds but also private sector securities—helped stabilize yields of longer-dated securities which had been rising sharply amid liquidity strains in many countries, despite policy rates being lowered (Chile, Colombia, South Africa, Turkey; Figure 1.20.E; Arslan, Drehmann, and Hofmann 2020; Hartley and Rebucci 2020; Hördahl and Shim 2020).

To help accommodate slowing economic activity, EMDE central banks with sufficient monetary policy room could ease their stances further, while reaffirming long-term inflation objectives. The effectiveness of conventional monetary policy easing may, however, be reduced while lockdowns are still in place. Monetary policy easing could also be less effective in economies with large informal sectors and low financial inclusion (Alberola-Ila and Urrutia 2019; Box 1.4). In economies where the solvency of private sector enterprises and households are at risk due to their cash flows being disrupted, or banks' appetite to lend wane, central banks could complement conventional monetary policy easing with additional liquidity provision to enable banks to continue extending credit to these entities (Didier et al. 2020).

Central banks in EMDEs may face challenges arising from their asset purchase programs, which are a new addition to the monetary policy toolkit for most EMDEs. These policies could potentially be ineffective in the absence of credible policy frameworks and transparent communication. Moreover, if investors fear that the central bank's independence is threatened and the institution is being used to fund large fiscal deficits, these policies may result in unsustainable increases in inflation, risk premia and government bond yields, and contribute to capital outflows, exchange rate depreciation, and financial instability. Given these risks, asset purchase programs in EMDEs may remain a tool reserved for extreme shocks, such as the current global recession. To alleviate these risks over the medium to long term, central banks could communicate their intentions to primarily rely on conventional policy tools once the economy recovers and activity normalizes.

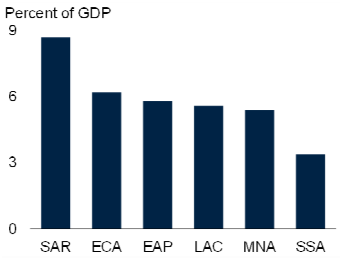
A variety of macroprudential policies have been employed in a targeted fashion to help ease funding stresses and support credit provision (Figure 1.20.F). In many EMDEs, banking sectors entered the current crisis better capitalized than before the global financial crisis, allowing regulators to relax capital requirements including countercyclical and conservation buffers, as well as capital surcharges that were imposed on systemically important financial institutions (Fang et al. 2020). In a number of economies, regulatory forbearance has been used to ease liquidity coverage and funding requirements, and to relax loan-loss provisioning standards. To help preserve banks' capital, dividend payments and executive bonuses have been prohibited in a few countries. To help provide immediate relief to distressed borrowers, interest rate caps have been imposed in some countries, while commercial banks in others have been encouraged to offer temporary loan repayment holidays to firms and households. Some countries have also prohibited the reclassification of distressed borrowers for the duration of the pandemic.

Regulators' adjustments of macroprudential policies may help prevent an adverse feedback loop where persistently weak activity as a result of the pandemic causes a rise in bankruptcies and non-performing loans that erode bank asset quality, leading to increasingly constrained bank lending that further weighs on growth and hinders the projected recovery. However, policymakers would need to carefully balance these actions—particularly those that relate to extended regulatory forbearance and deviate from minimum prudential standards—against the potential buildup of greater systemic risks in the financial sector (Drehmann et al. 2020; Garcia Mora 2020). Committing to time-bound and transparent policy actions that are based on rigorous risk assessments could help mitigate some of these risks. In the event that prolonged strains threaten to collapse financial sectors, governments may need to recapitalize troubled institutions,

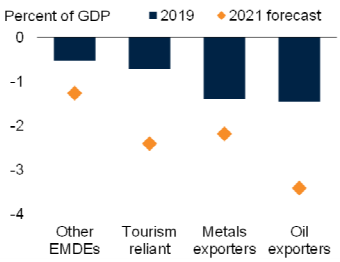
FIGURE 1.21 EMDE fiscal policy

Many EMDEs have implemented substantial fiscal measures to help stem the pandemic's impact on activity and increase public support to the most vulnerable, despite entering the crisis with limited fiscal space. In EMDEs with narrow buffers, policymakers can reprioritize spending to manage fiscal sustainability concerns and to boost spending efficiency. Energy exporters will have to confront narrowing budgetary space as oil prices remain below break-even prices. The recent plunge in oil prices could provide EMDEs with the opportunity to reduce or eliminate energy subsidies, to discourage wasteful energy consumption, and to reallocate spending to programs that better target the poor.

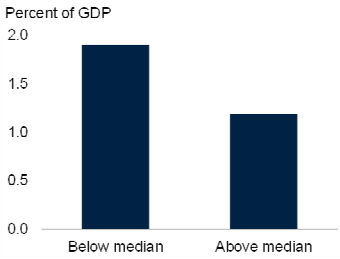
A. Size of economic support measures in 2020, by EMDE region



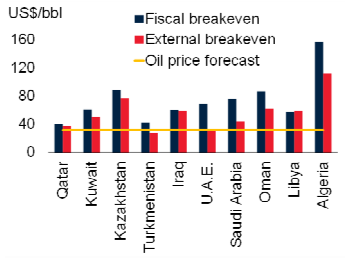
B. Primary fiscal balance in 2019 versus 2021, by EMDE group



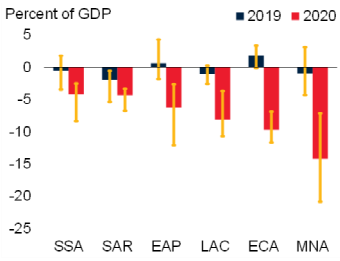
C. Discretionary fiscal support measures in 2020, by debt levels



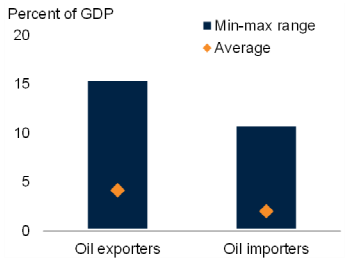
D. Fiscal and external break-even prices in 2020



E. Fiscal sustainability gaps



F. Energy subsidies in 2018



Source: Air Quality Open Data Platform; International Energy Agency; International Monetary Fund; Kose et al. (2017); 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.C. Total measures either planned or under consideration as of May 29, 2020.

A. Aggregates are calculated using 2019 nominal U.S. dollar GDP. Sample includes 29 EMDEs.

B. Figure shows median values for each EMDE group. "Other EMDEs" indicates EMDEs not included in other categories. "Tourism reliant" indicates tourism as a share of GDP above the EMDE median value. "Oil exporters" and "metal exporters" are defined in Table 1.2. Sample includes 79 EMDEs.

C. Figure shows median values. Above (below) median indicates countries with government debt-to-GDP ratios above (below) a median of 51 in 2018. Sample includes 48 EMDEs.

D. Break-even prices refer to the oil price at which either the fiscal or current account balance is zero.

E. Fiscal sustainability gaps are measured as the difference between the overall balance and the debt-stabilizing overall balance under current condition. A negative (positive) bar indicates government debt is on a rising (falling) trajectory. Yellow whiskers indicate the interquartile range. Data for 2020 are World Bank staff estimates based on the April 2020 *Fiscal Monitor*.

F. Sample includes 37 EMDEs, of which 23 are oil exporters and 14 are oil importers.

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while committing to divest ownership over the medium term once stability has been restored (Al Tuwaijri et al. 2020). In general, once economic activity begins to normalize, EMDE policymakers would need to carefully withdraw the large-scale policy stimulus provided during the crisis without endangering the recovery.

EMDE fiscal policy

Many EMDEs have announced fiscal policy support to confront the immediate health crisis and preserve lives, as well as to limit the magnitude of the economic contraction and hasten the eventual recovery. At least three-fourths of EMDEs have increased their funding of health care systems to expand testing and hospital capacity. Fiscal support has targeted the expansion of social protection coverage, including wage subsidies to protect jobs, cash transfers to households, and increased access to unemployment benefits (Figure 1.21.A). Measures have also been implemented to ensure continued access to critical public service delivery to vulnerable groups, including low-income households and the elderly (Argentina, Indonesia, Pakistan, Russia, the Philippines). Fiscal space, however, is constrained in some of the worst-affected EMDEs, limiting the scope of fiscal support and highlighting the need for improving the allocation and efficiency of spending (Figure 1.21.B).

To support firms, policymakers have provided access to credit, loan guarantees, and vouchers or cash for critical employers and affected sectors such as tourism. Temporary revenue-side measures to ease the financial burden on households and firms have complemented these efforts and include tax filing and payment deferrals, income and VAT tax cuts, and social contribution reductions. Announced government support packages have averaged 5.4 percent of GDP in EMDEs, and are at least 10 percent of GDP in some cases (India, Malaysia, Poland, Qatar, South Africa, Thailand).

While most EMDEs have managed to implement discretionary fiscal support packages, countries with more policy space have generally provided greater support. Packages in countries with wider space are almost twice the average of those in

countries with narrower space (Figure 1.21.C; Balajee, Tomar, and Udupa 2020). This latter group includes many industrial commodity exporters, reflecting the loss of revenue due to the collapse in commodity prices. Expenditures have been prioritized and reallocated toward income support and health spending to conserve space (Algeria, Brazil, Ghana, Nigeria, Saudi Arabia).

EMDEs with available fiscal space and affordable financing conditions could consider additional stimulus if the effects of the pandemic persist. This could be accompanied by measures to help credibly restore medium-term fiscal sustainability, including those that strengthen fiscal frameworks, increase domestic revenue mobilization and spending efficiency, and raise fiscal and debt transparency (IMF 2020a; Koh and Yu 2019; Munoz and Olaberria 2019; Tandberg and Allen 2020). The timing and sequencing of additional stimulus measures should also be carefully executed to optimize limited government resources—liquidity injections, for instance, are best implemented before critical firms or industries default, but policies aimed at bolstering demand may be more effective after lockdowns are lifted (Blanchard 2020; Izvorski et al. 2020).

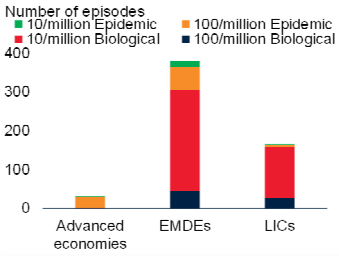
Government debt, however, has reached a record high of 51 percent of GDP in EMDEs and the fiscal surpluses achieved prior to the global financial crisis have turned into deficits; as a result, many EMDEs have limited room to ease their fiscal stances (Kose et al. 2020; Ruch 2019). Oil-exporting EMDEs face the added challenge of a collapse in revenue from oil extraction, with oil prices now well below their average fiscal break-even points (Figure 1.21.D; Arezki and Nguyen 2020). Deficits in these economies were already rising prior to the pandemic and will likely further deteriorate, placing debt on a more unsustainable path (Figure 1.21.E; World Bank 2020p).

Pressures on EMDE public balance sheets could be magnified by tighter external financing conditions and rising debt service costs. Caution is especially warranted where public and private balance sheets are intertwined, especially if adverse financing conditions trigger the realization of contingent liabilities (Bova et al. 2016; Feyen and Zuccardi 2019). Narrower fiscal space and tighter

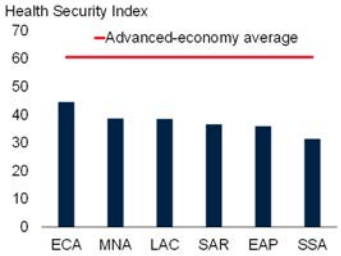
FIGURE 1.22 EMDE structural policies

A rising frequency of biological disasters in EMDEs, including epidemics, highlights the critical need for resilient health care systems, and for improved emergency preparedness. Extensive informality across EMDEs is associated with worse economic and fiscal outcomes, deficient health and sanitation systems, and weaker social safety nets. SMEs across EMDEs face significant financing constraints, including limited access to credit. COVID-19 will likely dampen long-term growth, as exemplified by previous severe epidemics.

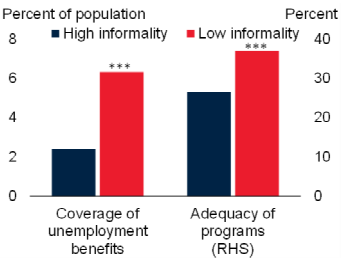
A. Frequency of biological disasters in EMDEs, 1960-2018



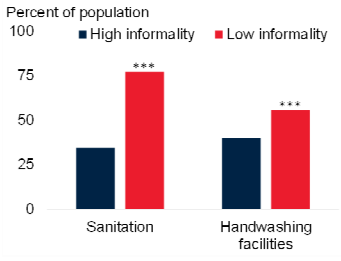
B. EMDE health security, by region



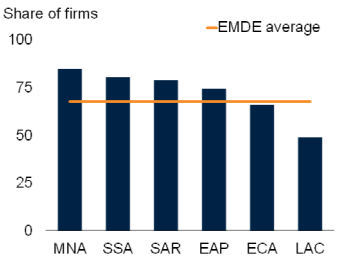
C. Social insurance



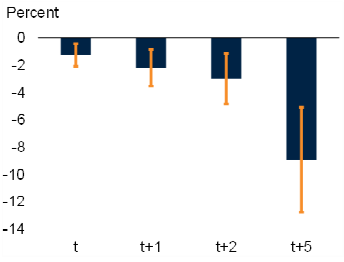
D. Access to sanitation



E. Firms without access to credit



F. Effect of epidemics on output



Source: Bosio, Djankov, and Jolevski (2020); Elgin et al. (forthcoming); EM-DAT; Global Health Index (2019); World Bank; WHO/UNICEF Joint Monitoring Programme (JMP) for Water Supply, Sanitation and Hygiene.

B.E. 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. Biological and epidemic episodes follow EMDAT definitions. The sample includes 35 advanced economies and 135 EMDEs, of which 27 are LICs.

B. Figure reports overall average for each EMDE region compared to the advanced economy average. Maximum value of index is 100.

C. Adequacy of social insurance programs is measured in percent of total welfare of beneficiary households.

C.D. Bars are group means calculated for EMDEs with high (low) informality—i.e., the highest (lowest) one-third of EMDEs by DGE-based informal output measures—over the period 2010-16. *** indicates the group differences are not zero at 10 percent significance level. Refer to Box 1.4 for details.

E. Aggregates calculated using U.S. dollar GDP weights at 2010 prices and market exchange rates.

F. Bars show the estimated impacts of the 4 most severe epidemics on output levels relative to non-affected EMDEs. Orange lines display the range of estimates with 90 percentile significance. Sample includes 30 advanced economies and 86 EMDEs. Refer to Box 3.2 in Chapter 3 for more details.

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financing conditions highlight the need for temporary debt relief and international assistance to help EMDEs confront the immediate health crisis head on, protect jobs and workers, and to avoid procyclical fiscal policy, which could otherwise exacerbate the downturn (Loayza and Pennings 2020; Hevia and Neumeyer 2020).

In light of limited fiscal space, EMDEs may want to preemptively identify priority expenditures that need to be safeguarded if financing shrinks, such as education and health measures, as well as lower-priority, poorly targeted, or inefficiently spent expenditures that yield lower growth dividends and that can be delayed or suspended (IMF 2018; Herrera Aguilera and Ouedraogo 2020). While lockdowns persist, governments should focus on mitigating the damage from interruptions in household and corporate incomes (Blanchard 2020). A supplemental budget can also be considered, especially if increased access to public services, including food banks, and expanded social safety nets are needed to protect the most vulnerable.

Steps can be taken to bolster EMDE fiscal space and flatten the debt curve once the immediate crisis subsides. EMDEs that temporarily cut taxes or suspended fiscal rules should provide clear exit strategies to preserve the credibility of medium-term fiscal frameworks (Gbohoui and Medas 2020). These steps can be complemented by better prioritizing public expenditures and enhancing the review of public investment projects. The recent downturn in oil prices also provides a window of opportunity to put in place mechanisms that permanently eliminate costly and poorly targeted energy subsidies, particularly in EMDE oil exporters where these subsidies, on average, accounted for 4.2 percent of GDP in 2018 (Figure 1.21.F; Coady et al. 2017; Guénette 2020; IEA 2015; Stocker et al. 2018; Chapter 4). Reductions in energy subsidies could provide longer-run efficiency dividends by freeing resources to boost investment in green energy and technology.

EMDE structural policies

The pandemic, coupled with the rising frequency of biological and other natural disasters, highlights the critical need to invest in health care capacity to prevent and to better cope with future health and economic crises (Figure 1.22A; World Bank 2020g). It also highlights the formidable challenges of weaker health systems, widespread informality, and small and medium enterprise (SME) financing constraints in EMDEs. The deep contractions caused by the pandemic, and their adverse consequences for potential output, underscores the need for a renewed emphasis on structural reform to set the stage for sustained economic growth. So too does the increased frequency of extreme weather events, which are a growing threat to food supplies, housing, and infrastructure, especially in already-deprived communities.

Pandemic preparedness of health systems

Since 2003, there have been several serious epidemics—including of SARS, Ebola, avian flu, and now COVID-19. These experiences underscore the importance for EMDEs to provide broad-based access to medical services to identify and treat acute symptoms during health emergencies. As part of comprehensive measures to alleviate the stress on health systems, front-line health workers need to be supported with protective equipment and strengthened hazardous-waste management. At the same time, governments need to seek to prioritize the timely and transparent dissemination of accurate information on infections in order to build public trust. Emergency health policies must be adapted to the unique challenges of many EMDEs, including weaker health systems, crowded housing conditions, and limited access to water and sanitation.

After taking stock of the current pandemic, enhancing health security in EMDEs will first require the development of national epidemic preparedness strategies which highlight existing gaps (Figure 1.22.B; Johns Hopkins Center for Health Security 2019). Funding can be allocated in national budgets to implement these strategies and address any gaps. In general, funding for epidemic preparedness tends to be allocated in waves during crises rather than smoothly and efficiently over time; therefore, it is vital that countries routinely stress-test their health systems to monitor progress and demonstrate the system's viability in a crisis (Yamey et al. 2017).

More broadly, authorities need to take steps to strengthen clinical and general health care, invest in access to clean water and sanitation, and tighten food safety standards. In particular, boosting investment in the foundational capacity for national health systems—by developing a robust public health workforce—is critical for enhancing long-term preparedness and the quality of national health outcomes (Johns Hopkins Center for Health Security 2019). Maintaining effective public health safety nets—including unrestricted access to emergency medical care—will also be essential to removing barriers to testing and treatment. A lesson from the current crisis is that investments in public health infrastructure must be continuously sustained, even during quiet times, when it may appear that the system has redundant capacity. In an epidemic, such redundancy pays ample dividends.

Informality and SME financing constraints

Informality is widespread across EMDEs, with the informal sector, on average, accounting for about a third of official GDP and about 70 percent of total employment in EMDEs (World Bank 2019a). Extensive informality is associated with weaker economic and fiscal outcomes, reduced efficacy of monetary policy, deficient health and sanitation systems, and weaker social safety nets (Figures 1.22.C and 1.22.D; Box 1.4; Alberola-Ila and Urrutia 2019). This leaves countries with widespread informality severely constrained in their ability to address the health, economic and social challenges of COVID-19. A general lack of adequate medical infrastructure may worsen the severity of infection outcomes (Dahab et al. 2020). At the same time, economic pressures associated with poverty—which is expected to rise sharply as a result of the pandemic—may undermine efforts to slow the spread of the virus (Lakner et al. 2020; Loayza and Pennings 2020). The impact is likely to be particularly severe on women, since they have an outsized participation in informal activities.

The sudden stop of activity caused by lockdowns and other mitigation measures would have dire consequences for many firms in EMDEs. Forced closures could quickly lead to the widespread collapse of informal firms, as they are highly dependent on internal funds and moneylenders for working capital (Farazi 2014). More broadly, SMEs across EMDEs face significant financing constraints as higher information asymmetries caused by their lack of established track records and publicly available information discourage bank lending (Figure 1.22.E; Abraham and Schmukler 2017).

In light of this, policy support is needed to increase the availability of finance for urgent capital needs. Governments could temporarily incentivize lenders—including commercial and domestic development banks and digital platforms—to redirect credit to SMEs through risk-sharing measures such as public credit guarantees. In doing so, policies could be put in place to increase funds available for financial sector institutions without access to central bank liquidity facilities. In addition, governments could consider temporary equity injections to prevent highly productive firms from exiting the market. Authorities could implement well-regulated credit information sharing mechanisms to minimize information asymmetries. Well-enforced collateral laws enhance the use of movable assets as collateral, and thereby reduce risks to lenders. For the duration of the crisis at least, government might consider public credit guarantees as a means to redirect credit to SMEs, with sunset clauses.

Given the substantial challenge posed by widespread informality and SME financing constraints, pandemic-control measures will need to be complemented with measures that support the income of the most vulnerable firms and households, including those households that have been pushed into poverty by the crisis. Authorities also need to preserve access to essential health and nutrition services. Similarly, maintaining access to education is critical for avoiding irreversible losses in long-term human capital. In countries lacking adequate income redistribution systems, policies such as untargeted cash transfers, public works programs and food aid may minimize delays in providing assistance. The delivery of cash transfer and other support policies can be enhanced with the use of digital technologies, including mobile payment platforms (Box 1.4; Pazarbasioglu et al. 2020). Prompt financial support from the

international community can play a key role in financing these efforts in countries without the necessary fiscal capacity.

Setting the stage for a robust recovery

Beyond the unprecedented near-term damage, COVID-19 will likely dampen long-term growth, as exemplified by previous severe epidemics (Figure 1.22.F; Chapter 3). The long-run loss in output growth would be compounded if the current recession triggers financial crises. For these reasons, once the immediate health emergency abates, setting the stage for a robust recovery will require policies that deal with the lingering effects of the pandemic.

The immediate need is to implement a comprehensive set of policies to alleviate solvency strains, and, where necessary, prevent bankruptcies of firms that will be viable in the longer run without infringing on the integrity of private ownership. Where possible, support can be employed to invest in digital infrastructure to ensure uninterrupted provision of critical services to a broad set of households, including those in the informal sector, while facilitating wider adoption of these technologies.

In the medium term, a renewed emphasis on structural reforms and inclusive and environmentally sustainable post-disaster investments, as well as the development of sound fiscal policy frameworks, institutions, and business environments, can help establish a robust and resilient recovery (Hallegatte, Rentschler and Walsh 2018). Structural reforms need to be carefully calibrated to unique country circumstances, as productivity gains will heavily depend—among other factors—on their timing, mix and sustainability. Such reforms include policies to promote investment in physical and human capital, including green infrastructure; reallocation toward more productive sectors; and greater rates of technology adoption (World Bank 2020p). Reforms to reduce excessive regulations and litigiousness could also be pursued. In the case of oil exporters, persistently lower world oil prices reinforce the need for economic diversification, subject to market forces. This would increase long-term growth and enhance resilience to external shocks (Chapter 4). Lastly, policymakers can develop new insurance frameworks that enhance the quality and transparency of risk sharing during systemic economic disruptions.

Global coordination and cooperation

The pandemic underscores the crucial value of global coordination and cooperation in public health as well as in economic policy. Cooperation across governments, and between governments, non-governmental organizations, and the private sector is necessary to help build domestic capacity to detect and respond to health crises, as well as develop and disseminate global public goods such as vaccines. Global coordination is vital for transferring health supplies and expertise where they are most needed in the near term, and to develop a coordinated exit strategy from restrictions on the free movement of people in the medium term. Moreover, the unprecedented common economic shock adds to the growing evidence of the gains from coordinating monetary and fiscal actions across countries (Bodenstein, Corsetti, and Guerrieri 2020; Triggs 2018). In late March, the G7 pledged to "do whatever is necessary to restore confidence and economic growth and to protect jobs, businesses, and the resilience of the financial system" (U.S. Department of the Treasury 2020).

Many fiscally constrained EMDEs will benefit from the coordinated support of G20 countries and multilateral organizations. International financial institutions can adopt a two-phase approach to their policy response. In the first phase, rapid policy support can be deployed to help provide the fiscal resources necessary to protect the most vulnerable, keeping firms and jobs in place. For example, bilateral creditors might suspend debt payments from low-income countries that request forbearance. In the second phase, policy should focus on ensuring a strong and sustainable economic recovery, seizing the opportunity to increase investment in infrastructure, human capital, and growth-enhancing institutions—each of which has an important public health dimension.

Recently, many countries have responded to increasing domestic demand for food and medical

equipment with export restrictions. At the macroeconomic level, these policies, if applied over long periods, are likely to increase price volatility and dampen growth (Barattieri, Cacciatore and Ghironi 2019; Laborde, Lakatos, and Martin 2019). Authorities need to avoid the temptation of damaging isolationist or tit-for-tat protectionist policies. Critically, governments need to avoid restricting exports of necessary food and medical products. In view of closely integrated trade in intermediate inputs, such measures can obstruct supply chains for essential items. Facilitating the flow of remittances is also important. Good outcomes are more likely when countries work together to support increased production, and cooperate to ensure that resources flow to where they are most needed. More broadly, upholding a stable rules-based international trading system will be critical to launching a strong and durable global economic recovery (IMF 2020b).

TABLE 1.2 Emerging market and developing economies[1]

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

* 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; Netherlands; New Zealand; Norway; Portugal; Singapore; the Slovak Republic; Slovenia; Spain; Sweden; Switzerland; the United Kingdom; and the United States.

2. An economy is defined as commodity exporter when, on average in 2012-14, either (i) total commodities exports accounted for 30 percent or more of total goods exports or (ii) exports of any single commodity accounted for 20 percent or more of total goods exports. Economies for which these thresholds were met as a result of re-exports were excluded. When data were not available, judgment was used. This taxonomy results in the classification of some well-diversified economies as importers, even if they are exporters of certain commodities (e.g., Mexico).

3. Commodity importers are all EMDEs that are not classified as commodity exporters.

References

Abraham, F., and S. Schmukler. 2017. "Addressing the SME Finance Problem." Research & Policy Briefs 9, World Bank, Washington, DC.

Aghion, P., U. Akcigit, and P. Howitt. 2014. *Handbook of Economic Growth,* Volume 2. Amsterdam: Elsevier.

Ahir, H., N. Bloom, and D. Furceri. 2018. "The World Uncertainty Index." Mimeo, October 29.

Ahir, H., and P. Loungani. 2014. "'There Will be Growth in the Spring': How Well do Economists Predict Turning Points?" April 14, VoxEU.org, Center for Economic Policy Research, London.

Ahn, J., M. Amiti, and D. E. Weinstein. 2011. "Trade Finance and the Great Trade Collapse." *American Economic Review*, 101 (3): 298-302.

Aker, J., R. Boumnijel, A. McClelland, and N. Tierney. 2016. "Payment Mechanisms and Antipoverty Programs: Evidence from a Mobile Money Cash Transfer Experiment in Niger." *Economic Development and Cultural Change* 65 (1): 1-37.

Al Tuwaijri, S. M., S. Saadat, R. V. Gatti, L. B. Rawlings, H. Brixi, Z. Y. Debebe, R. Govindaraj, et al. 2020. *Protecting People and Economies: Integrated Policy Responses to COVID-19.* Washington, DC: World Bank.

Alberola-Ila, E., and C. Urrutia. 2019. "Does Informality Facilitate Inflation Stability?" BIS Working Paper 778, Bank for International Settlements, Basel.

Alesina, A., and F. Giavazzi. 2020. "The EU Must Support the Member at the Centre of the COVID-19 Crisis." In *Mitigating the COVID Economic Crisis: Act Fast and Do Whatever*, edited by R. Baldwin and B. Weder di Mauro, 51-55. VoxEU.org eBook, Center for Economic Policy Research, London.

Allen, R. E. 2009. *Financial Crises and Recession in the Global Economy*. Third Edition. Cheltenham, U.K.: Edward Elgar.

Amin, M., F. Ohnsorge, and C. Okou. 2019. "Casting a Shadow: Productivity of Formal Firms and Informality." Policy Research Working Paper 8945, World Bank, Washington, DC.

An, Z., and P. Loungani. 2020. "There Will Be Growth in the Spring': How Well Do Economists Forecast Recoveries?" Mimeo, April 20.

Arezki, R., and H. Nguyen. 2020. "Coping with a Dual Shock: COVID-19 and Oil Prices." Vox CEPR Policy Portal, April 1. Available at https://voxeu.org/article/coping-dual-shock-covid-19-and-oil-prices.

Armitage, R., and L. Nellumns. 2020. Considering Inequalities in the School Closure Response to COVID-19. *Lancet Global Health 2020: Correspondence*.

Aromí, J. D. 2019. "Medium Term Growth Forecasts: Experts vs. Simple Models." *International Journal of Forecasting* 35 (3): 1085-1099.

Aron, J. 2018. "Mobile Money and the Economy: A Review of the Evidence." The World Bank Research Observer 33 (2): 135-188.

Arslan, Y., M. Drehmann, and B. Hofmann. 2020. "Central Bank Bond Purchases in Emerging Market Economies." *BIS Bulletin*, No. 20, Bank for International Settlements, Basel.

Avdjiev, S., E. Eren, and P. McGuire. 2020. "Dollar Funding Costs During the Covid-19 Crisis Through the Lens of the FX Swap Market." *BIS Bulletin*, No. 1, Bank for International Settlements, Basel.

Baffes, J., M. A. Kose, F. Ohnsorge, and M. Stocker. 2015. "The Great Plunge in Oil Prices: Causes, Consequences, and Policy Responses." Policy Research Note 15/01, World Bank, Washington, DC.

Balajee, A., S. Tomar, and G. Udupa. 2020. "COVID-19, fiscal stimulus, and credit ratings." In *COVID Economics: Vetted and real-time papers*, Issue 11, edited by C. Wyplosz, 132-164. CEPR Press VoxEU.org eBook, Center for Economic Policy Research, London.

Baldwin, R., and E. Tomiura. 2020. "Thinking Ahead about the Trade Impact of COVID-19." In *Economics in the Time of COVID-19*, edited by R. Baldwin and B. Weder di Mauro, 59-71. London: CEPR Press.

Baldwin, R., and B. Weder di Mauro, eds. 2020. *Economics in the Time of COVID-19.* CEPR Press VoxEU.org eBook, Center for Economic Policy Research, London.

Barattieri, A., M. Cacciatore, and F. Ghironi. 2019."Protectionism and the Business Cycle." NBER Working Paper 24353, National Bureau of Economic Research, Cambridge, MA.

Barro, R. J., J. F. Ursúa, and J. Weng. 2020. "The Coronavirus and the Great Influenza Pandemic: Lessons from the 'Spanish Flu' for the Coronavirus's Potential Effects on Mortality and Economic Activity."

NBER Working Paper 26866, National Bureau of Economic Research, Cambridge, MA.

Bems, R., R. C. Johnson, and K. M. Yi. 2010. "Demand spillovers and the collapse of trade in the global recession." IMF Working Paper 10/142, International Monetary Fund, Washington, DC.

Benediktsdottir, S., G. Feldberg, and N. Liang. 2020. "What Macroprudential Policies are Countries Using to Help Their Economies Through the Covid-19 Crisis?" Yale School of Management, New Haven, CT.

Benjamin, N., and A. Mbaye. 2012. *The Informal Sector in Francophone Africa: Firm Size, Productivity, and Institutions.* Africa Development Forum. Washington, DC: World Bank.

Besley, T., and T. Persson. 2014. "Why Do Developing Countries Tax So Little?" *Journal of Economic Perspectives* 28 (4): 99-120.

Bhandari, A., J. Borovicka, and P. Ho. 2019. "Survey Data and Subjective Beliefs in Business Cycle Models." Working Paper 19-14, Federal Reserve Bank of Richmond, Richmond, VA.

BIS (Bank for International Settlements). 2019. "International Banking and Financial Market Developments." *BIS Quarterly Review*, September, Bank for International Settlements, Basel.

Blanchard, O. 2020. "Whatever it Takes. Getting into the Specifics of Fiscal Policy to Fight COVID-19." *Realtime Economic Issues Watch*, March 30, Peterson Institute for International Economics, Washington, DC.

Bodenstein, M., G. Corsetti, and L. Guerrieri. 2020. "The Elusive Gains from Nationally-Oriented Monetary Policy." International Finance Discussion Papers 1271. Board of Governors of the Federal Reserve System, Washington, DC.

Boissay, F., D. Rees, and P. Rungcharoenkitkul. 2020. "Dealing with Covid-19: understanding the policy choices." *BIS Bulletin*, No. 19, Bank for International Settlements, Basel.

Bolt, J., R. Inklaar, H. de Jong, and J. L. van Zanden. 2018. "Rebasing 'Maddison': New Income Comparisons and the Shape of Long-Run Economic Development." GGDC Research Memorandum 174, University of Groningen, Groningen.

Bosio, E., S. Djankov, and F. Jolevski. 2020. "Making Access to New Credit Easier." *Let's Talk Development* (blog), March 25, World Bank, Washington, DC.

Bova, E., M. Ruiz-Arranz, F. G. 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.

Bown, C. P. 2020. "Unappreciated Hazards of the U.S.-China Phase One Deal." *Trade and Investment Policy Watch*. January. Peterson Institute for International Economics, Washington, DC.

Brandao-Marques, L., G. Gelos, T. Harjes, R. Sahay, and Y. Xue. 2020. "Monetary Policy Transmission in Emerging Markets and Developing Economies." IMF Working Paper 20/35, International Monetary Fund, Washington, DC.

Bruno, V., S. J. Kim, and H. Shin. 2018. "Exchange Rates and the Working Capital Channel of Trade Fluctuations." *AEA Papers and Proceedings* 108 (May): 531-36.

Burgess, S., and H. H. Sievertsen. 2020. "Schools, skills, and learning: The impact of COVID-19 on education." Vox CEPR Policy Portal, April 1. Available at https://voxeu.org/article/impact-covid-19-education.

Burns, A. F., and W. C. Mitchell. 1946. *Measuring Business Cycles*. Cambridge, MA: National Bureau of Economic Research.

Burns, A., D. van der Mensbrugghe, and H. Timmer. 2006. "Evaluating the Economic Consequences of Avian Influenza". Policy Research Working Paper 47417, World Bank, Washington, DC.

Bussière, M., G. Callegari, F. Ghironi, G. Sestieri, and N. Yamano. 2013. "Estimating Trade Elasticities: Demand Composition and the Trade Collapse of 2008-2009." NBER Working Paper 17712, National Bureau of Economic Research, Cambridge, MA.

Caballero, R. J., T. Hoshi, and A. K. Kashyap. 2008. "Zombie Lending and Depressed Restructuring in Japan." *American Economic Review* 98 (5): 1943-77.

Calderón, C., and A. Zeufack. 2020. "Borrow with Sorrow? The Changing Risk Profile of Sub-Saharan Africa's Debt." Policy Working Paper 9137, World Bank, Washington, DC.

Campos, F., M. Goldstein, and D. Mckenzie. 2018. "How Should the Government Bring Small Firms into the Formal System? Experimental Evidence from Malawi." Policy Research Working Paper 8601, World Bank, Washington, DC.

Cangul, M., C. Sdralevich, and I. Sian. 2017. "Beating Back Ebola." *Finance & Development*, June, International Monetary Fund, Washington, DC.

Cerra, V., A. Fatás, and S. Saxena. 2020. "Hysteresis and Business Cycles." CEPR Discussion Paper 14531, Centre for Economic Policy Research, London.

CFRTV (COVID-19 Financial Response Tracker Visualization). 2020. Database, Yale School of Management, New Haven. Accessed April 10. https://som.yale.edu/faculty-research-centers/centers-initiatives/program-on-financial-stability/covid-19-tracker.

Chodorow-Reich, G., G. Gopinath, P. Mishra, and A. Naraynan. 2020. "Cash and the Economy: Evidence from India's Demonetization." *Quarterly Journal of Economics* 135 (1): 57-103.

Chor, D., and K. Manova. 2012. "Off the cliff and back? Credit Conditions and International Trade During the Global Financial Crisis." *Journal of International Economics* 87 (1): 117-133.

Claessens, C., M. A. Kose, and M. E. Terrones. 2012. "How do Business and Financial Cycles Interact?" *Journal of International Economics* 87 (1): 178-190.

Coady, D., I. Parry, L. Sears, and B. Shang. 2017. "How Large Are Global Fossil Fuel Subsidies?" *World Development* 91 (March): 11–27.

Conflitti, C., and R. Cristadoro. 2018. "Oil Prices Do Not Affect Inflation Expectations After All." Vox CEPR Policy Portal, March 21. Available at https://voxeu.org/article/oil-prices-do-not-affect-inflation-expectations-after-all.

Constantinescu, C., A. Mattoo, and M. Ruta. 2015. "The Global Trade Slowdown: Cyclical or Structural?" *World Bank Economic Review* 34 (1): 121-142.

Conte, B., L. Piemontese, and A. Tapsoba. 2020. "Ancient Plagues in Modern Times: The Impact of Desert Locust Invasions on Child Health." TSE Working Paper 20-1069, Toulouse School of Economics, Toulouse.

Contessi, S., and L. Li. 2013. "Translating Kurzarbeit." *Economic Synopses* 17, Federal Reserve Bank of San Francisco.

Crowe, C. 2010. "Consensus Forecasts and Inefficient Information Aggregation." IMF Working Paper 10/148, International Monetary Fund, Washington, DC.

Cullen, M. 2020. "A Battle Plan for Ensuring Global Food Supplies During the COVID-19 Crisis." Food and Agriculture Organization of United Nations. http://www.fao.org/news/story/en/item/1268059/icode.

Dahab, M., K. van Zandvoort, S. Flasche, A. Warsame, P. Spiegel, R. Waldman, and F. Checchi. 2020. "COVID-19 Control in Low-Income Settings and Displaced Populations: What Can Realistically Be Done?" London School of Hygiene and Tropical Medicine, London.

De Long, J. B. 1996. "Keynesianism, Pennsylvania Avenue Style: Some Economic Consequences of the Employment Act of 1946." *Journal of Economic Perspectives* 10 (3): 41-53.

Demirgüç-Kunt, A., L. Klapper, D. Singer, S. Ansar, and J. Hess. 2018. *The Global Findex Database 2017: Measuring Financial Inclusion and the Fintech Revolution*. World Bank: Washington, DC.

Devi, S. 2020. "Locust Swarms in East Africa Could be 'a Catastrophe'." *The Lancet* 395 (10224): 547.

Didier, T., F. Huneeus, M. Larrain, and S. L. Schmukler. 2020. "Financing Firms in Hibernation during the COVID-19 Pandemic." Research and Policy Brief 30, World Bank, Washington, DC.

Draghi, M., and J. Yellen. 2020. "Japanification, Secular Stagnation, and the Fiscal and Monetary Policy Challenges." American Economic Association Panel Session. Available at: https://www.aeaweb.org/webcasts/2020/japanification-secular-stagnation-fiscal-monetary-policy-challenges.

Drehmann, M., M. Farag, N. Tarashev, and K. Tsatsaronis. 2020. "Buffering COVID-19 Losses—The Role of Prudential Policy." *BIS Bulletin*, No. 9, Bank for International Settlements, Basel.

Economist. 2001. "Going Downhill." September 27.

Economist. 2008. "The Global Slumpometer." November 6.

Eichenbaum, M. S., S. Rebelo, and M. Trabandt. 2020. "The Macroeconomics of Epidemics." National Bureau of Economic Research. NBER Working Paper 26882, National Bureau of Economic Research, Cambridge, MA.

Eichengreen, B. 2015. *Hall of Mirrors: The Great Depression, the Great Recession, and the Uses—and Misuses—of History*. New York: Oxford University Press.

El Zowalaty, M. E, and J. D. Järhult. 2020. "From SARS to COVID-19: A Previously Unknown SARS-related Coronavirus (SARS-CoV-2) of Pandemic Potential Infecting Humans - Call for a One Health Approach." *One Health* 9 (June): 100124.

Elgin, C., M. A. Kose, F. Ohnsorge, and S. Yu. Forthcoming. "Synchronization of Informal and Formal Business Cycles." Mimeo, World Bank, Washington, DC.

Fang, X., D. Jutrsa, S. Martinez Peria, A. F. Presbitero, and L. Ratnovski. 2020. "Bank Capital Requirements and Lending in Emerging Markets: The Role of Bank Characteristics and Economic Conditions." *Journal of Banking & Finance*. Available at https://doi.org/10.1016/j.jbankfin.2020.105806.

FAO (Food and Agriculture Organization of the United Nations). 2020a. *Migrant Workers and the COVID-19 Pandemic*. April. Rome: FAO.

———. 2020b. "Q&A: COVID-19 Pandemic – Impact on Food and Agriculture." Food Agriculture Organization of the United Nations, Rome. http://www.fao.org/2019-ncov/q-and-a/en/.

Farazi, S. 2014. "Informal Firms and Financial Inclusion: Status and Determinants." Policy Research Working Paper 6778, World Bank, Washington, DC.

Fels, R. 1951. "American Business Cycles, 1865-79." *American Economic Review* 41 (3): 325-349.

———. 1952. "The American Business Cycle of 1879-85." *Journal of Political Economy* 60 (1): 60-75.

Feyen, E., and I. Zuccardi. 2019. "The Sovereign-Bank Nexus in EMDEs : What Is It, Is It Rising, and What Are the Policy Implications?" Policy Research Working Paper 8950, World Bank, Washington, DC.

Financial Times. 2020. "Global Recession Already Here, Say Top Economists." March 15.

Frankel, J. A. 2011. "How Can Commodity Exporters Make Fiscal and Monetary Policy Less Procyclical?" HKS Faculty Research Working Paper, Harvard University, Cambridge, MA.

Freund, C. 2009. "The Trade Response to Global Downturns: Historical Evidence." Policy Research Working Paper 5015, World Bank, Washington, DC.

FSIN (Food Security Information Network). 2020. *Global Report on Food Crises*. Rome: Food Security Information Network.

Fugazzola, P., F. Coccolini, C. Merli, E. Gamberini, V. Agnoletti, and L. Ansaloni. 2020. "Mass Casualties Management in Low-Income Countries". In *WSES Handbook of Mass Casualties Incidents Management*, edited by Y. Kluger, F. Coccolini, F. Catena, and L. Ansaloni, 157-165. Cham, Switzerland: Springer.

Furceri, D., P. Loungani, and J. D. Ostry. 2020. "How Pandemics Leave the Poor Even Farther Behind." *IMFBlog* (blog), May 11. Available at https://blogs.imf.org/2020/05/11/how-pandemics-leave-the-poor-even-farther-behind/.

Garcia Mora, A. 2020. "Patterns—and Some Implications—of Covid-19 Financial Sector Policy Interventions." *Private Sector Development* (blog), May 7, World Bank. Available at https://blogs.worldbank.org/psd/patterns-and-some-implications-covid-19-financial-sector-policy-interventions.

Gbohoui, W., and P. Medas. 2020. "Fiscal Rules, Escape Clauses, and Large Shocks." Special Series on Fiscal Policies to Respond to COVID-19. April. International Monetary Fund, Washington, DC.

Gentilini, U. 2020. "5 Lessons for Using Universal Basic Income during a Pandemic." *Future Development* (blog), Brookings Institution, March 13. https://www.brookings.edu/blog/future-development/2020/03/13/5-lessons-for-using-universal-basic-income-during-a- pandemic.

Gevorkyan, A., and W. Semmler. 2016. "Oil Price, Overleveraging and Shakeout in the Shale Energy Sector—Game Changers in the Oil Industry." *Economic Modelling* 54 (April)*:* 244-259.

Gourinchas, P. O. 2020. "Flattening the Pandemic and Recession Curves." In *Mitigating the COVID Economic Crisis: Act Fast and Do Whatever*, edited by R. Baldwin and B. Weder di Mauro, 31-39. CEPR Press VoxEU.org eBook, Center for Economic Policy Research, London.

Goy, G., and J. W. van den End. 2020. "The Impact of the COVID-19 Crisis on the Equilibrium Interest Rate." Vox CEPR Policy Portal, April 20. Available at https://voxeu.org/article/impact-covid-19-crisis-equilibrium-interest-rate.

GPMB (Global Preparedness Monitoring Board). 2019. *Annual Report on Global Preparedness for Health Emergencies*. Geneva: World Health Organization.

Guénette, J. D. 2020. *Price Controls: Good Intentions,*

Bad Outcomes (English). Policy Research Working Paper 9212, World Bank, Washington, DC.

Guerrieri, V., G. Lorenzoni, L. Straub, and I. Werning. 2020. "Macroeconomic Implications of COVID-19: Can Negative Supply Shocks Cause Demand Shortages?" NBER Working Paper 26918, National Bureau of Economic Research, Cambridge, MA.

Hallegatte, S., J. Rentschler, and B. Walsh. 2018. "Building Back Better: Achieving Resilience Through Stronger, Faster, and More Inclusive Post-Disaster Reconstruction." World Bank, Washington, DC.

Hamilton, J. D. 2013. "Historical Oil Shocks." In *Routledge Handbook of Major Events in Economic History*, edited by R. E. Parker and R. Whaples, 239-265. London: Routledge.

Haren, P., and D. Simchi-Levi. 2020. "How Coronavirus Could Impact the Global Supply Chain by Mid-March." *Harvard Business Review*, February 28. https://hbr.org/2020/02/how-coronavirus-could-impact-the-global-supply-chain-by-mid-march.

Hartley, J., and A. Rebucci. 2020. "An Event Study of COVID-19 Central Bank Quantitative Easing in Advanced and Emerging Economies." Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3607645.

Haushofer J., and J. Shapiro. 2016. "The Short-Term Impact of Unconditional Cash Transfers to the Poor: Experimental Evidence from Kenya." *Quarterly Journal of Economics* 131 (4): 1973-2042.

Herrera Aguilera, S., and A. Ouedraogo. 2018. "Efficiency of Public Spending in Education, Health, and Infrastructure: An International Benchmarking Exercise." Policy Research Working Paper 8586, World Bank, Washington, D.C.

Herzog-Stein, A., G. A. Horn, and U. Stein. 2013. "Macroeconomic Implications of the German Short-time Work Policy during the Great Recession." *Global Policy* 4 (1): 30-40.

Hevia, C., and P. A. Neumeyer. 2020. "A Perfect Storm: COVID-19 in Emerging Economies." Vox CEPR Policy Portal, April 21. Available at https://voxeu.org/article/perfect-storm-covid-19-emerging-economies.

Hofmann, B., I. Shim, and H. S. Shin. 2020. "Emerging Market Economy Exchange Rates and Local Currency Bond Markets Amid the Covid-19 Pandemic." *BIS Bulletin* No. 5, Bank for International Settlements, Basel.

Hördahl, P., and I. Shim. 2020. "EME bond portfolio flows and long-term interest rates during the Covid-19 pandemic." *BIS Bulletin*, No. 18, Bank for International Settlements, Basel.

Huidrom, R., M. A. Kose, J. Lim, and F. Ohnsorge. 2019. "Why Do Fiscal Multipliers Depend on Fiscal Positions?" Policy Research Working Paper 8784, World Bank, Washington, DC.

Huidrom, R., M. A. Kose, H. Matsuoka, and F. Ohnsorge. 2020. "How Important are Spillovers from Major Emerging Markets?" *International Finance* 23 (1): 47-63.

IEA (International Energy Agency). 2015. *World Energy Outlook* 2015. Paris: International Energy Agency.

ILO (International Labour Organization). 2018. *Women and Men in the Informal Economy: A Statistical Picture*. Geneva: International Labour Office.

———. 2020a. *ILO Monitor: COVID-19 and the World of Work. Third edition.* Geneva: International Labour Office.

———. 2020b. "COVID-19 Crisis and the Informal Economy: Immediate Responses and Policy Challenges." *ILO Brief.* International Labour Office, Geneva.

———. 2020c. *ILO Monitor: COVID-19 and the World of Work. Second edition.* Geneva: International Labour Office.

———. 2020d. *Rapid Assessment of the Impact of COVID-19 on Enterprises and Workers in the Informal Economy in Developing and Emerging Countries: Guidelines.* Geneva: International Labour Office.

Ilut, C. L., and M. Schneider. 2014. "Ambiguous Business Cycles." *American Economic Review* 81 (3): 401-414.

IMF (International Monetary Fund). 2018. "Public Investment Management Assessment—Review and Update." International Monetary Fund, Washington, DC.

———. 2020a. "Improving Fiscal Transparency to Raise Government Efficiency and Reduce Corruption Vulnerabilities in Central, Eastern, and Southeastern Europe." IMF Departmental Paper 20/06, International Monetary Fund, Washington, DC.

———. 2020b. "WTO and IMF Heads Call for

Lifting Trade Restrictions on Medical Supplies and Food." Press Release 20/187. April 24. International Monetary Fund, Washington, DC.

Islam, A., and P. Maitra. 2012. Health Shocks and Consumption Smoothing in Rural Households: Does Microcredit Have a Role to Play? *Journal of Development Economics* 97 (2): 232:242.

Izvorski, I., S. Mahajan, L. Moorty, and G. A. Vincelette. 2020. "A policy framework for mitigating the economic impact of COVID-19." *Future Development* (blog), April 20. https://www.brookings.edu/blog/future-development/2020/04/20/a-policy-framework-for-mitigating-the-economic-impact-of-covid-19.

Johns Hopkins Center for Health Security. 2019. *Global Health Security Index: Building Collective Action and Accountability*. Available at https://www.ghsindex.org/wp-content/uploads/2019/10/2019-Global-Health-Security-Index.pdf.

Jones, B. L. 1972. "The Role of Keynesians in Wartime Policy and Postwar Planning, 1940-1946." *American Economic Review* 62 (1/2): 125-133.

Jordà, O., S. R. Singh and A. M. Taylor. 2020. "Longer-Run Economic Consequences of Pandemics." National Bureau of Economic Research. NBER Working Paper 26934, National Bureau of Economic Research, Cambridge, MA.

Klapper, L. 2017. "How Digital Payments Can Benefit Entrepreneurs." IZA World of Labor: 396.

Klapper, L., M. Miller, and J. Hess. 2019. *Leveraging Digital Financial Solutions to Promote Formal Business Participation*. Washington, D.C. : World Bank Group.

Klapper, L., and D. Singer. 2017. "The Opportunities and Challenges of Digitizing Government-to-Person Payments." *World Bank Research Observer* 32 (2): 211–26.

Koh, W. C., and S. Yu. 2019. "Macroeconomic and Financial Sector Policies." In *A Decade after the Global Recession: Lessons and Challenges for Emerging and Developing Economies*, edited by A. Kose and F. Ohnsorge. Washington, DC: World Bank.

Knoop, T. A. 2004. *Recessions and Depressions: Understanding Business Cycles*. Westport, CT: Praeger.

Kose, M. A., S. Kurlat, F. Ohnsorge, and N. Sugawara. 2017. "A Cross-Country Database of Fiscal Space." Policy Research Working Paper 8157, World Bank, Washington, DC.

Kose, M. A., P. Nagle, F. Ohnsorge, and N. Sugawara. 2020. *Global Waves of Debt: Causes and Consequences*. Washington, DC: World Bank.

Kose, M. A., and F. Ohnsorge, eds. 2019. *A Decade After the Global Recession: Lessons and Challenges for Emerging and Developing Economics*. Washington, DC: World Bank.

Kose, M. A., N. Sugawara, and M. E. Terrones. 2019. "What Happens During Global Recessions?" In *A Decade after the Global Recession: Lessons and Challenges for Emerging and Developing Economies*, edited by M. A. Kose and F. Ohnsorge, 55-114. Washington, DC: World Bank.

———. 2020. "Global Recessions." CEPR Discussion Paper 14397, Center for Economic Policy Research, London, U.K.

Kose, M. A., and M. E. Terrones. 2015. *Collapse and Revival: Understanding Global Recessions and Recoveries.* Washington, DC: International Monetary Fund.

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

Lakner, C., D. G. Mahler, M. Negre, and E. B. Prydz. 2020. "How Much Does Reducing Inequality Matter for Global Poverty?" Global Poverty Monitoring Technical Note 13, World Bank, Washington, DC.

Loayza, N. 2018. "Informality: Why Is It So Widespread and How Can It Be Reduced?" Research & Policy Brief 20, World Bank, Kuala Lumpur.

Loayza, N., A. M. Oviedo, and L. Servén. 2006, "The Impact of Regulation on Growth and Informality – Cross-country Evidence." In *Linking the Formal and Informal Economy,* edited by B. Guha-Khasnobis, R. Kanbur and E. Ostrom. New York: Oxford University Press.

Loayza, N., and S. Pennings. 2020. "Macroeconomic Policy in the Time of Covid-19: A Primer for Developing Countries." Research & Policy Brief 28, World Bank, Kuala Lumpur.

Ma, C., J. Rogers, and S. Zhou. 2020. "Global Economic and Financial Effects of 21st Century Pandemics and Epidemics." In *Covid Economics: Vetted and Real-Time Papers*, Issue 5, 56-78. London: CEPR Press.

Mann, C. L. 2020. "Real and financial lenses to assess

the economic consequences of COVID-19." In *Economics in the Time of COVID-19*, edited by R. Baldwin and B. Weder di Mauro, 81-85. CEPR Press VoxEU.org eBook, Center for Economic Policy Research, London.

McKibbin, W., and R. Fernando. 2020. *The Global Macroeconomic Impacts of COVID-19: Seven Scenarios*. Washington, DC: Brookings Institution.

Miyamoto, W., T. L. Nguyen, and D. Sergeyev. 2018. "Government Spending Multipliers under the Zero Lower Bound: Evidence from Japan." *American Economic Journal: Macroeconomics* 10 (3): 247-77.

Mody, A., F. Ohnsorge, and D. Sandri. 2012. "Precautionary Savings in the Great Recession." *IMF Economic Review* 60 (1): 114-138.

Munoz, E., and E. Olaberria. 2019. "Are Budget Rigidities a Source of Fiscal Distress and a Constraint for Fiscal Consolidation?" Policy Research Working Paper 8956, World Bank, Washington, DC.

Muralidharan, K., P. Niehaus, and S. Sukhtankar. 2016. "Building State Capacity: Evidence from Biometric Smartcards in India." *American Economic Review* 106 (10): 2895-2929.

Murthy, S., A. Leligdowicz, and N. Adhikari. 2015. "Intensive Care Unit Capacity in Low-Income Countries: A Systematic Review." *PloS ONE* 10 (1): e0116949.

Obstfeld, M., R. Arezki, and G. M. Milesi-Ferretti. 2016. "Oil prices and the global economy: It's complicated." Vox CEPR Policy Portal, April 13. Available at https://voxeu.org/article/why-cheap-oil-fails-boost-global-economy-imf-view.

OECD (Organisation for Economic Cooperation and Development). 2020. "Evaluating the Initial Impact of COVID-19 Containment Measures on Economic Activity." OECD, Paris.

Oreopoulos, P., T. von Wachter, and A. Heisz. 2012. "The Short- and Long-Term Career Effects of Graduating in a Recession." *American Economic Journal: Applied Economics* 4 (1): 1-29.

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

Özler, B. 2020. "What Can Low-income Countries Do to Provide Relief for the Poor and the Vulnerable During the COVID-19 Pandemic?" *Development Impact* (blog), World Bank, March 19. Available at https://blogs.worldbank.org/impactevaluations/what-can-low-income-countries-do-provide-relief-poor-and-vulnerable-during-covid.

Panizza, U. 2020. "Europe's Ground Zero." In Mitigating the COVID Economic Crisis: Act Fast and Do Whatever It Takes, edited by R. Baldwin and B. Weder di Mauro, 151–66. Center for Economic Policy and Research. Washington, DC: CEPR Press.

Pazarbasioglu, C., A. Garcia Mora, M. Uttamchandani, H. Natarjan, E. Feyen, and M. Saal. 2020. *Digital Financial Services*. Washington, DC: World Bank.

Peisakhin, L., and P. Pinto. 2010. "Is Transparency an Effective Anti-Corruption Strategy? Evidence from a Field Experiment in India." *Regulation and Governance* 4 (3): 261-280.

Perry, G. E., W. F. Maloney, O. S. Arias, P. Fajnzylber, A. D. Mason, and J. Saavedra-Chanduvi. 2007. *Informality: Exit and Exclusion*. Washington, DC: World Bank.

Reinhart, C. M., and K. S. Rogoff. 2009. *This Time is Different: Eight Centuries of Financial Folly*. Princeton: Princeton University Press.

Roose, K. D. 1948. "The Recession of 1937-38." *Journal of Political Economy* 56 (3): 239-248.

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

Ruch, F. U. 2019. "Prospects, Risks and Vulnerabilities." In *A Decade After the Global Recession: Lessons and Challenges for Emerging and Developing Economies*, edited by M. A. Kose and F. Ohnsorge. Washington, DC: World Bank.

Schneider, F., A. Buehn, and C. E. Montenegro. 2010. "Shadow Economies All over the World: New Estimates for 162 Countries from 1999 to 2007." Policy Research Working Paper 5356, World Bank, Washington, DC.

Shu'aibu, T., A. S. Kutama, S. Umar, and T. A. Maryam. 2013. "Preference of Food Plants by Adult of the Desert Locust Schistocerca Gregaria." *Global Advanced Research Journal of Agriculture Science* 2 (9): 242-245.

Song, Y. 2014. "What Should Economists Know About the Current Chinese Hukou System?" *China*

Economic Review 29 (June): 200-212.

Steel, I., and D. Phillips. 2020. "How Tax Officials in Lower-income Countries Can Respond to the Coronavirus Pandemic." ODI Briefing Note, Overseas Development Institute, London.

Stocker, M., J. Baffes, Y. Modeste Some, D. Vorisek, and C. M. Wheeler. 2018. "The 2014-16 Oil Price Collapse in Retrospect: Sources and Implications." Policy Research Paper 8419, World Bank, Washington, DC.

Surico, P., and A. Galeotti. 2020. "The Economics of a Pandemic: The Case of COVID-19." European Research Council, Brussels, and Wheeler Institute, London. Available at https://sites.google.com/site/paolosurico/covid-19.

Sussman, N. 2020. "Time for Bed(s): Hospital Capacity and Mortality from COVID-19." *Covid Economics* 11 (April): 116-129.

Tandberg, E., and R. Allen. 2020. "Managing Public Investment Spending During the Crisis." Special Series on COVID-19. May. International Monetary Fund, Washington, DC.

Temin, P. 1989. *Lessons from the Great Depression*. Cambridge, MA: MIT Press.

Triggs, A. 2018. "The Economic and Political Case for Coordinating Fiscal Stimulus." Global Economy and Development Working Paper 121, Brookings Institution, Washington, DC.

UNESCO (United Nations Educational, Scientific, and Cultural Organization). 2020. "COVID-19 Educational Disruption and Response." Available at https://en.unesco.org/covid19/educationresponse.

U.S. Department of the Treasury. 2020. "Statement of G7 Finance Ministers and Central Bank Governors." Statements & Remarks, U.S. Department of the Treasury, Washington, DC.

Verikios, G., M. Sullivan, P. Stojanovski, J. A. Giesecke, and G. Woo. 2011. "The Global Economic Effects of Pandemic Influenza." Centre of Policy Studies, Monash University, Australia.

Wang, G, Y. Zhang, J. Zhao, J. Zhang, and F. Jiang. 2020. "Mitigate the Effects of Home Confinement on Children During the COVID-19 Outbreak." *The Lancet: Correspondence* 395 (10228): 945-47.

World Bank. 2004. *World Development Report 2004: Making Services Work for Poor People*. Washington, DC: World Bank.

———. 2014. *The Economic Impact of the 2014 Ebola Epidemic: Short- and Medium-Term Estimates for West Africa*. Washington, DC: World Bank.

———. 2015. *The Socio-Economic Impacts of Ebola in Liberia Results from a High Frequency Cell Phone Survey Round 5.* Washington, DC: World Bank.

———. 2018a. *Global Economic Prospects*: *The Turning of the Tide?* June 2018. Washington, DC: World Bank.

———. 2018b. *Poverty and Shared Prosperity Report: Piecing Together the Poverty Puzzle.* Washington, DC: World Bank.

———. 2019a. *Global Economic Prospects: Darkening Skies.* January. Washington DC: World Bank.

———. 2019b. *Africa's Pulse: An Analysis of Issues Shaping Africa's Economic Future.* Fall. Washington, DC: World Bank.

———. 2019c. "Cyclical Risks and Structural Imperatives." *China Economic Update*, World Bank, Washington, DC.

———. 2020a. *East Asia and Pacific Economic Update: East Asia and Pacific in the Time of COVID-19*. April. Washington, DC: World Bank.

———. 2020b. "COVID-19 Crisis Through a Migration Lens." Migration and Development Brief 32, World Bank, Washington, DC.

———. 2020c. *Commodity Markets Outlook: Implications of COVID-19 for Commodities*. April. Washington, DC: World Bank.

———. 2020d. *Europe and Central Asia Economic Update: Fighting COVID-19*. April. Washington, DC: World Bank.

———. 2020e. *The Economy in the Time of Covid-19. LAC Semiannual Report*. April. Washington, DC: World Bank.

———. 2020f. *Middle East and North Africa Economic Update: How Transparency Can Help the Middle East and North Africa*. Washington, DC: World Bank.

———. 2020g. *Africa's Pulse: Assessing the Economic Impact of COVID-19*. April. Washington, DC: World Bank.

———. 2020h. "Productivity in Emerging and Developing Economies: Trends, Drivers Convergence and Events." World Bank, Washington, DC.

———. 2020i. *On the Frontlines of the Fight Against Poverty*. Washington, DC: World Bank.

———. 2020j. *South Asia Economic Focus: The Cursed Blessing of Public Banks*. April. Washington, DC: World Bank.

———. 2020k. *Investing in the Early Years During COVID-19*. Washington, DC: World Bank.

———. 2020l. *The COVID-19 Pandemic: Shocks to Education and Policy Responses.* Washington, DC: World Bank.

———. 2020m. "Social Protection and Jobs Responses to COVID-19: A Real-Time Review of Country Measures." Washington DC: World Bank.

———. 2020n. "Assessing the Impact and Policy Responses in Support of Private-sector Firms in the Context of the COVID-19 Pandemic." Washington DC: World Bank.

———. 2020o. *World Development Report 2020. Trading for Development in the Age of Global Value Chains*. Washington, DC: World Bank.

———. 2020p. *Global Economic Prospects: Slow Growth, Policy Challenges*. January. Washington, DC: World Bank.

World Bank and DRC (Development Research Center of the State Council, the People's Republic of China). 2014. *Urban China: Toward Efficient, Inclusive, and Sustainable Urbanization*. Washington, DC: World Bank.

WFP (World Food Programme). 2020a. "2020 Global Report on Food Crises." World Food Programme, Rome.

———. 2020b. "COVID-19 Will Double Number of People Facing Food Crises Unless Swift Action is Taken." News Release, April 21, World Food Programme, Rome.

———. Forthcoming. *The State of School Feeding Worldwide 2020*. Rome: World Food Programme.

WHO (World Health Organization). 2016. *International health regulations (2005)*. World Health Organization.

Wyplosz, C. 2020. "So Far, So Good: And Now Don't Be Afraid of Moral Hazard." In *Mitigating the COVID Economic Crisis: Act Fast and Do Whatever*, edited by R. Baldwin and B. Weder di Mauro, 25-30. CEPR Press VoxEU.org eBook, Center for Economic Policy Research, London.

Yamey, G., M. Schäferhoff, O. K. Aars, B. Bloom, D. Carroll, M. Chawla, V. Dzau, et al. 2017. "Financing of International Collective Action for Epidemic and Pandemic Preparedness." *The Lancet Global Health* 5 (8): e742-e744.