INTERNATIONAL MONETARY FUND

FISCAL MONITOR

Policies for the Recovery

2020
OCT

INTERNATIONAL MONETARY FUND

FISCAL MONITOR

Policies for the Recovery

2020
OCT

Cover: IMF CSF Creative Solutions Division
Composition: AGS, An RR Donnelley Company

Cataloging-in-Publication Data
IMF Library

Names: International Monetary Fund.
Title: Fiscal monitor.
Other titles: World economic and financial surveys, 0258-7440
Description: Washington, DC : International Monetary Fund, 2009- | Semiannual | Some issues also have thematic titles.
Subjects: LCSH: Finance, Public—Periodicals. | Finance, Public—Forecasting—Periodicals. | Fiscal policy—Periodicals. | Fiscal policy—Forecasting—Periodicals.
Classification: LCC HJ101.F57

ISBN: 978-1-51355-270-5 (paper)
978-1-51355-737-3 (ePub)
978-1-51355-738-0 (PDF)

Disclaimer: The *Fiscal Monitor* is a survey by the IMF staff published twice a year, in the spring and fall. The report analyzes the latest public finance developments, updates medium-term fiscal projections, and assesses policies to put public finances on a sustainable footing. The report was prepared by IMF staff and has benefited from comments and suggestions from Executive Directors following their discussion of the report on September 30, 2020. The views expressed in this publication are those of the IMF staff and do not necessarily represent the views of the IMF's Executive Directors or their national authorities.

Recommended citation: International Monetary Fund (IMF). 2020. *Fiscal Monitor: Policies for the Recovery.* Washington, October.

Publication orders may be placed online, by fax, or through the mail:
International Monetary Fund, Publication Services
PO Box 92780, Washington, DC 20090, USA
Telephone: (202) 623-7430 Fax: (202) 623-7201
E-mail: publications@imf.org
www.imfbookstore.org
www.elibrary.imf.org

CONTENTS

Tables

Online Annexes

Online Database

ASSUMPTIONS AND CONVENTIONS

The following symbols have been used throughout this publication:

. . . to indicate that data are not available

— to indicate that the figure is zero or less than half the final digit shown, or that the item does not exist

– between years or months (for example, 2008–09 or January–June) to indicate the years or months covered, including the beginning and ending years or months

/ between years (for example, 2008/09) to indicate a fiscal or financial year

"Billion" means a thousand million; "trillion" means a thousand billion.

"Basis points" refers to hundredths of 1 percentage point (for example, 25 basis points are equivalent to ¼ of 1 percentage point).

"n.a." means "not applicable."

Minor discrepancies between sums of constituent figures and totals are due to rounding.

As used in this publication, the term "country" does not in all cases refer to a territorial entity that is a state as understood by international law and practice. As used here, the term also covers some territorial entities that are not states but for which statistical data are maintained on a separate and independent basis.

FURTHER INFORMATION

Corrections and Revisions

The data and analysis appearing in the *Fiscal Monitor* are compiled by IMF staff at the time of publication. Every effort is made to ensure their timeliness, accuracy, and completeness. When errors are discovered, corrections and revisions are incorporated into the digital editions available from the IMF website and on the IMF eLibrary. All substantive changes are listed in the Table of Contents of the online PDF of the report.

Print and Digital Editions

Print

Print copies of this *Fiscal Monitor* can be ordered from the IMF Bookstore at imfbk.st/29234.

Digital

Multiple digital editions of the *Fiscal Monitor*, including ePub, enhanced PDF, Mobi, and HTML, are available on the IMF eLibrary at www.elibrary.imf.org/OCT20FM.

Download a free PDF of the report and data sets for each of the charts therein from the IMF website at www.imf.org/publications/fm, or scan the QR code below to access the *Fiscal Monitor* web page directly:

Copyright and Reuse

PREFACE

The projections included in this issue of the *Fiscal Monitor* are drawn from the same database used for the October 2020 *World Economic Outlook* and *Global Financial Stability Report* (and are referred to as "IMF staff projections"). Fiscal projections refer to the general government, unless otherwise indicated. Short-term projections are based on officially announced budgets, adjusted for differences between the national authorities and the IMF staff regarding macroeconomic assumptions. The fiscal projections incorporate policy measures that are judged by the IMF staff as likely to be implemented. For countries supported by an IMF arrangement, the projections are those under the arrangement. In cases in which the IMF staff has insufficient information to assess the authorities' budget intentions and prospects for policy implementation, an unchanged cyclically adjusted primary balance is assumed, unless indicated otherwise. Details on the composition of the groups, as well as country-specific assumptions, can be found in the Methodological and Statistical Appendix.

The *Fiscal Monitor* is prepared by the IMF Fiscal Affairs Department under the general guidance of Vitor Gaspar, Director of the Department. The project was directed by Paolo Mauro, Deputy Director; and Catherine Pattillo, Assistant Director. The main authors of Chapter 1 of this issue are Paulo Medas, John Ralyea, Elif Ture (team leaders), Paul Elger, Alexandra Fotiou, Jean-Marc Fournier, Andresa Lagerborg, Raphael Lam, Delphine Prady, Baoping Shang with contributions from the green tracker team: Katja Funke (team lead), Chuling Chen, Khaled Eltokhy, Guohua Huang, Yujin Kim, Jay Rappaport, and Genet Zinabou; and Raphael Espinoza (lead), Matthieu Bellon, William Gbohoui, Fabien Gonguet, Xuehui Han, Sandra Lizarazo, Mariano Moszoro, Andrea Presbitero, Mouhamadou Sy, and Claude Wendling for Chapter 2. Excellent research contributions were provided by Juliana Gamboa, Sureni Weerathunga, Andrew Womer and Yuan Xiang. The Methodological and Statistical Appendix was prepared by Yuan Xiang. Joni Mayfield and Meron Haile provided excellent coordination and editorial support. Rumit Pancholi from the Communications Department led the editorial team and managed the report's production, with editorial assistance from David Einhorn, Susan Graham, Devlan O'Connor, Grauel Group, and Vector Talent Resources.

Inputs, comments, and suggestions were received from other departments in the IMF, including area departments—namely, the African Department, Asia and Pacific Department, European Department, Middle East and Central Asia Department, and Western Hemisphere Department—as well as the Communications Department, Institute for Capacity Development, Legal Department, Monetary and Capital Markets Department, Research Department, Secretary's Department, Statistics Department, and Strategy, Policy, and Review Department. Chapter 2 of the Fiscal Monitor also benefited from comments by Christopher Adam (University of Oxford), César Calderón (World Bank), and Maria Vagliasindi (World Bank). Both projections and policy considerations are those of the IMF staff and should not be attributed to Executive Directors or to their national authorities.

FOREWORD

On March 11, 2020, the WHO declared COVID-19 a pandemic. It has now claimed more than 1 million lives. But already in March, economic activity and financial markets were hit in a sudden and violent way. Economic policy responses were prompt. They helped restore orderly financial market conditions, eased access to financing and limited the downside adjustment in employment, economic activity, and living standards. The overall size and speed of fiscal action was unprecedented at about $12 trillion globally, contributing to extending critical lifelines to households and firms.

More than six months into the pandemic, the *Fiscal Monitor* emphasizes the importance of not pulling the plug of fiscal support too soon, in spite of the high levels of debt prevailing worldwide. It evaluates the difficult policy trade-offs that different countries face. Finally, it makes the case for public investment.

Prior to the pandemic, public and private debt were already high and rising in most countries, reaching 225 percent of GDP in 2019, 30 percentage points above the level prevailing before the global financial crisis. Global public debt rose faster over the period, standing at 83 percent of GDP in 2019. And despite access to financing varying sharply across countries, medium- to long-term fiscal strategies were needed virtually everywhere. On one extreme, there were countries—mostly advanced economies like the United States, participants in the euro area, and Japan—benefitting from exceptionally easy financing conditions. But these also faced long-term fiscal challenges associated with the implications from population aging. On the other extreme, there were countries—often low-income developing countries, many in sub-Saharan Africa—with no access to international financial markets. These countries were facing binding constraints on their ability to put public finances and state capacity at the service of growth and development. Those limits were particularly relevant in the context of the 2030 SDGs.

In 2020, global general government debt is estimated to make an unprecedented jump up to almost 100 percent of GDP. The major increase in the primary deficit and the sharp contraction in economic activity of 4.7 percent projected in the latest *World Economic Outlook*, are the main drivers of this development. But 2020 is an exceptional year in terms of debt dynamics, and public debt is expected to stabilize to about 100 percent of GDP until 2025, benefiting from negative interest-growth differentials.

These high levels of public debt are hence not the most immediate risk. The near-term priority is to avoid premature withdrawal of fiscal support. Support should persist, at least into 2021, to sustain the recovery and to limit long-term scarring. Health and education should be given prime consideration everywhere. Fiscally constrained economies should prioritize the protection of the most vulnerable and eliminate wasteful spending. To manage the intertemporal tradeoffs in fiscal policy, a medium- to long-term fiscal framework is recommended. The intertemporal tradeoffs between short-term support and medium-term risks are also an important theme of the latest *Global Financial Stability Report*.

COVID-19 has confronted policymakers with painful and urgent trade-offs. Living standards will be falling in most of the world. We estimate that the number of people in extreme poverty will increase by 80 to 90 million. The risk of malnutrition is on the rise. Access to health and education are problematic for important segments of the population.

The international community must act with debt relief, access to grants and concessional financing—now and going forward—to help the poorest countries tackle these urgent and painful trade-offs. More broadly, confidence in the stability of the global financial system requires that international resources be available for all countries facing temporary financing challenges. That is the purpose of the lending capacity of the IMF that now stands at $1 trillion, of which about one-fourth is already committed. For countries with unsustainable debt, options for orderly debt restructuring must be considered.

The *Fiscal Monitor* makes the case for public investment. The relevant macroeconomic context includes

very low interest rates, high precautionary savings, weak private investment, and a gradual erosion of the public capital stock over time. But the novel argument in the *Fiscal Monitor* relates to uncertainty. Investment multipliers are particularly high when macroeconomic uncertainty is elevated—and uncertainty in the current *World Economic Outlook* is "unusually large." Under such conditions, public investment acts as a catalyst for private investment to take off.

The *Fiscal Monitor* estimates that a 1 percent of GDP increase in public investment, in advanced economies and emerging markets, has the potential to push GDP up by 2.7 percent, private investment by 10 percent and, most importantly, to create between 20 and 33 million jobs, directly and indirectly. Investment in health and education and in digital and green infrastructure can connect people, improve economy-wide productivity, and improve resilience to climate change and future pandemics.

Fiscal policy can be a bridge to smart, resilient, sustainable, and inclusive growth.

Vitor Gaspar
Director of the Fiscal Affairs Department

EXECUTIVE SUMMARY

Chapter 1: Fiscal Policies to Address the COVID-19 Pandemic

The COVID-19 pandemic and associated lockdowns have prompted unprecedented fiscal actions that amounted to $11.7 trillion, or close to 12 percent of global GDP, as of September 11, 2020. Half of the fiscal actions consisted of additional spending or forgone revenue, including temporary tax cuts, and the other half liquidity support, including loans, guarantees, and capital injections by the public sector. This forceful response by governments has saved lives, supported vulnerable people and firms, and mitigated the fallout on economic activity. However, the consequences of the crisis for public finances, combined with the revenue loss from the output contraction, have been massive. In 2020, government deficits are set to surge by an average of 9 percent of GDP, and global public debt is projected to approach 100 percent of GDP, a record high. Under the baseline assumptions of a healthy rebound in economic activity and low, stable interest rates, the global public debt ratio is expected to stabilize in 2021, on average, except in *China* and the *United States*. Yet, more needs to be done to address rising poverty, unemployment, and inequality and to foster the economic recovery.

Chapter 1 of this edition of the *Fiscal Monitor* reviews the state of public finances across the world in this unprecedented time and examines the scale, scope, and effectiveness of fiscal policy responses to the COVID-19 crisis. It then offers a roadmap for the overall fiscal strategy to promote a strong recovery.

Although the global fiscal response has been unparalleled, the pandemic has laid bare major differences in the ability of countries to finance emergency spending to protect their people. That ability has been determined in part by countries' fiscal space, and by public and private debt levels, heading into the crisis. In many advanced economies and some emerging markets, massive liquidity provision and asset purchases by central banks have facilitated fiscal expansions. However, in many emerging markets and especially in low-income developing countries—more than half of which are at a high risk of debt distress or in debt distress—financing constraints have been binding. Official support to alleviate such constraints has been overwhelmed by financing needs. Based on the projected fall in per capita incomes, 100–110 million people globally would be expected to enter extreme poverty, reversing the decades-long declining trend. Additional social assistance—supporting directly the poor and cushioning the recession—is expected to have a modest impact reflecting limited support and capacity constraints in some countries, containing the increase in poverty to 80 million to 90 million people.

With limited fiscal space, countries need to assess the benefits, costs, and risks of support measures. Early insights suggest that public health policies that quickly contained the spread of the disease also allowed for an earlier and safer reopening, restoration of confidence, and economic recovery, reducing overall social and fiscal costs. Targeted cash transfers were vital for poor individuals, who spent them on necessities. Likewise, unemployment benefits supported necessary consumption for people who lost their jobs. Many policies that provided essential support in the short-term have longer-term implications. For example, wage subsidies preserved employment relationships but may slow labor market reallocation when new vacancies emerge. Temporary tax deferrals and cuts have supported liquidity but risk becoming permanent at the expense of government revenues. Equity injections have often been necessary to prevent bankruptcies, particularly in hard-hit strategic firms, but they could delay sectoral reallocation that is crucial for the recovery. Direct or guaranteed loans have so far had low take-up, reflecting some success in restoring confidence, but also administrative constraints and conditionality, as well as the private debt overhang.

Fiscal risks are also unprecedented. They stem from uncertainty about the course of the pandemic, the shape of the recovery, the extent of scarring and the required resource reallocation, the outlook for commodity prices and global financial conditions, and the contingent liabilities from implicit and explicit guarantees. It is crucial to ensure the full transparency, good governance, and costing of all fiscal measures, especially given their size, exceptional nature, and speed of deployment.

A Roadmap for Fiscal Policies during the Different Phases of the Pandemic

Global efforts to develop and ensure universal access to an affordable and effective vaccine or treatment are the highest priority to contain the human, economic, and fiscal costs of the pandemic. National actions are also vital to address the health crisis, including smart, well-informed, and localized containment policies. High levels of precautionary savings by households and limited private investment in an uncertain environment imply that interest rates will remain low for a long time in advanced and some emerging market economies. These factors provide the scope and motivation for fiscal policy to remain a crucial and powerful tool to foster the recovery. Other emerging market economies and low-income developing countries facing tighter financing constraints will need to reprioritize expenditures and deliver more with less by enhancing efficiency, and will need further official financial support and debt relief.

Policymakers need a toolkit of flexible fiscal measures to navigate lockdowns and tentative reopenings, and to facilitate structural transformation to the new post-pandemic economy. In the acute outbreak phase, when lockdowns are pervasive, fiscal policies should be geared to do whatever it takes to save lives and livelihoods. As lockdowns ease and become more selective, governments should ensure that lifelines are not withdrawn too rapidly. Improvements in the ability of social protection systems to reach, target, and deliver benefits to vulnerable people should be preserved. When health risks diminish and a durable recovery is foreseeable, support should shift from protecting employee-firm relationships to helping workers find new jobs, helping viable but still-vulnerable firms reopen, and supporting structural transformation toward the post-pandemic economy.

When the pandemic is under control through effective vaccines or treatments, governments will need to foster the recovery while addressing the legacies of the crisis—including elevated private and public debt levels, high unemployment, and rising inequality and poverty. The scope for stimulus or the appropriate pace of fiscal adjustment is country-specific, depending especially on the depth of a country's recession, how many people are unemployed, and how easy it is to access financing. Countries with fiscal space and major scarring from the crisis should provide temporary stimulus, including through public investment, as discussed in Chapter 2. Measures to support low-income households—including good-quality jobs—will be critical to reducing poverty. Countries with limited fiscal space and less access to financing should protect public investment and transfers to lower-income households while increasing progressive taxation and ensuring highly profitable firms are appropriately taxed, aiming at a growth-friendly and equitable adjustment.

Policies for the new post-pandemic economy should focus on tackling poverty and inequality to ensure social peace and sustainable growth, and on building resilience against future epidemics and other shocks. This includes policies to ensure that all people have access to basic goods (for example, food) and services (for example, health and education). Finally, reducing emissions will remain a core long-term challenge after the pandemic. This will call for policies to increase carbon prices and catalyze investment in low-carbon technologies.

Chapter 2: Public Investment for the Recovery

The immediate focus of governments during the COVID-19 crisis thus far has been to address the health emergency and provide lifelines for vulnerable households and businesses. Governments now also need to prepare economies for safe and successful reopening, design policies to create jobs and boost economic activity, and facilitate the transformation to more resilient, inclusive, and greener economies. Spending on digital infrastructure will be essential to support social distancing and to narrow the digital gap that exacerbates disparities in access to information, education, and work opportunities.

Chapter 2 discusses the appropriate role of public investment in fostering such a recovery. Before the COVID-19 crisis, public-investment-to-GDP ratios were already declining and the growth in infrastructure had not kept up with needs. Priorities include developing well-resourced and better-prepared healthcare systems, expanding digital infrastructure, and addressing climate change and environmental protection.

In advanced and some emerging market economies, where interest rates are near their effective lower bound, scaling up of quality public investment can have a powerful impact on employment and activity, crowd in private investment, and absorb excess private savings without causing a rise in borrowing costs. For many low-income countries and several emerging

market economies—particularly those borrowing in foreign currency—investment is highly constrained by financing conditions, despite massive needs to attain the Sustainable Development Goals. In these countries, policymakers will need to safeguard public investment, to the extent compatible with saving lives and livelihoods, and enhance its efficiency. Moreover, the crisis makes a global response even more necessary to avoid slipping further behind on the Sustainable Development Goals.

Even with social distancing, public investment is feasible and can be delivered quickly if governments take four steps: (1) invest right now in maintenance; (2) review and restart promising projects that were delayed in preparation or implementation; (3) speed up projects in the pipeline to bring them to fruition within the next two years; and (4) start planning immediately for new projects aligned with postcrisis priorities.

Strengthened public investment management practices and governance are essential because delays, cost overruns, and disappointing projects are common and could be more frequent when investment is scaled up—the cost of an individual project can increase by 10 percent when public investment in the country is high. Satisfying these conditions may not be possible everywhere. But for countries with easy access to finance, borrowing to finance public investments of good quality will be an effective strategy because the global decline in interest rates has set a lower bar for investment projects to be beneficial. For countries with financing constraints, the bar is higher to pass because governments with limited resources face competing spending priorities.

Empirical estimates based on a cross-country data set and a sample of 400,000 firms show that public investment can have a powerful impact on GDP growth and employment during periods of high uncertainty—which is a defining feature of the current crisis. For advanced and emerging market economies, the fiscal multiplier peaks at over 2 in two years. Increasing public investment by 1 percent of GDP in these economies would create 7 million jobs directly, and between 20 million and 33 million jobs overall when considering the indirect macroeconomic effects.

Crowding in private investment is particularly strong in industries critical for the resolution of the health crisis (communications and transport) or for the recovery (construction and manufacturing), but it would have to be accompanied by complementary policies to address high leverage and liquidity constraints faced by private firms.

New investments in healthcare, social housing, digitalization, and environmental protection would lay the foundation for a more resilient and inclusive economy. Because rates of return on investments in adaptation to climate change are often greater than 100 percent, official aid for adaptation is an effective use of public money. Official aid for climate change adaptation would have to more than double the $10 billion allocated currently to around $25 billion to finance the public investments required for adaptation to climate change in low-income countries.

CHAPTER 1

FISCAL POLICIES TO ADDRESS THE COVID-19 PANDEMIC

Countries have made ample use of fiscal measures to protect lives and livelihoods against the health and economic fallout from the coronavirus disease 2019 (COVID-19) pandemic and to nurture the nascent reopening of economies in a highly uncertain environment. The drastic fiscal measures taken so far have been necessary, state-dependent, diverse, and costly. In general, these fiscal measures have mitigated the negative effects of the pandemic on health and economic outcomes. Although public debt levels are at record highs, further support is necessary to protect people who cannot make a living under the current circumstances and to promote a strong recovery. Fiscal policy should be tailored to different phases of the pandemic, adapting to evolving needs to protect people, support demand, facilitate the transformation to the post-pandemic economy, and ensure debt sustainability.

Introduction

The COVID-19 pandemic has prompted an unprecedented fiscal response worldwide to support health systems and provide lifelines to vulnerable households and firms. Fiscal measures announced as of September 11, 2020, are estimated at $11.7 trillion globally, or close to 12 percent of global GDP. Half of these measures have consisted of additional spending or forgone revenue, including temporary tax cuts, and the other half liquidity support, including loans, guarantees, and equity injections by the public sector. The size and composition of fiscal support has varied vastly by country (Figure 1.1), reflecting in part countries' available fiscal space. Advanced economies and large emerging markets account for the bulk of the global fiscal response for three reasons. First, they were hit earlier and harder by the health crisis. Second, their central banks were able to provide massive monetary stimulus and purchase government or corporate securities while retaining credibility to deliver low inflation. Third, their treasuries were able to finance larger deficits at low interest rates. The fiscal response in low-income developing countries, which were hit later by the health crisis, has largely been on budget and smaller because of tighter financing constraints.

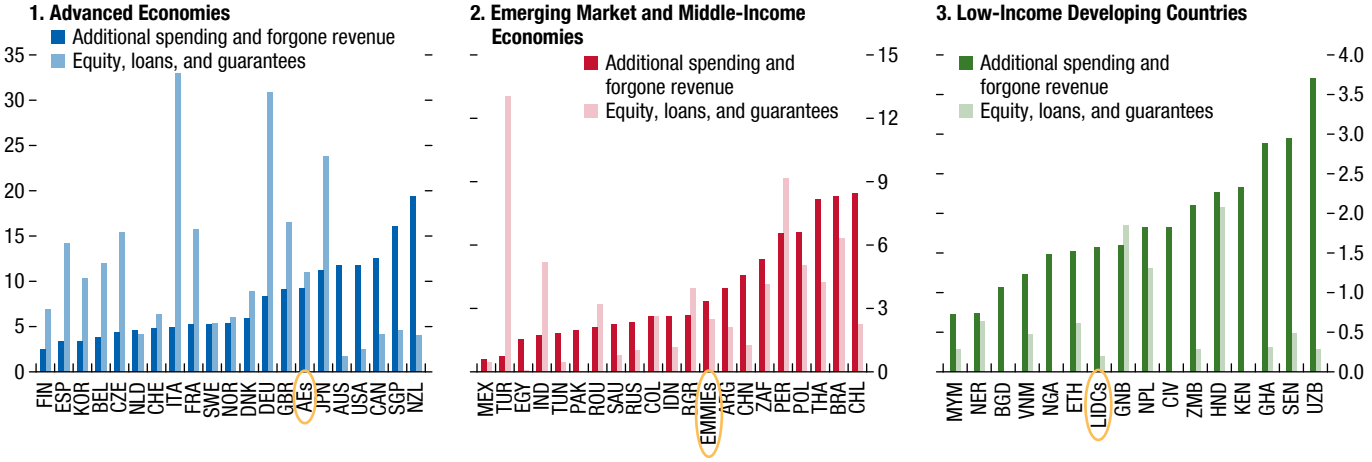
The fiscal response, coupled with the sharp decline in output and government revenue, will push public debt to levels close to 100 percent of GDP in 2020 globally, the highest ever (Figure 1.2). Central banks in several advanced economies and emerging market and middle-income economies have facilitated the fiscal response by directly or indirectly financing large portions of their country's debt buildup (Figure 1.3). In low-income developing countries, financing constraints have been modestly alleviated by debt relief and concessional financing from the official sector.

The increase in sovereign debt has added to global debt vulnerabilities that existed before the pandemic. Total private and public debt in the Group of Twenty (G20) has trended upward over the past two decades and reached almost 240 percent of GDP at the end of 2019, with private debt increasing steadily from 2014 to almost 150 percent of GDP at the end of 2019 (Figure 1.4). The long-term decline in borrowing costs and the expectation that interest rates will remain low has enabled governments in advanced economies and many emerging markets to carry higher debt loads by moderating debt-service burdens relative to GDP (Figure 1.5). Governments have also taken advantage of the interest rate decline to gradually extend the maturity of government bonds (Figure 1.6).

However, with bankruptcies on the rise, some private debt could migrate to the public sector through bailouts (Box 1.1). In addition, 54 percent of low-income countries were deemed to be in debt distress or at high risk of debt distress as of September 2020, up from 51 percent at the end of 2019.

On the whole, the massive fiscal support undertaken since the start of the COVID-19 crisis has saved lives and livelihoods. Public health policies that contained the spread of the disease were particularly effective because they also supported the recovery by restoring confidence and permitting a safe reopening of activity. Cash transfers were vital for the poor, who spent them largely on necessities. Unemployment benefits supported consumption for people who lost their main source of income. Even so, many policies that provided essential

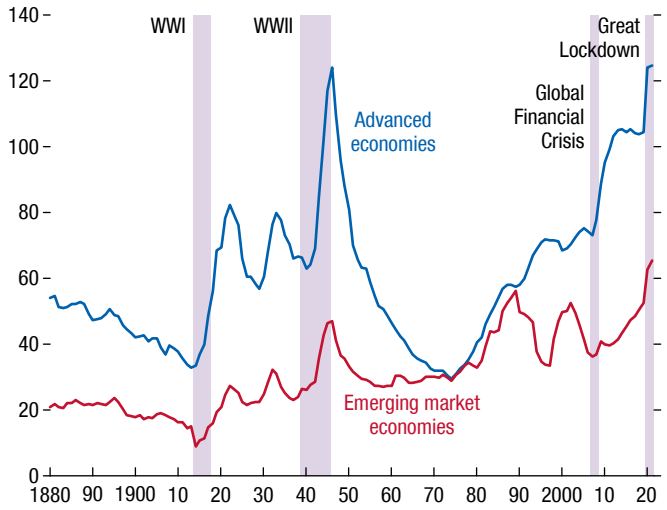
Figure 1.1. Discretionary Fiscal Response to the COVID-19 Crisis in Selected Economies
(Announced measures as of September 11, 2020, in percent of GDP)



Sources: *Fiscal Monitor* Database of Country Fiscal Measures in Response to the COVID-19 Pandemic (https://www.imf.org/en/Topics/imf-and-covid19/Fiscal-Policies-Database-in-Response-to-COVID-19); and IMF staff estimates.
Note: The timeframe for the announced measures is country specific, but the bulk of the measures announced so far are short-term crisis-response measures to be implemented in 2020–21. Country group averages are weighted by GDP in US dollars adjusted by purchasing power parity. Data labels use International Organization for Standardization country codes. AEs = advanced economies; COVID-19 = coronavirus disease 2019; EMMIEs = emerging market and middle-income economies; LIDCs = low-income developing countries.

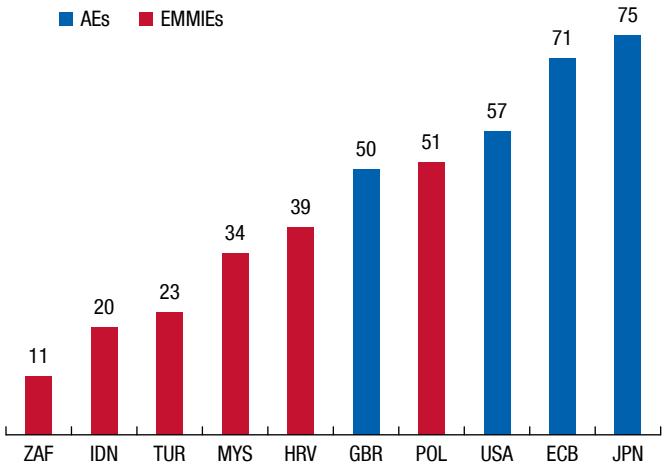
support in the short-term may have long-term implications. Wage subsidies preserved jobs and worker-firm relations but may slow labor market reallocation when new vacancies emerge. Temporary tax deferrals and cuts have supported liquidity, but there is a risk they will become permanent, at the expense of government revenues. While equity injections have often been necessary to prevent bankruptcies, particularly in hard-hit strategic firms, they could delay sectoral reallocation that is crucial for the recovery. Direct or guaranteed loans

Figure 1.2. Historical Patterns of General Government Debt
(Percent of GDP)



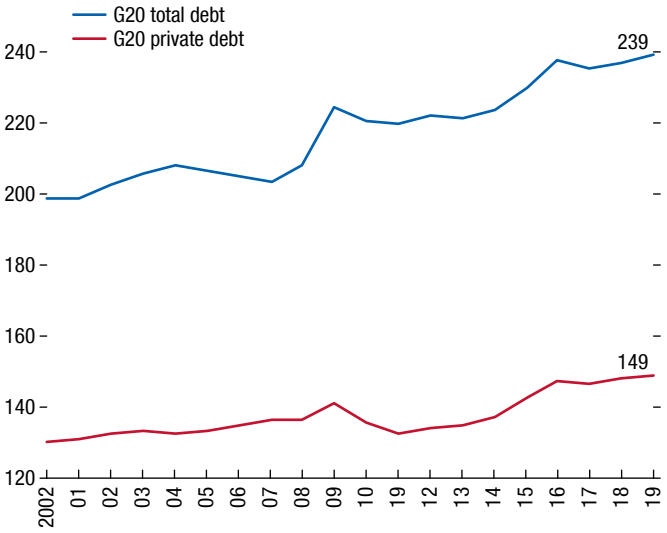
Sources: IMF, Historical Public Debt Database; IMF, World Economic Outlook database; Maddison Database Project; and IMF staff calculations.
Note: The aggregate public-debt-to-GDP series for advanced economies and emerging market economies is based on a constant sample of 25 and 27 countries, respectively, weighted by GDP in purchasing-power-parity terms. WWI = World War I; WWII = World War II.

Figure 1.3. Central Bank Purchases of Government Debt
(Percent of central government marketable securities or debt issued since February 2020)



Sources: Country authorities; US Federal Reserve Economic Data; Haver Analytics; and IMF staff calculations.
Note: Data labels use International Organization for Standardization country codes. AEs = advanced economies; EMMIEs = emerging market and middle-income economies.

Figure 1.4. G20 Total Public and Private Debt, 2002–19
(Percent of GDP)

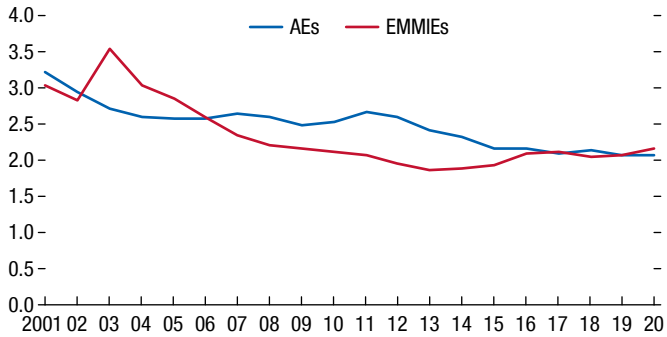


Source: IMF, Global Debt Database.
Note: G20 = Group of Twenty.

have so far had low take-up, partly reflecting administrative constraints and conditionality as well as the private debt overhang. The ultimate impact of these loans on economic activity and public finances will depend on their further take-up and future repayment, but their announcement has helped boost confidence and activity, which has also contributed to their low take-up to date.

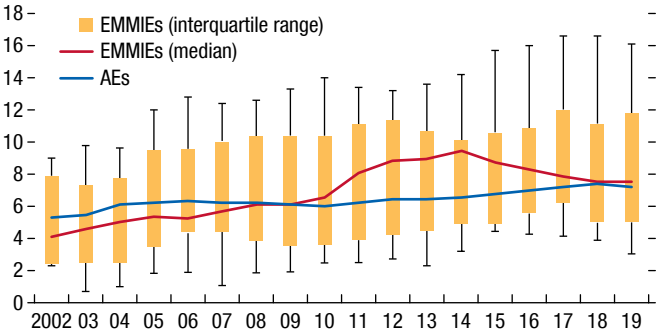
Record-high public debt levels limit the room for further fiscal support, particularly in countries where borrowing costs or access to financing impose constraints. However, more needs to be done

Figure 1.5. General Government Interest Expenditure-to-GDP Ratio, 2001–20
(Percent of GDP)



Source: IMF, World Economic Outlook database.
Note: AEs = advanced economies; EMMIEs = emerging markets and middle-income economies.

Figure 1.6. Average Remaining Maturity of Government Bonds, 2002–19
(Years; median across country groups)

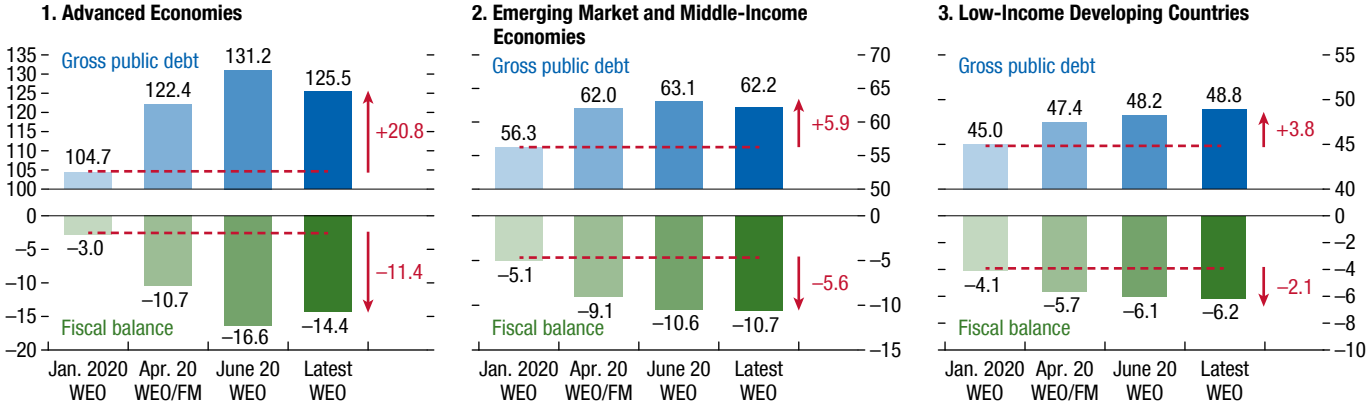


Sources: Haver Analytics; and national authorities.
Note: AEs = advanced economies; EMMIEs = emerging market and middle-income economies.

to prevent a large rise in poverty and income inequality, and promote a strong recovery amid heightened uncertainty. Fiscal policy will have to deliver more with less, putting a premium on careful design and implementation. At the same time, governments will need to be innovative and flexible, as many will have to address the deep scars from the crisis, including large rises in unemployment, public and corporate debt, and bankruptcies.

Fiscal policy will need to adapt as countries proceed through different phases of the pandemic: (1) outbreak with lockdowns; (2) partial reopening; and (3) high degree of control with medical advances. At the time of this writing (September 2020), most countries are in phase 2, with differing rates of contagion and control of the virus, but several countries that were hit relatively late or where contagion has progressed strongly are still in phase 1. Policies will need first to respond to the immediate health crisis, but over time foster the economic recovery and address the long-term challenges of the post-pandemic economy. Where lockdowns are extensive, fiscal policy has appropriately sought to do whatever it takes to save lives and livelihoods. Where lockdowns are eased, public health remains the number one priority, but policymakers have also begun to face the question of the appropriate pace of reducing lifelines to avoid an excessive increase in debt. When the health crisis is contained, the emphasis will shift to exiting from exceptional government interventions and to ensuring the sustainability of public finances while building resilience against future shocks and addressing preexisting challenges such as inequalities and global warming.

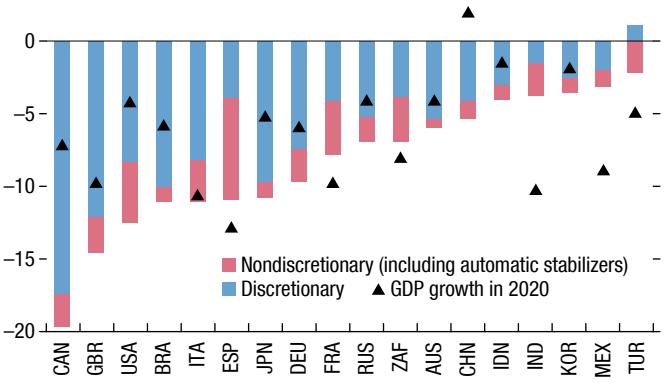
Figure 1.7. Forecasts for General Government Gross Debt and Fiscal Balances, 2020
(Percent of GDP)



Sources: IMF, WEO database; and IMF staff estimates.
Note: Data are as of July 24, 2020. Country groups are weighted by GDP in current US dollars adjusted for purchasing power parity. FM = *Fiscal Monitor*; WEO = *World Economic Outlook*.

The remainder of Chapter 1 reviews recent developments and the outlook for public debt, deficits, and finance across countries; provides a closer look at discretionary fiscal policy responses to the pandemic; discusses fiscal risks and uncertainty; and presents a broad roadmap for the overall fiscal strategy to navigate tentative reopenings, economic recovery, and transformation toward a more inclusive and resilient postpandemic economy.

Figure 1.8. Change in G20 Deficits, 2020
(Percent of GDP)



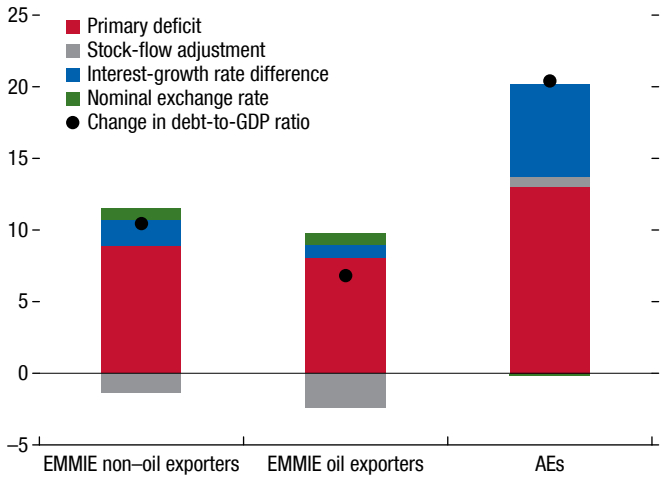
Sources: IMF, World Economic Outlook database; and IMF staff estimates.
Note: Discretionary fiscal support is measured as the change in the cyclically adjusted primary balance; nondiscretionary fiscal support is the residual. The allocation between discretionary and nondiscretionary measures should be considered indicative because output gap estimates, which are used to derive the cyclically adjusted primary balance, are subject to a high degree of uncertainty. Argentina and Saudi Arabia are excluded because of data limitations; Spain is a permanent invitee. Data labels use International Organization for Standardization country codes. G20 = Group of Twenty.

Fiscal Developments and the Outlook: Doing Whatever It Takes

Sizable discretionary support, along with a sharp contraction in output and an ensuing fall in revenues, has led to a surge in government debt and deficits (Tables 1.1 and 1.2). The fiscal support has been massive and swift, and much larger than the fiscal response to the global financial crisis. During the containment phase, new debt financed much of the fiscal response. The projected increases in countries' debts and deficits have been revised upward since the beginning of the year (Figure 1.7). In addition, more fiscal actions are likely as policymakers respond to the ongoing uncertainty over the course of the pandemic and the economic fallout.

Discretionary fiscal policy measures are not the only factors driving the rise in public debt. Nondiscretionary items—mainly "automatic" declines in tax revenues and surges in expenditures (such as unemployment benefits) that occur as economies contract—are projected to account for one-third of general government deficits of the G20 in 2020 (Figure 1.8). Moreover, in advanced economies the projected economic contraction in 2020 will add 7 percentage points to the ratio of general government debt to GDP (as negative economic growth results in a large and positive gap between the interest rates on government debt and growth, $r - g > 0$) (Figure 1.9). However, under current projections, the public debt ratio is expected to stabilize in 2021 (except in *China* and the *United States*), spurred by a strong rebound in economic activity projected in the baseline, against a backdrop of stable and low interest rates.

Figure 1.9. Change in Public Debt, 2020
(Percent of GDP)



Sources: IMF, World Economic Outlook database; and IMF staff estimates.
Note: AEs = advanced economies; EMMIE = emerging market and middle-income economy.

Advanced Economies: Fiscal Policy on the Front Line

In 2020, headline fiscal deficits in advanced economies are expected to be over four times higher (in percent of GDP) than in 2019. Double-digit increases are projected in the overall-deficit-to-GDP ratio in one third of advanced economies. *Canada* and the *United States* lead the group, with anticipated budget deficits of almost one-fifth of their GDP in 2020 (Table 1.1).

Spending increases and revenue decreases almost equally drive the deficit expansions in advanced economies. The medians of the projected real increase in spending and real decrease in revenue are 4.5 and 3.5 percentage points of 2019 GDP, respectively. The fall in revenues mainly reflects the economic collapse, as average revenues relative to GDP are projected to remain at prepandemic levels in 2020. Discretionary measures in response to the pandemic (including support to people and firms beyond preexisting automatic stabilizers) account for most of the spending increase.[1] Advanced economy governments have also provided unprecedented off-budget assistance in the form of liquidity support and guarantees to firms that do not have a direct effect on current budget deficits.

These measures were complemented by quantitative easing measures put in place by some advanced economies' central banks, including purchases of corporate bonds (Bank of England, Bank of Israel, Bank of Japan, European Central Bank, US Federal Reserve), and commercial paper (Bank of Canada, Bank of England, Bank of Japan) and potentially quasi-fiscal activities such as participation in bank loans to corporations (US Federal Reserve) or the purchase of corporate bonds in the primary market (Bank of Canada, US Federal Reserve) or secondary market (Bank of Japan).

Many advanced economies announced additional fiscal packages over the summer as the fallout from the pandemic lingered.[2] The packages blended continued support for those most affected by the crisis, with broader fiscal stimulus for nascent recoveries. To encourage reallocation, some recovery packages contained support for innovation (*France*), training (*Australia, France*), and green growth (*France, Germany, Italy, Japan, Korea, United Kingdom*) (Box 1.2) or expanded digital infrastructure (*Germany*, *Korea, Japan*). *Germany*'s package also included broad-based stimulus, such as a six-month cut in the value-added tax (VAT) rate starting on July 1 and a temporary additional child benefit (Figure 1.10, panel 1). In the *United States*, negotiations for another stimulus package are ongoing as of this writing.

The steady stream of fiscal measures and the economic contraction will push the average general government debt to 126 percent of GDP in 2020. Compared with 2019, general government debt is projected to increase close to 30 percentage points of GDP in *Italy*, *Japan*, and *Spain*, driven predominantly by large existing debt stocks coupled with the fall in economic activity, and more than 20 percent of GDP in the *United States*, driven by on-budget fiscal measures.

[1]As of mid-July 2020, the Group of Seven (G7) countries had also committed $20 billion in vaccine and therapeutics research for COVID-19. This amount includes an increase of $11.25 billion for the science budget of the National Institutes of Health and the national laboratories funded by the Department of Energy's Office of Science in the *United States*; a €5 billion spending plan for COVID-19 research and development in *France*; a joint pledge of $3 billion by *France*, *Germany*, *Japan*, and the *United Kingdom* to find a COVID-19 vaccine; and $160 million in grants to COVID-19 research projects in *Canada*. The estimate does not include the budget for COVID-19 research and development in *Italy*, *Germany*, or the *United Kingdom* because there are no specified allocations within their overall budgets.

[2]On July 21, European Union leaders approved a €750 billion recovery fund, the "Next Generation EU" fund. See the June 2020 *WEO Update* for additional details.

Table 1.1. General Government Fiscal Balance, 2012–25: Overall Balance

(Percent of GDP)

									Projections					
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
World	**–3.8**	**–2.9**	**–2.9**	**–3.3**	**–3.5**	**–3.0**	**–3.1**	**–3.9**	**–12.7**	**–7.6**	**–5.9**	**–5.1**	**–4.8**	**–4.5**
Advanced Economies	**–5.5**	**–3.7**	**–3.1**	**–2.6**	**–2.7**	**–2.4**	**–2.7**	**–3.3**	**–14.4**	**–6.9**	**–4.6**	**–3.7**	**–3.4**	**–3.3**
United States[1]	–8.0	–4.6	–4.1	–3.6	–4.4	–4.6	–5.8	–6.3	–18.7	–8.7	–6.5	–5.6	–5.4	–5.5
Euro Area	–3.7	–3.0	–2.5	–2.0	–1.5	–1.0	–0.5	–0.6	–10.1	–5.0	–2.7	–2.1	–1.8	–1.8
France	–5.0	–4.1	–3.9	–3.6	–3.6	–2.9	–2.3	–3.0	–10.8	–6.5	–5.3	–4.9	–4.7	–4.7
Germany	0.0	0.0	0.6	1.0	1.2	1.4	1.8	1.5	–8.2	–3.2	0.6	0.8	1.0	1.0
Italy	–2.9	–2.9	–3.0	–2.6	–2.4	–2.4	–2.2	–1.6	–13.0	–6.2	–3.9	–2.7	–2.5	–2.5
Spain[2]	–10.7	–7.0	–5.9	–5.2	–4.3	–3.0	–2.5	–2.8	–14.1	–7.5	–5.8	–4.7	–3.9	–4.4
Japan	–8.6	–7.9	–5.6	–3.8	–3.7	–3.1	–2.5	–3.3	–14.2	–6.4	–3.2	–2.8	–2.6	–2.7
United Kingdom	–7.6	–5.5	–5.6	–4.6	–3.3	–2.5	–2.3	–2.2	–16.5	–9.2	–7.1	–5.8	–5.1	–4.4
Canada	–2.5	–1.5	0.2	–0.1	–0.5	–0.1	–0.4	–0.3	–19.9	–8.7	–5.4	–3.0	–1.4	–0.3
Others	0.4	0.2	0.2	0.1	0.7	1.4	1.3	0.0	–6.8	–4.3	–2.5	–1.6	–1.1	–0.8
Emerging Market and Middle-Income Economies	**–0.9**	**–1.5**	**–2.4**	**–4.3**	**–4.8**	**–4.2**	**–3.8**	**–4.9**	**–10.7**	**–9.2**	**–8.1**	**–7.5**	**–6.9**	**–6.3**
Excluding MENAP Oil Producers	–1.9	–2.3	–2.7	–4.0	–4.3	–4.1	–4.0	–5.1	–10.7	–9.3	–8.3	–7.7	–7.1	–6.5
Asia	–1.6	–1.8	–1.9	–3.3	–3.9	–4.0	–4.5	–6.1	–11.4	–11.0	–10.0	–9.2	–8.5	–7.7
China	–0.3	–0.8	–0.9	–2.8	–3.7	–3.8	–4.7	–6.3	–11.9	–11.8	–10.9	–10.0	–9.1	–8.1
India	–7.5	–7.0	–7.1	–7.2	–7.1	–6.4	–6.3	–8.2	–13.1	–10.9	–10.0	–9.6	–9.3	–9.1
Europe	–0.7	–1.5	–1.4	–2.7	–2.9	–1.8	0.4	–0.7	–7.2	–4.5	–3.4	–3.4	–3.3	–3.2
Russia	0.4	–1.2	–1.1	–3.4	–3.7	–1.5	2.9	1.9	–5.3	–2.6	–1.0	–1.0	–1.0	–0.5
Latin America	–2.9	–3.2	–5.0	–6.8	–6.2	–5.5	–5.2	–4.1	–11.1	–5.3	–4.2	–3.9	–3.8	–3.7
Brazil	–2.5	–3.0	–6.0	–10.3	–9.0	–7.9	–7.2	–6.0	–16.8	–6.5	–5.6	–5.6	–5.9	–5.9
Mexico	–3.7	–3.7	–4.5	–4.0	–2.8	–1.1	–2.2	–2.3	–5.8	–3.4	–2.6	–2.5	–2.5	–2.5
MENAP	5.6	3.9	–1.4	–7.4	–9.6	–5.7	–2.9	–3.9	–9.7	–7.0	–5.3	–4.6	–4.1	–3.6
Saudi Arabia	11.9	5.6	–3.5	–15.8	–17.2	–9.2	–5.9	–4.5	–10.6	–6.0	–4.0	–2.9	–1.6	–0.4
South Africa	–4.4	–4.3	–4.3	–4.8	–4.1	–4.4	–4.1	–6.3	–14.0	–11.1	–7.9	–5.6	–4.2	–3.1
Low-Income Developing Countries	**–2.0**	**–3.3**	**–3.1**	**–3.7**	**–3.7**	**–3.6**	**–3.4**	**–4.0**	**–6.2**	**–5.1**	**–4.5**	**–4.1**	**–3.9**	**–3.7**
Nigeria	0.3	–2.2	–2.0	–3.2	–4.0	–5.4	–4.3	–4.8	–6.7	–5.0	–5.1	–4.4	–4.5	–4.6
Oil Producers	**2.8**	**1.4**	**–0.4**	**–4.1**	**–5.3**	**–2.9**	**0.1**	**–0.6**	**–10.7**	**–5.7**	**–3.8**	**–2.8**	**–2.2**	**–1.6**
Memorandum														
World Output (percent)	**3.5**	**3.5**	**3.5**	**3.4**	**3.3**	**3.8**	**3.5**	**2.8**	**–4.4**	**5.2**	**4.2**	**3.8**	**3.6**	**3.5**

Source: IMF staff estimates and projections.

Note: All country averages are weighted by nominal GDP converted to US dollars (adjusted by purchasing power parity only for world output) at average market exchange rates in the years indicated and based on data availability. Projections are based on IMF staff assessments of current policies. In many countries, 2020 data are still preliminary. For country-specific details, see "Data and Conventions" and Tables A, B, C, and D in the Methodological and Statistical Appendix. MENAP = Middle East, North Africa, and Pakistan.

[1] For cross-country comparability, expenditure and fiscal balances of the United States are adjusted to exclude the imputed interest on unfunded pension liabilities and the imputed compensation of employees, which are counted as expenditures under the 2008 System of National Accounts (2008 SNA) adopted by the United States but not in countries that have not yet adopted the 2008 SNA. Data for the United States in this table may thus differ from data published by the US Bureau of Economic Analysis.

[2] Including financial sector support.

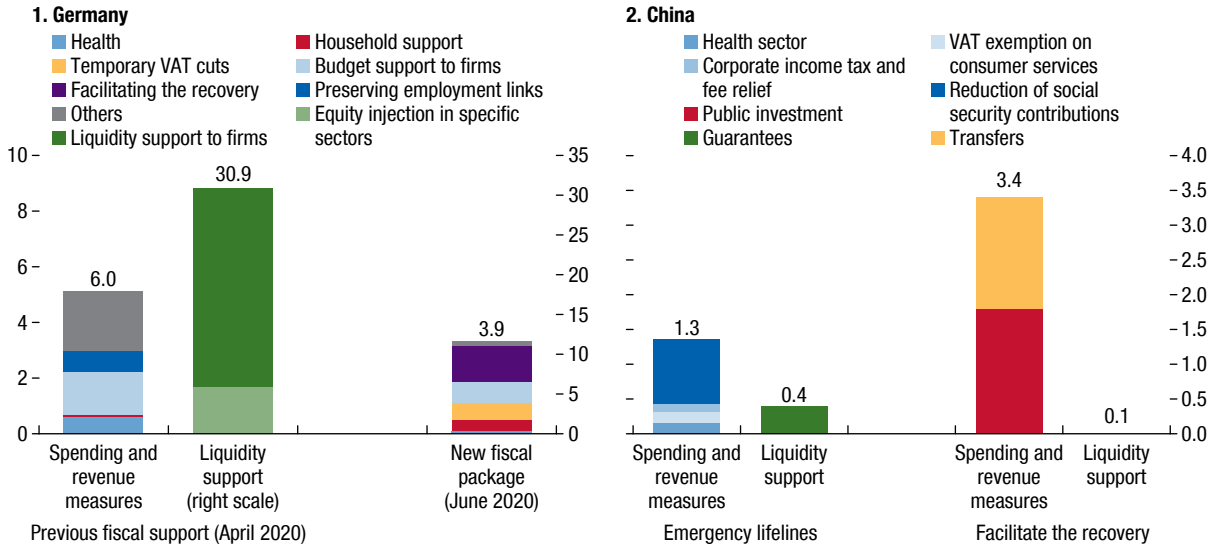
Emerging Market and Middle-Income Economies: Doing More with Less

In emerging market and middle-income economies, the overall fiscal deficit is projected to widen by about 6 percentage points of GDP in 2020 compared with 2019—almost half as large as the increase in advanced economies. On average, the budget balance for oil exporters is expected to weaken by about 7 percentage points of GDP and the balance for non–oil exporters by 6 percentage points of GDP. And unlike in advanced economies, revenue drops contribute considerably more to the deficit increase—the projected median revenue decrease is about 3½ percentage points of 2019 GDP and the projected expenditure increase is more than 1 percentage point of 2019 GDP. Average revenues relative to GDP are projected to increase 0.7 percentage point of GDP in 2021, though they will remain below pre-pandemic levels.

Among non–oil exporters, there is heterogeneity in the expected fiscal developments. Deficit increases are pronounced in *Brazil* (almost 11 percentage points of GDP) and *South Africa* (almost 8 percentage points of GDP), with COVID-19-related discretionary fiscal measures contributing more than 8 and 5 percentage points of GDP, respectively.[3] Because of support and stimulus measures, *China*'s deficit is projected to

[3]Net COVID-19–related discretionary fiscal measures in South Africa are about 3.2 percent of GDP after expenditure reprioritization.

Figure 1.10. Composition and Evolution of Fiscal Support, April 2020 versus June 2020
(Percent of GDP)



Sources: *Fiscal Monitor* Database for Fiscal Measures in Response to the COVID-19 Pandemic (https://www.imf.org/en/Topics/imf-and-covid19/Fiscal-Policies-Database-in-Response-to-COVID-19); and IMF staff estimates.
Note: New fiscal package for Germany announced in June contained measures for 2020–21. The numbers indicate the size of the fiscal support in percent of GDP. COVID-19 = coronavirus disease 2019; VAT = value-added tax.

expand by 5.6 percentage points of GDP, somewhat less than in the aftermath of the global financial crisis (Figure 1.10, panel 2). Conversely, *Egypt*'s deficit relative to GDP is projected to remain broadly flat, as it has faced annual gross financing requirements exceeding 35 percent of GDP, which has likely constrained its fiscal response to the pandemic. And *Pakistan*'s deficit is estimated to have tightened for its fiscal year that ended in June 2020 as COVID-19 impacted only the fourth quarter and the capacity to scale up spending was limited.

For oil-exporting countries, the average fiscal deficit is projected to widen by 7 percentage points of GDP. Oil price declines feed into an expected median fall in real revenues of 5 percentage points of 2019 GDP, while the median of the real change in expenditures is close to zero. In *Saudi Arabia,* to partially offset a fall in oil-related revenues of almost 7 percentage points of GDP, the authorities pared back spending on wage allowances to civil servants, increased customs duties on imports, and tripled the VAT rate to 15 percent.

Fiscal space considerations, including financing constraints, have likely tempered fiscal responses to the pandemic in emerging market and middle-income economies relative to advanced economies. Despite record-low global interest rates and an increase in risk appetite, the demand for short-term local currency debt is weak among this group, though investment-grade emerging markets are able to issue long-term debt in foreign currency. Financing has come from a variety of sources, including borrowing internationally, drawing down buffers, purchasing of government debt by central banks, or increasing taxes. Following the US Federal Reserve's announcement of open-ended asset purchases in late March, Eurobond issuance by emerging markets soared to US$140 billion in the first half of 2020 compared with US$95 billion in 2019. Several emerging market central banks have introduced or boosted their purchase of government debt through quantitative easing (*Croatia, Indonesia, Philippines, Poland, Turkey*), although the amounts are far lower as a share of GDP than in advanced economies (see Chapter 2 of the October 2020 *Global Financial Stability Report*). Some have also tapped extrabudgetary funds or sovereign wealth funds (*Chile, India, Russia*),[4] raised fuel excise taxes (*India*), imposed a digital tax on foreign firms (*Indonesia*), or increased the VAT rate (*Saudi Arabia*).

Most emerging market and middle-income economies will emerge from the pandemic with higher debt vulnerabilities. Average general government debt in this group, as a share of GDP, is expected to increase

[4]*Russia's* National Welfare Fund resources offset a decline in government oil revenues as established in the fiscal rule.

to more than 62 percent in 2020 from 53 percent in 2019, driven by both fiscal measures and economic contraction. Among large non–oil exporters, *Brazil, India,* and *South Africa* have the largest projected increases in debt ratios, by 12, 17, and 17 percentage points, respectively (Table 1.2). Among oil exporters, debt ratios in *Ecuador* and *Oman* are expected to increase by 17 and 18 percentage points, respectively.[5] Off-budget and quasi-fiscal measures could also add to fiscal vulnerabilities. State-owned enterprises have helped support the economy through greater lending to companies and households (*Brazil*) or by undertaking quasi-fiscal operations such as temporarily reducing electricity tariffs or waiving port fees (*China*).

Low-Income Developing Countries: Constrained by Financing

The headline deficit in low-income developing countries is projected to widen by more than 2 percentage points of GDP in 2020 compared with 2019. However, the average masks heterogeneity. At one extreme, the primary deficit relative to GDP is projected to widen by 6 percentage points or more in some countries as a result of pandemic-related expenditures (*Republic of Congo*, *Ghana*, *Kyrgyz Republic*, *Moldova*, and *Mozambique*), including cash or food transfers to the poorest. Conversely, some budgets are projected to tighten, generally reflecting cuts in primary expenditures (*Democratic Republic of the Congo*, *Sudan*, *Timor-Leste*, *Zambia*). Fiscal expansions have been contained in other countries owing to cost-effective control measures against the pandemic (*Vietnam*) or the use of off-budget measures and capital spending reductions (*Bangladesh*).

Oil-exporter revenues have been hard hit, particularly from the sharp fall in crude oil prices in early 2020. Revenues of oil exporters in real terms are projected to decline, on average, by 15 percent (driven by *Republic of Congo*, *Nigeria*, and *Yemen*) compared with a real decline of 9 percent, on average, in non–oil exporters. Conversely, several countries' real revenues are projected to increase by more than 5 percent (*Burkina Faso, Chad*, *Haiti, Niger, Senegal*) (Figure 1.11). The increases are driven by grants that contribute to covering humanitarian needs or the cost of their fiscal responses to the pandemic.

Many low-income and developing countries are cutting expenditures. Reflecting limited financing options, aggregate expenditures relative to GDP are projected to decrease relative to the January 2020 *World Economic Outlook Update* forecast, driven by downward revisions in some of the larger countries (*Côte d'Ivoire, Uganda, Vietnam*). In real terms, almost half of low-income developing countries are projected to cut total spending, and about 60 percent are expected to cut capital spending in 2020 from 2019 levels.

As the pandemic continues to unfold, some economies are boosting their fiscal responses when financing and debt conditions allow. Since the June 2020 *World Economic Outlook Update,* examples of further fiscal response include *Sudan* announcing a quasi-universal basic income program financed with official support. In July, *Nigeria* revised its 2020 budget to reallocate more resources to COVID-19–related spending. *Angola* also increased several taxes in July and is considering other non-oil revenue measures to fully offset pandemic-related tax relief measures. Moreover, supplementary budgets included more health spending (*Papua New Guinea*) or additional transfers to help states respond to the crisis (*Somalia*).

Countries entered this pandemic with growing debt levels and debt-service burdens, which has likely constrained their fiscal response to the pandemic. Debt service relative to tax revenues will exceed 20 percent in over half of low-income developing countries in 2020 and 2021 (Figure 1.12). Public debt is expected to remain elevated in 2021 because countries will still face daunting spending needs to meet their development goals. The debt and debt-service picture is complicated by the growing reliance on nonconcessional debt. Commercial credit has more than doubled as a percentage of external low-income developing country debt, rising from less than 8 percent to more than 19 percent from 2010 to 2018. Moreover, debt restructuring may be required to stabilize debt in some countries. The official sector has stepped up with bilateral debt relief (through implementing debt service suspensions by the G20 and Paris Club creditors under the Debt Service Suspension Initiative), debt relief from international financial institutions (for example, the IMF's Catastrophe Containment and Relief Trust), and financing to help the poorest countries cover COVID-related expenditures. Projected disbursements

[5]*Ecuador* restructured its international bonds totaling $17.4 billion (19 percent of GDP) in August 2020. The operation significantly reduces debt service, generating a net present value reduction of about 44 percent at a 10 percent discount rate.

Table 1.2. General Government Debt, 2012–25

(Percent of GDP)

								Projections						
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Gross Debt														
World	**79.6**	**78.3**	**78.6**	**79.7**	**82.7**	**81.4**	**81.7**	**83.0**	**98.7**	**99.8**	**100.3**	**100.5**	**100.4**	**100.1**
Advanced Economies	**106.8**	**105.3**	**104.8**	**104.2**	**106.8**	**104.5**	**104.0**	**105.3**	**125.5**	**125.6**	**125.6**	**125.8**	**125.7**	**125.5**
United States[1]	103.3	104.9	104.5	104.6	106.6	105.7	106.9	108.7	131.2	133.6	134.5	135.2	136.0	136.9
Euro Area	90.7	92.6	92.8	90.9	90.0	87.6	85.7	84.0	101.1	100.0	98.4	97.0	95.6	94.3
France	90.6	93.4	94.9	95.6	98.0	98.3	98.1	98.1	118.7	118.6	120.0	121.3	122.3	123.3
Germany	81.1	78.7	75.7	72.2	69.2	65.0	61.6	59.5	73.3	72.2	68.5	65.5	62.6	59.5
Italy	126.5	132.5	135.4	135.3	134.8	134.1	134.8	134.8	161.8	158.3	156.6	154.9	153.8	152.6
Spain	86.3	95.8	100.7	99.3	99.2	98.6	97.6	95.5	123.0	121.3	120.4	119.3	118.1	118.8
Japan	228.7	232.2	235.8	231.3	236.4	234.5	236.6	238.0	266.2	264.0	263.0	262.8	263.0	264.0
United Kingdom	83.2	84.2	86.2	86.9	86.8	86.2	85.7	85.4	108.0	111.5	113.4	115.3	116.4	117.0
Canada[1]	85.4	86.1	85.6	91.2	91.7	90.5	89.7	88.6	114.6	115.0	114.7	112.8	110.0	106.2
Emerging Market and Middle-Income Economies	**37.0**	**38.2**	**40.3**	**43.7**	**46.5**	**48.1**	**50.1**	**52.6**	**62.2**	**65.0**	**67.5**	**69.2**	**70.4**	**71.1**
Excluding MENAP Oil Producers	39.4	40.7	43.1	45.7	48.1	49.7	51.8	54.1	63.7	66.7	69.2	71.0	72.1	72.7
Asia	39.6	41.3	43.4	44.9	47.1	49.0	50.6	53.8	63.7	67.8	71.4	74.0	75.7	76.6
China	34.4	37.0	40.0	41.5	44.3	46.4	48.8	52.6	61.7	66.5	71.2	74.6	76.8	78.1
India	67.7	67.4	66.8	68.8	68.7	69.4	69.6	72.3	89.3	89.9	89.5	89.0	88.6	88.2
Europe	25.3	26.2	28.2	30.5	31.4	29.6	29.3	29.0	37.8	38.8	39.2	39.5	40.1	40.7
Russia	11.2	12.3	15.1	15.3	14.8	14.3	13.5	13.9	18.9	19.0	18.5	18.2	18.0	17.9
Latin America	47.1	47.8	50.1	53.9	57.4	62.3	69.7	70.8	81.6	81.0	80.9	80.6	80.3	80.0
Brazil2	62.2	60.2	62.3	72.6	78.3	83.7	87.1	89.5	101.4	102.8	103.5	103.8	104.2	104.4
Mexico	42.7	45.9	48.9	52.8	56.7	54.0	53.6	53.7	65.5	65.6	65.4	65.2	65.0	64.9
MENAP	23.3	23.6	23.4	33.2	40.4	40.1	40.0	44.7	53.4	53.8	53.5	53.2	53.4	53.2
Saudi Arabia	3.0	2.1	1.6	5.8	13.1	17.2	19.0	22.8	33.4	34.3	34.1	33.0	34.4	35.5
South Africa	41.0	44.1	47.0	49.3	51.5	53.0	56.7	62.2	78.8	82.8	85.7	87.3	86.9	85.2
Low-Income Developing Countries	**29.4**	**30.9**	**31.5**	**35.3**	**37.9**	**42.4**	**42.9**	**43.3**	**48.8**	**49.7**	**49.1**	**48.4**	**47.7**	**46.8**
Nigeria	17.6	18.3	17.5	20.3	23.4	25.3	27.7	29.1	35.0	35.5	36.2	36.5	37.0	37.4
Oil Producers	**30.9**	**30.9**	**31.4**	**37.6**	**41.4**	**42.3**	**44.2**	**45.6**	**57.6**	**58.0**	**58.0**	**57.6**	**57.2**	**56.5**
Net Debt														
World	**65.9**	**65.1**	**65.4**	**66.8**	**69.5**	**68.2**	**68.7**	**69.5**	**87.4**	**88.1**	**88.9**	**89.0**	**89.0**	**89.3**
Advanced Economies	**76.9**	**76.0**	**75.9**	**75.9**	**77.6**	**76.0**	**76.1**	**76.7**	**96.1**	**96.4**	**97.3**	**97.5**	**97.7**	**98.3**
United States1	80.8	81.5	81.2	80.8	81.8	81.9	83.2	84.0	106.8	107.3	109.5	110.2	111.4	113.8
Euro Area	73.2	75.7	75.9	74.7	74.3	72.1	70.4	69.2	85.1	84.7	83.7	82.8	81.8	80.9
France	80.0	83.0	85.5	86.3	89.2	89.4	89.3	89.4	110.0	109.8	111.2	112.5	113.5	114.6
Germany	59.6	58.6	55.0	52.2	49.3	45.5	42.7	41.1	54.1	54.2	51.2	48.8	46.3	43.8
Italy	114.6	120.0	122.3	123.1	122.4	122.0	122.9	123.0	148.8	146.1	144.7	143.4	142.6	141.5
Spain	71.8	80.8	85.2	84.9	86.1	84.5	82.7	81.3	106.9	106.4	106.3	105.9	105.3	106.4
Japan	145.3	144.7	146.6	146.4	152.0	149.8	153.5	154.9	177.1	178.9	178.6	178.5	178.7	179.7
United Kingdom	74.8	75.9	78.0	78.4	77.8	76.7	75.9	75.4	98.1	101.6	103.5	105.3	106.5	107.1
Canada[1]	28.9	29.7	28.5	28.4	28.7	27.9	26.5	25.9	46.4	48.4	48.4	47.4	45.2	42.9
Emerging Market and Middle-Income Economies	**22.7**	**22.9**	**24.3**	**28.7**	**34.5**	**35.7**	**36.8**	**38.8**	**48.9**	**51.5**	**52.8**	**53.6**	**54.1**	**54.3**
Emerging G-20	21.9	21.7	23.1	26.1	32.0	35.1	36.3	38.1	48.2	. . .	. . .	. . .	. . .	. . .
Asia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Europe	32.0	31.6	29.7	28.7	31.0	30.0	30.5	29.7	39.9	42.8	44.0	44.9	46.1	47.3
Latin America	29.6	29.7	32.3	35.7	41.1	43.3	44.0	45.3	56.7	59.3	60.8	61.8	62.7	63.2
MENAP	–2.5	–3.4	–0.1	15.5	28.9	28.8	31.5	37.8	48.3	49.9	50.5	51.5	51.3	50.4

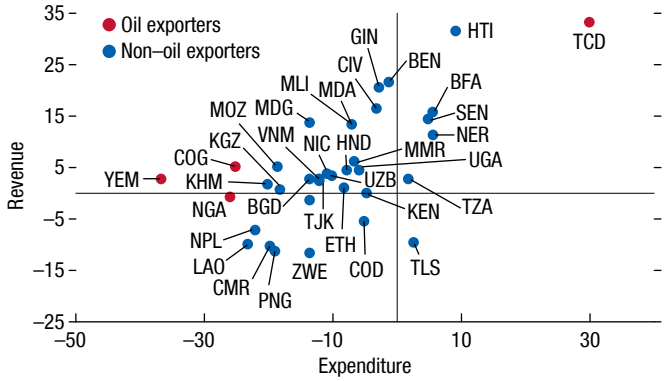
Source: IMF staff estimates and projections.

Note: All country averages are weighted by nominal GDP converted to US dollars (adjusted by purchasing power parity only for world output) at average market exchange rates in the years indicated and based on data availability. Projections are based on IMF staff assessments of current policies. In many countries, 2020 data are still preliminary. For country-specific details, see "Data and Conventions" and Tables A, B, C, and D in the Methodological and Statistical Appendix. MENAP = Middle East, North Africa, and Pakistan.

[1] For cross-economy comparability, gross and net debt levels reported by national statistical agencies for countries that have adopted the 2008 System of National Accounts (Australia, Canada, Hong Kong SAR, United States) are adjusted to exclude unfunded pension liabilities of government employees' defined-benefit pension plans.

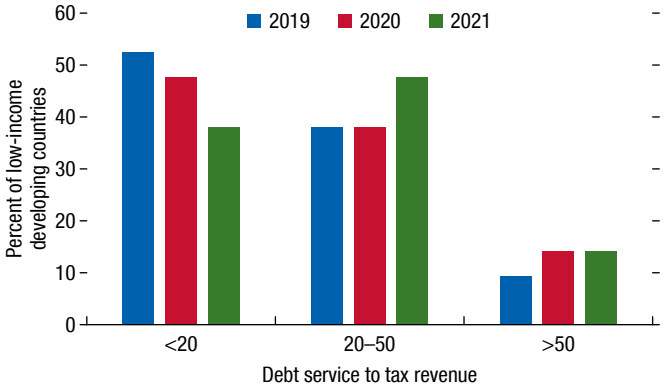
[2] Gross debt refers to the nonfinancial public sector, excluding Eletrobras and Petrobras, and includes sovereign debt held on the balance sheet of the central bank.

Figure 1.11. Revenue and Expenditure, 2019–20
(Projected real change, GDP deflator)



Source: IMF, World Economic Outlook database.
Note: Data labels use International Organization for Standardization country codes.

Figure 1.12. Debt Service, 2019–21
(Percent)



Source: IMF, World Economic Outlook database.

from the multilateral development banks to countries eligible for the IDA 19 (plus *Angola*) from April to December 2020 amount to US$45 billion—more than six times the total debt service (US$7 billion).[6] Even so, more than half of low-income developing countries are now in debt distress or at high risk of debt distress.

Fiscal Response to the Pandemic: A Preliminary Assessment

The April 2020 *Fiscal Monitor* called for large, timely, temporary, and targeted fiscal support for the people and viable firms most affected by the COVID-19 crisis, including those in hard-to-reach informal sectors. Many governments have indeed deployed large and timely measures. But timeliness has often come at the expense of targeting, and durations were often extended because of continued lockdowns. The size, composition, and evolution of fiscal support have varied widely because of country circumstances (see Box 1.3 for a closer look at the various types of fiscal measures introduced to date and their beneficiaries). On average, countries that put in place strong containment measures such as mobility restrictions before total cases of COVID-19 reached 100 ultimately deployed smaller fiscal packages (Figure 1.13, panel 1). Fiscal support was larger for countries with higher income per capita (Figure 1.13, panel 2). Whereas countries with initially high sovereign bond spreads deployed smaller on-budget support (Figure 1.13, panel 3), those with initially high public debt deployed larger off-budget support (Figure 1.13, panel 4). Fiscal policy actions have been massive in advanced economies but constrained by financing for many emerging markets and, especially, low-income developing countries. Reaching the affected groups has also been challenging in countries with large informal sectors.

Overall, the fiscal measures deployed so far have helped mitigate the health and economic fallout from the COVID-19 crisis, more so in advanced economies where average fiscal support has been larger. Although there is high uncertainty, based on the projected decline in per capita incomes, 100 million to 110 million people globally would be expected to enter extreme poverty relative to the pre-COVID projection, reversing the decades-long declining trend. Additional social assistance—supporting directly the poor and helping limit the recession—is expected to have a modest impact, containing the increase to 80 million to 90 million (Figure 1.14).[7] The impact would be concentrated

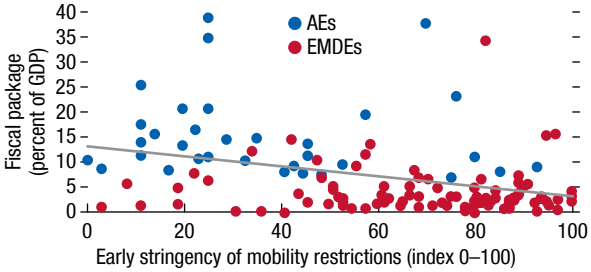
[6]IDA 19 refers to the World Bank Group's International Development Association 19 replenishment.

[7]The projections for per capita incomes are based on the June 2020 *World Economic Outlook Update*. The recent revision to the global outlook (as in the October 2020 *World Economic Outlook*) suggests that the global poverty estimates at the time of this writing (September 2020) are likely to be at the lower end of the range, although individual countries where 2020 growth has been marked down from June could see an increase in poverty projections. Global estimates are subject to high uncertainty and could be affected by data revisions in a few countries with large populations. The estimates are comparable to those by the World Bank (https://blogs.worldbank.org/opendata/updated-estimates-impact-covid-19-global-poverty) in June 2020 that projected a rise in the extreme poverty headcount of 70 million to 100 million relative to the pre-COVID-19 estimates, adjusting for 2019 growth revisions. The World Bank estimated that the headcount would be higher if income inequality also rises.

Figure 1.13. Discretionary Fiscal Response to the COVID-19 Crisis and Country Preconditions

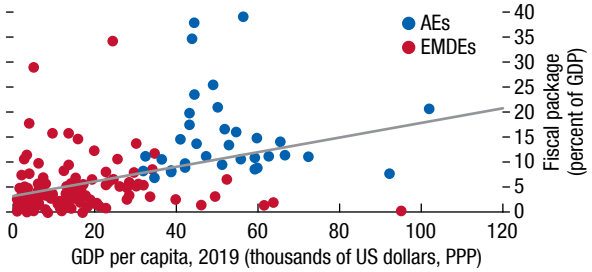
1. Fiscal Support and Stringency of Early Containment

Countries that swiftly put in place stronger containment measures ultimately deployed smaller fiscal packages.



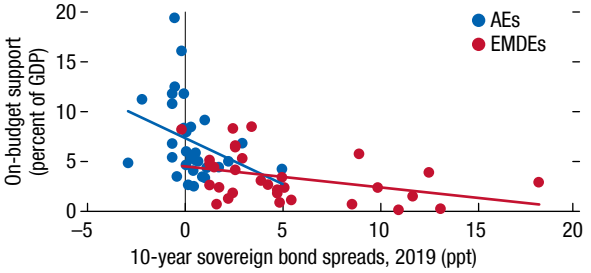
2. Fiscal Support and Initial Income per Capita

Whereas total fiscal support was larger for countries with higher income per capita ...



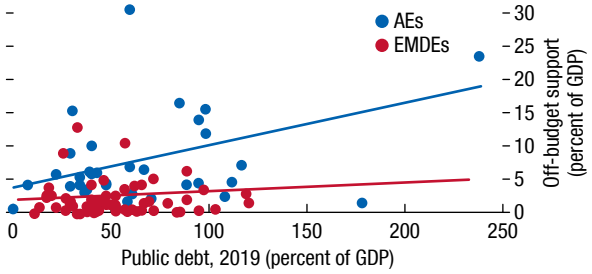
3. Fiscal Support and Initial Sovereign Spreads

... countries with initially high sovereign bond spreads deployed less on-budget support ...



4. Fiscal Support and Initial Public Debt

... and countries with initially high public debt levels deployed more off-budget support.

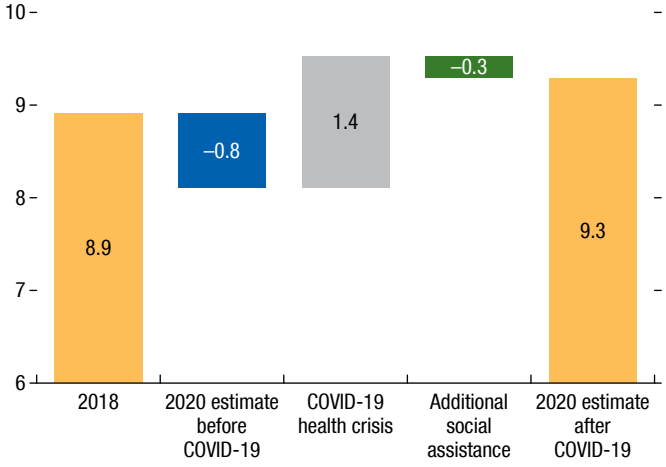


Sources: OxCGRT Database; IMF, World Economic Outlook database; *Fiscal Monitor* Database of Country Fiscal Measures in Response to the Covid-19 Pandemic (https://www.imf.org/en/Topics/imf-and-covid19/Fiscal-Policies-Database-in-Response-to-COVID-19); and IMF staff estimates.
Note: Sovereign spreads are computed over 10-year US Treasury bond yields for non-European economies and 10-year German bund yields for European economies. Gray trend lines in panels 1 and 2 refer to both AEs and EMDEs; blue and red trend lines in panels 3 and 4 refer to AEs and EMDEs, respectively. AEs = advanced economies; COVID-19 = coronavirus disease 2019; EMDEs = emerging market and developing economies; PPP = purchasing power parity; ppt = percentage point.

Figure 1.14. Global Extreme Poverty Rate

(Percent of total population)

Additional social assistance has helped mitigate the potential increase in global poverty.



Sources: IMF, World Economic Outlook database; Gentilini and others 2020; World Bank PovcalNet database; and IMF staff estimates (see Online Annex 1.1).
Note: COVID-19 = coronavirus disease 2019.

largely in emerging market and developing economies in sub-Saharan Africa and South Asia (Online Annex 1.1). Moreover, income inequality within countries is expected to increase as the pandemic affects low-income individuals disproportionately (Palomino, Rodriguez, and Sebastian 2020). The impact of the pandemic and ensuing lockdowns on people's lives, livelihoods, jobs, and businesses has been devastating. But outcomes would have been much worse without the public health and fiscal measures put in place, as outlined below.

Public health measures that contain the spread of the virus are effective tools to support the recovery because they save lives, restore confidence, and boost activity (Chetty and others 2020). Countries that responded to the pandemic with "smart" containment measures, including early, localized, and stringent mobility restrictions, together with large-scale testing, tracing, and public information campaigns, have lost fewer lives from the pandemic and are projected to better contain the adverse impact on economic activity and budget balances (Fotiou and Lagerborg,

2020; see also Online Annex 1.2). Although the cost of virus prevention and treatment depends on the capacity of health systems and the effectiveness of containment measures, estimates suggest that increasing intensive-care capacity by one-fifth (excluding capital costs) and testing capacity to twice per individual in a year would cost between 0.3 and 0.5 percent of GDP in selected advanced economies (*G7, Korea, Spain*) (de Bidegain and others 2020). The current as well as the capital costs associated with strengthening pandemic preparedness are likely higher in emerging market and developing economies with weaker health systems (see Chapter 2 and Online Annex 2.7).

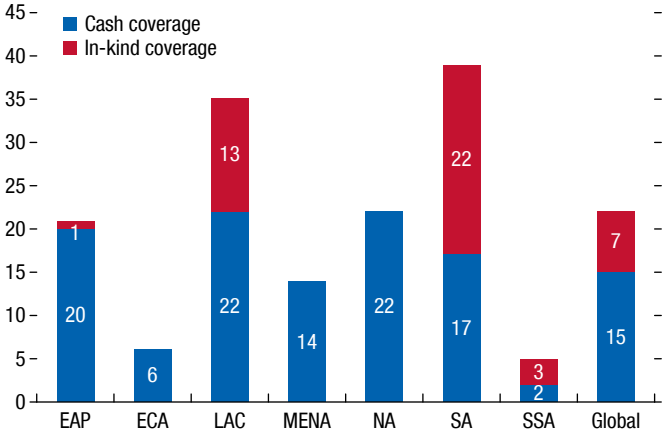
Nonhealth fiscal measures have served varying objectives and faced different trade-offs, as outlined below.

Cash transfers have been particularly effective in protecting the poor and have had a larger impact on total consumption when targeted to those most in need or most likely to spend, such as the unemployed. In the *United Kingdom*, for instance, the increase in the means-tested universal credit allowance is estimated to fully offset the adverse impact of the pandemic on poverty (Bronka, Collado, and Richiardi 2020). In the *United States*, however, higher-income households that received "stimulus checks" under the Coronavirus Aid, Relief, and Economic Security Act have spent less than lower-income households that received those checks, and on goods less affected by the lockdown, such as durables, limiting the aggregate impact (Baker and others 2020; Chetty and others 2020). *Unemployment benefits* were found to be more effective than "stimulus checks" in reaching those households with a higher propensity to consume additional resources (Bayer and others 2020; Faria-e-Castro 2020; Chetty and others 2020).

Cash and in-kind transfers have provided better coverage of vulnerable households than unemployment benefits in emerging market and developing economies with larger informal sectors. In many parts of the world, coverage of social assistance was expanded quickly to address the pandemic (Figure 1.15). Some countries (*India, Togo, Turkey*) expanded existing cash benefits rapidly, transparently, and safely, using citizen identification systems linked to socioeconomic databases and digital payment platforms (Prady 2020; Una, Allen, and others 2020; Una, van Eden, and others 2020). Some low-income developing countries with administrative and financial constraints effectively provided in-kind (food) assistance to informal workers

Figure 1.15. Increase in the Coverage of Social Assistance
(Percent of population)

Coverage of social assistance was expanded quickly in many parts of the world.



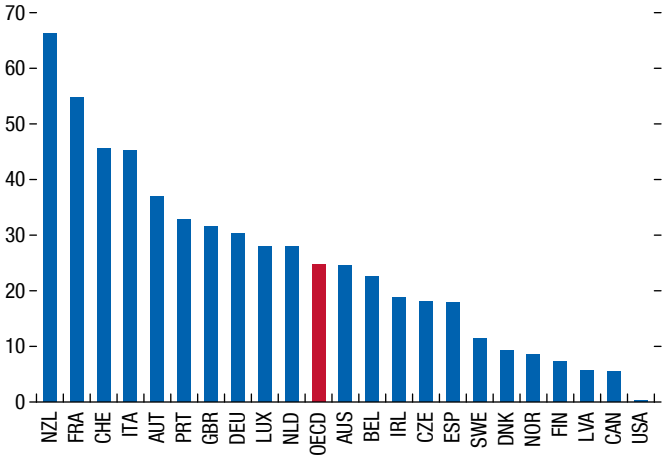
Source: Gentilini and others 2020.
Note: EAP = East Asia and Pacific; ECA = Europe and Central Asia; LAC = Latin America and the Caribbean; MENA = Middle East and North Africa; NA = North America; SA = South Asia; SSA = sub-Saharan Africa.

and people in need through community organizations (*Nepal, Rwanda*). In Latin America, existing social safety nets were expanded to better cover the structurally poor with low incomes and assets; however, those who might fall into poverty temporarily—such as informal lower-middle-income workers who lost jobs—were often not reached by cash transfers or unemployment benefits, highlighting the need for expanding coverage of social insurance (Busso and others 2020).

Wage subsidies for furloughed workers or businesses with revenue losses have been particularly effective in preserving employment linkages, but if maintained for too long after reopenings they could delay the required reallocation in labor markets. The take-up of job retention schemes averaged one-quarter of employees in Organisation for Economic Co-operation and Development (OECD) economies, exceeding half of employees in two cases (*France, New Zealand*) (Figure 1.16). In *Denmark*, firms reported fewer job separations because of the strong take-up of wage subsidies (Bennedsen and others 2020). Headline unemployment rates increased less in economies that channeled more labor market support through wage subsidies (*Australia, United Kingdom*) rather than unemployment benefits (*Canada, United States*) (Tetlow, Pope, and Dalton 2020). In addition, replacement rates in job retention schemes tended to be higher than in unemployment benefit

Figure 1.16. Take-Up of Job Retention Schemes
(Percent of employees)

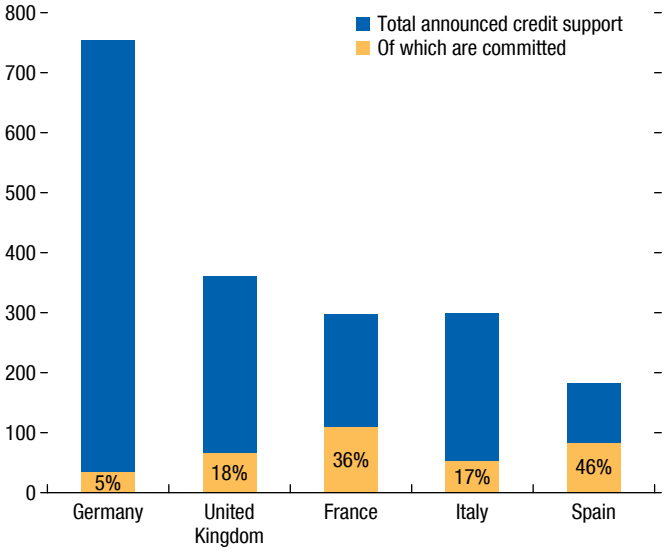
Participation in job retention schemes reached one-quarter of employees in OECD countries, and more than half in a few countries.



Source: OECD 2020e.
Note: Data refer to the end of May 2020, except for Luxembourg and Switzerland (end of April 2020). Take-up rates are calculated as a percentage of dependent employees in the fourth quarter of 2019. OECD = Organisation for Economic Co-operation and Development.

Figure 1.17. Take-Up of Guaranteed Loans
(In billions of euros and percent of total)

Take-up of guaranteed loans has been low, with no calls on guarantees reported yet.



Source: Anderson, Papadia, and Véron 2020.
Note: Data are as of the end of June 2020. For Germany, the take-up refers to the new KfW guarantees only.

schemes (OECD 2020d). However, it may be that wage subsidies in Europe have postponed, rather than averted, a larger mass job loss, because the subsidies will be phased out eventually—after more than a year in some cases (*France, Germany*). About one-fifth of persons enrolled in short-time work schemes in the five largest European economies are in hard-hit sectors and face elevated risk of unemployment when support is phased out (Utermöhl, Ozyurt, and Subran 2020). About one-third of pandemic-induced firm-level layoffs in the *United States* are estimated to be permanent, requiring job reallocations. Overextended job retention schemes and overly generous unemployment benefits could delay such reallocations (Barrero, Bloom, and Davis 2020).[8]

Loans and guarantees, including through public corporations, have aimed to provide liquidity to cash-strapped businesses, but so far many countries report low take-up (for example, *Germany, Italy, United Kingdom*) (Figure 1.17). On the supply side, this could reflect administrative capacity constraints or program conditionality; on the demand side it could reflect liquidity buffers in less-affected sectors and firms and the availability of other forms of government support, such as grants and wage subsidies (Anderson, Papadia, and Véron 2020). Private debt overhang and elevated uncertainty are also likely drivers. In the *United States*, forgivable loans under the Paycheck Protection Program, contingent on businesses maintaining employment at precrisis levels, also had a low take-up initially (Cororaton and Rosen 2020), partly reflecting administrative complexities. The program has had a modest effect on employment in small businesses, likely because it was the less-affected businesses primarily receiving these loans (Chetty and others 2020). For small and medium enterprises (SMEs), low utilization can also be attributed to design issues, such as large loan size and low coverage of guarantees. In the *United Kingdom*, the number of SME loans was 20 times higher under the Bounce Back Loan Scheme, which had a lower maximum loan size and a higher government guarantee than the previously announced Coronavirus Business Interruption Loan Scheme (Dreyer and Naygaard 2020). In the *euro area*, banks reported that government guarantees played a significant role in keeping credit standards favorable for SMEs (European Central Bank 2020). The mere existence and large size

[8]Ganong, Noel, and Vavra (2020) find that two-thirds of beneficiaries under the US Federal Pandemic Unemployment Compensation Program received unemployment benefits greater than lost earnings.

of loan and guarantee programs likely support market confidence and economic activity as well, and may in turn help explain low take-up thus far.

Equity injections have often been necessary to prevent bankruptcies of hard-hit strategic firms, such as national airlines, albeit with the risk of delaying sectoral reallocation that is crucial for the recovery. In some cases (*New Zealand, Singapore*), governments provided convertible loans to national airlines with options to convert bonds into common equity, which ensures that the risks and rewards are better shared by the state and shareholders (OECD 2020c). In *France*, airline support was combined with conditionality on cutting emissions, which helps with "greening" the recovery (Box 1.2). Although the green (emissions-reducing) component of fiscal responses has been limited, climate-relevant measures may become more prominent as countries shift their attention from the emergency to the recovery.

Tax measures in response to the pandemic have consisted largely of deadline extensions and payment deferrals (OECD 2020f; Djankov and Nasr 2020) that have supported household and firm liquidity, albeit to a lesser extent than debt moratoriums and wage subsidies, given that tax burdens are already limited by lower sales and profits (OECD 2020b). Moreover, these deferred taxes may not be recovered in full if they are merely delaying severe cash flow problems, creating fiscal risks for governments. Tariff waivers on medical supplies (*Colombia, Vietnam*)—although tariff rates are already low in many countries—and quick release procedures at customs (*Philippines*) have expedited imports of essential goods. Accelerated VAT refunds (*France, Indonesia*), new and expanded loss carryback rules (*China, New Zealand, Japan*), and accelerated depreciation deductions (*Australia*) have eased business cash flow needs. Reduced social security contributions (*Argentina, China, France, Korea*) have protected the most vulnerable and affected households and firms. Nevertheless, tax-based support may be less effective in some emerging market and developing economies because of its limited reach to informal sectors.

Payment forbearance policies, on the other hand, such as moratoriums facilitated by government support or public enterprises on payments of mortgages (*United States*), utilities (*Argentina, Colombia, Japan*), rents (*China*), or loans (*Argentina*, *Turkey*) have provided short-term relief to households and businesses, including in informal sectors.

Magnified Fiscal Risks

Sizable fiscal risks stem from a protracted economic downturn, volatile global financial conditions amid high and rising public and private debt, abrupt commodity price movements, and the announced contingent liabilities. In addition, quantitative easing and quasi-fiscal activities by central banks could lead to a deterioration in central bank balance sheets if supported firms default on central bank holdings of their bonds or commercial paper not covered by a government guarantee. The following are some of the magnified fiscal risks in the face of the current crisis:

- *A protracted economic downturn*: Absent herd immunity or the development and widespread availability of effective therapies or a vaccine, outbreaks and the associated fear remain possible, constraining the recovery (see the October 2020 *World Economic Outlook*). Private demand may not materialize as projected into 2021, leading to a prolonged recession. This could mean more bankruptcies, further deterioration in bank balance sheets and fiscal support for banks, and greater need for fiscal resources to support and retrain unemployed workers. Under these circumstances, firms that received support in early 2020 may no longer be viable and budget resources should shift elsewhere.
- *Tightening of financial conditions*: The rapid growth in sovereign and private debt stocks, particularly among nonfinancial corporations, and the need to service those debts, has left government budgets and private entities more exposed to changes in financing conditions. If financial markets tighten abruptly, perhaps because investors lose confidence after seeking safe haven assets, many countries and companies could see their borrowing costs spike (see the October 2020 *Global Financial Stability Report*). Similarly, local currency depreciation would add to debt costs for countries and companies with debt denominated in foreign currencies. In low-income developing countries, low revenue mobilization as a result of large informal sectors and weak administrative systems will compound debt servicing problems. These developments could lead to further concerns about sovereign and corporate credit risk and debt sustainability, reinforcing the effects of a financial tightening.
- *Commodity market volatility*: Commodity price fluctuations impact commodity exporters and

importers differently. A sharp fall in oil prices would further undermine the already-stretched budgets of oil exporters but could also provide importers with some relief.

- *Contingent liabilities*. Although new guarantees remain largely untapped by firms to date, the use of guarantees may accelerate and the stock of guarantees could eventually be called in an adverse scenario, adding substantially to debt vulnerabilities. Quantification of the risk from guarantees and other contingent liabilities (for example, public-private partnerships) is challenging while the pandemic is ongoing. It would depend on country-specific factors, including the overall size of the guarantee program, the projected value of guarantees issued, the expected duration of the downturn (which would affect the likelihood of borrower default), and the estimated recovery rate in the event of default.

To a lesser extent, there are also *upside risks*, including the rapid development and wide distribution of a safe, affordable, and effective vaccine; changes in economic structures that boost productivity through new techniques or technologies; or a normalization that proceeds faster than expected in areas that have reopened without sparking new outbreaks of infections. Realization of these outcomes would imply a faster economic recovery than expected, thereby reducing the necessary fiscal support.

Fiscal Roadmap for the Recovery

Public policies to bring the pandemic under control are of paramount importance: developing vaccines and treatments and ensuring their universal access at low cost as soon as possible is the best way to safeguard the economy and public finances, both globally and for individual countries. Multilateral coordination is vital in this regard and in providing financial support for developing economies that have been hard hit by the global recession and are struggling with limited resources.

Another important anchor for fiscal policy will be to revive growth and job creation. This will be critical to reverse the rise in poverty and inequality, and will also help improve public finances. To achieve these objectives fiscal strategies will need to be flexible and adapt to the three phases of the pandemic: (1) the outbreak with lockdowns; (2) partial reopening; and (3) a high degree of control of the virus through medical advances. This section outlines the broad fiscal policy strategies, challenges, and trade-offs in each phase, focusing on the second and third phases (see the April 2020 *Fiscal Monitor* and the June 2020 *World Economic Outlook Update* on policies for phase 1). Dividing the crisis into phases is intended to illustrate the main policy challenges, but different countries will enter each phase at different times, individual country circumstances may differ in the same phase, and setbacks are likely to occur (for example, localized outbreaks or a new wave of infections leading to widespread lockdowns).

Table 1.3 summarizes the general applicability of fiscal measures during each phase. Policymakers will need to tailor those measures to country-specific conditions. Throughout, it is crucial to ensure full transparency (including a good communication strategy), good governance, and costing of all fiscal measures, especially given their size, exceptional nature, and speed of deployment.

Phase 1: The Outbreak with Lockdowns

In this phase, fiscal policy is largely devoted to fully accommodating additional health and emergency services to fight the pandemic, and providing lifelines to protect the most affected people and firms. As discussed earlier, measures include wage subsidies to preserve jobs and unemployment benefits for those who lost their jobs, as well as deferred tax collection, subsidized loans, and loan guarantees to allow firms to "hibernate." Given the urgency, governments should use all available tools—for example, expanding social protection schemes to protect the most vulnerable groups (including informal workers)[9] and financing for SMEs (for instance, through public banks). Fiscal measures should be complemented with actions by central banks and regulators (for example, delaying bankruptcies or evictions from homes). Effective health measures together with prompt and continued government support can limit the scarring from the crisis and facilitate the recovery in the next phases.

[9]When capacity constraints make it difficult to expand existing social assistance programs, countries often resort to alternative approaches, including cash transfers targeted at specific regions or population groups (for example, the elderly or informal sector workers), or subsidies for key goods and services such as food, health, transportation, and utilities. See also Online Annex 1.3.

Table 1.3. Fiscal Strategies during Different Phases of the Pandemic

Fiscal Measures	1. Widespread Lockdowns	2. Gradual Reopening	3. Post–COVID-19 Recovery
Household Income Support			
Cash or in-kind transfers	Yes, they likely have the largest multipliers, particularly for basic necessities and public services	Transition and better target to those in need	Reconsider within the reforms to enhance social protection systems
Unemployment benefits	Expand coverage and extend duration	Refine the benefits to preserve work incentives as unemployment returns to normal levels	Key components when enhancing social protection systems
Employment Measures			
Short-term work-/ job-retention schemes	Yes, they can help preserve jobs and worker-firm relationships	Reduce use of these programs to encourage moving to new jobs if needed	Reduce access for prolonged cases
Temporary hiring subsidies	Not yet	Plan or initiate if supply disruptions have largely eased	Transition to active labor market policies (for example, retraining)
Active labor market policies	Not yet	Initiate with programs that improve labor skills (education, digitalization)	Yes, tailored to structural transformation in the post–COVID-19 economy
Public Investment			
	Planning for next phase	Could boost maintenance and public works; plan for next phase, emphasizing job creation and green recovery	Scale up quality investment with sustainable financing
Tax Measures			
Temporary deferral of taxes and social security payments	Yes, to protect cash flows for households and firms	Targeted deferrals, depending on taxpayers, pandemic developments, and strength of recovery	No, but could engage taxpayers as part of debt restructuring
General income tax cuts	No, because they largely benefit those not in need	No, because those benefiting are less likely to spend the additional income and because the cuts likely favor firms with profits	Consider as part of the stimulus package depending on fiscal space; could bring stronger effect if targeted to cash-constrained households
Accelerated depreciation or loss-carry backward	Not yet	Yes, to firms that resume activity	Yes
Progressive taxes	Consider, especially if financing is limited	Consider, especially if financing is limited	Yes, choice of instruments should conform to good tax law design; greater progressivity of taxes and ensuring highly profitable firms pay appropriate taxes helps finance other measures and may ease social tensions
Other Liquidity Support			
Loans, guarantees	Yes, could be partially conditional on preserving jobs, with restrictions on dividends/ executive pay	Refine with declining generosity	Tighten for a timely exit and manage fiscal risks
Solvency support (equity injections)	Yes, with dividend restrictions and imposing losses to shareholders	Interventions on systemic and strategic firms; restrictions on dividends/executive pay	Aim for a timely exit
Debt restructuring	No, possible debt moratorium	Prepare streamlined restructuring framework and mediation mechanism for a speedy workout	Yes, to facilitate reallocation and timely exit of nonviable firms

Source: IMF staff compilation.

Note: Appropriate fiscal responses will be country-specific depending on the fiscal space, the development of the pandemic, and the strength of the recovery. Measures included here are not exhaustive and will need to be adapted to the specific tax and benefit systems of individual countries. For countries with less-developed social protection systems, other measures, such as in-kind provision of food and basic public services may be introduced. COVID-19 = coronavirus disease 2019.

Phase 2: Gradual Reopening under Uncertainty

Public health remains the top priority to ensure a sustainable reopening of the economy. Economic activity will remain depressed if the easing of social distancing measures is not accompanied by public confidence that the pandemic is being brought under control (Chetty and others 2020; Fang, Nie, and Xie 2020). Resources should be directed to fund smart containment strategies comprising intensive testing and tracing, localized mobility restrictions, and real-time risk assessment. As governments start to lift the mobility restrictions and costly wide-ranging lifelines introduced in phase 1, fiscal policy will have to remain flexible, given the risk of new waves of infection. Removing government support too fast could also prolong the recession and worsen poverty and inequality. Policies should ensure a safe resumption of activity for consumers, workers, and firms amid a challenging environment.

Replacing the lifelines with broader fiscal stimulus measures is unlikely to be cost-effective because the recovery is expected to be uneven, with supply disruptions and depressed demand concentrated in certain sectors because of health concerns.[10] As such, a generalized cut in taxes, for example, would have limited impact on promoting growth and jobs and could put public finances under stress. A better alternative, for countries with fiscal space, could be to accelerate job-intensive public investments such as maintenance or public works, since such initiatives are less disrupted by social distancing restrictions and can crowd in private investment.

As many countries have limited fiscal space, resources should be prioritized toward safeguarding enhanced safety nets and reopening the economy. The focus should be on creating a safe work environment,[11] helping workers find new jobs, and helping viable but still-vulnerable firms reopen after a period of large revenue losses and rising leverage. Reprioritization of spending, which could include containing the public sector wage bill (Garcia-Escribano and Abdallah 2020), will likely be needed, especially in countries for which borrowing constraints are tighter.

Governments may also need to consider revenue-enhancing measures, including both increasing tax compliance and the progressivity of taxes on more affluent and less-affected groups, as well as reforms to modernize business taxation. The latter would include the design of international corporate taxation on a multilateral cooperative basis to respond to the challenges of the digital economy. The design of corporate income taxes to appropriately capture very high profits of firms in a rapidly changing economy, including those that made windfall profits during the crisis, can help finance priority areas such as health and social safety nets, thereby safeguarding social cohesion during a crisis that has disproportionately hurt the most vulnerable groups. Tax policy options include increasing tax rates on higher bracket incomes, capital income higher end property, or wealth. In addition, the lower oil price level facilitates increases in taxes (or reductions in subsidies) on fuel, which in emerging market and developing economies will impact mostly the well-off.

As activity resumes and health risks diminish, however, exceptional support should be phased out or modified to facilitate people moving to new and more productive jobs. Job retention programs can be reduced, and job search requirements can be reintroduced. Governments can also increase programs for online training and learning to help the unemployed, which could be complemented by hiring incentives to create new jobs (Baqaee and Farhi 2020; OECD 2020e). Linking unemployment benefits to local unemployment rates would steer support to the hardest-hit areas, including those affected by new lockdowns or mobility restrictions. More generally, introducing or making permanent enhanced automatic stabilizers and social protection (for example, paid sick leave and extension of unemployment benefits to self-employed or temporary workers) can provide timely support and unwind automatically as conditions improve.

Selective Support to Firms to Help Them Reopen

Government support to firms coming out of the lockdown phase with high leverage and mounting losses would limit defaults that would otherwise

[10]Although fiscal multipliers are usually larger in recessions driven by low aggregate demand (see the April 2020 *World Economic Outlook*), the impact of broad-based fiscal measures would be limited in this phase of the pandemic because supply remains constrained and low demand in contact-intensive sectors is caused by concerns about contagion.

[11]For example, measures to increase digitalization among SMEs, including training of workers and grants or loans to adopt new technologies (*Argentina, Japan, Korea, Spain*), could promote a faster shift to digital operations and encourage telework.

undermine the economic recovery and exacerbate unemployment. In this phase, however, government support should be more selective in order to limit costs and avoid standing in the way of necessary economic adjustments or distorting competition. Governments should also have a clear exit strategy as the economy recovers. Support should be directed to otherwise viable firms whose operations are impaired by health risks or social distancing restrictions, or to firms whose operations are crucial for the economy to function. To limit fiscal costs and risks to taxpayers, the fiscal strategy could include risk-sharing with investors and creditors (investors will not get involved if a firm is unviable). Examples might include the following:

- Liquidity *support* such as government loans and guarantees could be extended, especially if banks remain reticent to lend, but the generosity of such support should gradually be reduced (for example, use of partial guarantees and more access conditions).
- *Solvency support* should give priority to systemic firms where bankruptcies could disrupt supply chains or the provision of critical services (for example, hospitals, utilities) and to prevent a wave of SME defaults given potentially large spillover effects (Harris and others 2020). Existing shareholders should bear much of the burden; government support should include conditions (for example, caps on executive compensation and bans on dividends and share buybacks) and could be in exchange for equity participation.[12]

Support for SMEs is particularly important because of their vulnerabilities, weight in total employment, and complexity given the sheer number and diversity of firms. This is especially the case for SMEs with high debt burdens or that have difficulty raising new equity. Temporary debt repayment moratoriums (OECD 2020a) or the temporary suspension of insolvency rules can provide short-term relief (*Egypt, Ghana, Kazakhstan*). Longer-lasting options include securitizing SMEs' debt to help them access capital markets with government guarantees (*Portugal*) or government buying securitized SME debt (*Australia*), providing equity or hybrid instruments (for example, convertible bonds), or providing government financial support to help corporate debt restructurings for SMEs (Blanchard, Philippon, and Pisani-Ferry 2020). In many developing economies, SMEs are often harder to reach because they operate in the informal sector. Countries are channeling support through institutions that serve these groups, such as micro-credit institutions and informal sector organizations. Governments can, for example, provide grants or guarantees for bank lending to formal and informal microenterprises and SMEs (*Gambia, Malaysia*) or give temporary relief on payments such as rent and utilities. In some cases, these measures may need to be accompanied by direct support to informal workers.

[12]For example, government support in the *United States* during the global financial crisis was subject to executive compensation restrictions. Financial institutions that received support faced restrictions on dividend payouts and share buybacks. To minimize distortions to competition, the *European Union* prohibited firms from using state aid to cross-subsidize activity.

Phase 3: The Pandemic under Control

When vaccines and therapies become widely accessible, the goal will be to promote an inclusive and green recovery and structural transformation of the economy, while addressing the legacies of the crisis, including by unwinding government interventions and tackling higher corporate and public debt.

Support the Recovery while Ensuring Debt Sustainability

The appropriate stance of fiscal policy will depend on access to financing, debt levels, and the extent of the scarring of the economy (long-lasting damage from bankruptcies, disrupted supply chains, and discouraged workers dropping out of the labor force).[13] Given the large deficits and jump in debt levels, countries will need to rebuild fiscal buffers over the medium term. However, tightening too fast could undermine the recovery and efforts to foster job creation, which is critical to reduce poverty. For countries with fiscal space and deeper scarring, temporary expansionary measures—implying a slower reduction in the fiscal deficit and a further increase in debt in the short term—would appropriately balance the pro-growth

[13]Such scarring—or "hysteresis" in the economic literature—reflects persistent declines in potential output caused by a temporary shock (Blanchard and Summers 1986; Cerra and Saxena 2008), in this case the pandemic.

Figure 1.18. Pace of Fiscal Adjustment, 2013–25
(Normative structural primary balance in percent of potential GDP)

Concerns with long-term scarring from the pandemic justify more gradual fiscal adjustment ...

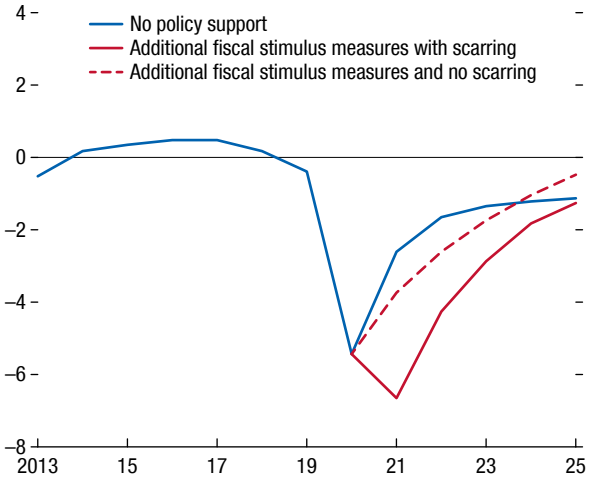
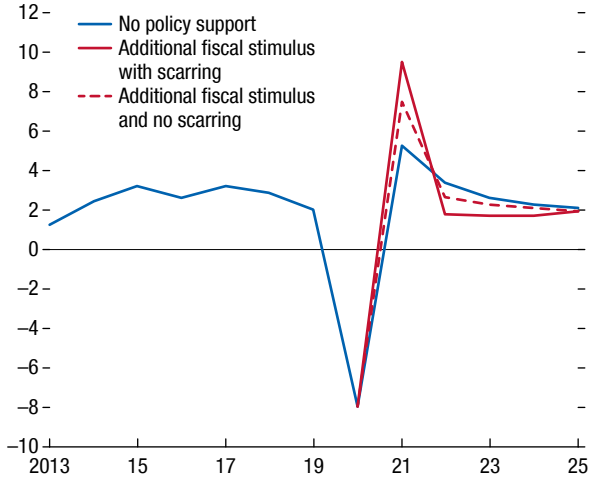


Figure 1.19. Economic Growth, 2013–25
(Percent change in GDP)

... allowing for a stronger economic recovery.



Sources: Fournier 2019; and IMF staff estimates.
Note: Figure 1.18 shows a normative fiscal adjustment path with discretionary stimulus in the first few years for an advanced economy with an average debt level (baseline) at 80 percent of GDP. Figure 1.19 shows the GDP growth path for each adjustment path. Scarring reflects a permanent negative effect of a large negative output gap on the level of potential output (see Online Annex 1.4). The simulations show desirable policies based on a model where governments pursue both economic stability and debt sustainability.

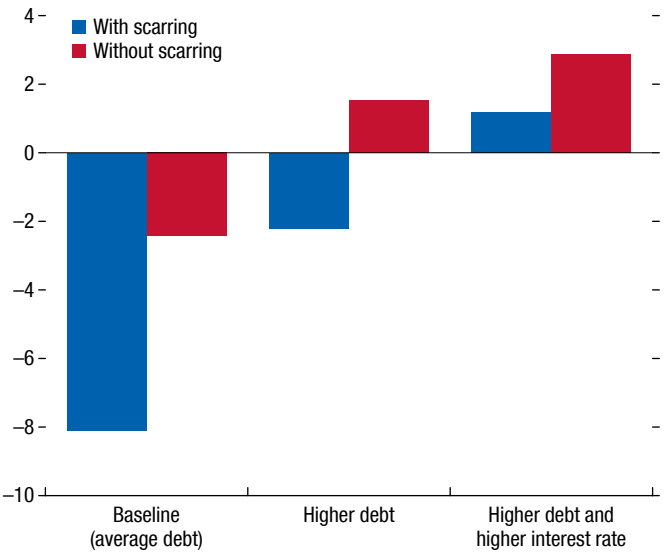
and debt sustainability objectives over the medium term (Figures 1.18 and 1.19).[14] For countries with limited fiscal space—especially those with tighter financing constraints—fiscal deficits would need to be reduced faster to prevent debt distress or increases in borrowing costs that could derail the recovery (Figure 1.20).

For many developing economies, a significant impact of the crisis has been through sizable external shocks that involve further challenges. For example, for countries with a large share of government debt denominated in foreign currency, a more cautious fiscal stance will be needed because of possible effects of a currency depreciation (Online Annex 1.4). Countries with greater reliance on sectors facing more persistent negative impacts will face the greatest challenge: managing a weaker economy with tighter fiscal constraints (for example, receipts from oil exports or tourism may

[14]Figures 1.18 through 1.20 show normative model simulations of desirable policies for a government that pursues both economic stability and debt sustainability. A large countercyclical fiscal response is recommended in the present environment given the large recession, but the size will depend on how close public debt is to levels that could trigger a debt crisis or loss of market access. At lower debt levels, the degree of scarring reinforces the motive to counter negative shocks. See also Online Annex 1.4.

Figure 1.20. Fiscal Support and Scarring
(Normative change in structural primary balance relative to no-policy-change scenario over 2021–23 in percent of potential GDP)

The appropriate pace of adjustment also depends on initial debt levels and financing constraints.

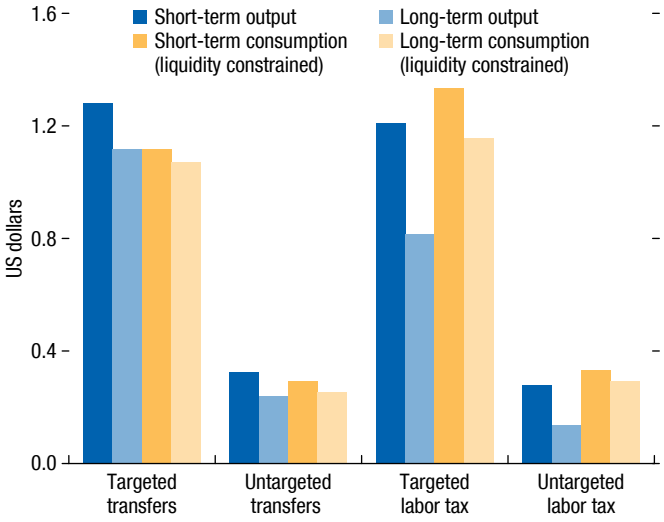


Sources: Fournier 2019; and IMF staff estimates.
Note: The figure shows differences in adjustments for higher debt levels, interest rates, and scarring (hysteresis) relative to baseline (Figure 1.18). The high debt level is at 140 percent of GDP. High interest cost refers to an addition of 1 percent compared with the baseline on average. Scarring reflects a permanent negative effect of a large negative output gap on the level of potential output (see Online Annex 1.4). The simulations show desirable policies based on a model where governments pursue both economic stability and debt sustainability.

remain depressed for longer). Under these circumstances, the composition of fiscal adjustment will become central to avoid undermining the recovery (see later discussion).

For many emerging market and developing economies, the pandemic has imposed a major setback in their plans to achieve the Sustainable Development Goals (SDGs) by 2030. The setback points to the urgency of making renewed efforts to reach those objectives. These countries will need to boost revenue capacity and seek sustainable financing, including development aid. Many low-income developing countries are in or at high risk of debt distress, and some will require upfront adjustments. The international community's cooperation will be critical for some of these economies to recover from the pandemic and to achieve the SDGs, especially to reduce poverty and hunger. This includes support for debt relief (for example, the Debt Service Suspension Initiative), including private sector participation.

Figure 1.21. Targeted Measures Have a Greater Impact (Fiscal Multipliers) on Output
(Increase in output per US$1 of stimulus)



Source: IMF staff estimates.
Note: The tax multipliers plotted are converted such that a positive number refers to an increase in a variable in response to a tax cut measure. Short (long)-term multipliers refer to cumulative multipliers at the end of one (five) years (see Online Annex 1.5 for details).

Stimulus Measures Should Be Cost-Effective and Targeted to Lower-Income Households

As supply disruptions diminish, a temporary fiscal stimulus could have a powerful multiplier effect on aggregate demand and output. This is particularly the case in countries that face low interest rates partly because of a savings glut, reflecting high savings levels among high-income households and low private investment given the uncertain outlook. High public debt levels and precautionary savings, however, could reduce multipliers (Ilzetzki, Mendoza, and Vegh 2013; Fotiou, Shen, and Yang 2020).

The choice of fiscal instruments will determine the impact of any fiscal package on economic growth and job creation. Targeted transfers (for example, enhanced social safety nets) and income tax cuts for low-wage workers can boost consumption in the poorest households, resulting in higher short-term multipliers (Figure 1.21; Online Annex 1.5).[15] Temporary provisions for accelerated depreciation or investment tax credits can reduce the cost of capital and encourage frontloading of private investment (Rochelle and Rudd 2011; Zwick and Mahon 2017). Meanwhile, active labor market policies (including those that help workers acquire new skills) would support reallocation of workers to more productive and better-quality formal jobs and higher earnings.

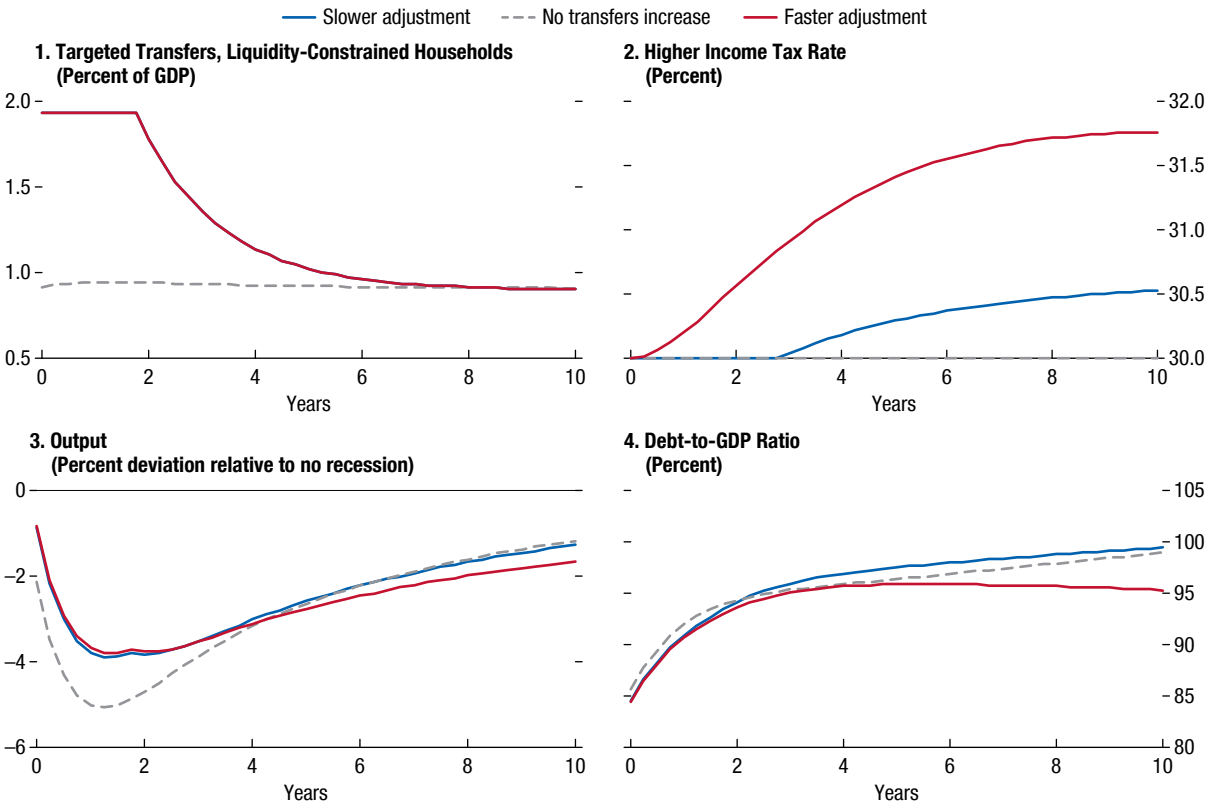
For countries with limited space to borrow, combining fiscal instruments could help achieve policy objectives while containing public debt. An option to reduce the consumption and output drop in the short term would include, for example, a rise in targeted transfers to protect the most vulnerable, financed by progressive income taxes. The tax increases could be legislated now to become effective a few years later (Figure 1.22), or they could be implemented immediately if reducing debt is urgent. Another option is to finance additional public investment with higher indirect taxes (see also Chapter 2).

Unwind Government Interventions in the Corporate Sector

As the recovery gets under way, unwinding the large public interventions in firms and managing the associ-

[15]The multiplier estimates assume an environment of low growth and low interest rates, and one in which poorer households are cash constrained.

Figure 1.22. Impact of a Fiscal Package on Output and Government Debt
(Percent)



Source: IMF staff estimates.
Note: The figure shows three scenarios: (1) no fiscal package (no additional transfers and no tax increases); (2) slower adjustment, which includes a fiscal package of higher transfers and a gradual increase in taxes on the high-income group as debt rises; and (3) a faster adjustment scenario where higher transfers and taxes are raised from year 1 and more aggressively as debt rises (see Online Annex 1.5). The output impact is relative to a scenario without the pandemic (no recession).

ated fiscal risks becomes a priority.[16] An effective debt resolution system, including a streamlined restructuring framework and institutional capacity to manage a large number of bankruptcies, can promote a smooth reallocation of resources to more productive uses (Bergthaler and others 2015; Liu, Garrido, and DeLong 2020). Governments, as one of the main creditors for SMEs, can also directly facilitate the debt restructuring process, but this would require accepting losses from unpaid taxes and loans granted during the pandemic.[17]

[16]Government ownership tends to be associated with weaker firm performance and can distort competition, ultimately undermining economic growth (see the April 2020 *Fiscal Monitor*).

[17]The debt restructuring should be authorized by legislation and the process surrounding the restructuring should be carefully circumscribed in order to ensure appropriate accountability and transparency.

The Recovery Can Enable Building a More Inclusive and Green Economy

The present crisis has exposed the risks of inaction and the need for ambitious reform agendas—including investment in human and physical capital—to make crises less frequent and damaging, and make economies more resilient by addressing poverty and inequality, as well as climate change. As economies become more digital and firms and sectors are transformed, ensuring that the post-pandemic economy becomes more inclusive and green will require reorienting expenditures toward investment in people and raising equitable revenues.

- Progressive income taxation and education and health spending are two of the most important fiscal policy tools for addressing income inequality (October 2017 *Fiscal Monitor*). In particular, reducing health and

education gaps, through reallocating public education and health spending to the poor, can contribute to reducing inequality and promoting economic growth.
- Moreover, investment in physical capital will need to be increased and reoriented toward job-rich, highly productive, and greener activities (Chapter 2). Likewise, tax systems will need to be reshaped to finance these priorities in ways that maintain social cohesion and help to curb carbon emissions.

Enhance social protection systems. The crisis has laid bare structural gaps in social protection systems contributing to a rise in inequality. The broader policy goal is to ensure that all have access to basic goods (for example, food and shelter) and services (for example, health and education) during crises. Additional spending is needed on social protection, which could be partly financed by progressive taxes. For example, an additional 1 percentage point of social spending to GDP can reduce extreme poverty headcount by 6 percentage points on average across emerging market and developing economies (Online Annex 1.1). Even when social spending cannot be increased, some countries have scope to consolidate inefficient and fragmented programs to enhance capacity to reach larger shares of the population.

Emerging market and developing economies that have less-developed safety nets can strengthen the capacity to reach, target, and deliver benefits to the most vulnerable households (Figure 1.23, Online Annex 1.1). This involves reliable universal identification systems, safe and transparent delivery, and up-to-date and integrated socioeconomic data to help identify vulnerable households and provide timely and adequate safety nets (for example, digital transfers). Advanced economies with stronger safety nets need to improve the outcomes of existing programs by extending coverage through enhanced means testing and better preserving work incentives (McKay and Reis 2016; Landais, Michaillat, and Saez 2018).

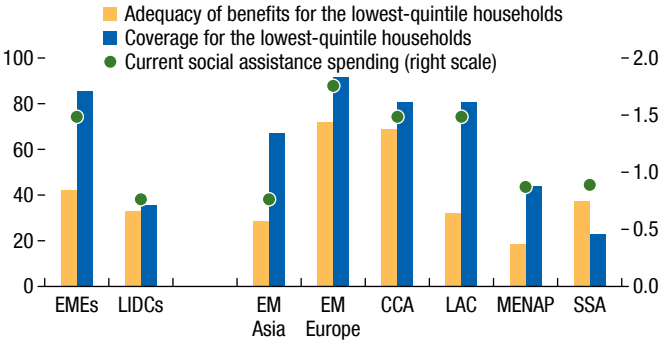
Invest in a green and sustainable future. Reducing emissions and adapting to climate change remain critical and urgent challenges when the pandemic is under control (see the October 2020 *World Economic Outlook*). The recovery from the current health crisis is an opportunity to move away from the precrisis growth model, especially regarding climate change. Government plans to promote the recovery are an opportunity to accelerate the transition to a low-carbon economy (The Coalition of Finance Ministers for Climate Action 2020). More robust carbon pricing should be at the core of the policy response: it encourages people and firms to reduce energy use and shift to cleaner alternatives. It also generates revenues that can be used as part of a fiscal package that is both efficient and equitable (see the October 2019 *Fiscal Monitor*). Other key measures include reducing subsidies or tax incentives for emissions-intensive activities, and investing in clean energy infrastructure, which can create new jobs, and likely crowd in private sector investment (Chapter 2).

The next chapter develops one element of the fiscal roadmap for the recovery in greater depth: investment for a more resilient, more inclusive, and greener economy.

Figure 1.23. Adequacy and Coverage of Social Protection Programs

(Percent, left scale; percent of GDP, right scale)

Social protection programs in low-income developing countries have low coverage and in many emerging market developing economies provide insufficient benefits.



Sources: World Bank PovcalNet database; IMF, World Economic Outlook database; and IMF staff estimates (see Online Annex 1.1).
Note: Adequacy is the total transfers received by beneficiaries as a share of the pretransfer total income in the lowest-income quintile of individuals. Coverage is the share of the lowest-quintile individuals who receive social protection benefits. CCA = Caucasus and Central Asia; EM = emerging market; EMEs = emerging market economies; LAC = Latin America and the Caribbean; LIDCs = low-income developing countries; MENAP = Middle East, North Africa, Afghanistan, and Pakistan; SSA = sub-Saharan Africa.

Box 1.1. Private Debt and Public Sector Risk

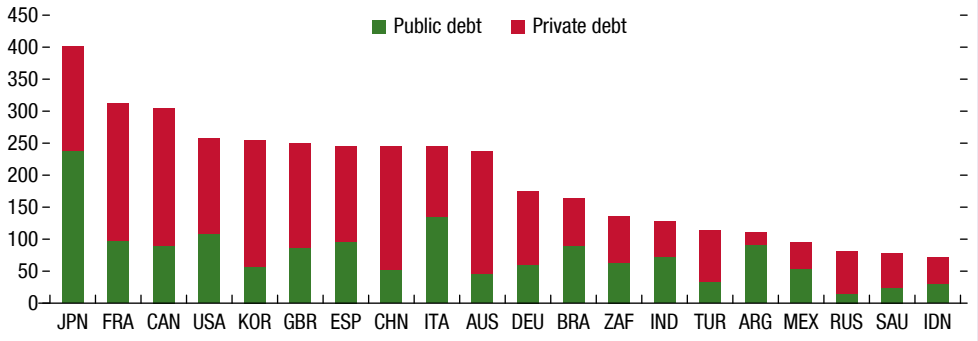
Private sector debt vulnerabilities were elevated before the coronavirus disease 2019 (COVID-19) pandemic. Nonfinancial corporate and household debt has trended upward for two decades, reaching almost 150 percent of GDP in 2019 and exceeding public debt by a large margin in most Group of Twenty countries (Figure 1.1.1). The quality of corporate debt had also been deteriorating in many countries even before the pandemic. Corporate speculative-grade debt as a share of total corporate debt—a leading indicator of corporate sector distress—was nearly 50 percent in *China* and the *United States* and even higher in *Italy* and the *United Kingdom* (see the April 2019 and October 2019 *Global Financial Stability Reports*). These factors may have limited the size and scope of government support to firms during the COVID-19 crisis.

The monetary policy response to the pandemic has sustained the issuance of corporate debt. The first half of 2020 saw the most intense burst of capital-raising in history, with $5.4 trillion secured by companies across the globe, including $3.9 trillion since the start of March. But signs of corporate liquidity pressures and growing corporate solvency risk are mounting (see the October 2020 *Global Financial Stability Report*). The US high-yield bond market has already surpassed leverage levels seen during the 2008 financial crisis in terms of the ratio of companies' gross debt to their earnings before interest, tax, depreciation, and amortization.

Several studies warn against the risks of excessive private borrowing (Gourinchas and Obstfeld 2012; Jordà, Schularick, and Taylor 2016; Koo 2008; Reinhart and Rogoff 2011). Excessive private debt can suppress growth and migrate to the public sector balance sheet through three channels: (1) direct public support to the corporations or their creditors, (2) calls on public guarantees on private debts, or (3) countercyclical fiscal response to corporate deleveraging episodes (Mbaye, Moreno Badia, and Chae 2018). For example, cumulative gross support to financial institutions in 37 countries following the global financial crisis was $3.5 trillion (Igan and others 2019). Since the start of the COVID-19 pandemic, some banks have already started to provision more for expected losses on their loans (see the June 2020 *Global Financial Stability Report Update*). Also, in response to the pandemic, governments have announced guarantee programs equivalent to $3.8 trillion that could be exercised.

Risks from high private debt may ultimately require fiscal action to help repair private balance sheets (see the October 2016 *Fiscal Monitor*). Also, policies that support equitable and rapid bankruptcy procedures can help. For strategic or systemic firms with unsustainable debt, it may be in the public interest for governments to absorb some of the debt. However, direct support for firms should not bail out owners (Bernardo, Talley, and Welch 2016). Looking forward, public policies that encourage debt accumulation, such as the deductibility of interest for tax purposes, could be reconsidered (De Mooij 2012).

Figure 1.1.1. Total Debt in G20 Countries, 2019
(Percent of GDP)



Source: IMF Global Debt Database.
Note: Data labels use International Organization for Standardization country codes. G20 = Group of Twenty.

Box 1.2. How Green Is the Fiscal Response to the COVID-19 Crisis?

Fiscal policy across the globe has rightly focused on fighting the economic crisis induced by the coronavirus disease 2019 (COVID-19) pandemic. But the need for decisive policy action to address the climate change crisis remains. Given the large size and range of countries' fiscal responses, decisions made now may shape the climate for decades. An initial assessment, however, indicates that little of the response to the COVID-19 crisis to date has been "green".

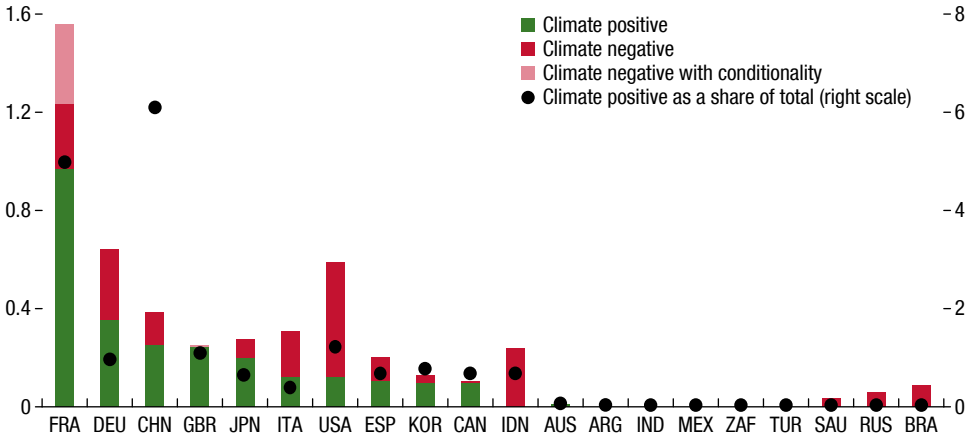
The greenness of the fiscal response has varied across the Group of Twenty (Figure 1.2.1). *France* allocated almost 1 percent of GDP to green measures, whereas many countries had no climate-positive (green) measures or significant climate-negative (red) measures. Green measures were mostly direct budget expenditures such as incentives for more energy-efficient vehicles (*China*, *France*, *Italy*). Countries have also provided loans and grants for green investments, such as cleaning inactive oil wells in *Canada*, modernizing commercial vehicles in *Germany*, and building climate-resilient infrastructure in *Japan*. Negative measures have been mainly bailouts, such as those for airlines in *Brazil*, *China*, and *France*. To date, only *France* attached significant green conditionality to its bailout.

With countries still shaping their post-pandemic policies and moving from crisis containment to recovery, there is great scope and need to green the response. Indeed, the *European Union* announced a 30 percent green spending target for its 5.5 percent of GDP stimulus package. Undertaking and publishing climate impact assessments and introducing green budgeting would also increase transparency, awareness, and accountability for climate-sensitive policymaking.

As examples of what can be done, following the global financial crisis, *Korea* launched a multiannual large-scale infrastructure program with a focus on climate-relevant public infrastructure (for example, river restoration) (Kamal-Chaoui and others 2011); and the *United States* leveraged its support of auto firms to introduce tougher emissions standards in a "green-bargain" with the industry (Weiss and Weidman 2012; Strecker and Meckling 2020).

Figure 1.2.1. Climate Relevance of Fiscal Measures in the G20 Related to the COVID-19 Crisis

(Percent of GDP, left scale; percent of total, right scale)



Source: IMF staff.
Note: Data labels use International Organization for Standardization country codes. Measures are categorized into positive and negative policy "archetypes," based on the climate relevance of specific activities. A similar methodology is applied in the Greenness of Stimulus Index (https://www.vivideconomics.com/casestudy/greenness-for-stimulus-index).

Box 1.3. An Unprecedented Fiscal Response: A Closer Look

The global fiscal response to the pandemic has been unprecedented. By September 11, 2020, countries had announced discretionary fiscal measures averaging close to 12 percent of GDP. The size and scope of fiscal support has varied vastly across countries.

In *advanced economies*, where the pandemic hit earlier and harder, and where financing conditions are favorable, direct budget support committed through September 11 is equivalent to 9.3 percent of GDP (Figure 1.3.1). A large part of this support is aimed at workers and their employers (Figure 1.3.2) through wage subsidies (*Australia, Canada, Japan*), including short-term work schemes (*France, Germany, Spain, United Kingdom*), and forgivable loans contingent on employment protection (*United States*). Support to households has also been significant, including the expansion in size, eligibility, or duration of unemployment benefits (*France, Japan, Spain, United States*); sickness, family, and childcare benefits (*Japan, Spain, United Kingdom, United States*); and cash transfer schemes (*Canada, Japan, Spain, United States*). Another 11 percent of GDP has been committed to liquidity support: examples include equity injections, particularly for the hardest-hit companies such as airlines (*France, Germany, Scandinavia*), and to a larger extent, loans and guarantees (*France, Germany, Italy, Spain*), often through quasi-fiscal activities (*Japan, Korea*).

In *emerging market and middle-income economies*, where the severity of the pandemic and financing conditions have varied widely, total fiscal support through September 11 amounts to about 6 percent of GDP, 3.5 percentage points of which is committed on budget. Oil exporters facing a double shock from the pandemic and low oil prices have on average deployed smaller fiscal packages (Figure 1.3.1), prioritizing health spending in some cases (*Iran, Saudi Arabia*). Among emerging markets, budget measures have consisted largely of public works (Figure 1.3.2), typically aimed at infrastructure investment to support the recovery (*Argentina, China, Indonesia*). Also playing a significant role in fiscal packages have been job retention schemes, including forgivable loans (*Mexico, Russia*) and wage subsidies (*Argentina, Saudi Arabia, Turkey*), as well as support to households through expanded unemployment benefits (*China, Indonesia, Russia*) and targeted cash and in-kind benefits (*Argentina, Brazil, India, South Africa*). Public sector equity injections, loans, and guarantees have on average been modest compared with those in advanced economies, exceeding 5 percent of GDP in only a few cases (*Brazil, Peru, Turkey*).

Figure 1.3.1. Breakdown of Fiscal Support, by Type
(As of September 11, 2020; percent of GDP)

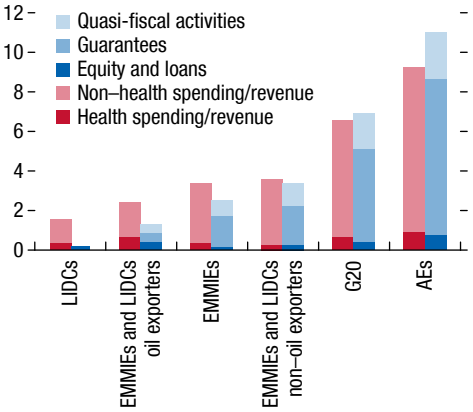
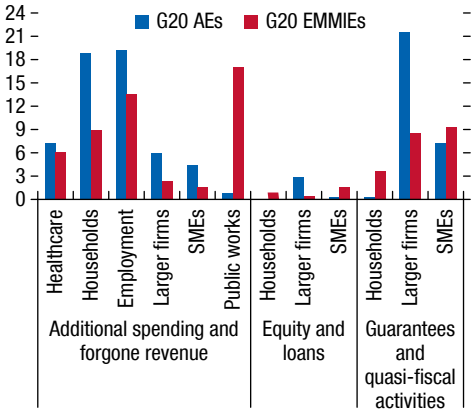


Figure 1.3.2. Distribution of Fiscal Support, by Beneficiary
(As of September 11, 2020; percent of total)



Sources: *Fiscal Monitor* Database of Country Fiscal Measures in Response to the COVID-19 Pandemic (https://www.imf.org/en/Topics/imf-and-covid19/Fiscal-Policies-Database-in-Response-to-COVID-19); and IMF staff estimates.
Note: Country group averages are weighted by GDP in US dollars adjusted by purchasing power parity. AEs = advanced economies; COVID-19 = coronavirus disease 2019; EMMIEs = emerging market and middle-income economies; G20 = Group of Twenty; LIDCs = low-income developing countries; SMEs = small and medium enterprises.

Box 1.3 *(continued)*

In *low-income developing countries*, where the pandemic has hit later and financing constraints are tighter, total fiscal support announced through September 11 is 1.8 percent of GDP, largely through budgetary measures. Of these, spending on health services has amounted to 0.3 percent of GDP.

A large share of fiscal support has also been allocated to protecting households, including cash and in-kind (food) transfers (*Bangladesh, Ethiopia, Kenya, Nigeria, Senegal*), temporary unemployment benefits (*Honduras, Vietnam*), and utility (water, electricity) subsidies (*Ghana, Senegal*).

References

Anderson, J., F. Papadia, and N. Véron. 2020. "Government-Guaranteed Bank Lending in Europe: Beyond the Headline Numbers." *Realtime Economic Issues Watch* (blog), Peterson Institute for International Economics, July 21. https://www.piie.com/blogs/realtime-economic-issues-watch/government-guaranteed-bank-lending-europe-beyond-headline.

Baker, S., R. A. Farrokhnia, M. Pagel, S. Meyer, and C. Yannelis. 2020. "Income, Liquidity, and the Consumption Response to the COVID-19 Pandemic and Economic Stimulus Payments." *VoxEU* (blog), Centre for Economic Policy Research, June 17. https://voxeu.org/article/covid-19-fiscal-stimulus-measures-and-household-spending-us.

Baqaee, D., and E. Farhi. 2020. "Supply and Demand in Disaggregated Keynesian Economies with an Application to the Covid-19 Crisis." NBER Working Paper 27152, National Bureau of Economic Research, Cambridge, MA.

Barrero, J. M., N. Bloom, and S. J. Davis. 2020. "COVID-19 Is Also a Reallocation Shock." BFI Working Paper, Becker Friedman Institute, University of Chicago.

Bayer, C., B. Born, R. Luetticke, and G. J. Müeller. 2020. "The Coronavirus Stimulus Package: How Large Is the Transfer Multiplier?" CEPR Working Paper DP14600, Centre for Economic Policy Research, London.

Bennedsen, M., B. Larsen, I. Schmutte, and D. Scur. 2020. "Preserving Job Matches during the COVID-19 Pandemic: Firm-Level Evidence on the Role of Government Aid." Working Paper, Initiative on the Digital Economy, Massachusetts Institute of Technology, Cambridge, MA.

Bergthaler, W., K. Kang, L. Yan, and M. Dermot. 2015. "Tackling Small and Medium-Sized Enterprise Problem Loans in Europe." IMF Staff Discussion Note 15/04, International Monetary Fund, Washington, DC.

Bernardo, A., E. Talley, and I. Welch. 2016. "Designing Corporate Bailouts." *Journal of Law and Economics* 59 (February): 1–30.

Blanchard, O., T. Philippon, and J. Pisani-Ferry. 2020. "A New Policy Toolkit Is Needed as Countries Exit COVID-19 Lockdowns." Policy Brief 20/8, Peterson Institute for International Economics, Washington, DC.

Blanchard, O., and L. Summers. 1986. "Hysteresis and the European Unemployment Problem." *NBER Macroeconomics Annual*, Volume 1. Cambridge, MA: National Bureau of Economic Research.

Bronka, P., D. Collado, and M. Richiardi. 2020. "The COVID-19 Crisis Response Helps the Poor: The Distributional and Budgetary Consequences of the UK Lockdown." EUROMOD Working Paper EM 11/20, Institute for Social and Economic Research, University of Essex, Essex, UK.

Busso, M., J. Camacho, J. Messina, and G. Montenegro. 2020. "The Challenge of Protecting Informal Households during the COVID-19 Pandemic: Evidence from Latin America." Discussion Paper IDB-DP-780, Inter-American Development Bank, Washington, DC.

Cerra, V., and S. Saxena. 2008, "Growth Dynamics: The Myth of Economic Recovery." *American Economic Review* 98 (1): 439–57.

Chetty, R., J. Friedman, N. Hendren, and M. Stepner. 2020. "How Did COVID-19 and Stabilization Policies Affect Spending and Employment? A New Real-Time Economic Tracker Based on Private Sector Data." Opportunity Insights Working Paper, Harvard University, Cambridge, MA.

Coalition of Finance Ministers for Climate Action. 2020. "Better Recovery, Better World: Resetting Climate Action in the Aftermath of the COVID-19 Pandemic." Washington, DC, July. https://www.financeministersforclimate.org/

Cororaton, A., and S. Rosen. 2020. "Public Firm Borrowers of the US Paycheck Protection Program." Cox School of Business Research Paper 20-01, Southern Methodist University, Dallas, TX.

de Bidegain, I., P. Dudine, K. Hellwig, S. Jahan, and G. Verdier. 2020. "Managing the Impacts of the Coronavirus: Guidance on Health Spending Policies." Special Series on COVID-19, Fiscal Affairs Department, International Monetary Fund, Washington, DC.

De Mooij, R. 2012. "Tax Biases to Debt Finance: Assessing the Problem, Finding Solutions." *Fiscal Studies* 33 (4): 489–512.

Djankov, S., and J. Nasr. 2020. "Tax Relief in a Time of Crisis: What Countries Are Doing to Sustain Business and Household Liquidity." *Let's Talk Development* (blog), World Bank, April 1. https://blogs.worldbank.org/developmenttalk/tax-relief-time-crisis-what-countries-are-doing-sustain-business-and-household.

Dreyer, M., and K. Naygaard. 2020. "Utilization of Credit Support Programs for SMEs." *Systemic Risk* (blog), Yale University School of Management, July 20. https://som.yale.edu/blog/utilization-of-credit-support-programs-for-smes.

European Central Bank. 2020. "Euro Area Bank Lending Survey." July 14. https://www.ecb.europa.eu/stats/ecb_surveys/bank_lending_survey/html/index.en.html.

Fang, L., J. Nie, and Z. Xie. 2020. "Unemployment Insurance during a Pandemic." Federal Reserve Bank of Atlanta Working Paper 2020–13.

Faria-e-Castro, M. 2020. "Fiscal Policy during a Pandemic." Federal Reserve Bank, St. Louis Working Paper 2020–006C.

Fotiou, A., and A. Lagerborg. 2020. "Early and Smart Containment: Lessons from Countries with Past Experience." Unpublished, International Monetary Fund, Washington, DC.

Fotiou, A., W. Shen, and S.-C. Yang. 2020. "The Fiscal State-Dependent Effects of Capital Income Tax Cuts." IMF Working Paper 20/71, International Monetary Fund, Washington, DC.

Fournier, J. M. 2019. "A Buffer-Stock Model for the Government: Balancing Stability and Sustainability." IMF Working Paper 19/159, International Monetary Fund, Washington, DC.

Ganong, P., P. J. Noel, and J. S. Vavra. 2020. "US Unemployment Insurance Replacement Rates during the Pandemic." NBER Working Paper 27216, National Bureau of Economic Research, Cambridge, MA.

Garcia-Escribano, M., and C. Abdallah. 2020. "Issues When Cutting Government Pay to Help Reshuffle Spending in a Crisis." Special Series on COVID-19, Fiscal Affairs Department, International Monetary Fund, Washington, DC.

Gentilini, U., M. Almenfi, D. Pamela, A. V. Lopez, I. Mujica Canas, R. Codero, and U. Zafar. 2020. "Social Protection and Jobs Responses to COVID-19: A Real-Time Review of Country Measures." COVID-19 Living Paper, Version 12 (July 10), World Bank, Washington, DC.

Gourinchas, P., and M. Obstfeld. 2012. "Stories of the Twentieth Century for the Twenty-First." *American Economic Journal: Macroeconomics* 4 (1): 226–65.

Harris, J., B. Imbert, P. Medas, J. Ralyea, and A. Singh. 2020. "Government Support to State-Owned Enterprises: Options for Sub-Saharan Africa." Special Series on COVID-19, Fiscal Affairs Department, International Monetary Fund, Washington, DC.

Igan, D., H. Moussawi, A. Tieman, A. Zdzienicka, G. Dell'Ariccia, and P. Mauro. 2019. "The Long Shadow of the Global Financial Crisis: Public Interventions in the Financial Sector." IMF Working Paper 19/164, International Monetary Fund, Washington, DC.

Ilzetzki, E., E. Mendoza, and C. Vegh. 2013. "How Big (Small?) Are Fiscal Multipliers?" *Journal of Monetary Economics* 60 (2): 239–54.

Jordà, Ò., M. Schularick, and A.M. Taylor. 2016. "Sovereigns versus Banks: Credit, Crises, and Consequences." *Journal of the European Economic Association* 14 (1): 45–79.

Kamal-Chaoui, L., F. Grazi, J. Joo, and M. Plouin. 2011. "The Implementation of the Korean Green Growth Strategy in Urban Areas." OECD Regional Development Working Paper 2011/02, Organisation for Economic Co-operation and Development Publishing, Paris.

Koo, R. 2008. *The Holy Grail of Macroeconomics: Lessons from Japan's Great Recession.* Singapore: Wiley.

Landais, C., P. Michaillat, and E. Saez. 2018. "A Macroeconomic Approach to Optimal Unemployment Insurance: Theory." *American Economic Journal: Economic Policy* 10 (2): 151–81.

Liu, Y., J. Garrido, and C. DeLong. 2020. "Private Debt Resolution Measures in the Wake of the Pandemic." Special Series on COVID-19, Fiscal Affairs Department, International Monetary Fund, Washington, DC.

Mbaye, S., M. Moreno Badia, and K. Chae. 2018. "Bailing Out the People? When Private Debt Becomes Public." IMF Working Paper 18/141, International Monetary Fund, Washington, DC.

McKay, A., and R. Reis. 2016. "The Role of Automatic Stabilizers in the U.S. Business Cycles." *Econometrica* 84: 141–94.

Organisation for Economic Co-operation and Development (OECD). 2020a. "Coronavirus (COVID-19): SME Policy Responses." OECD, Publishing Paris.

Organisation for Economic Co-operation and Development (OECD). 2020b. "Corporate Sector Vulnerabilities during the COVID-19 Outbreak: Assessment and Policy Responses." OECD Publishing, Paris.

Organisation for Economic Co-operation and Development (OECD). 2020c. "Equity Injections and Unforeseen State Ownership of Enterprises during the COVID-19 Crisis." OECD Publishing, Paris.

Organisation for Economic Co-operation and Development (OECD). 2020d. "Job Retention Schemes during the COVID-19 Lockdown and Beyond." OECD Publishing, Paris.

Organisation for Economic Co-operation and Development (OECD). 2020e. "OECD Employment Outlook 2020: Work Security and the COVID-19 Crisis." OECD, Paris.

Organisation for Economic Co-operation and Development (OECD). 2020f. "Tax Administration Responses to COVID-19: Measures Taken to Support Taxpayers." OECD Publishing, Paris.

Palomino, J., J. Rodriguez, and R. Sebastian. 2020. "Wage Inequality and Poverty Effects of Lockdown and Social Distancing in Europe." *COVID Economics* 25: 186–229.

Prady, D. 2020. "Reaching Households in Emerging and Developing Economies: Citizen ID, Socioeconomic Data, and Digital Delivery." Special Series on COVID-19, Fiscal Affairs Department, International Monetary Fund, Washington, DC.

Reinhart, C. M., and K. S. Rogoff. 2011. "From Financial Crash to Debt Crisis." *American Economic Review* 101 (5): 1676–706.

Rochelle M. E., and J. B. Rudd. 2011. "General Equilibrium Effects of Investment Tax Incentives." *Journal of Monetary Economics* 58 (6–8): 564–77.

Strecker, J., and J. Meckling. 2020. "Green Bargains: From Crisis Response to Sectoral Transformation. Report." Unpublished, University of California, Berkeley.

Tetlow, G., T. Pope, and G. Dalton. 2020. "Coronavirus and Unemployment: The Importance of Government Policy: A Five Nation Comparison." IfG Insight, Institute for Government, London.

Una, G., R. Allen, S. Pattanayak, and G. Suc. 2020. "Digital Solutions for Direct Cash Transfers in Emergencies." IMF Special Series on COVID-19, Fiscal Affairs Department, International Monetary Fund, Washington, DC.

Una, G., H. van Eden, A. Singh, F. Bardella, and A. Verma. 2020. "Enhancing Digital Solutions to Implement Emergency Responses." Special Series on COVID-19, Fiscal Affairs Department, International Monetary Fund, Washington, DC.

Utermöhl, K., S. Ozyurt, and L. Subran. 2020. "The Risk of 9 Million Zombie Jobs in Europe." Allianz Research, München und Umgebung, Germany. https://www.allianz.com/content/dam/onemarketing/azcom/Allianz_com/economic-research/publications/specials/en/2020/june/2020_6_17_labor_market.pdf.

Weiss, D. J. and J. Weidman. 2012. "5 Ways the Obama Administration Revived the Auto Industry by Reducing Oil Use." Center for American Progress, Washington, DC.

Zwick, E., and J. Mahon. 2017. "Tax Policy and Heterogeneous Investment Behavior." *American Economic Review* 107 (1): 217–48.

CHAPTER 2

PUBLIC INVESTMENT FOR THE RECOVERY

Introduction

The immediate focus of governments during the COVID-19 crisis thus far has appropriately been to address the health emergency and provide lifelines for vulnerable households and businesses. Governments now also need to prepare economies for safe and successful reopening, foster recovery in employment and economic activity, and facilitate transformation to a post-pandemic economy that, with the right policies, can be more resilient, more inclusive, and greener. Public investment can make a crucial contribution toward these goals (see a discussion of the fiscal strategy for the recovery in Chapter 1 and Table 2.1).[1] This chapter outlines how governments can undertake public investment in a timely manner while safeguarding quality, estimates the potential for public investment to create jobs and boost growth, and sets out priorities for the types of investment that will strengthen resilience and sustainability.

From a macroeconomic standpoint, the case for public investment is strongest in advanced economies and many emerging market economies that—with nominal interest rates and inflation expected to remain at historic lows—can easily finance an investment scale-up. In many cases, borrowing to finance high-quality investment will be desirable, since cheap financing lowers the bar for whether to undertake an investment. In addition, the assets created generate taxable returns and are valued by markets when they price sovereign risk (October 2018 *Fiscal Monitor*). However, policymakers should ensure that the amount and quality of public investment are such as not to pose risks by overly worsening debt dynamics, especially for countries that do not issue reserve currencies. Abrupt changes in global market sentiment can result in sudden increases in financing costs (Caceres, Guzzo, and Segoviano 2010; Lizarazo 2013), and sovereign spreads tend to increase only shortly before debt crises (Mauro and Zhou 2019).

With ample underused resources, public investment can also have a more powerful impact than in normal times. Public investment and its crowding-in effects on private investment could mitigate secular stagnation and the savings glut, which predate the onset of COVID-19 (Rachel and Summers 2019; Eggertsson, Mehrotra, and Robbins 2019) but have been exacerbated by the crisis, since uncertainty about the course of the pandemic has further dampened private investment and spurred higher levels of precautionary saving. Moreover, the recovery of private sector activity is being constrained by weakened private sector balance sheets, losses in human capital because of unemployment, and skill mismatches as demand shifts from high-contact sectors to those that permit social distancing. Public investment can encourage investment from businesses that might otherwise postpone their hiring and investment plans.

For low-income developing countries and some advanced and emerging market economies, however, deteriorating debt dynamics and, in many cases, tight financing conditions have and will likely continue to constrain investment, especially in those economies with high levels of external debt denominated in foreign currency. Sizable market borrowing could increase risk premiums for both the public and the private sectors, undermining the short-term growth benefits of investment spending (Huidrom and others 2019). Based on preliminary information, financing constraints and competing spending priorities to save lives and livelihoods have caused many middle- and—especially—low-income countries to put domestically financed investment projects on hold (Chapter 1). Even so, a gradual scaling-up of public investment financed by borrowing could pay off with positive short- and long-term multipliers, as long as interest rates do not increase too much (Buffie and others 2012; Online Annex 2.1) and governments choose and manage investment projects to maximize economic

[1]Public investment usually refers to gross fixed capital formation (total value of acquisitions, less disposals, of fixed assets) by the state, whether through central or local governments or through publicly owned industries or corporations (see the April 2020 *Fiscal Monitor* for an analysis of the role of state-owned enterprises). Public investment encompasses physical or tangible investment in infrastructure (such as transport, telecommunications, and buildings), but in a broader sense, public investment can include human or intangible investment in education, skills, and knowledge.

Table 2.1. Public Investment in the Strategy for the Recovery

Phase	1. Great Lockdown	2. Partial Reopening	3. Post-Pandemic
Priority	Save lives and livelihoods	Safe reopening where possible	Transform to more inclusive, smart, and sustainable economies
Key fiscal policies	Lifelines for people and firms	Preserve lifelines; target support better; encourage workers to take new jobs	Depending on fiscal space, consider fiscal stimulus, repair balance sheets
Role of public investment	Continue projects where safe, start planning	Boost maintenance and job-rich projects; reassess priorities; prepare pipeline	Satisfy infrastructure needs and support progress toward the SDGs; increase resilience to crises
Preferable project characteristics	Maintenance	Maintenance; ready for implementation; small-size, job-intensive with large short-term multiplier	Large, transformational projects with large long-term multiplier
Public investment management actions	Review portfolio of planned and active projects	Review, reprioritize, restart feasible projects put on hold; plan for new priorities; prepare pipeline of appraised projects to be implemented within 24 months	Strengthen project planning, budgeting, and implementation practices to improve public investment efficiency
Priority sectors	Health	Health, including R&D in vaccine and therapeutics; water and sanitation; digital; safe buildings, schools and transportation	Health; climate change adaptation and mitigation; digital

Source: IMF staff.

Note: Countries do not necessarily progress smoothly through all phases of pandemic. Appropriate fiscal responses will be country-specific depending on the fiscal space, the development of the pandemic, and the strength of the recovery. Measures included here are not exhaustive. R&D = research and development; SDGs = Sustainable Development Goals.

returns for their citizens. Official support, especially if combined with private finance, would also help middle- and low-income countries scale up public investment significantly.

Thus, the quality and content of fiscal policy packages—and within them, public investment choices—will be key to supporting the economy and creating jobs in the near term but will also determine socioeconomic outcomes for decades. The stakes are high: although today's large fiscal packages are necessary, they will have long-lasting implications—directly, through choices made about expenditures and investments, and indirectly, by calling for lower levels of discretionary spending or higher levels of taxation if borrowing costs rise significantly in the years ahead.

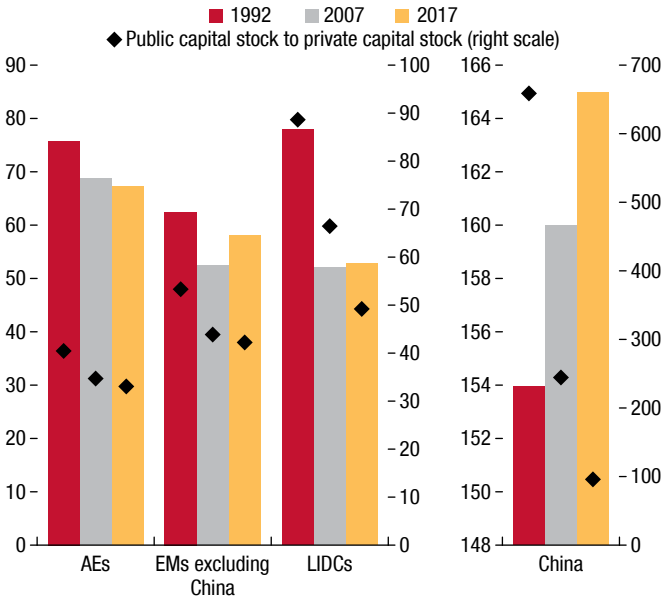
Beyond its macroeconomic implications, public investment is essential to raise long-term economic growth, to progress toward the Sustainable Development Goals (SDGs), and to strengthen economies' resilience to crises. In the long term, public investment in infrastructure can help reduce inequality by fostering structural transformation, which also facilitates regional convergence between rural and urban areas in low-income economies (Fabrizio and others 2017). Public investment has a further advantage: it preserves fiscal space, because it is by nature temporary. But policymakers need to ensure that the conditions outlined in this chapter are in place for choosing and implementing investments with the highest social payoffs.

Investment needs were clearly large before the pandemic and have increased since its onset. Public investment has slowed since the 1990s, reducing the capital-stock-to-GDP and public-to-private-capital ratios in all income groups (Figure 2.1; China is an exception).[2] Public investment ratios have been falling, especially in the health, housing, and environmental protection sectors, weakening societies' resilience to COVID-19, whereas investments in education and economic infrastructure have been preserved (Figure 2.2). Given public capital stock measurement issues such as discounting of flows (Pritchett 2000) and the limited institutional coverage in cross-country data sets, it is also worth looking at data on physical infrastructure.

Over the past decade or so, traditional infrastructure stocks have not risen fast enough. For example, between 2007 and 2016, the total number of miles of roads increased by a cumulative 56 percent in low-income countries and by 33 percent in emerging market economies; the number was nearly unchanged

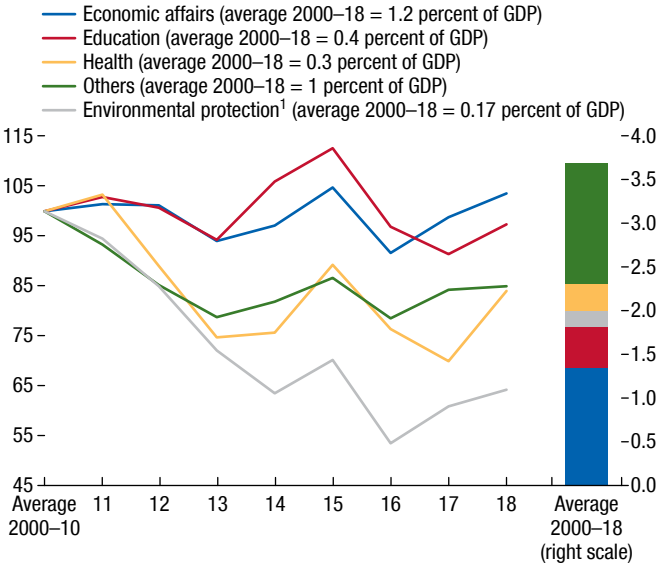
[2]In China, public capital stocks have increased, but traditional infrastructure investment may have reached a point of low returns, as the halving of total factor productivity growth in China after 2009 suggests (IMF 2019).

Figure 2.1. Public Capital Stocks, 1992, 2007, and 2017
(Ratio to GDP, left scale; ratio to private capital, right scale)



Source: IMF Investment and Capital Stock Dataset.
Note: The high ratio in low-income countries could hide statistical issues with the construction of a stock variable by cumulating flows, especially with inefficiencies in public investment management systems (Gupta and others 2014). "Public investment" refers to gross fixed capital formation by the general government. AEs = advanced economies; EMs = emerging markets; LIDCs = low-income developing countries.

Figure 2.2. Public Investment/GDP in Advanced Economies and Emerging Market Economies, 2000–18
(Ratio to GDP, left scale; ratio to private capital, right scale; index 100 = average 2000–10)



Sources: Organisation for Economic Co-operation and Development; and IMF staff estimates.
Note: Public investment refers to gross fixed capital formation by the general government. "Others" includes general public services, defense, social protection, housing, and so on.
[1]Covers waste management, protection of biodiversity, and so on.

in advanced economies.[3] This falls well short of estimated needs, especially for emerging market economies in which the demand for transportation is expected to more than double in the next two decades (Hellebrandt and Mauro 2016).

Digital infrastructure, which benefited from private investments, has grown much faster, but substantial gaps remain across countries. Between 2007 and 2018, the share of the population with internet access rose from 3 percent to 32 percent in low-income countries, from 16 percent to 72 percent in emerging market economies, and from 64 percent to 86 percent in advanced economies. These sizable digital gaps have adverse consequences for both economic convergence across countries and inclusive growth within countries (Broadband Commission 2019; April 2020 *Regional Economic Outlook: Sub-Saharan Africa*). Spending on digital infrastructure is essential and will have to be timely to provide countries with the ability to support social-distancing policies (Chiou and Tucker 2020), put in place a sophisticated contact-tracing system, improve cash transfer systems geared toward the poor (see Chapter 2 of the April 2020 *Fiscal Monitor*), and enable remote schooling and work.

The additional investment needed through 2030 to reach the SDGs for roads, electricity, water, and sanitation has been estimated at 2.7 percent of GDP and 9.8 percent of GDP per year in emerging markets and low-income developing countries, respectively (Gaspar and others 2019; Xiao, D'Angelo, and Lê 2020).[4]

Finally, investment needs for mitigation and adaptation to climate change are also sizable and crucial. Globally, as part of a policy package to reduce emissions to a level consistent with a target of a 2°C increase in temperature, energy investments, public and private, would have to rise from 2.0 to 2.3 percent of GDP by 2030 (October 2019 *Fiscal Monitor*;

[3]Data from the International Road Foundation's *World Road Statistics* (roads) and the World Bank's *World Development Indicators* (internet access).

[4]The estimates rely on economic projections from before COVID-19 (as per the October 2019 *World Economic Outlook*) and cover public and private investments. Gaspar and others (2019) express the estimates as a percentage of 2030 GDP. Xiao, D'Angelo, and Lê (2020) express them as a percentage of average GDP over the period 2019–2030. The figures in the text follow the latter.

see also the October 2020 *World Economic Outlook* for an analysis of the macroeconomic impact of climate change mitigation policies). A major challenge will be to change dramatically the composition of investment toward low-carbon technologies. Public investment needs for adaptation to climate change are also large, as documented at the end of this chapter.

This chapter explores how, and under which circumstances, increasing public investment can be an effective strategy for the recovery from the COVID-19 pandemic. Specifically, it asks (1) how investment can be accelerated and scaled up in the near term while retaining quality, (2) to what extent investment will foster job creation, (3) how the fiscal multiplier of investment could depend on different circumstances before and after the pandemic is brought under control, and (4) how investment can render societies more resilient to health crises and to the impacts of climate change.

A Timely and Effective Push to Investment

As part of stimulus packages, governments often hope to rely on "shovel-ready" projects that can be kick-started within a few months. Yet countries may find they have few such projects and thus may not be able to increase public investment in time to fight the current recession (Jones and Rothschild 2011). To support recovery, public investment needs to be timely while maintaining project quality. Four steps should be taken immediately: (1) focus on maintenance of existing infrastructure, (2) review and reprioritize active projects, (3) create and maintain a pipeline of projects that can be delivered within a couple of years, and (4) start planning for the new development priorities stemming from the crisis. These steps will facilitate identification of good investments that can be started immediately and projects that will prepare economies for the future.

Maintenance and COVID-19-Proofing

The case for boosting maintenance investment during a crisis is powerful: maintenance projects are relatively small, of short duration, and often less complex. Maintenance is even more attractive during the current pandemic, because lower infrastructure usage makes maintenance less disruptive than in normal times. Beyond maintenance, the current pandemic creates an urgent need for smaller, shorter-duration projects, not only in the health care sector, but also to facilitate social distancing in work and school activities, on transportation, and in public spaces. Such projects include both physical adaptation (for example, greater spacing and transparent barriers) and greater access to digital technologies. Empirical evidence and past experience relate primarily to maintenance and provide helpful lessons for the current situation.

Maintenance can be deployed quickly and has major economic benefits. The US American Recovery and Reinvestment Act of 2009 directed about 60 percent of the funds allocated to highways at repair or improvement, and most of the associated projects were completed within two years (GAO 2011). Maintenance contributes to preserving the substantial economic gains from investing in infrastructure: it alleviates the wear of assets, sustains the quality of service, contributes to the prevention of hazards, and limits waste, thus helping the environment (Wang and others 2020; Blazey, Gonguet, and Stokoe 2020). Fixing water network leaks in developing countries could prevent their losing the equivalent of the daily needs of 200 million people (Kingdom, Liemberger, and Marin 2006). Failure to perform routine maintenance now also increases costs later as assets depreciate faster: rehabilitation and replacement costs increase by 50 and 60 percent down the line in the transportation and the water and sanitation sectors, respectively (Rozenberg and Fay 2019).

But maintenance is often structurally underfunded. In many advanced economies, infrastructure assets need repair and are nearing the end of their typical life spans. In France, one-quarter of drinkable water pipes have reached their maximum life spans. According to Organisation for Economic Co-operation and Development (OECD) data, amounts spent on maintenance on roads, railways, waterways, and sea and air transport infrastructure in advanced economies ranged between 0.1 and 1 percent of GDP in 2018. Spending does not cover all needs: in the United States, the (one-time) expenditure needed to cover the backlog of highway and bridge repairs is estimated at 3.5 percent of GDP, and 20 percent of dams are considered to have high hazard potential (ASCE 2018). In emerging market and developing economies, ensuring a steady flow of maintenance spending will be key to achieving infrastructure SDGs, with average annual estimated costs of 2.75 percent of GDP (Rozenberg and Fay 2019).

To spend efficiently on maintenance projects in the short term, governments should first identify where pressing needs lie. Advanced economies can often

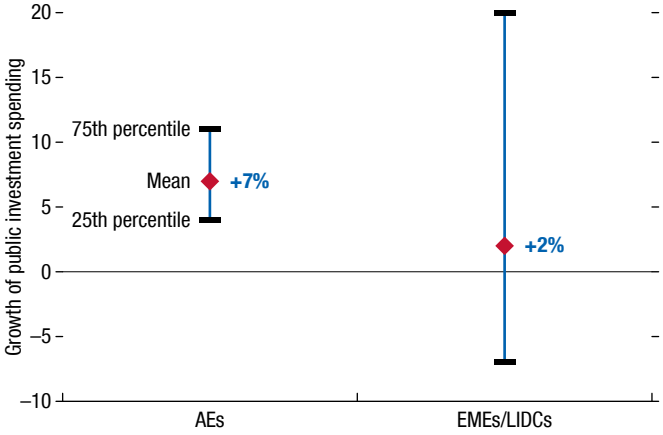
rely on asset registers and information systems. In lower-capacity settings, central authorities can build on the sectoral expertise of line ministries and local governments. Countries should consider shifting to a life cycle approach for public investment projects, which includes identifying maintenance needs at appraisal based on standards and methodologies set in each country's legal framework, securing funding for maintenance, and investing in systems to collect asset performance data. An integrated preparation of capital and current expenditure budgets, with a medium-term perspective, is needed to prevent mismatches between infrastructure assets and their maintenance needs, both routine and capital. Budgets should also report maintenance spending exhaustively. And capital maintenance projects should be selected and prioritized as part of countries' wider public investment strategy: in particular, governments should review their asset portfolios to ascertain whether maintaining existing assets is less efficient than replacing them (especially when assets are of poor quality in the first place) or leapfrogging to new technologies, which may lead to higher long-term benefits.

Review and Prioritization of Active Projects

Crises significantly affect public investment portfolios, as projects under implementation may be interrupted or suffer from delays and financing issues. Some countries have shown that construction work can proceed during the Great Lockdown with social distancing: monthly data suggest that so far, advanced economies have maintained investment spending. However, about half of emerging market and developing economies for which data have been collected have had to cut investment spending, likely owing to financing constraints (Figure 2.3). The October 2020 *World Economic Outlook* thus projects that public investment will be lower in 2020 than in 2019 in 72 out of 109 emerging markets and low-income developing countries. The average expected reduction in public investment is 1 percent of GDP for these 72 countries.

Prioritizing and restarting active projects would contribute to the timely delivery of a public investment stimulus. This ideally would require a well-coordinated system for actively monitoring projects, differentiated according to project size, complexity, and stage. Such active monitoring may enable governments to take on board potential needs related to the COVID-19 crisis: revisiting cost-benefit analyses in light of outdated

Figure 2.3. Public Investment Spending, March–June 2020
(Year-over-year percentage change)



Source: IMF staff estimates based on monthly execution numbers, for a sample of 13 countries.
Note: The figure shows the distribution of monthly execution of public investment, deflated by 2019 end-of-year consumer price index. Averages (square) are not weighted. See Online Annex 2.2. AEs = advanced economies; EMEs/LIDCs = emerging market economies/low-income developing countries.

underlying assumptions, renegotiating financing, and procuring new contracts. As crises create uncertainties, new risks should be identified and mitigating measures planned (Monteiro, Rial, and Tandberg 2020).

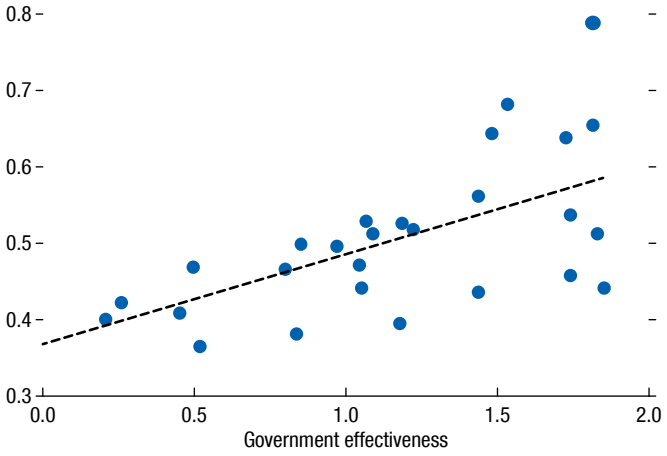
Establishment of Pipeline of Projects

Selecting projects primarily on the basis of their immediate readiness may impede quality and allocation efficiency by casting aside projects with greater potential than those chosen. Readiness may not be accurately assessed, and even once projects are ready, administrative burden and red tape can slow implementation. In Europe, with only one year remaining in the 2014–20 plan, several countries had spent only 40 percent of the European Structural Funds allocated (Figure 2.4).

Governments should prepare a pipeline of carefully appraised projects that can be selected for financing and implemented within the following 24 months. This presents a challenge, however, because appraisal and selection processes are among the most common shortcomings in the public investment management cycle (Chaponda, Matsumoto, and Murara 2020). More than half of the 63 countries that have undergone an IMF Public Investment Management Assessment do not effectively maintain such a pipeline. An independent review of projects, communicated transparently, reduces the likelihood that low-quality

Figure 2.4. Government Effectiveness and Speed of Execution in Europe

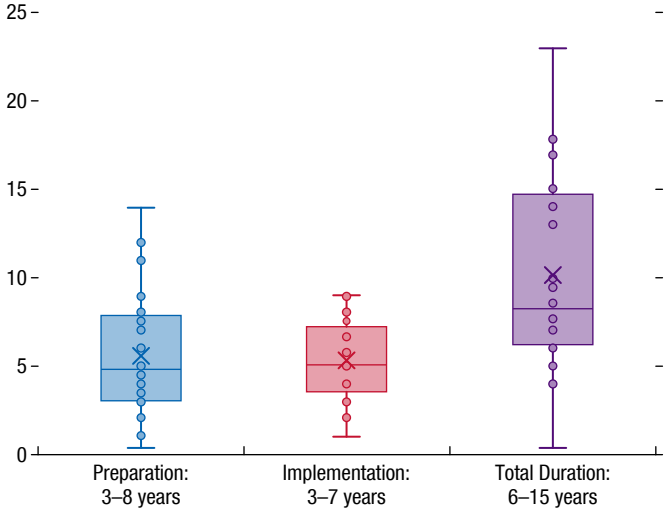
(Amounts spent in 2014–19, in proportion of amounts allocated for 2014–20)



Sources: European Structural and Investment Funds; World Bank Worldwide Governance Indicators; and IMF staff calculations.
Note: The figure shows the correlation between the World Bank government effectiveness index and the speed of national implementation of projects financed by European Structural and Investment Funds. Instrument for Pre-Accession Assistance not included.

Figure 2.5. Duration of Infrastructure Projects

(Number of years)



Sources: IMF staff calculations based on Klakegg, Williams, and Shiferaw 2016; Avellan, Cavalcanti, and Lotti 2019; and GIH 2019.
Note: The figure shows the range of duration of infrastructure projects, distinguishing between the preparation phase and the implementation phase.

projects will be approved. Selection criteria should be disclosed; governments should look for strategic relevance, feasibility and affordability, and implementation readiness. Where appraisal is not systematic or formalized, a small task force of experts can be temporarily established, with a mandate to review the viability of major projects, both active and in the pipeline (Tandberg and Allen 2020). Fast-tracking project preparation through expedited appraisal and selection procedures, as in Australia, for instance, or temporary exemptions, often embedded in public procurement systems, can help overcome roadblocks but must be accompanied by transparency and quality control safeguards.

Planning for New Development Priorities

Governments should also take into account new development priorities stemming from the COVID-19 crisis and start planning accordingly for projects that will accompany the likely economic and social transformations as economies recover from the crisis. Project choices should give prominence to investments that reduce the likelihood or impact of future crises, including pandemics and climate change, and to foster digitalization. Because public investment project development usually spans many years (Figure 2.5), planning should start now. Project preparation entails ensuring consistency with development strategies, design, and appraisal of technical and financial feasibility and compliance with environmental and social safeguards. Though smaller projects can be prepared within a year, preparation typically takes five years or more for large infrastructure projects.

Maintaining Quality When Scaling Up Public Investment

Maintaining the quality of projects—in terms of selection and implementation—and bringing about the expected long-term growth dividends requires sound project planning and preparation, country ownership of projects, and a strategy that does not scale up public investment too much and too fast. Indeed, although there is a consensus that a temporary increase in public investment is likely to increase output significantly in the short to medium term (Leduc and Wilson 2012; Calderón, Moral-Benito, and Servén 2015), on average, more than one-third of the resources spent on public infrastructure are lost to inefficiencies (Baum, Mogues, and Verdier 2020; Schwartz and others 2020). Further, the evidence on the long-term growth benefits of big, long-lasting scaling-up is mixed (Warner 2014; Arezki and others 2017).

Fast increases in public investment carry the risk of facilitating corruption. The selection and procurement of public investment projects are already particularly vulnerable to corruption, as public officials benefit from a higher level of discretion for such projects than for current expenditure, and complex projects' unique features hamper the use of price comparators (April 2019 *Fiscal Monitor*; Pattanayak and Verdugo-Yepes 2020). Several public investment management and fiscal transparency practices, such as the publication of project selection criteria, the use of e-procurement systems and project-monitoring platforms, and the implementation of alert systems ("red flags"), can help ensure that projects are objectively selected and competitively procured.

Another key concern is that projects undertaken in periods of rapid scaling-up have been found to be less successful in achieving their intended targets (Isham and Kaufmann 1999; Presbitero 2016). Implementing multiple new projects simultaneously requires a varied set of technical and managerial resources that cannot be expanded in the short term, because absorptive-capacity constraints and supply bottlenecks may inflate costs and delay project implementation and completion (Flyvbjerg 2009; Gurara and others 2020).

To understand the mechanisms through which periods of investment scaling-up can lead to poor project outcomes, an analysis of the drivers of delays and cost overruns—two features of project execution that can be measured and can proxy implementation efficiency—is performed on World Bank–financed projects. Cost overruns and delays are pervasive in public investment projects. Data collected from more than 2,200 individual World Bank–financed project reports covering 110 emerging markets and developing economies indicate that almost 40 percent of projects cost more than the estimated appraisal cost and 75 percent of projects are delayed beyond their projected completion date at project outset (see Online Annex 2.3), even though the projects are planned by professional experts and subject to rigorous procedures (Limodio 2019).[5] The analysis sheds light on why the results of increases in public investment can fall short of expectations. Cost increases are greater and project delays are longer if projects are approved and undertaken when public investment is significantly scaled up. Individual projects can cost 10–15 percent more simply because they are undertaken at a time of particularly high public investment (Figure 2.6, panel 1). In low-income developing countries, scaling up investment by 3 percent of GDP leads to an increase in costs of 6 percent above appraisal costs, as well as delays extending project length by 2.5 percent beyond what was planned.

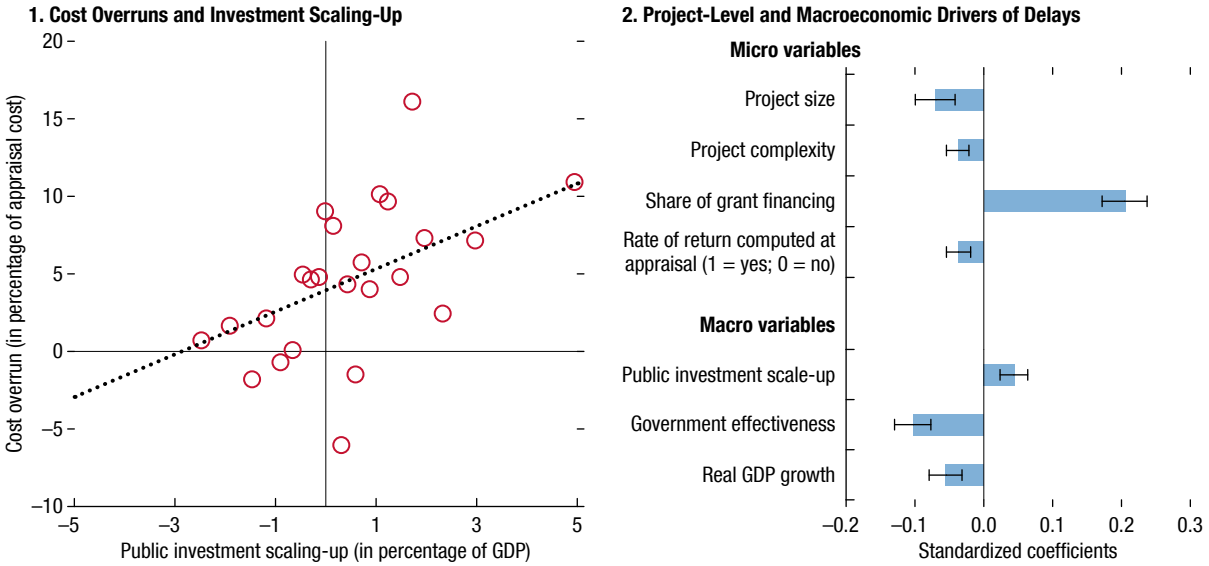
Good project planning and the quality of policies and institutions matter for project outcomes (Isham and Kaufmann 1999; Denizer, Kaufmann, and Kraay 2013). Countries with better public investment management are better placed to implement projects on time and on budget (IMF 2018). For instance, World Bank projects in which the expected rate of return is assessed at appraisal, suggesting careful project preparation, have shorter delays (Figure 2.6, panel 2). The same holds for larger and more complex projects (as measured by the number of sectors a project spans), possibly because they are more carefully planned and designed. Yet projects funded fully by grants have a time overrun 14 percentage points higher than those funded without grants (Figure 2.6, panel 2). A three-year project thus suffers from an extra five-month delay, on average, if it is fully funded by grants. Country ownership and the leadership of local authorities are important elements for project success and for the effectiveness of a scaling-up of investment (Bourguignon and Sundberg 2007; Edwards 2015). Project analysis is also crucial, and where capacity is limited, technical support by multilateral development banks could be beneficial and help countries attract private finance (Chelsky, Morel, and Kabir 2013; Broccolini and others, forthcoming). Countries' capacity to implement quality projects in a timely way will be essential if public investment is to boost growth and create jobs in both the short and long term.

Job Creation

How many jobs can a policymaker expect to create by increasing public investment? The COVID-19 pandemic has resulted in the sharpest rise in unemployment since the Great Depression, and job creation will be an essential criterion in deciding on the size and composition of a fiscal stimulus. Experience suggests that fiscal packages have significant job intensity. For example, the US American Recovery and

[5]Cost overruns and time delays do not always result from errors in evaluations. Sometimes circumstances extraneous to the project change project scope. Existing evidence shows that analyses based on World Bank projects can be generalized to other donors (Briggs 2019; see also Online Annex 2.3).

Figure 2.6. Cost Overruns and Delays



Source: Analysis of the performance of more than 2,200 World Bank–financed projects approved in 110 emerging and developing countries based on text mining of World Bank Independent Evaluation Group completion reports.
Note: Panel 1 is a binned scatter plot controlling for project-specific and macro variables as well as fixed effects. Panel 2 plots the standardized coefficients and the associated 90 percent confidence intervals of selected variables of a regression in which the dependent variable is the measure of the time delays (see column 6 in Online Annex Table 2.3.2 in Online Annex 2.3). The regression includes year, sector, region, and country group fixed effects. One standard deviation of the dependent variable—time delay—is 17.7 days. The standard deviations of the other variables used in the analysis are shown in Online Annex Table 2.3.1 in Online Annex 2.3.

Reinvestment Act created six to eight jobs in the short term per $1 million spent (Wilson 2012; Garin 2019; Ramey 2020). Firm-level information on revenues and employment for selected sectors, covering 27 advanced economies and 14 emerging markets over 1999 to 2017, shows that job intensity ranges from about two jobs per $1 million invested in schools and hospitals to three jobs in electricity in advanced economies, and from five jobs in roads to eight jobs in water and sanitation in emerging market economies (Figure 2.7).[6]

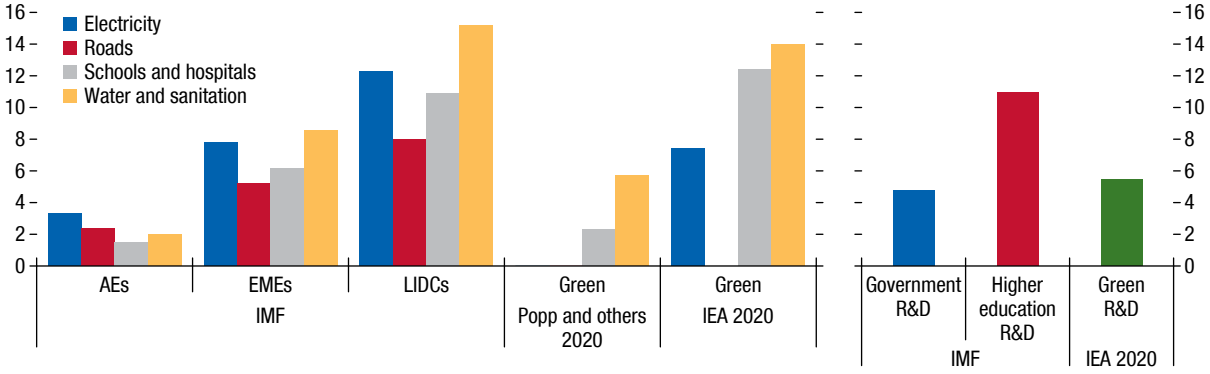
Government research and development (R&D) spending generates an estimated five jobs per $1 million invested in OECD member countries, and these are high-quality jobs. Public spending on R&D is a small component of public investment and goes primarily toward the government and higher education, but it is expected to increase, particularly in the health sector. The job content of higher education R&D is twice as high, possibly because it focuses on fundamental research and requires less capital than government R&D (which includes, for example, the military). Although the data set does not cover digital infrastructure, a conservative estimate is that the job content in digital infrastructure could lie between the estimates for electricity and those for R&D, at each income level.

The sectoral ranking of job intensity is similar across income groups, with water and sanitation and electricity displaying greater job intensity than roads, schools, and hospitals (Schwartz, Andres, and Dragoiu 2009). Job intensity increases as country income decreases: in addition to wages being lower in poorer countries, technology is also more labor intensive there, as evidenced by labor income's higher share in GDP (see the April 2017 *World Economic Outlook*; see also Dao and others 2017).

The numbers presented may underestimate the capacity of public investment to create jobs. First, they exclude jobs outsourced to companies not included in the data set and jobs created indirectly through higher demand for other products and services. Second, projects with a larger unskilled labor component will create more jobs (as a dollar can go further in employing more workers) and reduce inequality.

[6]These numbers are consistent with what would be found using a wage share of income of 30–40 percent in the construction sector, at the firm level. For instance, the implied gross wage for infrastructure in electricity would be about $90,000 in advanced economies, $38,000 in emerging market economies, and $24,000 in low-income developing countries.

Figure 2.7. Job Content Per US$1 Million of Additional Investment
(Selected infrastructure sectors)



Sources: Compustat; Orbis; and IMF staff estimates.
Note: The figure shows for different sectors, types of investment, and for country groups, the estimates of the job content of US$1 million of investment. The figure is based on regressions of employment on revenues over 1999–2017, covering 47,580 observations for 5,679 privately owned and state-owned enterprises. The estimates for low-income countries are extrapolated from the other estimates. For R&D spending, the figure is based on cross-country panel regressions based on OECD data. Green estimates are available in the literature but only for a few sectors. See Online Annex 2.4 for details. AEs = advanced economies; EMEs = emerging market economies; LIDCs = low-income developing countries; OECD = Organisation for Economic Co-Operation and Development; R&D = research and development.

Green investment can also create jobs (Chapter 3 of the October 2020 *World Economic Outlook*; Garrett-Peltier 2017; Coalition of Finance Ministers for Climate Action 2020). In advanced economies, job intensity appears to be greater for green investment than for traditional investment. For example, job intensity—net of job losses in traditional industries—is estimated at 8 jobs per $1 million invested in green electricity, 2–13 jobs in efficient new buildings such as schools and hospitals, and 6–14 jobs in green water and sanitation through efficient agricultural pumps and recycling (Figure 2.7; see also IEA 2020 and Popp and others 2020). In addition, many jobs in renewables do not require high educational attainment and have low barriers to entry. In the United States, less than 20 percent of workers in clean-energy production and energy-efficient occupations have college degrees (Muro and others 2019).

Clean-energy infrastructure has been found to be labor intensive in the short term (Garrett-Peltier 2017), although not all green investments create jobs quickly (Popp and others 2020). Some forms of green investment are also not job rich in the long term and require specific skills: for example, windmills are capital intensive and produced in only a few countries. Whereas green investments offer clear global welfare gains, they do not have straightforward distributional effects, especially in low-income countries. Green and environmental investment can be combined with public employment programs to maximize investment's job impact (as with the Green Army projects in Australia or the Conservation Corps in the United States), retrain the labor force, and protect people in the informal sector (for example, tree-planting programs in Ethiopia and Pakistan).

Although creating jobs is a critical objective in this crisis, there may be trade-offs between job quality and job quantity. Supporting the creation of low-wage, low-productivity jobs using public work programs or investment in labor-intensive sectors could bring down unemployment quickly but create fewer high-wage, high-productivity jobs in capital-intensive sectors. Generating high-quality formal jobs will be more difficult if adjusting to the pandemic necessitates permanent changes in the sectoral allocation of the workforce, as such changes would exacerbate skill mismatches between the unemployed and the jobs on offer (OECD 2020a). Governments will need to allocate resources, including resources for digital investment, to train displaced workers and allow them to move to jobs that satisfy pandemic and post-pandemic needs.

Fiscal Multipliers in the COVID-19 Crisis and Recovery

In addition to its direct effect on jobs, public investment has the potential to boost growth and increase employment through the usual macroeconomic interlinkages. A meta-analysis of existing studies

suggests that public investment has larger short-term multipliers than public consumption, taxes, or transfers (April 2020 *World Economic Outlook*; Gechert and Rannenberg 2018). In addition, medium- to long-term multipliers for public investment have often been estimated to be larger than 1.0 (Abiad, Furceri, and Topalova 2016). However, such results are not guaranteed, and these fiscal multipliers are also sometimes estimated to be close to 0 (Ramey 2020). Macroeconomic conditions as well as the quality of the investments undertaken affect their size. Multipliers tend to be larger (from the domestic economy's perspective) in countries less open to trade, as low propensity to import reduces leakage of the demand gains to other countries. Multipliers are also larger in recessions (because resources are idle) and in countries with fixed exchange rate regimes or where central banks have hit their effective lower bound (Ilzetzki, Mendoza, and Végh 2013; Chodorow-Reich 2019).

The quality of investment also matters, as discussed earlier, and this is reflected in macroeconometric estimates. For advanced economies that do well on the World Economic Forum's index of government-spending wastefulness, public investment has been found to have a fiscal multiplier of 0.8 in the first year and above 2.0 at the four-year horizon. But the fiscal multiplier is estimated to be four times smaller for countries with a worse rating (Abiad, Furceri, and Topalova 2016). Differentiating emerging markets and low-income countries by the quality of public investment management, as measured in the IMF's Public Investment Management Assessment (Miyamoto and others 2020), yields similar estimates.

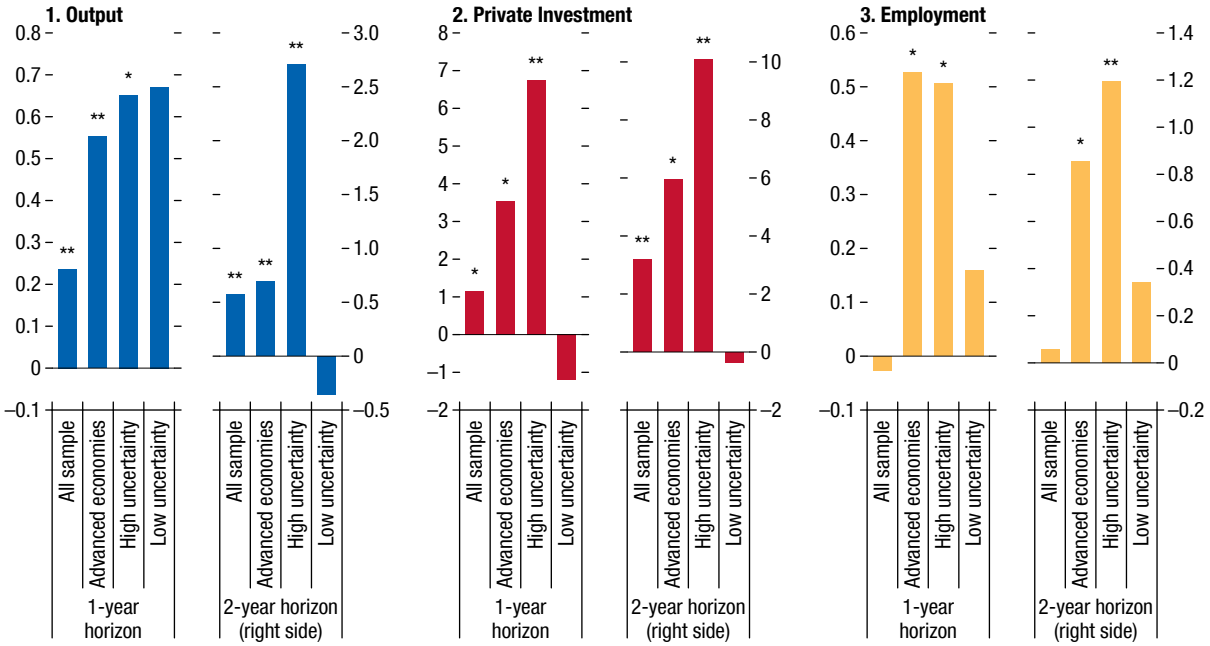
When assessing the possible size of multipliers, important initial conditions and unique features of the COVID-19 crisis should be taken into account:

- *High levels of public debt.* Public debt levels across the world are at historic highs (see Chapter 1). Whereas sovereign spreads have recently remained stable, history suggests that they occasionally rise abruptly as investors lose confidence and refinancing becomes difficult (Mauro and Zhou 2019). High levels of public debt can lower fiscal multipliers (Huidrom and others 2019) if deficit-financed investment leads to greater sovereign spreads and thus higher private financing costs. A sovereign debt model calibrated to represent a typical emerging market or frontier economy with high external debt shows that a strategy of borrowing to invest can lead to crowding-out of the private sector if spreads increase significantly, even if public investment has high returns. Fortunately, smaller scaling-up of investment mitigates this effect (Online Annex 2.1).
- *Supply constraints.* While fiscal multipliers tend to be larger in deeper recessions (Blanchard and Leigh 2013; Fatás and Summers 2018), macroeconomic theory suggests that fiscal multipliers will be lower in phase 2 of the pandemic, when social-distancing policies constrain supply (Guerrieri and others 2020), than in phase 3, when lockdowns will be lifted but slack may remain high.
- *Acute uncertainty*. The trajectory of the virus and the economy has a highly uncertain outlook, especially during the prevaccine phase. This uncertain trajectory could reduce the fiscal multiplier if private spending does not react to a fiscal stimulus as a result of uncertainty and precautionary saving (Alloza 2018; Bloom and others 2018). Alternatively, uncertainty could increase the fiscal multiplier if demand reacts positively to a government's commitment to economic stability (Bachmann and Sims 2012; Berg 2019).
- *Weak balance sheets*. The balance sheets of many firms—especially those whose business models are incompatible with social distancing—are likely to deteriorate severely as a result of COVID-related lockdowns and the extent of the COVID-spurred recession (see October 2020 *Global Financial Stability Report;* Caceres and others 2020). Firms with weak balance sheets may be unable to increase investment (Borensztein and Ye 2018). Highly leveraged firms are likely to use future profits to repay debt rather than to finance new investments (Myers 1977), and default risk increases borrowing costs. Because of frictions in loans and capital markets, cash flow constraints will also affect firms' investment spending, especially that of small firms (Fazzari, Hubbard, and Petersen 1998; Carpenter and Guariglia 2008; Gbohoui 2019).

An empirical exercise covering 72 advanced economies and emerging markets with data on economic uncertainty regarding GDP forecasts, proxied by disagreement among forecasters, sheds light on how the fiscal multiplier depends on macroeconomic uncertainty (Figure 2.8, panel 1). An unanticipated positive shock to public investment of 1 percent of GDP increases the level of output by between 0.25 and

Figure 2.8. Uncertainty and the Fiscal Multiplier of Public Investment in Advanced and Emerging Market Economies

(Effect, in percentage change, of an unexpected increase of public investment by 1 percent of GDP)



Source: IMF staff estimates.

Note: Panel 1: one- and two-year fiscal multipliers of public investment; panel 2: semi-elasticity of private investment to public investment; panel 3: semi-elasticity of employment to public investment. * (resp. **) for statistically significant coefficient at one (resp. two) standard deviation confidence interval. Nonlinear local projections estimated following IMF (2014) and Miyamoto and others (2020) using the model $y_{i,t+k} - y_{i,t} = \alpha_i^k + \gamma_t^k + \beta_1^k G(z_{i,t}) FE_{i,t}^+ + \beta_2^k(1 - G(z_{i,t}))\, FE_{i,t}^+ + \theta^k M_{i,t} + \varepsilon_{i,t}^k$, where *FE* is the unexpected shocks to public investment shocks, in deviation from IMF forecasts (following Auerbach and Gorodnichenko 2012), z is an indicator of the degree of uncertainty, and $G(z_{i,t})$ is the corresponding smooth transition function between different levels of uncertainty. *M* includes lagged GDP growth and lagged shocks. Data cover 72 advanced economies and emerging markets for which standard deviation of GDP forecasts across forecasters were available. See Online Annex 2.5.

0.5 percent in the first year, but the effect after two years is much larger in periods of higher uncertainty. The multiplier could be above 2.0, versus 0.6 for the baseline estimate.

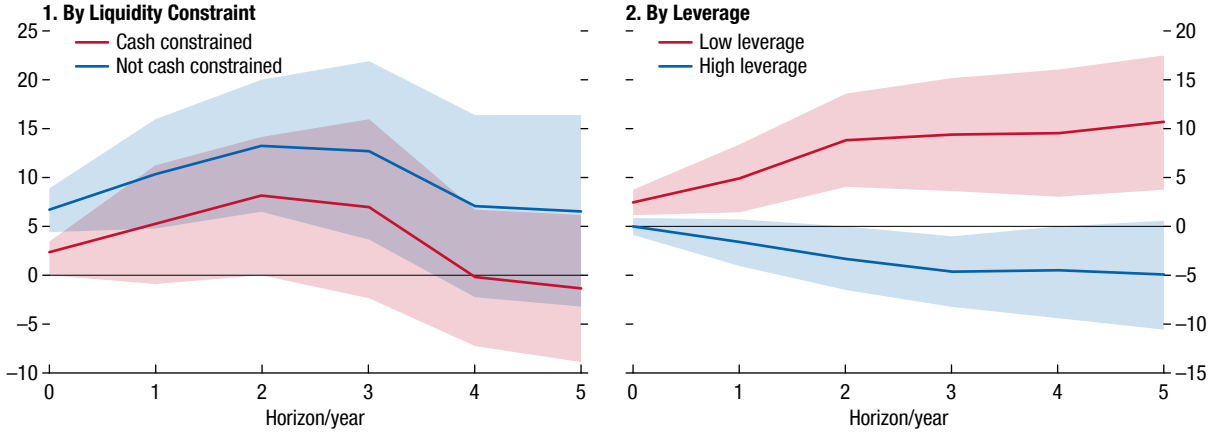
Public investment also has strong effects on employment. The results indicate that in periods of uncertainty, employment increases by between 0.9 and 1.5 percent over two years in response to a shock of 1 percent of GDP to public investment.[7] Applying these lower- and upper-bound estimates to total employment in advanced and emerging market economies (about 2.2 billion workers) shows that increasing public investment by 1 percent of GDP would create between 20 and 33 million jobs. This number is larger than the estimate based on direct job creation (about 7 million jobs when applying the numbers presented in Figure 2.8, panel 3)[8] because of the indirect macroeconomic effects of an investment stimulus.

The results suggest that demand reacts strongly to public investment shocks, possibly because they signal a government's commitment to growth and stability. By raising confidence, a push in public investment is also likely to foster investment from businesses that might otherwise remain cautious in their hiring and

[7]The point estimate in a period of high uncertainty is 1.2, but the 10–90 percent confidence interval is 0.9–1.5.

[8]The number of 7 million jobs is obtained by applying (1) a job content of 4.9 jobs per $1 million invested for advanced economies (unweighted average of 2.3 in construction, 7.5 for green investment, and 4.8 for research and development) to an increase in investment worth 1 percent of the GDP in advanced economies (about $500 billion in 2020) and (2) a job content of 14.7 for emerging markets (three times the estimate for advanced economies, in accordance with the regression estimates for the construction sector) to 1 percent of the GDP of emerging markets (about $320 billion).

Figure 2.9. Response of Private Firms' Net Investment to Public Investment
(Effect, in percentage change, of an increase of public investment by 1 percent)



Source: IMF staff estimates.
Note: The figure shows the cumulative effect on private investment of a 1 percent shock in public investment. It is obtained by nonlinear local projections, estimated based on a database of about 400,000 private firms in eight sectors at NACE level 2, covering 26 advanced economies and 23 emerging market and developing economies. The net investment rate is defined as the annual change in tangible fixed assets. Confidence intervals are set at 95 percent (shaded area). A firm is considered cash constrained if it has at least three consecutive years of negative cash flow. A firm has high leverage if its debt is above the mean of the distribution (based on a logistic function) of the debt-to-asset ratio. See Espinoza, Gamboa, and Sy (2020).

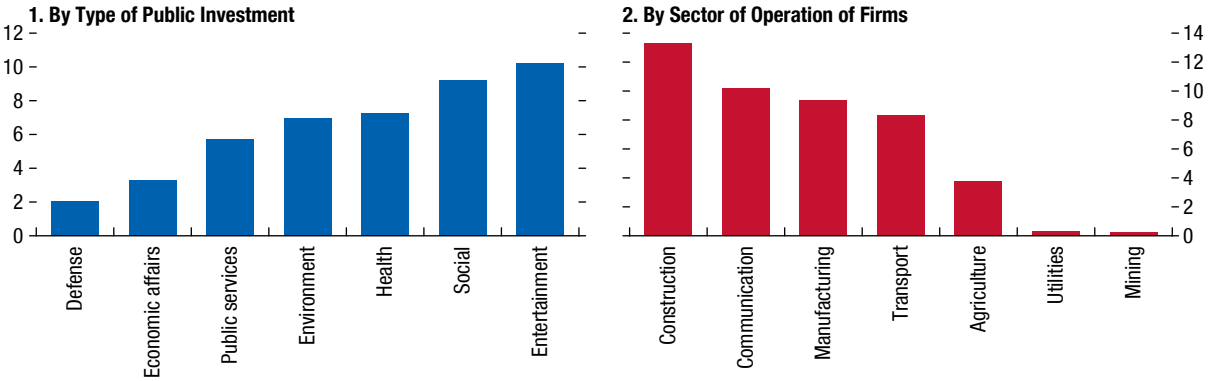
investment decisions.[9] Similar results—that is, fiscal multipliers higher than 2.0 in high-uncertainty periods—have been found for Germany and the United States (Bachmann and Sims 2012; Berg 2019). However, high efficiency and good institutional quality are required to reap such large benefits from public investment. Although the level and nature of uncertainty in this crisis make it difficult to extrapolate from historical patterns, these findings suggest that the public investment multiplier could be larger than in normal times.

Counterbalancing this effect, cash constraints and high levels of corporate leverage stemming from the pandemic's adverse economic impact could lower the fiscal multiplier. Estimates based on data for about 400,000 individual firms show that shocks to public investment tend to increase private investment among both firms with cash constraints and firms without such liquidity constraints (Figure 2.9, panel 1). Nevertheless, the impact is higher for firms that are less financially constrained. Likewise, the response to a public investment shock is stronger for firms with low leverage (Figure 2.9, panel 2). In the first period of the shock, their net investment rates increase by 2.5 percent, and the cumulative impact is 11 percent after six years, whereas for firms with high leverage, the multiplier is marginally insignificant statistically. Liquidity provision to firms and an effective debt resolution system including a streamlined restructuring framework (as discussed in Chapter 1; see also Balibek and others 2020) would not only help preserve the economy's long-term productive capacity but also strengthen fiscal policy's capacity to fight the recession. This mechanism would operate more strongly if the support were targeted to vulnerable but viable firms (October 2020 *Global Financial Stability Report*). In advanced economies, support for firms has been extensive, and it can be expected that the multiplier will be higher than 1.0.

Finally, it is important to consider which sectors would benefit the most from an increase in public investment and what kind of public investment is most efficient at stimulating private investment. An analysis of the firm-level response to public investment shocks that separates public investment by type and distinguishes firms by sectors of activity shows that public investments in health care and other social services are associated with sizable increases in private investment at the one-year horizon (Figure 2.10, panel 1). This complements earlier findings that health care

[9]Online Annex 2.5 provides further details on how public investment shocks affect confidence. The correlation between uncertainty and low growth does not drive the results. Even when growth is high, the multiplier is larger in periods of uncertainty. And when uncertainty is high, there is no statistically significant difference in the size of the multiplier between high- and low-growth periods.

Figure 2.10. The Effect of Public Investment on Private Firms' Net Investment
(Effect, in percentage change, of an increase of public investment by 1 percent; one-year horizon)



Sources: Orbis; and IMF staff calculations.
Note: The effect of public investment on private investment depends both on the type of public investment (panel 1) and on the economic sector in which firms operate (panel 2). Estimated based on a database of about 400,000 private firms in eight sectors at the NACE 2 level covering 26 advanced economies and 23 emerging market and developing economies. See also the note to Figure 2.9.

and social spending have strong Keynesian multipliers because import leakages are small and these sectors are labor intensive (Reeves and others 2013). Crowding-in is stronger for private investment in industries that are critical for the resolution of the health crisis (for example, communications and transport) or for the recovery (for example, construction and manufacturing; see Figure 2.10, panel 2). In addition to the short-term multipliers, the long-term benefits of investing in crisis prevention and mitigation are well documented (World Bank 2013). A survey found that leading experts, including academics and senior Group of Twenty (G20) officials, considered spending on clean-energy infrastructure, energy efficiency upgrades for buildings, and green spaces to have sizable long-term multipliers (Hepburn and others, forthcoming). Investing in adaptation to climate change also has high returns, often exceeding 100 percent (Global Commission on Adaptation 2019; Rozenberg and Fay 2019). Long-term savings from investment in resilience and coping mechanisms can reach 300 percent for droughts and 1,200 percent for storms in sub-Saharan Africa (see Chapter 2 of the April 2020 *Regional Economic Outlook: Sub-Saharan Africa*).

Investment in Resilience and the Role of the International Community

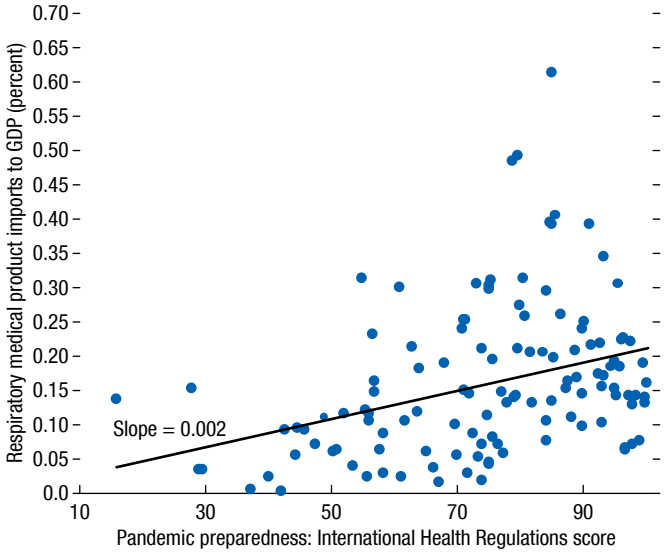
As countries design packages that include additional public investment, two key questions are which sectors they should prioritize and, for the most vulnerable and fiscally constrained countries, what level of financial support could come from the international community.[10] Reallocating spending, increasing investment efficiency, and strengthening domestic revenue mobilization are essential to make room for additional investments, but official aid will also be needed to support low-income developing countries through the crises they are facing. Supporting vulnerable and fiscally constrained countries would help reduce the dramatic impact of crises on poverty.

Fighting COVID-19 is the most urgent priority. At the global level, a significant step has been taken in committing amounts for R&D in vaccine and therapeutics (Chapter 1). For the pandemic to subside and the global recovery to be sustained, universal access to COVID-19 vaccines or treatments at low cost will be indispensable. While developing a safe vaccine may still take some time, countries need to start planning vaccine procurement and delivery immediately to ensure access at the right time (OECD 2020b). According to the Gates Foundation, the cost of global distribution of vaccines has been estimated in the range of about $25 billion,[11] but wide and rapid

[10]International cooperation initiatives that help relax countries' financing constraints, such as the Debt Service Suspension Initiative sponsored by the World Bank Development Committee, the IMF, and the G20 Finance Ministers, can play a significant role in participating countries.

[11]Bloomberg interview with Joe Cerrell, Managing Director of Global Policy and Advocacy at the Gates Foundation (Paton 2020).

Figure 2.11. Spending on Medical Products and World Health Organization Index of Pandemic Preparedness
(Percent of GDP)



Sources: World Health Organization, International Health Regulations; UN Comtrade; and IMF staff estimates.
Note: The figure shows the correlation between the International Health Regulations index and spending on imported medical products such as respiration apparatus, X-ray equipment, protective glasses, hand sanitizer, and surgical gloves (see Online Annex 2.6).

access will reduce the overall cost of the crisis by multiple times this amount. To reduce the risk of future crises, it would be crucial for such spending not to crowd out R&D spending to fight other zoonotic infectious diseases, an amount previously estimated to be $4.5 billion annually (Commission on a Global Health Risk Framework for the Future and National Academy of Medicine 2016).

At the national level, the correlation between a country's World Health Organization (WHO) index of pandemic preparedness and spending on imported medical products suggests that increasing preparedness by 10 index points would cost about 0.02 percent of GDP per year in medical products (Figure 2.11). Public investment in health care spending is also higher by about 0.1 to 0.2 percent of GDP in countries that score 10 points higher on the same WHO index (Online Annex 2.6).

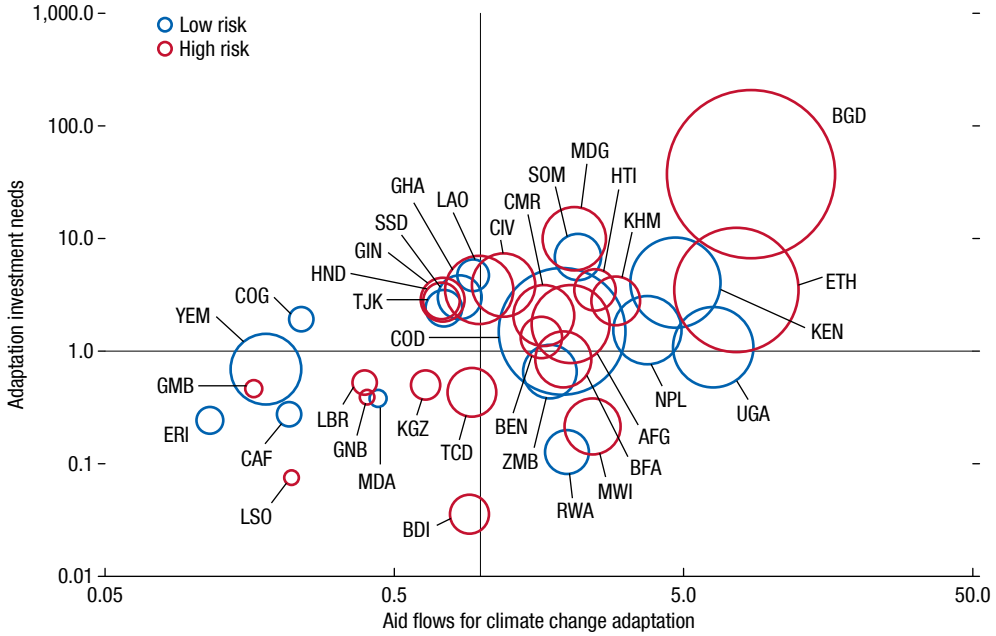
Digital infrastructure needs to be developed urgently to mitigate the effect of the COVID-19 crisis on the economy and human capital. Half of the 1.5 billion students affected by COVID-related school closures do not have access to a computer, and more than 40 percent have no internet access at home (UNESCO 2020). Low-income developing countries are most in need of digital infrastructure investment: only about 35 percent of the population in developing countries has access to the internet (versus about 80 percent in advanced economies). Africa's average broadband penetration was only 25 percent in 2018. Access to reliable electricity is also a major constraint on the expansion of digital infrastructure in Africa. Sub-Saharan Africa has the lowest household electrification rate in the world, averaging 44 percent of the population in 2017 (half of the world average; Broadband Commission 2019). Within sub-Saharan Africa, there is a digital divide too: more than half of the population is engaged in e-commerce in some countries, whereas the share in other countries remains below 15 percent (April 2020 *Regional Economic Outlook: Sub-Saharan Africa*).

Looking ahead, rapid technological progress will transform economic and social structures (Allen and Macomber 2020). Improvements in digital infrastructure will be essential to harness these changes, to strengthen government capacity, and to adapt economies to the disruptions the technological revolution could entail, such as income polarization (Autor, Dorn, and Hanson 2016; October 2017 *Fiscal Monitor*). Spending on digital infrastructure also provides an opportunity to boost government revenues (see April 2018 *Fiscal Monitor*) and generate jobs (for example, extending fiber-optic cable). The growing digital divides across and within countries show that public funds would be required in both low-income developing countries' and advanced economies' lagging areas (Shenglin and others 2017).

Global warming is perhaps the most significant crisis that is looming, threatening our planet as well as living standards around the world. To respond to this threat, investment in adaptation is urgent. A new IMF staff assessment based on World Bank data (Box 2.1) finds that low-income countries need about $25 billion annually (1.1 percent of GDP) in public investment for adaptation.

Official creditors are already allocating aid for climate change adaptation: the correlation between IMF estimates of needs and official aid for adaptation to climate change is about 56 percent. However, annual aid to low-income developing countries was $10 billion in 2018 and would thus have to more than double to fulfill the needs (Figure 2.12). Although private finance for cleaner activities has increased rapidly at the global

Figure 2.12. Public Investment in Adaptation to Climate Change: Needs and Aid Flows
(In 100 million US dollars, log scale)



Sources: Bellon (forthcoming); OECD; and IMF staff estimates.
Note: The size of the bubble is the population size. Aid flows for climate change adaptation (horizontal axis, in log scale) are correlated with the IMF estimates of adaptation needs (vertical axis, in log scale). The correlation between aid and needs in ratio to GDP is also high, at 0.57. The United Nations University Institute for Environment and Human Security World Risk Index for 2018 is used to measure natural disaster risk. The threshold suggested by the World Risk Report 2018 for high-risk and very-high-risk country, at 7.14 percent, is used to differentiate countries into high and low risk. See also Box 2.1 and Online Annex 2.6. Data labels use International Organization for Standardization (ISO) country codes.

level since 2008, it is unfortunately less viable for these countries, owing to their limited access to capital markets.[12]

Conclusion

In response to the COVID-19 crisis, governments around the world are taking extraordinary measures to save lives and limit the sharpest and deepest global economic collapse in contemporary history. Public investment is urgently needed in sectors critical to controlling the pandemic—in particular, health care, schools, digital infrastructure, safe buildings, and safe transportation. In addition, public investment should play an important role in fiscal packages allocated for the recovery, to promote job creation and private investment in the near term and to increase productivity, make progress toward the SDGs, and strengthen resilience to crises in the longer term.

Public investment is a potentially powerful element of any stimulus package. It would create millions of jobs directly in the short term and could also create many additional jobs indirectly and in the longer term. The unique features of the COVID-19 crisis make it difficult to anticipate the size of the fiscal multiplier that would result from such investment. But it is reasonable to expect that in advanced economies and several emerging market economies, the multiplier will be larger than in normal times and well above 1.0, if projects chosen are of good quality, because resources are idle, interest rates are stuck at the effective lower bound, and fiscal packages may increase confidence in the recovery.

The macroeconomic case for public investment is not as strong in those emerging market economies and low-income countries that face tighter financing constraints, but the investment needs to meet the SDGs' call for reallocating spending, enhancing domestic revenue mobilization, and improving investment

[12]Green bond issuance has grown significantly in recent years, from an average annual issuance of $52 billion between 2008 and 2018 to a total issuance of $255 billion for 2019 alone (Climate Bonds Initiative 2019; Fatin 2020). Other resilience-oriented financing vehicles that fund coastal restoration, marine biodiversity, sustainable fisheries, and pollution control could be explored (such as blue bonds).

efficiency so as to safeguard as much investment as is compatible with other key spending priorities. Strengthening revenue administrations and reforming tax policy are essential to scale up domestic revenue mobilization. Vulnerable and fiscally constrained countries will also need international support to weather the crises they are facing. In all countries, policymakers can increase the impact of public investment on jobs and private sector activity by taking public health measures that bring COVID-19 under control and allow safe reopening and easing of supply constraints, improving mechanisms for private debt resolution, and strengthening public investment management institutions.

To be timely and efficient, any investment scaling-up must meet several conditions. First, priority should be given to maintenance spending and to existing projects, because designing new or complex projects too quickly will impede investment quality. Second, governments should identify a pipeline of projects that can be carefully appraised and ready for implementation within the next 24 months. A pipeline with a longer horizon is also needed for more complex projects that will address the new priorities stemming from structural transformations associated with the pandemic, particularly projects that increase resilience to crises and climate change. Third, the procedures for selection and procurement of public investment projects should be strengthened immediately. Project outcomes are more often disappointing, and short- and long-term fiscal multipliers are lower, in countries with weak public investment management practices.

Satisfying these conditions may not be possible for every project in every country, especially because responding to such a multifaceted crisis is placing tremendous pressure on governments. Although the global fall in interest rates has set a low bar for investment projects to be beneficial, the bar is higher to pass when governments with limited resources face competing spending priorities. Investments that contribute to the resolution of the COVID-19 crisis, can create jobs quickly, and help countries become more resilient—including in respect to preparing for global warming—should be given priority and supported by the international community.

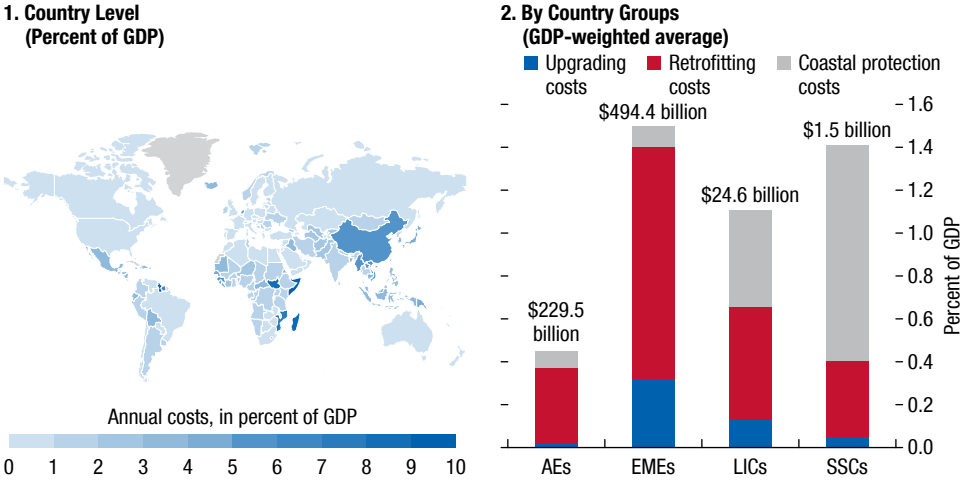
Box 2.1. Estimating Public Investment Needs for Climate Change Adaptation

Building protection and strengthening physical assets are key to addressing the challenges natural disasters and climate change pose and thus to making progress toward the Sustainable Development Goals. Countries should consider three types of adaptation investment: (1) upgrading investment projects, (2) retrofitting existing assets, and (3) building new coastal protection infrastructure. This list excludes certain other investment needs, such as preparing for droughts and other temperature changes, but such investments, although needed, are substantially less expensive (Global Commission on Adaptation 2019). This box presents cost estimates for public investment for climate change adaptation by country and income group, as well as the methodology underpinning IMF staff estimates.

For new infrastructure projects in all sectors subject to hazards (energy, water, transportation, and social sector facilities), the additional up-front cost to increase resilience standards is estimated to average about 15 percent of the typical initial cost (Rozenberg and Fay 2019). Retrofitting assets is substantially more expensive and would incur costs greater than 50 percent of the asset value. Countries with exposed coasts should also consider building new infrastructure, such as dikes, dedicated to protecting and reducing risks for other assets.

High returns to adaptation imply that, over the medium term, an average annual investment of 1 percent of GDP globally would be beneficial. These costs exceed previous estimates (see the April 2020 *Fiscal Monitor*; UNEP 2016; and Global Commission on Adaptation 2019) because they encompass more types of investment (for example, investment dedicated to coastal protection and the retrofitting of exposed assets) and because they extend coverage to all countries. Costs are estimated using a bottom-up approach: the analysis uses data on the share of exposed assets by country, constructed thanks to two detailed global maps, one of natural hazards and another of road and railway asset data (Koks and others 2019). Upgrading and retrofitting costs are based on this evaluation of exposed assets and the engineering techniques known to improve resilience (see Online Annex 2.7).

Figure 2.1.1. Annual Upgrading, Retrofitting, and Protection Investment Costs



Sources: Nicholls and others 2019; Rozenberg and Fay 2019; IMF Investment and Capital Stock Dataset 2019; IMF World Economic Outlook database; and IMF staff estimates.
Note: Upgrading costs are estimated using public investment projections, the share of exposed assets, and a unit cost of 15 percent. Retrofitting costs are calculated using the share of exposed public assets and a unit cost of 50 percent, spreading costs equally over 10 years. Coastal protection costs are based on global high-definition representations of coastal zones and the climate model in Nicholls and others (2019). The boundaries, colors, denominations, and any other information shown on the maps do not imply, on the part of the International Monetary Fund, any judgment on the legal status of any territory or any endorsement or acceptance of such boundaries. AEs = advanced economies; EMEs = emerging market economies; LICs = low-income countries; SSCs = small-state countries.

Box 2.1. ***(continued)***

Disparities across countries in needed adaptation investment are vast, and low-income countries and small states face greater challenges. Countries in Asia and the Pacific, Africa, and the Caribbean face above-average costs because a large share of their existing and future infrastructure is exposed to climate hazards (Figure 2.1.1, panel 1). Across the globe, coastal protection is most expensive for low-income countries and small states. Low-income countries and emerging markets can encounter large upgrading costs because these countries typically have more investment projects. By contrast, retrofitting costs are more evenly distributed, as even advanced economies face substantial expenses (Figure 2.1.1, panel 2).

References

Abiad, A., D. Furceri, and P. Topalova. 2016. "The Macroeconomic Effects of Public Investment: Evidence from Advanced Economies." *Journal of Macroeconomics* 50: 224–40.

Allen, J. G., and J. D. Macomber. 2020. *Healthy Buildings: How Indoor Spaces Drive Performance and Productivity.* Cambridge, MA: Harvard University Press.

Alloza, M. 2018. "Is Fiscal Policy More Effective in Uncertain Times or during Recessions?" Working Paper, Banco de España, Madrid.

American Society of Civil Engineers (ASCE). 2018. "Infrastructure Report Card." ASCE, Reston, VA.

Arezki, R., P. Bolton, S. Peters, F. Samama, and J. Stiglitz. 2017. "From Global Savings Glut to Financing Infrastructure." *Economic Policy* 32 (90): 221–61.

Auerbach, A., and Y. Gorodnichenko. 2012. "Measuring the Output Responses to Fiscal Policy." *American Economic Journal: Economic Policy* 4 (2): 1–27.

Autor, D. H., D. Dorn, and G. H. Hanson. 2016. "The China Shock: Learning from Labor-Market Adjustment to Large Changes in Trade." *Annual Review of Economics* 8: 205–40.

Avellan, L. M., V. G. Cavalcanti, and G. Lotti. 2019. "Is Shorter Project Preparation Time Associated with Longer Project Execution Time?" IDB Technical Note 714, Inter-American Development Bank, Washington, DC.

Bachmann, R., and E. Sims. 2012. "Confidence and the Transmission of Government Spending Shocks." *Journal of Monetary Economics* 59 (3): 235–49.

Balibek, E., P. Medas, J. Ralyea, and S. Saxena. 2020. "Public Sector Support to Firms." Special Series on COVID-19, International Monetary Fund, Washington, DC.

Baum, A., T. Mogues, and G. Verdier. 2020. "Getting the Most from Public Investment." In *Well Spent: How Strong Infrastructure Governance Can End Waste in Public Investment*, edited by G. Schwartz, M. Fouad, T. Hansen, and G. Verdier. Washington, DC: International Monetary Fund.

Bellon, M. Forthcoming. "Fiscal Policies for Climate Change Adaptation: Opportunities and Challenges." IMF Working Paper, International Monetary Fund, Washington, DC.

Berg, T. 2019. "Business Uncertainty and the Effectiveness of Fiscal Policy in Germany." *Macroeconomic Dynamics* 23 (4): 1442–70.

Blanchard, O., and D. Leigh. 2013. "Growth Forecast Errors and Fiscal Multipliers." *American Economic Review* 103 (3): 117–20.

Blazey, A., F. Gonguet, and P. Stokoe. 2020. "Maintaining and Managing Public Infrastructure Assets." In *Well Spent: How Strong Infrastructure Governance Can End Waste in Public Investment,* edited by G. Schwartz, M. Fouad, T. Hansen, and G. Verdier. Washington, DC: International Monetary Fund.

Bloom, N., M. Floetotto, N. Jaimovich, I. Saporta-Eksten, and S. J. Terry. 2018. "Really Uncertain Business Cycles." *Econometrica* 86 (3): 1031–65.

Borensztein, E., and L. S. Ye. 2018. "Corporate Debt Overhang and Investment: Firm-Level Evidence." Working Paper 8553, World Bank, Washington, DC.

Bourguignon, F., and M. Sundberg. 2007. "Aid Effectiveness—Opening the Black Box." *American Economic Review* 97 (2): 316–21.

Briggs, R. C. 2019. "Results from Single-Donor Analyses of Project Aid Success Seem to Generalize Pretty Well across Donors." *Review of International Organizations* 15 (4): 947–63.

Broadband Commission. 2019. *Connecting Africa through Broadband: A Strategy for Doubling Connectivity by 2021 and Reaching Universal Access by 2030.* Broadband Commission Working Group on Broadband for All: A "Digital Infrastructure Moonshot" for Africa. Geneva: Broadband Commission for Sustainable Development.

Broccolini, C., G. Lotti, A. Maffioli, A. F. Presbitero, and R. Stucchi. Forthcoming. "Mobilization Effects of Multilateral Development Banks." *World Bank Economic Review*.

Buffie, E., A. Berg, C. Pattillo, R. Portillo, and F. Zanna. 2012. "Public Investment, Growth and Debt Sustainability: Putting Together the Pieces." IMF Working Paper 12/144, International Monetary Fund, Washington, DC.

Caceres, C., D. Cerdeiro, S. Tambunlertchai, and D. Pan. 2020. "U.S. Corporate Stress Tests." IMF Working Paper, International Monetary Fund, Washington, DC.

Caceres, C., V. Guzzo, and M. Segoviano. 2010. "Sovereign Spreads: Global Risk Aversion, Contagion or Fundamentals?" IMF Working Paper 10/120, International Monetary Fund, Washington, DC.

Calderón, C., E. Moral-Benito, and L. Servén. 2015. "Is Infrastructure Capital Productive? A Dynamic Heterogeneous Approach." *Journal of Applied Econometrics* 30: 177–98.

Carpenter, R., and A. Guariglia. 2008. "Cash Flow, Investment, and Investment Opportunities: New Tests Using UK Panel Data." *Journal of Banking and Finance* 32: 1894–1906.

Chaponda, T., C. Matsumoto, and L. Murara. 2020. "The Public Investment Management Assessment Framework: An Overview." In *Well Spent: How Strong Infrastructure Governance Can End Waste in Public Investment,* edited by G. Schwartz, M. Fouad, T. Hansen, and G. Verdier. Washington, DC: International Monetary Fund.

Chelsky, J., C. Morel, and M. Kabir. 2013. "Investment Financing in the Wake of the Crisis: The Role of Multilateral Development Banks." Economic Premise Work Report 78974, World Bank, Washington, DC.

Chiou, L., and C. Tucker. 2020. "Social Distancing, Internet Access and Inequality." NBER Working Paper 26982, National Bureau of Economic Research, Cambridge, MA.

Chodorow-Reich, G. 2019. "Geographic Cross-Sectional Fiscal Spending Multipliers: What Have We Learned?" *American Economic Journal: Economic Policy* 11 (2): 1–34.

Climate Bonds Initiative. 2019. *Green Bonds: The State of the Market 2018*. London.

Coalition of Finance Ministers for Climate Action. 2020. "Better Recovery, Better World: Resetting Climate Action in the Aftermath of the COVID-19 Pandemic." Group of Experts Report, Coalition of Finance Ministers for Climate Action, Washington, DC.

Commission on a Global Health Risk Framework for the Future and National Academy of Medicine. 2016. *The Neglected Dimension of Global Security: A Framework to Counter Infectious Disease Crises.* Washington, DC: National Academies Press.

Dao, M. C., M. M. Das, Z. Koczan, and W. Lian. 2017. "Why Is Labor Receiving a Smaller Share of Global Income? Theory and Empirical Evidence." IMF Working Paper 17/169, International Monetary Fund, Washington, DC.

Denizer, C., D. Kaufmann, and A. Kraay. 2013. "Good Countries or Good Projects? Macro and Micro Correlates of World Bank Project Performance." *Journal of Development Economics* 105: 288–302.

Edwards, S. 2015. "Economic Development and the Effectiveness of Foreign Aid: A Historical Perspective." *Kyklos* 68 (3): 277–316.

Eggertsson, G. B., N. R. Mehrotra, and J. A. Robbins. 2019. "A Model of Secular Stagnation: Theory and Quantitative Evaluation." *American Economic Journal: Macroeconomics* 11 (1): 1–48.

Espinoza, R., J. Gamboa, and M. Sy. 2020. "The Multiplier Effect of Public Investment: The Role of Corporate Balance Sheet." IMF Working Paper, International Monetary Fund, Washington, DC.

Fabrizio, S., D. Furceri, R. Garcia-Verdu, B. G. Li, S. V. Lizarazo, M. Mendes Tavares, F. Narita, and A. Peralta-Alva. 2017. "Macro-structural Policies and Income Inequality in Low-Income Developing Counties." IMF Staff Discussion Note 17/01, International Monetary Fund, Washington, DC.

Fatás, A., and L. H. Summers. 2018. "The Permanent Effects of Fiscal Consolidations." *Journal of International Economics* 12: 238–50.

Fatin, L. 2020. "Record 2019 GB Issuance 255bn! EU Largest Market: US, China, France Lead Top 20 National Rankings: Sovereign GBs & Certified Bonds Gain Momentum." *Climate Bonds Connected* (blog), January 16. https://www.climatebonds.net/2020/01/record-2019-gb-issuance-255bn-eu-largest-market-us-china-france-lead-top-20-national.

Fazzari, S., G. Hubbard, and B. Petersen. 1998. "Financing Constraints and Corporate Investment." *Brooking Papers on Economic Activity* 1: 141–95.

Flyvbjerg, B. 2009. "Survival of the Unfittest: Why the Worst Infrastructure Gets Built—And What We Can Do about It." *Oxford Review of Economic Policy* 25 (3): 344–67.

Garin, A. 2019. "Putting America to Work, Where? Evidence on the Effectiveness of Infrastructure Construction as a Locally Targeted Employment Policy." *Journal of Urban Economics* 111: 108–31.

Garrett-Peltier, H. 2017. "Green versus Brown: Comparing the Employment Impacts of Energy Efficiency, Renewable Energy, and Fossil Fuels Using an Input-Output Model." *Economic Modelling* 61: 439–47.

Gaspar, V., D. Amaglobeli, M. Garcia-Escribano, D. Prady, and M. Soto. 2019. "Fiscal Policy and Development: Human, Social, and Physical Investment for the SDGs." IMF Staff Discussion Note 19/03, International Monetary Fund, Washington, DC.

Gbohoui, W. 2019. "Do Temporary Business Tax Cuts Matter? A General Equilibrium Analysis." IMF Working Paper 19/29, International Monetary Fund, Washington, DC.

Gechert, S., and A. Rannenberg. 2018. "Which Fiscal Multipliers Are Regime-Dependent? A Meta-regression Analysis." *Journal of Economic Surveys* 32 (4): 1160–82.

General Accountability Office (GAO). 2011. "Funding Used for Transportation Infrastructure Projects, but Some Requirements Proved Challenging." Document GAO-11–600, GAO, Washington, DC.

Global Commission on Adaptation. 2019. *Adapt Now: A Global Call for Leadership on Climate Resilience.* Washington, DC: World Resources Institute.

Global Infrastructure Hub (GIH). 2019. "Leading Practices in Governmental Processes Facilitating Infrastructure Project Preparation." Sydney, Australia. https://www.gihub.org/resources/publications/leading-practices-in-governmental-processes-facilitating-infrastructure-project-preparation/.

Guerrieri, V., G. Lorenzoni, L. Straub, and I. Werning. 2020. "Macroeconomic Implications of COVID-19: Can Negative Supply Shocks Cause Demand Shortages?" Becker Friedman Institute for Economics Working Paper 2020–35, University of Chicago, Chicago.

Gupta, S., A. Kangur, C. Papageorgiou, and A. Wane. 2014. "Efficiency-Adjusted Public Capital and Growth." *World Development* 57: 164–78.

Gurara, D., K. Kpodar, A. F. Presbitero, and D. Tessema. 2020. "On the Capacity to Absorb Public Investment: How Much Is Too Much?" IMF Working Paper 20/48, International Monetary Fund, Washington, DC.

Hellebrandt, T., and P. Mauro. 2016. *World on the Move: Consumption Patterns in a More Equal Economy.* Policy Analyses in International Economics 105. Washington, DC: Peterson Institute for International Economics.

Hepburn, C., B. O'Callaghan, N. Stern, J. Stiglitz, and D. Zenghelis. Forthcoming. "Will COVID-19 Fiscal Recovery Packages Accelerate or Retard Progress on Climate Change?" *Oxford Review of Economic Policy* 36 (S1).

Huidrom, R., M. A. Kose, J. J. Lim, and F. L. Ohnsorge, 2019. "Why Do Fiscal Multipliers Depend on Fiscal Positions?" CAMA Working Paper 28/2019, Centre for Applied Macroeconomic Analysis, Australian National University, Canberra.

Ilzetzki, E., E. G. Mendoza, and C. A. Végh. 2013. "How Big (Small?) Are Fiscal Multipliers?" *Journal of Monetary Economics* 60 (2): 239–54.

International Energy Agency (IEA). 2020. *Sustainable Recovery*. World Economic Outlook Special Report in Collaboration with the International Monetary Fund. Paris. https://www.iea.org/reports/sustainable-recovery.

International Monetary Fund (IMF). 2014. *World Economic Outlook*. "Legacies, Clouds, Uncertainties" (Chapter 3). Washington, DC.

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

International Monetary Fund (IMF). 2019. "Article IV Consultation for China." Washington, DC.

Isham, J., and D. Kaufmann. 1999. "The Forgotten Rationale for Policy Reform: The Productivity of Investment Projects." *Quarterly Journal of Economics* 114 (1): 149–84.

Jones, G., and D. M. Rothschild. 2011. "No Such Thing as Shovel-Ready: The Supply Side of the Recovery Act." Mercatus Center Working Paper 11–18, George Mason University, Fairfax, VA.

Kingdom, B., R. Liemberger, and P. Marin. 2006. "The Challenge of Reducing Non-Revenue Water in Developing Countries: How the Private Sector Can Help—A Look at Performance-Based Service Contracting." Water Supply and Sanitation Sector Board Discussion Series Paper 8, World Bank, Washington, DC.

Klakegg, O. J., T. Williams, and A. T. Shiferaw. 2016. "Taming the Trolls: Major Public Projects in the Making." *International Journal of Project Management* 34 (2): 282–96.

Koks, E. E., J. Rozenberg, C. Zorn, M. Tariverdi, M. Vousdoukas, S. A. Fraser, J. W. Hall, and S. Hallegatte. 2019. "A Global Multi-hazard Risk Analysis of Road and Railway Infrastructure Assets." *Nature Communications* 10 (1): 1–11.

Leduc, S., and D. Wilson. 2012. "Roads to Prosperity or Bridges to Nowhere? Theory and Evidence on the Impact of Public Infrastructure Investment." In *NBER Macroeconomics Annual* 27. Cambridge, MA: National Bureau of Economic Research.

Limodio, N. 2019. "Bureaucrat Allocation in the Public Sector: Evidence from the World Bank." IGIER Working Paper 655, Innocenzo Gasparini Institute for Economic Research, Bocconi University, Milan.

Lizarazo, S. V. 2013. "Default Risk and Risk Averse International Investors." *Journal of International Economics* 89 (2): 317–30.

Mauro, P., and Zhou, J. 2019. "$r - g < 0$: Can We Sleep More Soundly?" Paper presented at the Twentieth Jacques Polak Annual Research Conference, International Monetary Fund, Washington, DC, November 7–8.

Miyamoto, H., N. Gueorguiev, J. Honda, A. Baum, and S. Walker. 2020. "Growth Impact of Public Investment and the Role of Infrastructure Governance." In *Well Spent: How Strong Infrastructure Governance Can End Waste in Public Investment*, edited by G. Schwartz, M. Fouad, T. Hansen, and G. Verdier. Washington, DC: International Monetary Fund.

Monteiro, R., I. Rial, and E. Tandberg. 2020. "Fiscal Risks in Infrastructure." In *Well Spent: How Strong Infrastructure Governance Can End Waste in Public Investment,* edited by G. Schwartz, M. Fouad, T. Hansen, and G. Verdier. Washington, DC: International Monetary Fund.

Muro, M., A. Tomer, R. Shivaram, and J. Kane. 2019. "Advancing Inclusion through Clean Energy Jobs." Metropolitan Policy Program, Brookings Institution, Washington, DC.

Myers, S. 1977. "Determinants of Corporate Borrowing." *Journal of Financial Economics* 5 (2): 147–75.

Nicholls, R. J., J. Hinkel, D. Lincke, and T. van der Pol. 2019. "Global Investment Costs for Coastal Defense through the 21st Century." Policy Research Working Paper 8745, World Bank, Washington, DC.

Organisation for Economic Co-operation and Development (OECD). 2020a. "Skill Measures to Mobilise the Workforce during the COVID-19 Crisis." Policy Brief, Paris.

Organisation for Economic Co-operation and Development (OECD). 2020b. "Treatments and a Vaccine for COVID-19: The Need for Coordinating Policies on R&D, Manufacturing and Access." Policy Brief, Paris.

Paton, J. 2020. Interview with Joe Cerrell (Managing Director of Global Policy and Advocacy, Gates Foundation). In "Nations Back Push for Universal Access to COVID-19 Vaccines." *Bloomberg*, May 5. https://www.bloomberg.com/news/articles/2020-05-05/nations-back-push-for-universal-access-to-covid-19-vaccines.

Pattanayak, S., and C. Verdugo-Yepes. 2020. Protecting Public Infrastructure from Vulnerabilities to Corruption: A Risk-Based Approach." In *Well Spent: How Strong Infrastructure Governance Can End Waste in Public Investment*, edited by G. Schwartz, M. Fouad, T. Hansen, and G. Verdier. Washington, DC: International Monetary Fund.

Popp, D., F. Vona, G. Marin, and Z. Chen. 2020. "The Employment Impact of Green Fiscal Push: Evidence from the American Recovery Act." NBER Working Paper 27321, National Bureau of Economic Research, Cambridge, MA.

Presbitero, A. 2016. "Too Much and Too Fast? Public Investment Scaling-Up and Absorptive Capacity." *Journal of Development Economics* 120: 17–31.

Pritchett, L. 2000. "The Tyranny of Concepts: CUDIE (Cumulated, Depreciated, Investment Effort) Is Not Capital." *Journal of Economic Growth* 5 (4): 361–84.

Rachel, L., and L. H. Summers. 2019. "On Falling Neutral Real Rates, Fiscal Policy, and the Risk of Secular Stagnation." *Brookings Papers on Economic Activity* (Spring): 1–76.

Ramey, V. A. 2020. "The Macroeconomic Consequences of Infrastructure Investment." NBER Working Paper 27625, National Bureau of Economic Research, Cambridge, MA.

Reeves, A., S. Basu, M. McKee, C. Meissner, and D. Stuckler. 2013. "Does Investment in the Health Sector Promote or Inhibit Economic Growth?" *Globalization and Health* 9, art. 43.

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

Schwartz, J. Z., L. A. Andres, and G. Dragoiu. 2009. *Crisis in Latin America: Infrastructure Investment, Employment and the Expectations of Stimulus.* Washington, DC: World Bank.

Schwartz, G., M. Fouad, T. Hansen, and G. Verdier, editors. 2020. *Well Spent: How Strong Infrastructure Governance Can End Waste in Public Investment.* Washington, DC: International Monetary Fund.

Shenglin, B., F. Simonelli, Z. Ruidong, R. Bosc, and L. Wenwei. 2017. "Digital Infrastructure: Overcoming the Digital Divide in Emerging Economies." *G20 Insights* 3. https://www.g20-insights.org/policy_briefs/digital-infrastructure-overcoming-digital-divide-emerging-economies/.

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

United Nations Educational, Scientific and Cultural Organisation (UNESCO). 2020. "Startling Disparities in Digital Learning Emerge as COVID-19 Spreads: UN Education Agency." *UN News*, April 21. https://news.un.org/en/story/2020/04/1062232.

United Nations Environment Programme (UNEP). 2016. *Adaptation Finance Gap Report 2016.* Nairobi, Kenya.

Wang, H., I. Al-Saadi, P. Lu, and A. Jasim. 2020. "Quantifying Greenhouse Gas Emission of Asphalt Pavement Preservation at Construction and Use Stages Using Life Cycle Assessment." *International Journal of Sustainable Transportation* 14 (1): 25–34.

Warner, A. 2014. "Public Investment as an Engine of Growth." IMF Working Paper 14/148, International Monetary Fund, Washington, DC.

Wilson, D. J. 2012. "Fiscal Spending Jobs Multipliers: Evidence from the 2009 American Recovery and Reinvestment Act." *American Economic Journal: Economic Policy* 4 (3): 251–82.

World Bank. 2013. *World Development Report 2014: Risk and Opportunity Managing Risk for Development.* Washington, DC.

Xiao, Y., D. D'Angelo, and N.-P. T. Lê. 2020. "Infrastructure Investment and Sustainable Development Goals." In *Well Spent: How Strong Infrastructure Governance Can End Waste in Public Investment*, edited by G. Schwartz, M. Fouad, T. Hansen, and G. Verdier. Washington, DC: International Monetary Fund.

COUNTRY ABBREVIATIONS

Code	Country name
AFG	Afghanistan
AGO	Angola
ALB	Albania
ARE	United Arab Emirates
ARG	Argentina
ARM	Armenia
ATG	Antigua and Barbuda
AUS	Australia
AUT	Austria
AZE	Azerbaijan
BDI	Burundi
BEL	Belgium
BEN	Benin
BFA	Burkina Faso
BGD	Bangladesh
BGR	Bulgaria
BHR	Bahrain
BHS	Bahamas, The
BIH	Bosnia and Herzegovina
BLR	Belarus
BLZ	Belize
BOL	Bolivia
BRA	Brazil
BRB	Barbados
BRN	Brunei Darussalam
BTN	Bhutan
BWA	Botswana
CAF	Central African Republic
CAN	Canada
CHE	Switzerland
CHL	Chile
CHN	China
CIV	Côte d'Ivoire
CMR	Cameroon
COD	Congo, Democratic Republic of the
COG	Congo, Republic of
COL	Colombia
COM	Comoros
CPV	Cabo Verde
CRI	Costa Rica
CYP	Cyprus
CZE	Czech Republic
DEU	Germany
DJI	Djibouti
DMA	Dominica
DNK	Denmark

Code	Country name
DOM	Dominican Republic
DZA	Algeria
ECU	Ecuador
EGY	Egypt
ERI	Eritrea
ESP	Spain
EST	Estonia
ETH	Ethiopia
FIN	Finland
FJI	Fiji
FRA	France
FSM	Micronesia, Federated States of
GAB	Gabon
GBR	United Kingdom
GEO	Georgia
GHA	Ghana
GIN	Guinea
GMB	Gambia, The
GNB	Guinea-Bissau
GNQ	Equatorial Guinea
GRC	Greece
GRD	Grenada
GTM	Guatemala
GUY	Guyana
HKG	Hong Kong Special Administrative Region
HND	Honduras
HRV	Croatia
HTI	Haiti
HUN	Hungary
IDN	Indonesia
IND	India
IRL	Ireland
IRN	Iran
IRQ	Iraq
ISL	Iceland
ISR	Israel
ITA	Italy
JAM	Jamaica
JOR	Jordan
JPN	Japan
KAZ	Kazakhstan
KEN	Kenya
KGZ	Kyrgyz Republic
KHM	Cambodia
KIR	Kiribati
KNA	St. Kitts and Nevis

Code	Country name
KOR	Korea
KWT	Kuwait
LAO	Lao P.D.R.
LBN	Lebanon
LBR	Liberia
LBY	Libya
LCA	St. Lucia
LKA	Sri Lanka
LSO	Lesotho
LTU	Lithuania
LUX	Luxembourg
LVA	Latvia
MAR	Morocco
MDA	Moldova
MDG	Madagascar
MDV	Maldives
MEX	Mexico
MHL	Marshall Islands
MKD	North Macedonia
MLI	Mali
MLT	Malta
MMR	Myanmar
MNE	Montenegro
MNG	Mongolia
MOZ	Mozambique
MRT	Mauritania
MUS	Mauritius
MWI	Malawi
MYS	Malaysia
NAM	Namibia
NER	Niger
NGA	Nigeria
NIC	Nicaragua
NLD	Netherlands, The
NOR	Norway
NPL	Nepal
NZL	New Zealand
OMN	Oman
PAK	Pakistan
PAN	Panama
PER	Peru
PHL	Philippines
PLW	Palau
PNG	Papua New Guinea
POL	Poland
PRT	Portugal
PRY	Paraguay
QAT	Qatar
ROU	Romania
RUS	Russian Federation
RWA	Rwanda
SAU	Saudi Arabia
SDN	Sudan
SEN	Senegal
SGP	Singapore
SLB	Solomon Islands
SLE	Sierra Leone
SLV	El Salvador
SMR	San Marino
SOM	Somalia
SRB	Serbia
STP	São Tomé and Príncipe
SUR	Suriname
SVK	Slovak Republic
SVN	Slovenia
SWE	Sweden
SWZ	Eswatini
SYC	Seychelles
SYR	Syria
TCD	Chad
TGO	Togo
THA	Thailand
TJK	Tajikistan
TKM	Turkmenistan
TLS	Timor-Leste
TON	Tonga
TTO	Trinidad and Tobago
TUN	Tunisia
TUR	Turkey
TUV	Tuvalu
TWN	Taiwan Province of China
TZA	Tanzania
UGA	Uganda
UKR	Ukraine
URY	Uruguay
USA	United States
UZB	Uzbekistan
VCT	St. Vincent and the Grenadines
VEN	Venezuela
VNM	Vietnam
VUT	Vanuatu
WSM	Samoa
YEM	Yemen
ZAF	South Africa
ZMB	Zambia
ZWE	Zimbabwe

GLOSSARY

Accelerated depreciation deductions Tax measures that reduce the taxable income of a firm, by allowing for greater deductions for depreciation of an asset (e.g., machinery) in its earlier years of use.

Automatic stabilizers Revenue and some expenditure items that adjust automatically to cyclical changes in the economy—for example, as output falls, revenue collections decline and unemployment benefits increase, which "automatically" provides demand support.

Balance sheet Statement of the values of the stock positions of assets owned and liabilities owed by a unit, or group of units, drawn up in respect of a particular point in time.

Contingent liabilities Obligations that are not explicitly recorded on government balance sheets and that arise only in the event of a particular discrete situation, such as a crisis.

Countercyclical fiscal policy Active changes in expenditure and tax policies to smooth the economic cycle (by contrast with the operation of automatic stabilizers); for instance, by cutting taxes or raising expenditures during an economic downturn.

Coverage of public benefits Share of individuals or households of a particular socioeconomic group who receive a public benefit.

Cyclically adjusted balance (CAB) Difference between the overall balance and the automatic stabilizers; equivalently, an estimate of the fiscal balance that would apply under current policies if output were equal to potential.

Cyclically adjusted primary balance (CAPB) Cyclically adjusted balance excluding net interest payments (interest expenditure minus interest revenue).

Equity injections by the public sector Purchase of shares (ownership) of a firm by governments or public corporations, to provide it with the required capital to continue operations.

Fiscal buffer Fiscal space created by saving budgetary resources and reducing public debt in good times.

Fiscal multiplier Measures the short-term impact of discretionary fiscal policy on output. Usually defined as the ratio of a change in output to an exogenous change in the fiscal deficit with respect to their respective baselines.

General government All government units and all nonmarket, nonprofit institutions that are controlled and mainly financed by government units comprising the central, state, and local governments; includes social security funds and does not include public corporations or quasi corporations.

Government guarantees Government can provide coverage on the potential losses of the liabilities incurred by banks, firms, or households. They usually have no immediate upfront cost in the form of deficit or debt unless the expected cost is budgeted, but they create a contingent liability, with the government exposed to future calls on guarantees and fiscal risks.

Gross debt All liabilities that require future payment of interest and/or principal by the debtor to the creditor. This includes debt liabilities in the form of special drawing rights, currency, and deposits; debt securities; loans; insurance, pension, and standardized guarantee programs; and other accounts payable. (See the IMF's 2001 *Government Finance Statistics Manual* and *Public Sector Debt Statistics Manual*.) The term "public debt" is used in the *Fiscal Monitor*, for simplicity, as synonymous with gross debt of the general government, unless specified otherwise. (Strictly speaking, public debt refers to the debt of the public sector as a whole, which includes financial and nonfinancial public enterprises and the central bank.)

In-kind benefits/transfers Government social assistance provided in terms of specific goods (e.g., food) or services (e.g., healthcare) instead of cash.

Job retention schemes Government programs that provide payments to employers to retain current employees, either part or full time. The payments typically cover part or all of an employees' hours worked, or top up an employees' pay for hours reduced (i.e., lost wages).

Liquid assets Assets that can be readily converted to cash.

Loss carry back rules Tax measures that aim to provide liquidity to firms, by allowing for carrying current operating losses back to previous tax years to recover income taxes paid in these years.

Net debt Gross debt minus financial assets corresponding to debt instruments. These financial assets are monetary gold and special drawing rights; currency and deposits; debt securities; loans, insurance, pensions, and standardized guarantee programs; and other accounts receivable. In some countries, the reported net debt can deviate from this definition based on available information and national fiscal accounting practices.

Output gap Deviation of actual from potential GDP, in percent of potential GDP.

Overall fiscal balance (also "headline" fiscal balance) Net lending and borrowing, defined as the difference between revenue and total expenditure, using the IMF's 2001 *Government Finance Statistics Manual* (GFSM 2001). Does not include policy lending. For some countries, the overall balance is still based on the GFSM 1986, which defines it as total revenue and grants minus total expenditure and net lending.

Potential output Estimate of the level of GDP that can be reached if the economy's resources are fully employed.

Primary balance Overall balance excluding net interest payments (interest expenditure minus interest revenue).

Progressive (or regressive) taxes Taxes that feature an average tax rate that rises (or falls) with income.

Public debt See *gross debt*.

Public sector Includes all resident institutional units that are deemed to be controlled by the government. It includes general government and resident public corporations.

Quasi-fiscal activities Non-commercial activities (such as subsidies or loans) undertaken by public corporations (such as state-owned enterprises or banks) on behalf of the government, outside their regular mandate.

Replacement rate (in job retention schemes) The rate at which a wage subsidy covers the lost wages of a worker due to reduced hours or pay.

Short-term/Short-time work schemes Wage subsidies for temporary reductions in working time or pay of employees in firms affected by a temporary shock, to cover all or part of their lost wages.

Social insurance Programs aimed at protecting households from shocks that can adversely impact their incomes and welfare; typically financed by contributions or payroll taxes.

Social protection Comprise social insurance and social safety nets.

Social safety nets Noncontributory transfer programs financed by general government revenue.

Structural primary balance Extension of the cyclically adjusted primary balance that also corrects for other nonrecurrent effects that go beyond the cycle, such as one-off operations and other factors whose cyclical fluctuations do not coincide with the output cycle (for instance, asset and commodity prices and output composition effects).

Wage subsidies Government payments to workers or their employers to incentivize employers to recruit or retain (often disadvantaged) workers.

METHODOLOGICAL AND STATISTICAL APPENDIX

This appendix comprises four sections. "Data and Conventions" provides a general description of the data and conventions used to calculate economy group composites. "Fiscal Policy Assumptions" summarizes the country-specific assumptions underlying the estimates and projections for 2020–25. "Definition and Coverage of Fiscal Data" summarizes the classification of countries in the various groups presented in the *Fiscal Monitor* and provides details on the coverage and accounting practices underlying each country's *Fiscal Monitor* data. Statistical tables on key fiscal variables complete the appendix. Data in these tables have been compiled based on the information available through September 29, 2020.

Data and Conventions

Country-specific data and projections for key fiscal variables are based on the October 2020 World Economic Outlook database, unless indicated otherwise, and compiled by IMF staff. Historical data and projections are based on information gathered by IMF country desk officers in the context of their missions and through their ongoing analysis of the evolving situation in each country; they are updated on a continual basis as more information becomes available. Structural breaks in data may be adjusted to produce smooth series through splicing and other techniques. IMF staff estimates serve as proxies when complete information is unavailable. As a result, *Fiscal Monitor* data may differ from official data in other sources, including the IMF's *International Financial Statistics* and *Government Financial Statistics*.

Sources for fiscal data and projections not covered by the World Economic Outlook database are listed in the respective tables and figures.

The country classification in the *Fiscal Monitor* divides the world into three major groups: 35 advanced economies, 40 emerging market and middle-income economies, and 40 low-income developing countries. The seven largest advanced economies as measured by GDP (Canada, France, Germany, Italy, Japan, United Kingdom, United States) constitute the subgroup of major advanced economies, often referred to as the Group of Seven (G7). The members of the euro area are also distinguished as a subgroup. Composite data shown in the tables for the euro area cover the current members for all years, even though the membership has increased over time. Data for most European Union member countries have been revised following the adoption of the new European System of National and Regional Accounts (ESA 2010). Low-income developing countries are countries that have per capita income levels below a certain threshold (currently set at $2,700, as of 2016, as measured by the World Bank's Atlas method), structural features consistent with limited development and structural transformation, and external financial linkages insufficiently open to be considered as emerging market economies. Emerging market and middle-income economies include those not classified as advanced economies or low-income developing countries. See Table A, "Economy Groupings," for more details.

Most fiscal data refer to the general government for advanced economies, while for emerging market and developing economies, data often refer to the central government or budgetary central government only (for specific details, see Tables B–D). All fiscal data refer to calendar years, except in the cases of Bangladesh, Egypt, Ethiopia, Haiti, Hong Kong Special Administrative Region, India, the Islamic Republic of Iran, Myanmar, Nepal, Pakistan, Singapore, and Thailand, for which they refer to the fiscal year. For economies whose fiscal years end before June 30, data are recorded in the previous calendar year. For economies whose fiscal years end on or after June 30, data are recorded in the current calendar year.

Composite data for country groups are weighted averages of individual country data, unless specified otherwise. Data are weighted by annual nominal GDP converted to US dollars at average market exchange rates as a share of the group GDP.

For the purpose of data reporting in the *Fiscal Monitor*, the Group of 20 (G20) member aggregate refers to the 19 country members and does not include the European Union.

In the majority of advanced economies, and some large emerging market and middle-income economies, fiscal data follow the IMF's 2014 *Government Finance Statistics Manual* (GFSM 2014) or are produced using national accounts methodology that follow the System of National Accounts 2008 (SNA 2008) or ESA 2010, both of which are broadly aligned with the GFSM 2014. Most other countries follow the GFSM 2001, but some countries, including a significant proportion of low-income developing countries, have fiscal data that are based on the 1986 GFSM. The overall fiscal balance refers to net lending (+) and borrowing (–) of the general government. In some cases, however, the overall balance refers to total revenue and grants minus total expenditure and net lending.

The fiscal gross and net debt data reported in the *Fiscal Monitor* are drawn from official data sources and IMF staff estimates. While attempts are made to align gross and net debt data with the definitions in the GFSM, as a result of data limitations or specific country circumstances, these data can sometimes deviate from the formal definitions. Although every effort is made to ensure the debt data are relevant and internationally comparable, differences in both sectoral and instrument coverage mean that the data are not universally comparable. As more information becomes available, changes in either data sources or instrument coverage can give rise to data revisions that are sometimes substantial.

As used in the *Fiscal Monitor*, the term "country" does not in all cases refer to a territorial entity that is a state as understood by international law and practice. As used here, the term also covers some territorial entities that are not states but whose statistical data are maintained on a separate and independent basis.

Australia: For cross-country comparability, gross and net debt levels reported by national statistical agencies for economies that have adopted the 2008 SNA (Australia, Canada, Hong Kong Special Administrative Region, United States) are adjusted to exclude unfunded pension liabilities of government employees' defined-benefit pension plans.

Bangladesh: Data are on a fiscal year basis.

Brazil: General government data refer to the nonfinancial public sector—which includes the federal, state, and local governments, as well as public enterprises (excluding Petrobras and Eletrobras)—and are consolidated with those for the sovereign wealth fund. Revenue and expenditures of federal public enterprises are added in full to the respective aggregates. Transfers and withdrawals from the sovereign wealth fund do not affect the primary balance. Disaggregated data on gross interest payments and interest receipts are available only from 2003 onward. Before 2003, total revenue of the general government excludes interest receipts; total expenditure of the general government includes net interest payments. Gross public debt includes the Treasury bills on the central bank's balance sheet, including those not used under repurchase agreements. Net public debt consolidates nonfinancial public sector and central bank debt. The national definition of general government gross debt excludes government securities held by the central bank, except the stock of Treasury securities used for monetary policy purposes by the central bank (those pledged as security reverse repurchase agreement operations). According to this national definition, gross debt amounted to 75.8 percent of GDP at the end of 2019.

Canada: For cross-country comparability, gross and net debt levels reported by national statistical agencies for economies that have adopted the 2008 SNA (Australia, Canada, Hong Kong Special Administrative Region, United States) are adjusted to exclude unfunded pension liabilities of government employees' defined-benefit pension plans.

Chile: Cyclically adjusted balances refer to the structural balance, which includes adjustments for output and commodity price developments.

China: Public debt data include central government debt as reported by the Ministry of Finance, explicit local government debt, and shares—less than 25 percent, based on estimates from the National Audit Office estimate—of contingent liabilities the government may incur. IMF staff estimates exclude central government debt issued for the China Railway Corporation. Relative to the authorities' definition, consolidated general government net borrowing includes (1) transfers to and from stabilization funds, (2) state-administered, state-owned enterprise funds and social security contributions and expenses, and (3) off-budget spending by local governments. Deficit numbers do not include some expenditure items, mostly infrastructure investment financed off-budget through land sales and local government financing vehicles. Fiscal balances are not consistent with reported debt, because no time series of data in line with the National Audit Office debt definition is published officially.

Colombia: Gross public debt refers to the combined public sector, including Ecopetrol and excluding Banco de la República's outstanding external debt.

Dominican Republic: The fiscal series for the *Dominican Republic* have the following coverage: the public debt, debt service, and cyclically adjusted or structural balances are for the consolidated public sector (which includes the central government, the rest of the nonfinancial public sector, and the central bank); and the remaining fiscal series are for the central government.

Egypt: Data are on a fiscal year basis.

Ethiopia: Data are on a fiscal year basis.

Greece: General government gross debt includes short-term debt and loans of state-owned enterprises.

Haiti: Data are on a fiscal year basis.

Hong Kong Special Administrative Region: Data are on a fiscal year basis. Cyclically adjusted balances include adjustments for land revenue and investment income. For cross-country comparability, gross and net debt levels reported by national statistical agencies for countries that have adopted the 2008 SNA (Australia, Canada, Hong Kong Special Administrative Region, United States) are adjusted to exclude unfunded pension liabilities of government employees' defined-benefit pension plans.

Iceland: Gross debt excludes insurance technical reserves (including pension liabilities) and other accounts payable.

India: Data are on a fiscal year basis.

Iran, Islamic Republic of: Data are on a fiscal year basis.

Ireland: General government balances between 2011 and 2012 reflect the impact of banking sector support. Fiscal balance, estimates excluding these measures, are –8.6 percent of GDP for 2011, and –7.9 percent of GDP for 2012. For 2015, if the conversion of the government's remaining preference shares to ordinary shares in one bank is excluded, the fiscal balance is –1.1 percent of GDP. Cyclically adjusted balances reported in Tables A3 and A4 exclude financial sector support measures. Ireland's 2015 national accounts were revised as a result of restructuring and relocation of multinational companies, which resulted in a level shift of nominal and real GDP. For more information, see "National Income and Expenditure Annual Results 2015" (http://www.cso.ie/en/releasesandpublications/er/nie/nationalincomeandexpenditureannualresults2015).

Japan: Gross debt is on an unconsolidated basis.

Latvia: The fiscal deficit includes bank restructuring costs and thus is higher than the deficit in official statistics.

Mexico: General government refers to the central government, social security funds, public enterprises, development banks, the national insurance corporation, and the National Infrastructure Fund, but excludes subnational governments.

Myanmar: Data are on a fiscal year basis.

Nepal: Data are on a fiscal year basis.

Norway: Cyclically adjusted balances correspond to the cyclically adjusted non-oil overall or primary balance. These variables are in percent of non-oil potential GDP.

Pakistan: Data are on a fiscal year basis.

Peru: Cyclically adjusted balances include adjustments for commodity price developments.

Singapore: Data are on a fiscal year basis.

Spain: Overall and primary balances include financial sector support measures estimated to be 0.3 percent of GDP for 2011, 3.7 percent of GDP for 2012, 0.3 percent of GDP for 2013, 0.1 percent of GDP for 2014, 0.1 percent of GDP for 2015, and 0.2 percent of GDP for 2016.

Sweden: Cyclically adjusted balances take into account output and employment gaps.

Switzerland: Data submissions at the cantonal and commune levels are received with a long and variable lag and are subject to sizable revisions. Cyclically adjusted balances include adjustments for extraordinary operations related to the banking sector.

Thailand: Data are on a fiscal year basis.

Turkey: The fiscal projections assume a more negative primary and overall balance than envisaged in the authorities' New Economic Program 2020–22 (October 2019), partly due to the deterioration in the growth outlook related to COVID-19, and partly due to definitional differences. The basis for the projections in the *World Economic Outlook* and *Fiscal Monitor* is the IMF-defined fiscal balance, which excludes some revenue and expenditure items included in the authorities' headline balance.

United States: Cyclically adjusted balances exclude financial sector support estimated at 0.2 percent of potential GDP for 2011, 0.1 percent of potential GDP for 2012, and 0.0 percent of potential GDP for 2013. For cross-country comparability, expenditure and fiscal balances of the United States are adjusted to exclude the imputed interest on unfunded pension liabilities and the imputed compensation of employees, which are counted as expenditures under the 2008 SNA adopted by the United States, but not for

countries that have not yet adopted the 2008 SNA. Data for the United States may thus differ from data published by the US Bureau of Economic Analysis (BEA). In addition, gross and net debt levels reported by the BEA and national statistical agencies for other economies that have adopted the 2008 SNA (Australia, Canada, Hong Kong Special Administrative Region) are adjusted to exclude unfunded pension liabilities of government employees' defined-benefit pension plans.

Uruguay: Data are for the nonfinancial public sector (NFPS), which includes the central government, the local government, social security funds, nonfinancial public corporations, and Banco de Seguros del Estado. The coverage of fiscal data was changed from the consolidated public sector to the NFPS with the October 2019 submission. Because of this narrower coverage, central bank balances are not included in the fiscal data.

Venezuela: Fiscal accounts include the budgetary central government; social security funds; FOGADE (insurance deposit institution); and a sample of public enterprises, including Petróleos de Venezuela, S.A. (PDVSA). Data for 2018–19 are IMF staff estimates.

Fiscal Policy Assumptions

Historical data and projections of key fiscal aggregates are in line with those of the October 2020 *World Economic Outlook*, unless noted otherwise. For underlying assumptions other than on fiscal policy, see the October 2020 *World Economic Outlook*.

Short-term fiscal policy assumptions are based on officially announced budgets, adjusted for differences between the national authorities and IMF staff regarding macroeconomic assumptions and projected fiscal outturns. Medium-term fiscal projections incorporate policy measures that are judged likely to be implemented. When IMF staff have insufficient information to assess the authorities' budget intentions and prospects for policy implementation, an unchanged structural primary balance is assumed, unless indicated otherwise.

Argentina: Fiscal projections are based on the available information regarding budget outturn and budget plans for the federal and provincial governments, fiscal measures announced by the authorities, and the IMF staff projections.

Australia: Fiscal projections are based on data from the Australian Bureau of Statistics, the fiscal year 2019/20 mid-year reviews of the Commonwealth and States, the Economic and Fiscal Outlook in July 2020, and IMF staff estimates and projections.

Austria: Fiscal projections are based on data from Statistics Austria, the authorities' projections, and IMF staff estimates and projections.

Belgium: Projections are based on the 2020–21 Stability Programme (covering two years only, due to COVID shock), the Draft Budgetary Plan 2020, and other available information on the authorities' fiscal plans, with adjustments for IMF staff assumptions.

Brazil: Fiscal projections for 2020 take into account the deficit target proposed in the budget guidance law and reflect policy announcements as of July 31, 2020. Those for the medium term assume compliance with the constitutional spending ceiling.

Cambodia: Historical fiscal and monetary data are from the Cambodian authorities. Projections are based on the IMF staff assumptions following discussions with the authorities.

Canada: Projections use baseline forecasts in the federal Economic and Fiscal Update 2019, the Economic and Fiscal Snapshot 2020, and the latest provincial budgets. IMF staff makes some adjustments to this forecast, including for differences in macroeconomic projections. The IMF staff forecast also incorporates the most recent data releases from Statistics Canada's National Economic Accounts, including federal, provincial, and territorial budgetary outturns through the first quarter of 2020.

Chile: Projections are based on the authorities' quarterly fiscal reports, adjusted to reflect IMF staff projections for GDP and copper prices.

China: A large fiscal expansion is estimated for 2020 based on budgeted and announced tax and expenditures measures to offset the health and economic repercussions of the COVID pandemic. For 2021, a mild expansion is projected given that the output gap is expected to remain relatively large.

Colombia: Projections are based on the authorities' policies and projections reflected in the Medium-Term Fiscal Framework 2019, adjusted to reflect IMF staff macroeconomic assumptions.

Croatia: Projections are based on the macroeconomic framework and the authorities' medium-term fiscal guidelines.

Cyprus: Projections are based on IMF staff assessments of authorities' budget plans and IMF staff macroeconomic assumptions.

Czech Republic: Projections are based on the authorities' budget forecast for 2018–19, with adjustments for IMF staff macroeconomic projections. Projections for 2019 onward are based on the country's Convergence Programme and Fiscal Outlook.

Denmark: Estimates for 2020 are aligned with the latest official budget numbers, adjusted where appropriate for IMF staff macroeconomic assumptions. For 2020, the projections incorporate key features of the medium-term fiscal plan as embodied in the authorities' latest budget.

Estonia: The forecast incorporates the authorities' approved supplementary budget for 2020, adjusted for newly available information and for IMF staff's macroeconomic scenario.

Finland: Projections are based on the authorities' announced policies, adjusted for the IMF staff macroeconomic scenario.

France: Estimates for 2019 and projections for 2020 onward are based on the measures of the 2018, 2019, and 2020 budget laws and the March 2020 amending budget law, adjusted for differences in assumptions on macroeconomic and financial variables, and revenue projections. Historical fiscal data reflect the May 2019 revisions and the update of the historical fiscal accounts, debt data, and national accounts.

Germany: IMF staff estimates and projections for 2020 and beyond are based on the 2020 stability program, supplementary budgets, and data updates from the national statistical agency and ministry of finance, adjusted for the differences in IMF staff macroeconomic framework and assumptions concerning revenue elasticities. The estimate of gross debt includes portfolios of impaired assets and noncore businesses transferred to institutions that are winding up, as well as other financial sector and European Union support operations.

Greece: Greece's general government primary balance estimate for 2019 is based on the preliminary budget execution data by the Greek authorities. Historical data since 2011 reflect adjustments in line with the primary balance definition under the enhanced surveillance framework for Greece.

Hong Kong Special Administrative Region: Projections are based on the authorities' medium-term fiscal projections on expenditure.

Hungary: Fiscal projections include IMF staff projections of the macroeconomic framework and fiscal policy plans announced in the 2020 budget.

India: Historical data are based on budgetary execution data. Projections are based on available information on the authorities' fiscal plans, with adjustments for IMF staff assumptions. Subnational data are incorporated with a lag of up to one year; general government data are thus finalized well after central government data. IMF and Indian presentations differ, particularly regarding divestment and license auction proceeds, net versus gross recording of revenues in certain minor categories, and some public sector lending.

Indonesia: Fiscal projections are consistent with a gradual unwinding of the large fiscal stimulus in 2020, including returning the fiscal deficit to below 3 percent of GDP by 2023.

Ireland: Fiscal projections are based on the country's Budget 2020 and Stability Programme Update April 2020 and July Job Stimulus 2020.

Israel: Historical data are based on Government Finance Statistics data prepared by the Central Bureau of Statistics. Projections assume that the partial implementation of the two fiscal packages will be approved by Parliament in response to the COVID-19 shock.

Italy: IMF staff estimates and projections are informed by the fiscal plans included in the government's 2020 budget and approved supplementary budgets. The stock of maturing postal saving bonds (BPF, *buono postale fruttifero*) is included in the debt projections.

Japan: The projections reflect fiscal measures already announced by the government as of September 11, with adjustments for IMF staff assumptions.

Kazakhstan: Fiscal projections are based on the budget code and IMF staff projections.

Korea: The medium-term forecast incorporates the medium-term path for the overall fiscal balance in the 2021 budget the medium-term fiscal plan announced in the 2021 budget, and IMF staff adjustments.

Libya: Against the backdrop of a civil war and weak capacity, the reliability of Libya's data, especially medium-term projections, is low.

Malaysia: Fiscal projections are based on budget numbers, discussions with the authorities, and IMF staff estimates.

Malta: Projections are based on the latest Stability Programme Update by the authorities and on budget documents, which also take into account other recently adopted fiscal measures, adjusted for IMF staff macroeconomic and other assumptions.

Mexico: Fiscal projections for 2020 are informed by the approved budget but take into account the likely

effects of the COVID-19 pandemic on fiscal outturns; projections for 2021 onward assume compliance with rules established in the Fiscal Responsibility Law.

Moldova: Fiscal projections are based on various bases and growth rates for GDP, consumption, imports, wages, and energy prices and on demographic changes.

Myanmar: Fiscal projections are based on budget numbers, discussions with the authorities, and IMF staff estimates.

Netherlands: Fiscal projections for the period 2020–25 are based on IMF staff forecast frameworks, and are also informed by authorities' draft budget plan and the Bureau for Economic Policy Analysis projections. Historical data were revised following the June 2014 Central Bureau of Statistics release of macro data because of the adoption of ESA 2010 and the revisions of data sources.

New Zealand: Fiscal projections are based on the fiscal year 2020/21 budget and IMF staff estimates.

Nigeria: Fiscal projections assume unchanged policies and differ from the authorities' active policy scenario.

Norway: Fiscal projections are based on the 2020 budget, and subsequent ad hoc updates.

Philippines: Revenue projections reflect IMF staff macroeconomic assumptions and incorporate anticipated improvements in tax administration. Expenditure projections are based on budgeted figures, institutional arrangements, and current data in each year.

Poland: Data are based on ESA-1995 for 2004 and earlier. Data are based on ESA-2010 beginning in 2005 on an accrual basis. Projections are based on the 2020 budget and take into account additional fiscal measures that will subsequently be incorporated into a revised 2020 budget later this year.

Portugal: The projections for the current year are based on the authorities' approved budget, adjusted to reflect the IMF staff's macroeconomic forecast. Projections thereafter are based on the assumption of unchanged policies.

Romania: Projections for 2020 mainly reflect legislated changes up to the end of 2019. Medium-term projections include a gradual implementation of recovery measures from the temporary recovery instrument (Next Generation EU).

Russia: Fiscal policy will be countercyclical in 2020. It will show a degree of consolidation in 2021 and it will come back to the fiscal rule in 2022.

Saudi Arabia: IMF staff baseline fiscal projections are based on IMF staff understanding of government policies as outlined in the 2020 budget and of government measures announced to counter the adverse impact of COVID-19 and the decline in oil prices. Exported oil revenues are based on *World Economic Outlook* baseline oil price assumptions and IMF staff's understanding of Saudi Arabia's current oil export policy.

Singapore: For fiscal year 2020, projections are based on the budget (February 18, 2020) and subsequent supplementary budgets (March 26, April 6, April 21, and May 26). IMF staff assumes that support packages in fiscal year 2020 are only for one year and that policies are unchanged for the remainder of the projection period.

Slovak Republic: The current year projections taken into consideration of COVID-19–related policy measures and developments to date. Fiscal consolidation is assumed from 2021 onward. The projections also include the new EU recovery funds.

Spain: The 2020 fiscal projections include the discretionary measures adopted in response to the COVID-19 crisis, the legislated pension and public wage, and the minimum vital income support. Fiscal projections from 2021 onward assume an expiration of the temporary COVID-19 measures and no further policy change. Disbursement under the EU Recovery and Resilience Facility are reflected in the projections for 2021–24.

Sri Lanka: Fiscal projections are based on IMF staff assessments.

Sweden: Fiscal estimates for 2019 are based on the data from the Swedish Ministry of Finance. Projections for 2020 are based on preliminary information on the fall of 2020 budget bill. The fiscal impact of cyclical developments is calculated using the 2014 Organisation for Economic Co-operation and Development elasticity,[1] which takes into account output and employment gaps.

Switzerland: The authorities announced a discretionary stimulus—as reflected in the fiscal projections for 2020—which is permitted within the context of the debt brake rule in the event of "exceptional circumstances."

[1]Price, R., T. Dang, and Y. Guillemette. 2014. "New Tax and Expenditure Elasticity Estimates for EU Budget Surveillance." OECD Economics Department Working Papers 1174, OECD Publishing, Paris.

Thailand: For the projection period, IMF staff assumes that planned infrastructure investment programs will not be fully implemented.

Turkey: The basis for the projections in the *World Economic Outlook* and *Fiscal Monitor* is the IMF-defined fiscal balance, which excludes some revenues and expenditure items that are included in the authorities' headline balance.

United Kingdom: Fiscal projections are based on the Budget Statement 2020 and revised estimates by the Office for Budget Responsibility. Expenditure projections reflect the measures to respond to the COVID-19 outbreak. Revenue projections are in addition adjusted for differences between IMF staff forecasts of macroeconomic variables (such as GDP growth and inflation) and the forecasts of these variables assumed in the authorities' fiscal projections. Projections assume that the measures taken in response to COVID-19 expire as announced, but also that there is some additional fiscal loosening relative to the Budget Statement 2020 over the next two years to support the economic recovery, and gradual consolidation begins thereafter with the goal of stabilizing public debt within five years. IMF staff data exclude public sector banks and the effect of transferring assets from the Royal Mail Pension Plan to the public sector in April 2012. Real government consumption and investment are part of the real GDP path, which, according to IMF staff, may or may not be the same as projected by the UK Office for Budget Responsibility. Fiscal year GDP is different from current year GDP. The fiscal accounts are presented in fiscal-year terms. Projections take into account revisions to the accounting (including on student loans) implemented on September 24, 2019.

United States: Fiscal projections are based on the January 2020 Congressional Budget Office baseline adjusted for IMF staff policy and macroeconomic assumptions. Projections then incorporate the effects of the Coronavirus Preparedness and Response Supplemental Appropriations Act; the Families First Coronavirus Response Act; and the Coronavirus Aid, Relief, Paycheck Protection Program and Health Care Enhancement Act. Finally, fiscal projections are adjusted to reflect IMF staff forecasts for key macroeconomic and financial variables and different accounting treatments of financial sector support and of defined-benefit pension plans and which are converted to a general government basis. Data are compiled using the 2008 System of National Accounts, and when translated into government financial statistics; this is in accordance with the *Government Finance Statistics Manual 2014*. Because of data limitations, most series begin in 2001.

Venezuela: Projecting the economic outlook in Venezuela, including assessing past and current economic developments as the basis for the projections, is complicated by the lack of discussions with the authorities (the last Article IV consultation took place in 2004), incomplete understanding of the reported data, and difficulties in interpreting certain reported economic indicators given economic developments. The fiscal accounts include the budgetary central government, social security funds, FOGADE (insurance deposit institution), and a sample of public enterprises including PDVSA. The data for 2018–21 are IMF staff estimates. The effects of hyperinflation and the lack of reported data mean that IMF staff-projected macroeconomic indicators should be interpreted with caution. For example, nominal GDP is estimated assuming that the GDP deflator rises in line with IMF staff projections of average inflation. Public external debt in relation to GDP is projected using IMF staff estimates of the average exchange rate for the year. Considerable uncertainty surrounds these projections.

Vietnam: Fiscal data for 2015–17 are the authorities' estimate. From 2018 onward, fiscal data are based on IMF staff projections.

Yemen: Hydrocarbon revenue projections are based on *World Economic Outlook* assumptions for oil and gas prices and authorities' projections of production of oil and gas. Non-hydrocarbon revenues largely reflect the authorities' projections, as do most of the expenditure categories, with the exception of fuel subsidies, which are projected based on the *World Economic Outlook* price consistent with revenues. Monetary projections are based on key macroeconomic assumptions about the growth rate of broad money, credit to the private sector, and deposit growth.

Definition and Coverage of Fiscal Data

Table A. Economy Groupings

The following groupings of economies are used in the *Fiscal Monitor*.

Advanced Economies	Emerging Market and Middle-Income Economies	Low-Income Developing Countries	G7 Countries	G20 Countries[1]	Advanced G20 Countries[1]	Emerging G20 Countries
Australia	Algeria	Bangladesh	Canada	Argentina	Australia	Argentina
Austria	Angola	Benin	France	Australia	Canada	Brazil
Belgium	Argentina	Burkina Faso	Germany	Brazil	France	China
Canada	Azerbaijan	Cambodia	Italy	Canada	Germany	India
Cyprus	Belarus	Cameroon	Japan	China	Italy	Indonesia
Czech Republic	Brazil	Chad	United Kingdom	France	Japan	Mexico
Denmark	Chile	Congo, Democratic Republic of the	United States	Germany	Korea	Russia
Estonia	China	Congo, Republic of		India	United Kingdom	Saudi Arabia
Finland	Colombia	Côte d'Ivoire		Indonesia	United States	South Africa
France	Croatia	Ethiopia		Italy		Turkey
Germany	Dominican Republic	Ghana		Japan		
Greece	Ecuador	Guinea		Korea		
Hong Kong SAR	Egypt	Haiti		Mexico		
Iceland	Hungary	Honduras		Russia		
Ireland	India	Kenya		Saudi Arabia		
Israel	Indonesia	Kyrgyz Republic		South Africa		
Italy	Iran	Lao P.D.R.		Turkey		
Japan	Kazakhstan	Madagascar		United Kingdom		
Korea	Kuwait	Mali		United States		
Latvia	Libya	Moldova				
Lithuania	Malaysia	Mozambique				
Luxembourg	Mexico	Myanmar				
Malta	Morocco	Nepal				
Netherlands, The	Oman	Nicaragua				
New Zealand	Pakistan	Niger				
Norway	Peru	Nigeria				
Portugal	Philippines	Papua New Guinea				
Singapore	Poland	Rwanda				
Slovak Republic	Qatar	Senegal				
Slovenia	Romania	Somalia				
Spain	Russia	Sudan				
Sweden	Saudi Arabia	Tajikistan				
Switzerland	South Africa	Tanzania				
United Kingdom	Sri Lanka	Timor-Leste				
United States	Thailand	Uganda				
	Turkey	Uzbekistan				
	Ukraine	Vietnam				
	United Arab Emirates	Yemen				
	Uruguay	Zambia				
	Venezuela	Zimbabwe				

Note: G7 = Group of Seven; G20 = Group of Twenty.
[1] Does not include European Union aggregate.

Table A. Economy Groupings *(continued)*

Euro Area	Emerging Market and Middle-Income Asia	Emerging Market and Middle-Income Europe	Emerging Market and Middle-Income Latin America	Emerging Market and Middle-Income Middle East, North Africa, and Pakistan	Emerging Market and Middle-Income Africa
Austria	China	Azerbaijan	Argentina	Algeria	Angola
Belgium	India	Belarus	Brazil	Egypt	South Africa
Cyprus	Indonesia	Croatia	Chile	Iran	
Estonia	Malaysia	Hungary	Colombia	Kuwait	
Finland	Philippines	Kazakhstan	Dominican Republic	Libya	
France	Sri Lanka	Poland	Ecuador	Morocco	
Germany	Thailand	Romania	Mexico	Oman	
Greece		Russia	Peru	Pakistan	
Ireland		Turkey	Uruguay	Qatar	
Italy		Ukraine	Venezuela	Saudi Arabia	
Latvia				United Arab Emirates	
Lithuania					
Luxembourg					
Malta					
Netherlands, The					
Portugal					
Slovak Republic					
Slovenia					
Spain					

Low-Income Developing Asia	Low-Income Developing Latin America	Low-Income Developing Sub-Saharan Africa	Low-Income Developing Others	Low-Income Oil Producers	Oil Producers
Bangladesh	Haiti	Benin	Kyrgyz Republic	Chad	Algeria
Cambodia	Honduras	Burkina Faso	Moldova	Congo, Republic of	Angola
Lao P.D.R.	Nicaragua	Cameroon	Somalia	Nigeria	Azerbaijan
Myanmar		Chad	Sudan	Timor-Leste	Bahrain
Nepal		Congo, Democratic Republic of the	Tajikistan	Yemen	Brunei Darussalam
Papua New Guinea		Congo, Republic of	Uzbekistan		Chad
Timor-Leste		Côte d'Ivoire	Yemen		Canada
Vietnam		Ethiopia			Congo, Republic of
		Ghana			Ecuador
		Guinea			Equatorial Guinea
		Kenya			Gabon
		Madagascar			Iran
		Mali			Iraq
		Mozambique			Kazakhstan
		Niger			Kuwait
		Nigeria			Libya
		Rwanda			Nigeria
		Senegal			Norway
		Tanzania			Oman
		Uganda			Qatar
		Zambia			Russia
		Zimbabwe			Saudi Arabia
					Timor-Leste
					Trinidad and Tobago
					United Arab Emirates
					Venezuela
					Yemen

Table B. Advanced Economies: Definition and Coverage of *Fiscal Monitor* Data

	Overall Fiscal Balance[1]			Cyclically Adjusted Balance			Gross Debt		
	Coverage		Accounting Practice	Coverage		Accounting Practice	Coverage		Valuation of Debt[2]
	Aggregate	Subsectors		Aggregate	Subsectors		Aggregate	Subsectors	
Australia	GG	CG,SG,LG,TG	A	GG	CG,SG,LG,TG	A	GG	CG,SG,LG,TG	Current market
Austria	GG	CG,SG,LG,SS	A	GG	CG,SG,LG,SS	A	GG	CG,SG,LG,SS	Face
Belgium	GG	CG,SG,LG,SS	A	GG	CG,SG,LG,SS	A	GG	CG,SG,LG,SS	Face
Canada	GG	CG,SG,LG,SS	A	GG	CG,SG,LG,SS	A	GG	CG,SG,LG,SS	Face
Cyprus	GG	CG,LG,SS	A	GG	CG,LG,SS	A	GG	CG,LG,SS	Face
Czech Republic	GG	CG,LG,SS	A	GG	CG,LG,SS	A	GG	CG,LG,SS	Nominal
Denmark	GG	CG,LG,SS	A	GG	CG,LG,SS	A	GG	CG,LG,SS	Face
Estonia	GG	CG,LG,SS	C	. . .	. . .	. . .	GG	CG,LG,SS	Nominal
Finland	GG	CG,LG,SS	A	GG	CG,LG,SS	A	GG	CG,LG,SS	Face
France	GG	CG,LG,SS	A	GG	CG,LG,SS	A	GG	CG,LG,SS	Face
Germany	GG	CG,SG,LG,SS	A	GG	CG,SG,LG,SS	A	GG	CG,SG,LG,SS	Face
Greece	GG	CG,LG,SS	A	GG	CG,LG,SS	A	GG	CG,LG,SS	Nominal
Hong Kong SAR	GG	CG	C	GG	CG	C	GG	CG	Face
Iceland	GG	CG,LG,SS	A	GG	CG,LG,SS	A	GG	CG,LG,SS	Face
Ireland	GG	CG,LG,SS	A	GG	CG,LG,SS	A	GG	CG,LG,SS	Nominal
Israel	GG	CG,LG,SS	Mixed	GG	CG,LG,SS	Mixed	GG	CG,LG,SS	Nominal
Italy	GG	CG,LG,SS	A	GG	CG,LG,SS	A	GG	CG,LG,SS	Face
Japan	GG	CG,LG,SS	A	GG	CG,LG,SS	A	GG	CG,LG,SS	Current market
Korea	CG	CG,SS	C	CG	CG,SS	C	CG	CG,SS	Nominal
Latvia	GG	CG,LG,SS	C	GG	CG,LG,SS	C	GG	CG,LG,SS	Nominal
Lithuania	GG	CG,LG,SS	A	GG	CG,LG,SS	A	GG	CG,LG,SS	Nominal
Luxembourg	GG	CG,LG,SS	A	GG	CG,LG,SS	A	GG	CG,LG,SS	Face
Malta	GG	CG,SS	A	GG	CG,SS	A	GG	CG,SS	Nominal
Netherlands, The	GG	CG,LG,SS	A	GG	CG,LG,SS	A	GG	CG,LG,SS	Nominal
New Zealand	CG	CG,LG	A	CG	CG,LG	A	CG	CG,LG	Current market
Norway	GG	CG,LG,SS	A	GG	CG,LG,SS	A	GG	CG,LG,SS	Current market
Portugal	GG	CG,LG,SS	A	GG	CG,LG,SS	A	GG	CG,LG,SS	Nominal
Singapore	GG	CG	C	GG	CG	C	GG	CG	Nominal
Slovak Republic	GG	CG,LG,SS	A	GG	CG,LG,SS	A	GG	CG,LG,SS	Face
Slovenia	GG	CG,LG,SS	A	GG	CG,LG,SS	A	GG	CG,LG,SS	Face
Spain	GG	CG,SG,LG,SS	A	GG	CG,SG,LG,SS	A	GG	CG,SG,LG,SS	Nominal
Sweden	GG	CG,LG,SS	A	GG	CG,LG,SS	A	GG	CG,LG,SS	Nominal
Switzerland	GG	CG,SG,LG,SS	A	GG	CG,SG,LG,SS	A	GG	CG,SG,LG,SS	Nominal
United Kingdom	GG	CG,LG	A	GG	CG,LG	A	GG	CG,LG	Nominal
United States	GG	CG,SG,LG	A	GG	CG,SG,LG	A	GG	CG,SG,LG	Nominal

Note: Coverage: CG = central government; GG = general government; LG = local governments; SG = state governments; SS = social security funds; TG = territorial governments. Accounting standard: A = accrual; C = cash; Mixed = combination of accrual and cash accounting.

[1] In many economies, fiscal data follow the IMF's *Government Finance Statistics Manual 2014*. The concept of overall fiscal balance refers to net lending (+) and borrowing (–) of the general government. In some cases, however, the overall balance refers to total revenue and grants minus total expenditure and net lending.

[2] "Nominal" refers to debt securities that are valued at their nominal values, that is, the nominal value of a debt instrument at any moment in time is the amount that the debtor owes to the creditor. "Face" refers to the undiscounted amount of principal to be repaid at (or before) maturity. The use of face value as a proxy for nominal value in measuring the gross debt position can result in an inconsistent approach across all instruments and is not recommended, unless nominal and market values are not available. "Current market" refers to debt securities that are valued at market prices; insurance, pension, and standardized guarantee schemes are valued according to principles that are equivalent to market valuation; and all other debt instruments are valued at nominal prices, which are considered to be the best generally available proxies for their market prices.

Table C. Emerging Market and Middle-Income Economies: Definition and Coverage of *Fiscal Monitor* Data

	Overall Fiscal Balance[1]			Cyclically Adjusted Balance			Gross Debt		
	Coverage		Accounting Practice	Coverage		Accounting Practice	Coverage		Valuation of Debt[2]
	Aggregate	Subsectors		Aggregate	Subsectors		Aggregate	Subsectors	
Algeria	CG	CG	C	. . .	. . .	. . .	CG	CG	Nominal
Angola	GG	CG,LG	Mixed	. . .	. . .	. . .	GG	CG,LG	Nominal
Argentina	GG	CG,SG,SS	C	CG	CG	C	CG	CG	Nominal
Azerbaijan	CG	CG	C	. . .	. . .	. . .	CG	CG	Face
Belarus[3]	GG	CG,LG,SS	C	. . .	. . .	. . .	GG	CG,LG,SS	Nominal
Brazil[4]	NFPS	CG,SG,LG,SS,NFPC	C	NFPS	CG,SG,LG,SS,NFPC	C	NFPS	CG,SG,LG,SS,NFPC	Nominal
Chile	GG	CG,LG	A	CG	CG	A	GG	CG,LG	Face
China	GG	CG,LG	C	GG	CG,LG	C	GG	CG,LG	Face
Colombia[5]	GG	CG,SG,LG,SS	Mixed	GG	CG,SG,LG,SS	Mixed	GG	CG,SG,LG,SS	Face
Croatia	GG	CG,LG	A	GG	CG,LG	A	GG	CG,LG	Nominal
Dominican Republic	CG	CG,LG,SS,NMPC	Mixed	PS	CG,LG,SS,NMPC	Mixed	PS	CG,LG,SS,NMPC	Face
Ecuador	NFPS	CG,SG,LG,SS,NFPC	C	NFPS	CG,SG,LG,SS,NFPC	C	NFPS	CG,SG,LG,SS,NFPC	Face
Egypt	GG	CG,LG,SS	C	GG	CG,LG,SS	C	GG	CG,LG,SS	Nominal
Hungary	GG	CG,LG,SS,NMPC	A	GG	CG,LG,SS,NMPC	A	GG	CG,LG,SS,NMPC	Face
India	GG	CG,SG	C	GG	CG,SG	C	GG	CG,SG	Nominal
Indonesia	GG	CG,LG	C	GG	CG,LG	C	GG	CG,LG	Face
Iran	CG	CG	C	. . .	. . .	. . .	CG	CG	Nominal
Kazakhstan	GG	CG,LG	A	. . .	. . .	. . .	GG	CG,LG	Nominal
Kuwait	GG	CG,SS	Mixed	. . .	. . .	. . .	GG	CG,SS	Nominal
Libya	GG	CG,SG,LG	C	. . .	. . .	. . .	GG	CG,SG,LG	Face
Malaysia	GG	CG,SG,LG	C	GG	CG,SG,LG	C	GG	CG,SG,LG	Nominal
Mexico	PS	CG,SS,NMPC,NFPC	C	PS	CG,SS,NMPC,NFPC	C	PS	CG,SS,NMPC,NFPC	Face
Morocco	CG	CG	A	. . .	. . .	. . .	CG	CG	Face
Oman	CG	CG	C	. . .	. . .	. . .	CG	CG	Nominal
Pakistan	GG	CG,SG,LG	C	. . .	. . .	. . .	GG	CG,SG,LG	Nominal
Peru	GG	CG,SG,LG,SS	C	GG	CG,SG,LG,SS	C	GG	CG,SG,LG,SS	Face
Philippines	GG	CG,LG,SS	C	GG	CG,LG,SS	C	GG	CG,LG,SS	Nominal
Poland	GG	CG,LG,SS	A	GG	CG,LG,SS	A	GG	CG,LG,SS	Face
Qatar	CG	CG	C	. . .	. . .	. . .	CG	CG	Nominal
Romania	GG	CG,LG,SS	C	GG	CG,LG,SS	C	GG	CG,LG,SS	Face
Russia	GG	CG,SG,SS	Mixed	GG	CG,SG,SS	Mixed	GG	CG,SG,SS	Current market
Saudi Arabia	CG	CG	C	. . .	. . .	. . .	CG	CG	Nominal
South Africa[6]	GG	CG,SG,SS	C	GG	CG,SG,SS	C	GG	CG,SG,SS	Nominal
Sri Lanka	CG	CG	C	. . .	. . .	. . .	CG	CG	Nominal
Thailand[7]	PS	CG,BCG,LG,SS	A	PS	CG,BCG,LG,SS	A	PS	CG,BCG,LG,SS	Nominal
Turkey	GG	CG,LG,SS	A	GG	CG,LG,SS	A	GG	CG,LG,SS	Nominal
Ukraine	GG	CG,LG,SS	C	GG	CG,LG,SS	C	GG	CG,LG,SS	Nominal
United Arab Emirates[8]	GG	CG,BCG,SG,SS	Mixed	. . .	. . .	. . .	GG	CG,BCG,SG,SS	Nominal
Uruguay	NFPS	CG,LG,SS,NMPC,NFPC	A	. . .	. . .	. . .	NFPS	CG,LG,SS,NMPC,NFPC	Face
Venezuela[9]	GG	BCG,NFPC	C	GG	BCG,NFPC	C	GG	BCG,NFPC	Nominal

Note: Coverage: BCG = budgetary central government; CG = central government; GG = general government; LG = local governments; NFPC = nonfinancial public corporations; NFPS = nonfinancial public sector; NMPC = nonmonetary financial public corporations; PS = public sector; SG = state governments; SS = social security funds. Accounting standard: A = accrual; C = cash; Mixed = combination of accrual and cash accounting.

[1] In many countries, fiscal data follow the IMF's *Government Finance Statistics Manual 2014*. The concept of overall fiscal balance refers to net lending (+) and borrowing (–) of the general government. In some cases, however, the overall balance refers to total revenue and grants minus total expenditure and net lending.

[2] "Nominal" refers to debt securities that are valued at their nominal values, that is, the nominal value of a debt instrument at any moment in time is the amount that the debtor owes to the creditor. "Face" refers to the undiscounted amount of principal to be repaid at (or before) maturity. The use of face value as a proxy for nominal value in measuring the gross debt position can result in an inconsistent approach across all instruments and is not recommended, unless nominal and market values are not available. "Current market" refers to debt securities that are valued at market prices; insurance, pension, and standardized guarantee schemes are valued according to principles that are equivalent to market valuation; and all other debt instruments are valued at nominal prices, which are considered to be the best generally available proxies of their market prices.

[3] Gross debt refers to general government public debt, including publicly guaranteed debt.

[4] Gross debt refers to the nonfinancial public sector, excluding Eletrobras and Petrobras, and includes sovereign debt held on the balance sheet of the central bank. The overall balance combines the cash primary balance of the nonfinancial public sector and the net interest of the public sector on an accrual basis

[5] Revenue is recorded on a cash basis and expenditure on an accrual basis.

[6] Coverage for South Africa is a proxy for general government. It includes the national and provincial governments and certain public entities, while local governments are only partly covered, through the transfers to them.

[7] Data for Thailand do not include the debt of specialized financial institutions without government guarantee.

[8] Gross debt covers banking system claims only.

[9] The fiscal accounts include the budgetary central government; social security; POGADE (insurance deposit institution); and a sample of public enterprises, including Petróleos de Venezuela, S.A.; and data for 2018–19 are IMF staff estimates.

Table D. Low-Income Developing Countries: Definition and Coverage of *Fiscal Monitor* Data

	Overall Fiscal Balance[1]			Cyclically Adjusted Balance			Gross Debt		
	Coverage		Accounting Practice	Coverage		Accounting Practice	Coverage		Valuation of Debt[2]
	Aggregate	Subsectors		Aggregate	Subsectors		Aggregate	Subsectors	
Bangladesh	CG	CG	C	CG	CG	C	CG	CG	Nominal
Benin	CG	CG	C	. . .	. . .	. . .	CG	CG	Nominal
Burkina Faso	CG	CG	CB	. . .	. . .	. . .	CG	CG	Face
Cambodia	CG	CG,LG	A	CG	CG,LG	A	CG	CG,LG	Face
Cameroon	CG	CG	C	. . .	. . .	. . .	CG	CG	Nominal
Chad	NFPS	CG,NFPC	C	. . .	. . .	. . .	NFPS	CG,NFPC	Face
Congo, Democratic Republic of the	CG	CG,LG	A	. . .	. . .	. . .	CG	CG,LG,NFPC	Nominal
Congo, Republic of	CG	CG	A	. . .	. . .	. . .	CG	CG	Nominal
Côte d'Ivoire	CG	CG	A	. . .	. . .	. . .	CG	CG	Nominal
Ethiopia	GG	CG,SG,LG,NFPC	C	. . .	. . .	. . .	NFPS	CG,SG,LG,NFPC	Nominal
Ghana	CG	CG	C	. . .	. . .	. . .	CG	CG	Face
Guinea	CG	CG	C	. . .	. . .	. . .	CG	CG	Nominal
Haiti[3]	CG	CG	C	. . .	. . .	. . .	CG	CG	Nominal
Honduras	GG	CG,LG,SS	Mixed	GG	CG,LG,SS	Mixed	GG	CG,LG,SS	Nominal
Kenya	CG	CG	C	. . .	. . .	. . .	CG	CG	Current market
Kyrgyz Republic	GG	CG,LG,SS	C	. . .	. . .	. . .	GG	CG,LG,SS	Face
Lao P.D.R.[4]	CG	CG	C	CG	CG	C	CG	CG	. . .
Madagascar	CG	CG,LG	C	. . .	. . .	. . .	CG	CG,LG	Nominal
Mali	CG	CG	Mixed	. . .	. . .	. . .	CG	CG	Nominal
Moldova	GG	CG,LG,SS	C	GG	CG,LG,SS	C	GG	CG,LG,SS	Nominal
Mozambique	CG	CG,SG	Mixed	CG	CG,SG	Mixed	CG	CG,SG	Nominal
Myanmar[5]	NFPS	CG,NFPC	C	. . .	. . .	. . .	NFPS	CG,NFPC	Face
Nepal	CG	CG	C	CG	CG	C	CG	CG	Face
Nicaragua	GG	CG,LG,SS	C	GG	CG,LG,SS	C	GG	CG,LG,SS	Nominal
Niger	CG	CG	A	. . .	. . .	. . .	CG	CG	Nominal
Nigeria	GG	CG,SG,LG	C	. . .	. . .	. . .	GG	CG,SG,LG	Current market
Papua New Guinea	CG	CG	C	. . .	. . .	. . .	CG	CG	Face
Rwanda	GG	CG,LG	Mixed	. . .	. . .	. . .	GG	CG,LG	Nominal
Senegal	CG	CG	C	. . .	. . .	. . .	PS	CG	Nominal
Somalia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Sudan	CG	CG	Mixed	. . .	. . .	. . .	CG	CG	Nominal
Tajikistan	GG	CG,LG,SS	C	. . .	. . .	. . .	GG	CG,LG,SS	Nominal
Tanzania	CG	CG,LG	C	. . .	. . .	. . .	CG	CG,LG	Nominal
Timor-Leste	CG	CG	C	CG	CG	C	CG	CG	. . .
Uganda	CG	CG	C	. . .	. . .	. . .	CG	CG	Nominal
Uzbekistan[6]	GG	CG,SG,LG,SS	C	. . .	. . .	. . .	GG	CG,SG,LG,SS	Nominal
Vietnam	GG	CG,SG,LG	C	GG	CG,SG,LG	C	GG	CG,SG,LG	Nominal
Yemen	GG	CG,LG	C	. . .	. . .	. . .	GG	CG,LG	Nominal
Zambia	CG	CG	C	. . .	. . .	. . .	CG	CG	Nominal
Zimbabwe	CG	CG	C	. . .	. . .	. . .	CG	CG	Current market

Note: Coverage: CG = central government; GG = general government; LG = local governments; NFPC = nonfinancial public corporations; NFPS = nonfinancial public sector; SG = state governments; SS = social security funds. Accounting standard: A = accrual; C = cash; CB = commitments-based; Mixed = combination of accrual and cash accounting.

[1] In many countries, fiscal data follow the IMF's *Government Finance Statistics Manual 2014*. The concept of overall fiscal balance refers to net lending (+) and borrowing (–) of the general government. In some cases, however, the overall balance refers to total revenue and grants minus total expenditure and net lending.

[2] "Nominal" refers to debt securities that are valued at their nominal values, that is, the nominal value of a debt instrument at any moment in time is the amount that the debtor owes to the creditor. "Face" refers to the undiscounted amount of principal to be repaid at (or before) maturity. The use of face value as a proxy for nominal value in measuring the gross debt position can result in an inconsistent approach across all instruments and is not recommended, unless nominal and market values are not available. "Current market" refers to debt securities that are valued at market prices; insurance, pension, and standardized guarantee schemes are valued according to principles that are equivalent to market valuation; and all other debt instruments are valued at nominal prices, which are considered to be the best generally available proxies of their market prices.

[3] Haiti's fiscal balance and debt data cover the central government, special funds and programs (Fonds d'Entretien Routier and Programme de Scolarisation Universelle, Gratuite, et Obligatoire), and the state-owned electricity company EDH.

[4] Lao P.D.R.'s fiscal spending includes capital spending by local governments financed by loans provided by the central bank.

[5] Overall and primary balances in 2012 are based on monetary statistics and are different from the balances calculated from expenditure and revenue data.

[6] Uzbekistan's listing includes the Fund for Reconstruction and Development.

Table A1. Advanced Economies: General Government Overall Balance, 2011–25

(Percent of GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Australia	–4.5	–3.5	–2.8	–2.9	–2.8	–2.4	–1.7	–1.2	–3.9	–10.1	–10.5	–6.2	–3.9	–2.6	–2.0
Austria	–2.6	–2.2	–2.0	–2.7	–1.0	–1.6	–0.7	0.2	0.7	–9.9	–3.9	–2.3	–1.8	–1.2	–0.5
Belgium	–4.3	–4.3	–3.1	–3.1	–2.4	–2.4	–0.7	–0.8	–1.9	–11.4	–6.3	–5.4	–5.1	–5.2	–5.2
Canada	–3.3	–2.5	–1.5	0.2	–0.1	–0.5	–0.1	–0.4	–0.3	–19.9	–8.7	–5.4	–3.0	–1.4	–0.3
Cyprus[1]	–5.7	–5.6	–5.2	–0.2	0.0	0.1	1.7	–4.2	1.7	–5.6	–2.0	–0.3	0.3	1.1	1.5
Czech Republic	–2.7	–3.9	–1.2	–2.1	–0.6	0.7	1.5	0.9	0.3	–7.3	–4.3	–3.2	–2.4	–1.7	–1.1
Denmark	–2.1	–3.5	–1.2	1.1	–1.3	–0.1	1.5	0.5	3.8	–4.0	–3.0	–1.5	–0.2	–0.1	0.0
Estonia	1.1	–0.3	–0.2	0.7	0.1	–0.3	–0.4	–0.5	–0.4	–6.8	–4.9	–4.5	–3.8	–3.7	–3.0
Finland	–1.0	–2.2	–2.5	–3.0	–2.4	–1.7	–0.7	–0.9	–0.9	–6.8	–4.1	–2.6	–2.2	–1.9	–1.7
France	–5.2	–5.0	–4.1	–3.9	–3.6	–3.6	–2.9	–2.3	–3.0	–10.8	–6.5	–5.3	–4.9	–4.7	–4.7
Germany	–0.9	0.0	0.0	0.6	1.0	1.2	1.4	1.8	1.5	–8.2	–3.2	0.6	0.8	1.0	1.0
Greece	–10.3	–6.6	–3.6	–4.1	–2.8	0.6	1.0	0.9	0.6	–9.0	–3.0	–1.5	–1.0	–1.2	–1.5
Hong Kong SAR	3.8	3.1	1.0	3.6	0.6	4.4	5.5	2.3	–1.5	–11.8	–6.6	0.1	0.1	0.1	0.1
Iceland	–5.4	–3.6	–1.8	–0.1	–0.8	12.4	0.6	0.8	–1.0	–10.0	–7.0	–5.9	–5.3	–5.4	–5.1
Ireland[1]	–12.8	–8.1	–6.2	–3.6	–2.0	–0.7	–0.3	0.1	0.4	–6.0	–2.7	–0.7	0.1	0.3	0.5
Israel	–2.9	–4.3	–4.0	–2.3	–0.9	–1.4	–1.1	–3.6	–3.9	–12.9	–7.1	–5.4	–4.9	–4.4	–3.9
Italy	–3.6	–2.9	–2.9	–3.0	–2.6	–2.4	–2.4	–2.2	–1.6	–13.0	–6.2	–3.9	–2.7	–2.5	–2.5
Japan	–9.4	–8.6	–7.9	–5.6	–3.8	–3.7	–3.1	–2.5	–3.3	–14.2	–6.4	–3.2	–2.8	–2.6	–2.7
Korea	1.6	1.5	0.6	0.4	0.5	1.6	2.2	2.6	0.4	–3.2	–2.3	–2.7	–2.7	–2.5	–2.5
Latvia	–3.2	0.2	–0.6	–1.7	–1.5	–0.4	–0.8	–0.7	–0.4	–5.4	–3.3	–1.4	–0.8	–0.7	–0.8
Lithuania	–9.0	–3.1	–2.6	–0.7	–0.2	0.3	0.5	0.6	0.3	–6.7	–3.8	–1.4	–0.2	–0.2	0.0
Luxembourg	0.6	0.5	0.8	1.3	1.3	1.8	1.3	3.1	2.1	–7.0	–1.7	–1.2	–0.3	–0.1	0.0
Malta	–2.4	–3.4	–2.3	–1.7	–1.0	0.9	3.2	1.9	0.5	–9.4	–3.9	–2.6	–2.7	–2.9	–2.6
The Netherlands	–4.4	–3.9	–2.9	–2.2	–2.0	0.0	1.3	1.5	1.7	–8.8	–4.9	–2.0	–1.1	–0.4	0.2
New Zealand	–4.9	–2.2	–1.3	–0.4	0.3	1.0	1.3	1.4	–2.9	–9.2	–8.7	–5.7	–3.8	–2.2	–1.4
Norway	13.3	13.8	10.7	8.6	6.0	4.1	5.0	7.2	7.8	–1.8	2.0	4.1	5.0	5.6	6.2
Portugal	–7.7	–6.2	–5.1	–7.3	–4.3	–1.9	–3.0	–0.4	0.2	–8.4	–2.7	–1.6	–0.7	–2.3	–1.8
Singapore	8.0	7.3	6.0	4.6	2.9	3.7	5.3	3.7	3.8	–10.8	1.2	2.4	2.5	2.6	2.6
Slovak Republic	–4.5	–4.4	–2.9	–3.1	–2.7	–2.5	–1.0	–1.0	–1.3	–8.8	–4.6	–3.8	–2.9	–2.7	–2.5
Slovenia	–6.6	–4.0	–14.6	–5.5	–2.8	–1.9	0.0	0.7	0.5	–8.8	–2.8	–0.8	–0.2	0.0	0.1
Spain[1]	–9.7	–10.7	–7.0	–5.9	–5.2	–4.3	–3.0	–2.5	–2.8	–14.1	–7.5	–5.8	–4.7	–3.9	–4.4
Sweden	–0.2	–1.0	–1.4	–1.5	0.0	1.0	1.4	0.8	0.4	–5.9	–2.0	–1.5	0.3	0.3	0.3
Switzerland	0.7	0.2	–0.4	–0.3	0.6	0.2	1.2	1.3	1.5	–4.2	–1.4	–0.6	–0.3	–0.1	0.0
United Kingdom	–7.5	–7.6	–5.5	–5.6	–4.6	–3.3	–2.5	–2.3	–2.2	–16.5	–9.2	–7.1	–5.8	–5.1	–4.4
United States[2]	–9.7	–8.0	–4.6	–4.1	–3.6	–4.4	–4.6	–5.8	–6.3	–18.7	–8.7	–6.5	–5.6	–5.4	–5.5
Average	–6.3	–5.5	–3.7	–3.1	–2.6	–2.7	–2.4	–2.7	–3.3	–14.4	–6.9	–4.6	–3.7	–3.4	–3.3
Euro Area	–4.2	–3.7	–3.0	–2.5	–2.0	–1.5	–1.0	–0.5	–0.6	–10.1	–5.0	–2.7	–2.1	–1.8	–1.8
G7	–7.4	–6.5	–4.3	–3.6	–3.0	–3.3	–3.2	–3.7	–4.2	–16.2	–7.6	–5.1	–4.2	–4.0	–4.0
G20 Advanced	–7.0	–6.1	–4.1	–3.4	–2.9	–3.1	–2.9	–3.3	–4.0	–15.5	–7.5	–5.0	–4.2	–3.9	–3.8

Source: IMF staff estimates and projections. Projections are based on staff assessments of current policies (see "Fiscal Policy Assumptions" in text).

Note: For country-specific details, see "Data and Conventions" in text, and Table B.

[1] Data include financial sector support. For Cyprus, 2014 and 2015 balances exclude financial sector support.

[2] For cross-economy comparability, the expenditure and fiscal balances of the United States are adjusted to exclude the imputed interest on unfunded pension liabilities and the imputed compensation of employees, which are counted as expenditures under the 2008 System of National Accounts (2008 SNA) adopted by the United States, but not in economies that have not yet adopted the 2008 SNA. Data for the United States in this table may thus differ from data published by the US Bureau of Economic Analysis.

Table A2. Advanced Economies: General Government Primary Balance, 2011–25

(Percent of GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Australia	–4.1	–2.9	–2.1	–2.1	–1.9	–1.5	–0.8	–0.4	–3.1	–9.2	–9.5	–5.3	–2.9	–1.7	–1.1
Austria	–0.4	0.0	0.2	–0.7	0.9	0.1	0.8	1.4	1.8	–8.9	–3.0	–1.5	–1.1	–0.7	0.0
Belgium	–1.2	–1.2	–0.2	–0.2	0.2	0.0	1.3	1.0	–0.2	–9.7	–4.9	–4.3	–4.1	–4.1	–4.0
Canada	–2.7	–1.8	–1.0	0.5	0.6	0.1	0.0	–0.2	–0.2	–19.8	–8.2	–5.0	–2.7	–1.1	0.1
Cyprus[1]	–4.1	–2.9	–1.9	2.8	3.0	2.6	4.1	–1.9	4.1	–3.1	0.3	1.9	2.2	3.0	3.2
Czech Republic	–1.6	–2.7	–0.2	–1.0	0.3	1.5	2.1	1.5	0.8	–6.8	–3.7	–2.5	–1.7	–1.0	–0.4
Denmark	–1.4	–3.0	–0.8	1.6	–0.6	0.4	1.7	0.4	3.5	–4.2	–3.3	–1.6	–0.2	0.0	0.1
Estonia	1.0	–0.4	–0.2	0.6	0.0	–0.4	–0.4	–0.5	–0.4	–6.8	–4.9	–4.5	–3.8	–3.7	–3.0
Finland	–1.0	–1.9	–2.4	–2.8	–2.2	–1.4	–0.4	–0.7	–0.8	–6.8	–4.1	–2.6	–2.2	–1.9	–1.7
France	–2.7	–2.5	–1.9	–1.8	–1.8	–1.9	–1.3	–0.7	–1.6	–9.5	–5.3	–4.2	–3.8	–3.6	–3.4
Germany	1.1	1.9	1.5	1.8	2.0	2.1	2.2	2.5	2.1	–7.6	–2.7	1.0	1.2	1.4	1.4
Greece	–2.7	–1.3	0.5	–0.1	0.8	3.7	4.1	4.2	3.5	–6.0	0.0	1.4	1.9	1.7	1.5
Hong Kong SAR	1.9	1.3	–0.7	3.6	0.6	3.6	4.7	1.0	–2.7	–13.0	–7.8	–1.1	–1.2	–1.1	–1.1
Iceland	–2.8	–0.4	1.6	3.5	2.8	15.5	3.7	3.0	0.9	–7.8	–4.7	–3.6	–2.8	–2.9	–2.7
Ireland[1]	–10.3	–4.9	–2.7	–0.3	0.4	1.5	1.6	1.7	1.6	–4.9	–1.7	0.3	1.1	1.2	1.3
Israel	0.6	–1.2	–1.0	–0.2	0.8	0.4	0.8	–1.5	–1.8	–10.8	–4.9	–3.2	–2.8	–2.3	–1.8
Italy	0.8	2.0	1.8	1.4	1.4	1.3	1.1	1.3	1.6	–9.4	–2.8	–0.7	0.3	0.4	0.3
Japan	–8.3	–7.5	–7.0	–4.9	–3.2	–3.0	–2.6	–2.2	–3.0	–13.9	–6.2	–3.1	–2.8	–2.7	–2.6
Korea	0.9	1.0	0.2	0.0	0.2	1.4	1.8	2.1	–0.1	–3.7	–2.6	–2.9	–2.8	–2.5	–2.4
Latvia	–1.8	1.7	0.9	–0.2	0.3	0.8	0.3	0.2	0.5	–4.5	–2.3	–0.6	–0.1	0.0	–0.1
Lithuania	–7.3	–1.2	–0.9	1.0	1.3	1.6	1.6	1.5	1.1	–6.7	–3.8	–1.1	0.1	0.1	0.5
Luxembourg	0.3	0.2	0.7	1.0	1.1	1.6	1.2	3.0	2.0	–7.2	–1.9	–1.4	–0.5	–0.3	–0.2
Malta	0.8	–0.5	0.4	0.9	1.2	3.0	5.0	3.4	1.9	–8.0	–2.4	–1.2	–1.3	–1.5	–1.2
The Netherlands	–3.0	–2.5	–1.6	–0.8	–0.8	1.1	2.2	2.3	2.3	–8.2	–4.1	–1.2	–0.3	0.4	1.0
New Zealand	–4.1	–1.3	–0.5	0.2	1.0	1.7	1.9	2.1	–2.2	–8.6	–8.3	–5.3	–3.0	–1.1	–0.3
Norway	11.3	11.9	8.8	6.3	3.5	1.5	2.6	5.1	5.7	–3.8	0.0	2.0	2.9	3.4	4.1
Portugal	–3.8	–1.9	–0.9	–3.0	–0.1	1.9	0.7	2.8	3.1	–5.3	0.0	0.8	1.6	–0.1	0.2
Singapore	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Slovak Republic	–3.1	–2.8	–1.2	–1.4	–1.2	–1.1	0.3	0.1	–0.2	–7.7	–3.5	–2.8	–1.9	–1.7	–1.5
Slovenia	–5.2	–2.6	–12.6	–2.7	0.0	0.7	2.1	2.5	2.0	–7.4	–1.5	0.5	1.0	1.2	1.4
Spain[1]	–7.8	–8.2	–4.1	–3.0	–2.6	–1.9	–0.7	–0.3	–0.8	–11.7	–5.1	–3.4	–2.4	–1.7	–2.1
Sweden	0.1	–0.8	–1.2	–1.4	0.0	1.0	1.4	0.8	0.3	–5.8	–1.9	–1.5	0.3	0.3	0.3
Switzerland	1.1	0.6	–0.2	0.0	0.8	0.4	1.3	1.4	1.6	–4.0	–1.2	–0.4	–0.1	0.1	0.2
United Kingdom	–4.8	–5.3	–4.2	–3.8	–3.1	–1.8	–0.7	–0.6	–0.8	–15.5	–8.1	–5.9	–4.6	–3.7	–2.9
United States[2]	–7.4	–5.8	–2.6	–2.1	–1.7	–2.4	–2.6	–3.6	–4.1	–16.7	–6.9	–4.9	–4.0	–3.9	–4.0
Average	–4.5	–3.7	–2.1	–1.5	–1.2	–1.2	–1.0	–1.3	–1.9	–13.1	–5.7	–3.5	–2.7	–2.4	–2.3
Euro Area	–1.6	–1.0	–0.6	–0.2	0.1	0.4	0.8	1.2	0.8	–8.7	–3.6	–1.3	–0.8	–0.6	–0.5
G7	–5.3	–4.4	–2.5	–1.8	–1.4	–1.7	–1.6	–2.0	–2.5	–14.6	–6.2	–3.9	–3.0	–2.8	–2.7
G20 Advanced	–5.0	–4.1	–2.4	–1.8	–1.3	–1.5	–1.4	–1.7	–2.4	–14.0	–6.2	–3.9	–3.0	–2.7	–2.7

Source: IMF staff estimates and projections. Projections are based on staff assessments of current policies (see "Fiscal Policy Assumptions" in text).

Note: Primary balance is defined as the overall balance, excluding net interest payments. For country-specific details, see "Data and Conventions" in text, and Table B.

[1] Data include financial sector support. For Cyprus, 2014 and 2015 balances exclude financial sector support.

[2] For cross-economy comparability, the expenditure and fiscal balances of the United States are adjusted to exclude the imputed interest on unfunded pension liabilities and the imputed compensation of employees, which are counted as expenditures under the 2008 System of National Accounts (2008 SNA) adopted by the United States, but not in economies that have not yet adopted the 2008 SNA. Data for the United States in this table may thus differ from data published by the US Bureau of Economic Analysis.

Table A3. Advanced Economies: General Government Cyclically Adjusted Balance, 2011–25

(Percent of potential GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Australia	–4.5	–3.5	–2.7	–2.8	–2.6	–2.3	–1.6	–1.2	–3.7	–9.2	–9.8	–5.9	–3.7	–2.5	–1.9
Austria	–3.1	–2.5	–1.6	–2.0	–0.4	–1.2	–0.9	–0.4	–0.8	–8.9	–3.4	–1.9	–1.6	–1.1	–0.5
Belgium	–4.2	–3.8	–2.2	–2.2	–1.9	–1.9	–0.5	–0.7	–2.0	–8.5	–4.9	–4.8	–4.9	–5.2	–5.2
Canada	–3.2	–2.4	–1.5	–0.2	0.0	–0.1	–0.3	–0.6	–0.5	–17.9	–8.1	–5.2	–3.0	–1.4	–0.3
Cyprus	–5.9	–4.3	–2.1	2.1	1.9	0.6	1.1	1.7	0.2	–3.7	–1.4	–0.1	0.2	0.8	1.1
Czech Republic	–2.6	–2.9	0.4	–0.7	–0.4	0.7	0.8	0.2	–0.6	–6.1	–3.8	–3.0	–2.2	–1.6	–1.1
Denmark	–0.7	–1.4	1.0	2.9	–0.5	–0.9	0.5	–1.2	1.5	–1.0	–1.4	–0.8	–0.2	–0.1	0.1
Estonia	1.9	0.2	0.5	1.2	0.7	0.3	–0.6	–1.2	–1.1	–5.5	–4.6	–4.3	–3.7	–3.7	–3.0
Finland	–1.6	–1.7	–1.0	–0.8	0.3	0.3	–0.1	–0.3	–0.3	–3.3	–2.7	–1.9	–2.2	–1.9	–1.7
France	–4.8	–4.2	–2.9	–2.6	–2.3	–2.2	–2.1	–2.0	–3.0	–7.0	–4.0	–3.8	–4.1	–4.4	–4.7
Germany	–1.6	–0.1	0.5	0.8	1.1	1.1	0.8	1.2	1.3	–6.2	–2.2	1.0	0.9	1.1	1.0
Greece	–4.4	1.9	4.8	2.8	3.0	5.6	4.8	4.0	3.5	–2.0	1.4	0.8	–0.3	–1.2	–1.5
Hong Kong SAR[1]	–2.7	–2.1	–5.0	–2.2	–4.3	–2.3	–3.2	–4.4	–5.8	–12.8	–9.5	–3.8	–4.0	–4.0	–4.1
Iceland	–4.3	–2.5	–1.6	0.8	–0.2	11.7	–0.5	–0.9	–2.4	–7.6	–6.4	–5.8	–5.2	–5.3	–5.1
Ireland[1]	–6.5	–5.4	–4.6	–3.1	–1.3	–1.4	–0.9	–0.5	–0.2	–4.8	–2.4	–0.5	0.1	0.3	0.5
Israel	–3.3	–4.2	–4.1	–2.5	–0.7	–1.3	–1.1	–3.6	–4.1	–10.9	–5.5	–4.2	–4.1	–4.1	–4.0
Italy	–3.4	–1.5	–0.7	–0.8	–0.8	–1.1	–1.8	–1.8	–1.3	–9.7	–3.0	–2.3	–2.1	–2.0	–2.0
Japan	–8.0	–7.6	–7.5	–5.5	–4.3	–4.1	–3.3	–2.5	–3.0	–12.7	–5.6	–2.8	–2.6	–2.6	–2.7
Korea	1.4	1.5	0.6	0.5	0.7	1.8	2.3	2.7	0.6	–1.9	–1.3	–1.9	–2.1	–2.1	–2.2
Latvia	–2.7	0.1	–1.4	–1.7	–1.7	–0.5	–1.1	–1.1	–0.6	–2.9	–1.9	–0.7	–0.7	–0.7	–0.8
Lithuania	–7.3	–2.2	–2.1	–0.6	0.2	0.7	0.5	0.5	–0.2	–6.0	–3.6	–1.4	–0.2	–0.2	0.1
Luxembourg	0.4	1.4	1.4	1.5	1.1	1.1	0.7	2.5	1.9	–5.3	–1.1	–1.0	–0.2	0.0	0.0
Malta	–1.9	–2.3	–1.1	–1.3	–2.1	0.6	3.1	1.3	0.2	–6.6	–1.8	–1.3	–1.8	–2.5	–2.6
The Netherlands	–4.4	–2.7	–1.1	–0.5	–0.8	0.8	1.3	0.9	1.0	–7.2	–4.5	–1.7	–0.9	–0.2	0.3
New Zealand	–3.6	–1.1	–0.3	0.3	0.6	1.0	1.1	1.2	–2.4	–7.3	–7.8	–5.4	–3.5	–2.2	–1.3
Norway[1]	–4.0	–4.5	–4.8	–5.6	–6.6	–7.6	–7.7	–7.1	–8.1	–15.3	–13.9	–13.2	–12.7	–12.3	–11.8
Portugal	–5.8	–2.4	–0.9	–3.5	–1.6	–0.2	–2.4	–0.5	–0.1	–5.5	–1.3	–1.2	–0.7	–2.2	–1.8
Singapore	2.5	2.4	1.5	1.0	–0.7	1.2	1.8	0.7	1.2	–13.1	–1.7	–0.5	–0.4	–0.3	–0.3
Slovak Republic	–3.4	–3.3	–1.6	–2.5	–3.2	–3.0	–1.6	–1.8	–1.8	–5.4	–3.5	–3.6	–3.1	–2.9	–2.7
Slovenia	–6.0	–1.9	–10.9	–3.2	–0.8	–0.4	0.5	0.7	0.5	–7.8	–2.3	–0.4	0.0	0.1	0.1
Spain[1]	–6.8	–2.8	–1.8	–1.3	–2.2	–2.6	–2.5	–2.4	–3.1	–7.3	–4.1	–4.2	–4.3	–4.3	–4.7
Sweden[1]	–0.4	–0.8	–0.9	–1.0	–0.9	0.5	0.6	0.0	–0.5	–4.9	–1.5	–1.3	0.4	0.3	0.3
Switzerland[1]	0.7	0.4	–0.3	–0.2	0.6	0.4	1.1	1.1	1.3	–2.4	–0.5	–0.1	0.0	0.0	0.0
United Kingdom[1]	–5.9	–6.1	–4.3	–4.9	–4.3	–3.3	–2.6	–2.3	–2.2	–14.0	–6.4	–5.4	–4.8	–4.6	–4.3
United States[1,2]	–6.6	–4.9	–3.0	–2.6	–2.6	–3.7	–4.3	–5.7	–6.8	–15.0	–7.6	–6.1	–5.4	–5.2	–5.4
Average	–5.2	–4.0	–2.8	–2.3	–2.1	–2.4	–2.4	–2.9	–3.7	–11.6	–5.7	–4.2	–3.6	–3.5	–3.4
Euro Area	–3.8	–2.4	–1.1	–0.9	–0.7	–0.6	–0.7	–0.6	–0.8	–7.0	–3.1	–1.7	–1.7	–1.7	–1.7
G7	–5.8	–4.6	–3.2	–2.6	–2.4	–2.9	–3.1	–3.7	–4.4	–13.1	–6.2	–4.5	–3.9	–3.8	–3.8
G20 Advanced	–5.5	–4.4	–3.0	–2.5	–2.3	–2.7	–2.8	–3.3	–4.2	–12.5	–6.1	–4.4	–3.9	–3.7	–3.7

Source: IMF staff estimates and projections. Projections are based on staff assessments of current policies (see "Fiscal Policy Assumptions" in text).

Note: For country-specific details, see "Data and Conventions" in text, and Table B.

[1] Data for these economies include adjustments beyond the output cycle.

[2] For cross-economy comparability, the expenditure and fiscal balances of the United States are adjusted to exclude the imputed interest on unfunded pension liabilities and the imputed compensation of employees, which are counted as expenditures under the 2008 System of National Accounts (2008 SNA) adopted by the United States, but not in economies that have not yet adopted the 2008 SNA. Data for the United States in this table may thus differ from data published by the US Bureau of Economic Analysis.

Table A4. Advanced Economies: General Government Cyclically Adjusted Primary Balance, 2011–25

(Percent of potential GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Australia	–4.1	–2.8	–2.0	–1.9	–1.7	–1.4	–0.7	–0.3	–2.9	–8.3	–8.9	–5.0	–2.8	–1.6	–1.1
Austria	–1.0	–0.3	0.5	–0.1	1.5	0.4	0.6	0.8	0.2	–7.8	–2.5	–1.2	–0.9	–0.6	0.0
Belgium	–1.0	–0.7	0.7	0.6	0.7	0.5	1.5	1.1	–0.2	–6.9	–3.5	–3.6	–3.9	–4.1	–4.0
Canada	–2.6	–1.7	–1.0	0.1	0.6	0.5	–0.1	–0.4	–0.3	–17.8	–7.6	–4.9	–2.6	–1.1	0.1
Cyprus	–4.6	–2.3	0.3	4.2	4.0	2.5	3.0	3.5	2.1	–1.8	0.4	1.5	1.7	2.2	2.4
Czech Republic	–1.6	–1.7	1.4	0.4	0.5	1.5	1.5	0.8	0.0	–5.6	–3.2	–2.4	–1.6	–0.9	–0.4
Denmark	–0.1	–0.9	1.4	3.4	0.3	–0.4	0.7	–1.3	1.2	–1.2	–1.7	–0.9	–0.2	0.0	0.2
Estonia	1.7	0.1	0.4	1.1	0.6	0.2	–0.7	–1.2	–1.1	–5.5	–4.6	–4.3	–3.7	–3.7	–3.0
Finland	–1.6	–1.5	–0.9	–0.6	0.5	0.5	0.2	–0.1	–0.1	–3.2	–2.6	–1.9	–2.2	–1.9	–1.7
France	–2.4	–1.8	–0.8	–0.6	–0.5	–0.5	–0.5	–0.4	–1.6	–5.8	–2.9	–2.7	–3.0	–3.2	–3.4
Germany	0.4	1.7	1.9	2.0	2.2	2.0	1.6	1.9	1.9	–5.7	–1.8	1.4	1.2	1.4	1.4
Greece	2.3	6.4	8.3	6.3	6.1	8.4	7.6	7.1	6.3	0.6	4.1	3.6	2.5	1.7	1.5
Hong Kong SAR[1]	–4.6	–3.9	–6.7	–2.2	–4.3	–3.1	–4.0	–5.8	–7.0	–14.0	–10.7	–5.0	–5.2	–5.2	–5.3
Iceland	–1.8	0.6	1.8	4.3	3.4	14.8	2.6	1.3	–0.5	–5.4	–4.1	–3.6	–2.8	–2.9	–2.7
Ireland[1]	–4.1	–2.3	–1.2	0.2	1.0	0.9	1.0	1.1	1.0	–3.7	–1.4	0.4	1.1	1.2	1.3
Israel	0.2	–1.1	–1.1	–0.5	1.0	0.5	0.8	–1.5	–2.0	–8.9	–3.5	–2.1	–2.0	–1.9	–1.8
Italy	1.1	3.4	3.7	3.4	3.0	2.5	1.7	1.6	1.9	–6.4	0.2	0.8	0.9	0.9	0.9
Japan	–6.9	–6.5	–6.6	–4.7	–3.7	–3.4	–2.9	–2.1	–2.8	–12.5	–5.4	–2.7	–2.6	–2.7	–2.6
Korea	0.7	1.1	0.2	0.0	0.4	1.5	2.0	2.3	0.2	–2.4	–1.6	–2.1	–2.2	–2.1	–2.1
Latvia	–1.3	1.6	0.1	–0.2	0.1	0.7	0.0	–0.2	0.3	–2.1	–1.0	0.1	0.0	0.0	–0.1
Lithuania	–5.7	–0.3	–0.4	1.1	1.7	2.1	1.7	1.4	0.6	–6.0	–3.6	–1.1	0.1	0.1	0.5
Luxembourg	0.1	1.2	1.2	1.2	0.9	0.9	0.5	2.4	1.7	–5.4	–1.3	–1.2	–0.4	–0.2	–0.2
Malta	1.2	0.5	1.6	1.3	0.2	2.6	4.9	2.9	1.6	–5.3	–0.5	0.0	–0.4	–1.1	–1.2
The Netherlands	–2.9	–1.4	0.2	0.8	0.4	1.9	2.3	1.8	1.6	–6.7	–3.7	–0.9	–0.1	0.6	1.0
New Zealand	–2.9	–0.2	0.5	0.9	1.2	1.6	1.7	1.8	–1.7	–6.7	–7.4	–4.9	–2.7	–1.1	–0.3
Norway[1]	–6.5	–6.6	–7.1	–8.3	–9.6	–10.5	–10.6	–9.6	–10.5	–17.6	–16.2	–15.6	–15.1	–14.7	–14.2
Portugal	–2.1	1.6	2.9	0.6	2.4	3.6	1.2	2.7	2.8	–2.6	1.3	1.2	1.6	–0.1	0.2
Singapore	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Slovak Republic	–2.1	–1.7	0.0	–0.8	–1.7	–1.6	–0.3	–0.6	–0.7	–4.3	–2.5	–2.5	–2.1	–1.9	–1.7
Slovenia	–4.7	–0.5	–9.1	–0.5	2.0	2.1	2.7	2.4	2.0	–6.4	–0.9	0.8	1.2	1.3	1.4
Spain[1]	–4.9	–0.5	0.9	1.4	0.2	–0.2	–0.2	–0.1	–1.0	–5.1	–1.8	–1.9	–2.0	–2.0	–2.4
Sweden[1]	–0.1	–0.6	–0.7	–0.9	–0.8	0.5	0.6	–0.1	–0.7	–4.8	–1.4	–1.3	0.4	0.3	0.3
Switzerland[1]	1.1	0.8	–0.1	0.0	0.8	0.6	1.3	1.2	1.4	–2.3	–0.3	0.1	0.2	0.2	0.2
United Kingdom[1]	–3.3	–3.9	–3.0	–3.1	–2.9	–1.7	–0.8	–0.7	–0.8	–13.0	–5.3	–4.3	–3.6	–3.2	–2.8
United States[1,2]	–4.5	–2.8	–1.2	–0.7	–0.8	–1.8	–2.3	–3.5	–4.6	–13.0	–5.8	–4.5	–3.8	–3.7	–3.8
Average	–3.4	–2.2	–1.2	–0.7	–0.7	–0.9	–1.0	–1.5	–2.3	–10.3	–4.6	–3.1	–2.6	–2.4	–2.4
Euro Area	–1.2	0.2	1.2	1.3	1.3	1.2	1.0	1.1	0.7	–5.6	–1.8	–0.4	–0.5	–0.4	–0.5
G7	–3.7	–2.6	–1.4	–0.9	–0.8	–1.2	–1.4	–2.0	–2.7	–11.6	–4.8	–3.2	–2.8	–2.6	–2.6
G20 Advanced	–3.6	–2.5	–1.4	–0.9	–0.8	–1.1	–1.3	–1.7	–2.6	–11.1	–4.8	–3.3	–2.7	–2.6	–2.6

Source: IMF staff estimates and projections. Projections are based on staff assessments of current policies (see "Fiscal Policy Assumptions" in text).

Note: "Cyclically adjusted primary balance" is defined as the cyclically adjusted balance plus net interest payable/paid (interest expense minus interest revenue) following the *World Economic Outlook* convention. For economy-specific details, see "Data and Conventions" in text, and Table B.

[1] The data for these economies include adjustments beyond the output cycle.

[2] For cross-economy comparability, expenditure and fiscal balances of the United States are adjusted to exclude the imputed interest on unfunded pension liabilities and the imputed compensation of employees, which are counted as expenditures under the 2008 System of National Accounts (2008 SNA) adopted by the United States, but not in economies that have not yet adopted the 2008 SNA. Data for the United States in this table may thus differ from data published by the US Bureau of Economic Analysis.

Table A5. Advanced Economies: General Government Revenue, 2011–25

(Percent of GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Australia	31.8	33.1	33.7	33.9	34.5	34.9	35.0	35.6	34.6	34.4	33.6	34.5	35.2	35.6	34.9
Austria	48.3	49.0	49.7	49.6	50.0	48.5	48.2	48.8	48.9	48.4	48.6	48.7	48.9	48.7	48.9
Belgium	51.0	52.2	53.0	52.5	51.3	50.7	51.2	51.4	50.4	49.9	50.1	50.1	50.2	50.3	50.2
Canada	38.3	38.4	38.5	38.5	40.0	40.3	40.4	40.7	40.8	37.4	37.3	38.4	39.0	39.5	39.8
Cyprus	36.5	36.4	37.0	40.3	39.7	37.7	38.6	39.2	41.2	42.2	43.8	45.2	45.9	46.0	45.9
Czech Republic	40.0	40.3	40.9	40.0	40.8	40.5	40.5	41.5	41.4	40.6	41.0	41.4	41.6	41.5	41.0
Denmark	54.4	54.5	54.6	56.4	53.2	52.4	52.8	51.4	53.5	53.1	50.7	50.0	50.0	50.0	50.0
Estonia	38.2	38.8	38.1	38.3	39.5	38.7	38.5	38.7	38.6	33.9	38.0	38.3	39.1	39.0	39.6
Finland	52.6	53.3	54.3	54.3	54.1	54.0	53.0	52.5	52.3	53.1	53.5	53.2	52.9	52.6	52.6
France	51.1	52.1	53.1	53.3	53.2	53.0	53.5	53.4	52.6	52.3	52.6	52.0	51.3	51.2	51.1
Germany	44.4	44.9	45.0	44.9	45.1	45.5	45.6	46.3	46.7	45.7	45.8	46.5	46.7	46.7	46.7
Greece	43.9	46.3	48.0	46.2	47.9	49.5	48.4	47.8	46.8	48.3	48.3	48.7	48.5	47.1	45.2
Hong Kong SAR	22.4	21.4	21.0	20.8	18.6	22.6	22.9	20.7	19.4	16.8	19.7	21.8	21.6	21.7	21.7
Iceland	38.8	40.2	40.6	43.7	40.6	56.9	43.5	43.1	40.9	38.0	38.7	39.1	39.1	38.7	38.4
Ireland	33.8	34.0	34.3	33.9	27.0	27.2	25.7	25.2	24.6	23.4	23.6	23.7	23.7	23.4	23.0
Israel	37.0	36.2	36.4	36.6	36.8	36.6	37.8	36.0	35.3	33.6	34.8	35.3	35.3	35.3	35.3
Italy	45.6	47.6	48.1	47.9	47.8	46.7	46.3	46.3	47.1	46.7	47.6	47.6	47.5	47.5	47.4
Japan	30.0	30.8	31.6	33.3	34.2	34.3	34.2	35.0	34.4	34.0	33.9	34.4	34.6	34.7	34.8
Korea	20.7	21.2	20.5	20.2	20.3	21.1	21.8	22.9	23.0	22.9	22.9	22.9	22.9	23.0	23.0
Latvia	35.6	37.3	36.7	36.1	36.1	36.2	35.9	37.5	37.5	38.8	40.0	43.1	43.4	40.8	38.1
Lithuania	32.6	32.1	32.1	33.4	34.2	33.6	32.9	33.9	34.4	33.2	34.9	36.3	35.3	34.6	34.5
Luxembourg	43.2	44.6	44.4	43.5	43.2	42.7	43.5	45.4	44.8	44.5	44.2	44.0	44.0	44.2	44.2
Malta	38.3	38.2	38.0	38.2	37.2	36.8	38.1	38.2	37.7	37.4	38.4	38.0	37.2	36.5	36.4
The Netherlands	41.5	42.0	42.8	42.8	41.8	42.8	42.9	42.8	43.9	39.8	41.2	42.4	42.8	42.9	43.1
New Zealand	37.4	37.5	37.3	37.3	37.7	37.6	37.1	37.8	37.0	37.5	35.8	35.9	36.5	36.9	37.0
Norway	56.9	56.4	54.4	54.2	54.5	54.8	54.6	56.5	58.6	53.5	55.8	56.5	56.6	56.8	56.6
Portugal	42.4	42.7	44.8	44.4	43.8	42.9	42.4	42.9	42.9	42.1	44.6	44.9	44.8	42.1	42.0
Singapore	17.6	17.2	16.9	17.2	17.3	18.9	19.0	17.7	18.2	17.7	17.3	17.3	17.4	17.5	17.5
Slovak Republic	37.0	36.6	39.4	40.2	43.1	40.2	40.5	40.8	41.5	42.3	42.6	43.0	43.6	41.6	41.0
Slovenia	44.2	45.4	45.7	45.3	45.9	44.3	44.0	44.3	44.2	39.7	43.0	43.2	43.3	43.5	43.6
Spain	36.4	37.9	38.8	39.2	38.7	38.1	38.2	39.2	39.1	38.6	40.5	40.5	40.3	40.1	38.5
Sweden	48.4	48.8	49.1	48.2	48.4	49.8	49.7	49.6	48.7	47.4	47.1	46.3	45.5	44.7	43.8
Switzerland	32.9	32.8	32.9	32.7	33.7	33.5	34.3	34.0	34.1	33.1	32.6	32.9	32.9	32.9	32.9
United Kingdom	36.0	36.0	36.3	35.5	35.7	36.1	36.6	36.5	36.4	36.6	36.4	36.4	37.1	37.6	38.2
United States	29.2	29.2	31.4	31.4	31.6	31.1	30.7	29.6	29.4	28.5	28.8	30.0	30.3	30.3	30.4
Average	35.4	35.6	36.8	36.9	36.5	36.3	36.3	36.0	35.7	34.8	35.3	36.0	36.2	36.2	36.2
Euro Area	45.1	46.2	46.8	46.8	46.4	46.2	46.1	46.4	46.4	45.6	46.2	46.3	46.2	46.0	45.8
G7	34.8	34.9	36.4	36.5	36.3	36.1	35.9	35.6	35.2	34.3	34.8	35.6	35.8	35.8	35.9
G20 Advanced	34.2	34.4	35.7	35.8	35.6	35.4	35.3	35.1	34.7	33.9	34.3	35.1	35.3	35.3	35.4

Source: IMF staff estimates and projections. Projections are based on staff assessments of current policies (see "Fiscal Policy Assumptions" in text).

Note: For economy-specific details, see "Data and Conventions" in text, and Table B.

Table A6. Advanced Economies: General Government Expenditure, 2011–25

(Percent of GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Australia	36.4	36.6	36.5	36.8	37.3	37.3	36.7	36.9	38.5	44.5	44.1	40.7	39.1	38.2	36.9
Austria	50.9	51.2	51.6	52.3	51.0	50.1	48.9	48.6	48.2	58.3	52.5	51.0	50.7	49.9	49.4
Belgium	55.3	56.5	56.1	55.6	53.7	53.1	51.9	52.2	52.3	61.3	56.4	55.5	55.3	55.5	55.4
Canada	41.6	40.9	40.0	38.4	40.0	40.8	40.6	41.0	41.2	57.3	46.1	43.8	42.0	40.9	40.1
Cyprus	42.2	42.0	42.2	40.5	39.6	37.6	36.9	43.4	39.5	47.7	45.8	45.5	45.6	44.9	44.4
Czech Republic	42.7	44.2	42.1	42.1	41.4	39.8	39.0	40.6	41.2	47.9	45.3	44.6	43.9	43.2	42.2
Denmark	56.4	58.0	55.8	55.2	54.5	52.5	51.2	50.9	49.7	57.1	53.7	51.5	50.2	50.1	50.0
Estonia	37.1	39.1	38.2	37.6	39.4	39.0	38.9	39.1	39.0	40.8	42.9	42.7	42.9	42.7	42.6
Finland	53.7	55.4	56.8	57.3	56.5	55.7	53.7	53.4	53.2	59.9	57.6	55.8	55.1	54.5	54.3
France	56.3	57.1	57.2	57.2	56.8	56.7	56.5	55.7	55.6	63.1	59.1	57.3	56.2	55.9	55.8
Germany	45.2	44.9	44.9	44.3	44.1	44.4	44.2	44.5	45.2	53.9	49.0	45.9	45.9	45.6	45.7
Greece	54.1	52.8	51.6	50.3	50.7	49.0	47.4	46.9	46.2	57.3	51.3	50.1	49.5	48.3	46.7
Hong Kong SAR	18.6	18.3	20.0	17.3	18.0	18.3	17.4	18.4	20.9	28.5	26.3	21.6	21.5	21.5	21.5
Iceland	44.2	43.8	42.4	43.8	41.4	44.5	42.9	42.3	41.8	48.1	45.7	45.0	44.4	44.1	43.5
Ireland	46.7	42.1	40.5	37.5	29.0	27.9	26.0	25.0	24.2	29.4	26.3	24.3	23.6	23.1	22.5
Israel	39.8	40.4	40.4	38.9	37.7	38.0	38.9	39.6	39.2	46.5	41.8	40.7	40.2	39.7	39.2
Italy	49.2	50.6	51.0	50.9	50.3	49.1	48.8	48.5	48.7	59.7	53.8	51.5	50.2	50.0	50.0
Japan	39.4	39.4	39.5	38.9	38.0	38.0	37.3	37.5	37.7	48.1	40.3	37.6	37.4	37.4	37.5
Korea	19.1	19.7	19.9	19.8	19.7	19.5	19.6	20.4	22.6	26.1	25.2	25.6	25.6	25.5	25.5
Latvia	38.8	37.1	37.2	37.8	37.6	36.6	36.7	38.2	37.8	44.3	43.2	44.5	44.3	41.6	38.9
Lithuania	41.6	35.2	34.7	34.0	34.4	33.3	32.4	33.3	34.1	39.9	38.7	37.7	35.5	34.8	34.4
Luxembourg	42.6	44.1	43.6	42.2	41.9	40.9	42.2	42.3	42.6	51.5	45.9	45.3	44.2	44.2	44.2
Malta	40.7	41.6	40.4	39.9	38.2	35.9	34.8	36.3	37.1	46.8	42.2	40.7	39.9	39.4	39.0
The Netherlands	46.0	45.9	45.7	44.9	43.8	42.8	41.7	41.3	42.3	48.5	46.1	44.4	43.9	43.3	42.8
New Zealand	42.3	39.7	38.6	37.7	37.3	36.6	35.8	36.4	40.0	46.7	44.5	41.7	40.3	39.1	38.3
Norway	43.5	42.7	43.7	45.5	48.5	50.7	49.6	49.2	50.8	55.3	53.7	52.4	51.6	51.2	50.4
Portugal	50.0	48.9	49.9	51.7	48.1	44.8	45.4	43.4	42.7	50.5	47.3	46.4	45.5	44.3	43.8
Singapore	9.7	9.8	10.9	12.6	14.4	15.2	13.7	14.0	14.3	28.5	16.1	14.9	14.9	14.9	14.9
Slovak Republic	41.4	41.0	42.3	43.3	45.8	42.7	41.5	41.9	42.8	51.2	47.1	46.8	46.5	44.3	43.5
Slovenia	50.9	49.4	60.3	50.8	48.7	46.2	44.1	43.6	43.7	48.5	45.8	44.0	43.5	43.5	43.5
Spain	46.2	48.7	45.8	45.1	43.9	42.4	41.2	41.7	41.9	52.7	48.0	46.3	45.0	44.1	42.9
Sweden	48.6	49.8	50.5	49.7	48.4	48.8	48.2	48.8	48.3	53.3	49.1	47.8	45.2	44.4	43.5
Switzerland	32.2	32.5	33.4	33.0	33.1	33.2	33.2	32.7	32.7	37.3	34.0	33.6	33.2	33.0	32.9
United Kingdom	43.5	43.6	41.8	41.1	40.3	39.5	39.1	38.8	38.6	53.1	45.6	43.5	42.9	42.7	42.7
United States[1]	38.9	37.2	36.0	35.5	35.2	35.5	35.3	35.4	35.7	47.2	37.4	36.5	35.9	35.7	35.9
Average	41.8	41.1	40.5	40.0	39.1	39.0	38.6	38.7	39.0	49.2	42.2	40.6	39.9	39.6	39.5
Euro Area	49.3	49.9	49.8	49.2	48.4	47.7	47.1	46.9	47.0	55.7	51.2	49.0	48.3	47.8	47.6
G7	42.2	41.4	40.7	40.1	39.4	39.4	39.2	39.2	39.4	50.5	42.3	40.7	40.0	39.8	39.9
G20 Advanced	41.2	40.4	39.8	39.2	38.5	38.5	38.3	38.4	38.7	49.3	41.7	40.1	39.5	39.2	39.2

Source: IMF staff estimates and projections. Projections are based on staff assessments of current policies (see "Fiscal Policy Assumptions" in text).

Note: For economy-specific details, see "Data and Conventions" in text, and Table B.

[1] For cross-economy comparability, expenditure and fiscal balances of the United States are adjusted to exclude the imputed interest on unfunded pension liabilities and the imputed compensation of employees, which are counted as expenditures under the 2008 System of National Accounts (2008 SNA) adopted by the United States, but not in economies that have not yet adopted the 2008 SNA. Data for the United States in this table may thus differ from data published by the US Bureau of Economic Analysis.

Table A7. Advanced Economies: General Government Gross Debt, 2011–25

(Percent of GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Australia[1]	24.1	27.5	30.5	34.0	37.7	40.5	41.1	41.7	46.3	60.4	70.2	74.4	75.0	73.6	70.9
Austria	82.2	81.7	81.0	83.8	84.4	82.6	78.4	74.0	70.3	84.8	84.3	82.4	81.1	79.3	77.0
Belgium	103.5	104.8	105.5	107.0	105.2	104.9	101.8	99.9	98.7	117.7	117.1	118.3	119.6	121.2	123.0
Canada[1]	81.8	85.4	86.1	85.6	91.2	91.7	90.5	89.7	88.6	114.6	115.0	114.7	112.8	110.0	106.2
Cyprus	65.0	79.4	102.9	109.2	107.5	103.4	93.9	100.6	95.5	118.4	112.4	105.1	101.0	93.9	85.7
Czech Republic	39.5	44.2	44.4	41.9	39.7	36.6	34.2	32.1	30.2	39.1	41.4	42.5	42.8	42.4	41.9
Denmark	46.1	44.9	44.0	44.3	39.8	37.2	35.8	34.2	29.4	34.5	39.3	42.6	44.5	45.3	45.9
Estonia	6.1	9.8	10.2	10.4	9.8	9.1	9.1	8.3	8.4	18.7	22.4	25.6	28.0	30.3	31.9
Finland	48.3	53.6	56.2	59.8	63.6	63.2	61.3	59.6	59.0	67.9	68.6	69.1	69.8	70.3	70.5
France	87.8	90.6	93.4	94.9	95.6	98.0	98.3	98.1	98.1	118.7	118.6	120.0	121.3	122.3	123.3
Germany	79.8	81.1	78.7	75.7	72.2	69.2	65.0	61.6	59.5	73.3	72.2	68.5	65.5	62.6	59.5
Greece	180.6	159.6	177.9	180.2	177.8	181.1	179.3	184.8	180.9	205.2	200.5	187.3	177.0	169.7	165.9
Hong Kong SAR[1]	0.6	0.5	0.5	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.3	0.3	0.2	0.0	0.0
Iceland	92.0	89.4	81.8	78.8	65.0	51.2	43.2	37.4	37.0	51.7	52.5	52.7	52.9	52.5	53.1
Ireland	111.1	120.0	120.1	104.3	76.7	74.2	67.4	62.9	57.3	63.7	61.3	59.2	55.8	52.5	49.2
Israel	68.8	68.5	67.1	65.7	63.8	62.1	60.6	60.9	60.0	76.5	80.0	81.4	82.2	82.6	82.7
Italy	119.7	126.5	132.5	135.4	135.3	134.8	134.1	134.8	134.8	161.8	158.3	156.6	154.9	153.8	152.6
Japan	221.9	228.7	232.2	235.8	231.3	236.4	234.5	236.6	238.0	266.2	264.0	263.0	262.8	263.0	264.0
Korea	33.1	35.0	37.7	39.7	40.8	41.2	40.1	40.0	41.9	48.4	52.2	55.8	59.3	62.3	65.0
Latvia	43.3	41.9	39.4	40.9	36.7	40.2	40.3	36.5	36.8	44.1	45.0	43.0	40.9	39.6	38.5
Lithuania	37.2	39.8	38.7	40.6	42.7	39.9	39.3	34.1	37.7	48.3	47.7	44.9	42.2	40.0	37.6
Luxembourg	19.0	22.0	23.7	22.7	22.0	20.1	22.3	21.0	22.1	26.9	27.5	28.3	28.4	28.4	28.4
Malta	69.3	65.9	65.8	61.6	55.9	54.5	48.8	45.2	42.6	56.7	57.1	55.4	54.6	53.1	51.4
The Netherlands	61.8	66.4	67.8	68.0	64.6	61.9	56.9	52.4	48.4	59.3	61.1	61.0	60.1	58.6	56.4
New Zealand	34.7	35.7	34.6	34.2	34.3	33.5	31.3	28.5	31.5	48.0	60.2	65.6	68.0	68.5	66.9
Norway	29.8	31.1	31.6	29.9	34.5	38.1	38.6	39.9	41.3	40.0	40.0	40.0	40.0	40.0	40.0
Portugal	114.4	129.0	131.4	132.9	131.2	131.5	126.1	122.0	117.7	137.2	130.0	124.1	119.6	117.8	115.9
Singapore	103.1	106.7	98.2	97.8	102.3	106.5	108.4	110.4	130.0	131.2	132.4	133.5	134.7	135.9	137.1
Slovak Republic	43.5	51.8	54.7	53.5	51.9	52.0	51.3	49.5	48.0	61.8	60.6	59.0	56.9	55.6	55.2
Slovenia	46.5	53.6	70.0	80.3	82.6	78.7	74.1	70.4	66.1	81.0	78.0	77.3	75.5	73.9	72.7
Spain	69.9	86.3	95.8	100.7	99.3	99.2	98.6	97.6	95.5	123.0	121.3	120.4	119.3	118.1	118.8
Sweden	37.1	37.5	40.2	44.9	43.7	42.3	40.7	38.8	34.8	41.9	41.7	41.4	39.5	37.8	36.0
Switzerland	42.9	43.8	43.0	43.1	43.0	41.9	42.7	41.0	42.1	48.7	48.5	47.9	47.3	46.2	45.3
United Kingdom	80.1	83.2	84.2	86.2	86.9	86.8	86.2	85.7	85.4	108.0	111.5	113.4	115.3	116.4	117.0
United States[1]	99.8	103.3	104.9	104.5	104.6	106.6	105.7	106.9	108.7	131.2	133.6	134.5	135.2	136.0	136.9
Average	102.6	106.8	105.3	104.8	104.2	106.8	104.5	104.0	105.3	125.5	125.6	125.6	125.8	125.7	125.5
Euro Area	87.7	90.7	92.6	92.8	90.9	90.0	87.6	85.7	84.0	101.1	100.0	98.4	97.0	95.6	94.3
G7	117.0	121.1	118.9	117.6	116.4	119.6	117.5	117.3	118.5	141.2	141.2	141.2	141.5	141.7	141.7
G20 Advanced	110.5	114.4	112.4	111.5	110.8	113.9	111.7	111.6	113.2	135.0	135.5	135.8	136.1	136.3	136.3

Source: IMF staff estimates and projections. Projections are based on staff assessments of current policies (see "Fiscal Policy Assumptions" in text).

Note: For economy-specific details, see "Data and Conventions" in text, and Table B.

[1] For cross-economy comparability, gross debt levels reported by national statistical agencies for economies that have adopted the 2008 System of National Accounts (Australia, Canada, Hong Kong SAR, United States) are adjusted to exclude unfunded pension liabilities of government employees' defined-benefit pension plans.

Table A8. Advanced Economies: General Government Net Debt, 2011–25

(Percent of GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Australia[1]	10.6	13.8	16.0	19.1	22.1	23.3	23.3	24.1	27.6	39.4	49.2	53.4	54.1	52.8	50.7
Austria	60.3	60.5	60.4	59.1	58.3	57.0	55.8	50.7	47.8	61.0	61.7	60.9	60.4	59.4	57.7
Belgium[2]	91.6	92.0	92.5	93.3	92.0	91.1	88.1	86.5	85.8	103.8	104.0	105.8	107.5	109.5	111.6
Canada[1]	27.5	28.9	29.7	28.5	28.4	28.7	27.9	26.5	25.9	46.4	48.4	48.4	47.4	45.2	42.9
Cyprus	52.4	67.2	78.8	90.5	90.9	86.0	79.0	53.5	49.4	. . .	. . .	. . .	. . .	. . .	. . .
Czech Republic	26.6	28.1	28.8	29.2	28.1	25.0	21.5	19.6	18.3	27.3	29.8	30.9	31.4	31.4	31.2
Denmark	15.1	18.5	18.3	18.1	16.2	16.5	15.6	14.7	10.4	14.8	17.2	18.0	17.6	17.1	16.4
Estonia	–6.7	–4.7	–4.3	–3.9	–2.2	–2.6	–1.6	–1.8	–2.1	9.2	13.4	17.1	20.0	22.7	24.6
Finland[3]	5.0	9.4	12.9	17.2	18.4	21.2	21.9	24.3	24.5	32.0	34.5	35.8	36.8	37.6	38.1
France	76.4	80.0	83.0	85.5	86.3	89.2	89.4	89.3	89.4	110.0	109.8	111.2	112.5	113.5	114.6
Germany	60.3	59.6	58.6	55.0	52.2	49.3	45.5	42.7	41.1	54.1	54.2	51.2	48.8	46.3	43.8
Greece	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Hong Kong SAR[1]	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Iceland[4]	59.9	62.0	60.5	53.6	47.4	39.7	35.7	29.0	27.7	42.0	43.4	44.0	44.5	44.5	45.4
Ireland[5]	79.6	87.2	90.2	86.0	65.9	65.9	59.4	54.6	49.6	58.6	56.0	54.2	51.0	47.9	44.8
Israel	63.3	63.2	62.2	61.8	60.1	58.4	56.8	57.4	57.2	73.6	77.2	78.8	79.7	80.2	80.4
Italy	109.8	114.6	120.0	122.3	123.1	122.4	122.0	122.9	123.0	148.8	146.1	144.7	143.4	142.6	141.5
Japan	141.4	145.3	144.7	146.6	146.4	152.0	149.8	153.5	154.9	177.1	178.9	178.6	178.5	178.7	179.7
Korea	31.5	2.3	5.8	7.5	9.5	9.7	9.6	9.6	11.5	18.0	21.8	25.4	28.8	31.8	34.5
Latvia	31.6	29.8	29.6	29.6	30.9	31.0	31.8	28.1	28.3	35.1	36.7	35.2	33.6	32.7	32.0
Lithuania	33.2	33.4	34.1	32.7	34.7	32.2	32.3	27.5	31.5	42.0	41.8	39.4	37.0	34.9	32.8
Luxembourg	–11.1	–10.4	–9.0	–10.8	–12.1	–11.5	–11.2	–10.7	–7.9	–4.8	–1.7	0.7	2.1	3.2	4.3
Malta	57.4	56.4	56.7	52.3	47.7	42.0	36.7	33.9	31.1	. . .	. . .	. . .	. . .	. . .	. . .
The Netherlands	48.5	52.1	53.7	54.8	52.8	51.1	46.2	42.5	41.7	48.1	49.6	49.5	48.8	47.5	45.8
New Zealand	6.6	8.5	8.6	8.0	7.4	6.7	5.6	4.8	9.0	21.3	31.0	36.9	40.4	40.9	39.4
Norway[6]	–47.4	–49.0	–60.1	–74.6	–85.6	–84.2	–79.3	–71.8	–105.5	–111.3	–111.9	–114.8	–118.0	–121.7	–125.1
Portugal	103.0	115.7	118.3	120.5	121.5	120.0	116.6	116.0	111.4	130.3	123.6	118.0	113.8	112.2	110.4
Singapore	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Slovak Republic	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Slovenia	32.3	36.6	45.2	46.5	50.3	52.3	51.9	45.9	43.1	50.2	50.7	50.3	49.1	48.0	47.3
Spain	56.4	71.8	80.8	85.2	84.9	86.1	84.5	82.7	81.3	106.9	106.4	106.3	105.9	105.3	106.4
Sweden	11.7	11.3	11.4	11.2	11.2	8.9	6.2	5.9	3.2	9.2	10.7	11.8	11.0	10.3	9.6
Switzerland	22.6	22.2	21.2	21.3	21.4	22.1	21.2	20.2	21.3	28.0	27.7	27.1	26.5	25.4	24.5
United Kingdom	71.8	74.8	75.9	78.0	78.4	77.8	76.7	75.9	75.4	98.1	101.6	103.5	105.3	106.5	107.1
United States[1]	76.9	80.8	81.5	81.2	80.8	81.8	81.9	83.2	84.0	106.8	107.3	109.5	110.2	111.4	113.8
Average	74.3	76.9	76.0	75.9	75.9	77.6	76.0	76.1	76.7	96.1	96.4	97.3	97.5	97.7	98.3
Euro Area	69.6	73.2	75.7	75.9	74.7	74.3	72.1	70.4	69.2	85.1	84.7	83.7	82.8	81.8	80.9
G7	85.7	88.8	87.6	87.0	86.4	88.4	87.1	87.5	88.1	109.7	109.9	110.8	111.1	111.5	112.4
G20 Advanced	80.9	82.8	81.8	81.5	81.3	83.2	81.7	82.2	83.2	103.9	104.5	105.6	106.0	106.4	107.3

Source: IMF staff estimates and projections. Projections are based on staff assessments of current policies (see "Fiscal Policy Assumptions" in text).

Note: For economy-specific details, see "Data and Conventions" in text, and Table B.

[1] For cross-economy comparability, net debt levels reported by national statistical agencies for economies that have adopted the 2008 System of National Accounts (Australia, Canada, Hong Kong SAR, United States) are adjusted to exclude unfunded pension liabilities of government employees' defined-benefit pension plans.

[2] Belgium's net debt series has been revised to ensure consistency between liabilities and assets. Net debt is defined as gross debt (Maastricht definition) minus assets in the form of currency and deposits, loans, and debt securities.

[3] Net debt figures were revised to only include categories of assets corresponding to the categories of liabilities covered by the Maastricht definition of "gross debt."

[4] "Net debt" for Iceland is defined as gross debt minus currency and deposits.

[5] "Net debt" for Ireland is defined as gross general debt minus debt instrument assets, namely, currency and deposits (F2), debt securities (F3), and loans (F4). It was previously defined as general government debt less currency and deposits.

[6] Norway's net debt series has been revised because of a change in the net debt calculation, which excludes the equity and shares from financial assets and includes accounts receivable in the financial assets, following *Government Finance Statistics* and the Maastricht definition.

Table A9. Emerging Market and Middle-Income Economies: General Government Overall Balance, 2011–25
(Percent of GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Algeria	–0.1	–4.4	–0.4	–7.3	–15.3	–13.1	–6.6	–4.5	–5.6	–11.5	–11.4	–9.2	–9.5	–9.2	–8.6
Angola	8.1	4.1	–0.3	–5.7	–2.9	–4.5	–6.3	2.2	0.8	–2.8	–0.1	1.0	1.7	1.8	1.9
Argentina	–2.7	–3.0	–3.3	–4.3	–6.0	–6.7	–6.7	–5.5	–4.5	. . .	. . .	. . .	. . .	. . .	. . .
Azerbaijan	10.9	3.7	1.6	2.7	–4.8	–1.1	–1.4	5.5	8.1	–6.3	–5.8	–5.1	–5.0	–4.8	–5.2
Belarus[1]	–2.8	0.4	–1.0	0.1	–3.0	–1.7	–0.3	1.8	0.6	–4.7	–2.8	–1.8	–0.8	–0.7	–0.8
Brazil	–2.5	–2.5	–3.0	–6.0	–10.3	–9.0	–7.9	–7.2	–6.0	–16.8	–6.5	–5.6	–5.6	–5.9	–5.9
Chile	1.4	0.7	–0.5	–1.5	–2.1	–2.6	–2.6	–1.5	–2.6	–8.7	–4.0	–3.8	–3.0	–2.3	–1.5
China	–0.1	–0.3	–0.8	–0.9	–2.8	–3.7	–3.8	–4.7	–6.3	–11.9	–11.8	–10.9	–10.0	–9.1	–8.1
Colombia	–2.0	0.2	–1.0	–1.7	–3.5	–2.3	–2.5	–4.7	–2.5	–9.5	–6.2	–3.2	–2.0	–0.9	–0.9
Croatia	–7.9	–5.4	–5.3	–5.3	–3.3	–1.0	0.8	0.2	0.4	–8.1	–4.1	–2.5	–2.3	–2.2	–2.2
Dominican Republic	–3.1	–6.6	–3.5	–2.8	0.0	–3.1	–3.1	–2.2	–2.2	–7.8	–3.3	–2.0	–1.5	–1.6	–1.6
Ecuador[2]	–0.1	–0.9	–4.6	–5.2	–6.1	–8.2	–4.5	–3.2	–3.2	–8.9	–2.9	0.6	1.8	2.4	2.3
Egypt[3]	–9.6	–10.0	–12.9	–11.3	–10.9	–12.5	–10.4	–9.4	–7.4	–7.5	–8.1	–5.2	–4.4	–4.0	–3.8
Hungary	–5.2	–2.3	–2.6	–2.8	–2.0	–1.8	–2.5	–2.1	–2.0	–8.3	–3.9	–2.3	–1.3	–0.7	–0.6
India	–8.3	–7.5	–7.0	–7.1	–7.2	–7.1	–6.4	–6.3	–8.2	–13.1	–10.9	–10.0	–9.6	–9.3	–9.1
Indonesia	–0.7	–1.6	–2.2	–2.1	–2.6	–2.5	–2.5	–1.8	–2.2	–6.3	–5.5	–4.0	–3.0	–2.8	–2.5
Iran	0.6	–0.3	–0.9	–1.1	–1.8	–2.3	–1.8	–1.9	–5.5	–9.5	–6.8	–7.3	–7.7	–8.1	–8.2
Kazakhstan	5.8	4.4	4.9	2.5	–6.3	–4.5	–4.3	2.6	–0.6	–5.3	–3.3	–2.1	–1.5	–1.6	–1.8
Kuwait	33.3	32.4	34.1	22.4	5.6	0.3	6.3	9.0	5.4	–8.5	–10.7	–7.2	–5.2	–4.2	–3.4
Libya	–17.2	28.6	–5.1	–73.8	–130.8	–113.2	–43.5	–0.2	2.2	–102.9	–43.2	–33.2	–29.4	–29.9	–28.4
Malaysia[4]	–3.6	–3.1	–3.5	–2.6	–2.5	–2.6	–2.4	–3.3	–3.7	–6.5	–4.7	–3.6	–3.6	–3.2	–3.1
Mexico	–3.3	–3.7	–3.7	–4.5	–4.0	–2.8	–1.1	–2.2	–2.3	–5.8	–3.4	–2.6	–2.5	–2.5	–2.5
Morocco	–6.6	–7.2	–5.1	–4.8	–4.2	–4.5	–3.5	–3.7	–4.1	–7.8	–6.0	–4.5	–3.8	–3.1	–2.5
Oman	9.4	4.6	4.7	–1.1	–15.9	–21.3	–14.0	–7.9	–7.1	–18.7	–16.8	–10.9	–10.0	–9.2	–8.4
Pakistan	–6.7	–8.6	–8.4	–4.9	–5.3	–4.4	–5.8	–6.4	–9.0	–8.0	–6.7	–5.2	–4.0	–3.5	–3.2
Peru	2.0	2.1	0.7	–0.2	–2.1	–2.3	–2.9	–2.0	–1.4	–9.4	–4.3	–3.2	–2.6	–2.0	–1.7
Philippines	–0.3	–0.3	0.2	0.8	0.6	–0.4	–0.4	–1.6	–1.8	–8.1	–7.3	–6.3	–6.2	–6.2	–6.1
Poland	–4.9	–3.7	–4.2	–3.6	–2.6	–2.4	–1.5	–0.2	–0.7	–10.5	–4.3	–3.2	–3.9	–3.8	–3.8
Qatar	7.3	10.5	21.6	15.4	21.7	–4.8	–2.5	5.9	4.9	3.0	3.3	6.5	7.4	8.7	10.1
Romania	–4.3	–2.5	–2.5	–1.7	–1.4	–2.4	–2.8	–2.8	–4.6	–9.6	–8.1	–8.1	–7.7	–7.4	–7.0
Russia	1.4	0.4	–1.2	–1.1	–3.4	–3.7	–1.5	2.9	1.9	–5.3	–2.6	–1.0	–1.0	–1.0	–0.5
Saudi Arabia	11.6	11.9	5.6	–3.5	–15.8	–17.2	–9.2	–5.9	–4.5	–10.6	–6.0	–4.0	–2.9	–1.6	–0.4
South Africa	–4.1	–4.4	–4.3	–4.3	–4.8	–4.1	–4.4	–4.1	–6.3	–14.0	–11.1	–7.9	–5.6	–4.2	–3.1
Sri Lanka	–6.2	–5.6	–5.2	–6.2	–7.0	–5.3	–5.5	–5.3	–8.2	–9.6	–8.1	–7.6	–7.7	–7.5	–7.4
Thailand	0.1	–0.9	0.5	–0.8	0.1	0.6	–0.4	0.1	–0.8	–5.2	–4.9	–1.7	–1.9	–1.9	–1.9
Turkey	–0.7	–1.8	–1.5	–1.4	–1.3	–2.3	–2.2	–3.7	–5.6	–7.9	–7.9	–8.1	–7.7	–7.4	–7.4
Ukraine	–2.8	–4.3	–4.8	–4.5	–1.2	–2.2	–2.2	–2.1	–2.0	–7.8	–5.2	–3.5	–2.4	–2.4	–2.4
United Arab Emirates	5.3	9.0	8.4	1.9	–3.4	–2.8	–2.0	1.9	–0.8	–9.9	–5.1	–3.7	–2.9	–2.5	–2.2
Uruguay[5]	–0.4	–2.4	–1.9	–2.8	–2.0	–2.9	–2.7	–2.0	–3.0	–5.8	–4.0	–3.6	–3.1	–2.8	–2.7
Venezuela	–8.2	–10.4	–11.3	–15.6	–10.7	–10.8	–23.0	–31.0	–10.0	. . .	. . .	. . .	. . .	. . .	. . .
Average	–0.9	–0.9	–1.5	–2.4	–4.3	–4.8	–4.2	–3.8	–4.9	–10.7	–9.2	–8.1	–7.5	–6.9	–6.3
Asia	–1.6	–1.6	–1.8	–1.9	–3.3	–3.9	–4.0	–4.5	–6.1	–11.4	–11.0	–10.0	–9.2	–8.5	–7.7
Europe	–0.2	–0.7	–1.5	–1.4	–2.7	–2.9	–1.8	0.4	–0.7	–7.2	–4.5	–3.4	–3.4	–3.3	–3.2
Latin America	–2.7	–2.9	–3.2	–5.0	–6.8	–6.2	–5.5	–5.2	–4.1	–11.1	–5.3	–4.2	–3.9	–3.8	–3.7
MENAP	4.3	5.6	3.9	–1.4	–7.4	–9.6	–5.7	–2.9	–3.9	–9.7	–7.0	–5.3	–4.6	–4.1	–3.6
G20 Emerging	–1.1	–1.2	–1.8	–2.6	–4.5	–4.9	–4.3	–4.3	–5.5	–11.3	–9.9	–9.0	–8.3	–7.7	–7.0

Source: IMF staff estimates and projections. Projections are based on staff assessments of current policies (see "Fiscal Policy Assumptions" in text).

Note: For country-specific details, see "Data and Conventions" in text, and Table C. MENAP = Middle East, North Africa, and Pakistan.

[1] For Belarus, the underlying assumption for IMF staff projections is no compensation for the loss of oil-related discounts and transfers as a result of internal changes in Russia's taxation system. (Negotiations between Russia and Belarus on this issue are ongoing.)

[2] The data for Ecuador reflect net lending/borrowing for the nonfinancial public sector. Ecuadorian authorities, in the context of the Extended Fund Facility approved in March 2019 and with the technical support from IMF staff, are undertaking revisions of the historical fiscal data for the net lending/borrowing of the nonfinancial public sector correcting recently identified statistical errors, mostly in the recording of revenues and expenditures of local governments. Fiscal data reported in the table for 2018 and 2019 reflect the corrected series, while data for earlier years are still under revisions and will be corrected in subsequent *World Economic Outlook* releases as far back as 2012. The authorities are also working on reconciling historical revenue and expenditure data with financing.

[3] Based on nominal GDP series before the recent revision; therefore, data in the tables are not comparable to the authorities' numbers.

[4] The general government overall balance in 2019 includes a one-off refund of tax arrears in 2019 of 2.4 percent of GDP.

[5] Data are for the nonfinancial public sector, which includes central government, local government, social security funds, nonfinancial public corporations, and Banco de Seguros del Estado. The coverage of the fiscal data was changed from the consolidated public sector to the nonfinancial public sector with the October 2019 submission. With this narrower coverage, the central bank balances are not included in fiscal data. Historical data were also revised accordingly. Starting in October 2018, the public pension system has been receiving transfers in the context of a new law that compensates persons affected by the creation of the mixed pension system. These funds are recorded as revenues, consistent with the IMF's methodology. Therefore, data and projections for 2018–21 have been affected by these transfers, which amounted to 1.3 percent of GDP in 2018 and 1.2 percent of GDP in 2019, and are projected to be 0.8 percent of GDP in 2020, 0.2 percent of GDP in 2021, and zero thereafter. Please see IMF Country Report No. 19/64 (https://www.imf.org/en/Publications/CR/Issues/2019/02/22/Uruguay-2018-Article-IV-Consultation-Press-Release-Staff-Report-and-Statement-by-the-46624) for further details. The disclaimer about the public pension system applies only for the revenues and net lending/borrowing series.

Table A10. Emerging Market and Middle-Income Economies: General Government Primary Balance, 2011–25

(Percent of GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Algeria	–1.3	–5.3	–0.5	–7.4	–15.8	–13.1	–6.3	–4.7	–6.3	–11.9	–11.5	–9.1	–8.7	–7.6	–6.3
Angola	9.0	5.0	0.4	–4.7	–1.1	–1.7	–3.0	6.7	6.0	4.0	6.0	6.6	6.6	6.2	5.8
Argentina	–1.6	–1.7	–2.6	–3.5	–4.4	–4.8	–4.2	–2.3	–0.4	. . .	. . .	. . .	. . .	. . .	. . .
Azerbaijan	10.9	3.8	1.7	2.9	–4.4	–0.7	–0.8	6.2	8.9	–5.4	–4.9	–4.4	–4.3	–4.2	–4.6
Belarus[1]	–1.7	1.7	0.0	1.1	–1.3	0.3	1.6	3.8	2.4	–2.6	–0.8	–0.1	0.7	0.7	0.6
Brazil	2.9	1.9	1.7	–0.6	–1.9	–2.5	–1.8	–1.7	–1.0	–12.0	–3.1	–2.0	–1.3	–0.6	–0.1
Chile	1.5	0.8	–0.4	–1.3	–1.9	–2.4	–2.3	–1.1	–2.3	–8.1	–3.7	–3.5	–2.5	–1.9	–1.1
China	0.4	0.2	–0.3	–0.3	–2.3	–3.0	–3.1	–3.8	–5.5	–10.9	–10.9	–9.9	–8.9	–8.0	–7.1
Colombia	0.1	1.8	0.9	–0.2	–1.7	–0.4	–0.5	–2.5	0.0	–6.2	–2.9	0.0	1.2	2.2	2.1
Croatia	–5.6	–2.6	–2.6	–2.4	–0.2	1.9	3.2	2.3	2.4	–6.0	–1.9	–0.3	–0.2	–0.2	–0.2
Dominican Republic	–1.0	–4.2	–1.2	–0.4	2.3	–0.6	–0.5	0.4	0.6	–4.6	0.2	1.4	1.8	1.5	1.4
Ecuador[2]	0.5	–0.2	–3.5	–4.2	–4.7	–6.7	–2.3	–0.7	–0.5	–5.8	–1.3	2.4	3.7	4.4	4.5
Egypt[3]	–4.8	–4.9	–5.9	–4.2	–4.1	–4.3	–2.5	–0.4	1.2	1.4	0.4	2.1	2.1	2.1	2.1
Hungary	–1.5	1.9	1.7	1.0	1.3	1.2	0.2	0.2	0.2	–6.2	–2.1	–0.6	0.5	1.2	1.5
India	–4.0	–3.2	–2.4	–2.6	–2.7	–2.5	–1.6	–1.6	–3.3	–7.2	–4.9	–3.9	–3.5	–3.3	–3.1
Indonesia	0.5	–0.4	–1.0	–0.9	–1.2	–1.0	–0.9	0.0	–0.5	–4.5	–3.6	–2.0	–1.0	–0.8	–0.5
Iran	0.7	–0.2	–0.8	–1.1	–1.7	–2.2	–1.5	–1.5	–4.9	–8.6	–4.4	–3.9	–3.4	–3.2	–2.9
Kazakhstan	5.7	3.8	4.4	2.0	–5.9	–4.3	–5.2	1.8	–0.8	–5.5	–3.4	–2.0	–1.5	–1.5	–1.7
Kuwait[4]	26.5	25.4	25.8	12.7	–7.5	–14.2	–9.4	–3.0	–7.8	–22.4	–22.9	–20.6	–19.1	–17.9	–16.6
Libya	–17.2	28.6	–5.1	–73.8	–130.8	–113.2	–43.5	–0.2	2.2	–102.9	–43.2	–33.2	–29.4	–29.9	–28.4
Malaysia	–2.0	–2.1	–2.1	–0.9	–0.9	–0.8	–0.6	–1.4	–1.7	–4.0	–2.2	–1.2	–1.3	–1.0	–1.0
Mexico	–0.7	–0.9	–0.9	–1.7	–1.2	0.4	2.6	1.6	1.3	–2.0	0.2	0.8	0.8	0.8	0.8
Morocco	–4.4	–4.7	–2.5	–2.1	–1.4	–1.8	–0.9	–1.3	–1.6	–5.1	–3.2	–1.7	–1.1	–0.5	–0.1
Oman	8.9	3.3	2.6	–2.1	–16.1	–21.8	–13.4	–6.9	–5.6	–16.5	–14.6	–8.1	–6.5	–5.2	–4.0
Pakistan	–2.9	–4.2	–3.9	–0.3	–0.5	–0.1	–1.5	–2.1	–3.5	–1.7	–0.4	0.7	1.6	1.6	1.7
Peru	3.0	3.0	1.7	0.7	–1.2	–1.3	–1.9	–0.9	–0.2	–7.9	–2.6	–1.4	–0.7	–0.2	0.2
Philippines	2.2	2.2	2.6	3.0	2.5	1.4	1.3	0.1	–0.2	–6.0	–4.9	–3.6	–3.6	–3.5	–3.3
Poland	–2.3	–1.1	–1.7	–1.7	–0.9	–0.7	0.1	1.2	0.6	–9.1	–2.6	–1.4	–2.1	–1.9	–1.8
Qatar	8.8	12.0	22.8	16.6	23.2	–3.3	–1.1	7.4	6.5	5.1	5.3	8.3	9.1	10.2	11.4
Romania	–2.8	–0.7	–0.8	–0.2	–0.1	–1.1	–1.7	–1.5	–3.5	–8.2	–6.6	–6.4	–5.8	–5.4	–4.9
Russia	1.7	0.7	–0.8	–0.7	–3.1	–3.2	–1.0	3.4	2.2	–4.9	–2.1	–0.5	–0.5	–0.5	0.0
Saudi Arabia	11.6	11.7	5.2	–4.2	–17.9	–20.2	–11.1	–6.5	–4.5	–12.2	–5.3	–3.2	–1.9	–0.6	0.7
South Africa	–1.5	–1.7	–1.4	–1.3	–1.6	–0.7	–0.8	–0.4	–2.3	–9.3	–6.1	–2.4	0.2	1.8	3.1
Sri Lanka	–1.3	–0.9	–0.6	–2.0	–2.2	–0.2	0.0	0.6	–2.2	–3.2	–1.5	–1.1	–0.9	–0.7	–0.5
Thailand	0.9	0.0	1.3	–0.1	0.7	1.0	0.1	0.6	–0.3	–4.8	–4.3	–0.9	–1.0	–1.0	–0.9
Turkey	1.8	0.7	0.8	0.5	0.6	–1.0	–0.9	–2.2	–3.9	–5.1	–4.4	–4.1	–3.8	–3.4	–3.4
Ukraine	–0.8	–2.4	–2.3	–1.2	3.0	1.9	1.6	1.1	1.0	–4.0	–1.7	–0.1	0.9	0.7	0.5
United Arab Emirates	5.5	9.3	8.8	2.2	–3.2	–2.7	–1.8	2.3	–0.3	–9.3	–4.4	–3.0	–2.2	–1.8	–1.5
Uruguay[5]	2.0	–0.1	0.5	–0.5	0.3	–0.3	–0.1	0.6	–0.6	–2.9	–1.2	–0.6	–0.2	0.1	0.2
Venezuela	–6.1	–6.9	–8.1	–11.9	–9.0	–10.6	–23.0	–31.0	–10.0	. . .	. . .	. . .	. . .	. . .	. . .
Average	0.8	0.6	0.1	–0.8	–2.5	–3.1	–2.4	–2.1	–3.1	–8.8	–7.2	–6.1	–5.4	–4.8	–4.2
Asia	–0.3	–0.4	–0.6	–0.6	–2.1	–2.6	–2.5	–3.1	–4.6	–9.7	–9.3	–8.2	–7.4	–6.6	–5.9
Europe	1.0	0.5	–0.3	–0.3	–1.5	–1.7	–0.8	1.4	0.3	–5.9	–3.0	–1.8	–1.8	–1.6	–1.4
Latin America	0.9	0.2	–0.1	–1.6	–2.5	–2.4	–1.6	–1.4	–0.4	–7.5	–2.2	–1.0	–0.4	0.1	0.4
MENAP	4.8	6.1	4.5	–0.8	–6.9	–9.2	–5.5	–2.1	–2.8	–8.4	–4.8	–3.1	–2.3	–1.7	–1.1
G20 Emerging	0.8	0.4	–0.2	–0.9	–2.7	–3.1	–2.4	–2.5	–3.7	–9.4	–8.1	–7.0	–6.2	–5.5	–4.8

Source: IMF staff estimates and projections. Projections are based on staff assessments of current policies (see "Fiscal Policy Assumptions" in text).

Note: "Primary balance" is defined as the overall balance, excluding net interest payments. For country-specific details, see "Data and Conventions" in text, and Table C. MENAP = Middle East, North Africa, and Pakistan.

[1] For Belarus, the underlying assumption for IMF staff projections is no compensation for the loss of oil-related discounts and transfers as a result of internal changes in Russia's taxation system. (Negotiations between Russia and Belarus on this issue are ongoing.)

[2] The data for Ecuador reflect net lending/borrowing for the nonfinancial public sector. Ecuadorian authorities, in the context of the Extended Fund Facility approved in March 2019 and with the technical support from IMF staff, are undertaking revisions of the historical fiscal data for the net lending/borrowing of the nonfinancial public sector correcting recently identified statistical errors, mostly in the recording of revenues and expenditures of local governments. Fiscal data reported in the table for 2018 and 2019 reflect the corrected series, while data for earlier years are still under revisions and will be corrected in subsequent *World Economic Outlook* releases as far back as 2012. The authorities are also working on reconciling historical revenue and expenditure data with financing.

[3] Based on nominal GDP series before the recent revision; therefore, data in the tables are not comparable to the authorities' numbers.

[4] Interest revenue is proxied by IMF staff estimates of investment income. The country team does not have the breakdown of investment income between interest revenue, and dividends.

[5] Data are for the nonfinancial public sector, which includes central government, local government, social security funds, nonfinancial public corporations, and Banco de Seguros del Estado. The coverage of the fiscal data was changed from the consolidated public sector to the nonfinancial public sector with the October 2019 submission. With this narrower coverage, the central bank balances are not included in fiscal data. Historical data were also revised accordingly. Starting in October 2018, the public pension system has been receiving transfers in the context of a new law that compensates persons affected by the creation of the mixed pension system. These funds are recorded as revenues, consistent with the IMF's methodology. Therefore, data and projections for 2018–21 have been affected by these transfers, which amounted to 1.3 percent of GDP in 2018 and 1.2 percent of GDP in 2019, and are projected to be 0.8 percent of GDP in 2020, 0.2 percent of GDP in 2021, and zero thereafter. Please see IMF Country Report No. 19/64 (https://www.imf.org/en/Publications/CR/Issues/2019/02/22/Uruguay-2018-Article-IV-Consultation-Press-Release-Staff-Report-and-Statement-by-the-46624) for further details. The disclaimer about the public pension system applies only for the revenues and net lending/borrowing series.

Table A11. Emerging Market and Middle-Income Economies: General Government Cyclically Adjusted Balance, 2011–25

(Percent of potential GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Algeria	–0.7	–3.3	2.1	–8.8	–17.8	–14.7	–9.0	–7.7	–11.1	–19.0	–18.9	–15.0	–14.4	–12.4	–9.7
Angola	3.4	–0.3	–2.2	–5.3	0.7	–1.4	–3.3	3.0	1.2	–1.4	–0.2	0.5	1.2	1.5	1.8
Argentina	–3.7	–2.9	–3.6	–3.4	–6.2	–6.0	–7.2	–5.1	–3.4	. . .	. . .	. . .	. . .	. . .	. . .
Azerbaijan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Belarus[1]	–3.6	–0.2	–1.5	–0.8	–2.3	–0.1	0.3	1.6	0.3	–3.6	–2.2	–1.7	–0.6	–0.4	–0.6
Brazil	–3.9	–3.7	–4.5	–7.6	–10.1	–7.4	–6.5	–6.0	–5.0	–14.7	–5.4	–5.0	–5.4	–5.8	–5.9
Chile[2]	–1.0	–0.4	–0.5	–0.5	0.5	–1.0	–2.0	–1.5	–1.7	–3.3	–4.4	–3.0	–2.5	–2.0	–1.5
China	–0.5	–0.4	–0.9	–0.9	–2.5	–3.4	–3.6	–4.5	–5.9	–10.2	–10.9	–10.3	–9.6	–8.9	–8.1
Colombia	–2.2	0.1	–1.5	–2.4	–3.9	–2.6	–2.3	–4.0	–2.0	–6.5	–4.2	–1.8	–1.1	–0.4	–0.8
Croatia	–8.8	–6.1	–6.3	–5.2	–2.9	–1.0	0.8	0.4	0.4	–6.5	–3.4	–2.3	–2.3	–2.2	–2.2
Dominican Republic	–3.1	–6.2	–3.1	–4.8	–4.6	–4.2	–4.1	–4.0	–4.1	–8.5	–4.0	–2.9	–2.5	–2.5	–2.5
Ecuador[3]	–1.5	–2.3	–6.0	–6.5	–6.8	–7.6	–3.9	–3.8	–3.6	–5.7	–1.5	1.9	2.7	2.9	2.5
Egypt[4]	–9.6	–9.9	–13.2	–11.6	–11.4	–12.0	–10.7	–9.5	–7.2	–7.5	–8.5	–5.7	–4.8	–4.4	–4.1
Hungary	–4.1	0.2	–0.2	–1.4	–1.2	–1.0	–2.3	–2.7	–3.2	–6.5	–2.9	–1.7	–1.1	–0.6	–0.6
India	–8.5	–7.3	–6.6	–6.7	–7.0	–7.4	–6.4	–7.1	–8.2	–10.2	–9.2	–8.9	–8.9	–9.0	–9.0
Indonesia	–1.0	–1.9	–2.5	–2.3	–2.7	–2.5	–2.4	–1.7	–2.2	–5.3	–5.0	–3.7	–2.8	–2.7	–2.4
Iran	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Kazakhstan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Kuwait	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Libya	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Malaysia	–3.3	–3.3	–3.2	–2.5	–2.7	–2.7	–2.6	–4.2	–3.3	–5.7	–4.4	–3.5	–3.5	–3.2	–3.1
Mexico	–3.3	–3.9	–3.6	–4.5	–4.2	–4.1	–2.6	–2.4	–2.1	–4.3	–2.5	–2.0	–2.1	–2.4	–2.5
Morocco	–6.9	–7.7	–5.9	–6.3	–4.6	–4.8	–4.2	–3.9	–4.1	–5.6	–5.1	–4.0	–3.7	–3.1	–2.7
Oman	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Pakistan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Peru[2]	1.2	1.3	0.1	–0.1	–1.6	–1.9	–2.1	–1.7	–0.7	–6.3	–2.5	–2.2	–2.2	–1.9	–1.6
Philippines	–0.1	–0.3	0.2	0.7	0.6	–0.4	–0.5	–1.6	–1.8	–7.5	–7.1	–6.2	–6.2	–6.2	–6.1
Poland	–5.3	–3.6	–3.6	–3.1	–2.3	–2.1	–1.7	–0.6	–1.2	–8.8	–3.6	–3.1	–4.0	–3.9	–3.8
Qatar	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Romania	–3.2	–1.2	–1.4	–0.7	–0.5	–2.0	–3.4	–3.6	–5.5	–9.2	–7.8	–7.8	–7.6	–7.4	–7.1
Russia	1.5	0.1	–1.6	–0.1	–3.1	–3.2	–1.0	2.9	2.0	–3.5	–1.8	–0.7	–0.9	–1.0	–0.5
Saudi Arabia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
South Africa	–3.7	–4.2	–4.1	–4.1	–4.2	–3.8	–3.8	–3.5	–4.8	–9.1	–7.9	–5.9	–4.4	–3.6	–2.7
Sri Lanka	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Thailand	0.1	–0.6	0.3	–0.4	0.5	0.9	–0.2	0.1	–0.7	–3.0	–2.9	–0.7	–1.2	–1.7	–1.8
Turkey	–1.1	–1.7	–1.9	–1.5	–1.5	–2.0	–3.1	–4.6	–6.3	–6.2	–7.3	–7.9	–7.6	–7.4	–7.4
Ukraine	–3.2	–4.5	–4.6	–3.3	0.9	–1.2	–1.4	–2.1	–1.8	–4.5	–3.8	–3.0	–2.1	–2.2	–2.4
United Arab Emirates	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Uruguay[5]	–1.6	–3.3	–2.9	–3.7	–2.1	–2.8	–2.7	–2.0	–2.6	–4.7	–3.9	–3.5	–3.2	–2.9	–2.7
Venezuela	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Average	–2.1	–2.0	–2.4	–2.7	–3.7	–4.0	–3.8	–3.9	–4.8	–9.0	–8.5	–7.8	–7.4	–7.0	–6.6
Asia	–1.9	–1.6	–1.8	–1.8	–3.0	–3.7	–3.8	–4.5	–5.8	–9.6	–10.0	–9.3	–8.8	–8.3	–7.7
Europe	–0.8	–1.1	–2.0	–1.1	–2.2	–2.4	–1.7	–0.1	–1.1	–5.6	–3.8	–3.2	–3.4	–3.3	–3.2
Latin America	–3.2	–3.1	–3.6	–5.3	–6.5	–5.4	–4.8	–4.2	–3.4	–8.6	–4.2	–3.4	–3.5	–3.7	–3.7
MENAP	–6.7	–7.8	–7.7	–9.8	–11.7	–11.3	–8.7	–7.7	–7.5	–9.7	–10.1	–7.3	–6.6	–5.7	–4.8
G20 Emerging	–2.0	–1.9	–2.4	–2.6	–3.9	–4.2	–4.0	–4.2	–5.2	–9.4	–9.1	–8.4	–8.0	–7.6	–7.1

Source: IMF staff estimates and projections. Projections are based on staff assessments of current policies (see "Fiscal Policy Assumptions" in text).

Note: For country-specific details, see "Data and Conventions" in text, and Table C. MENAP = Middle East, North Africa, and Pakistan.

[1] For Belarus, the underlying assumption for IMF staff projections is no compensation for the loss of oil-related discounts and transfers as a result of internal changes in Russia's taxation system. (Negotiations between Russia and Belarus on this issue are ongoing.)

[2] Data for these countries include adjustments beyond the output cycle.

[3] The data for Ecuador reflect net lending/borrowing for the nonfinancial public sector. Ecuadorian authorities, in the context of the Extended Fund Facility approved in March 2019 and with the technical support from IMF staff, are undertaking revisions of the historical fiscal data for the net lending/borrowing of the nonfinancial public sector correcting recently identified statistical errors, mostly in the recording of revenues and expenditures of local governments. Fiscal data reported in the table for 2018 and 2019 reflect the corrected series, while data for earlier years are still under revisions and will be corrected in subsequent *World Economic Outlook* releases as far back as 2012. The authorities are also working on reconciling historical revenue and expenditure data with financing.

[4] Based on nominal GDP series before the recent revision; therefore, data in the tables are not comparable to the authorities' numbers.

[5] Data are for the nonfinancial public sector, which includes central government, local government, social security funds, nonfinancial public corporations, and Banco de Seguros del Estado. The coverage of the fiscal data was changed from the consolidated public sector to the nonfinancial public sector with the October 2019 submission. With this narrower coverage, the central bank balances are not included in fiscal data. Historical data were also revised accordingly. Starting in October 2018, the public pension system has been receiving transfers in the context of a new law that compensates persons affected by the creation of the mixed pension system. These funds are recorded as revenues, consistent with the IMF's methodology. Therefore, data and projections for 2018–21 have been affected by these transfers, which amounted to 1.3 percent of GDP in 2018 and 1.2 percent of GDP in 2019, and are projected to be 0.8 percent of GDP in 2020, 0.2 percent of GDP in 2021, and zero thereafter. Please see IMF Country Report No. 19/64 (https://www.imf.org/en/Publications/CR/Issues/2019/02/22/Uruguay-2018-Article-IV-Consultation-Press-Release-Staff-Report-and-Statement-by-the-46624) for further details.

Table A12. Emerging Market and Middle-Income Economies: General Government Cyclically Adjusted Primary Balance, 2011–25

(Percent of potential GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Algeria	–2.6	–4.7	2.0	–9.0	–18.5	–14.8	–8.6	–7.9	–11.8	–19.4	–19.1	–15.0	–13.5	–10.6	–6.9
Angola	4.4	0.7	–1.4	–4.3	2.2	0.9	–0.5	7.3	6.3	4.7	6.0	6.3	6.3	6.0	5.8
Argentina	–2.6	–1.6	–3.0	–2.7	–4.6	–4.1	–4.7	–1.9	0.5	. . .	. . .	. . .	. . .	. . .	. . .
Azerbaijan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Belarus[1]	–2.5	1.2	–0.5	0.2	–0.7	1.8	2.2	3.6	2.1	–1.6	–0.3	0.1	0.9	1.0	0.7
Brazil	1.8	0.9	0.4	–2.0	–1.8	–1.2	–0.6	–0.7	0.0	–10.2	–2.1	–1.5	–1.0	–0.6	0.0
Chile[2]	–0.9	–0.3	–0.4	–0.4	0.7	–0.7	–1.6	–1.1	–1.3	–2.7	–4.0	–2.7	–2.0	–1.5	–1.0
China	0.0	0.1	–0.4	–0.4	–2.0	–2.7	–2.9	–3.7	–5.1	–9.3	–10.0	–9.3	–8.5	–7.8	–7.1
Colombia	–0.1	1.7	0.5	–0.8	–2.1	–0.6	–0.3	–1.9	0.4	–3.5	–1.1	1.3	2.0	2.6	2.2
Croatia	–6.4	–3.3	–3.5	–2.3	0.2	1.9	3.2	2.5	2.4	–4.5	–1.2	–0.1	–0.1	–0.2	–0.2
Dominican Republic	–1.1	–3.9	–0.9	–2.5	–2.3	–1.6	–1.6	–1.3	–1.2	–5.4	–0.7	0.5	0.7	0.6	0.5
Ecuador[3]	–0.8	–1.6	–5.0	–5.4	–5.4	–6.1	–1.8	–1.4	–0.9	–2.9	0.0	3.6	4.5	4.8	4.7
Egypt[4]	–4.7	–4.9	–6.1	–4.5	–4.6	–3.9	–2.7	–0.5	1.5	1.4	0.0	1.5	1.6	1.7	1.8
Hungary	–0.4	4.2	3.9	2.2	2.1	1.9	0.2	–0.4	–0.8	–4.5	–1.3	0.0	0.7	1.4	1.5
India	–4.2	–3.0	–2.1	–2.3	–2.5	–2.7	–1.6	–2.3	–3.3	–4.9	–3.5	–3.1	–3.0	–3.1	–3.1
Indonesia	0.2	–0.7	–1.3	–1.1	–1.3	–1.0	–0.8	0.0	–0.4	–3.5	–3.1	–1.7	–0.9	–0.7	–0.5
Iran	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Kazakhstan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Kuwait	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Libya	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Malaysia	–1.7	–2.3	–1.9	–0.8	–1.1	–0.9	–0.8	–2.3	–1.3	–3.2	–2.0	–1.1	–1.3	–1.0	–1.0
Mexico	–0.7	–1.1	–0.9	–1.7	–1.4	–0.9	1.1	1.4	1.5	–0.7	1.0	1.3	1.1	0.9	0.8
Morocco	–4.7	–5.2	–3.3	–3.6	–1.9	–2.2	–1.7	–1.5	–1.5	–3.1	–2.4	–1.3	–1.0	–0.5	–0.2
Oman	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Pakistan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Peru[2]	2.2	2.3	1.1	0.8	–0.6	–0.9	–1.1	–0.5	0.5	–5.0	–0.8	–0.4	–0.4	–0.1	0.2
Philippines	2.3	2.2	2.6	2.8	2.6	1.4	1.2	0.1	–0.2	–5.5	–4.7	–3.6	–3.5	–3.5	–3.3
Poland	–2.8	–0.9	–1.1	–1.2	–0.6	–0.4	–0.1	0.9	0.2	–7.5	–1.9	–1.3	–2.2	–1.9	–1.8
Qatar	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Romania	–1.8	0.5	0.2	0.8	0.7	–0.7	–2.3	–2.3	–4.4	–7.8	–6.3	–6.1	–5.7	–5.3	–4.9
Russia	1.8	0.3	–1.2	0.3	–2.8	–2.8	–0.5	3.4	2.2	–3.1	–1.4	–0.2	–0.4	–0.4	0.0
Saudi Arabia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
South Africa	–1.2	–1.5	–1.2	–1.1	–1.0	–0.4	–0.2	0.2	–0.8	–4.7	–3.1	–0.6	1.3	2.3	3.4
Sri Lanka	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Thailand	1.0	0.3	1.1	0.3	1.1	1.3	0.3	0.6	–0.2	–2.6	–2.4	0.1	–0.3	–0.7	–0.8
Turkey	1.4	0.8	0.4	0.5	0.4	–0.7	–1.7	–3.2	–4.5	–3.5	–3.9	–3.9	–3.8	–3.4	–3.4
Ukraine	–1.2	–2.6	–2.2	0.0	4.9	2.8	2.3	1.1	1.2	–1.0	–0.4	0.4	1.2	0.9	0.5
United Arab Emirates	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Uruguay[5]	0.9	–1.0	–0.5	–1.4	0.2	–0.2	–0.2	0.6	–0.1	–1.9	–1.0	–0.6	–0.3	0.1	0.2
Venezuela	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Average	–0.2	–0.3	–0.7	–0.9	–1.8	–2.1	–1.8	–2.0	–2.9	–7.0	–6.6	–5.8	–5.3	–4.9	–4.4
Asia	–0.6	–0.4	–0.6	–0.6	–1.8	–2.4	–2.4	–3.1	–4.3	–8.0	–8.4	–7.6	–7.0	–6.5	–5.9
Europe	0.6	0.3	–0.7	0.2	–0.9	–1.2	–0.6	1.0	0.0	–4.2	–2.2	–1.5	–1.6	–1.5	–1.4
Latin America	0.5	0.1	–0.4	–1.8	–2.0	–1.5	–0.9	–0.4	0.4	–5.2	–1.2	–0.3	0.0	0.3	0.5
MENAP	–4.1	–4.9	–3.4	–5.5	–7.3	–6.0	–4.1	–2.7	–2.4	–4.1	–4.7	–2.5	–2.0	–1.2	–0.2
G20 Emerging	0.0	–0.2	–0.7	–0.8	–2.0	–2.3	–2.0	–2.3	–3.3	–7.5	–7.2	–6.5	–6.0	–5.5	–5.0

Source: IMF staff estimates and projections. Projections are based on staff assessments of current policies (see "Fiscal Policy Assumptions" in text).

Note: Cyclically adjusted primary balance is defined as the cyclically adjusted balance plus net interest payable/paid (interest expense minus interest revenue) following the *World Economic Outlook* convention. For country-specific details, see "Data and Conventions" in text, and Table C. MENAP = Middle East, North Africa, and Pakistan.

[1] For Belarus, the underlying assumption for IMF staff projections is no compensation for the loss of oil-related discounts and transfers as a result of internal changes in Russia's taxation system. (Negotiations between Russia and Belarus on this issue are ongoing.)

[2] Data for these countries include adjustments beyond the output cycle. For country-specific details, see "Data and Conventions" in text, and Table C.

[3] The data for Ecuador reflect net lending/borrowing for the nonfinancial public sector. Ecuadorian authorities, in the context of the Extended Fund Facility approved in March 2019 and with the technical support from IMF staff, are undertaking revisions of the historical fiscal data for the net lending/borrowing of the nonfinancial public sector correcting recently identified statistical errors, mostly in the recording of revenues and expenditures of local governments. Fiscal data reported in the table for 2018 and 2019 reflect the corrected series, while data for earlier years are still under revisions and will be corrected in subsequent *World Economic Outlook* releases as far back as 2012. The authorities are also working on reconciling historical revenue and expenditure data with financing.

[4] Based on nominal GDP series before the recent revision; therefore, data in the tables are not comparable to the authorities' numbers.

[5] Data are for the nonfinancial public sector, which includes central government, local government, social security funds, nonfinancial public corporations, and Banco de Seguros del Estado. The coverage of the fiscal data was changed from the consolidated public sector to the nonfinancial public sector with the October 2019 submission. With this narrower coverage, the central bank balances are not included in fiscal data. Historical data were also revised accordingly. Starting in October 2018, the public pension system has been receiving transfers in the context of a new law that compensates persons affected by the creation of the mixed pension system. These funds are recorded as revenues, consistent with the IMF's methodology. Therefore, data and projections for 2018–21 have been affected by these transfers, which amounted to 1.3 percent of GDP in 2018 and 1.2 percent of GDP in 2019, and are projected to be 0.8 percent of GDP in 2020, 0.2 percent of GDP in 2021, and zero thereafter. Please see IMF Country Report No. 19/64 (https://www.imf.org/en/Publications/CR/Issues/2019/02/22/Uruguay-2018-Article-IV-Consultation-Press-Release-Staff-Report-and-Statement-by-the-46624) for further details.

Table A13. Emerging Market and Middle-Income Economies: General Government Revenue, 2011–25
(Percent of GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Algeria	40.0	39.1	35.8	33.3	30.5	28.6	32.6	33.7	32.6	28.2	27.8	27.7	26.6	26.0	26.1
Angola	45.5	41.3	36.7	30.7	24.1	17.5	17.5	21.9	20.0	17.9	19.7	20.2	20.1	19.6	19.0
Argentina	32.2	33.8	34.3	34.6	35.4	34.9	34.4	34.0	33.9	. . .	. . .	. . .	. . .	. . .	. . .
Azerbaijan	44.6	40.3	39.4	39.1	33.9	34.3	34.2	38.6	41.5	36.0	35.6	35.5	34.9	34.1	33.2
Belarus[1]	37.5	39.3	39.8	38.9	38.8	39.0	38.7	39.6	39.2	36.0	36.3	36.7	36.5	36.5	36.4
Brazil	35.1	34.7	34.5	32.5	28.2	30.6	30.4	30.9	31.8	28.0	29.8	30.7	30.7	30.4	30.2
Chile	24.2	23.8	22.6	22.3	22.8	22.6	22.8	23.9	23.2	20.6	25.8	23.9	24.1	24.0	23.8
China	27.0	27.9	27.7	28.1	28.8	28.2	27.8	28.3	27.7	24.4	25.0	25.0	25.0	25.0	25.0
Colombia	28.2	29.2	29.0	29.5	27.8	27.7	26.8	30.0	29.4	26.0	26.6	27.4	28.1	28.5	28.3
Croatia	41.1	43.0	42.9	43.4	45.3	46.5	46.1	46.5	47.5	42.5	46.9	50.3	50.3	50.3	46.4
Dominican Republic	12.9	13.6	14.2	14.2	16.6	13.9	14.0	14.2	14.4	12.5	13.9	14.5	14.5	14.5	14.5
Ecuador[2]	39.3	39.3	39.2	38.4	33.6	30.3	32.0	35.3	33.4	30.1	31.6	34.6	35.2	35.5	35.6
Egypt[3]	20.9	20.8	21.7	24.4	22.0	20.3	21.8	20.7	20.1	19.2	20.0	20.2	20.6	21.0	21.4
Hungary	44.1	47.0	47.6	47.4	48.6	45.4	44.5	44.5	44.0	43.8	45.0	46.1	45.4	44.6	44.3
India	19.3	19.8	19.6	19.1	19.9	20.1	19.9	20.2	19.3	18.1	19.0	19.5	19.8	19.9	19.9
Indonesia	17.0	17.2	16.9	16.5	14.9	14.3	14.1	14.9	14.2	11.8	11.9	12.4	12.8	13.1	13.3
Iran	18.9	13.9	13.5	14.3	16.1	17.3	17.5	16.1	11.5	9.4	11.7	12.0	12.2	12.3	12.5
Kazakhstan	27.0	26.3	24.8	23.7	16.6	17.0	19.8	21.4	19.7	17.8	18.6	18.4	18.5	18.2	17.8
Kuwait	72.3	71.2	72.3	66.6	60.0	54.1	57.7	58.4	58.1	56.3	51.1	52.9	53.6	53.2	52.5
Libya	42.4	74.2	83.0	69.3	51.2	31.7	52.4	85.6	104.0	62.0	63.3	64.1	62.6	58.0	55.1
Malaysia	23.5	25.4	24.3	23.3	22.2	20.1	19.5	19.4	20.2	20.3	19.2	19.3	19.3	19.3	19.3
Mexico	24.4	24.5	24.1	23.4	23.5	24.6	24.6	23.5	24.1	24.4	23.0	23.1	22.9	23.0	23.0
Morocco	27.2	28.0	27.8	28.0	26.5	26.1	26.6	26.2	25.9	27.5	26.6	27.0	27.2	27.4	27.7
Oman	48.7	48.7	49.5	46.3	34.9	29.9	31.8	37.2	37.1	30.7	31.4	34.2	34.5	34.5	34.6
Pakistan	12.6	13.0	13.5	15.2	14.5	15.5	15.5	15.2	13.0	15.1	16.1	17.0	17.7	17.8	17.8
Peru	21.8	22.4	22.3	22.4	20.3	18.8	18.3	19.4	19.9	18.3	20.2	20.6	20.6	20.8	20.9
Philippines	16.8	17.8	18.0	18.1	18.5	18.3	18.7	19.3	19.9	17.2	17.5	17.7	17.7	17.9	18.0
Poland	39.0	39.1	38.4	38.7	39.1	38.7	39.8	41.3	41.3	40.7	40.0	41.1	40.0	39.5	39.1
Qatar	35.8	41.5	49.9	47.7	60.3	35.3	32.2	34.8	37.5	35.4	33.4	34.1	34.0	33.6	33.9
Romania	32.5	32.5	31.5	32.1	32.8	28.9	28.0	29.1	28.9	29.0	29.1	28.9	28.8	28.7	28.9
Russia	34.7	34.4	33.5	33.9	31.9	32.9	33.4	35.3	35.5	32.0	32.6	33.1	33.4	33.5	33.4
Saudi Arabia	44.4	45.2	41.2	36.7	25.0	21.5	24.1	30.7	31.2	28.4	31.1	31.0	31.4	31.8	32.3
South Africa	26.8	26.9	27.3	27.6	28.2	28.6	28.2	29.0	29.1	27.0	26.9	28.4	29.0	29.3	29.5
Sri Lanka	13.6	12.2	12.0	11.6	13.3	14.1	13.8	13.5	12.6	9.3	10.7	11.6	11.8	12.0	12.2
Thailand	21.2	21.4	22.2	21.4	22.3	21.9	21.1	21.4	21.0	21.0	21.0	21.0	21.0	21.0	21.0
Turkey	32.4	32.3	32.5	31.6	31.9	32.5	31.2	31.0	29.5	29.0	28.5	28.8	29.1	29.3	29.4
Ukraine	42.9	44.7	43.3	40.3	41.9	38.3	39.3	39.6	39.4	39.1	40.6	40.8	40.8	40.7	40.6
United Arab Emirates	36.5	38.1	38.7	35.0	29.0	28.9	28.6	30.8	29.8	26.0	28.0	27.9	27.9	27.5	27.1
Uruguay[4]	28.4	27.8	29.6	28.9	28.9	29.4	29.7	31.2	30.9	30.7	30.4	30.6	30.6	30.6	30.6
Venezuela	31.1	29.8	28.4	34.6	19.7	14.3	14.7	17.4	11.4	. . .	. . .	. . .	. . .	. . .	. . .
Average	29.0	29.5	29.1	28.5	27.4	26.8	26.8	27.6	27.0	24.3	24.9	25.2	25.2	25.2	25.2
Asia	24.4	25.3	25.3	25.6	26.2	25.6	25.2	25.8	25.2	22.5	23.1	23.2	23.3	23.3	23.4
Europe	35.3	35.1	34.4	34.3	33.3	33.7	33.7	35.1	34.9	33.1	33.4	33.9	33.8	33.7	33.5
Latin America	30.8	30.6	30.3	29.5	26.8	27.4	27.8	27.9	28.1	25.9	26.9	27.4	27.5	27.5	27.5
MENAP	33.8	36.2	35.4	32.6	27.4	24.1	25.6	28.6	27.1	23.3	24.7	25.2	25.4	25.5	25.6
G20 Emerging	28.6	29.0	28.6	28.2	27.4	27.2	27.0	27.6	27.1	24.2	24.8	25.0	25.1	25.1	25.1

Source: IMF staff estimates and projections. Projections are based on staff assessments of current policies (see "Fiscal Policy Assumptions" in text).

Note: For country-specific details, see "Data and Conventions" in text, and Table C. MENAP = Middle East, North Africa, and Pakistan.

[1] For Belarus, the underlying assumption for IMF staff projections is no compensation for the loss of oil-related discounts and transfers as a result of internal changes in Russia's taxation system. (Negotiations between Russia and Belarus on this issue are ongoing.)

[2] The data for Ecuador reflect net lending/borrowing for the nonfinancial public sector. Ecuadorian authorities, in the context of the Extended Fund Facility approved in March 2019 and with the technical support from IMF staff, are undertaking revisions of the historical fiscal data for the net lending/borrowing of the nonfinancial public sector correcting recently identified statistical errors, mostly in the recording of revenues and expenditures of local governments. Fiscal data reported in the table for 2018 and 2019 reflect the corrected series, while data for earlier years are still under revisions and will be corrected in subsequent *World Economic Outlook* releases as far back as 2012. The authorities are also working on reconciling historical revenue and expenditure data with financing.

[3] Based on nominal GDP series before the recent revision; therefore, data in the tables are not comparable to the authorities' numbers.

[4] Data are for the nonfinancial public sector, which includes central government, local government, social security funds, nonfinancial public corporations, and Banco de Seguros del Estado. The coverage of the fiscal data was changed from the consolidated public sector to the nonfinancial public sector with the October 2019 submission. With this narrower coverage, the central bank balances are not included in fiscal data. Historical data were also revised accordingly. Starting in October 2018, the public pension system has been receiving transfers in the context of a new law that compensates persons affected by the creation of the mixed pension system. These funds are recorded as revenues, consistent with the IMF's methodology. Therefore, data and projections for 2018–21 have been affected by these transfers, which amounted to 1.3 percent of GDP in 2018 and 1.2 percent of GDP in 2019, and are projected to be 0.8 percent of GDP in 2020, 0.2 percent of GDP in 2021, and zero thereafter. Please see IMF Country Report No. 19/64 (https://www.imf.org/en/Publications/CR/Issues/2019/02/22/Uruguay-2018-Article-IV-Consultation-Press-Release-Staff-Report-and-Statement-by-the-46624) for further details. The disclaimer about the public pension system applies only for the revenues and net lending/borrowing series.

Table A14. Emerging Market and Middle-Income Economies: General Government Expenditure, 2011–25
(Percent of GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Algeria	40.1	43.5	36.2	40.6	45.8	41.7	39.2	38.2	38.2	39.6	39.1	36.9	36.1	35.3	34.7
Angola	37.4	37.2	37.0	36.5	27.1	22.0	23.8	19.7	19.2	20.7	19.8	19.3	18.5	17.8	17.2
Argentina	34.9	36.8	37.6	38.9	41.4	41.5	41.1	39.5	38.3	. . .	. . .	. . .	. . .	. . .	. . .
Azerbaijan	33.7	36.6	37.8	36.4	38.7	35.4	35.6	33.1	33.4	42.3	41.4	40.7	39.9	39.0	38.3
Belarus[1]	40.3	38.9	40.8	38.8	41.8	40.7	39.0	37.8	38.6	40.7	39.1	38.6	37.3	37.2	37.2
Brazil	37.6	37.2	37.4	38.5	38.5	39.6	38.3	38.1	37.9	44.8	36.3	36.3	36.3	36.3	36.1
Chile	22.8	23.1	23.1	23.8	24.9	25.3	25.4	25.4	25.8	29.3	29.8	27.7	27.2	26.3	25.4
China	27.1	28.2	28.6	29.0	31.6	31.9	31.6	32.9	34.0	36.3	36.8	35.9	35.0	34.1	33.1
Colombia	30.2	29.1	30.0	31.3	31.3	30.0	29.3	34.7	31.9	35.5	32.8	30.6	30.1	29.4	29.2
Croatia	49.0	48.3	48.3	48.7	48.6	47.4	45.3	46.3	47.1	50.6	51.0	52.8	52.6	52.6	48.6
Dominican Republic	15.9	20.1	17.7	17.0	16.7	17.0	17.1	16.3	16.6	20.3	17.2	16.4	15.9	16.1	16.0
Ecuador[2]	39.5	40.3	43.7	43.6	39.7	38.6	36.5	38.5	36.6	39.0	34.6	34.0	33.3	33.1	33.3
Egypt[3]	30.5	30.8	34.6	35.7	33.0	32.7	32.2	30.1	27.5	26.6	28.1	25.4	25.0	25.0	25.1
Hungary	49.4	49.4	50.2	50.2	50.6	47.2	47.0	46.7	46.1	52.1	48.8	48.4	46.7	45.3	44.9
India	27.6	27.4	26.6	26.2	27.1	27.2	26.2	26.5	27.5	31.2	30.0	29.6	29.3	29.2	29.0
Indonesia	17.7	18.8	19.1	18.6	17.5	16.8	16.6	16.6	16.4	18.1	17.4	16.3	15.7	15.9	15.8
Iran	18.3	14.3	14.4	15.4	17.9	19.5	19.3	18.1	17.0	18.9	18.5	19.3	19.9	20.4	20.8
Kazakhstan	21.2	21.9	19.8	21.3	22.9	21.5	24.1	18.8	20.2	23.1	22.0	20.5	20.0	19.8	19.7
Kuwait	39.1	38.8	38.1	44.3	54.4	53.8	51.4	49.4	52.7	64.8	61.8	60.1	58.7	57.4	55.9
Libya	59.7	45.7	88.1	143.1	181.9	144.9	95.9	85.8	101.8	165.0	106.6	97.3	92.0	87.9	83.6
Malaysia	27.1	28.5	27.8	26.0	24.7	22.7	21.9	22.7	23.9	23.0	23.9	22.9	22.9	22.5	22.5
Mexico	27.7	28.2	27.8	28.0	27.5	27.4	25.7	25.7	26.4	30.2	26.4	25.7	25.4	25.5	25.5
Morocco	33.8	35.2	32.9	32.9	30.7	30.5	30.0	29.9	30.0	35.3	32.6	31.5	31.0	30.5	30.2
Oman	39.3	44.1	44.9	47.4	50.9	51.2	45.8	45.1	44.2	49.4	48.2	45.1	44.5	43.7	43.0
Pakistan	19.3	21.7	21.8	20.1	19.8	19.9	21.3	21.6	22.0	23.1	22.8	22.2	21.7	21.3	20.9
Peru	19.7	20.3	21.6	22.6	22.4	21.1	21.2	21.4	21.3	27.7	24.5	23.8	23.2	22.8	22.6
Philippines	17.1	18.1	17.9	17.3	17.9	18.7	19.1	20.9	21.7	25.3	24.8	24.0	24.0	24.1	24.1
Poland	43.9	42.9	42.6	42.4	41.7	41.1	41.2	41.5	42.0	51.2	44.3	44.3	43.9	43.3	42.9
Qatar	28.5	31.0	28.3	32.3	38.6	40.1	34.7	28.9	32.6	32.3	30.0	27.6	26.6	24.9	23.8
Romania	36.7	35.0	34.0	33.8	34.2	31.3	30.8	32.0	33.4	38.6	37.2	37.0	36.6	36.1	35.9
Russia	33.3	34.0	34.7	34.9	35.3	36.6	34.8	32.4	33.6	37.3	35.2	34.1	34.4	34.6	33.9
Saudi Arabia	32.8	33.2	35.5	40.2	40.8	38.7	33.3	36.6	35.6	38.9	37.0	35.0	34.2	33.4	32.7
South Africa	30.9	31.4	31.6	31.9	32.9	32.7	32.6	33.2	35.3	41.1	38.0	36.2	34.6	33.5	32.6
Sri Lanka	19.9	17.8	17.2	17.9	20.4	19.5	19.3	18.7	20.8	18.9	18.8	19.2	19.5	19.6	19.6
Thailand	21.1	22.3	21.6	22.2	22.2	21.3	21.5	21.4	21.8	26.2	25.9	22.8	22.9	22.9	22.9
Turkey	33.1	34.2	33.9	33.1	33.2	34.8	33.4	34.6	35.2	36.9	36.5	36.9	36.7	36.7	36.8
Ukraine	45.7	49.0	48.1	44.8	43.0	40.6	41.5	41.7	41.4	46.9	45.9	44.3	43.2	43.1	43.0
United Arab Emirates	31.2	29.1	30.3	33.1	32.4	31.7	30.5	28.9	30.6	35.9	33.0	31.7	30.8	30.0	29.3
Uruguay[4]	28.7	30.2	31.4	31.7	30.9	32.3	32.4	33.2	33.9	36.5	34.5	34.1	33.7	33.4	33.3
Venezuela	39.4	40.3	39.7	50.1	30.3	25.2	37.7	48.4	21.4	. . .	. . .	. . .	. . .	. . .	. . .
Average	29.9	30.4	30.5	30.9	31.6	31.5	30.9	31.4	31.9	35.0	34.1	33.3	32.7	32.1	31.5
Asia	26.0	26.9	27.1	27.4	29.5	29.5	29.2	30.3	31.3	33.9	34.1	33.2	32.5	31.8	31.1
Europe	35.5	35.8	35.9	35.8	36.0	36.6	35.6	34.8	35.6	40.2	37.9	37.4	37.2	37.0	36.6
Latin America	33.4	33.5	33.5	34.5	33.6	33.6	33.3	33.1	32.2	37.0	32.2	31.6	31.4	31.3	31.1
MENAP	29.5	30.6	31.5	34.0	34.8	33.7	31.4	31.5	31.0	33.0	31.7	30.5	30.1	29.6	29.2
G20 Emerging	29.7	30.2	30.4	30.7	31.8	32.0	31.3	31.8	32.6	35.5	34.8	34.0	33.3	32.7	32.1

Source: IMF staff estimates and projections. Projections are based on staff assessments of current policies (see "Fiscal Policy Assumptions" in text).

Note: For country-specific details, see "Data and Conventions" in text, and Table C. MENAP = Middle East, North Africa, and Pakistan.

[1] For Belarus, the underlying assumption for IMF staff projections is no compensation for the loss of oil-related discounts and transfers as a result of internal changes in Russia's taxation system. (Negotiations between Russia and Belarus on this issue are ongoing.)

[2] The data for Ecuador reflect net lending/borrowing for the nonfinancial public sector. Ecuadorian authorities, in the context of the Extended Fund Facility approved in March 2019 and with the technical support from IMF staff, are undertaking revisions of the historical fiscal data for the net lending/borrowing of the nonfinancial public sector correcting recently identified statistical errors, mostly in the recording of revenues and expenditures of local governments. Fiscal data reported in the table for 2018 and 2019 reflect the corrected series, while data for earlier years are still under revisions and will be corrected in subsequent *World Economic Outlook* releases as far back as 2012. The authorities are also working on reconciling historical revenue and expenditure data with financing.

[3] Based on nominal GDP series before the recent revision; therefore, data in the tables are not comparable to the authorities' numbers.

[4] Data are for the nonfinancial public sector, which includes central government, local government, social security funds, nonfinancial public corporations, and Banco de Seguros del Estado. The coverage of the fiscal data was changed from the consolidated public sector to the nonfinancial public sector with the October 2019 submission. With this narrower coverage, the central bank balances are not included in fiscal data. Historical data were also revised accordingly.

Table A15. Emerging Market and Middle-Income Economies: General Government Gross Debt, 2011–25
(Percent of GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Algeria	9.3	9.3	7.6	7.7	8.7	20.5	27.3	38.2	46.3	57.2	66.6	74.7	83.2	90.8	96.7
Angola	29.6	26.7	33.1	39.8	57.1	75.7	69.3	89.0	109.2	120.3	107.5	93.8	83.7	74.3	67.2
Argentina	38.9	40.4	43.5	44.7	52.6	53.1	57.0	86.4	90.4	. . .	. . .	. . .	. . .	. . .	. . .
Azerbaijan	5.0	5.8	6.2	8.5	18.0	20.6	22.5	18.7	17.7	20.1	20.0	21.4	23.6	23.6	26.2
Belarus[1]	58.2	36.9	36.9	38.8	53.0	53.5	53.2	47.5	41.9	50.9	48.6	48.2	45.2	44.3	43.0
Brazil[2]	61.2	62.2	60.2	62.3	72.6	78.3	83.7	87.1	89.5	101.4	102.8	103.5	103.8	104.2	104.4
Chile	11.1	11.9	12.7	15.0	17.3	21.0	23.6	25.6	27.9	32.8	37.5	41.7	44.9	47.7	48.0
China	33.8	34.4	37.0	40.0	41.5	44.3	46.4	48.8	52.6	61.7	66.5	71.2	74.6	76.8	78.1
Colombia	35.8	34.0	37.6	43.3	50.4	49.8	49.4	53.7	52.3	68.2	68.1	67.3	65.5	62.3	59.5
Croatia	64.4	70.1	81.2	84.7	84.3	80.8	77.8	74.7	73.2	87.7	85.5	82.7	80.3	78.0	76.0
Dominican Republic	39.1	42.3	46.7	44.9	44.9	46.8	49.2	50.7	53.8	68.8	68.2	66.8	65.0	63.3	61.7
Ecuador[3]	16.8	17.5	20.0	27.1	33.8	43.2	44.6	46.1	51.8	68.9	67.4	65.8	62.3	60.0	56.1
Egypt[4]	72.8	73.8	84.0	85.1	88.5	96.8	103.2	92.7	83.8	86.6	90.6	87.8	84.4	80.8	77.0
Hungary	80.8	78.6	77.4	76.8	76.2	75.5	72.9	70.2	66.3	77.4	75.9	73.2	69.8	66.4	63.5
India	68.3	67.7	67.4	66.8	68.8	68.7	69.4	69.6	72.3	89.3	89.9	89.5	89.0	88.6	88.2
Indonesia	23.1	23.0	24.8	24.7	27.0	28.0	29.4	30.1	30.5	38.5	41.8	43.2	43.3	43.2	43.1
Iran	9.1	12.1	10.7	11.8	39.7	46.2	38.2	40.3	44.7	45.4	40.4	39.2	38.6	38.5	38.3
Kazakhstan	10.2	12.1	12.6	14.5	21.9	19.7	19.9	20.3	19.9	23.4	24.1	25.3	26.2	28.0	29.8
Kuwait	4.6	3.6	3.1	3.4	4.7	10.0	20.5	14.8	11.8	19.3	36.6	49.3	65.2	78.4	89.9
Libya	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Malaysia	51.9	53.8	55.7	55.4	57.0	55.8	54.4	55.5	57.2	67.6	66.0	65.0	64.1	63.0	62.0
Mexico	42.9	42.7	45.9	48.9	52.8	56.7	54.0	53.6	53.7	65.5	65.6	65.4	65.2	65.0	64.9
Morocco	52.5	56.5	61.7	63.3	63.7	64.9	65.1	65.3	65.8	76.9	76.6	75.6	74.3	72.4	70.0
Oman	5.2	4.9	5.0	4.9	15.5	32.7	46.4	53.2	63.1	81.5	88.7	86.7	90.8	95.3	99.1
Pakistan	59.0	63.4	64.5	63.5	63.3	67.6	67.1	72.1	85.6	87.2	86.0	82.1	78.3	73.6	69.3
Peru	23.0	21.2	20.0	20.6	24.1	24.5	25.4	26.2	27.1	39.5	39.1	39.7	39.4	38.8	37.8
Philippines	45.4	45.7	43.8	40.2	39.6	37.3	38.1	37.1	37.0	48.9	52.5	55.0	57.0	58.4	59.3
Poland	54.5	54.1	56.0	50.8	51.3	54.3	50.6	48.8	46.0	60.0	60.2	59.2	59.3	59.9	60.9
Qatar	33.5	32.1	30.9	24.9	35.5	46.7	51.6	46.5	56.2	68.1	60.6	54.0	48.0	43.0	38.0
Romania	34.2	37.8	39.0	40.5	39.4	38.9	36.8	36.4	36.8	44.8	49.6	54.4	58.5	62.2	65.4
Russia	10.3	11.2	12.3	15.1	15.3	14.8	14.3	13.5	13.9	18.9	19.0	18.5	18.2	18.0	17.9
Saudi Arabia	5.4	3.0	2.1	1.6	5.8	13.1	17.2	19.0	22.8	33.4	34.3	34.1	33.0	34.4	35.5
South Africa	38.2	41.0	44.1	47.0	49.3	51.5	53.0	56.7	62.2	78.8	82.8	85.7	87.3	86.9	85.2
Sri Lanka	71.1	69.6	71.8	72.2	78.5	79.0	77.9	83.8	86.8	98.3	98.3	97.8	97.7	97.3	96.6
Thailand	39.1	41.9	42.2	43.3	42.6	41.7	41.8	42.0	41.1	50.4	56.4	56.1	56.9	56.9	56.9
Turkey	36.2	32.4	31.2	28.5	27.4	28.0	28.0	30.2	33.0	41.7	45.5	47.3	48.1	49.3	50.4
Ukraine	36.9	37.5	40.5	70.3	79.5	81.2	71.6	60.6	50.1	65.7	64.3	61.8	58.2	55.0	52.1
United Arab Emirates	21.5	21.2	16.0	14.2	16.7	19.4	21.6	20.9	27.3	36.9	38.2	39.6	39.6	39.3	38.8
Uruguay[5]	45.0	54.3	54.6	55.8	63.2	61.7	61.0	63.4	65.9	69.5	69.0	69.2	69.4	69.8	69.5
Venezuela	31.7	30.1	33.2	25.1	11.0	5.1	26.0	180.8	232.8	. . .	. . .	. . .	. . .	. . .	. . .
Average	37.1	37.0	38.2	40.3	43.7	46.5	48.1	50.1	52.6	62.2	65.0	67.5	69.2	70.4	71.1
Asia	39.7	39.6	41.3	43.4	44.9	47.1	49.0	50.6	53.8	63.7	67.8	71.4	74.0	75.7	76.6
Europe	26.6	25.3	26.2	28.2	30.5	31.4	29.6	29.3	29.0	37.8	38.8	39.2	39.5	40.1	40.7
Latin America	47.5	47.1	47.8	50.1	53.9	57.4	62.3	69.7	70.8	81.6	81.0	80.9	80.6	80.3	80.0
MENAP	22.1	23.3	23.6	23.4	33.2	40.4	40.1	40.0	44.7	53.4	53.8	53.5	53.2	53.4	53.2
G20 Emerging	37.8	37.4	38.6	41.0	44.0	46.7	48.6	50.4	53.3	62.8	66.1	69.2	71.3	72.9	73.7

Source: IMF staff estimates and projections. Projections are based on staff assessments of current policies (see "Fiscal Policy Assumptions" in text).

Note: For country-specific details, see "Data and Conventions" in text, and Table C. MENAP = Middle East, North Africa, and Pakistan.

[1] For Belarus, the underlying assumption for IMF staff projections is no compensation for the loss of oil-related discounts and transfers as a result of internal changes in Russia's taxation system. (Negotiations between Russia and Belarus on this issue are ongoing.)

[2] "Gross debt" refers to the nonfinancial public sector, excluding Eletrobras and Petrobras and including sovereign debt held on the balance sheet of the central bank.

[3] In late 2016, the authorities changed the definition of "debt" to a consolidated basis, which in 2016 was 11.5 percent of GDP lower than the previous aggregate definition. Both the historic and projection numbers are now presented on a consolidated basis.

[4] Based on nominal GDP series before the recent revision; therefore, data in the tables are not comparable to the authorities' numbers.

[5] Data are for the nonfinancial public sector, which includes central government, local government, social security funds, nonfinancial public corporations, and Banco de Seguros del Estado. The coverage of the fiscal data was changed from the consolidated public sector to the nonfinancial public sector with the October 2019 submission. With this narrower coverage, the central bank balances are not included in fiscal data. Historical data were also revised accordingly. Data estimates before 2012 are preliminary.

Table A16. Emerging Market and Middle-Income Economies: General Government Net Debt, 2011–25
(Percent of GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Algeria	–31.1	–29.0	–29.5	–21.8	–7.6	13.3	21.6	25.4	30.5	53.5	64.0	71.9	80.0	87.1	92.7
Angola	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Argentina	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Azerbaijan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Belarus	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Brazil	34.5	32.2	30.5	32.6	35.6	46.1	51.4	53.6	55.7	68.5	74.0	76.9	79.1	81.2	82.8
Chile	–8.6	–6.8	–5.6	–4.4	–3.4	0.9	4.4	5.7	7.9	14.7	18.3	21.8	24.4	25.7	26.7
China	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Colombia	27.2	24.8	26.9	32.9	42.1	38.6	38.6	43.1	43.8	59.2	61.8	61.1	59.7	57.1	54.7
Croatia	53.2	58.4	65.7	69.7	70.9	68.7	65.8	62.8	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Dominican Republic	31.9	37.6	40.3	38.5	38.1	39.2	40.9	41.9	43.6	58.4	57.3	55.5	53.4	51.6	49.8
Ecuador	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Egypt[1]	61.3	63.5	73.7	77.1	78.8	88.2	93.9	81.3	74.4	78.0	82.7	80.8	81.6	78.3	74.8
Hungary	72.8	70.9	71.1	70.6	70.9	68.5	65.9	63.2	59.3	70.4	68.9	66.2	62.8	59.4	56.5
India	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Indonesia	17.8	18.6	20.6	20.4	22.0	23.5	25.3	26.3	27.0	35.0	38.6	40.2	40.5	40.6	40.7
Iran	–2.4	1.3	–5.6	–5.6	23.0	33.1	24.5	27.9	41.0	44.0	39.7	38.7	38.4	38.4	38.3
Kazakhstan	–12.7	–15.9	–17.6	–19.1	–30.8	–23.8	–15.8	–15.8	–13.9	–12.2	–7.7	–4.9	–2.9	–1.0	0.9
Kuwait	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Libya	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Malaysia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Mexico	37.2	37.2	40.0	42.6	46.5	48.7	45.7	44.8	44.9	56.7	56.8	56.6	56.3	56.2	56.1
Morocco	52.1	56.0	61.2	62.8	63.1	64.4	64.7	65.0	65.5	76.6	76.3	75.3	74.0	72.1	69.7
Oman	–16.8	–15.6	–28.8	–27.6	–22.8	–1.0	13.4	32.1	41.5	66.2	78.4	81.4	87.3	94.3	98.1
Pakistan	55.9	59.4	60.7	58.1	58.2	61.3	61.5	66.5	77.2	79.7	79.1	76.1	72.9	68.8	64.9
Peru	6.1	2.8	1.5	2.7	5.3	7.0	8.7	10.2	11.2	22.0	24.1	25.7	26.6	27.2	27.4
Philippines	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Poland	48.7	48.2	51.2	44.9	46.5	48.1	44.8	42.4	39.5	53.5	53.7	52.7	52.8	53.4	54.4
Qatar	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Romania	27.4	29.0	29.6	29.7	29.7	27.7	28.3	28.0	28.5	36.6	41.5	46.4	50.6	54.4	57.7
Russia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Saudi Arabia	–37.0	–47.1	–50.9	–47.1	–35.9	–17.1	–7.7	–0.1	5.0	16.8	21.5	24.4	26.1	26.6	25.7
South Africa	31.3	34.8	37.9	40.7	43.6	45.4	47.8	51.0	56.1	74.5	80.0	83.4	85.0	84.7	83.1
Sri Lanka	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Thailand	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Turkey	30.9	27.3	25.8	23.7	22.8	23.3	22.1	23.9	26.6	35.2	39.9	42.5	44.0	45.8	47.4
Ukraine	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
United Arab Emirates	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Uruguay[2]	32.3	41.4	43.1	45.1	49.6	49.5	49.3	51.8	56.0	59.7	59.3	59.6	59.9	60.4	60.2
Venezuela	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Average	24.1	22.7	22.9	24.3	28.7	34.5	35.7	36.8	38.8	48.9	51.5	52.8	53.6	54.1	54.3
Asia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Europe	34.8	32.0	31.6	29.7	28.7	31.0	30.0	30.5	29.7	39.9	42.8	44.0	44.9	46.1	47.3
Latin America	31.2	29.6	29.7	32.3	35.7	41.1	43.3	44.0	45.3	56.7	59.3	60.8	61.8	62.7	63.2
MENAP	–0.6	–2.5	–3.4	–0.1	15.5	28.9	28.8	31.5	37.8	48.3	49.9	50.5	51.5	51.3	50.4
G20 Emerging	24.8	21.9	21.7	23.1	26.1	32.0	35.1	36.3	38.1	48.2	. . .	. . .	. . .	. . .	. . .

Source: IMF staff estimates and projections. Projections are based on staff assessments of current policies (see "Fiscal Policy Assumptions" in text).

Note: For country-specific details, see "Data and Conventions" in text, and Table C. MENAP = Middle East, North Africa, and Pakistan.

[1] Based on nominal GDP series before the recent revision; therefore, data in the tables are not comparable to the authorities' numbers.

[2] Data are for the nonfinancial public sector, which includes central government, local government, social security funds, nonfinancial public corporations, and Banco de Seguros del Estado. The coverage of the fiscal data was changed from the consolidated public sector to the nonfinancial public sector with the October 2019 submission. With this narrower coverage, the central bank balances are not included in fiscal data. Historical data were also revised accordingly. Data estimates before 2012 are preliminary.

Table A17. Low-Income Developing Countries: General Government Overall Balance, 2011–25

(Percent of GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Bangladesh	–3.6	–3.0	–3.4	–3.1	–4.0	–3.4	–3.3	–4.6	–5.4	–6.8	–6.1	–5.5	–5.0	–4.4	–4.3
Benin	–1.0	–0.2	–1.4	–1.7	–5.6	–4.3	–4.2	–3.0	–0.5	–3.7	–3.4	–2.8	–2.6	–2.2	–2.1
Burkina Faso	–2.0	–2.8	–3.5	–1.7	–2.1	–3.1	–6.9	–4.4	–3.5	–6.1	–4.6	–4.0	–3.5	–3.0	–3.0
Cambodia	–4.7	–4.5	–2.6	–1.6	–0.6	–0.3	–0.8	0.7	3.2	–2.4	–2.4	–3.2	–3.9	–4.5	–4.3
Cameroon	–2.4	–1.4	–3.7	–4.3	–4.4	–6.1	–4.9	–2.5	–3.3	–4.1	–3.3	–2.6	–2.0	–1.7	–1.4
Chad	2.4	0.5	–2.1	–4.2	–4.4	–1.9	–0.2	1.9	–0.2	–0.6	–1.2	0.8	2.2	0.9	1.8
Congo, Democratic Republic of the	–1.0	1.8	1.9	0.0	–0.4	–0.5	1.4	0.0	–2.1	–1.9	–0.3	–0.3	–0.7	–0.9	–0.9
Congo, Republic of	16.1	7.2	–2.8	–10.7	–17.8	–15.6	–5.9	5.8	5.8	–2.1	1.8	3.8	4.8	5.1	5.5
Côte d'Ivoire	–2.9	–2.3	–1.6	–1.6	–2.0	–3.0	–3.3	–2.9	–2.3	–5.4	–4.1	–3.0	–3.0	–3.0	–3.0
Ethiopia	–1.6	–1.2	–1.9	–2.6	–1.9	–2.3	–3.2	–3.0	–2.5	–3.5	–3.1	–1.9	–1.9	–1.9	–1.9
Ghana	–5.5	–8.4	–9.2	–8.0	–4.1	–6.9	–4.1	–7.0	–7.3	–16.4	–9.3	–8.1	–7.8	–7.2	–6.3
Guinea	–0.9	–2.5	–3.9	–3.2	–6.9	–0.1	–2.1	–1.1	–0.5	–3.7	–3.1	–2.4	–1.9	–2.1	–2.2
Haiti	–2.5	–4.7	–7.0	–6.3	–2.5	0.0	0.0	–1.7	–2.3	–5.9	–4.7	–2.1	–2.2	–2.5	–2.6
Honduras	–2.9	–3.5	–5.7	–2.9	–0.8	–0.4	–0.4	0.2	0.1	–3.1	–2.7	–0.6	–0.8	–0.9	–0.9
Kenya	–4.1	–5.0	–5.7	–7.4	–8.1	–8.5	–7.8	–7.4	–7.7	–8.4	–8.5	–7.9	–7.6	–7.2	–7.0
Kyrgyz Republic	–4.7	–5.9	–3.7	–3.1	–2.5	–5.8	–3.7	–0.6	–0.1	–7.3	–5.5	–3.0	–3.0	–3.0	–3.0
Lao P.D.R.	–1.4	–2.3	–4.0	–3.1	–5.6	–5.1	–5.5	–4.7	–5.0	–6.4	–5.7	–5.0	–4.4	–3.8	–3.7
Madagascar	–2.0	–2.2	–3.4	–2.0	–2.9	–1.1	–2.1	–1.3	–1.4	–5.5	–5.3	–5.2	–4.8	–4.4	–4.0
Mali	–3.4	–1.0	–2.4	–2.9	–1.8	–3.9	–2.9	–4.8	–1.7	–6.2	–4.5	–3.5	–3.5	–3.0	–3.0
Moldova	–2.0	–1.9	–1.6	–1.6	–1.9	–1.5	–0.6	–0.8	–1.4	–8.0	–4.3	–3.0	–2.6	–2.4	–2.4
Mozambique	–4.4	–3.6	–2.6	–10.3	–6.7	–5.5	–2.9	–6.8	–0.1	–7.1	–5.3	–3.4	–1.5	–1.0	–0.7
Myanmar	–4.4	–2.7	–1.7	–1.3	–2.8	–3.9	–2.9	–3.4	–3.9	–6.0	–6.5	–5.6	–5.0	–4.7	–4.2
Nepal	–0.8	–1.3	1.8	1.5	0.7	1.4	–3.1	–6.7	–4.6	–7.9	–6.7	–4.7	–4.4	–4.1	–4.0
Nicaragua	–0.1	–0.1	–0.7	–1.3	–1.4	–1.7	–1.6	–3.0	–0.5	–4.3	–3.0	–1.0	–1.0	–2.2	–2.7
Niger	–2.2	–0.8	–1.9	–6.1	–6.7	–4.5	–4.1	–3.0	–3.6	–4.8	–4.7	–3.2	–2.5	–2.5	–2.5
Nigeria	0.4	0.3	–2.2	–2.0	–3.2	–4.0	–5.4	–4.3	–4.8	–6.7	–5.0	–5.1	–4.4	–4.5	–4.6
Papua New Guinea	2.2	–1.2	–6.9	–6.3	–4.5	–4.7	–2.5	–2.6	–5.0	–6.3	–5.4	–4.5	–4.1	–3.7	–3.4
Rwanda	–0.9	–2.4	–1.3	–3.9	–2.7	–2.3	–2.5	–2.6	–5.2	–7.7	–7.1	–4.1	–3.5	–3.9	–3.7
Senegal	–4.9	–4.1	–4.3	–3.4	–3.7	–3.3	–3.0	–3.6	–3.8	–6.2	–4.5	–3.0	–3.0	–3.0	–3.0
Somalia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Sudan	–2.3	–7.4	–5.8	–4.7	–3.8	–4.6	–6.5	–7.9	–10.9	–6.8	–4.3	–2.6	–2.4	–2.0	–1.6
Tajikistan	–2.1	0.6	–0.9	–0.1	–2.0	–9.0	–6.0	–2.8	–2.1	–6.0	–4.4	–2.6	–2.5	–2.5	–2.5
Tanzania	–3.5	–4.1	–3.8	–2.9	–3.2	–2.1	–1.2	–1.9	–1.7	–1.9	–2.8	–2.7	–2.5	–2.4	–2.2
Timor-Leste	–25.1	–39.1	–14.4	–37.5	–33.1	–55.2	–33.4	–28.1	–32.1	–17.5	–33.8	–57.0	–51.5	–42.4	–36.3
Uganda	–2.0	–2.4	–3.2	–2.7	–2.6	–3.6	–2.7	–2.7	–5.0	–6.6	–6.9	–7.0	–7.0	–5.7	–5.0
Uzbekistan	5.4	6.2	2.3	2.1	–0.3	0.8	1.3	1.7	–0.3	–4.1	–2.7	–1.8	–1.0	–0.7	–0.6
Vietnam	–0.9	–5.5	–6.0	–5.0	–5.0	–3.2	–2.0	–1.0	–3.3	–6.0	–5.2	–4.5	–4.1	–3.9	–3.3
Yemen	–4.5	–6.3	–6.9	–4.1	–8.7	–8.5	–4.9	–7.8	–5.3	–9.2	–6.0	–4.6	–5.0	–3.0	–2.1
Zambia	–1.8	–2.8	–6.2	–5.8	–9.5	–6.1	–7.6	–8.4	–8.1	–6.0	–5.0	–4.0	–2.9	–2.0	–0.1
Zimbabwe	–2.2	0.8	–0.6	–0.4	–1.4	–6.2	–8.1	–4.5	–1.6	–1.8	–0.8	0.1	0.2	–0.1	–0.4
Average	–1.2	–2.0	–3.3	–3.1	–3.7	–3.7	–3.6	–3.4	–4.0	–6.2	–5.1	–4.5	–4.1	–3.9	–3.7
Oil Producers	0.6	0.0	–2.6	–2.5	–4.0	–4.7	–5.4	–4.1	–4.5	–6.7	–4.9	–4.9	–4.3	–4.3	–4.3
Asia	–2.2	–4.0	–4.3	–3.7	–4.1	–3.3	–2.7	–2.9	–4.1	–6.3	–5.7	–5.0	–4.6	–4.2	–3.9
Latin America	–2.0	–2.8	–4.6	–3.2	–1.3	–0.7	–0.7	–1.1	–0.5	–3.9	–3.1	–1.0	–1.1	–1.5	–1.6
Sub–Saharan Africa	–0.9	–1.2	–3.0	–3.1	–3.7	–4.3	–4.5	–3.9	–4.1	–6.3	–4.9	–4.4	–4.0	–3.9	–3.8
Others	–0.3	–1.4	–2.5	–1.7	–3.3	–3.0	–2.8	–3.0	–3.7	–6.1	–3.9	–2.5	–2.1	–1.6	–1.3

Source: IMF staff estimates and projections. Projections are based on staff assessments of current policies (see "Fiscal Policy Assumptions" in text).

Note: For country-specific details, see "Data and Conventions" in text, and Table D.

Table A18. Low-Income Developing Countries: General Government Primary Balance, 2011–25

(Percent of GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Bangladesh	–1.9	–1.1	–1.4	–1.0	–1.9	–1.5	–1.6	–2.8	–3.3	–4.8	–3.7	–3.0	–2.5	–1.9	–1.8
Benin	–0.7	0.2	–1.0	–1.4	–5.0	–3.4	–2.8	–1.4	1.1	–1.9	–1.1	–0.5	–0.5	–0.3	–0.3
Burkina Faso	–1.5	–2.1	–3.0	–1.1	–1.5	–2.2	–6.0	–3.3	–2.2	–4.6	–3.0	–2.3	–1.7	–1.2	–1.2
Cambodia	–4.4	–4.2	–2.3	–1.3	–0.3	0.1	–0.5	1.0	3.6	–2.1	–2.0	–2.8	–3.5	–4.1	–4.0
Cameroon	–2.0	–1.1	–3.3	–3.9	–4.0	–5.3	–4.0	–1.6	–2.3	–3.2	–2.4	–1.7	–1.1	–0.9	–0.7
Chad	3.0	0.9	–1.5	–3.6	–2.7	0.1	1.3	3.0	0.8	0.3	–0.3	1.6	2.9	1.6	2.4
Congo, Democratic Republic of the	–0.3	2.3	2.4	0.3	–0.1	–0.2	1.6	0.4	–1.7	–1.3	0.3	0.3	–0.1	–0.3	–0.2
Congo, Republic of	16.1	7.2	–2.7	–10.6	–17.2	–13.7	–4.3	7.7	8.2	–0.4	3.2	4.8	5.9	6.2	6.4
Côte d'Ivoire	–1.6	–1.0	–0.6	–0.7	–0.9	–1.7	–2.1	–1.6	–0.8	–3.4	–2.5	–1.4	–1.4	–1.3	–1.4
Ethiopia	–1.2	–0.9	–1.6	–2.2	–1.5	–1.9	–2.8	–2.5	–2.0	–3.0	–2.4	–1.1	–0.9	–0.8	–0.4
Ghana	–3.5	–5.8	–5.6	–3.4	1.0	–1.5	1.2	–1.4	–1.7	–10.5	–3.6	–2.1	–1.6	–0.6	–0.2
Guinea	0.5	–1.2	–3.0	–2.2	–6.1	0.9	–1.1	–0.3	0.0	–3.0	–2.1	–1.4	–0.9	–1.1	–1.1
Haiti	–2.1	–4.4	–6.7	–5.9	–2.3	0.3	0.3	–1.4	–1.8	–5.6	–4.3	–1.7	–1.8	–2.1	–2.2
Honduras	–3.2	–3.6	–5.6	–2.6	0.0	0.2	0.2	0.8	0.8	–2.5	–1.7	0.3	0.0	–0.1	0.0
Kenya	–2.2	–2.9	–3.3	–4.8	–5.3	–5.3	–4.5	–3.7	–3.9	–4.5	–4.4	–3.8	–3.4	–3.0	–2.8
Kyrgyz Republic	–3.7	–4.9	–2.9	–2.3	–1.7	–4.9	–2.9	0.4	0.8	–5.9	–4.3	–1.9	–1.8	–1.8	–1.8
Lao P.D.R.	–0.9	–1.7	–3.2	–2.4	–4.8	–4.2	–4.6	–3.5	–3.7	–4.2	–3.4	–2.6	–2.1	–1.5	–1.4
Madagascar	–1.3	–1.6	–2.8	–1.5	–2.2	–0.4	–1.4	–0.6	–0.7	–4.5	–4.5	–4.3	–4.0	–3.7	–3.2
Mali	–2.8	–0.4	–1.9	–2.3	–1.2	–3.3	–2.0	–3.9	–0.7	–5.0	–3.0	–1.8	–1.7	–1.2	–1.2
Moldova	–1.4	–1.3	–1.1	–1.1	–1.2	–0.4	0.5	0.0	–0.7	–7.0	–3.4	–2.0	–1.7	–1.5	–1.5
Mozambique	–3.6	–2.7	–1.8	–9.2	–5.5	–3.0	0.0	–2.4	3.1	–3.8	–2.1	–0.5	1.1	1.3	1.3
Myanmar	–3.1	–1.3	–0.4	–0.1	–1.6	–2.6	–1.5	–1.6	–2.4	–4.4	–4.8	–3.7	–3.0	–2.7	–2.3
Nepal	0.0	–0.5	2.6	2.1	1.1	1.7	–2.8	–6.2	–4.0	–7.2	–6.0	–3.8	–3.4	–3.1	–2.9
Nicaragua	0.4	0.5	–0.4	–0.9	–1.0	–1.1	–0.7	–1.9	0.8	–3.0	–2.1	–0.1	0.4	–0.7	–1.2
Niger	–1.9	–0.6	–1.7	–5.8	–6.3	–3.8	–3.4	–2.1	–2.6	–3.8	–3.7	–1.9	–1.3	–1.3	–1.3
Nigeria	1.3	1.3	–1.2	–1.1	–2.0	–2.7	–4.0	–2.6	–3.1	–4.7	–3.4	–3.4	–2.7	–2.6	–2.4
Papua New Guinea	3.2	–0.2	–5.8	–4.6	–2.8	–2.8	–0.4	–0.2	–2.4	–3.7	–2.8	–2.1	–1.7	–1.2	–1.1
Rwanda	–0.5	–2.0	–0.4	–3.1	–1.8	–1.3	–1.5	–1.4	–3.9	–6.0	–5.3	–2.5	–2.1	–2.4	–2.2
Senegal	–3.7	–3.0	–3.1	–2.0	–2.1	–1.6	–1.1	–1.7	–1.9	–4.0	–2.6	–1.0	–1.0	–1.1	–1.0
Somalia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Sudan	–1.3	–6.2	–5.3	–3.9	–3.1	–4.1	–6.0	–7.7	–10.7	–6.8	–4.2	–2.6	–2.4	–1.9	–1.4
Tajikistan	–1.6	1.1	0.1	0.4	–1.5	–8.3	–5.5	–1.7	–1.2	–5.0	–3.5	–1.7	–1.6	–1.6	–1.6
Tanzania	–2.8	–3.1	–2.6	–1.6	–1.7	–0.6	0.4	–0.2	0.0	–0.1	–0.6	–0.2	0.0	–0.1	0.0
Timor-Leste	–25.1	–39.1	–14.4	–37.5	–33.1	–55.2	–33.4	–28.0	–31.9	–17.5	–33.5	–56.4	–50.7	–41.7	–35.5
Uganda	–1.3	–1.4	–2.1	–1.5	–1.1	–1.5	–0.7	–0.9	–2.9	–4.5	–4.4	–3.9	–3.6	–2.2	–1.5
Uzbekistan	5.5	6.2	2.2	1.9	–0.4	0.7	1.1	1.3	–0.3	–4.0	–2.5	–1.8	–0.9	–0.5	–0.5
Vietnam	–0.1	–4.5	–4.8	–3.7	–3.4	–1.6	–0.4	0.5	–1.9	–4.6	–3.7	–3.0	–2.5	–2.2	–1.5
Yemen	–0.2	–0.9	–1.5	1.5	–2.6	–3.2	–4.7	–7.8	–5.1	–8.9	–5.7	–4.2	–2.9	0.1	1.8
Zambia	–0.8	–1.5	–4.7	–3.6	–6.7	–2.7	–3.6	–3.8	–1.4	2.4	3.4	4.2	4.7	4.9	6.2
Zimbabwe	–1.9	1.0	0.0	0.3	–0.5	–5.6	–7.3	–3.6	–1.2	–1.2	0.3	1.2	1.2	0.8	0.5
Average	–0.2	–0.9	–2.1	–1.9	–2.3	–2.2	–2.1	–1.8	–2.3	–4.4	–3.2	–2.6	–2.1	–1.8	–1.5
Oil Producers	1.6	1.3	–1.3	–1.3	–2.5	–3.1	–4.1	–2.5	–2.9	–4.7	–3.4	–3.3	–2.6	–2.4	–2.1
Asia	–1.1	–2.7	–2.9	–2.2	–2.5	–1.7	–1.2	–1.3	–2.5	–4.7	–3.9	–3.2	–2.7	–2.2	–1.9
Latin America	–2.0	–2.6	–4.3	–2.8	–0.8	–0.2	0.0	–0.4	0.3	–3.2	–2.2	–0.1	–0.2	–0.6	–0.6
Sub–Saharan Africa	0.0	–0.1	–1.8	–1.9	–2.4	–2.7	–2.8	–2.0	–2.1	–4.0	–2.8	–2.2	–1.8	–1.6	–1.4
Others	1.0	0.1	–1.2	–0.2	–1.8	–1.9	–2.5	–2.9	–3.5	–5.8	–3.6	–2.3	–1.6	–1.0	–0.7

Source: IMF staff estimates and projections. Projections are based on staff assessments of current policies (see "Fiscal Policy Assumptions" in text).

Note: "Primary balance" is defined as the overall balance, excluding net interest payments. For country-specific details, see "Data and Conventions" in text, and Table D.

Table A19. Low-Income Developing Countries: General Government Revenue, 2011–25

(Percent of GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Bangladesh	10.4	11.2	11.2	10.9	9.8	10.1	10.2	9.7	9.7	8.2	8.8	9.8	10.0	9.9	9.9
Benin	13.7	14.0	13.5	12.6	12.6	11.1	13.6	13.6	14.1	13.7	14.0	14.2	14.1	14.1	14.0
Burkina Faso	18.4	19.9	21.7	19.2	18.3	18.6	19.2	19.4	20.4	22.1	21.1	21.5	21.7	21.9	22.2
Cambodia	15.9	17.2	18.7	20.1	19.6	20.8	21.6	23.9	26.2	21.6	21.4	21.0	20.7	20.6	20.7
Cameroon	16.3	16.3	16.3	16.6	16.5	14.8	15.0	16.1	15.7	13.2	14.2	14.6	14.7	14.8	15.0
Chad	24.8	24.4	20.7	17.8	14.0	12.4	14.6	15.3	14.2	18.7	16.3	17.5	18.5	17.1	17.5
Congo, Democratic Republic of the	13.0	15.5	14.6	18.5	16.8	14.0	11.7	11.1	10.9	10.6	13.9	14.5	14.8	15.0	15.0
Congo, Republic of	43.9	37.9	39.5	37.8	23.5	26.1	22.4	25.4	27.3	22.1	23.7	24.8	25.3	25.8	26.1
Côte d'Ivoire	10.3	13.9	14.2	13.6	14.5	14.7	15.1	14.9	15.0	14.4	14.5	14.5	14.6	14.5	14.6
Ethiopia	16.6	15.5	15.8	14.9	15.4	15.9	14.7	13.1	12.8	11.5	11.9	14.0	14.7	15.1	15.2
Ghana	14.1	13.7	12.5	13.4	14.9	13.4	13.9	14.5	13.7	11.8	12.8	13.6	14.4	14.5	14.5
Guinea	15.1	17.5	14.8	17.0	14.8	16.0	15.3	14.5	14.1	13.6	14.9	15.6	16.3	16.8	16.9
Haiti	22.0	23.8	20.9	19.0	19.2	18.7	17.7	17.3	12.2	13.8	17.3	16.6	17.6	18.0	18.6
Honduras	23.0	22.9	23.8	24.7	25.2	27.0	26.5	26.5	25.8	25.5	26.8	27.4	27.4	27.5	27.5
Kenya	19.5	19.1	19.7	19.8	19.1	19.2	18.2	18.2	17.7	16.7	16.4	16.5	16.5	16.5	16.5
Kyrgyz Republic	32.7	34.7	34.4	35.4	35.6	33.1	33.3	32.5	34.0	31.8	31.5	31.8	32.1	32.7	33.2
Lao P.D.R.	18.8	22.4	20.2	21.9	20.2	16.0	16.1	16.2	15.4	11.8	13.8	14.8	15.4	15.7	15.8
Madagascar	10.0	9.3	9.3	10.6	10.2	12.4	12.8	12.9	13.9	12.5	11.5	12.1	12.3	12.5	12.6
Mali	17.1	14.6	17.4	17.1	19.1	18.3	20.1	15.7	21.4	20.3	21.6	21.5	21.8	21.8	21.9
Moldova	30.5	31.7	30.9	31.8	30.0	28.6	29.8	30.5	30.0	29.9	29.9	30.4	30.4	30.5	30.5
Mozambique	25.0	25.2	29.6	30.4	26.0	23.9	27.1	25.8	29.9	24.6	26.4	27.2	27.7	25.8	24.0
Myanmar	9.5	15.5	20.8	22.5	21.4	19.6	17.9	17.6	16.4	15.0	14.7	15.2	16.0	16.3	16.6
Nepal	17.8	18.0	19.6	20.4	20.8	23.3	24.1	25.3	26.0	20.3	25.0	25.3	25.3	25.4	25.5
Nicaragua	23.5	23.9	23.5	23.3	23.9	25.1	25.5	24.5	27.1	26.0	26.5	27.3	27.7	27.6	27.6
Niger	13.1	15.8	18.5	17.5	17.5	14.9	15.4	18.1	18.0	19.0	18.5	18.3	18.3	18.5	18.8
Nigeria	17.7	14.7	11.5	10.9	7.9	6.0	6.6	8.5	7.9	5.9	7.1	7.1	7.2	7.4	7.4
Papua New Guinea	21.9	21.2	20.7	20.8	18.3	16.1	15.9	17.8	16.3	14.0	14.6	15.7	16.0	16.3	16.3
Rwanda	23.7	22.1	24.8	23.5	23.8	22.8	22.6	23.8	23.6	20.1	20.7	20.6	20.6	20.9	21.2
Senegal	18.2	18.6	17.7	19.7	19.3	20.7	19.5	18.8	20.2	21.5	20.4	21.0	21.5	21.7	22.4
Somalia	. . . .	. . . .	2.8	3.7	3.5	4.1	6.0	5.7	6.8	12.7	10.7	12.3	13.5	10.5	11.2
Sudan	15.9	9.1	9.6	8.8	8.4	7.1	7.2	8.9	7.9	6.8	12.8	12.9	13.9	14.6	15.3
Tajikistan	24.9	25.1	26.9	28.4	29.9	29.9	29.7	29.1	27.4	24.3	25.6	27.5	27.7	27.8	27.9
Tanzania	15.4	15.4	15.0	14.4	14.0	14.8	15.4	14.7	14.7	15.1	15.0	15.2	15.4	15.4	15.6
Timor-Leste	106.6	91.6	81.8	73.5	64.6	55.9	52.7	58.2	56.4	46.5	52.9	51.6	48.7	46.9	44.7
Uganda	11.1	10.7	10.1	10.8	12.8	12.5	12.8	13.2	13.7	12.9	13.7	14.4	14.5	14.8	16.2
Uzbekistan	30.6	31.6	29.1	28.3	25.6	25.4	24.7	27.8	28.0	24.7	24.6	24.6	24.7	24.8	25.1
Vietnam	20.3	18.0	18.5	17.7	19.2	19.1	19.6	19.5	19.5	17.0	17.8	18.0	18.3	18.5	18.7
Yemen	25.3	29.9	23.9	23.6	10.7	7.5	3.5	6.4	8.5	5.7	5.2	5.2	7.4	13.2	18.8
Zambia	17.7	18.7	17.6	18.9	18.8	18.2	17.5	18.9	19.7	18.0	18.9	19.3	19.6	19.6	19.7
Zimbabwe	21.1	21.2	20.3	20.0	19.1	17.1	14.4	13.2	14.7	14.2	14.5	14.8	14.8	13.9	13.9
Average	17.8	17.1	16.1	15.8	14.5	14.2	14.4	14.8	14.7	13.0	13.8	14.2	14.4	14.5	14.5
Oil Producers	19.5	16.9	13.6	12.8	8.7	6.8	7.2	9.2	8.7	6.7	7.8	7.8	7.9	8.2	8.2
Asia	15.8	16.1	16.9	16.7	16.4	16.0	16.1	16.0	15.9	13.6	14.4	15.0	15.2	15.3	15.4
Latin America	22.9	23.4	23.1	23.1	23.6	24.9	24.6	24.0	23.6	23.4	25.1	25.5	25.8	25.9	26.1
Sub-Saharan Africa	17.3	16.0	14.3	14.1	12.5	11.9	12.4	13.0	12.7	11.4	12.2	12.5	12.6	12.6	12.6
Others	24.0	24.7	22.3	21.7	17.7	17.4	16.5	19.3	20.2	18.3	19.9	20.6	21.4	22.3	23.2

Source: IMF staff estimates and projections. Projections are based on staff assessments of current policies (see "Fiscal Policy Assumptions" in text).

Note: For country-specific details, see "Data and Conventions" in text, and Table D.

Table A20. Low-Income Developing Countries: General Government Expenditure, 2011–25

(Percent of GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Bangladesh	14.0	14.2	14.6	14.0	13.8	13.4	13.6	14.3	15.1	15.0	14.9	15.2	15.0	14.4	14.2
Benin	14.7	14.2	14.9	14.2	18.2	15.4	17.8	16.6	14.6	17.4	17.5	17.0	16.7	16.3	16.2
Burkina Faso	20.4	22.7	25.3	20.9	20.4	21.6	26.1	23.8	23.9	28.2	25.7	25.5	25.2	24.9	25.2
Cambodia	20.6	21.7	21.4	21.7	20.3	21.1	22.4	23.2	23.0	24.0	23.8	24.2	24.5	25.1	25.0
Cameroon	18.6	17.8	20.0	20.9	20.9	20.9	19.8	18.5	19.1	17.3	17.5	17.2	16.6	16.5	16.3
Chad	22.4	23.9	22.8	22.0	18.3	14.4	14.9	13.3	14.4	19.3	17.5	16.7	16.3	16.2	15.7
Congo, Democratic Republic of the	14.0	13.7	12.7	18.5	17.2	14.5	10.4	11.1	12.9	12.5	14.2	14.8	15.5	15.9	15.8
Congo, Republic of	27.9	30.7	42.4	48.6	41.3	41.7	28.3	19.6	21.4	24.2	21.9	21.0	20.5	20.7	20.6
Côte d'Ivoire	13.2	16.1	15.9	15.2	16.5	17.7	18.4	17.8	17.3	19.8	18.6	17.5	17.6	17.5	17.5
Ethiopia	18.2	16.6	17.8	17.5	17.3	18.2	18.0	16.1	15.3	15.0	15.0	15.9	16.7	17.1	17.1
Ghana	19.6	22.1	21.7	21.4	18.9	20.3	18.0	21.5	21.1	28.3	22.0	21.7	22.2	21.7	20.8
Guinea	16.0	20.0	18.6	20.2	21.7	16.1	17.3	15.6	14.6	17.3	18.0	18.0	18.2	18.9	19.0
Haiti	24.5	28.6	28.0	25.2	21.7	18.7	17.7	19.0	14.4	19.7	21.9	18.6	19.8	20.5	21.2
Honduras	25.9	26.4	29.6	27.6	26.0	27.4	26.9	26.3	25.7	28.6	29.5	28.0	28.2	28.4	28.4
Kenya	23.6	24.2	25.4	27.2	27.2	27.7	26.1	25.6	25.4	25.1	25.0	24.4	24.1	23.7	23.5
Kyrgyz Republic	37.4	40.6	38.1	38.5	38.1	38.9	37.0	33.1	34.2	39.0	36.9	34.8	35.1	35.7	36.2
Lao P.D.R.	20.2	24.7	24.2	25.0	25.8	21.1	21.6	20.9	20.4	18.3	19.5	19.7	19.8	19.5	19.5
Madagascar	12.0	11.5	12.7	12.6	13.0	13.5	14.9	14.3	15.3	18.0	16.8	17.2	17.1	16.9	16.6
Mali	20.6	15.5	19.8	20.0	20.9	22.2	22.9	20.4	23.1	26.5	26.1	25.0	25.3	24.8	24.9
Moldova	32.6	33.7	32.4	33.4	31.9	30.1	30.5	31.4	31.4	37.9	34.2	33.3	33.0	32.9	32.9
Mozambique	29.4	28.8	32.2	40.7	32.7	29.4	30.0	32.6	30.0	31.7	31.7	30.6	29.2	26.8	24.7
Myanmar	13.9	18.1	22.6	23.8	24.2	23.4	20.8	21.0	20.3	21.1	21.2	20.8	21.0	21.0	20.8
Nepal	18.6	19.3	17.8	18.8	20.1	21.9	27.2	31.9	30.6	28.2	31.7	30.0	29.7	29.6	29.5
Nicaragua	23.5	24.1	24.2	24.6	25.3	26.8	27.0	27.5	27.6	30.3	29.5	28.3	28.8	29.8	30.3
Niger	15.3	16.6	20.4	23.6	24.2	19.4	19.5	21.1	21.6	23.9	23.3	21.4	20.8	21.0	21.3
Nigeria	17.3	14.4	13.7	13.0	11.1	10.0	12.0	12.8	12.6	12.7	12.1	12.2	11.6	12.0	11.9
Papua New Guinea	19.7	22.4	27.6	27.1	22.8	20.9	18.4	20.4	21.2	20.2	19.9	20.2	20.1	20.0	19.7
Rwanda	24.6	24.5	26.1	27.4	26.5	25.0	25.1	26.4	28.8	27.8	27.7	24.8	24.1	24.8	24.9
Senegal	23.1	22.8	22.0	23.1	22.9	24.0	22.5	22.4	24.0	27.7	24.9	24.0	24.5	24.7	25.4
Somalia	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Sudan	18.2	16.5	15.3	13.5	12.2	11.6	13.6	16.8	18.8	13.7	17.1	15.5	16.3	16.6	16.9
Tajikistan	27.0	24.5	27.8	28.5	31.9	38.9	35.6	31.9	29.5	30.3	30.0	30.0	30.2	30.3	30.4
Tanzania	18.9	19.5	18.8	17.3	17.2	16.9	16.6	16.6	16.4	17.0	17.8	17.9	17.8	17.8	17.9
Timor-Leste	131.7	130.7	96.1	111.0	97.7	111.1	86.1	86.2	88.5	64.1	86.7	108.5	100.1	89.4	80.9
Uganda	13.2	13.1	13.3	13.6	15.3	16.1	15.5	16.0	18.7	19.5	20.7	21.4	21.4	20.5	21.2
Uzbekistan	25.2	25.4	26.8	26.2	25.9	24.5	23.4	26.0	28.2	28.9	27.3	26.4	25.8	25.5	25.7
Vietnam	21.2	23.5	24.5	22.8	24.2	22.2	21.5	20.5	22.8	23.0	23.0	22.6	22.4	22.3	22.0
Yemen	29.8	36.2	30.8	27.8	19.4	16.1	8.4	14.3	13.8	14.9	11.2	9.8	12.4	16.2	20.9
Zambia	19.5	21.5	23.8	24.7	28.3	24.3	25.1	27.4	27.9	24.0	23.9	23.3	22.5	21.5	19.8
Zimbabwe	23.2	20.4	20.9	20.4	20.5	23.4	22.5	17.7	16.3	16.1	15.3	14.6	14.6	14.0	14.3
Average	19.1	19.1	19.4	19.0	18.3	17.9	18.0	18.3	18.7	19.2	18.9	18.7	18.5	18.3	18.2
Oil Producers	18.9	16.9	16.2	15.4	12.7	11.5	12.6	13.4	13.2	13.3	12.6	12.7	12.2	12.5	12.5
Asia	18.1	20.1	21.2	20.4	20.5	19.3	18.8	18.9	20.0	19.9	20.1	20.0	19.8	19.5	19.3
Latin America	24.9	26.2	27.7	26.2	24.9	25.6	25.2	25.1	24.1	27.4	28.2	26.5	26.9	27.4	27.7
Sub-Saharan Africa	18.3	17.1	17.3	17.2	16.2	16.1	16.9	17.0	16.8	17.7	17.1	16.9	16.6	16.5	16.4
Others	24.3	26.1	25.2	23.7	21.2	20.7	19.6	22.8	24.4	24.6	24.1	23.4	23.8	24.3	25.0

Source: IMF staff estimates and projections. Projections are based on staff assessment of current policies (see "Fiscal Policy Assumptions" in text).

Note: For country-specific details, see "Data and Conventions" in text, and Table D.

Table A21. Low-Income Developing Countries: General Government Gross Debt, 2011–25

(Percent of GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Bangladesh	36.6	36.2	35.8	35.3	33.7	33.3	33.4	34.6	35.8	39.6	41.9	42.3	42.4	41.9	41.3
Benin	21.9	19.5	18.5	22.3	30.9	35.9	39.6	41.1	41.2	41.8	41.4	39.9	38.4	36.8	35.2
Burkina Faso	24.5	25.2	25.9	26.6	31.4	33.3	33.5	37.7	42.7	46.6	48.1	48.4	48.3	47.7	47.1
Cambodia	29.7	31.5	31.7	31.9	31.2	29.1	30.0	28.6	28.6	31.5	31.4	32.1	33.4	35.1	36.9
Cameroon	15.7	15.4	18.2	21.5	32.0	33.3	37.7	39.5	42.7	44.7	45.0	44.9	44.1	42.8	41.4
Chad	30.6	28.8	30.6	39.5	43.9	51.3	50.3	49.1	44.3	46.4	44.4	41.9	39.1	37.8	35.1
Congo, Democratic Republic of the	25.0	21.8	19.1	16.8	17.0	21.7	19.1	15.3	14.7	16.1	13.4	11.3	9.3	7.7	6.3
Congo, Republic of	34.4	30.2	33.9	42.3	74.2	91.0	94.2	78.6	83.7	104.5	98.4	90.4	81.8	70.3	63.7
Côte d'Ivoire	50.0	32.6	31.4	32.4	34.2	35.6	36.9	39.7	37.9	41.7	42.6	42.4	42.2	41.9	42.1
Ethiopia	45.3	42.2	47.5	47.6	54.5	55.8	57.7	61.1	57.6	56.1	58.5	56.9	53.9	48.6	43.3
Ghana	31.4	35.6	43.2	51.2	54.8	57.1	58.3	59.1	62.8	76.7	74.7	74.6	72.4	71.9	71.3
Guinea	58.1	27.2	34.0	35.1	41.9	42.5	40.5	38.0	34.5	44.9	45.9	44.3	42.9	42.0	41.0
Haiti	23.7	27.6	31.0	35.5	38.5	40.3	38.0	39.7	47.7	54.4	52.4	48.9	46.3	44.8	43.8
Honduras	24.6	29.2	39.4	37.1	37.1	38.2	38.9	40.1	40.3	46.0	50.4	52.4	53.9	53.7	51.1
Kenya	43.0	43.9	44.0	42.9	48.6	50.5	56.9	60.2	62.1	66.4	70.5	73.3	76.3	77.7	78.6
Kyrgyz Republic	50.1	50.5	47.1	53.6	67.1	59.1	58.8	54.8	54.1	68.1	66.8	64.1	61.2	59.7	58.6
Lao P.D.R.	43.0	46.1	49.5	53.5	53.1	54.5	57.2	59.7	62.6	70.9	70.7	70.6	70.0	68.8	67.4
Madagascar	29.9	30.4	36.2	37.8	44.1	40.3	40.0	39.9	38.4	44.2	45.0	47.0	48.8	50.0	51.0
Mali	24.0	25.4	26.4	26.9	30.7	36.0	36.0	37.7	40.5	44.8	46.2	46.2	46.6	46.4	46.2
Moldova	24.2	31.2	29.8	35.0	42.4	39.2	34.3	31.6	28.4	37.8	39.2	40.4	40.7	39.8	38.9
Mozambique	34.7	37.4	50.1	64.3	87.4	119.9	102.4	106.2	104.4	121.3	123.5	123.4	116.8	104.9	92.1
Myanmar	47.7	36.9	36.5	35.2	36.3	38.3	38.5	40.4	38.8	42.4	45.2	47.0	48.4	49.7	50.5
Nepal	31.7	34.3	32.2	28.2	25.6	27.9	26.1	30.2	30.1	39.2	43.7	45.0	46.3	47.4	48.2
Nicaragua	28.8	27.9	28.8	28.7	28.9	30.9	34.1	37.5	42.1	48.3	50.3	50.5	51.2	53.4	55.5
Niger	14.7	18.1	19.5	22.0	29.9	32.8	39.5	38.9	41.7	48.3	48.6	45.5	43.0	42.2	41.6
Nigeria[1]	17.4	17.6	18.3	17.5	20.3	23.4	25.3	27.7	29.1	35.0	35.5	36.2	36.5	37.0	37.4
Papua New Guinea	16.3	19.1	24.9	26.9	29.9	33.7	32.5	36.8	40.1	46.7	47.7	49.2	47.8	47.7	45.7
Rwanda	18.6	19.0	26.0	28.2	32.2	36.4	41.3	45.0	51.4	61.6	69.4	69.5	67.6	67.0	66.9
Senegal[2]	32.7	34.2	36.8	42.4	44.5	47.5	61.1	63.2	64.1	65.4	65.4	64.6	60.4	58.3	57.5
Somalia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Sudan	60.5	77.8	76.7	67.8	66.5	58.6	159.2	186.7	201.6	259.4	250.7	221.2	210.0	204.9	198.9
Tajikistan	35.3	32.3	29.1	27.7	34.7	42.1	50.3	47.8	43.1	47.8	48.9	48.5	48.3	48.2	48.0
Tanzania	27.8	29.2	31.4	34.6	37.1	37.0	37.7	38.7	38.2	38.5	39.2	39.0	38.3	37.4	36.8
Timor-Leste	0.0	0.0	0.5	1.5	2.8	4.6	6.6	9.2	11.4	11.7	15.6	17.7	19.5	21.6	23.3
Uganda	18.0	19.5	22.1	24.8	28.8	31.2	33.8	35.1	38.2	46.0	50.9	54.9	57.3	57.8	55.4
Uzbekistan	6.8	7.2	6.6	6.4	7.1	8.6	20.2	20.4	29.3	36.1	40.1	40.2	40.2	39.3	38.8
Vietnam	35.8	38.3	41.4	43.6	46.1	47.6	46.3	43.6	43.4	46.6	47.1	47.2	46.9	46.4	45.6
Yemen	45.7	47.3	48.2	48.7	57.0	72.3	77.4	74.5	76.5	81.7	79.3	78.4	71.9	65.5	60.4
Zambia	20.8	25.4	27.1	36.1	65.6	60.6	65.5	77.2	91.9	120.0	119.6	116.5	112.3	107.7	102.7
Zimbabwe	41.4	37.2	38.6	40.3	41.8	54.2	52.9	37.3	10.8	2.4	2.2	2.2	2.1	2.1	2.0
Average	29.6	29.4	30.9	31.5	35.3	37.9	42.4	42.9	43.3	48.8	49.7	49.1	48.4	47.7	46.8
Oil Producers	20.2	20.2	21.1	20.8	24.7	28.8	30.9	32.1	33.0	38.6	38.6	38.7	38.4	38.2	38.3
Asia	36.4	36.3	37.8	38.5	39.0	39.9	39.3	39.1	39.4	43.3	44.8	45.2	45.3	45.1	44.6
Latin America	25.6	28.5	34.5	34.3	34.9	36.3	37.3	39.3	42.2	48.2	50.7	51.3	51.9	52.1	50.9
Sub-Saharan Africa	24.8	24.4	26.1	27.0	32.3	36.6	39.7	41.3	41.7	46.9	47.9	47.7	47.1	46.3	45.5
Others	37.6	39.7	39.1	37.2	39.7	38.0	75.3	77.7	79.3	97.4	95.1	85.3	80.4	76.7	73.5

Source: IMF staff estimates and projections. Projections are based on staff assessments of current policies (see "Fiscal Policy Assumptions" in text).

Note: For country-specific details, see "Data and Conventions" in text, and Table D.

[1] Debt includes overdrafts from the Central Bank of Nigeria and liabilities of the Asset Management Corporation of Nigeria.

[2] From 2017 onward, Senegal data include the whole of the public sector, whereas before 2017, only central government debt stock was taken into account.

Table A22. Low-Income Developing Countries: General Government Net Debt, 2011–25

(Percent of GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Bangladesh	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Benin	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Burkina Faso	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Cambodia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Cameroon	12.6	13.1	15.9	19.9	27.8	31.6	34.4	37.0	40.4	42.8	43.5	43.7	43.6	42.5	41.1
Chad	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Congo, Democratic Republic of the	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Congo, Republic of	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Côte d'Ivoire	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Ethiopia	40.0	37.0	41.9	43.0	49.6	51.8	53.8	57.5	53.8	52.6	55.6	54.5	51.7	46.4	36.2
Ghana	28.6	34.0	40.2	46.3	50.7	52.0	53.1	57.8	58.0	72.3	70.8	71.1	69.3	69.1	68.8
Guinea	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Haiti	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Honduras	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Kenya	39.1	40.1	40.1	38.7	43.5	45.1	51.1	54.5	57.2	62.7	66.9	69.2	71.8	72.7	74.4
Kyrgyz Republic	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Lao P.D.R.	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Madagascar	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Mali	17.5	21.3	20.2	19.7	23.1	30.0	31.1	34.3	34.3	31.3	29.4	27.7	26.6	26.2	26.3
Moldova	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Mozambique	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Myanmar	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Nepal	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Nicaragua	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Niger	12.0	14.4	15.3	17.2	25.9	29.5	35.4	36.0	37.9	44.6	45.2	42.4	40.2	39.5	39.0
Nigeria[1]	12.5	10.7	11.4	13.8	15.9	19.0	20.9	23.5	25.4	31.5	32.5	33.5	34.2	34.9	35.6
Papua New Guinea	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Rwanda	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Senegal	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Somalia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Sudan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Tajikistan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Tanzania	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Timor-Leste	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Uganda	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Uzbekistan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Vietnam	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Yemen	42.3	45.3	46.7	47.8	56.1	71.3	76.6	73.8	75.8	81.1	78.9	78.0	71.6	65.2	60.1
Zambia	16.4	20.1	25.2	31.8	56.1	51.3	55.8	66.5	76.5	99.7	99.0	97.3	94.9	91.8	87.9
Zimbabwe	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Average	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Oil Producers	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Asia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Latin America	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Sub-Saharan Africa	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Others	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .

Source: IMF staff estimates and projections. Projections are based on staff assessment of current policies (see "Fiscal Policy Assumptions" in text).

Note: For country-specific details, see "Data and Conventions" in text, and Table D.

[1] The overdrafts and government deposits at the Central Bank of Nigeria almost cancel each other out, and the Asset Management Corporation of Nigeria debt is roughly halved. See footnote 1 in Table A21.

Table A23. Advanced Economies: Structural Fiscal Indicators

(Percent of GDP, except when indicated otherwise)

	Pension Spending Change, 2019–30[1]	Net Present Value of Pension Spending Change, 2019–50[1,2]	Health Care Spending Change, 2019–30	Net Present Value of Health Care Spending Change, 2019–50[2]	Gross Financing Need, 2020[3]	Average Term to Maturity, 2020 (years)[4]	Debt to Average Maturity, 2020	Projected Interest Rate–Growth Differential, 2020–25 (percent)	Pre-Pandemic Overall Balance, 2012–19	Projected Overall Balance, 2020–25	Nonresident Holding of General Government Debt, 2019 (percent of total)[5]
Australia	0.7	22.0	1.1	40.3	12.9	7.5	8.1	–0.8	–2.7	–5.9	40.9
Austria	0.6	16.7	1.0	39.7	16.5	10.4	8.1	–1.2	–1.2	–3.3	79.3
Belgium	0.5	20.1	1.3	55.1	23.6	10.0	11.8	–0.6	–2.3	–6.4	65.8
Canada	0.9	15.7	1.2	43.5	30.2	5.4	21.1	0.0	–0.7	–6.5	23.2
Cyprus	0.7	21.5	. . .	. . .	8.1	7.1	16.6	–0.6	–1.5	–0.8	82.6
Czech Republic	0.1	20.1	0.7	24.6	10.7	6.1	6.4	–1.7	–0.6	–3.3	40.2
Denmark	–1.1	–34.8	1.1	35.7	7.6	8.0	4.3	–0.3	0.1	–1.5	34.1
Estonia	–0.6	–15.9	0.5	22.5	...	0.4	42.6	–3.3	–0.2	–4.4	88.7
Finland	1.1	11.1	1.1	33.9	15.7	6.3	10.7	–1.6	–1.8	–3.2	95.2
France	0.4	0.1	1.3	47.4	21.4	7.8	15.2	–0.7	–3.6	–6.1	58.0
Germany	1.4	39.3	0.8	36.1	13.6	5.9	12.3	–1.6	0.9	–1.3	52.8
Hong Kong SAR	1.5	48.9	. . .	. . .	. . .	. . .	. . .	–2.6	2.4	–3.0	. . .
Iceland	3.4	112.0	1.6	61.0	14.5	4.5	4.0	2.4	0.8	–6.5	27.3
Ireland	0.8	33.2	0.6	23.0	13.9	10.8	5.9	–2.9	–2.6	–1.4	72.3
Israel	0.3	14.3	0.3	12.3	. . .	6.4	12.0	0.2	–2.7	–6.4	14.5
Italy[6]	1.6	49.3	0.8	30.9	32.9	6.8	23.8	1.2	–2.5	–5.1	35.1
Japan	–1.3	–7.7	1.9	60.4	52.8	8.2	32.6	0.0	–4.8	–5.3	12.1
Korea	1.8	69.1	2.0	77.6	5.7	7.9	6.1	–1.6	1.2	–2.7	13.4
Latvia	–0.8	–18.3	0.7	25.0	. . .	9.7	4.5	–2.1	–0.7	–2.1	85.5
Lithuania	0.1	–0.3	0.9	31.9	12.0	7.2	6.7	–2.7	–0.6	–2.1	88.9
Luxembourg	1.2	48.6	1.0	39.9	. . .	5.0	5.3	–2.8	1.5	–1.7	48.4
Malta	–0.7	–8.7	. . .	. . .	15.7	8.2	6.9	–1.2	–0.2	–4.0	16.9
The Netherlands	0.8	34.5	1.8	64.2	14.7	7.5	7.9	–0.8	–0.8	–2.8	47.3
New Zealand	1.5	44.8	1.6	58.1	11.9	7.6	6.3	–1.0	–0.4	–5.2	54.8
Norway	0.8	20.2	2.1	74.9	. . .	4.7	8.4	–1.8	7.9	3.5	51.2
Portugal	0.7	18.2	1.0	36.1	19.9	6.4	21.6	–0.3	–3.5	–2.9	57.8
Singapore[7]	1.0	34.5	. . .	. . .	26.2	4.0	32.8		4.7	0.1	. . .
Slovak Republic	–0.7	–10.3	0.5	20.2	12.2	8.6	7.2	–1.8	–2.3	–4.2	64.4
Slovenia	1.0	49.9	0.8	31.5	13.2	8.8	9.2	–1.2	–3.5	–2.1	68.4
Spain	0.3	25.4	1.2	47.1	27.6	7.5	16.4	0.4	–5.2	–6.7	55.6
Sweden	–0.8	–26.5	0.5	19.7	9.9	4.9	8.5	–1.5	0.0	–1.4	31.7
Switzerland	0.5	21.3	2.3	83.8	5.9	11.1	4.4	–0.1	0.5	–1.1	10.0
United Kingdom	0.5	19.3	1.5	56.0	26.1	14.8	7.3	–0.4	–4.2	–8.0	39.4
United States	1.1	27.7	4.9	162.1	41.2	5.8	22.7	–1.3	–5.2	–8.4	29.1
Average	0.7	23.1	2.9	97.5	32.3	7.1	18.9	–0.9	–3.2	–6.1	35.2
G7	0.8	22.4	3.3	110.2	36.7	7.0	21.4	–0.9	–3.8	–6.9	32.6
G20 Advanced	0.8	24.2	3.1	106.7	34.7	7.0	20.4	–0.9	–3.6	–6.7	32.2

Sources: Bloomberg Finance L.P.; Joint External Debt Hub, Quarterly External Debt Statistics; national authorities; and IMF staff estimates and projections.

Note: All economy averages are weighted by nominal GDP converted to US dollars at average market exchange rates in the years indicated and based on data availability.

[1] Pension projections rely on authorities' estimates when these are available. For the EU countries, pension projections are based on *The 2018 Ageing Report* of the European Commission. When authorities' estimates are not available, IMF staff projections use the methodology described in Clements, Eich, and Gupta's *Equitable and Sustainable Pensions: Challenges and Experience* (IMF 2014). These numbers will differ greatly compared with the previous vintages of the pension update because of new baseline pension numbers from the sources of World Bank and International Labour Organization, as well as new labor force participation rate numbers from the International Labour Organization. These two changes not only affect countries without country authority projections but also affect those with such projections (excluding EU countries covered by *The 2018 Aging Report*). IMF staff projections for health care spending are driven by demographic and other factors. The difference between the growth of health care spending and real GDP growth that is not explained by demographics ("excess cost growth") is assumed to start at the economy-specific historical average and converge to the advanced economy historical average by 2050 (0.8 percent).

[2] For net present value calculations, a discount rate of 1 percent a year in excess of GDP growth is used for each economy.

[3] "Gross financing need" is defined as the projected overall deficit and maturing government debt in 2020. For most economies, data on maturing debt refer to central government securities. Data are from Bloomberg Finance L.P. and IMF staff projections.

[4] For most economies, the average-term-to-maturity data refer to central government securities; the source is Bloomberg Finance L.P.

[5] Nonresident holding of general government debt data are for the fourth quarter of 2019 or latest available from the Joint External Debt Hub, Quarterly External Debt Statistics, which include marketable and nonmarketable debt. For some economies, tradable instruments in the Joint External Debt Hub are reported at market value. External debt in US dollars is converted to local currency, then taken as a percentage of the 2019 gross general government debt.

[6] Italy's pension projections do not reflect the new demographic assumptions. Taking more prudent assumptions for the employment rate, productivity growth, and demographics, IMF staff calculations show that the change in pension spending over 2015–30 would be about 3 percent of GDP; see Italy 2017 Article IV Staff Report, Box 4.

[7] Singapore's general government debt is covered by financial assets and is issued to deepen the domestic market, meet the Central Provident Fund's investment needs, and provide individuals with a long-term savings option.

Table A24. Emerging Market and Middle-Income Economies: Structural Fiscal Indicators

(Percent of GDP, except when indicated otherwise)

	Pension Spending Change, 2019–30[1]	Net Present Value of Pension Spending Change, 2019–50[1,2]	Health Care Spending Change, 2019–30	Net Present Value of Health Care Spending Change, 2019–50[2]	Gross Financing Need, 2020[3]	Average Term to Maturity, 2020 (years)[4]	Debt to Average Maturity, 2020	Projected Interest Rate–Growth Differential, 2020–25 (percent)	Pre-Pandemic Overall Balance, 2012–19	Projected Overall Balance, 2020–25	Nonresident Holding of General Government Debt, 2019 (percent of total)[5]
Algeria	3.2	123.6	0.7	28.2	. . .	. . .	. . .	–2.2	–7.2	–9.9	1.8
Angola	0.0	2.1	0.1	3.8	. . .	10.3	11.7	–6.9	–1.6	0.6	. . .
Argentina	. . .	. . .	. . .	. . .	. . .	10.6	. . .	. . .	–5.0	. . .	43.0
Azerbaijan	4.0	121.4	0.2	7.0	. . .	6.0	3.4	1.7	1.8	–5.4	. . .
Belarus	4.9	129.0	0.5	18.7	. . .	5.2	9.8	–2.0	–0.4	–1.9	64.9
Brazil[6]	4.2	162.8	. . .	. . .	28.7	6.3	16.1	1.3	–6.5	–7.7	10.8
Chile	–0.6	–9.1	0.9	34.3	10.0	10.2	3.2	–2.3	–1.6	–3.9	36.1
China	2.5	104.7	0.7	25.3	. . .	. . .	. . .	–5.4	–2.9	–10.3	. . .
Colombia	–0.1	–12.7	1.1	43.7	11.1	8.2	8.3	1.2	–2.3	–3.8	30.6
Croatia	–0.5	–32.2	0.9	32.0	15.8	4.7	18.8	–0.7	–2.4	–3.6	32.7
Dominican Republic	0.2	5.9	0.4	15.1	10.1	8.6	8.0	–1.3	–2.9	–3.0	48.8
Ecuador	0.7	30.3	0.7	27.3	16.1	5.9	11.8	2.8	–4.5	–0.8	70.9
Egypt	1.0	41.1	0.2	6.9	35.9	3.4	25.8	–2.2	–10.6	–5.5	24.2
Hungary	–0.6	0.1	1.0	34.4	22.4	3.6	21.3	–1.8	–2.3	–2.8	33.9
India	0.8	31.8	0.2	8.8	17.5	9.6	9.3	–0.5	–7.1	–10.3	5.3
Indonesia	0.2	10.5	0.2	7.7	8.9	8.6	4.5	–1.4	–2.2	–4.0	58.5
Iran	1.7	95.8	. . .	. . .	. . .	. . .	. . .	–13.0	–2.0	–7.9	. . .
Kazakhstan	2.1	57.3	0.2	9.4	...	7.4	3.2	–2.9	–0.1	–2.6	34.2
Kuwait	7.2	364.9	0.5	18.0	10.2	2.2	8.7	1.6	14.4	–6.5	. . .
Malaysia	1.9	73.4	0.4	13.7	13.9	7.7	8.8	–1.4	–3.0	–4.1	24.3
Mexico	0.5	16.9	0.5	18.3	15.1	8.0	8.2	2.8	–3.0	–3.2	30.1
Morocco	1.8	63.4	0.3	12.6	14.0	6.2	12.5	0.6	–4.6	–4.6	21.8
Oman	0.5	25.1	0.4	19.7	. . .	8.6	9.4	3.3	–7.2	–12.3	. . .
Pakistan	0.2	10.9	0.1	2.9	36.9	2.5	35.6	–3.4	–6.6	–5.1	30.7
Peru	0.3	14.2	0.5	20.7	11.7	11.7	3.4	1.4	–1.0	–3.9	26.4
Philippines	0.2	9.7	0.2	6.4	13.6	7.7	6.4	–1.4	–0.3	–6.7	25.9
Poland	–0.1	–2.5	0.7	25.6	15.7	4.8	12.5	–1.7	–2.4	–4.9	42.3
Qatar	1.0	51.0	0.5	21.7	. . .	9.4	7.3	2.1	9.1	6.5	. . .
Romania	–0.8	–1.0	0.6	23.3	13.4	6.5	6.9	–1.8	–2.6	–8.0	48.5
Russia	3.3	84.6	0.5	18.3	6.4	6.5	2.9	1.5	–0.7	–1.9	29.5
Saudi Arabia	1.9	86.4	0.5	22.9	11.6	9.0	3.7	1.9	–4.8	–4.2	36.2
South Africa	0.3	14.2	0.5	20.7	25.1	12.7	6.2	2.8	–4.6	–7.7	35.7
Sri Lanka	0.7	27.5	0.3	9.8	22.5	5.5	18.0	–0.6	–6.0	–8.0	48.5
Thailand	3.7	129.7	0.5	18.8	11.5	7.1	7.1	0.0	–0.2	–2.9	15.4
Turkey[7]	0.2	31.4	0.7	27.3	13.2	5.1	7.7	–1.8	–2.5	–7.7	39.7
Ukraine	0.8	39.3	0.5	18.0	14.9	8.3	7.9	–0.6	–2.9	–4.0	57.5
United Arab Emirates	0.8	41.5	0.4	17.9	. . .	. . .	. . .	1.3	1.5	–4.4	. . .
Uruguay[8]	–0.2	3.2	0.8	32.8	12.4	12.4	5.6	–3.7	–2.5	–3.7	46.9
Venezuela	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	–15.3	–4.8	. . .
Average	2.0	79.4	0.6	21.2	16.8	7.1	9.9	–3.3	–3.6	–8.0	17.9
G20 Emerging	2.2	86.8	0.6	21.6	16.7	7.1	9.2	–3.4	–3.7	–8.8	15.0

Sources: Joint External Debt Hub, Quarterly External Debt Statistics; national authorities; and IMF staff estimates and projections.

Note: All country averages are weighted by nominal GDP converted to US dollars at average market exchange rates in the years indicated and based on data availability.

[1] Pension projections rely on authorities' estimates when these are available. For the EU countries, pension projections are based on *The 2018 Ageing Report* of the European Commission. When authorities' estimates are not available, IMF staff projections use the methodology described in Clements, Eich, and Gupta's *Equitable and Sustainable Pensions: Challenges and Experience* (IMF 2014). These numbers will differ greatly compared with the previous vintages of the pension update because of new baseline pension numbers from the sources of World Bank and International Labour Organization, as well as new labor force participation rate numbers from the International Labour Organization. These two changes not only affect countries without country authority projections but also affect those with such projections (excluding EU countries covered by *The 2018 Aging Report*). IMF staff projections for health care spending are driven by demographic and other factors. The difference between the growth of health care spending and real GDP growth that is not explained by demographics ("excess cost growth") is assumed to start at the economy-specific historical average and converge to the advanced economy historical average by 2050 (0.8 percent).

[2] For net present value calculations, a discount rate of 1 percent a year in excess of GDP growth is used for each country.

[3] "Gross financing need" is defined as the projected overall balance and maturing government debt in 2020. Data are from IMF staff projections.

[4] Average-term-to-maturity data refer to government securities; the source is Bloomberg Finance L.P.

[5] Nonresident holding of general government debt data are the third quarter of 2019 or latest available from the Joint External Debt Hub, Quarterly External Debt Statistics, which include marketable and nonmarketable debt. For some countries, tradable instruments in the Joint External Debt Hub are reported at market value. External debt in US dollars is converted to local currency, then taken as a percentage of 2019 gross general government debt.

[6] Note that the pension spending projections reported in the first and second column do not include savings from the pension reform approved in October 2019.

[7] The average-term-to-maturity data for Turkey are in accordance with the published data for central government debt securities as of July 2020.

[8] Data are for the nonfinancial public sector, which includes central government, local government, social security funds, nonfinancial public corporations, and Banco de Seguros del Estado. The coverage of fiscal data was changed from the consolidated public sector to the nonfinancial public sector with the October 2019 submission. With this narrower coverage, the central bank balances are not included in fiscal data. Historical data were also revised accordingly.

Table A25. Low-Income Developing Countries: Structural Fiscal Indicators

(Percent of GDP, except when indicated otherwise)

	Pension Spending Change, 2019–30[1]	Net Present Value of Pension Spending Change, 2019–50[1,2]	Health Care Spending Change, 2019–30	Net Present Value of Health Care Spending Change, 2019–50[2]	Average Term to Maturity, 2020 (years)[3]	Debt to Average Maturity, 2020	Projected Interest Rate–Growth Differential, 2020–25 (percent)	Pre-Pandemic Overall Balance, 2012–19	Projected Overall Balance, 2020–25	Nonresident Holding of General Government Debt, 2019 (percent of total)[4]
Bangladesh	0.2	12.9	0.1	3.6	4.9	8.1	–5.0	–3.8	–5.3	37.3
Benin	0.0	1.1	0.2	7.7	3.2	13.2	–1.9	–2.6	–2.8	0.0
Burkina Faso	0.0	3.0	0.2	9.1	1.3	36.3	–2.2	–3.5	–4.0	55.8
Cambodia	0.3	9.5	0.1	5.5	. . .	. . .	–6.5	–0.8	–3.4	99.3
Cameroon	0.0	2.6	0.1	3.3	5.6	8.1	–3.1	–3.8	–2.5	68.4
Chad	0.0	0.0	0.1	3.4	. . .	. . .	–3.3	–1.3	0.6	. . .
Congo, Democratic Republic of the	. . .	. . .	0.1	2.2	. . .	. . .	–4.6	0.2	–0.8	. . .
Congo, Republic of	0.2	10.7	0.1	5.4	. . .	. . .	1.7	–4.3	3.2	. . .
Côte d'Ivoire	0.0	2.0	0.1	3.7	. . .	. . .	–2.6	–2.4	–3.6	. . .
Ethiopia	0.0	1.0	0.1	3.8	. . .	. . .	–14.5	–2.3	–2.4	. . .
Ghana	0.3	10.1	0.2	7.0	1.0	75.0	–2.3	–6.9	–9.2	. . .
Guinea	0.0	0.0	0.3	9.9	. . .	. . .	–9.7	–2.5	–2.6	. . .
Haiti	. . .	. . .	0.1	4.0	. . .	. . .	–14.8	–3.1	–3.3	. . .
Honduras	0.2	5.3	. . .	. . .	2.7	17.2	–0.8	–1.7	–1.5	. . .
Kenya	0.4	23.4	0.2	7.6	6.9	9.6	–3.5	–7.2	–7.8	50.4
Kyrgyz Republic	4.8	137.6	0.3	9.9	. . .	. . .	–6.1	–3.2	–4.1	84.1
Lao P.D.R.	0.2	7.9	0.1	3.9	. . .	. . .	–5.1	–4.4	–4.8	. . .
Madagascar	0.2	10.7	0.2	8.4	. . .	. . .	–6.2	–2.1	–4.9	58.2
Mali	–0.1	–0.2	0.1	3.4	2.1	21.2	–1.9	–2.7	–3.9	. . .
Moldova	5.6	159.1	0.6	21.2	5.1	7.4	–4.2	–1.4	–3.8	50.6
Mozambique	–0.1	0.0	0.3	13.4	1.2	97.5	–8.6	–4.8	–3.2	. . .
Myanmar	0.3	11.8	. . .	. . .	. . .	. . .	–6.9	–2.8	–5.3	. . .
Nepal	0.2	15.1	0.1	5.1	. . .	. . .	–6.7	–1.3	–5.3	. . .
Nicaragua	0.9	42.8	. . .	. . .	2.3	20.9	–1.4	–1.3	–2.4	81.0
Niger	0.0	–1.1	0.1	4.6	. . .	. . .	–6.0	–3.8	–3.4	. . .
Nigeria	0.0	1.1	0.1	3.4	5.0	7.0	–5.6	–3.2	–5.1	0.0
Papua New Guinea	0.1	2.6	0.2	5.9	…	…	0.7	–4.2	–4.6	43.3
Rwanda	0.1	2.9	0.2	9.3	3.4	18.2	–7.5	–2.8	–5.0	66.8
Senegal	0.0	2.5	0.1	3.9	11.3	5.8	–4.1	–3.7	–3.8	. . .
Somalia	. . .	. . .	. . .	. . .	. . .	. . .		. . .	. . .	. . .
Sudan	0.0	1.5	0.2	8.3	. . .	. . .	–35.0	–6.4	–3.3	. . .
Tajikistan	0.5	16.2	0.2	7.1	. . .	. . .	–6.6	–2.8	–3.4	79.5
Tanzania	0.2	11.5	0.1	4.3	6.0	6.4	–3.2	–2.6	–2.4	. . .
Timor-Leste	. . .	. . .	. . .	. . .	. . .	. . .	–0.2	–34.1	–39.7	. . .
Uganda	0.0	3.7	0.1	4.0	3.7	12.4	–3.3	–3.1	–6.3	62.5
Uzbekistan	3.6	117.7	0.3	12.4	. . .	. . .	–10.8	1.7	–1.8	. . .
Vietnam	2.2	83.3	0.3	10.5	8.0	5.8	–5.6	–3.9	–4.5	. . .
Yemen	0.2	9.2	0.1	5.2	. . .	. . .	–12.2	–6.6	–5.0	. . .
Zambia	0.1	5.4	0.2	7.7	4.2	28.8	–2.5	–6.8	–3.3	. . .
Zimbabwe	0.0	7.3	. . .	. . .	2.6	0.9	18.1	–2.8	–0.5	. . .
Average	0.7	25.1	0.1	5.6	1.8	2.7	–5.8	–3.7	–4.5	17.9

Sources: Joint External Debt Hub, Quarterly External Debt Statistics; national authorities; and IMF staff estimates and projections.

Note: All country averages are weighted by nominal GDP converted to US dollars at average market exchange rates in the years indicated and based on data availability.

[1] Pension projections rely on authorities' estimates when these are available. For the EU countries, pension projections are based on *The 2018 Ageing Report* of the European Commission. When authorities' estimates are not available, IMF staff projections use the methodology described in Clements, Eich, and Gupta's *Equitable and Sustainable Pensions: Challenges and Experience* (IMF 2014). These numbers will differ greatly compared with the previous vintages of the pension update because of new baseline pension numbers from the sources of World Bank and International Labour Organization, as well as new labor force participation rate numbers from the International Labour Organization. These two changes not only affect countries without country authority projections but also affect those with such projections (excluding EU countries covered by *The 2018 Aging Report*). IMF staff projections for health care spending are driven by demographic and other factors. The difference between the growth of health care spending and real GDP growth that is not explained by demographics ("excess cost growth") is assumed to start at the economy-specific historical average and converge to the advanced economy historical average by 2050 (0.8 percent).

[2] For net present value calculations, a discount rate of 1 percent a year in excess of GDP growth is used for each country.

[3] The average-term-to-maturity data refer to government securities; the source is Bloomberg Finance L.P.

[4] Nonresident holding of general government debt data are the third quarter of 2019 or latest available from the Joint External Debt Hub, Quarterly External Debt Statistics, which include marketable and nonmarketable debt. For some countries, tradable instruments in the Joint External Debt Hub are reported at market value. External debt in US dollars is converted to local currency, then taken as a percentage of 2019 gross general government debt.

Fiscal Monitor Archives

Policies for the Recovery	October 2020
Policies to Support People During the COVID-19 Pandemic	April 2020
How to Mitigate Climate Change	October 2019
Curbing Corruption	April 2019
Managing Public Wealth	October 2018
Capitalizing on Good Times	April 2018
Tackling Inequality	October 2017
Achieving More with Less	April 2017
Debt: Use It Wisely	October 2016
Acting Now, Acting Together	April 2016
The Commodities Roller Coaster: A Fiscal Framework for Uncertain Times	October 2015
Now Is the Time: Fiscal Policies for Sustainable Growth	April 2015
Back to Work: How Fiscal Policy Can Help	October 2014
Public Expenditure Reform: Making Difficult Choices	April 2014
Taxing Times	October 2013
Fiscal Adjustment in an Uncertain World	April 2013
Taking Stock: A Progress Report on Fiscal Adjustment	October 2012
Balancing Fiscal Policy Risks	April 2012
Addressing Fiscal Challenges to Reduce Economic Risks	September 2011
Shifting Gears	April 2011
Fiscal Exit: From Strategy to Implementation	November 2010
Navigating the Fiscal Challenges Ahead	May 2010

I. Adjustment

Capitalizing on Good Times	April 2018
Defining and Measuring Fiscal Space	April 2017, Annex 1.1
China: What Do We Know about the General Government's Balance Sheet?	October 2016, Box 1.1
Brazil: Private Debt and the Strength of the Public Sector Balance Sheet	October 2016, Box 1.3
Fiscal Consolidations with Progressive Measures	April 2014, Box 2.4
Constructing an Index of the Difficulty of Fiscal Adjustment	October 2013, Box 1
Medium-Term Fiscal Adjustment in an Uncertain World	April 2013, Chapter 2
The Appropriate Pace of Short-Term Fiscal Adjustment	April 2013, Box 2
Fiscal Adjustment in the United States: Making Sense of the Numbers	April 2013, Box 5
Taking Stock: A Progress Report on Fiscal Adjustment	October 2012, Chapter 2
Distributional Consequences of Alternative Fiscal Consolidation Measures: Reading from the Data	October 2012, Appendix 1
Easy Does It: The Appropriate Pace of Fiscal Consolidation	April 2012, Chapter 3
Experience with Large Fiscal Adjustment Plans in Ireland and Portugal	April 2012, Box A2.1
Fiscal Multipliers in Expansions and Contractions	April 2012, Appendix 1
Early Lessons from Experiences with Large Fiscal Adjustment Plans	April 2012, Appendix 2
Fiscal Adjustment Plans and Medium-Term Fiscal Outlook	November 2010, Chapter 3
To Tighten or Not to Tighten: This Is the Question	November 2010, Box 1.2
Fiscal Adjustment and Income Distribution in Advanced and Emerging Economies	November 2010, Appendix 3

The Fiscal Policy Outlook: Adjustment Needs and Plans	May 2010, Chapter 3
Adjustment Measures and Institutions	May 2010, Chapter 4
Fiscal Adjustment Requirements: Gross and Net Debt Targets	May 2010, Appendix 2

II. Commodities and Energy

Governance in the Extractive Industries	April 2019, Box 2.1
Bolivia: Inequality Decline during a Commodity Boom	October 2017, Box 1.3
The Fiscal Impact of Lower Oil Prices	April 2015, Chapter 1
Reforming Energy Subsidies	April 2015, Box 1.2
Reforming Energy Subsidies	April 2013, Appendix 1
Fiscal Developments in Oil-Producing Economies	September 2011, Box 3
Fuel and Food Price Shocks and Fiscal Performance in Low-Income Countries	September 2011, Box 8
Pass-Through and Fiscal Impact of Rising Fuel Prices	April 2011, Box 1.2
Reforming Petroleum Subsidies	May 2010, Appendix 5

III. Country Cases

A Wave of Protests: Economic Reforms and Social Unrest	April 2020, Box 1.2
Fiscal Measures in Selected Economies in Response to the COVID-19 Pandemic	April 2020, Special Feature Online Annex 1.1
The Macroeconomic Effects of Public Investment: A Model-Based Analysis	April 2020, Online Annex 2.1
China: State-Owned Enterprises Remain Key Players	April 2020, Online Annex 3.1
Brazil: A Complex and, at Times, Turbulent Relationship between SOEs and the Government	April 2020, Online Annex 3.2
Ghana: Risks in SOEs Can Spill Over to Other Sectors and the Budget	April 2020, Online Annex 3.5
How to Get the Most Out of SOEs: The Nordic Example	April 2020, Online Annex 3.7
China: How Can Fiscal Policy Support Economic Activity and Rebalancing?	April 2019, Box 1.2
The Distributional Effects of Income Tax Cuts in the United States	April 2018, Box 1.2
International Tax Policy Implications from US Corporate Tax Reform	April 2018, Box 1.3
General Government Debt and Fiscal Risks in China	April 2018, Box 1.4
Digital Government	April 2018, Chapter 2
Digitalization Advances in Revenue Administration in South Africa and Estonia	April 2018, Box 2.1
The Digitalization of Public Finances: Country Case Studies	April 2018, Annex 2.1
Bolivia: Inequality Decline during a Commodity Boom	October 2017, Box 1.3
Adopting a Universal Basic Income to Support Subsidy Reform in India	October 2017, Box 1.6
Model Simulations	October 2017, Annex 1.3
Making Growth More Inclusive in China	April 2017, Box 1.3
Colombia: Labor Tax Reform and the Shift from Informal to Formal Employment	April 2017, Box 2.2
Mozambique: Differential Tax Treatment across Firms	April 2017, Box 2.3
Innovation in Brazil, Russia, India, China, and South Africa (BRICS)	October 2016, Box 2.4
Lowflation and Debt in the Euro Area	October 2014, Box 1.1
Fiscal Challenges in the Pacific Island Countries	April 2014, Box 1.3
Fiscal Reforms to Unlock Economic Potential in the Arab Countries in Transition	October 2013, Box 2
Fiscal Adjustment in the United States: Making Sense of the Numbers	April 2013, Box 5
Lessons from Sweden	October 2012, Box 2
The "Two-Pack": Further Reforms to Fiscal Governance in the Euro Area	October 2012, Box 6
Ireland: The Impact of Crisis and Fiscal Policies on Inequality	October 2012, Box 8
The "Fiscal Compact": Reforming EU Fiscal Governance	April 2012, Box 5

Experience with Large Fiscal Adjustment Plans in Ireland and Portugal	April 2012, Box A2.1
Subnational Government Response to the Financial Crisis in the United States and Canada	April 2012, Box A3.1
The Dog That Didn't Bark (So Far): Low Interest Rates in the United States and Japan	September 2011, Chapter 3
United States: Government-Sponsored Enterprises and Contingent Liabilities	September 2011, Box 1
Fiscal Aspects of EU Economic Governance Reforms	April 2011, Box 4.1
The U.S. National Commission Report	April 2011, Box A5.1
The European Union: Reforming Fiscal Governance	November 2010, Box 3.2
Increasing Social Expenditures and Household Consumption in China	May 2010, Box 4
Health Care Reforms in the United States	May 2010, Box 5

IV. Crises, Shocks

Financing Constraints and the Strategy for Investment	October 2020, Online Annex 2.1
Assessing the Impact of the COVID-19 Crisis on Monthly Investment Budgets	October 2020, Online Annex 2.2
Database of Country Fiscal Measures in Response to the COVID-19 Pandemic	October 2020, Online Only
An Unprecedented Fiscal Response: A Closer Look	October 2020, Box 1.2
Policies to Support People During the COVID-19 Pandemic	April 2020, Chapter 1
Fiscal Measures in Selected Economies in Response to the COVID-19 Pandemic	April 2020, Online Annex 1.1
Fiscal Implications of Potential Stress in Global Financial Markets	April 2019, Box 1.1
Learning from the Crisis? Taxation and Financial Stability	October 2013, Box 3
Ireland: The Impact of Crisis and Fiscal Policies on Inequality	October 2012, Box 8
The Impact of the Global Financial Crisis on Subnational Government Finances	April 2012, Appendix 3
The Evolution of Seigniorage during the Crisis	April 2012, Box 4
Subnational Government Response to the Financial Crisis in the United States and Canada	April 2012, Box A3.1
The Legacy of the Crisis: How Long Will It Take to Lower Public Debt?	September 2011, Chapter 5
The G-20 Economies: Crisis-Related Discretionary Fiscal Stimulus	November 2010, Box 1.1
Update on Crisis-Related Discretionary Fiscal Stimulus in G-20 Economies	May 2010, Appendix 1
The Impact of the Crisis on Subnational Governments	May 2010, Appendix 4

V. Emerging Markets

General Government Debt and Fiscal Risks in China	April 2018, Box 1.4
Digitalization Advances in Revenue Administration in South Africa and Estonia	April 2018, Box 2.1
The Digitalization of Public Finances: Country Case Studies	April 2018, Annex 2.1
Innovation in Brazil, Russia, India, China, and South Africa (BRICS)	October 2016, Box 2.4
Nonresident Holdings of Emerging Market Economy Debt	April 2014, Box 1.2
Potential Sources of Contingent Liabilities in Emerging Market Economies	April 2013, Box 4
Fiscal Fundamentals and Global Spillovers in Emerging Economies	April 2012, Box 2
Too Good to Be True? Fiscal Developments in Emerging Economies	September 2011, Chapter 4
Determinants of Domestic Bond Yields in Emerging Economies	September 2011, Box 4

VI. Employment

The Direct Labor Impact of Public Investment	October 2020, Online Annex 2.4
Colombia: Labor Tax Reform and the Shift from Informal to Formal Employment	April 2017, Box 2.2
Can Fiscal Policies Do More for Jobs?	October 2014, Chapter 2
Methodology for Estimating the Impact of Fiscal Consolidation on Employment	October 2014, Appendix 1
Do Old Workers Crowd Out the Youth?	October 2014, Box 2.2
Fiscal Policies to Address Weak Employment	October 2012, Appendix 2

VII. Financial Sector

State-Owned Banks	April 2020, Box 3.2
The Fiscal Implications of International Bond Issuance by Low-Income Developing Countries	October 2014, Box 1.2
Nonresident Holdings of Emerging Market Economy Debt	April 2014, Box 1.2
A One-Off Capital Levy?	October 2013, Box 6
Bond Yields and Stability of the Investor Base	April 2013, Box 3
Long-Run and Short-Run Determinants of Sovereign Bond Yields in Advanced Economies	October 2012, Box 3
Financial Sector Support	October 2012, Box 4
Reassuring Markets about Fiscal Sustainability in the Euro Area	September 2011, Chapter 2
Determinants of Domestic Bond Yields in Emerging Economies	September 2011, Box 4
Financial Sector Support and Recovery to Date	September 2011, Box 7
Financial Sector Support and Recovery to Date	April 2011, Box 1.1
Sovereign Financing and Government Debt Markets	November 2010, Chapter 2
Market Concerns about Economies and Default Risks	November 2010, Box 2.1
Advanced Economies: Financial Market Spillovers among Sovereigns	November 2010, Box 2.2
Are Sovereign Spreads Linked to Fundamentals?	November 2010, Appendix 2
Measures to Finance the Cost of Financial Sector Support	May 2010, Box 3

VIII. Fiscal Outlook

Policies to Support People During the COVID-19 Pandemic	April 2020, Chapter 1
Fiscal Policy for a Changing Global Economy	April 2019, Chapter 1
Saving for a Rainy Day	April 2018, Chapter 1
Recent Fiscal Developments and Outlook	April 2017, Chapter 1
Navigating a Risky World	October 2016, Chapter 1
Recent Fiscal Developments and Outlook	April 2015, Chapter 1
Recent Fiscal Developments and Outlook	October 2014, Chapter 1
Recent Fiscal Developments and Outlook	April 2014, Chapter 1
Recent Fiscal Developments and the Short-Term Outlook	October 2013, Chapter 1
Recent Fiscal Developments and the Short-Term Outlook	April 2013, Chapter 1
The Fiscal Outlook	October 2012, Chapter 1
Moving Forward	October 2012, Chapter 3
Continued Fiscal Tightening Is in Store for 2012, Particularly among Advanced Economies	April 2012, Chapter 1
Conclusion and Risk Assessment	April 2012, Chapter 7
Addressing Fiscal Challenges to Reduce Economic Risks: Introduction	September 2011, Chapter 1
Too Good to Be True? Fiscal Developments in Emerging Economies	September 2011, Chapter 4
Addressing Fiscal Challenges to Reduce Economic Risks: Conclusion	September 2011, Chapter 7
Risk to the Baseline	September 2011, Box 2
Fiscal Developments in Oil-Producing Economies	September 2011, Box 3
The Fiscal Indicators Index	September 2011, Box 5
Shocks to the Baseline Fiscal Outlook	April 2011, Chapter 3
Fiscal Developments and Near-Term Outlook	November 2010, Chapter 1
Fiscal Adjustment Plans and Medium-Term Fiscal Outlook	November 2010, Chapter 3
Assessing Fiscal Risks	November 2010, Chapter 4
The Near- and Medium-Term Fiscal Outlook	May 2010, Chapter 1

IX. Government Debt

Capitalizing on Good Times	April 2018
Private Debt and Its Discontents	April 2018, Box 1.1

General Government Debt and Fiscal Risks in China	April 2018, Box 1.4
Can Countries Sustain Higher Levels of Public Debt?	April 2017, Box 1.4
Do Fiscal Rules Lower Sovereign Borrowing Costs in Countries with Weak Track Records of Fiscal Performance?	April 2017, Box 1.5
Debt: Use It Wisely	October 2016, Chapter 1
Debt Data Set	October 2016, Annex 1.1
Private and Public Debt and the Pace of the Recovery	October 2016, Annex 1.2
Interlinkages between Public and Private Debt: Selected Summary of the Literature	October 2016, Annex 1.3
Policies during Deleveraging Episodes	October 2016, Annex 1.5
How Much Do Financial Markets Value Government Balance Sheets?	October 2016, Box 1.5
Skeletons in the Closet? Shedding Light on Contingent Liabilities	April 2016, Box 1.3
Lowflation and Debt in the Euro Area	October 2014, Box 1.1
Moment of Truth: Unfunded Pension Liabilities and Public Debt Statistics	April 2014, Box 1.1
Public Debt Dynamics and Fiscal Adjustment in Low-Income Countries in Sub-Saharan Africa	April 2013, Box 6
Debt Ratios Are Still on the Rise, but Peaks Are within Sight	April 2012, Chapter 2
High Gross Debt Levels May Overstate Challenges in the Short Run . . .	April 2012, Chapter 4
. . . But Long-Run Debt-Related Challenges Remain Large	April 2012, Chapter 5
The Legacy of the Crisis: How Long Will It Take to Lower Public Debt?	September 2011, Chapter 5
Factors Underlying the Debt Increase Precrisis versus End-2015	September 2011, Box 6
The Importance of Monitoring Both Gross and Net Debt	September 2011, Appendix 3
Stock-Flow Adjustments and Their Determinants	September 2011, Appendix 4
Fiscal Deficits and Debts: Development and Outlook	April 2011, Chapter 1
Sovereign Financing and Government Debt Markets	April 2011, Chapter 2
Debt Dynamics and the Interest Rate–Growth Differential	April 2011, Box 3.1
Sovereign Financing and Government Debt Markets	November 2010, Chapter 2
Are Sovereign Spreads Linked to Fundamentals?	November 2010, Appendix 2
Risks to Medium-Term Public Debt Trajectories; Methodological and Statistical Appendix	November 2010, Appendix 4
Implications of Fiscal Developments for Government Debt Markets	May 2010, Chapter 2
Debt Dynamics in G-20 Economies: An Update	May 2010, Box 1
Gross versus Net Debt	May 2010, Box 2
Fiscal Adjustment Requirements: Gross and Net Debt Targets	May 2010, Appendix 2
Government Debt and Growth	May 2010, Appendix 3

X. Private Debt

Private Debt and Public Sector Risk	October 2020, Box 1.1
Private Debt and Its Discontents	April 2018, Box 1.1
Debt: Use It Wisely	October 2016, Chapter 1
Debt Data Set	October 2016, Annex 1.1
Private and Public Debt and the Pace of Recovery	October 2016, Annex 1.2
Interlinkages between Public and Private Debt: Selected Summary of the Literature	October 2016, Annex 1.3
Private Deleveraging and the Role of Fiscal Policy	October 2016, Annex 1.4
Policies during Deleveraging Episodes	October 2016, Annex 1.5
Benefits of Targeted Fiscal Intervention during Times of Private Deleveraging	October 2016, Box 1.4

XI. Growth

IDEAS to Respond to Weaker Growth	April 2020, Chapter 2
Factors Underlying Low Growth and Low Interest Rates	April 2020, Box 2.1
Fiscal Policy for a Changing Global Economy	April 2019, Chapter 1
China: How Can Fiscal Policy Support Economic Activity and Rebalancing?	April 2019, Box 1.2
Tackling Inequality	October 2017, Chapter 1

A Greater Role for Fiscal Policy	April 2017, Chapter 1
Upgrading the Tax System to Boost Productivity	April 2017, Chapter 2
Making Growth More Inclusive in China	April 2017, Box 1.3
Taxation and Growth: Details Matter	October 2013, Box 4
Debt Dynamics and the Interest Rate–Growth Differential	April 2011, Box 3.1
Interest Rate–Growth Differential	November 2010, Appendix 1
Government Debt and Growth	May 2010, Appendix 3

XII. Innovation, Entrepreneurship, Research, Development, and Investment

Public Investment for the Recovery	October 2020, Chapter 2
Maintaining Quality When Scaling Up Public Investment	October 2020, Online Annex 2.3
How Green Is the Fiscal Response to the COVID-19 Crisis?	October 2020, Box 1.2
Estimating Public Investment Needs for Climate Change Adaptation	October 2020, Box 2.1
The Macroeconomic Effects of Public Investment: A Model-Based Analysis	April 2020, Online Annex 2.1
Digital Government	April 2018, Chapter 2
The Role of Patents for Innovation	October 2016, Box 2.1
Fiscal Policy and Green Innovation	October 2016, Box 2.2
Does Preferential Tax Treatment of Income from Intellectual Property Promote Innovation?	October 2016, Box 2.3
Innovation in Brazil, Russia, India, China, and South Africa (BRICS)	October 2016, Box 2.4
Programs for Young Innovators and Start-Ups	October 2016, Box 2.5
Fiscal Policy, Research and Development, and Total Factor Productivity Growth	October 2016, Annex 2.1
Corrective Fiscal Incentives for Research and Development	October 2016, Annex 2.2
Taxation and Entrepreneurship	October 2016, Annex 2.4
Fiscal Policies for Innovation and Growth	April 2016, Chapter 2

XIII. Interest Rates

The Dog That Didn't Bark (So Far): Low Interest Rates in the United States and Japan	September 2011, Chapter 3
Debt Dynamics and the Interest Rate–Growth Differential	April 2011, Box 3.1
Interest Rate–Growth Differential	November 2010, Appendix 1

XIV. Low-Income Countries

Digital Government	April 2018, Chapter 2
Digitalization and Property Taxation in Developing Economies	April 2018, Box 2.2
Digitalizing Government Payments in Developing Economies	April 2018, Box 2.3
The Digitalization of Public Finances: Country Case Studies	April 2018, Annex 2.1
The Fiscal Implications of Slowing Global Trade for Emerging Market and Developing Economies	April 2016, Box 1.1
The Fiscal Implications of International Bond Issuance by Low-Income Developing Countries	October 2014, Box 1.2
Confronting Trade-Offs: Accommodating Spending Pressures in Low-Income Countries	September 2011, Chapter 6
Global Fuel and Food Price Shocks and Fiscal Performance in Low-Income Countries	September 2011, Box 8

XV. Policy and Reform

Fiscal Policies to Address the COVID-19 Pandemic	October 2020, Chapter 1
IDEAS to Respond to Weaker Growth	April 2020, Chapter 2
Capitalizing on Good Times	April 2018
Tackling Inequality	October 2017, Chapter 1
Upgrading the Tax System to Boost Productivity	April 2017, Chapter 2
What Are the Budgetary Costs and Gains of Structural Reforms?	April 2017, Box 1.2
Do Fiscal Rules Lower Sovereign Borrowing Costs in Countries with Weak Track Records of Fiscal Performance?	April 2017, Box 1.5
Debt: Use It Wisely	October 2016, Chapter 1

Policies during Deleveraging Episodes	October 2016, Annex 1.5
Benefits of Targeted Fiscal Interventions at Times of Private Deleveraging	October 2016, Box 1.4
An Active, Supportive Role for Fiscal Policy	April 2015, Chapter 1
Can Fiscal Policy Stabilize Output?	April 2015, Chapter 2
Public Expenditure Reform: Making Difficult Choices	April 2014, Chapter 2
Expenditure Rules: Effective Tools for Sound Fiscal Policy	April 2014, Appendix 1
The Future of the State: Testing the Wagner and Baumol Hypotheses	April 2014, Box 2.1
Fiscal Reforms to Unlock Economic Potential in the Arab Countries in Transition	October 2013, Box 2
Tricks of the Trade	October 2013, Box 5
How Can Fiscal Councils Strengthen Fiscal Performance?	April 2013, Box 1
Commonly Used Definitions of the Fiscal Balance	October 2012, Box 1
The "Two-Pack": Further Reforms to Fiscal Governance in the Euro Area	October 2012, Box 6
Anchoring Medium-Term Fiscal Credibility: The Second Generation of Fiscal Rules	April 2012, Chapter 6
Measuring Fiscal Space: A Critical Review of Existing Methodologies	April 2012, Box 1
The "Fiscal Compact": Reforming EU Fiscal Governance	April 2012, Box 5
Assessing the Cyclicality of Subnational Government Policies	April 2012, Box A3.2
"Fiscal Devaluation": What Is It—and Does It Work?	September 2011, Appendix 1
Fiscal Aspects of EU Economic Governance Reforms	April 2011, Box 4.1
Fiscal Transparency under Pressure	April 2011, Appendix 2
The European Union: Reforming Fiscal Governance	November 2010, Box 3.2
Fiscal Rules—Recent Developments	May 2010, Box 7

XVI. Privatization, Public Enterprises

Experience with Privatization	April 2020, Box 3.1
General Government Nonfinancial Assets: What Do We Know?	October 2012, Box 7
Government Shares in Publicly Listed Companies	April 2012, Box 3
United States: Government-Sponsored Enterprises and Contingent Liabilities	September 2011, Box 1
Adjusting Public Capital Stock for Investment Inefficiency	September 2011, Box 9
Insights for Privatization Plans from Previous Large Episodes	September 2011, Appendix 2

XVII. Revenue

Digital Government	April 2018, Chapter 2
Digitalization Advances in Revenue Administration in South Africa and Estonia	April 2018, Box 2.1
Digitalization and Property Taxation in Developing Economies	April 2018, Box 2.2
Small Business Taxation and the P2P Economy	April 2018, Box 2.5
The Digitalization of Public Finances: Country Case Studies	April 2018, Annex 2.1
Estimating the Impact of Digitalization on Tax Evasion from Cross-Border Fraud	April 2018, Annex 2.2
Estimating the Distribution of Tax Revenue Collection from Offshore Income and Wealth Following Improved Cross-Country Information Exchange	April 2018, Annex 2.3
Upgrading the Tax System to Boost Productivity	April 2017, Chapter 2
Past, Present, and Future Patterns in Revenues	April 2015, Box 1.1
Assessing Potential Revenue: Two Approaches	October 2013, Appendix 2
Increasing Revenue from Real Property Taxes	October 2013, Appendix 3
Past Episodes of Sustained Fiscal Revenue Increases	May 2010, Box 6

XVIII. Social Expenditures

Smart Strategies to Contain the COVID-19 Pandemic	October 2020, Online Annex 1.2
From Lockdown to Recovery: Spending Measures to Support Livelihoods during the COVID-19 Crisis	October 2020, Online Annex 1.3
Understanding the Implications of Different Types of Fiscal Measures for Public Finances	April 2020, Box 1.1

IDEAS to Respond to Weaker Growth	April 2020, Chapter 2
State-Owned Enterprises: The Other Government	April 2020, Chapter 3
Digital Government	April 2018, Chapter 2
Tackling Inequality	October 2017, Chapter 1
The Fiscal Response to the Refugee Influx in Europe	April 2016, Box 1.2
The Pressure of Age-Related Spending on Public Debt in Advanced Economies	April 2015, Box 1.3
Targeted Employer Social Security Contribution Cuts: Lessons from Experiences in Advanced Economies	October 2014, Box 2.1
Public Expenditure Reform: Making Difficult Choices	April 2014, Chapter 2
Moment of Truth: Unfunded Pension Liabilities and Public Debt Statistics	April 2014, Box 1.1
Structural Measures and Social Dialogue	April 2014, Box 2.2
Health System Inefficiencies	April 2014, Box 2.3
Recent Developments in Public Health Spending and Outlook for the Future	October 2013, Appendix 1
Confronting Trade-Offs: Accommodating Spending Pressures in Low-Income Countries	September 2011, Chapter 6
Potential Reform Strategies to Contain the Growth of Public Health Spending	April 2011, Box A1.1
The U.S. National Commission Report	April 2011, Box A5.1
Tackling the Challenge of Health Care Reform in Advanced Economies	April 2011, Appendix 1
Selected Spending and Tax Issues	November 2010, Chapter 5
Advanced Economies: The Outlook for Public Health Spending	November 2010, Box 3.1
Increasing Social Expenditures and Household Consumption in China	May 2010, Box 4
Health Care Reforms in the United States	May 2010, Box 5

XIX. Stabilization

Policy Options to Support the Economic Recovery	October 2020, Online Annex 1.5
IDEAS to Respond to Weaker Growth	April 2020, Chapter 2
Can Fiscal Policy Stabilize Output?	April 2015, Chapter 2
Fiscal Stabilization under Alternative Estimates of the Output Gap	April 2015, Box 2.1
Boosting the Effectiveness of Automatic Stabilizers	April 2015, Box 2.2

XX. Stimulus

Public Investment Fiscal Multiplier and Macroeconomic Uncertainty	October 2020, Online Annex 2.5
Determining the Size of Fiscal Stimulus for Sustained Recovery	October 2020, Online Annex 1.4
The G-20 Economies: Crisis-Related Discretionary Fiscal Stimulus	November 2010, Box 1.1
Update on Crisis-Related Discretionary Fiscal Stimulus in G-20 Economies	May 2010, Appendix 1

XXI. Subsidies

Digital Government	April 2018, Chapter 2
The Digitalization of Public Finances: Country Case Studies	April 2018, Annex 2.1
Adopting a Universal Basic Income to Support Subsidy Reform in India	October 2017, Box 1.6
Reforming Energy Subsidies	April 2015, Box 1.2
Reforming Petroleum Subsidies	April 2010, Appendix 5

XXII. Sustainability and Risk Management

Investing in Resilience	October 2020, Online Annex 2.6
Estimating the Adaptation Costs of Investing in the Resilience of Physical Assets	October 2020, Online Annex 2.7
State-Owned Enterprises: The Other Government	April 2020, Chapter 3
Can Countries Sustain Higher Levels of Public Debt?	April 2017, Box 1.4
Developing a Fiscal Risk Management Framework	April 2016, Box 1.4

Reassuring Markets about Fiscal Sustainability in the Euro Area	September 2011, Chapter 2
Assessing and Mitigating Fiscal Sustainability Risks	April 2011, Chapter 4
Assessing Fiscal Sustainability Risks: Deriving a Fiscal Sustainability Risk Map	April 2011, Appendix 3

XXIII. Taxation

Tax Policy and Automatic Stabilizers	April 2020, Box 2.2
Curbing Corruption	April 2019, Chapter 2
Avoiding International Tax Wars	April 2019, Box 1.3
Digital Government	April 2018, Chapter 2
The Distributional Effects of Income Tax Cuts in the United States	April 2018, Box 1.2
International Tax Policy Implications from US Corporate Tax Reform	April 2018, Box 1.3
Digitalization Advances in Revenue Administration in South Africa and Estonia	April 2018, Box 2.1
Digitalization and Property Taxation in Developing Economies	April 2018, Box 2.2
Small Business Taxation and the P2P Economy	April 2018, Box 2.5
The Digitalization of Public Finances: Country Case Studies	April 2018, Annex 2.1
Estimating the Impact of Digitalization on Tax Evasion from Cross-Border Fraud	April 2018, Annex 2.2
Estimating the Distribution of Tax Revenue Collection from Offshore Income and Wealth Following Improved Cross-Country Information Exchange	April 2018, Annex 2.3
Tackling Inequality	October 2017, Chapter 1
Measuring Tax Progressivity	October 2017, Box 1.4
Taxing Wealth and Wealth Transfers	October 2017, Box 1.5
Upgrading the Tax System to Boost Productivity	April 2017, Chapter 2
The Destination-Based Cash Flow Tax: A Primer	April 2017, Box 1.1
What Is the Effective Marginal Tax Rate?	April 2017, Box 2.1
Colombia: Labor Tax Reform and the Shift from Informal to Formal Employment	April 2017, Box 2.2
Mozambique: Differential Tax Treatment across Firms	April 2017, Box 2.3
Taxation and Foreign Direct Investment	October 2016, Annex 2.3
Taxation and Entrepreneurship	October 2016, Annex 2.4
Taxing Our Way out of—or into?—Trouble	October 2013, Chapter 2
Learning from the Crisis? Taxation and Financial Stability	October 2013, Box 3
Taxation and Growth: Details Matter	October 2013, Box 4
A One-Off Capital Levy?	October 2013, Box 6
Increasing Revenue from Real Property Taxes	October 2013, Appendix 3
Do Pensioners Get Special Treatment on Taxes?	October 2012, Box 5
Containing Tax Expenditures	April 2011, Appendix 5
Selected Spending and Tax Issues	November 2010, Chapter 5

XXIV. Poverty and Inequality

How Will the COVID-19 Pandemic Affect Poverty and Inequality?	October 2020, Online Annex 1.1
Tackling Inequality	October 2017, Chapter 1
Global Inequality Today and in 2035	October 2017, Box 1.1
Equally Distributed Equivalent Level of Income as a Measure of Social Welfare	October 2017, Box 1.2
Bolivia: Inequality Decline during a Commodity Boom	October 2017, Box 1.3
Inequality Dimensions: Wealth, Opportunities, and Gender	October 2017, Annex 1.2

IMF EXECUTIVE BOARD DISCUSSION OF THE OUTLOOK, OCTOBER 2020

The following remarks were made by the Chair at the conclusion of the Executive Board's discussion of the Fiscal Monitor, Global Financial Stability Report, *and* World Economic Outlook *on September 30, 2020.*

Executive Directors broadly concurred with the assessment of the global economic outlook, risks, and policy priorities. While noticing the stronger-than-expected economic activity in the second quarter, especially in advanced economies, they agreed that the path to prepandemic activity will be long and precarious with persistent scarring effects on output and employment. They noted that the projections assume that social distancing will continue into 2021 and then fade over time as therapies improve and vaccines become more broadly available. Directors noted with concern that the pandemic is having dramatic effects on vulnerable people, leading to higher inequality, and a sharp increase in the number of people living in extreme poverty.

Directors agreed that the uncertainty surrounding the baseline projections remains exceptionally large as the economic recovery will be shaped primarily by the path of the pandemic, the efficacy of containment measures, and pharmaceutical innovations. More rapid development of new therapeutics and wide distribution of effective vaccines could accelerate the economic recovery, while medical setbacks and new waves of infections could require new lockdowns. Other important sources of uncertainty include the extent of global spillovers, the damage to the supply potential, the efficacy and duration of policy support, and potential shifts in financial market sentiment. Directors also noted prepandemic risks stemming from trade and technology tensions, geopolitical challenges, and climate change.

Directors agreed that effective and decisive policy support is needed to ensure stronger, more equitable, and resilient growth. Key near-term priorities include supporting the economic recovery, protecting vulnerable people, and strengthening health care systems. They stressed the need to reduce the scarring effects of the crisis on potential output and employment and to reverse the development toward greater inequality and setbacks to human capital accumulation. Most Directors also saw the crisis as an opportunity to stimulate innovation, develop the digital infrastructure, and to transition to lower carbon emissions using different climate tools, such as green investment and a gradual increase of the carbon price, with due consideration to offsetting negative social impact.

Directors welcomed the unprecedented fiscal actions in response to the pandemic. Directors emphasized that, as economies tentatively reopen, governments should ensure that lifelines are not withdrawn prematurely. Support should gradually shift from protecting jobs to helping displaced workers find new jobs through retraining and reskilling. Directors noted that when the pandemic is under control, governments will need to address the legacies of the crisis, including record deficits and public debt levels, elevated unemployment, and increased poverty. Directors agreed that public investment should play a crucial role in supporting the postpandemic recovery, noted its sizable job creation potential, and underlined that good governance, budget execution, and communication, remain crucial to reap the full benefits of fiscal support and maintain public trust.

Directors emphasized that governments will need to do more with less and prepare credible and equitable measures to reduce fiscal deficits and debts over the medium term. Countries with limited fiscal space should protect public investment and support lower-income households that have been disproportionately hit by the pandemic. Governments could consider increasing progressive taxation as well as reforms to modernize business taxation, including multilateral cooperation on the design of international corporate taxation to respond to the challenges of the digital economy. LICs in particular are faced with significant financing constraints, and many countries will require external support, including in the form of debt relief, grants, and concessional financing.

Directors agreed that bold policy actions taken by central banks to ease monetary policy, provide ample liquidity, and maintain the flow of credit have helped contain the near-term risks to global financial stability. They noted, however, that vulnerabilities are rising, most notably in the nonfinancial corporate sector as liquidity pressures may morph into insolvencies, especially for small and medium-sized enterprises. The credit outlook will ultimately be shaped by the extent of continued policy support and the pace of the recovery, which is expected to be uneven across sectors and countries. Rising defaults could lead to significant losses at banks and nonbank financial institutions. While the global banking system is overall well capitalized, some banks and banking systems may experience aggregate capital shortfalls in the WEO adverse scenario. Directors also highlighted the importance of improving access of emerging markets and frontier economies to capital markets.

Directors emphasized that as economies reopen, accommodative policies and the continued flow of credit to borrowers will be essential to sustaining the recovery. Once the pandemic is under control, policy support can be gradually withdrawn. The postpandemic financial reform agenda should focus on strengthening the regulatory framework to address vulnerabilities in the nonbank financial sector exposed by the crisis and stepping up prudential supervision to contain excessive risk taking in the lower-for-longer interest rate environment.

Directors underscored the importance of international cooperation in the fight against the global health and economic crisis. A key priority is to scale up production capacity and develop distribution channels to ensure that all countries have access to an effective, affordable, and safe vaccine. Directors noted that several emerging market and developing countries require international assistance through debt relief, grants, and concessional financing. They pointed out that the IMF has rapidly scaled up its lending facilities since the onset of the pandemic, providing swift financial assistance to more than 80 countries. Directors discussed opportunities for multilateral cooperation to alleviate trade and technology tensions between countries and to collectively implement climate change mitigation policies.

IMF Special Series on COVID-19

The IMF has responded to the COVID-19 crisis by quickly deploying financial assistance, developing policy advice, and creating special tools to assist member countries. The Special Notes Series (**IMF.org/COVID19notes**) features the latest analysis and research from IMF staff in response to the pandemic. Below are four recent Notes from the dozens published to date.

Digital Solutions for Direct Cash Transfers in Emergencies

Gerardo Una, Richard Allen, Sailendra Pattanayak and Gwenaelle Suc

Digital solutions for direct cash transfers help to identify and validate intended beneficiaries, make payments in a timely and secure manner, and ensure transparency and accountability by providing a reliable audit trail and publishing timely data.

Managing the Impacts of the Coronavirus: Guidance on Health Spending Policies

Ignatius de Bidegain, Paolo Dudine, Klaus Hellwig, Samir Jahan and Geneviève Verdier

The immediate response to the outbreak should be to increase spending for mitigation and medical treatment. Costs will depend on country-specific factors, e.g. virus exposure, capacity of health systems, and effectiveness of mitigation measures.

Challenges in Forecasting Tax Revenue

A. Klemm, A. Aslam, T. Baunsgaard, T. Benninger, S. Beer, S. Hebous, G. Kalyandu, S. Leduc, L. Liu, and D. Prihardini

Forecasting tax revenue during the pandemic is challenging. Standard buoyancy approaches likely overestimate revenues. A disaggregated approach using information on the sector- and tax-specific impact of the pandemic improves forecasts.

Keeping the Receipts: Transparency, Accountability, and Legitimacy in Emergency Responses

Claude Wendling, Virginia Alonso, Sandeep Saxena, Vincent Tang, and Concepcion Verdugo

Keeping the receipts" (as governments "do what it takes" to support people and firms during the global pandemic and economic downturn) requires strong fiscal transparency, public accountability and institutional legitimacy.

COVID-19 Policy Tracker

This periodically updated policy tracker summarizes the key economic responses 196 governments are taking to limit the human and economic impact of the pandemic.
IMF.org/COVID19policytracker

INTERNATIONAL MONETARY FUND

IN THIS ISSUE:

CHAPTER 1
Fiscal Policies to Address the COVID-19 Pandemic

CHAPTER 2
Public Investment for the Recovery

PUBLICATIONS

ISBN: 978-1-51355-270-5

FISCAL MONITOR OCTOBER **2020**