INTERNATIONAL MONETARY FUND

FISCAL MONITOR

Policies to Support People During the COVID-19 Pandemic

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. . . 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

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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

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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.

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PREFACE

The projections included in this issue of the *Fiscal Monitor* are drawn from the same database used for the April 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 this issue are W. Raphael Lam and Mehdi Raissi (team leaders), Paul Elger, Alexandra Fotiou, Jean-Marc Fournier, Klaus Hellwig, and Susan Yang for Chapters 1 and 2, which also benefited from contributions by Aqib Aslam, Bryn Battersby, Emine Hanedar, John Ralyea, Amanda Sayegh, Elif Ture, Genevieve Verdier, and Jing Zhou; and Paulo Medas (lead), John Ralyea (deputy), Anja Baum, Paul Elger, W. Raphael Lam, Grace Li, Delphine Prady, Alberto Soler, Mouhamadou Sy, and Elif Ture for Chapter 3. Excellent research contributions were provided by Juliana Arbelaez 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 Sherrie Brown, David Einhorn, Susan Graham, Lucy Morales, Devlan O'Connor, 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 3 of the *Fiscal Monitor* also benefited from comments by Alvaro Cuervo-Cazurra (Northeastern University), Caroline L. Freund (World Bank), Brian Levy (Johns Hopkins University), Dan Rosen (Rhodium Group), and Mary Shirley (Ronald Coase Institute). Both projections and policy considerations are those of the IMF staff and should not be attributed to Executive Directors or to their national authorities.

EXECUTIVE SUMMARY

Chapter 1: Policies to Support People During the COVID-19 Pandemic

The COVID-19 pandemic has struck against the backdrop of a preexisting sluggish global growth outlook, with low inflation and nominal interest rates. The pandemic has elevated the need for fiscal policy action to an unprecedented level. This chapter of the *Fiscal Monitor* discusses the role of fiscal policy to save lives; protect the most-affected people and firms from income losses, unemployment, and bankruptcies; and reduce the likelihood that the pandemic results in a deep, long-lasting slump.

The human cost of the pandemic has intensified at an alarming rate, and the impact on output and public finances is projected to be massive. Government responses should be swift, concerted, and commensurate with the severity of the health crisis, with fiscal tools taking a prime role. The first priority, saving lives, requires fully accommodating spending on testing and treatment, which calls for global coordination—including support to countries with limited health capacity, through grants and concessional financing and the development of a universally low-cost vaccine. Saving lives also requires social distancing—a key component of collective protection domestically and globally—which imposes even larger costs through lower output, lower tax revenues, and the need to protect the most-affected people and firms. This can be done through large, timely, temporary, and targeted measures, such as government-funded paid sick and family leave, transfers, unemployment benefits, wage subsidies, and deferral of tax payments. Likewise, liquidity support to firms can reduce the risk of bankruptcies.

The COVID-19 outbreak and its financial and economic consequences will cause a major increase in fiscal deficits and public debt ratios compared with previous projections. As output drops, revenue will fall even more sharply (revenue is projected to be 2.5 percent of global GDP lower in the baseline scenario for 2020 than what was projected in the October 2019 *Fiscal Monitor*). The necessary health expenditure and the tax and spending measures to support people and firms will also have direct fiscal costs, currently estimated at $3.3 trillion globally. In addition, although public sector loans and equity injections ($1.8 trillion) and guarantees and other contingent liabilities ($2.7 trillion) can support financial and nonfinancial enterprises, they also create fiscal risks.

Based on policy responses to date, fiscal balances in 2020 are expected to deteriorate in almost all countries, with sizable estimated expansions in the *United States*, *China*, and several European and other Asian economies. Although a sizable increase in deficits this year is necessary and appropriate for many countries, the starting position in some cases presents vulnerabilities (global public debt was 83 percent of GDP in 2019). The situation is more concerning for emerging market and developing economies that face multiple shocks that include the pandemic, an abrupt worsening in financing conditions, weak external demand, and (for commodity exporters) lower commodity prices. Even after the global community's efforts to alleviate such financing constraints, these countries will need to reprioritize expenditure toward the health sector while safeguarding key public services (transport, energy, communications) and social protection.

The size of the impact of COVID-19 on public finances is highly uncertain at this time and will depend not only on the duration of the pandemic but also on whether the economic recovery is swift or the crisis casts a long shadow. As public sector support is provided on an extraordinary scale, including vehicles such as loans and guarantees, transparency is crucial to manage fiscal risks. As countries contain the pandemic and shutdowns end, broad-based, coordinated fiscal stimulus—depending on countries' financing constraints—will become a more effective tool to foster the recovery. Exit from the exceptional measures introduced during the crisis will also be appropriate. Once economies recover, achieving progress on ensuring debt sustainability will be needed.

Chapter 2: *IDEAS* to Respond to Weaker Growth

This chapter provides an outline for policymakers to reinvigorate economic growth and counter adverse macroeconomic shocks with a framework called

IDEAS: *I*nvest for the future—in health systems, infrastructure, low-carbon technologies, education, and research—thereby boosting productivity growth; adopt well-planned *D*iscretionary policies; and *E*nhance *A*utomatic *S*tabilizers, including features of the tax and benefit system that stabilize incomes and consumption, such as progressive taxation and unemployment assistance. This framework can inform policies to respond to downturns or weak demand. At the current juncture, governments are actively enhancing the automatic stabilizers by expanding social safety nets to support people during the COVID-19 pandemic. But it is also important to prepare investment plans and discretionary policies more generally, to be deployed as shutdowns end and fiscal stimulus becomes effective and, depending on fiscal space, appropriate.

Low interest rates present an opportunity for high-return public investment—a priority in most countries. Over the past decade, a moderation of capital accumulation has slowed economic growth. Modernizing the aging infrastructure in *advanced economies* and addressing infrastructure needs and other sustainable development goals in *emerging market and developing economies* are important. In all countries, combating climate change requires investment in mitigation and adaptation. These additional investment needs are likely to exceed $20 trillion globally at current prices, over the next two decades.

For *advanced economies* with fiscal space, undertaking more investment projects is worthwhile because the value of the resulting assets will likely exceed the liabilities incurred, thus improving the public sector's net worth. Where fiscal space is limited, it is appropriate to reorient revenues and expenditures to increase investment in health systems, infrastructure, and people. In *emerging market and developing economies*, high debt levels and rising interest expenditures call for financing development in a fiscally responsible way. In *low-income developing countries*, raising tax revenues would be crucial over the long term. Improving investment management is critical for all countries: one-third of funds for public infrastructure is lost worldwide to inefficiencies.

Discretionary fiscal support during previous downturns often came too late and was not well targeted. To reduce implementation lags and guide expectations, policymakers should act swiftly to establish a pipeline of appraised investment projects now that can be implemented when the health crisis abates, and plan discretionary measures that can be deployed quickly.

Enhancing automatic stabilizers, especially improving unemployment benefit systems and social safety nets, can protect household incomes from adverse shocks and strengthen resilience against epidemics. For example, if *Estonia* or the *United States* were to upgrade their benefit systems to the median level of Organisation of Economic Co-operation and Development countries, net incomes of workers who lose their jobs during recessions would fall by one-third less. Timely extension of the coverage and benefits of social safety nets (a priority during the pandemic) would support the consumption of vulnerable households. A good example is a guaranteed minimum income scheme that is selective, conditional, and means tested. While many countries are providing greater social assistance to households to fight COVID-19, a premium should be placed on measures that improve tax-benefit systems permanently.

Chapter 3: State-Owned Enterprises: The Other Government

Over the past decade, state-owned enterprises (SOEs) have doubled in importance among the world's largest corporations: at US$45 trillion, their assets are now 20 percent of the total. SOEs are present in virtually every country—numbering in the thousands, for instance, in Germany, Italy, and Russia. The recent growth of SOEs on the world stage primarily reflects the rise of China's economy—where SOEs still play a large role—along with other emerging market economies. SOEs often deliver basic services such as the water people drink, the buses they ride, and the electricity they need for daily life. SOEs such as public banks are also important sources of loans for families, farmers, and small businesses, particularly in emerging markets.

Yet, SOEs' hybrid status as neither government nor private—as well as their diversity in size, economic sector, and level of government responsibility—means that they are often overlooked, and many governments do not know all the SOEs they own or control. But, on occasion, severe problems in SOEs can contribute to economic slowdowns or recessions or the need for large bailouts from the government (among the Group of Twenty countries, recent examples include Brazil and South Africa). Therefore, governments should ask: Is each SOE the best vehicle to supply goods or services? If so, how can we guarantee that SOEs deliver value for taxpayers' money? And what policies can we implement so that SOEs compete fairly with private firms?

SOEs, taken as a whole, underperform. Drawing from a sample of about 1 million firms in 109 countries, this chapter finds that SOEs are less productive than private firms by one-third, on average. This diminished productivity can hamper economic growth, as some of the largest SOEs provide key inputs to the rest of the economy (for example, energy). Although SOEs are central to providing basic services to citizens in advanced economies, they are falling short in many developing countries, where more than 2 billion people remain without access to safe water and more than 0.8 billion lack reliable electricity. This often reflects SOEs' inability to charge sufficiently high prices to cover their costs and pay for the expansion of needed infrastructure. Moreover, many SOEs are plagued by corruption—both as recipients and as sources of bribes—domestically and across borders. Productivity of SOEs in countries with perceived lower corruption is more than three times higher than that of SOEs in countries where corruption is seen as severe.

This weak track record reflects governments' failures in many countries to establish proper incentives and promote greater transparency and accountability. Government demands of SOEs (that is, mandates) are often not clearly specified, costed, or appropriately funded. SOEs have also often been used to promote employment and to support credit growth without consideration for costs. In developing countries with high public debt, public banks hold more government debt than their private peers. Moreover, public officials or elected politicians may use SOEs to circumvent the government budget or to reward political backers with contracts, cheap credit, or jobs.

Government support for SOEs may also generate unfair competitive advantages over private firms. This concern has long been present in domestic markets, but, more recently—with the internationalization of SOEs and their large size—it has spilled across national borders. Domestically, some countries have frameworks that seek to promote fair competition between SOEs and private firms (for example, in Australia and the European Union). At the global level, however, there is no common framework.

How to Get the Most Out of SOEs

A core principle is do not waste public resources. Although SOEs exist for many reasons—including historical and political circumstances—it is important to regularly review whether the rationale for each SOE's existence and scope of activity remains valid and whether SOEs deliver value for taxpayers' money. For example, the case is weaker for SOEs that operate in competitive sectors, where private firms usually provide goods and services more efficiently. Privatization of such firms can bring benefits if the institutional preconditions are in place to ensure integrity of the sale and appropriate regulation of the privatized firm.

Effective frameworks for SOEs (many aspects of good practices are in place, for example, in the Nordic countries and New Zealand) include the following:

- *Full integration of all SOEs in the fiscal accounts:* This allows governments and the public to better assess the effect of SOE operations.
- *Provision of the right incentives:* SOEs should be able to set prices that reflect costs and should be compensated for mandates (for example, universal provision of electricity or water). Independent regulatory agencies can balance different interests (consumers, firms, and government).
- *Financial oversight and governance:* A first step is to collect information on all SOEs and provide clear mandates. Most countries can improve oversight and corporate governance.
- *Transparency of SOE performance and SOEs' relationship with governments:* An annual report analyzing SOEs' aggregate and individual performance (as in Brazil, India, and Sweden) can help.

Governments should ensure fair competition between SOEs and private firms domestically and globally to foster economic growth and use public money better. Many countries can do more to level the playing field, with direct benefits to their own economies. Globally, a potential way forward is to agree on principles to guide SOEs' international behavior (for example, transparency on government mandates and support) and recipient-country responses (namely, ensuring that SOEs are not discriminated against if they abide by the principles). Such principles would build mutual trust.

SOEs can help deliver on the global agenda by fighting corruption, contributing to greener policies, and supporting the pursuit of the Sustainable Development Goals. To achieve these objectives, many countries need more robust selection and oversight of their SOEs.

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CHAPTER 1

POLICIES TO SUPPORT PEOPLE DURING THE COVID-19 PANDEMIC

Introduction

The COVID-19 pandemic has struck amid a preexisting sluggish global growth outlook, historically low nominal interest rates, and low inflation. The pandemic has elevated the need for fiscal policy action to an unprecedented level. For some countries, however, high debt levels and tightening financing conditions are constraining the policy response. But whereas in other economic downturns a key goal of fiscal policy is to stimulate demand, this crisis is like no other—and in its early stages the primary objectives are to boost resources for health care and to provide emergency lifelines to people and firms.

The global economy is expected to contract sharply in 2020 by –3 percent, much worse than during the 2008–09 financial crisis, owing to the ongoing health crisis and its economic and financial ramifications (Chapter 1 of the April 2020 *World Economic Outlook*). The pandemic is causing local, regional, and global supply disruptions; local and sectoral demand repercussions; and confidence effects holding back demand. Social distancing efforts necessary to contain the spread of the virus have curtailed demand, particularly in tourism, travel, and hospitality services, and have imposed even larger costs on livelihoods and output. Consumer and business confidence has fallen. Commodity prices have declined as a result of both lower global demand and a decision in early March 2020 by large oil producers to increase supply. Financing has become more costly and scarce for firms and some sovereigns. Disrupted supply and weakened demand adversely affect employment and growth, reduce government revenues, and put further strains on countries' public finances, with elevated debt and associated vulnerabilities constraining the scope for fiscal support for many countries.

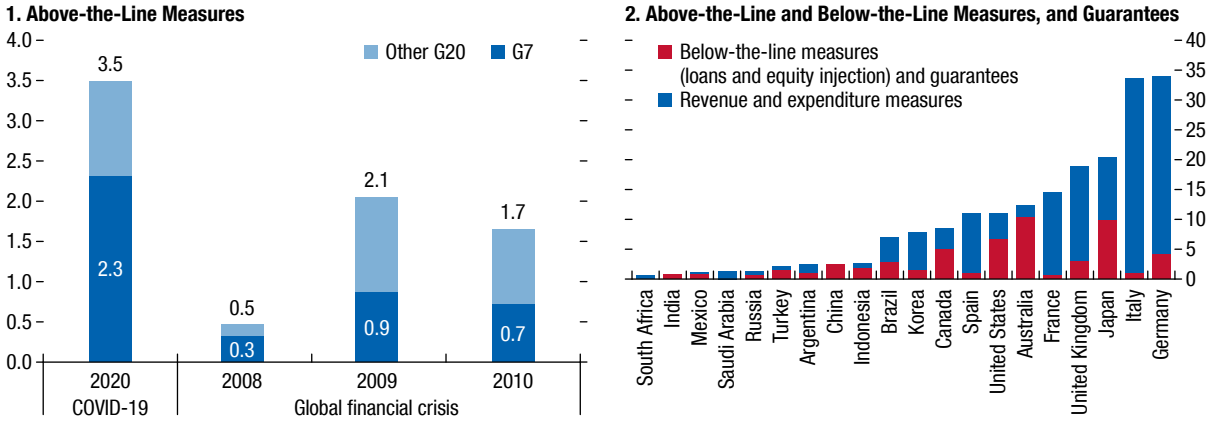
Swift and concerted government responses are needed to mitigate the health and economic effects of the coronavirus outbreak, and fiscal policies play a key role. The Group of Twenty (G20) economies have already provided sizable fiscal support through revenue and spending measures of 3.5 percent of GDP on average, as of April 8, 2020, in response to the pandemic. This amount is higher than the stimulus during the global financial crisis that began in 2008. In addition, massive packages of public-sector liquidity support, including loans and guarantees, each above 10 percent of GDP in *France, Germany*, *Italy*, *Japan*, and the *United Kingdom*, were announced to support financial and nonfinancial firms, including small and medium-sized enterprises (Figure 1.1). At the global level, spending and revenue measures amount to $3.3 trillion and loans, equity injections, and guarantees total $4.5 trillion. Box 1.1 summarizes how various types of fiscal support can have different implications for public finances in the near term and beyond. Key goals of these actions should be to save lives by containing the spread of the disease and treating those who are infected, and to protect people and viable firms from the economic fallout, including by providing unemployment benefits, wage subsidies, income support, and social assistance, as well as limiting layoffs and bankruptcies in affected firms, areas, and sectors. These actions could prevent a health crisis from generating long-lasting demand weaknesses and reducing the well-being of people.

The first policy priority is to fully accommodate spending on health and emergency services. This calls for global coordination to support countries with limited health capacity, including by providing medical supplies and expertise, grants, and concessional emergency financing. Large, timely, temporary, and targeted fiscal measures are needed to protect the most-affected people and viable firms, including in hard-to-reach informal sectors. Such support is likely to provide the most effective cushion to output and essential consumption because it alleviates the drop in incomes for people with limited savings and reduces the likelihood of bankruptcies.[1] Collectively, these measures amount to a sizable emergency lifeline, but the main policy goal during the virus containment and mitigation phases is not to boost demand but rather to preserve the web of economic relationships between employers

[1]The need for discretionary measures would be sizable, albeit lower, all else being equal, for countries with stronger existing automatic stabilizers and social safety nets.

Figure 1.1. G20 Fiscal Response to the COVID-19 Pandemic and the Global Financial Crisis
(Percent of G20 GDP, left panel; percent of national GDP, right panel)

Countries are providing sizable fiscal support in response to the COVID-19 pandemic.



Sources: IMF 2009a; IMF 2009b; national authorities; and IMF staff estimates as of April 8, 2020.
Note: Panel 1 includes above-the-line spending and revenue measures only, weighted by GDP in PPP-adjusted current US dollars. Panel 2 adds below-the-line measures (loans, equity injections) and government guarantees to revenue and expenditure measures adopted in 2020. These are presented in the same panel for ease of reference but are not additive; see Box 1.1 and Special Feature Online Annex 1.1. The decomposition between loans and guarantees is based on available information as of April 8, 2020. G7 = Group of Seven; G20 = Group of Twenty; PPP = purchasing power parity.

and employees, producers and consumers, and lenders and borrowers. Given their large fiscal costs, these measures should be embedded in a medium-term fiscal framework. Measures that are not included in revenue or expense, such as government guarantees of business loans, should be transparently managed and recorded to mitigate potential fiscal risks. As the virus is contained and people return to work, a broad-based fiscal stimulus becomes more effective. Depending on access to markets and the availability of fiscal space, such broad-based fiscal stimulus could facilitate the recovery.

Recent Fiscal Developments and Outlook

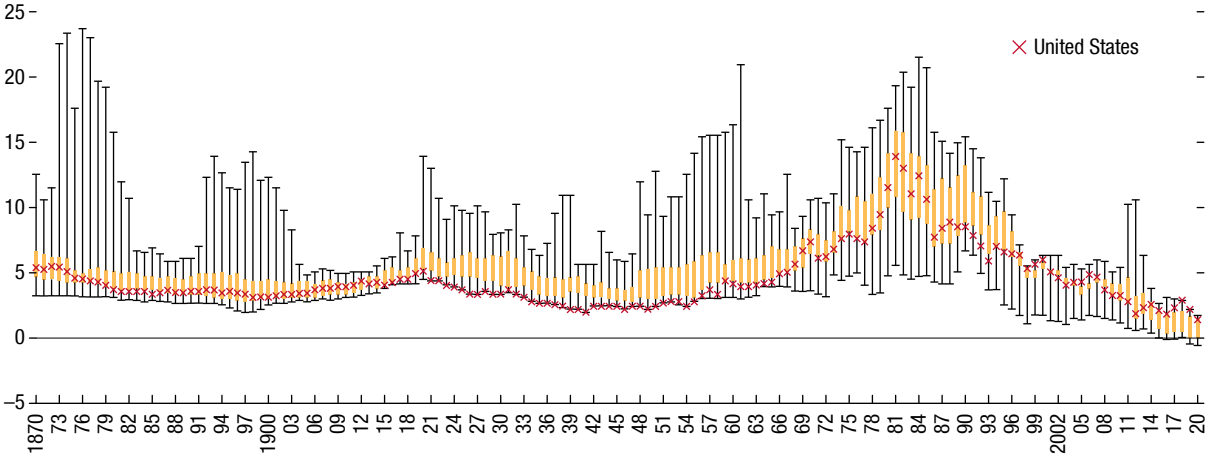
The scope, desirability, and effectiveness of fiscal policy in response to the COVID-19 crisis, and even more so during the recovery stage, are influenced by interest rates, inflation, and debt levels.

- *Low nominal interest rates:* Low rates shift the balance of cyclical demand support toward fiscal policy as the effective lower bound on monetary policy rates binds more frequently (Chapter 2).[2] Many governments can borrow at historically low rates—one-fifth of global bonds traded in negative territory at the end of 2019 (Figure 1.2). Interest rates are expected to remain low in the core advanced economies for a long period (Chapter 1 of the April 2020 *Global Financial Stability Report*), including after the virus-related shutdowns end. However, for many frontier and emerging markets (and, at times, some advanced economies), borrowing costs have risen sharply and have become more volatile since the coronavirus began spreading globally.
- *High public debt*: Global debt (public and private) reached $188 trillion (226 percent of GDP) in 2018, according to the IMF Global Debt Database. Average public debt of advanced economies had plateaued at about 100 percent of GDP in the 2010s, compared with 74 percent in 2007, and is now set to rise substantially as a result of the crisis. Meanwhile, it had steadily risen in emerging market and developing economies (Figure 1.3). High debt and rising debt service costs make it more difficult to conduct countercyclical fiscal policies. Likewise, as access to financing has become challenging for firms, and as the public sector steps in with loans and guarantees, related fiscal risks have risen.
- *Slow growth and low inflation:* Even prior to the current global recession, the real growth rate of GDP per capita had been subdued in

[2]Nonetheless, at the current juncture, synchronized and significant actions by large central banks, including rate reductions where possible, liquidity facilities, swap lines, and unconventional tools, have helped reduce systemic stress and lower sovereign spreads (Chapter 1 of the April 2020 *World Economic Outlook*).

Figure 1.2. Major Advanced Economies: 10-Year Government Bond Yields
(Percent)

Market interest rates are at their historical lows and negative in several advanced economies.



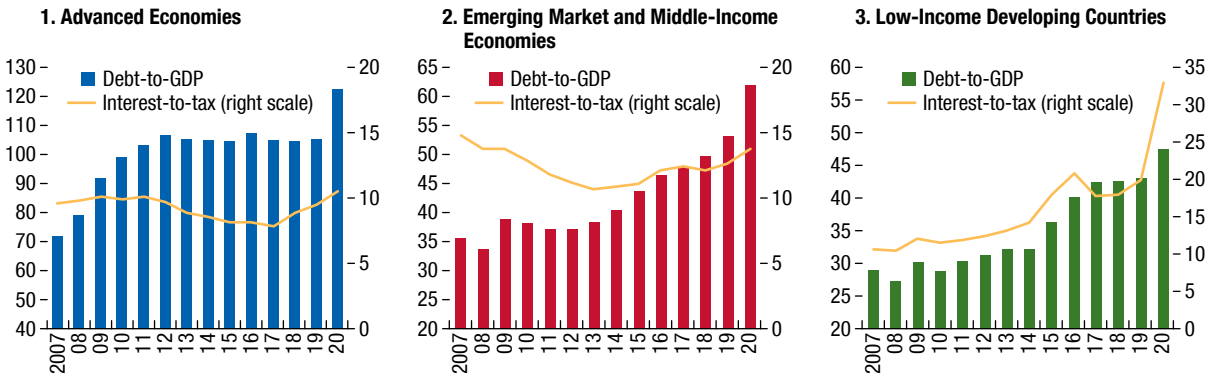
Sources: Jordà-Schularick-Taylor Macrohistory database (Jordà and others 2019); and IMF staff calculations.
Note: The sample includes Australia, Belgium, Canada, Denmark, Finland, France, Germany, Italy, Japan, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, the United Kingdom, and the United States. The figure shows the interquartile range (yellow bars) and the 10th and 90th percentiles (whiskers). Red markers signify the United States. Data for 2020 are through the end of March.

advanced economies, and had declined in emerging market and middle-income economies since 2013. There has also been a trend decline in public-investment-to-GDP ratios in advanced economies, and the growth rate of investment per capita in emerging market and developing economies has been slow (Figure 1.4). Moreover, inflation is below targets in two-thirds of inflation-targeting countries. Since the onset of the pandemic and the sharp fall in commodity prices, inflation and inflation expectations have registered further declines in many economies.

The pandemic and its economic consequences will cause a major increase in fiscal deficits and public debt ratios across countries (Figure 1.5). Under the baseline

Figure 1.3. General Government Gross-Debt-to-GDP and Interest-Expenditure-to-Tax-Revenue Ratios, 2007–20
(Percent)

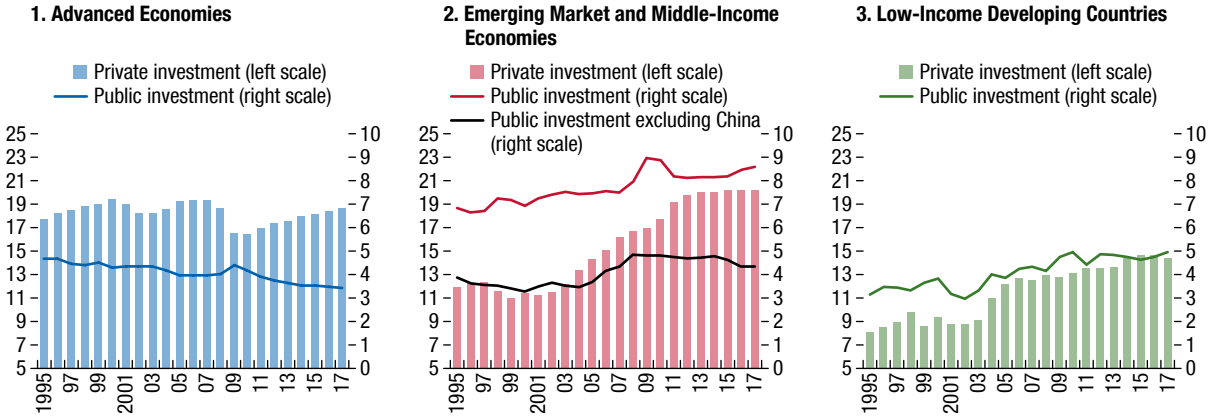
Public debt vulnerabilities persist.



Source: IMF, World Economic Outlook database.
Note: Interest-to-tax ratios are weighted averages among countries in the income group. The rise in the average interest-to-tax ratio of low-income developing countries in 2020 is largely driven by a few countries, such as Nigeria and Zambia, that are expected to experience sizable increases in their ratios.

Figure 1.4. Public and Private Investment, 1995–2017
(Percent of GDP)

Before the pandemic crisis, public investment had been declining in advanced economies and was growing slowly in emerging market and middle-income economies and low-income developing countries.



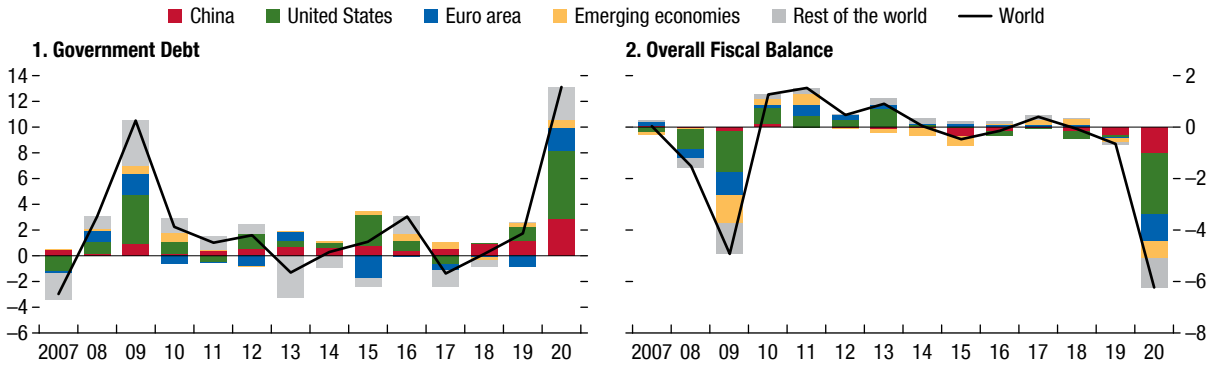
Source: IMF, Investment and Capital Dataset.

scenario in the April 2020 *World Economic Outlook*, the COVID-19 pandemic is assumed to have a large negative effect on economic activity. Consequently, government revenues, including customs, will fall as activity and trade decline. The experience of the global financial crisis and past epidemics suggests that revenues fall even more sharply than output, as people and firms struggle to comply with their tax obligations (Sancak, Velloso, and Xing 2010). Moreover, spending on health and support to people, firms, and sectors is being ramped up to mitigate the health and economic effects of COVID-19. Fiscal positions in 2020, therefore, are set to become significantly more expansionary across all three country groups (advanced economies, emerging market and middle-income economies, and low-income developing countries) compared with the fiscal outturns at the end of 2019. Overall fiscal deficits are expected to widen more in advanced economies, partly reflecting a more pronounced projected economic contraction in advanced economies than in emerging market and developing economies (April 2020 *World Economic Outlook*, Table 1.1). Global debt is estimated to increase by 13 percentage points to reach 96.4 percent of GDP in 2020 (Table 1.2).

Another notable development is a further widening of sovereign and corporate spreads, with a decline

Figure 1.5. Contribution to the Change in Global Government Debt and Deficits, 2007–20
(Percent of GDP)

A major increase in fiscal deficits and public debt ratios is expected across the world.



Source: IMF, World Economic Outlook database.

Table 1.1. General Government Fiscal Overall Balance, 2012–20
(Percent of GDP)

									Projections
	2012	2013	2014	2015	2016	2017	2018	2019	2020
World	**–3.8**	**–2.9**	**–2.9**	**–3.3**	**–3.4**	**–3.0**	**–3.1**	**–3.7**	**–9.9**
Advanced Economies	**–5.5**	**–3.7**	**–3.1**	**–2.6**	**–2.6**	**–2.3**	**–2.6**	**–3.0**	**–10.7**
United States[1]	–8.0	–4.6	–4.0	–3.6	–4.3	–4.5	–5.7	–5.8	–15.4
Euro Area	–3.7	–3.0	–2.5	–2.0	–1.4	–0.9	–0.5	–0.7	–7.5
France	–5.0	–4.1	–3.9	–3.6	–3.5	–2.8	–2.3	–3.0	–9.2
Germany	0.0	0.0	0.6	0.9	1.2	1.2	1.9	1.4	–5.5
Italy	–2.9	–2.9	–3.0	–2.6	–2.4	–2.4	–2.2	–1.6	–8.3
Spain[2]	–10.7	–7.0	–5.9	–5.2	–4.3	–3.0	–2.5	–2.6	–9.5
Japan	–8.6	–7.9	–5.6	–3.8	–3.7	–3.1	–2.4	–2.8	–7.1
United Kingdom	–7.6	–5.5	–5.6	–4.6	–3.3	–2.5	–2.2	–2.1	–8.3
Canada	–2.5	–1.5	0.2	–0.1	–0.5	–0.1	–0.4	–0.4	–11.8
Others	0.4	0.2	0.2	0.1	0.7	1.4	1.4	0.0	–5.3
Emerging Market and Middle-Income Economies	**–0.9**	**–1.5**	**–2.5**	**–4.4**	**–4.8**	**–4.1**	**–3.8**	**–4.8**	**–9.1**
Excluding MENAP Oil Producers	–1.9	–2.3	–2.7	–4.0	–4.4	–4.0	–4.0	–5.0	–9.0
Asia	–1.6	–1.8	–1.9	–3.3	–3.9	–4.0	–4.5	–6.0	–9.9
China	–0.3	–0.8	–0.9	–2.8	–3.7	–3.8	–4.7	–6.4	–11.2
India	–7.5	–7.0	–7.1	–7.2	–7.1	–6.4	–6.3	–7.4	–7.4
Europe	–0.7	–1.5	–1.4	–2.7	–2.9	–1.8	0.4	–0.7	–6.1
Russia	0.4	–1.2	–1.1	–3.4	–3.7	–1.5	2.9	1.9	–4.8
Latin America	–2.9	–3.2	–5.0	–6.8	–6.2	–5.4	–5.2	–4.0	–6.7
Brazil	–2.5	–3.0	–6.0	–10.3	–9.0	–7.9	–7.2	–6.0	–9.3
Mexico	–3.7	–3.7	–4.5	–4.0	–2.8	–1.1	–2.2	–2.3	–4.2
MENAP	5.6	3.9	–1.5	–8.5	–9.6	–5.8	–2.9	–3.8	–9.8
Saudi Arabia	11.9	5.6	–3.5	–15.8	–17.2	–9.2	–5.9	–4.5	–12.6
South Africa	–4.4	–4.3	–4.3	–4.8	–4.1	–4.4	–4.1	–6.3	–13.3
Low-Income Developing Countries	**–2.0**	**–3.3**	**–3.2**	**–3.8**	**–3.7**	**–3.6**	**–3.8**	**–4.1**	**–5.7**
Nigeria	0.2	–2.3	–2.1	–3.2	–4.0	–5.4	–4.3	–5.0	–6.4
Oil Producers	**1.6**	**0.4**	**–1.1**	**–4.2**	**–4.6**	**–2.6**	**–0.6**	**–1.0**	**–7.6**
Memorandum									
World Output (percent)	3.5	3.5	3.6	3.5	3.4	3.9	3.6	2.9	–3.0

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.

in borrowing costs for sovereigns that are considered to be safe and a simultaneous sell-off of assets that are perceived as risky. Spreads in many advanced and emerging market economies have risen sharply since the declaration of COVID-19 as a global health emergency by the World Health Organization in late January 2020. Many emerging market and middle-income economies have experienced portfolio flow reversals. Before the first outbreak of COVID-19 in late December 2019, effective nominal interest rates (that is, the average interest paid on existing public debt) were below 2 percent in more than one-third of advanced economies, and in a smaller share (one-tenth) of emerging market and developing economies (Figure 1.6). Those rates are expected to fall further in safe haven countries (for example, the *United States, Japan, Germany*). However, given high levels of public debt—at 83 percent of global GDP in 2019—and large gross financing needs in several countries, the risk of a surge in refinancing costs persists (Figure 1.7). The lengthened residual maturity of debt in advanced economies is a mitigating factor (which increased from six to nearly eight years over the past decade at the general government level). The median residual maturity of

Table 1.2. General Government Debt, 2012–20

(Percent of GDP)

	2012	2013	2014	2015	2016	2017	2018	2019	Projections 2020
Gross Debt									
World	**79.6**	**78.3**	**78.6**	**79.7**	**82.7**	**81.3**	**81.5**	**83.3**	**96.4**
Advanced Economies	**106.7**	**105.2**	**104.6**	**104.2**	**106.7**	**104.5**	**103.9**	**105.2**	**122.4**
United States[1]	103.3	104.9	104.6	104.8	106.8	105.9	106.9	109.0	131.1
Euro Area	90.7	92.6	92.8	90.8	90.0	87.8	85.9	84.1	97.4
France	90.6	93.4	94.9	95.6	98.0	98.4	98.4	98.5	115.4
Germany	81.1	78.7	75.7	72.1	69.2	65.3	61.9	59.8	68.7
Italy	126.5	132.4	135.3	135.3	134.8	134.1	134.8	134.8	155.5
Spain	86.3	95.8	100.7	99.3	99.2	98.6	97.6	95.5	113.4
Japan	228.7	232.2	235.8	231.3	236.4	234.5	236.5	237.4	251.9
United Kingdom	83.2	84.2	86.2	86.9	86.8	86.2	85.7	85.4	95.7
Canada[1]	85.4	86.1	85.6	91.2	91.7	90.5	89.7	88.6	109.5
Emerging Market and Middle-Income Economies	**37.0**	**38.2**	**40.3**	**43.7**	**46.5**	**48.0**	**49.7**	**53.2**	**62.0**
Excluding MENAP Oil Producers	39.4	40.8	43.1	45.7	48.1	49.5	51.5	54.9	63.5
Asia	39.7	41.4	43.5	44.9	47.1	48.8	50.9	55.1	64.1
China	34.4	37.0	40.0	41.4	44.2	46.1	49.1	54.4	64.9
India	67.7	67.4	66.8	68.8	68.7	69.4	69.4	71.9	74.3
Europe	25.3	26.2	28.2	30.5	31.5	29.7	29.4	29.2	36.5
Russia	11.2	12.3	15.1	15.3	14.8	14.3	13.6	14.0	17.9
Latin America	47.1	47.8	50.1	53.9	57.4	62.2	66.6	70.5	78.0
Brazil[2]	62.2	60.2	62.3	72.6	78.3	83.7	87.1	89.5	98.2
Mexico	42.7	45.9	48.9	52.8	56.8	54.0	53.7	53.4	61.4
MENAP	23.4	23.5	23.4	33.0	40.6	40.3	38.8	41.9	51.2
Saudi Arabia	3.0	2.1	1.6	5.8	13.1	17.2	19.0	22.8	34.0
South Africa	41.0	44.1	47.0	49.3	51.5	53.0	56.7	62.2	77.4
Low-Income Developing Countries	**31.1**	**32.2**	**32.2**	**36.4**	**40.2**	**42.3**	**42.6**	**43.0**	**47.4**
Nigeria	17.7	18.6	17.5	20.3	23.4	25.3	27.2	29.4	35.3
Oil Producers	**31.6**	**32.3**	**33.3**	**38.9**	**42.1**	**42.5**	**42.3**	**44.2**	**54.6**
Net Debt									
World	**65.8**	**65.0**	**65.2**	**66.8**	**69.4**	**68.2**	**68.6**	**69.4**	**85.3**
Advanced Economies	**76.7**	**75.9**	**75.7**	**75.8**	**77.5**	**75.9**	**76.0**	**76.6**	**94.2**
United States[1]	80.8	81.6	81.4	81.1	82.1	82.1	83.2	84.1	107.0
Euro Area	73.2	75.7	75.9	74.7	74.3	72.2	70.5	69.1	81.3
France	80.0	83.0	85.5	86.3	89.2	89.5	89.6	89.8	106.7
Germany	59.6	58.6	55.0	52.1	49.3	45.7	42.9	41.3	49.2
Italy	114.6	120.0	122.3	123.2	122.4	122.1	122.9	123.1	142.7
Spain	71.8	80.9	85.2	85.0	86.1	84.5	82.7	81.1	97.7
Japan	145.3	144.7	146.6	146.4	152.0	149.8	153.4	154.3	168.9
United Kingdom	74.8	75.9	78.0	78.4	77.8	76.7	75.9	75.5	85.9
Canada[1]	28.9	29.7	28.5	28.4	28.7	27.9	26.5	25.9	40.7
Emerging Market and Middle-Income Economies	**22.7**	**22.9**	**24.2**	**28.6**	**34.6**	**36.0**	**36.8**	**38.3**	**45.8**
Asia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Europe	32.0	31.6	29.6	28.8	31.0	30.1	30.7	30.6	36.9
Latin America	29.6	29.7	32.3	35.7	41.1	43.3	44.1	45.3	51.7
MENAP	–2.5	–3.4	–0.1	15.3	29.2	29.7	31.1	35.2	46.6

Source: IMF staff estimates and projections.

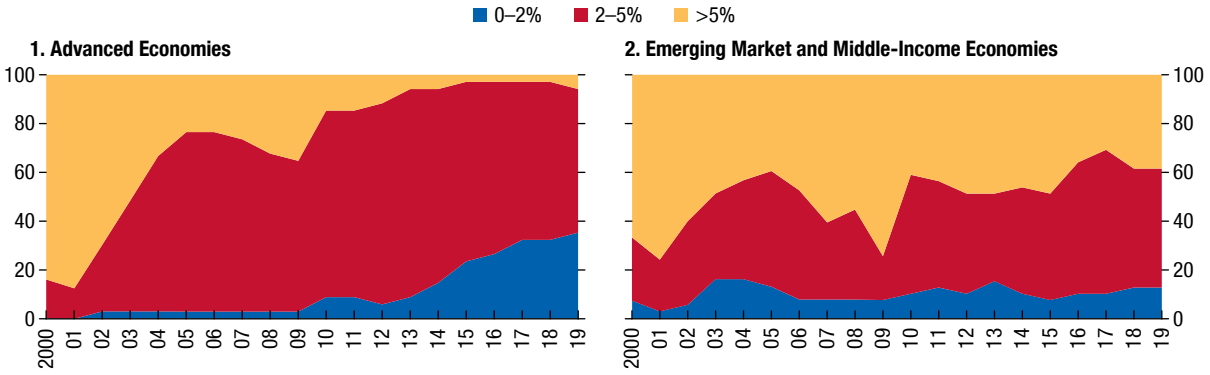
Note: All country averages are weighted by nominal GDP converted to US dollars (adjusted by purchasing power parity only for world output) at average market exchange rates in the years indicated and based on data availability. Projections are based on IMF staff assessments of current policies. In many 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 1.6. Distribution of Nominal Effective Interest Rates, 2000–19
(Percent of total countries for each group)

Average interest cost has declined in many countries and is currently below 2 percent in one-third of advanced economies.



Source: IMF, World Economic Outlook database.

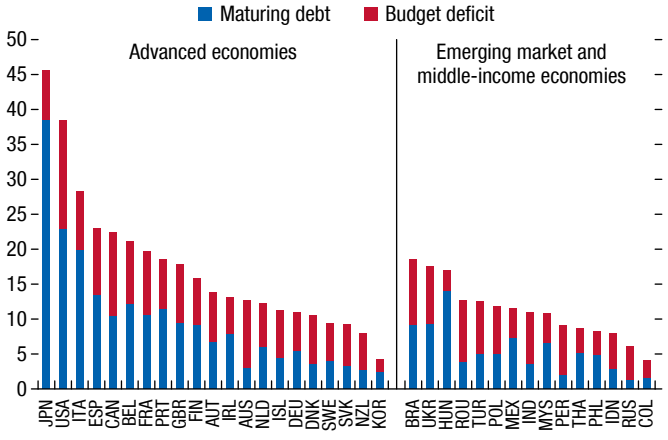
debt in emerging markets has declined since 2014, but remains greater than its level before the global financial crisis (Figure 1.8).

In response to the COVID-19 pandemic, many countries are allocating more fiscal resources to the health sector by increasing spending on monitoring, containment, and mitigation. On average, advanced economies have pledged an additional 0.5 percent of GDP to health care, whereas emerging market and middle-income economies have planned for an additional 0.2 percent of GDP. In low-income developing countries, health spending is likely to increase substantially from current pledges of 0.3 percent of GDP, on average. For example, it increased by 4 percentage points of GDP on average in the affected countries during the Ebola outbreak in West Africa.

Most countries are also allocating sizable additional fiscal support to other sectors to mitigate the economic fallout from the COVID-19 pandemic and the necessary social distancing policies. On the spending side, measures include extended unemployment benefits, government-funded paid sick leave, wage subsidies,

Figure 1.7. Gross Financing Needs, 2020
(Percent of GDP)

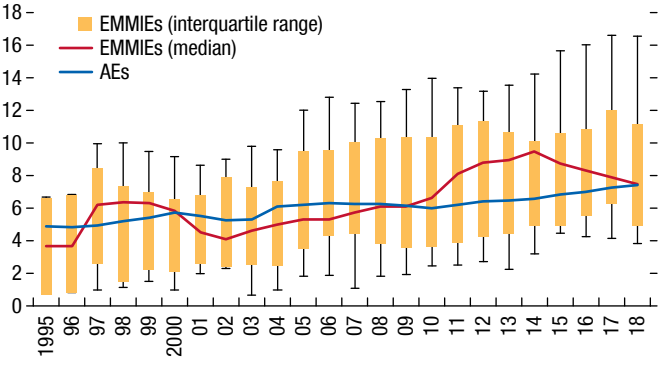
Several countries face sizable gross financing needs.



Sources: Bloomberg Finance L.P.; IMF, World Economic Outlook database; and IMF staff estimates.
Note: Data labels use International Organization for Standardization (ISO) country codes.

Figure 1.8. Average Remaining Maturity of Government Bonds, 1995–2018
(Years; median across country groups)

Governments in advanced economies have borrowed at longer terms in recent years, but those in emerging market and middle-income economies have not.



Sources: Haver Analytics; and national authorities.
Note: Boxes and whiskers indicate the interquartile ranges and 10th and 90th percentiles for emerging market and middle-income economies. AEs = advanced economies; EMMIEs = emerging market and middle-income economies.

targeted transfers to affected households and firms, and support to hard-hit sectors such as tourism, hospitality services, and travel. On the revenue side, measures include temporary deferral of corporate and personal income tax payments and social security contributions ranging from three months to one year, as well as temporary tax relief or exemptions, including on medical goods and services, for affected sectors and vulnerable firms and households (*China, France, Italy, Japan, Korea*). Special Feature Online Annex 1.1 provides a detailed overview of revenue and spending measures as well as liquidity support efforts across selected countries as of April 8, 2020. Governments plan to finance these additional fiscal measures by reprioritizing budget items; using emergency funds or buffers; frontloading existing spending plans, external aid, or grants; or undertaking additional borrowing. The following subsections discuss the recent fiscal developments and outlook by country income groups. Fiscal developments in the period ahead are highly uncertain and will depend on how severe the health crisis becomes, how long it lasts, and how it affects the economy and financial markets.

Advanced Economies: Large Fiscal Support Expected

In response to the COVID-19 pandemic, additional fiscal measures have been announced in most countries, with a weighted average of 5.9 percent of GDP among Group of Seven (G7) economies.[3] In the *United States*, in addition to health measures approved in early March, the Coronavirus Aid, Relief, and Economic Security (CARES) Act includes an unprecedented $2 trillion or almost 10 percent of GDP in tax, spending, and liquidity-support measures, including pandemic unemployment assistance to households, payroll tax deferral, and paycheck protection for small and medium-sized enterprises. In the European Union (EU), in addition to relatively large automatic stabilizers, discretionary measures taken by member states amount to 3.1 percent of EU-27 GDP. Further support is provided through the EU-level initiatives, including the coronavirus investment response to help national health sectors, businesses (through working capital or guarantees), and national short-term employment schemes. Liquidity support measures such as loans or loan guarantees to businesses are common, especially in European countries (16.7 percent of EU-27 GDP). In *Japan*, the Emergency Economic Package Against COVID-19 announced on April 7 totals ¥108 trillion (20 percent of GDP) and covers cash handouts to affected households and firms; concessional loans from public and private financial institutions; and deferral of payment of tax and social security premiums for one year. More measures are anticipated in several other countries as governments increase their support to crisis-hit economies. The cyclical effects of a sharp contraction in growth owing to COVID-19 through automatic stabilizers and lower customs revenues are expected to be very large, adversely affecting fiscal balances and debt levels.

The average overall fiscal balance in 2020 is, thus, expected to deteriorate significantly. This is on top of the fiscal easing in 2019, when more than half of the advanced economies pursued expansionary fiscal policies (Figure 1.9).[4] In the *United States*, the two-year budget deal reached in 2019 and the discretionary measures implemented in response to the pandemic will increase the overall deficit and worsen public debt dynamics. In *Korea*, the overall fiscal balance is estimated to decline by 2.8 percent of GDP through previously planned spending increases on the social safety net, job creation, and the fostering of innovation, as well as new measures to cope with the pandemic. The overall balance in most euro area economies is projected to deteriorate because of the fallout from COVID-19 and the announced emergency lifeline measures (*France, Germany*, *Italy*).

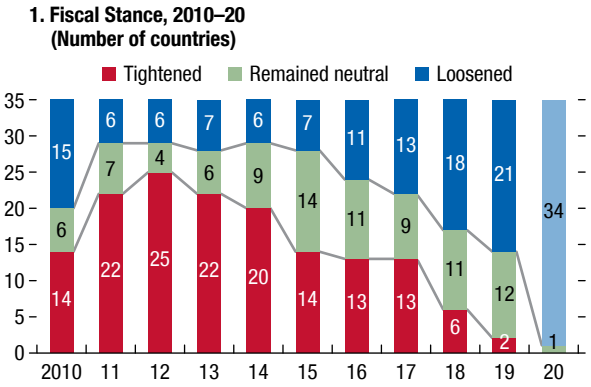
Although the macroeconomic effects of the pandemic are uncertain and the size of discretionary fiscal policy responses to COVID-19 may still rise, they will affect the overall balance and public-debt-to-GDP ratios over the medium term. For example, the pandemic will have an impact on the projected fiscal adjustment in *Japan*, where the increase in the

[3]The exact size often depends on usage, such as extended unemployment benefits or income support for short-time work, and many governments have indicated they intend to maintain measures as long as needed or further expand them. Thus, estimates of announced packages are preliminary.

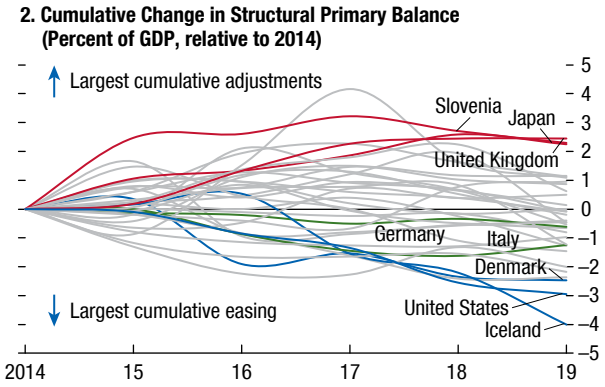
[4]A neutral fiscal stance is defined as a change in the structural primary balance (that is, adjusting the primary balance for the economic cycle and other one-off factors) between –0.25 and 0.25 of a percentage point of potential GDP in a year. Any change above 0.25 (below –0.25) of a percentage point is defined as fiscal tightening/contraction (loosening/expansion). Moderately expansionary (contractionary) refers to a decrease (increase) between 0.25 and 0.5 of a percentage point. The aggregate fiscal stance for each income group is calculated as the $GDP-weighted average of fiscal stances in individual economies.

Figure 1.9. Fiscal Developments in Advanced Economies

Fiscal policies have eased in 2019 and are expected to be expansionary in most advanced economies in 2020.



Fiscal policies continued to ease in half of advanced economies over 2014–19.



Sources: IMF, World Economic Outlook database; and IMF staff estimates.

consumption tax rate in October 2019, along with the expiring stimulus measures, were expected to reduce primary deficits over the medium term. In the *United Kingdom*, in addition to measures aimed at the health crisis, the fiscal year 2020/21 budget projects a substantial fiscal easing over the medium term (by 1 percentage point of GDP on average over the next five years relative to the previous fiscal path), including a planned increase in net public investment from 2 to 3 percent of GDP. Meanwhile, the weighted-average public-debt ratio of advanced economies, which rose modestly to 105 percent of GDP in 2019, is projected to rise over the medium term. Debt dynamics in some countries are subject to risks and hinge on interest rates remaining low.

Emerging Market and Middle-Income Economies: Facing Multiple Shocks

In 2020, the average overall deficit of emerging market and middle-income economies is projected to ease further to 9.1 percent of GDP from 4.8 percent in 2019, reflecting the recession and lower commodity prices, tighter financing conditions, and discretionary fiscal policy reactions to the COVID-19 pandemic (Figure 1.10).[5] The estimated fiscal easing in 2020, among non-oil exporters, is particularly large in some countries such as *Chile* and *China*. In response to the social unrest last year, *Chile* launched a stimulus package consisting of infrastructure investment, social pensions, and support programs for vulnerable groups and small and medium-sized enterprises. In response to COVID-19, this package was complemented by additional fiscal measures, including health spending, tax payment delays, and unemployment benefits. *China* has increased spending to mitigate the health effects of the pandemic, accelerated unemployment insurance disbursement to support households, and provided temporary tax relief and deferral of tax payments for businesses in affected sectors and regions. *China* is also expected to use its fiscal space to provide significant additional support for the recovery and reorient the economy toward a higher-quality growth path.

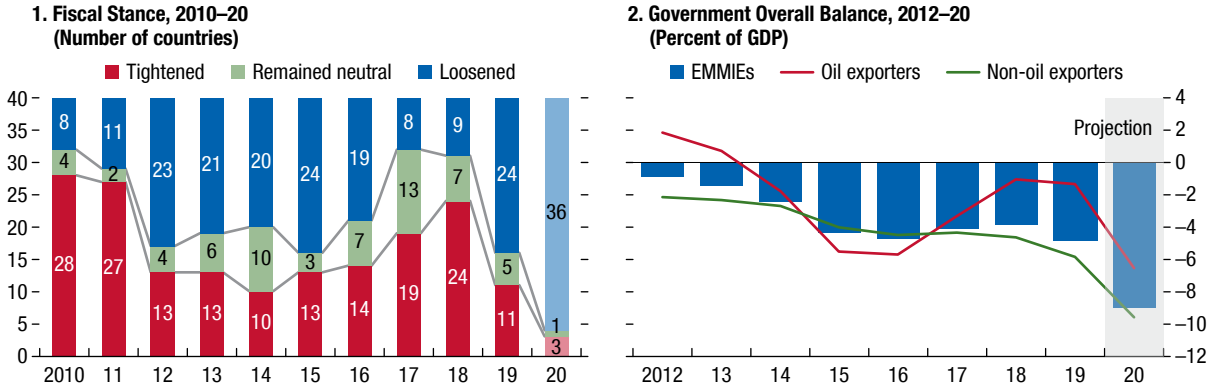
In the fiscal year 2020/21 budget, *India* announced a reduction in personal income tax rates with a rationalization of exemptions. In March 2020, the government announced a fiscal support package (0.8 percent of GDP) to cushion the COVID-19 impact, including cash transfers, an insurance cover to medical workers, and steps to strengthen food security. In *Brazil*, the government implemented pension reform in 2019 and submitted a reform package to Congress that aims at making the budget less rigid, reforming fiscal decentralization rules, and releasing earmarked spending to lower public debt. In response to the pandemic, *Brazil* expanded cash transfers to low-income households and provided temporary tax relief, amounting to 2.9 percent of GDP (partly from reallocations within the

[5]The average headline fiscal deficit rose by 1 percentage point of GDP to 4.8 percent in 2019, reversing the decline of similar magnitude over 2016–18. With higher deficits in two-thirds of economies, the average government-debt-to-GDP ratio reached 54 percent of GDP in 2019 (up 3 percentage points from 2018 and 17 percentage points from 2012).

Figure 1.10. Fiscal Developments in Emerging Market and Middle-Income Economies

Overall deficits increased in 2019, reversing the consolidation trends of previous years, and are expected to rise further for more countries in 2020.

Fiscal deficits are projected to increase in 2020.



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

current budget). In response to COVID-19, fiscal measures were also announced in *Indonesia* (1.8 percent of GDP), *Turkey* (1.6 percent of GDP), and *Malaysia* (2.8 percent of GDP).

Over the medium term, the fall in oil prices, partly owing to the COVID-19 outbreak, will weigh on the fiscal balance of oil-exporting countries. In *Saudi Arabia*, the fiscal deficit is expected to widen further because of lower oil revenues (despite an increase in oil production). Several oil-exporting countries were set to resume their fiscal adjustments after the 2019 pause through tax policy and administration reforms (including *Mexico*), but this may no longer be the case given the fall in oil prices. Emerging market and middle-income economies' average government debt was projected to remain on an upward trajectory. The rise in public debt across all countries will be substantially higher than previously projected as a result of the effects of and responses to COVID-19.

Low-Income Developing Countries: Navigating the Pandemic with High Debt

The average debt ratio of low-income developing countries remained stable at 43 percent of GDP over 2017–19 after an increase of 9 percentage points over the previous five years. In some cases, this increase in debt partly reflected borrowing to finance investment in infrastructure (*Ethiopia, Kenya*). Looking ahead, however, financing the development agenda in a sustainable way could become more challenging, considering the already-high debt levels and given (at least in the short term) potential revenue losses and spending needs arising from the COVID-19 pandemic.

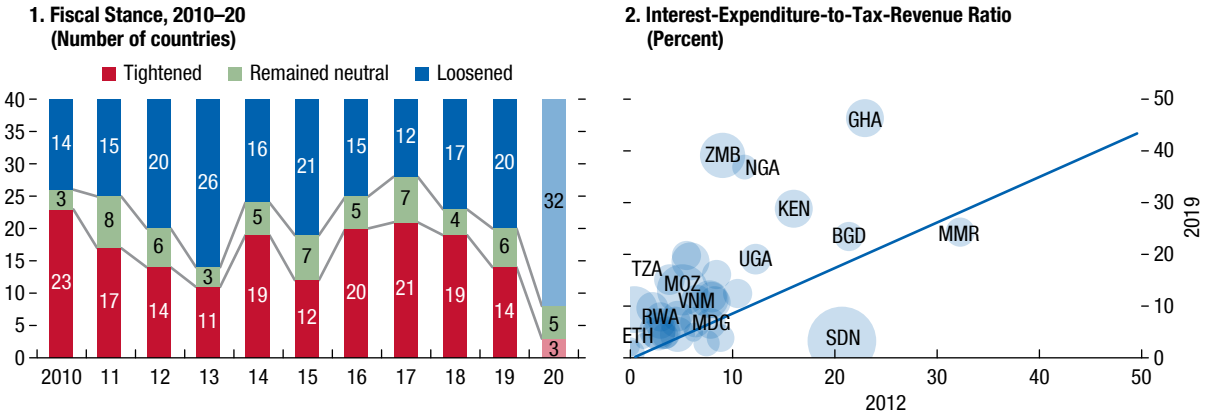
Half of low-income developing countries have seen their tax-to-GDP ratios increase by more than 3.7 percent of GDP since 2000. But over the past five years, tax revenues grew in line with GDP, and in many economies revenue gains have not offset the declining trend in external grants as a share of GDP. In addition, the halving of commodity prices since 2014 and the sharp oil price decline in early 2020 are having an adverse impact on revenues that is projected to be long-lasting for several large commodity exporters. At the same time, interest expenditures are on the rise, reflecting higher debt levels, currency depreciation, tighter financing conditions, and a growing share of borrowing on nonconcessional terms. These trends imply a squeeze in fiscal resources available for primary spending.

The average overall fiscal deficit in low-income developing countries increased by 0.4 of a percentage point of GDP to 4.1 percent in 2019. The easing was largely driven by oil-exporting countries (*Nigeria*, *Papua New Guinea*), reflecting lower oil prices and spending rigidities. For non-oil exporters, fiscal deficits rose moderately in 2019 to 4 percent of GDP. These averages mask important cross-country differences. Because of a

Figure 1.11. Fiscal Developments in Low-Income Developing Countries

Fiscal policy was eased in 2019, and a large number of countries are expected to ease further in 2020.

The ratio of interest expenditure to tax revenue has increased in most low-income developing countries relative to 2012.



Sources: IMF, World Economic Outlook database; and IMF staff estimates.
Note: Data labels in panel 2 use International Organization for Standardization (ISO) country codes.

range of factors, fiscal balances declined by 1.4 percentage points of GDP in *Chad* (higher investment, wages, subsidies, and transfers) and *Moldova* (shortfall in revenues that was more than offset by spending restraints). Natural disasters and instability (*Haiti*, *Yemen*) also led to higher fiscal deficits. On the other hand, *Burkina Faso* and *Nicaragua* consolidated their fiscal balances by more than 1 percentage point of GDP in response to the need to contain debt increases, mitigate the sharp decline in revenue collections, or comply with the regional fiscal rule. Overall, more than one-third of low-income developing countries contained or reduced the size of their fiscal deficits in 2019.

In 2020, the average headline deficit is projected to widen by 1.6 percentage points of GDP, notably in oil exporters. In *Nigeria*, the gain from an increase in the value-added tax rate is estimated to only partly offset projected losses in oil revenue. Although there have been a relatively small number of verified coronavirus cases to date in low-income developing countries, a surge of infection cases similar to other economies around the world would have a massive impact on people's lives and livelihoods, and on fiscal deficits. The tightening of global financial conditions would pose further challenges to frontier markets in accessing external finance. In countries with output contractions (*Haiti*, *Nicaragua, Sudan*), fiscal balances are affected by reduced tax revenues. Even in the absence of a major virus outbreak, headline deficits are expected to widen in several countries given higher social security outlays (*Nicaragua*), subsidies (*Sudan*), security spending (*Mali*), and capital investment (*Madagascar*, *Uganda*). In several cases (*Chad*, *Ghana*), consolidation is mandated by or enforced under new fiscal rules. In *Mozambique*, investment under the postcyclone reconstruction effort continues.

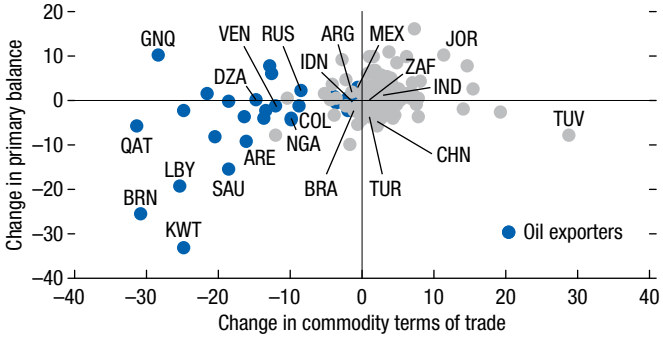
Government debt paths in low-income developing countries are subject to large uncertainty driven by the COVID-19 pandemic (Figure 1.11). For oil exporters, debt is projected to continue increasing given the fall in commodity prices. Elevated public debt levels are a source of vulnerability. According to the IMF–World Bank Debt Sustainability Assessments, the number of low-income developing countries in debt distress or classified as "at high risk" increased to 25 countries (44 percent) in 2019 (IMF 2019a). The global recession heightens vulnerabilities for this group.

Risks to the Fiscal Outlook

Downside risks include the following: (1) a more severe economic fallout from widespread infections and repeated outbreaks; (2) large swings in commodity prices; (3) prolonged stress in global financial markets; (4) renewed social unrest; and (5) extreme weather events. These risks are intertwined and could reinforce one another, exacerbating the drag on growth and

Figure 1.12. Commodity Terms of Trade and Primary Balances, 2012–19
(Percent)

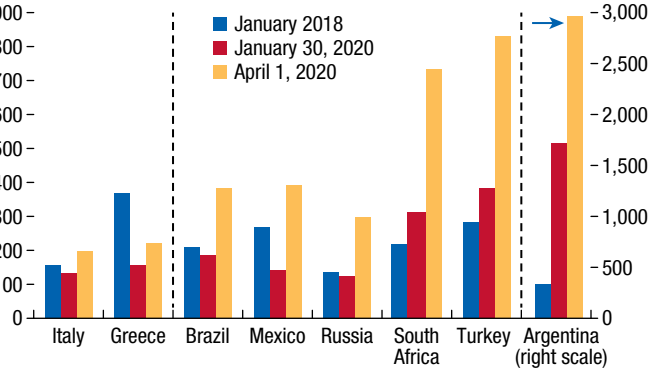
Primary deficits in large oil-exporting countries move in tandem with commodity terms of trade.



Sources: Haver Analytics; and IMF staff calculations.
Note: Data labels use International Organization for Standardization (ISO) country codes.

Figure 1.13. Sovereign Spreads
(Basis points)

Risks of a sharp rise in spreads remain in some advanced and emerging market economies.



Source: Bloomberg Finance L.P.
Note: Spreads for Italy and Greece refer to their sovereign yields over German bond yields, whereas the spreads for other countries are over the US Treasury bond yields. The World Health Organization declared COVID-19 a global health emergency on January 30, 2020, and a pandemic on March 11, 2020.

exerting negative effects on public finances (Chapter 1 of the April 2020 *World Economic Outlook*).

- *A more severe economic fallout from widespread coronavirus infections and repeated outbreaks:* The expectation of a rebound of activity in the second half of 2020, after the health emergency abates and containment measures are gradually scaled back, is subject to extreme uncertainty (Chapter 1 of the April 2020 *World Economic Outlook*). The pandemic could resurface in waves—that is, with every easing of social distancing restrictions, the infection rates could rise again, which would require re-imposition of those restrictions—bringing activity to a halt and dampening confidence further. At the same time, many emerging market and developing economies have not yet experienced widespread outbreaks—or at least they have not been detected so far given limited testing. Should they materialize, the weaker health care systems and other vulnerabilities in those economies could result in devastating human and economic effects. The impact could be intensified by declines in external demand and commodity prices, tighter financing conditions, and disruptions to supply chains. These risks would have sizable implications for the pace of recovery and public finances, raising the possibility of a debt deflation.
- *Large swings in commodity prices:* Oil prices declined by 50 percent in the first quarter of 2020. Risks to oil prices are large, stemming from both supply and demand shocks. A combination of increased oil supply and weak global demand could lead to low oil prices for a long period, worsening the public finances of many oil-exporting countries (Figure 1.12). Commodity terms-of-trade volatility could dampen the long-term growth of many countries, including commodity exporters (Cavalcanti, Mohaddes, and Raissi 2015).
- *Prolonged stress in global financial markets:* Over the past two months, markets have experienced bouts of volatility and, more recently, a run for safe assets, in part because of the ongoing COVID-19 pandemic. Increasing concerns about the economic effects of the crisis, particularly if prolonged, could trigger further deterioration of sentiment and more widespread risk-off events that expose financial vulnerabilities that have been building in a period of search for yield (Chapter 1 of the April 2020 *Global Financial Stability Report*). Such shocks could lead to higher spreads in high-debt countries, exchange rate volatility, pressures in dollar funding, and a sudden reversal of financial flows (Figure 1.13). Sustained high sovereign spreads could weigh on fiscal positions for some countries, making it more challenging to roll over debt and meet financing needs. In emerging market and developing countries, while a rising share of local currency debt in total may be beneficial, large participation by foreign investors and a lack of adequate liquidity could expose those economies to volatile spreads (Chapter 3 of the April 2020 *Global Financial Stability Report*).

- *Renewed social unrest:* In the past year, there were numerous protests in many parts of the world. Although the underlying causes of this social unrest are multifaceted and country-specific, some similarities reflect deep-rooted issues, such as poverty, inequality, erosion of trust in established institutions, and perceived lack of representation. Conventional fiscal redistribution may not quell such tensions given that protesters are not necessarily the poorest, and further redistribution could be viewed as transfers to outsiders. Box 1.2 explains some principles to reduce the risk of social unrest that reforms may trigger while recognizing that such risks cannot be eliminated. Indeed, some countries remain vulnerable to new protests, particularly if policy actions to mitigate the COVID-19 crisis are perceived as insufficient or as unfairly favoring large firms rather than people, or when those policies are withdrawn. New rounds of protests could exhaust reform momentum (for example, regarding pension or energy subsidies) and put public finances at risk.
- *Extreme weather events:* Climate change has made cold snaps and heat waves, droughts and floods, and other natural disasters more frequent and severe. These events adversely affect economic activity, impose severe humanitarian costs, inflict damage to capital stocks, and lower productivity (Kahn and others 2019; October 2019 *Fiscal Monitor*; Chapter 5 of the April 2020 *Global Financial Stability Report*). Limited global efforts to mitigate climate change and adapt to it could make these extreme events more severe, frequent, and widespread, which, in turn, may require more humanitarian assistance and higher spending on reconstruction, as well as pose risks to public finances, especially in small states with high exposure to natural disasters. Transition to low-carbon economies could result in sizable stranded assets and require significant amounts of investment for mitigation and adaptation.

Fiscal Policies across Economies

The immediate fiscal policy response to the COVID-19 pandemic should account for the particular nature of the health crisis that the global economy faces—one that affects supply, demand, and confidence—while being timely, temporary, and targeted across all levels of governments. It is important to ensure that resources are used efficiently and embedded in a medium-term fiscal framework. The need for discretionary measures is, all else being equal, lower for countries with larger existing automatic stabilizers and stronger social safety nets. The impact of targeted fiscal measures would be larger if they were accompanied by monetary accommodation (to avoid rising spreads in parts of sovereign debt markets) and financial safeguards (to reduce contingent costs to the budget). The overarching goals should be to save lives and protect households so that loss of income does not affect livelihoods, as well as to assist viable firms to prevent layoffs and permanent exits from supply chains. Otherwise, a temporary but severe health crisis could have a lasting impact on aggregate demand, supply chains, and global trade and the economy. Key challenges are to prevent health systems from becoming overloaded and to adopt comprehensive policies that reflect the evolving nature of the pandemic. Further policy action is required to position the economy for a speedy recovery once the health crisis and necessary social distancing measures recede, depending on available fiscal space. Since automatic stabilizers are less effective in low-income developing countries—given that their fiscal institutions are underdeveloped, and their financing constraints are more binding—monetary accommodation should play a larger role, especially where inflation is low.

Considering the nature of the health crisis—threatening the health and livelihoods of workers and employers globally—such actions are being taken now but should be commensurate with the economic and social fallout from the pandemic. As public support is provided on an extraordinary scale and includes vehicles such as loans and guarantees, transparency is crucial to manage fiscal risks. When countries contain the pandemic and shutdowns end, broad-based, coordinated fiscal stimulus—depending on countries' financing constraints—will become a more effective tool to foster the recovery.

Health Measures for Monitoring, Containment, and Mitigation

Additional spending needs for health and emergency services in all countries should be fully accommodated regardless of how much room a country may have in the budget. Experience from past epidemics, such as SARS, H1N1, and Ebola, shows that monitoring and containment costs are much lower than those of

mitigation and treatment (WHO 2020). Health systems could easily become overwhelmed once the virus spreads widely, amplifying the initial outbreak through social anxiety and heightened need for quarantines, particularly in emerging market and developing economies. As of April 8, 2020, most countries planned or allocated additional fiscal resources to health care to mitigate the impact of COVID-19 (amounting to 0.3 percent of GDP, on average). For example, a few advanced economies allocated resources to develop vaccines and ramped up production of medical supplies and testing kits (*euro area, Germany, Japan, Spain, United States*), while emerging market and developing economies such as *China, Côte d'Ivoire*, and *Saudi Arabia* have increased spending on monitoring and control, as well as on production of medical equipment. The potential health expenditure, however, is likely to rise significantly with the increasing number of infections.

Meeting the required health care needs quickly and sufficiently is challenging. First, countries with limited health care capacity in infrastructure (hospitals and medical facilities), personnel (doctors and nurses), or medical supplies (testing kits and ventilation equipment) cannot adequately scale up these resources in a pandemic, as shown in previous epidemics (for example, Ebola). Second, many emerging market and developing economies are facing borrowing constraints, tighter financing conditions, significantly lower revenues (customs, oil, and non-oil), and capital flows stoppages. In the near term, these countries should reprioritize expenditure toward health care while safeguarding priority spending on other social protection, capital maintenance and repair, and key public services (transport, energy, communications) to support the vulnerable and limit the detrimental impact on medium-term growth. They should also seek aid and concessional emergency financing for the health sector and budgets from development partners and multilateral financial institutions.

Comprehensive and coordinated global action is urgently needed to assist countries that face health emergencies, particularly those with limited capacity and financing constraints. Global efforts to ensure swift deployments of aid, medical resources (equipment and medical personnel), and concessional emergency financing would help contain the spread of disease. Acknowledging the need for an early coordinated response to contain the health crisis, the European Commission announced an aid package of €232 million to support the World Health Organization (WHO)'s global response plan and development of a vaccine. The US government has pledged up to $2 billion to help countries battling the virus. *Japan* has pledged ¥15 billion (about $140 million) in contributions to WHO and other international organizations. Multilateral financial institutions such as the IMF and the World Bank have committed resources to assist member countries, with a focus on low-income developing countries where health systems are the weakest and people are most vulnerable.[6] In addition, the IMF's Catastrophe Containment and Relief Trust can currently provide about $500 million in grant-based debt-service relief, including the recent $185 million pledge by the United Kingdom and $100 million provided by Japan, as immediately available resources. Official bilateral creditors have been called upon by the IMF Managing Director and the World Bank President to suspend debt payments from countries below the International Development Association's operational threshold that request forbearance while they battle the pandemic.

In addition to health spending, policymakers need to monitor and ensure smooth coordinated budget execution among various health and non-health agencies and across different levels of government, and expedite procurement of medical needs (makeshift hospitals, equipment, and medical supplies). National governments should continue to allocate sufficient funds for subnational governments to spend on health services or mobilize medical resources (for example, masks, medicine, disinfectants, hires and overtime hours of medical personnel) to affected locations (*China, India, Korea, United States*). Wage subsidies can be provided for medical personnel. For example, *China* and *Singapore* temporarily raised the compensation for front-line doctors, nurses, and caretakers. *Germany* has allocated €1.1 billion for development of vaccines and medicines. On the revenue side, reducing taxes or tariffs and excises on hygiene and health care goods and services is recommended (*Brazil, China, Colombia, United States*).

Governments should have a clear, timely, and transparent communication strategy to preserve (and restore, in some circumstances) public trust as well as consumer and business confidence. Other measures should also

[6]The recent doubling of access limits of the IMF's emergency financing facilities will allow the Fund to meet an expected demand of $100 billion in emergency financing, provided through the Rapid Credit Facility and the Rapid Financing Instrument, of which the former is only for low-income developing countries.

be implemented, including contingency plans (*Greece, Malaysia*) and regular media briefings from officials or health experts (*Chad, Indonesia, Romania, Vietnam*). All government services, particularly tax and customs administration, payment processors, and government benefit application centers should have a business continuity plan for providing services to citizens, taxpayers, and importers, relying as much as possible on electronic means.

Some of these health measures are administrative, while others will require budget resources and add to the fiscal cost. The legal framework should allow budget modifications to accommodate emergency spending, and these should be fully reflected in credible medium-term fiscal frameworks. Over the longer term, countries should act to improve their level of epidemic preparedness.

Temporary and Targeted Fiscal Measures to Assist Hard-Hit Individuals and Firms

Unlike a typical economic shock, the COVID-19 pandemic and the policies required to mitigate its spread have economic repercussions involving supply, demand, and confidence.

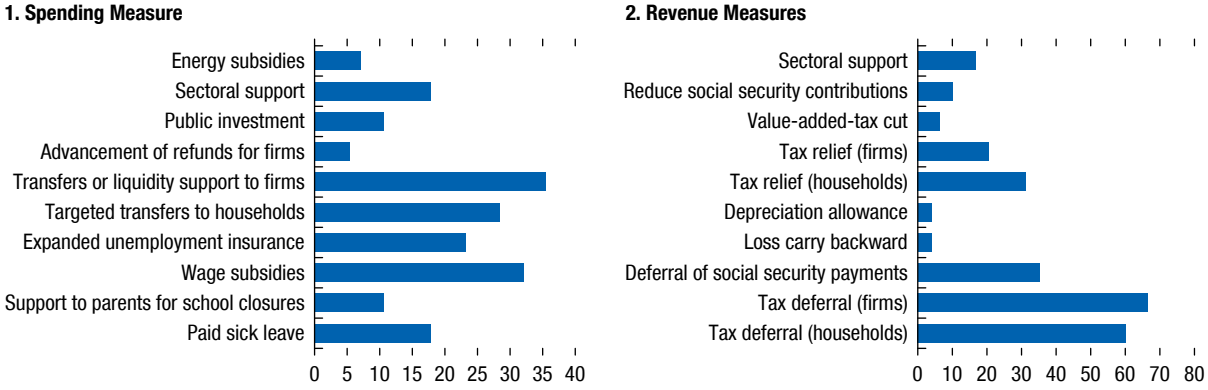
- On the supply side, necessary preventive or containment efforts inevitably involve social distancing at the local level, whereas lockdowns and quarantines reduce capacity utilization, make workers unable to do their jobs, and force businesses to reduce production. Broader disruptions to regional and global supply chains have knock-on effects, contributing to rising business costs, layoffs, and potential bankruptcies.
- On the demand side, the loss of income (from morbidity, quarantines, and unemployment), fear of contagion, and heightened uncertainty will reduce household consumption and firms' investment. The economic repercussions arising from the pandemic are not evenly shared in the economy. Workers in some sectors such as travel, tourism, and hospitality services are disproportionately affected, and low-income households tend to suffer more because they have less access to health care and limited savings. Countries or regions that rely heavily on oil revenues, tourism, and exports of goods and services are particularly vulnerable.
- The extreme uncertainty about the duration and magnitude of the COVID-19 pandemic poses a vicious cycle of dampening consumer confidence and tightening financial conditions, which could lead to job losses and cuts in investment in expectation of lower aggregate demand.

Countries are offering a range of targeted emergency lifelines (Figure 1.14), including the following:

- *Spending-side measures:* Governments are providing wage subsidies and transfers to workers and firms, as well as government-funded paid sick and family leave to those who are unwell, self-isolate, or have to stay home for childcare during school closings (*France*, *Japan*, *Korea, Singapore, Spain, United Kingdom*). Other measures include cash transfers to low-income households and temporary enhancement or extension of unemployment benefits (*Germany, Japan, United Kingdom, United States*). *Germany* has

Figure 1.14. Common Fiscal Support Measures for Non-Health Sectors in Response to COVID-19
(Percent of countries with fiscal support)

Countries are relying on a range of emergency lifelines to help hard-hit households and firms.



Sources: Announcements by national authorities; IMF Policy Tracker; and IMF staff estimates.

expanded subsidies to firms that maintain employment at reduced hours by covering employers' social security contributions for the missed hours. *Japan* and *Seychelles* have expanded subsidies to employers who maintain employment during any scale-down of operations. *Italy* has broadened its wage supplementation fund to provide income support to laid-off workers. In *Korea, Singapore*, and the *United States,* temporary direct subsidies are being provided to hard-hit businesses, including self-employed persons, to avoid sector dislocations. In *China,* planned public spending has been frontloaded, particularly on public health care, unemployment benefits, and the broader social safety net.

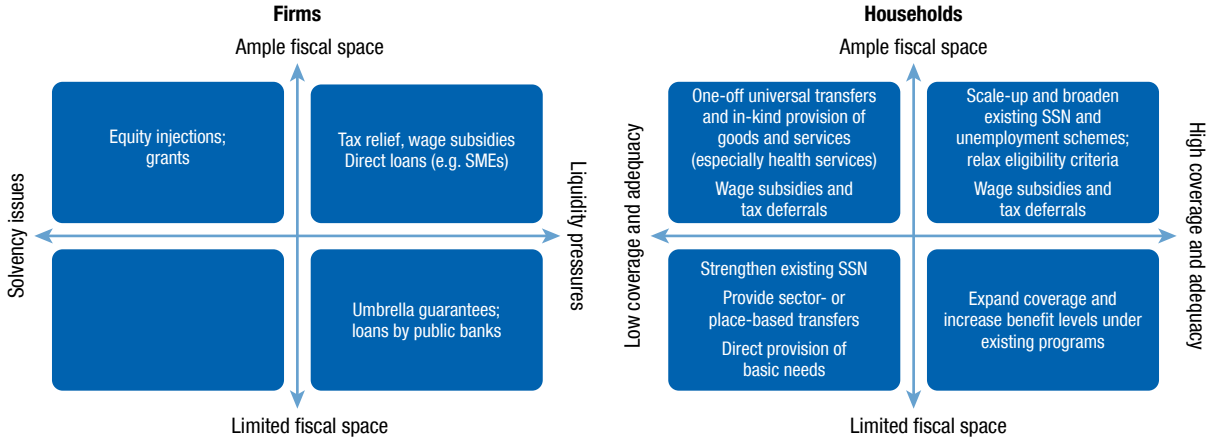
- *Revenue-side measures:* Governments can alleviate hardships by expanding loss carry-back rules to support firms' cashflow needs or provide temporary tax relief for people and firms most affected by COVID-19. Other options include postponing social security contributions and reducing advance tax payments that are based on past outcomes to reflect the new economic reality (*Madagascar*). To address supply constraints and support demand, special investment allowances for projects taking place in a given time period (for example, producing under-supplied medical equipment) or temporary value-added-tax rate cuts could be considered because they bring planned investment or spending forward in time. For example, *China* is easing the tax burden for firms in the most vulnerable regions and sectors, including transportation, tourism, and hospitality services. The *United Kingdom* adopted property tax relief for one year for small businesses in heavily hit sectors. A few countries have offered income and value-added-tax extensions to firms with cashflow shortfalls (*China*, *Eswatini, Italy*, *Japan*, *Vietnam*) or to those in affected industries or areas (*Italy, Korea*), as well as a deferral until the end of the financial year for value-added-tax payments falling due in the next quarter (*United Kingdom*). *China* has allowed value-added-tax refunds and temporarily reduced social security contribution rates for targeted firms. Both measures are part of the recommended reforms to rebalance the economy.
- *Government-supported liquidity measures:* Many workers and companies worldwide are in danger of income losses, unemployment, and closures owing to liquidity problems. In response, governments are providing cashflow support in the form of loans, umbrella guarantees, and other liquidity support. For example, *Cabo Verde, Korea, Thailand,* and the *United Kingdom* extended temporary loans to firms and households in the affected sectors. In *Australia*, the government is underwriting half of the amount of up to A$40 billion worth of unsecured loans (with a cap of A$250,000 per loan) offered by participating local lenders to small and medium-sized enterprises. At the same time, liquidity support, including government provision of loans, equity injections, and guarantees on business loans—sometimes extended through state-owned financial institutions or corporations—is now estimated to total $4.5 trillion globally and is often larger in size than the revenue and spending measures. Largest country examples include *France, Germany*, *Italy*, *Japan*, the *United Kingdom*, and the *United States*. These liquidity-support measures often occur "below the line" or involve contingent liabilities that are outside budget revenues and expenditures. Some are reflected in financing operations and raise government debt ratios, while others may not have upfront cashflow effects but nonetheless could bring fiscal risks in the future. Similar exceptional liquidity measures were used during the global financial crisis.

A number of factors are relevant for policymakers in determining the extent of support and the choice of fiscal instruments to provide emergency lifelines to firms and households (Figure 1.15):

- *Clear objectives with an emphasis on "solidarity" and equity:* A clear rationale for policy support would help evaluate the appropriateness of instruments and limit demands from vested interests. At the same time, measures should try to strengthen solidarity by not being overly restrictive in terms of eligibility, and should avoid being perceived as favoring vested interests.
- Fiscal measures should be *targeted, temporary, and progressive*. Measures should be targeted to households to maintain basic needs and to viable firms to prevent layoffs and exits from supply chains. They should be made progressive (for example, wage subsidies up to a ceiling) to ensure that lower-income households benefit more. Broad-based stimulus is less effective when physical distancing is in place.
- Tax and spending measures should be *cost-effective* and embedded in *medium-term budget frameworks*.

Figure 1.15. Some Principles for Instrument Choice in Supporting Firms and Households

The extent of support to firms and households and the choice of instruments depend on a range of factors.



Source: IMF staff.
Note: SMEs = small and medium-sized enterprises; SSN = social safety net.

They should not result in long-lasting deterioration of public finances. A premium should be placed on measures that maintain links with employment (for example, wage subsidies that can allow workers to be furloughed rather than laid off) and move the tax-benefit systems in desirable directions (for example, using mobile payments, expediting value-added-tax refunds, and upgrading health care systems).

- Measures should build on existing programs and infrastructure that enable timely support to vulnerable households and firms. The *institutional capacity* to implement targeted support to firms and households will influence the form, instruments, and channels of support. Examples include the adequacy and coverage of social safety nets and the strength of the social insurance system.
- *Financing constraints* should be taken into account in determining the scope of action.
- Fiscal costs and risks should be properly assessed and disclosed, and risk mitigation measures taken, in order to ensure *transparency, good governance, and accountability*.

These principles can provide guidance on the design of spending, tax, and liquidity measures:

- *Spending measures:* Countries with strong social protection systems should allow automatic stabilizers to fully operate and channel additional support through social safety net programs, to the extent possible, to maximize their effects. Unemployment benefits could be enhanced as needed, for example, by extending their duration, raising benefit levels, or relaxing eligibility (*Germany, Italy, Spain, United States*). Paid sick leave, while temporary in nature, should last for a sufficiently long period commensurate with the health crisis. Although wage subsidies can help businesses retain workers, they need to have clear phase-out mechanisms. Making transfers or expanded benefits part of taxable income would allow clawbacks at higher-income levels and improve targeting. In many emerging market and developing economies with weaker social safety nets (low coverage and adequacy), linking additional transfers to existing programs and delivery channels can improve targeting. When this is not possible, especially in low-income countries, categorical targeting (based on regions, sectors, residence, age, or other criteria) is appropriate (Chapter 2). Considering the urgency and widespread need to deliver rapid relief to liquidity-constrained households, including to the self-employed and those in temporary jobs, unconditional direct cash transfers could complement other targeted social protection spending, especially in countries with ample fiscal space.
- *Revenue measures:* A reduction in taxes that are paid monthly or quarterly is more powerful than those paid after the end of the fiscal year if the aim is to address liquidity problems in a timely manner. To encourage investment in producing undersupplied

goods or services, such as medical supplies and equipment, temporary and targeted tax advantages could be used. Examples include accelerated depreciation or super-deductions for investment in health or hygiene products. In contrast, profit-based incentives (for example, reduced tax rates, tax holidays, or blanket amnesties) should be avoided because they are not linked to the expenditure effort and would disproportionately reward businesses with the greatest profits. Granting certain tax advantages only in hard-hit sectors (for example, hospitality services and tourism-dependent sectors), or to firms that experience a decline in sales or profits above a certain threshold, or to critical products (for example, importation of medical supplies or priority foodstuffs) can improve targeting. On the administrative side, depending on countries' capacity, eligibility for deferring tax payments should allow for the tax administration to deny taxpayers with a poor compliance record or those at high risk of noncompliance in order to improve efficiency. Tax filings should continue to signal that the adopted measures are temporary. To make the support timelier, administrative relief can be introduced under existing frameworks. General tax relief to boost aggregate demand is likely to be more effective when supply disruptions subside and the health crisis abates.

- *Liquidity support:* While there are merits to providing immediate liquidity support where a large number of firms and households are facing cashflow difficulties, governments should ensure that those measures are properly costed, recorded, and monitored. Business dynamism should be maintained. Liquidity support should be conditional on the duration of the pandemic in order to avoid keeping nonviable firms afloat with subsidized finance. Umbrella guarantees (for example, covering loans to small and medium-sized enterprises) are often more efficient than direct government support, as the transaction costs of distributing subsidies or loans to multiple beneficiaries are high, especially in countries with weak institutional capacity. Policymakers need to manage the associated fiscal risks, including by assessing and quantifying the potential sources and size of fiscal costs, as well as by maintaining transparency and disclosure for budgets and medium-term fiscal frameworks. These principles also apply when there is Treasury backing of central bank liquidity support. A central approval process (led by the Ministry of Finance or the cabinet) should be in place for the provision of government loans to ensure transparent ex-ante assessment and ongoing monitoring. For government guarantees of business loans, policymakers should consider partial guarantees (to ensure that debtors still have incentives to repay) and risk-based guarantee charges to limit government exposures to fiscal risks. Making provisions for expected losses and retaining the ability to recover assets are important. For example, the loan guarantee scheme for small and medium-sized enterprises in the Netherlands is limited to 75 percent of the loan value and loans with maturities of one year or less.

For low-income developing countries, ramping up public health expenditure is the number one priority irrespective of the fiscal space and debt positions. Moreover, given the large and temporary nature of the shock for most countries, some discretionary fiscal support, including to hard-to-reach households, is warranted even in countries with limited fiscal space. Automatic stabilizers, though usually small in developing countries, should be allowed to operate. Discretionary measures could include cash transfers or food subsidies to households under strain, including through digital technologies, and temporary, targeted support to hard-hit sectors (*Eswatini, Madagascar, Mauritius*). However, for oil-exporting countries that face a long-lasting shock from the decline in oil revenues (*Angola, Gabon*), priorities should be to fund health spending and combine appropriately paced growth-friendly spending adjustments with additional financing from donors and international financial institutions. Once the health crisis has waned, and as debt levels and their servicing cost to tax revenues rise substantially, all countries will need to put their fiscal positions back on a sustainable path and reduce debt vulnerabilities.

Broad-Based Fiscal Support

The expected weakening in aggregate demand from the rapidly evolving pandemic and its wider spillover effects (through trade, commodity prices, and tighter financing conditions) would in general call for broad-based fiscal support, such as economy-wide tax cuts or public investments, to drive the recovery once the health crisis recedes, especially where monetary policy rates are at or near their

effective lower bounds.[7] Such a fiscal stimulus could boost business and consumer confidence (Bachmann and Sims 2012; Guimaraes, Machado, and Ribeiro 2016). The role for early broad-based stimulus, however, is likely to be more limited at the current juncture for several reasons. First, many pockets of localized outbreaks and some national lockdowns imply that a generalized fiscal stimulus is likely less effective given disruptions to production processes and supply chains. The output multiplier effects are likely small until business activity normalizes. Second, higher health care spending and targeted expenditure and tax measures could amount to sizable support. And third, decision and implementation lags imply that a generalized fiscal stimulus would likely start to boost demand once the pandemic fades. This would call for accelerating the implementation of already-budgeted investment projects, expediting previously planned discretionary measures, and planning for more fiscal support over time depending on available fiscal space. Some discretionary fiscal easing was already enacted, or was planned for 2020, to boost subdued growth that prevailed before the COVID-19 outbreak in a number of advanced economies (*Canada*, *Germany*, *Japan*, *Korea*, *United Kingdom*) and emerging market and developing economies (*Chile*, *China*, *India*, *Uganda*). These plans should be fully executed. To facilitate economic recovery as the coronavirus is contained, governments could plan to enact, for example, temporary payroll tax cuts to incentivize firms to hire and time-bound value-added-tax reductions to bring forward consumption, as well as implement accelerated investment, repair, and maintenance initiatives (depending on the countries' financing constraints).

Broader Country-Level Policies to Ensure Sustained Economic Recovery

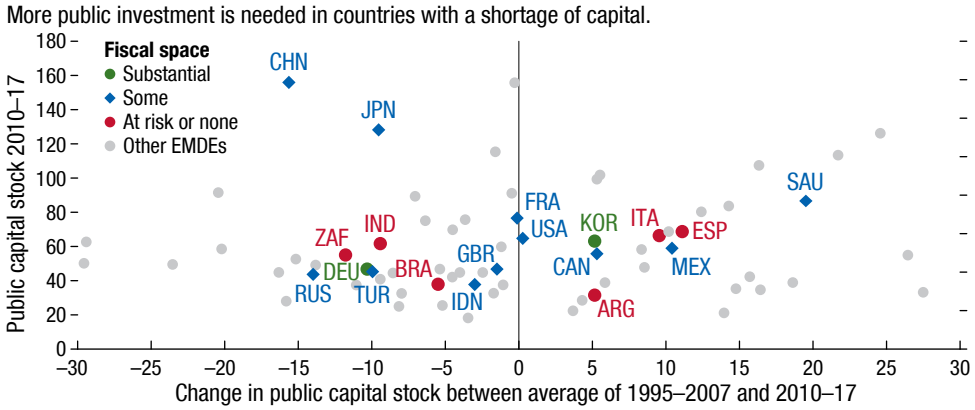
The current challenges arising from COVID-19 underscore the need to adopt, over time, broader enhancements to tax and expenditure policies that reduce vulnerabilities and boost medium-term growth. Improving social insurance schemes and safety nets can mitigate some concerns about how people would be protected in the event of a return of the current pandemic and future adverse macroeconomic shocks (Chapter 2). In high-debt countries, the pace and size of medium-term fiscal adjustment would need to be reassessed once the health crisis is over and the extent of the economic loss is better known. Any consolidation over the medium term should be appropriately paced, growth-friendly, and inclusive. Investing for the future remains an important priority for health care systems, infrastructure, low-carbon technologies, education, and research. This section discusses such recovery phase fiscal policies by country income group.

Advanced economies with ample fiscal space can take advantage of low interest rates to boost already weak potential growth by increasing spending on health care, research and development, training, and infrastructure—alongside changes to tax-benefit systems that can enhance resilience and raise productivity (*Germany*, the *Netherlands*). The case for public investment is particularly strong in countries with low or declining capital-to-GDP ratios (that is, where gross investment does not compensate for depreciation), slowing per capita capital accumulation (Figure 1.16), and weak aggregate demand. The fiscal expansion in *Korea* is expected to further foster female labor force participation and improve the social safety net (including to cushion the COVID-19 impact). To increase the automatic response of countries to shocks, unemployment insurance schemes and social safety nets should be improved to give adequate protection to vulnerable segments of the population.

Advanced economies with some or limited fiscal space should strive to reconfigure their spending and revenue mix to allow for greater capital spending (*Italy*, *United States*), particularly in sectors where the quality of public capital has deteriorated (for example, health care and transport infrastructure). For countries with large public capital stocks (*Japan*), additional investment should be selective (for example, to build resilience against pandemics and natural disasters, develop low-carbon technologies, and digitalize). In the *United States*, in addition to the resources allocated under the CARES Act, more direct demand stimulus should be put in place to bolster activity once the immediate health crisis has passed. This could include meeting well-documented federal, state, and local infrastructure

[7]Fiscal policies will likely have larger multipliers during the post-virus recovery phase given economic slack if the effective lower bound on monetary policy rates binds or monetary policy is accommodative (Auerbach and Gorodnichenko 2012, 2013; English, Erceg, and Lopez-Salido 2017; Erceg and Lindé 2014; Miyamoto, Nguyen, and Sergeyev 2018; Gali 2019), and debt remains low (Leeper, Traum, and Walker 2017; Mao and Yang, forthcoming). For countries with high debt levels, large-scale discretionary fiscal stimulus through revenue or spending measures is likely to have less expansionary effects (Ilzetzki, Mendoza, and Vegh 2013; Nickel and Tudyka 2014; Bi, Shen, and Yang 2016; Fournier 2019; Fotiou, Shen, and Yang, forthcoming).

Figure 1.16. Public Capital Stocks across Selected Countries
(Percent of GDP)



Source: IMF, Investment and Capital Dataset.
Note: Data labels use International Organization for Standardization (ISO) country codes. EMDEs = emerging market and developing economies.

needs, offering consumption vouchers to kickstart household spending, or investing to facilitate the transition to a lower-carbon economy. Additional relief can be provided to households, including further incentives to coordinate private creditors into offering delays in payments on auto, student, and credit card loans, as well as non-GSE (government-sponsored enterprise) mortgages. Moreover, once the COVID-19 crisis is over, prudent fiscal policies call for appropriately paced, inclusive, and credible adjustments to put debt ratios on a firm downward trajectory. To enhance the effectiveness of automatic stabilizers in these countries, social safety nets should be improved (*United States*).

Emerging market and developing economies' health systems generally have limited capacity, infrastructure needs that are pressing and substantially larger—with the potential to crowd in private sector investment (Eden and Kraay 2014)—and social safety nets that are relatively less developed (in coverage and adequacy) compared with advanced economies. In general, policymakers should finance development in a fiscally responsible way, improve the efficiency of public investment, and strengthen social safety nets. Taking advantage of unique identification systems (for example, Aadhaar in *India*) and new digital technologies (for example, the G-pay system in *Kenya*) can help deliver key public services, process applications for targeted income support, and implement direct cash transfers. The size of the initial fiscal support in response to the pandemic and financing constraints will determine the scope for additional fiscal action in the recovery phase. Once the COVID-19 crisis is over, high-debt countries should, in general, pursue fiscal consolidation supported by growth-friendly measures. However, the size and pace of adjustments would need to be carefully recalibrated, taking into account the full impact of the pandemic on the economy and the extent of debt vulnerabilities.

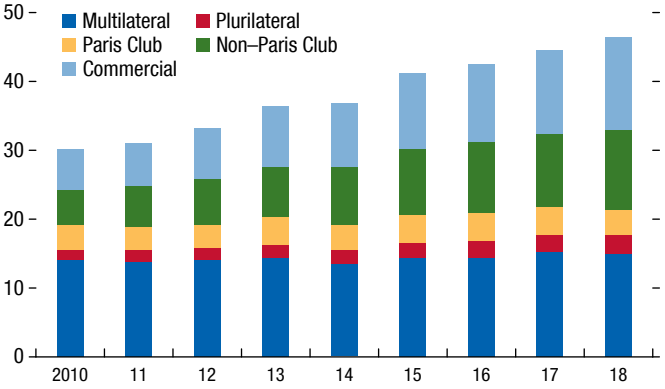
- *Among the large emerging market and middle-income economies*, additional on-budget fiscal support in *China* focusing predominantly on rebalancing and increased spending on low-income households, public health, and social safety nets is warranted should the recovery fall short even after supply constraints are removed. Refraining from off-budget, large-scale infrastructure investment remains appropriate in *China* as returns are diminishing. In *India*, the fiscal stance should be eased as needed to accommodate necessary increases in public health expenditure in response to the pandemic and shield against a more severe economic downturn, using targeted and temporary measures. Once the current economic situation improves, a more ambitious, credible medium-term fiscal consolidation path is needed to bring debt and interest expenditure down. Transparency must improve, and the practice of shifting spending off-budget must be curtailed. In *Brazil*, further easing of fiscal policy may be needed to arrest a steep deterioration in aggregate demand. However, the authorities should continue to pursue fiscal reforms and develop a medium-term fiscal framework that preserves the expenditure ceiling rule

and puts debt on a downward trajectory. Maintaining fiscal credibility is essential to restore investor confidence and attract much-needed investment once economic conditions start to normalize. *South Africa* should focus on containing the pandemic in the short term and undertaking fiscal consolidation over the medium term, accompanied by improving the efficiency of spending and implementing structural reforms. For many oil-exporting countries, the sharp fall in oil prices highlights the need for economic diversification as well as investing in low-carbon technologies.

- *Low-income developing countries* should strike a balance between addressing development needs and safeguarding debt sustainability once the health crisis wanes. Achieving this balance requires adhering to sound medium-term fiscal frameworks, raising domestic revenues, improving the efficiency of spending, and facilitating private sector activity through structural reforms and improvements in governance and the rule of law (Desruelle, Razafimahefa, and Sancak 2019). Priorities include the following:
  - *Mobilizing domestic revenues when the pandemic abates:* The average tax-to-GDP ratio of low-income developing countries is significantly lower than that of emerging market and middle-income economies. The current tax gap (the difference between potential and realized tax ratios) is large—estimated at 3–5 percent of GDP in sub-Saharan African countries (May 2018 *Regional Economic Outlook: Sub-Saharan Africa*). Although challenging, building tax capacity is needed to substantially increase government revenues over the long term—from the current median level of 15 percent of GDP—in order to facilitate efforts to meet the needs outlined in the United Nations Sustainable Development Goals (Gaspar and others 2019). Cross-country experience shows that bolstering revenue collection requires a medium-term revenue strategy in which both tax policy and revenue administration efforts are well coordinated, such as the domestic revenue mobilization strategy recently adopted in *Uganda*. Measures include implementing well-designed value-added taxes, including timely refunds; building capacity for property taxation; gradually expanding the base for corporate and personal income taxes, including by eliminating costly tax exemptions; and efficiently taxing extractive industries (IMF 2019a). Other priorities include adopting a comprehensive risk-based strategy to improve compliance, with a focus on large taxpayers (*Uganda*). These efforts should be complemented with improved governance (April 2019 *Fiscal Monitor*). Concerns that the value-added tax might be regressive are better addressed within the overall tax-benefits system by strengthening safety nets.
  - *Improving debt management and transparency:* Despite improvements in debt management and transparency in many low-income developing countries (*Cameroon, Ghana*), important gaps remain in some countries, including insufficient audits, lack of operational risk management, and incomplete coverage of debt statistics (such as those on borrowing terms and conditions of state-owned enterprises; see Chapter 2) (IMF 2019b). The likely impact of the COVID-19 pandemic on countries' public finances only reinforces the need to improve debt management and transparency. Further efforts are needed to manage risks and keep up with the evolving complexity of public debt structures and the rising share of external and nonconcessional financing (Figure 1.17). Measures include publishing regular debt reports, broadening the coverage of debt statistics, and limiting risks from contingent liabilities. Frontier economies, which have a large share of nonconcessional financing, should strengthen debt management governance (*Ghana*). These would help further develop local debt markets.

Figure 1.17. Low-Income Developing Countries: External Debt, by Creditors, 2010–18
(Percent of GDP)

The creditor base has shifted toward commercial and non–Paris Club creditors.



Sources: World Bank Debt Reporting System; and IMF staff estimates.

Box 1.1. Understanding the Implications of Different Types of Fiscal Measures for Public Finances

To address the economic and social challenges posed by the COVID-19 pandemic, governments are using fiscal measures that take various forms and have different budgetary and debt-related implications (Figure 1.1.1). Additional spending or tax cuts result in immediately higher budget deficits. Support to companies in financial trouble through loans or equity injections does not impact budgets directly but may increase debt or require additional borrowing. Guarantees do not affect deficits or debt in the near term, but they expose the government to medium- to long-term fiscal risks.

The full cost of most budgetary "above-the-line" measures is reflected in the fiscal balance, government debt, and increased borrowing needs in the short term. These measures include additional spending (for example, health services and unemployment benefits); capital grants and targeted transfers (for example, wage subsidies or direct transfers); or tax measures (for example, tax cuts or other relief) provided through standard budget channels. Deferrals of tax payments and social security contributions have a temporary effect on the deficit and debt, and aim to provide liquidity to taxpayers. Although deferrals create a financing need today, the government will eventually be repaid in the future.

"Below-the-line" measures generally involve the creation of assets, such as loans or equity in firms. Equity injections or loans to firms may have little or no upfront impact on the fiscal deficit unless they have a concessional component, but they can increase debt or reduce liquidity. Government guarantees granted to banks, firms, or households 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. A loan default or loss in equity would reduce the government's assets, whereas a call on a guarantee would increase public debt, as the guaranteed debt is assumed by the government. These would reduce government net worth (assets net of liabilities).

Figure 1.1.1. Likely Impact of Measures on the Government Budget and Debt

	Today		Tomorrow[1]	
	Budget Balance	Debt	Budget Balance or Net Worth	Debt
Additional spending or tax cuts	↓	↑	Unchanged	
Tax deferrals	↓	↑	↑	↓
Loans[2]	Unchanged	↑	↓ (if firm defaults)	Unchanged
Equity injections[2]	Unchanged	↑	↓ (if firm fails)	Unchanged
Guarantees[2]	Unchanged	Unchanged	↓ (if called)	↑

Source: IMF staff.
Note: All transactions are assumed to be financed through debt rather than by drawing on other government funds.
[1]Additional effect in the future rather than a combined effect with today's incurrence.
[2]If transactions are reasonably expected to have an economic rate of return. If not, treated like budgetary spending and revenue measures.

Box 1.2. A Wave of Protests: Economic Reforms and Social Unrest

An increasing number of protests have broken out during the past two years in various parts of the world, challenging governments and policymakers to understand and address the root causes of discontent. In *Ecuador*, *Haiti,* and the *Islamic Republic of Iran*, protests started when the government announced an increase in fuel prices, while protests in *France* were related to reforms of the railway system and pensions, and planned fuel tax increases, among other factors. In *Sudan,* a sharp increase in the price of bread and a shortage of fuel led to social unrest. In *Lebanon,* people took to the streets when the government announced the introduction of fees on internet-based calls, whereas in *Chile,* a small increase in public transport fares sparked social protests on much broader issues.

Protests over policy reforms—in particular, over price increases of basic goods and other fiscal measures—are not a new phenomenon (Morrisson 1996). For instance, cuts in public wages or increases in food and fuel prices sparked protests in *Burkina Faso, Ecuador*, *Nigeria,* and *Zambia* in the 1980s, and in *Gabon, Indonesia,* and the *Philippines* in the 1990s. In other cases, political rather than economic measures provoked unrest. Governments have struggled to understand the causes of protests and to design policies that could help reduce the risk of social unrest.

Common Themes: Root Causes and Triggers of Social Unrest

Each country's protests are unique, but they seem to have broad common themes. Specific measures may trigger protests, but rising tensions quickly transform social unrest into a broader critique of government policies. People take to the streets because of long-standing grievances and perceptions of mistreatment (Passarelli and Tabellini 2017). High or rising levels of poverty and inequality, particularly in countries with weak social safety nets, can contribute to unrest. Protests are also more likely in countries with histories of widespread corruption, lack of transparency in public policy, and poor service delivery. Across countries, many groups feel that they lack a voice in public matters and that they are not well represented by existing political parties or the political system. According to Piketty (2018), for example, in some Western democracies, established political parties on both the left and right have become dominated by "highly educated or merchant" elites, leaving the working class with less representation. In other regions, younger generations have been at the forefront of many recent protests, expressing their perceptions that existing policies pay scant attention to their welfare. Protests often also occur in waves, signaling a potential contagion effect, including across borders (Katz 1997; Chen, Lu, and Suen 2016). Examples include the Arab Spring in the early 2010s and the protests spreading across several countries in Latin America in 2019.

Although the long-standing challenges discussed above are multifaceted and have deep political, historical, and sociological roots, the triggers for protests are often related to specific types of economic policy measures that have commonalities across countries. Price increases for basic goods and energy products or reductions in public wages are more likely to face strong opposition because they threaten the livelihood of vulnerable segments of the population or take away important benefits from a societal group that can organize strong opposition, such as civil servants or the urban middle class. By comparison, cuts in public investment or general current expenditures entail less risk of unrest because their costs are sometimes deferred or indirectly dispersed over the entire population rather than concentrated on specific groups (Morrisson 1996). Countries could be vulnerable to new waves of social unrest, for example, if support measures are seen as insufficient to mitigate the COVID-19 crisis and its economic fallout, or as unfair by favoring the wealthy, or when those measures are later withdrawn.

Policy Design Matters

Policymakers should address the country-specific, complex root causes of discontent. In the near term, policymakers have more control over the design of policy reforms and, in this regard, cross-country experiences provide lessons on how to reduce the likelihood of triggering unrest.

- Adequate planning and a clear strategy based on analysis and on mitigation measures increase the likelihood of success, as does an electoral mandate for reform (Clements and others 2013; OECD 2009). A gradual approach that allows citizens to adapt has often proven to be more politically acceptable. In contrast, reforms are less successful if undertaken hastily in response to immediate economic pressures (OECD 2018).

Box 1.2 *(continued)*

- A reform plan should also include a strategy for overcoming opposition from interest groups, and mitigating measures for adversely affected groups, both of which are critical to building public support (Clements and others 2013; Inchauste and Victor 2017; Furceri and others 2019). Implementing mitigation measures before reforms, and publicly linking such measures to the reforms, can help demonstrate the government's commitment to protecting relevant groups. Any mitigation measure should provide adequate coverage and generosity and be visible to the relevant groups. For instance, the successful energy subsidy reform in the *Islamic Republic of Iran* in 2010 was preceded by a public information campaign accompanied by substantial and immediate cash transfers to households. In contrast, the large increase in fuel prices in November 2019, without prior notice or compensation, was met with protests because it occurred during a period of high unemployment and underlying dissatisfaction. When energy price increases triggered unrest in *Haiti* in 2018 and *Ecuador* in 2019, mitigation measures were either absent or not visible to the public, or were lacking in coverage and generosity. In *Morocco*, in contrast, the authorities phased out subsidies gradually and consulted stakeholders in 2014 before implementation of the reform, and a smoother rollout ensued.
- A far-reaching and consistent communications strategy can help build broad public support. At the current juncture, making clear that support measures to address the COVID-19 crisis are temporary could help manage expectations. More generally, the communication strategy should include consultation with those stakeholders who are affected by the reform and can influence its success (Worley, Pasquier, and Canpolat 2018).[1] The information campaign should be transparent, explain the rationale for reform and the cost of the status quo, and present mitigation measures for adversely affected groups (Clements and others 2013). For example, ahead of the 2015 introduction of the value-added tax in *The Bahamas*, the government embarked on an in-depth public information campaign and implemented mitigation measures. The public must be made aware that the status quo is costly and of how any savings from reform can be redeployed to benefit the population (for example, by scaling up education and health care spending) (Inchauste and Victor 2017; OECD 2018).
- Although these lessons are grounded in empirical evidence and cross-country experience, it is important to recognize that the factors leading to unrest remain unpredictable and depend on rapidly evolving circumstances specific to individual countries as well as on regional and global factors.

[1]See Abdallah and others (2019) for an application of a communications strategy in Colombia.

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CHAPTER 2

IDEAS TO RESPOND TO WEAKER GROWTH

Introduction

Low growth and investment, adverse shocks, and low inflation and interest rates during the past few years put fiscal policy at the forefront. The COVID-19 pandemic of 2020 has strengthened the case for fiscal policy action and heightened its urgency. In the past few years, growth has been subdued in advanced economies, reflecting various factors including a moderation in capital accumulation (Box 2.1). Sustained high and inclusive growth is critically needed for development in emerging market and developing economies. Inflation has trended down since the 1980s and is currently below targets in two-thirds of inflation-targeting countries. In advanced economies, inflation expectations are anchored at low levels. Nominal interest rates are at historical lows, shifting the balance of cyclical demand support toward fiscal policy. This is because the natural rate of interest—the interest rate that keeps the economy at full employment with stable inflation—is estimated to have fallen significantly and is now below zero in some economies (Rachel and Summers 2019). Consequently, the effective lower bound on policy rates binds more frequently. Moreover, the nominal interest rate on new government borrowing, although at times volatile, is currently negative in many advanced economies (something historically unprecedented). These patterns have been exacerbated by the COVID-19 pandemic (Chapter 1), resulting in a global recession this year, and are likely to persist during the post-shutdown recovery.

This chapter explores how fiscal policies can respond to weak growth with IDEAS: (1) Investing for the future in infrastructure, low-carbon technologies, health care, education, and research; (2) enacting Discretionary measures that can be deployed contingent upon a particular state of the economy (Chapter 2 of the April 2020 *World Economic Outlook*); and (3) Enhancing Automatic Stabilizers—particularly by improving unemployment benefits and social safety nets—that are key fiscal tools being used by countries in response to the pandemic. In discussing the IDEAS approach, the chapter will emphasize maximizing the benefits from sustainable, resilient public investment and improving social safety nets (that is, noncontributory transfer programs financed by general government revenue) (Figure 2.1).

Low-for-long interest rates present an opportunity for quality public investment across the world to boost growth. Discretionary fiscal policies can have larger fiscal multipliers when policy rates are at the effective lower bounds and economic slack and fiscal space exist, because the policies can lead to a virtuous cycle that spurs private consumption and investment through higher inflation expectations and lower real interest rates (Christiano, Eichenbaum, and Rebelo 2011; Eggertsson 2011; Woodford 2011; Auerbach and Gorodnichenko 2012, 2013; Correia and others 2013; Farhi and Werning 2016). With significant supply disruptions, the size of fiscal multipliers is more uncertain during pandemics and before the recovery phase. High levels of public debt, however, remain a vulnerability and impose constraints on the use of countercyclical fiscal policies in downturns (Romer and Romer 2019; April 2018 *Fiscal Monitor*). Moreover, when public debt is high, the multiplier effects of discretionary fiscal policies are lower (Bi, Shen, and Yang 2016). At high debt levels, automatic stabilizers can still be effective at reducing macroeconomic fluctuations. To that end, strengthening social safety nets can be highly effective, so it is an urgent priority to tailor the safety nets to the special situation of the pandemic.[1]

[1]The merits of improving tax-benefit systems go well beyond stabilization. Reducing tax distortions and providing incentives to encourage labor supply and investment, along with well-designed benefit systems, could contribute to supply potential and long-term growth. A strong safety net and unemployment insurance can reduce inequality and the need for precautionary savings (underlying causes of prolonged demand weaknesses), particularly for emerging market and developing economies (Di Maggio and Kermani 2016; Hsu, Matsa, and Melzer 2018). At the same time, if the burden of structural reforms and the cost of deleveraging fall on low-income households and small businesses, a well-designed safety net can alleviate such costs.

Figure 2.1. A Road Map for Fiscal Policies

Response to Weaker Growth

- **I**nvestment in the Future
- **D**iscretionary Measures
- **E**nhancing **A**utomatic **S**tabilizers (taxes, unemployment benefits, and social safety nets)

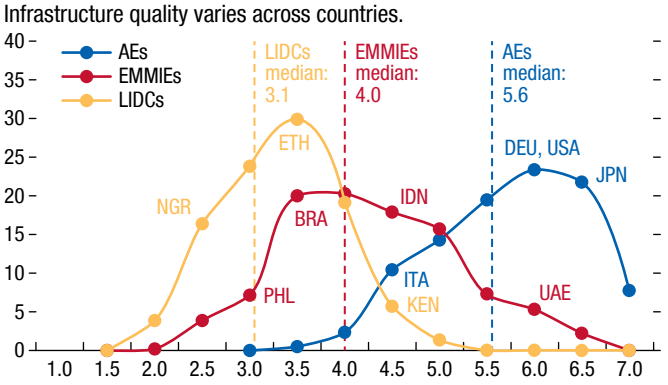
Source: IMF staff.

Investment for Growth

The slowdown in global growth has been linked, in part, to a moderation of capital accumulation. In advanced economies, total investment per person (public and private) was essentially unchanged for a decade: at $9,867 in 2007 and $9,991 in 2017, in constant 2017 US dollars (IMF Investment and Capital Database). In a range of countries, high-return public investment could act as a bridge to sustainable, resilient, and inclusive economic growth, including by lifting productivity, creating jobs, and spurring private sector investment. It could also improve public sector net worth because the value of the resulting assets would likely exceed the liabilities incurred (October 2018 *Fiscal Monitor*). In many emerging market and developing countries, infrastructure bottlenecks are impediments to long-term development (Chapter 3 of the October 2014 *World Economic Outlook*; Figure 2.2).

Figure 2.2. Distribution of Overall Infrastructure Quality, by Income Group

(Frequency in percent, 2007–17 average)



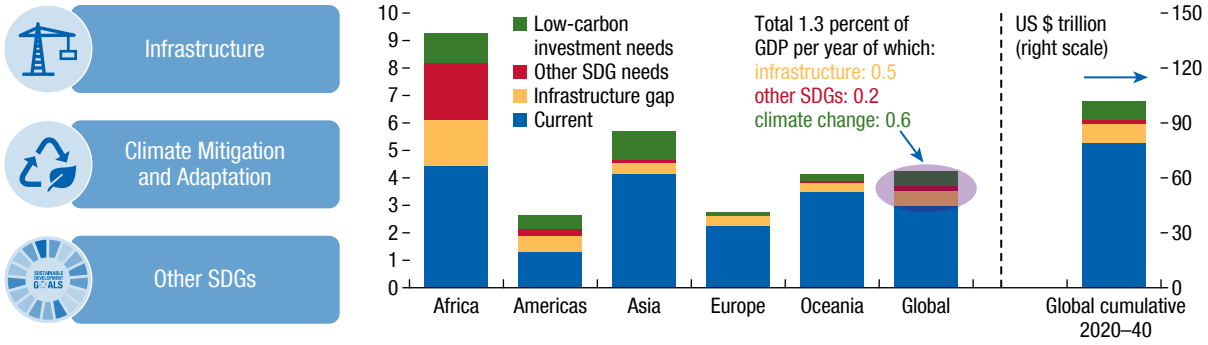
Source: World Bank.
Note: Based on the scoring of infrastructure quality for more than 150 countries across the world. Scoring of overall infrastructure quality ranges from 1 (lowest) to 7 (highest). Data labels use International Organization for Standardization (ISO) country codes. AEs = advanced economies; EMMIEs = emerging market and middle-income economies; LIDCs = low-income developing countries.

Investment inefficiencies and other structural rigidities, especially in emerging market and developing economies, could reduce expected returns on public capital and raise debt-to-GDP ratios following a scale-up of public investment. Decisions, including whether and how much to scale up quality public investment, will depend on the needs in specific sectors and their returns, prospects for sustainable financing (debt financed versus budget neutral), and the efficiency of public investment. A sizable increase in public investment—particularly if undertaken in a range of countries—could affect inflation and interest rates, which are especially relevant during the current macroeconomic situation for many advanced economies. For emerging market and developing countries, while investment needs are large and inefficiencies greater, a critical challenge is to finance development in a fiscally responsible way given high, and in many cases still rising, public debt (Schwartz and others 2020).

- *Sustainable investment areas:* Public investment is particularly desirable in sectors that have large positive externalities and could crowd in private sector investment (Acemoglu, Aghion, and Zilibotti 2006). Investment in health and emergency services will improve living standards, enhance resilience, and help mitigate risks from future epidemics. Key priorities include infrastructure, low-carbon technologies, and progress toward other Sustainable Development Goals. Additional investment needs are estimated at 1.3 percent of global GDP per year (Figure 2.3) or, on a cumulative basis, exceeding $20 trillion (measured in current US dollar terms) over the next two decades, although these estimates are subject to considerable uncertainty. Investment needs consist of the following:
  - *Infrastructure:* According to the Group of Twenty (G20) initiative on the global infrastructure outlook, an additional investment of 0.5 percent of global GDP per year is needed over the next two decades to cover infrastructure gaps,

Figure 2.3. Global Investment Needs for Infrastructure, Climate Change, and Other SDGs
(Percent of annual regional GDP; trillions of US dollars, right scale)

Additional global investment needs are large and concentrated in emerging market and developing economies.



Sources: Global Infrastructure Hub; Oxford Economics; and IMF staff estimates.
Note: The blue bars show the current investment levels across regions as of the end of 2017. Additional global investment needs are estimated, on average, at 1.3 percent of global GDP per year during 2020–40 (exceeding $20 trillion in current US dollars), and comprise infrastructure (0.5 percent of GDP), other SDGs (0.2 percent of GDP), and low-carbon investment (0.6 percent of GDP). The right panel shows the cumulative investment needs in trillions of US dollars (constant 2019 prices and exchange rates) over the next two decades. SDGs = Sustainable Development Goals.

mostly for transportation.[2] In addition, investment needs for upgrading health infrastructure (medical facilities and equipment) are large.

- *Climate change:* An additional investment of 0.6 percent of global GDP per year is needed for adaptation to climate change as well as the transition to cleaner energy systems—to limit the rise in global temperatures to below 2 degrees Celsius in this century compared with preindustrial levels (October 2019 *Fiscal Monitor*).[3]
- *Other Sustainable Development Goals:* Meeting these goals (for access to clean water, sanitation, and affordable electricity) requires an additional 0.2 percent of global GDP in investment per year up to 2030, according to the G20 initiative on the global investment outlook. These additional investment needs are over and above needs described in the first bullet on infrastructure and are mostly concentrated in sub-Saharan Africa and other low-income developing countries, amounting to 5 percent of regional GDP per year in Africa.[4]

- *Investment management:* Scaling up public investment too much and too fast, going beyond a country's absorptive capacity, risks waste rather than sustained output growth (Presbitero 2016). Across countries, losses and waste in public investment are prevalent. On average, more than one-third of funds for public infrastructure are estimated to be lost owing to inefficiencies (IMF 2015a; Baum, Mogues, and Verdier 2020). Weaknesses in infrastructure governance, such as optimism bias in project appraisal, limited interagency coordination, corruption, and weak budget processes, are critical factors behind such inefficiencies and poor investment outcomes, particularly in the allocation and implementation of public investment (Schwartz and others 2020; April 2019 *Fiscal Monitor*). In countries where subnational governments are critical in executing public investment, the fragmentation of public infrastructure delivery, local capacity constraints (Germany, Italy), or unclear delineation of land rights (India) could emerge as obstacles to large public investment. For example, in Germany, where two-thirds of public investment is executed by local governments (states and municipalities), earmarked deferral funds for

[2]The size of infrastructure needs in energy, telecommunications, transportation (airports, ports, rail, and roads), and water sectors for each of the 50 countries is calculated based on trend investment projections relative to best performers (that is, the 75th percentile) among countries with similar income levels. Missing data from remaining countries are scaled by their relative GDP weights to arrive at regional and global infrastructure needs. Additional Sustainable Development Goal investment needs for access to clean water, sanitation, and electricity are over and above those infrastructure needs indicated above.

[3]Investment needs for climate adaptation are estimated at $1.8 trillion globally cumulatively over 2020–30, or 0.2 percent of global GDP per year (Global Commission on Adaptation 2019). Key areas include early warning systems, climate-resilient infrastructure, dryland agriculture crop production, mangrove protection, and water resource management.

[4]Including health and education investment toward the Sustainable Development Goals could add an additional 0.2 percent of global GDP per year to the global investment needs (Gaspar and others 2019).

investment are underutilized. That is largely because of capacity constraints in some localities and price pressures in the construction industry, even though local municipalities have backlogs of investment needs. India's budget allocations for capital expenditure are not fully executed, particularly at the state level. Bolivia experiences weak intergovernmental coordination.

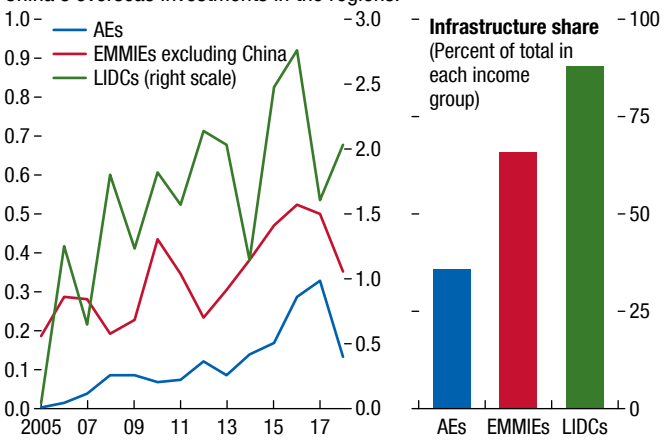
To increase the long-term output gains from increased public investment, investment efficiency needs to be improved. Sound institutional processes, including careful project selection, management, and evaluation, as well as a clear delineation of responsibilities and mechanisms to ensure coordination between central and subnational governments, should be in place to ensure productive investment (IMF 2015a). Improving public investment management (to the 90th percentile of best performers in each income group) could halve the size of investment inefficiencies across countries (Baum, Mogues, and Verdier 2020). Improving investment efficiency is by no means limited to emerging market and developing economies. Advanced economies can improve public investment processes. For example, policymakers can establish a central register of infrastructure projects, tighten financial rules on public-private partnerships, and disclose more ex post reviews and audits of capital projects. Policymakers can also strengthen the links among the national planning framework, the long-term capital plan, and the budgeting process (*Ireland*) (IMF 2017). Most countries should also accelerate their decision-making processes and strengthen implementation capacity (*Italy, Germany*).

- *Sustainable financing:* While government borrowing costs in many advanced economies have declined to unprecedented low levels, the rates of return on private capital have largely held up (Farhi and Gourio 2018). Considering weak private investment, to the extent that the risk-adjusted social return on new public investment is higher than government financing costs, a greater set of public investment projects is worth undertaking (Blanchard 2019). In this environment, public investment is less likely to crowd out private activity. In contrast, public investment in electricity networks could encourage, for example, private investment in low-carbon technologies (October 2019 *Fiscal Monitor*). However, in some countries with high debt-to-GDP ratios—including several advanced economies—adverse market reactions to large public investment scale-up could emerge, resulting in higher financing costs and further increases in debt vulnerabilities. In such cases, a budget-neutral increase in investment would deliver better outcomes (that is, higher output and lower debt ratios).

In most emerging market and developing economies, meeting large investment needs in a fiscally responsible way is challenging (October 2019 *Regional Economic Outlook: Sub-Saharan Africa*). Over the past decade, large emerging market economies, such as China, have played an important role in financing infrastructure investment in many emerging and developing economies, such as *Cambodia, Ethiopia,* and *Venezuela* (Figure 2.4; see also IMF 2019a; Scissors 2019). Loans from China accounted for 17 percent of total public external debt of low-income developing countries in 2018—a fourfold increase from the 2008 levels (IMF 2019b). Governments have relied on public-private partnerships to encourage private sector participation in

Figure 2.4. Overseas Investment by China, 2005–18
(Percent of recipients' GDP and infrastructure share of total overseas investment by China in the region)

China plays an important role in infrastructure investment in emerging market and developing economies, accounting for more than half of China's overseas investments in the regions.



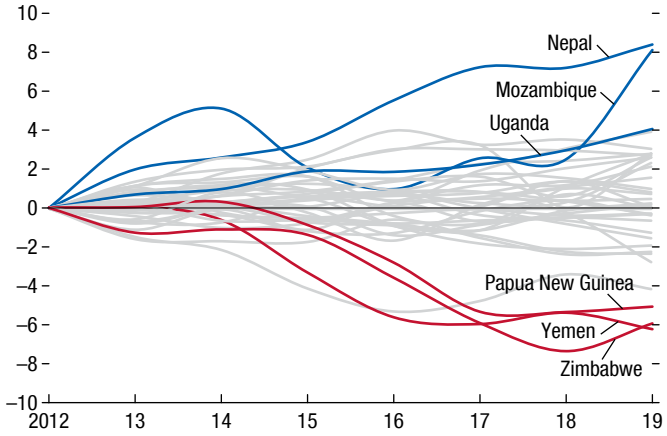
Sources: China Global Investment Tracker database; Scissors 2019; and IMF staff estimates.
Note: Based on more than 3,000 individual transactions during 2005–18 for 150 economies. Data include both private and public investment projects. Infrastructure share indicates the percentage of infrastructure investment (construction, energy, transportation, and utilities sectors) in total overseas investment financed by China in each income group. AEs = advanced economies; EMMIEs = emerging market and middle-income economies; LIDCs = low-income developing countries.

infrastructure projects. Given the sizable investment needs, direct private investment and financing are critical and could be facilitated by structural reforms, such as improving the business environment. Furthermore, supranational coordinated investment projects could play a role in regional infrastructure development or when the depth of challenges surpasses the capacity of individual countries (for example, cross-country renewable energy networks). The rise of multinational state-owned enterprises globally has also contributed significantly to cross-border investment flows, including in infrastructure (Chapter 3).

Countries need to balance the risks to debt sustainability against the benefits of additional public investment. This would call for stronger governance and institutions, better capture of the returns to investment, management of fiscal risks arising from public-private partnerships (Irwin, Mazraani, and Saxena 2018), greater debt transparency, and improved coordination with creditors to ensure debt sustainability. Based on current trends, meeting the Sustainable Development Goals in low-income developing countries would likely imply new borrowings on nonconcessional terms and could lead to a substantial increase in average interest rates by 110 basis points (IMF 2019b). Increasing tax-to-GDP ratios (Figure 2.5), seeking concessional financing, and involving the private sector are critical.

Figure 2.5. Low-Income Developing Countries: Change in Tax Revenues, 2012–19
(Percent of GDP)

Progress in tax collection is mixed.



Source: IMF, World Economic Outlook database.
Note: The lines show the cumulative changes in tax revenue-to-GDP ratios of individual countries since 2012.

What would be the macroeconomic effects of higher public investment to meet the needs estimated in Figure 2.3? Can such scaling up of investment "move the needle" on growth, inflation, and real interest rates? A general equilibrium model can help quantify (1) the growth and debt implications of meeting global investment needs, and in a separate scenario, of addressing Europe's green investment (which is specified in the Sustainable Europe Investment Plan) and infrastructure needs; and (2) estimated effects on inflation and interest rates, illustrating the extent to which fiscal policy can support monetary authorities in achieving inflation targets (model description is provided in Annex 1.1).[5]

- When public investment is efficient (that is, assuming demand inadequacy but not supply constraints), a sustained increase in public investment across the world (1.3 percent of global GDP initially, then declining very gradually) could increase (1) global GDP by an estimated 1.4 percent per year, on average, over a 20-year horizon;[6] (2) inflation by 66 basis points per year initially; and (3) the real interest rate by 14 basis points over the 20-year horizon. The impact on the public debt-to-GDP ratio would be limited. In a separate exercise for the European Union (EU), a sustained public investment increase of 0.6 percent of EU GDP on infrastructure and decarbonization would increase EU output by 0.7 percent per year, on average, over a 20-year horizon. For illustrative purposes, the green investment needs of 0.25 percent of EU GDP are assumed to be new financing rather than from rebalanced EU budget expenditure. A public investment increase would also add to inflation initially, raise long-term interest rates modestly, and result in a modest rise in the public debt-to-GDP ratio (see panels 1 and 3 of Figure 2.6).
- However, when supply-side bottlenecks and absorptive capacity constraints are binding (in skills, institutions, and management), investment efficiency

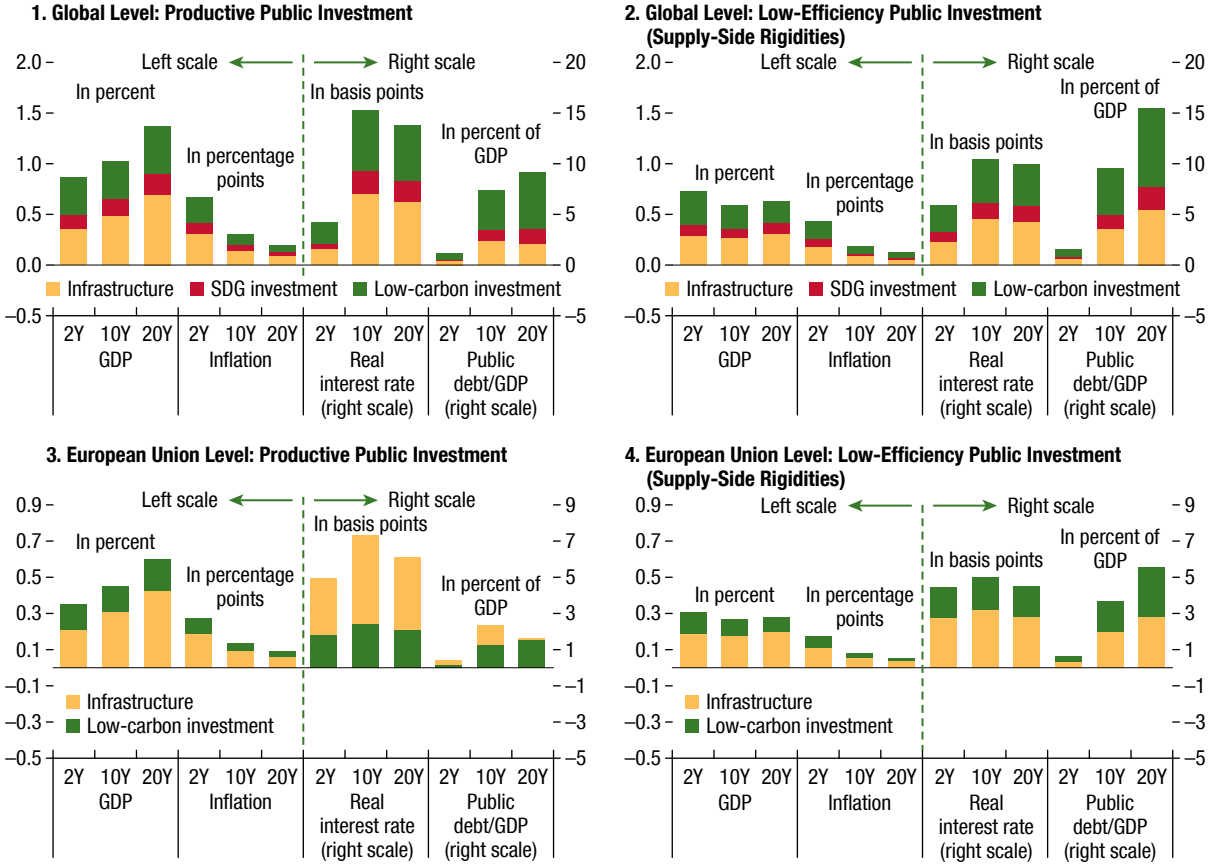
[5]The model assumes manageable financing costs and does not distinguish between different types of capital and thus does not capture the complementarity or substitutability of green investment with existing capital. If countries levy higher carbon taxes to mitigate climate change, parts of the existing capital (for example, brown assets from coal mines to oil fields) will be replaced by new "green" capital if carbon pricing is combined with supporting policies to encourage private investment in low-carbon technologies. Further research is needed to study these effects.

[6]The cumulative public investment injection over 20 years is 18 percent of global GDP and the increase in GDP is estimated to be 28 percent (assuming efficient investment). Thus, the cumulative multiplier is above 1 in both simulation exercises.

Figure 2.6. Simulated Macroeconomic Effects of a Public Investment Push

(Average annual deviations from the path without a public investment push for GDP, inflation, and real interest rates; cumulative change in percent of GDP over time horizon for public debt)

High-quality efficient public investment, if persistent, can lift growth, inflation, and interest rates. If investment is inefficient, the macro impact will be only modest, but public debt will surge.



Source: IMF staff estimates based on a revised version of the model developed in Traum and Yang 2015.
Note: In panels 1 and 2, additional global investment needs are estimated at 1.3 percent of global GDP initially and are assumed to decline gradually over time. Those needs are composed of infrastructure (0.5 percent of GDP), low-carbon energy investment (0.6 percent of GDP), and investment in other SDGs (0.2 percent of GDP). The supply-side rigidities scenario assumes efficiency of additional public investment at almost one-half that in the productive scenario. In panels 3 and 4, additional investment needs for the European Union are estimated at 0.6 percent of regional GDP initially and are assumed to decline gradually over time. Those needs are composed of infrastructure (0.35 percent of GDP) and low-carbon investment (0.25 percent of GDP). Model assumptions are outlined in Online Annex 1.1. SDGs = Sustainable Development Goals.

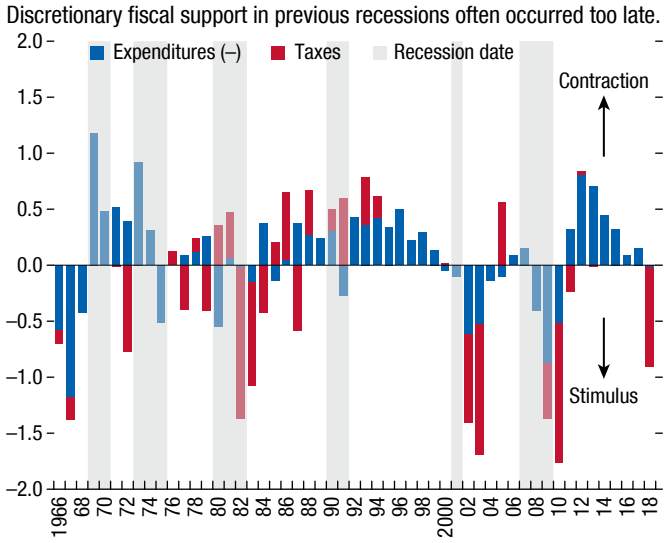
would be lower (Shen, Yang, and Zanna 2018; Berg and others 2019). In that case, scaling up public investment would have smaller effects on growth and inflation (with little support for monetary policy in achieving inflation targets) while leading to a large rise in debt-to-GDP ratios (see panels 2 and 4 of Figure 2.6).

Discretionary Measures

Given the information, decision, and implementation lags in enacting discretionary measures, policymakers should identify high-quality measures that can be deployed quickly when downside risks materialize. In previous recessions, discretionary measures were usually undertaken too late and were, at times, not effective. For example, discretionary measures in the *United States* came late in half of previous recessions (Figure 2.7). US county-level data also show that the discretionary stimulus from the American Recovery and Reinvestment Act during the Great Recession was not well targeted to areas where the recession was more severe (Crucini and Vu 2017).

Well-prepared countercyclical discretionary measures can be effective, as fiscal multipliers tend to be larger in downturns than under normal circumstances.

Figure 2.7. Breakdown of Discretionary Expenditure and Revenue Measures in the United States, 1966–2018
(Percent of GDP)



Sources: Congressional Budget Office 2013; Romer and Romer 2010; and IMF staff.
Note: Gray-shaded areas indicate recession periods. Negative (positive) numbers refer to stimulus (contractions).

Such measures are particularly appropriate in response to deep and prolonged downturns, where support through existing automatic stabilizers and social safety nets is not sufficient. To improve the timeliness of discretionary stimulus, an option is to enact discretionary measures that will be automatically activated—that is, a rules-based fiscal stimulus (Chapter 2 of the April 2020 *World Economic Outlook*)—when economic conditions deteriorate (for example, a decline in job creation below a certain threshold or a large increase in the unemployment rate above a certain level or duration) (Solow 2005; Blanchard, Dell'Ariccia, and Mauro 2010; Boushey, Nunn, and Shambaugh 2019; Eichenbaum 2019; Blanchard and Summers 2020). The rules-based fiscal stimulus should be designed in ways that prevent a continued debt buildup over the long term. On the revenue side, examples include temporary value-added tax cuts or tax policies targeted at low-income households (such as a flat, refundable tax rebate) or tax policies affecting firms (such as cyclical investment tax credits). On the expenditure side, measures include temporary extensions of the coverage and duration of unemployment benefits (for example, emergency unemployment compensation programs in the *United States*) or well-targeted transfers to low-income or liquidity constrained households, as they are more vulnerable to shocks and have a higher marginal propensity to consume (Landais and Spinnerwijn 2019). These policies can also be tailored to respond to the ongoing health crisis (Chapter 1).

To avoid policy lags when stimulus is most needed, a pipeline of appraised projects (especially those involving upgrades, maintenance, and repairs) can be identified for timely implementation when needed. At the current juncture, the scope for large public investment is limited considering supply disruptions (lockdowns and quarantines). Since public investment has a long lead time, however, efforts should start now to review the pipeline, identify bottlenecks, and prepare a set of ready-to-implement projects that can be deployed. Maintenance and repairs can be quickly scaled up as part of broad-based stimulus when supply disruptions ease. Some governments (*Australia, Ireland, New Zealand, Norway*) have a rolling pipeline of public infrastructure projects within a budget constraint over the long term, which provides details on the timing, sequencing, and scale of future public investment at different levels of government. In downturns, implementation of smaller projects can be accelerated.

*E*nhancing *A*utomatic *S*tabilizers

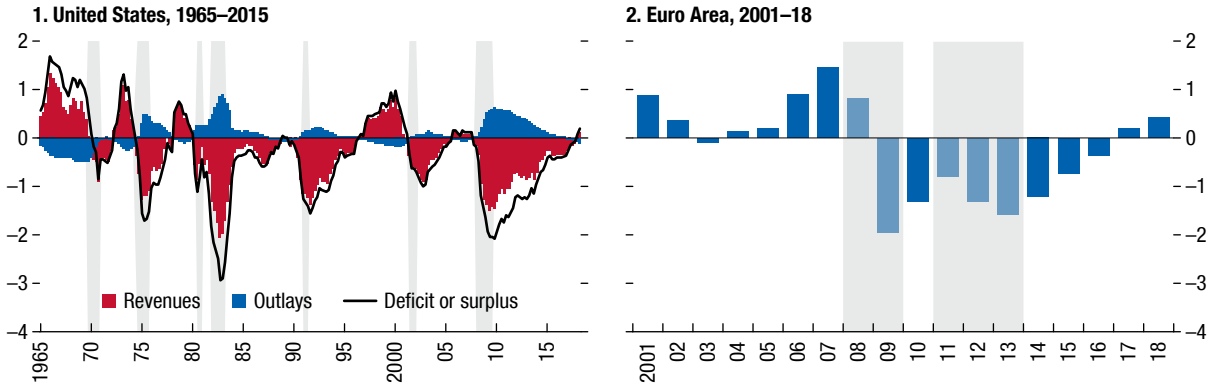
Enhancing automatic stabilizers by improving their design is another promising route toward reducing macroeconomic volatility and building resilience against downturns (Baunsgaard and Symansky 2009; Blanchard, Dell'Ariccia, and Mauro 2010; Spilimbergo and others 2010; Oh and Reis 2012; McKay and Reis 2016). The pandemic has highlighted the importance of automatic stabilizers in protecting people from losing jobs and incomes (Chapter 1). Automatic stabilizers are mechanisms built into government budgets that raise (reduce) spending or reduce (increase) taxes when the economy slows (expands). They primarily include, on the revenue side, progressive income taxes and, on the spending side, unemployment benefits and various social safety nets. Automatic stabilizers can attenuate a business cycle or limit the loss of incomes during a pandemic through channels such as the following:[7]

- *Disposable income:* Under progressive income taxation, household income (after accounting for taxes paid and transfers received) does not increase

[7]While progressive taxation (for example, on labor and capital income) can reduce inequality and the volatility of disposable income, it can also make it more likely that wealthy individuals will seek to avoid taxation, and lower firms' willingness to invest domestically (Pisani-Ferry 2019; Saez and Zucman 2019).

Figure 2.8. Automatic Stabilizers in the United States and the Euro Area
(Percent of GDP)

Automatic stabilizers provide a large and timely response to cyclical downturns.



Source: Congressional Budget Office 2013.
Note: Shaded areas indicate recession periods as identified by the National Bureau of Economic Research.

Source: European Commission.
Note: Shaded areas indicate recession periods as identified by the Center for Economic and Policy Research.

as much during upswings and does not fall as drastically during slowdowns, thereby stabilizing aggregate demand.

- *Social insurance and redistribution:* This would insure incomes when people become unemployed and protect poor households that are more likely than high-income families to consume most of their incomes, thereby stabilizing aggregate demand in recessions.

In downturns, automatic stabilizers support aggregate demand promptly, reach those affected by downturns, and come to an end when conditions improve. They account for more than one-half of overall fiscal stabilization—measured as the sensitivity of the overall budget balance to the output gap—in two-thirds of advanced economies. They also account for 30 percent of total fiscal stabilization in emerging market and developing economies, although the extent of stabilization varies greatly across countries (April 2015 *Fiscal Monitor*). Automatic stabilizers provided a sizable boost to output during the Great Recession—about 2 percent of GDP in the United States and slightly less than that in the euro area, reflecting the difference in severity of the shock (Figure 2.8). Several studies suggest that automatic stabilizers can absorb one-third of income shocks and 40 percent of unemployment shocks in major advanced economies (Gali 1994; Auerbach and Feenberg 2000; Fatas and Mihov 2001; Debrun, Pisani-Ferry, and Sapir 2008; Debrun and Kapoor 2010; Dolls, Fuest, and Peichl 2012). Their aggregate demand stabilization impact would be more effective (beyond smoothing disposable income through taxes) if unemployment benefits and social safety nets were strengthened. This is because a higher share of liquidity-constrained households would be able to smooth their consumption more effectively when facing income shocks (McKay and Reis 2016; Hellwig, forthcoming).

Practical measures to improve automatic stabilizers on the revenue side, including tax measures with desirable stabilization properties, are discussed in Box 2.2. On the expenditure side, automatic stabilizers can be enhanced by strengthening social safety nets and introducing two-pillar unemployment benefit systems: the first pillar is unemployment insurance financed from contributions, and the second pillar is unemployment assistance financed from government revenues for those who have either not contributed or have exhausted their insurance benefits.[8] Increasing the generosity of unemployment benefits plays an important role in macroeconomic stabilization (Kekre 2019). Similarly, increasing the take-up of transfer programs, raising benefit levels and their duration based on predefined formulas, and easing eligibility criteria during recessions could boost aggregate demand. Nonetheless, to increase the effectiveness of safety net programs,

[8]For example, a 1 standard deviation increase in the generosity of US unemployment insurance would attenuate the effect of adverse shocks on employment growth by 7 percent (Di Maggio and Kermani 2016).

their design should be improved to strike a balance between demand support and work disincentives (Landais, Michaillat, and Saez 2018; McKay and Reis 2019). An option includes gradually removing benefits as employment incomes increase. Although extending unemployment benefits can adversely affect workers' job search efforts, an extension's impact on macroeconomic outcomes is not settled in the literature (Chodorow-Reich, Coglianese, and Karabarbounis 2019; Hagedorn and others 2016). During the pandemic, extending unemployment benefits and enhancing social safety nets would likely have limited effects on work incentives.

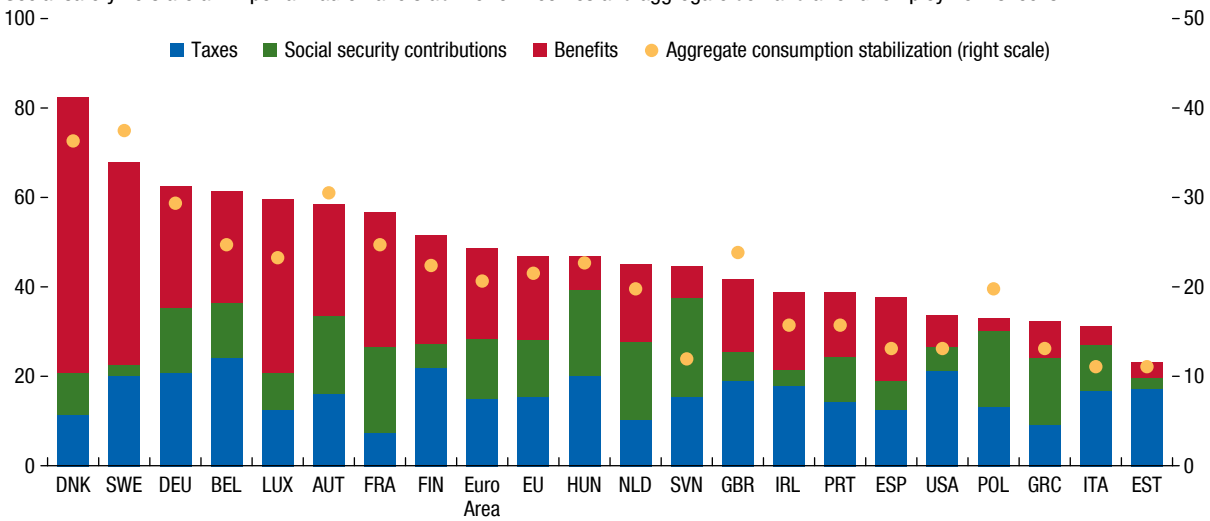
How Can Spending-Side Automatic Stabilizers Be Enhanced?

Strengthening unemployment benefit systems and social safety nets promotes two complementary objectives: (1) reinforcing spending-side automatic stabilizers and (2) protecting households by providing adequate income support in difficult times. Evidence suggests that cushioning personal incomes from shocks through automatic stabilizers does not necessarily translate one to one to aggregate consumption stabilization (Auerbach and Feenberg 2000; Dolls, Fuest, and Peichl 2012). This is because progressive taxes contribute more to automatic income stabilization of high-income households than do unemployment benefits and social safety nets. The opposite is true for low-income households, whose consumption depends more closely on income support. At the aggregate level, the impact of automatic stabilizers on consumption depends on the extent to which each group (high and low income) saves the additional income (from lower taxes or higher benefits) and the relative size of each group in the country's aggregate income (Figure 2.9). Recent research shows that well-designed unemployment benefit systems and social safety nets can play a large role in the stabilization of aggregate demand because such payments are directly tied to consumption of low-income households (McKay and Reis 2016; Dolls, Fuest, and Peichl 2012).

Unemployment benefits and social safety nets are important features of the tax-benefit systems in Organisation for Economic Co-operation and Development (OECD) countries, stabilizing households' incomes in a typical recession. In most OECD countries, the first line of defense for a typical household is unemployment insurance. On average, the household receives insurance and other benefits of 70 percent of its last

Figure 2.9. Automatic Income and Demand Stabilization, by Fiscal Instrument
(Percent of gross in-work earnings, left scale; percent of aggregate consumption loss restored, right scale)

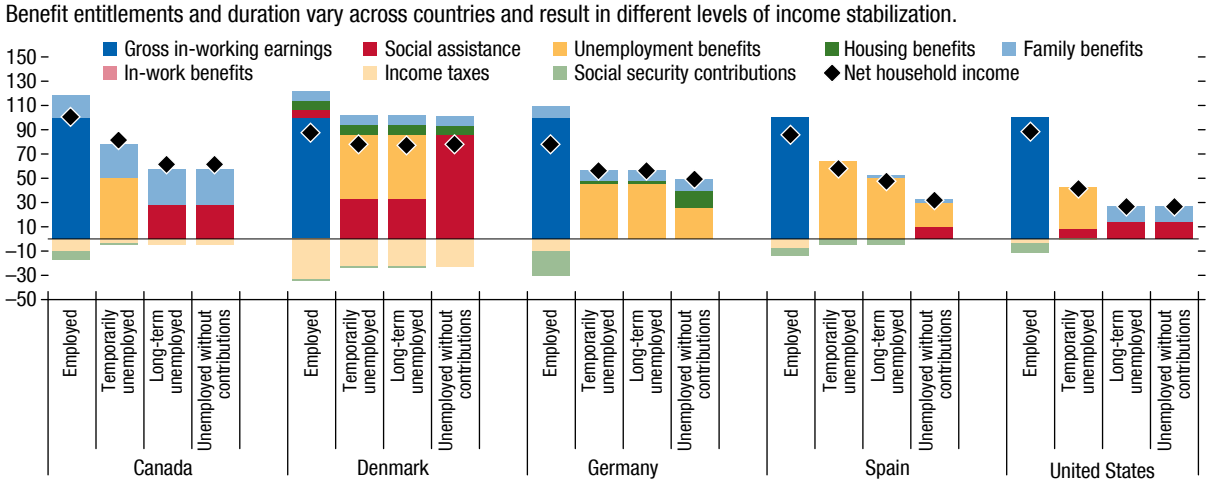
Social safety nets are an important automatic stabilizer of incomes and aggregate demand after unemployment shocks.



Sources: Dolls, Fuest, and Peichl 2012; and IMF staff calculations.
Note: Yellow dots show the extent to which the loss in aggregate consumption after an unemployment shock is restored by countries' tax-benefit systems. For example, if aggregate consumption falls by 1 percent, the tax-benefit system in Denmark restores one-third of this loss. Fiscal instruments include taxes, social security contributions, and benefits. Data labels use International Organization for Standardization (ISO) country codes.

Figure 2.10. Simulated Results on Average Working Income after Tax Liabilities and Benefit Entitlements during Typical Downturns

(Percent of gross in-work earnings)



Source: Organisation for Economic Co-operation and Development's tax-benefit web calculator.
Note: The focus is on a representative household of four (with two children and one working adult) and its net income under four scenarios: (1) baseline in which the working adult earns an average income; (2) unemployed for three months after nine years of unemployment insurance contributions; (3) long-term unemployed for more than one year with the same nine years of unemployment insurance contributions; and (4) becoming unemployed without previous unemployment insurance contributions.

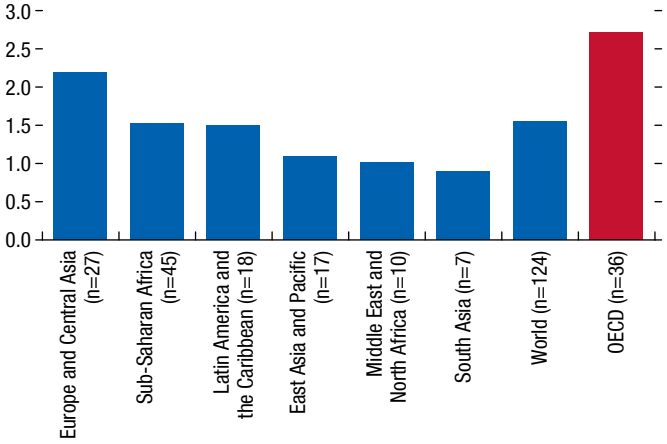
employment income. However, a long unemployment spell would eventually exhaust the insurance benefits. Some countries provide unemployment assistance (as part of labor market regulations) that, if combined with other benefits, would present a replacement rate of 60 percent of previous employment incomes. The fall in net incomes is sharper in countries without unemployment assistance (*United States*). In some cases, in lieu of unemployment assistance, other income-support schemes, such as guaranteed minimum income programs, are in place (*Denmark*). In several countries, people who become unemployed without prior insurance contributions could face hardship in recessions owing to a lack of unemployment assistance (*United States*) or an adequately funded and covered national guaranteed minimum income program (*Spain, United States*). In addition to tax design (Box 2.2), the variation of income stabilization across countries depends on policy instruments for income support as well as on design features of benefit entitlements. The size of income stabilization by the tax-benefit systems varies from 95 percent in *Denmark*, given its generous safety net, to below 20 percent in the *United States* (Figure 2.10).

Social safety nets are noncontributory transfer programs aimed at low-income households or the vulnerable (World Bank 2018; IMF 2019c). They are financed from government revenues and typically include (1) cash transfers, food stamps, child allowances, and social pensions; (2) in-kind transfers; (3) income-support schemes for low-income households, conditional on education or health; (4) public works; and (5) fee waivers, including for health care. These programs have contributed to a reduction of poverty gaps—the distance between the poverty line and the average income of poor households—by 45 percent worldwide, on average (World Bank 2018). The size of social safety nets varies across countries, averaging 2.7 percent of GDP in OECD countries and 1.5 percent of GDP at the global level (Figure 2.11). Within the safety nets, old-age social pension programs have grown rapidly across many emerging market and developing economies because of demographics, among other reasons (Figure 2.12).

The choice of instruments, coverage of the poor, adequacy of benefits, and implementation of social safety net programs varies significantly across emerging market and developing countries. For example, for coverage of the poorest quintile of households, the following programs stand out: unconditional cash transfers in *Malaysia*; conditional cash transfers in *Uruguay*; and social pensions in *Georgia*, *Mauritius,*

Figure 2.11. Social Safety Net Spending, by Region
(Percent of GDP)

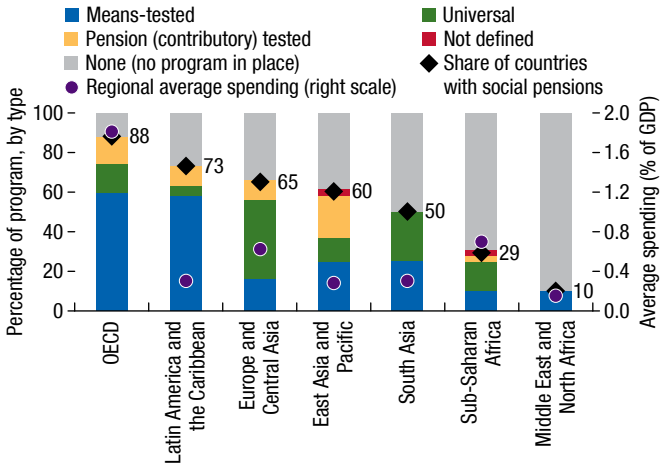
Spending on social safety nets is relatively low in the South Asia and Middle East and North Africa regions.



Source: World Bank, ASPIRE database.
Note: Simple average across regions. The number of countries in each region is in parentheses. OECD = Organisation for Economic Co-operation and Development.

Figure 2.12. Social Pensions, by Region
(Percent of program, left scale; percent of GDP, right scale)

Many countries provide social pensions.



Source: World Bank 2018.
Note: Data are as of 2014. OECD = Organisation for Economic Co-operation and Development.

and *South Africa*, covering between 60 percent and 100 percent of the poorest quintile of households. Unconditional cash transfer programs in *Georgia* and *Rwanda* are effective in poverty alleviation, and those in *Malawi* have a large impact on households' consumption (World Bank 2018). A strong safety net is also important for countries that plan to raise revenues by introducing a value-added tax or to reduce energy subsidies. For example, *Egypt* scaled up its means-tested cash transfer program to support energy price increases. *Bolivia* has made significant progress in poverty reduction by expanding safety net programs. In sub-Saharan Africa, while the social safety nets cover a small share of the poorest quintile of the population, the adequacy of benefits for this group is relatively high (Figure 2.13).

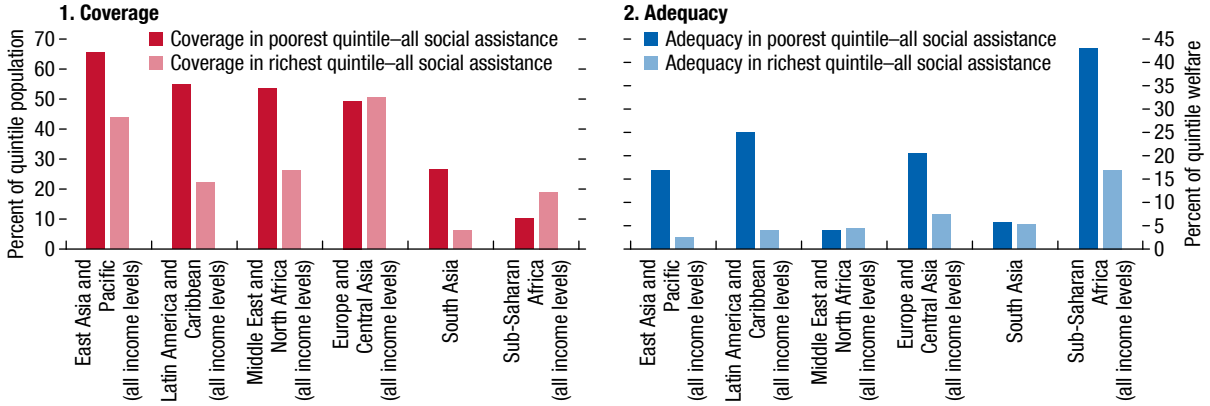
A good social safety net usually has four attributes (Grosh and others 2008). First, it provides broad coverage and adequate benefits to vulnerable groups in a progressive way within the overall tax-benefit system (IMF 2019c)—that is, more generous benefits to the poorest beneficiaries. Second, it strives to be cost effective by avoiding program fragmentation and beneficiary overlaps. Third, it tries to preserve work incentives and enhance human capital by linking transfers to required or voluntary programs such as public works, obtaining health care, and attending education and training. Fourth, it is financially sustainable within the overall expenditure envelope and consistent with other social protection programs.[9]

Against these yardsticks, social safety nets in emerging market and developing countries have significant gaps in terms of coverage of lower income groups and benefit levels (generosity). They cover less than one-fifth of the poorest quintile of households, on average, and the average transfer accounts for only 13 percent of the consumption of the bottom 20 percent of the income distribution (World Bank 2018). Programs are often fragmented (*Mexico*), involve beneficiary overlaps, and lack appropriate incentive features. Moreover, the burden of income support is placed on social safety nets, as very few of the poor are covered by unemployment insurance. In these countries, social safety nets can be improved by using instruments that are effective in reaching individuals most in need. These instruments include mobile money, in-kind provision of goods and services (especially health care, water, and transportation services), use of existing social registries where applicable, and use of community-based methods to identify those in need. In Middle East and North African countries, cash transfers to households (ideally targeted)

[9]Social safety nets in this chapter are considered to be a part of social protection and do not cover pension, health, and unemployment insurance.

Figure 2.13. Coverage and Adequacy of Social Safety Nets, by Region
(Percent of quintile population or welfare)

The coverage and adequacy of social safety nets vary greatly across regions.



Sources: Francese and Prady 2018; and World Bank, ASPIRE database.
Note: Welfare is usually estimated by total expenditure as self-declared in household surveys.

could be more progressive than subsidies. The example of Aadhaar in India—the largest biometric program in the world with 1.2 billion residents enrolled over several years—could be emulated in economies that have the means and centralized information to map individual bank account information with a unique identification number, to implement direct cash transfers, provided that privacy and security concerns are appropriately addressed.

For most advanced economies with better-developed safety nets, concerns relate to improving the outcomes of existing programs, extending coverage based on enhanced means testing, and better preserving work incentives (by reducing implicit labor tax wedges that arise from benefits being quickly withdrawn as earnings increase). In advanced economies, strengthening existing two-pillar unemployment benefit systems or improving the design features of guaranteed minimum income programs could improve income stabilization in the event of a recession.

- A two-pillar unemployment benefit system provides both income insurance and assistance to households in recessions, thereby stabilizing consumption. It is an effective automatic stabilizer for two reasons. First, more people receive unemployment insurance when they lose their jobs without any action from policymakers. And, second, beneficiaries of unemployment assistance are more likely than average to spend their benefits, thereby stabilizing demand. *Austria*, *Germany*, *Finland*, *Ireland*, *New Zealand*, *Spain*, and the *United Kingdom* have implemented two-pillar systems (Immervoll 2010).
- A guaranteed minimum income program is, typically, selective, conditional, and means tested (Table 2.1).[10] It is *selective* because it focuses on low-income households; *conditional* because recipients must prove their commitment to finding a job or participating in active labor market programs (for example, employment and training); and *means tested* because the entitlement depends on household income and wealth. Almost all OECD countries have centralized minimum-income programs for working-age individuals. *Italy,* where the government—building on earlier safety nets—introduced a citizenship income program in the 2019 budget, is the latest addition to this list.

Practical measures to enhance spending-side automatic stabilizers while preserving work incentives include subsidizing reduced working hours (*Germany*) and increasing the coverage and benefits of unemployment benefits and social safety nets (for example, by relaxing eligibility criteria and loosening work requirements in recessions). For example,

[10]A guaranteed minimum income program is different from a universal basic income scheme. The latter applies to all citizens, regardless of their socioeconomic status or their needs, is unconditional (granted to individuals without a need to meet any requirements), and is not means tested.

Table 2.1. Typical Features of Guaranteed Minimum Income Programs

Coverage	Able-bodied working-age individuals in poverty and their households receive a guaranteed minimum income. The government's ability to verify households' income and assets, based on a means test, is important to determine eligibility and benefit levels. Yet verification may not be feasible in countries with large informal sectors and limited administrative capacity, especially low-income developing countries. The appropriate mix of universal and targeted transfers depends on country preferences and circumstances, including administrative, financing, social, and political constraints (IMF 2019c).
Benefit Levels	The guaranteed minimum income (or the benefit level) should reflect basic needs without causing welfare dependence. The state tops up the beneficiary's income to the guaranteed limit, which is calibrated in relation to the relative poverty line. Most countries provide additional housing allowances and health care.
Incentives	Program design should include features that incentivize work. Generous benefit levels and high withdrawal rates (that is, the reduction in benefits once beneficiaries find jobs) could strongly disincentivize work and discourage labor force participation. To strengthen incentives, successful guaranteed minimum income programs incorporate conditional inwork tax credits (including for secondary earners) as well as a variety of "out of work" benefits, such as (marginal) income disregard for part-time and casual work, gradual benefit phaseouts, and back-to-work bonuses.
Conditionality	Participation in active labor market programs is essential for receiving the benefits, if implementation capacity exists. This further reduces disincentives to work and control the fiscal cost. The use of conditions based on job training or placement, education, and so on, would help households return to work. Active labor market programs are less effective if there is a high degree of welfare dependence.

Source: IMF 2019d.

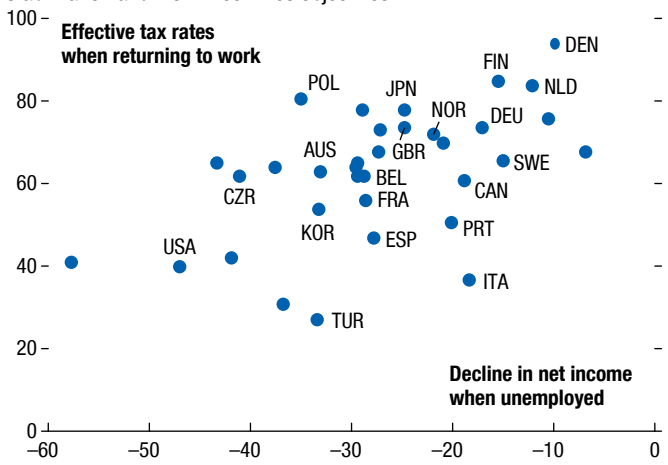
in *Italy*, the income-support scheme could be improved by reducing the generosity of benefits, thereby reducing welfare-dependence risks and creating greater incentives to work. Targeting could also be improved, and adequate controls and local administrative capacity should be built for effective implementation. As another illustrative example, if *Estonia* or the *United States* were to upgrade its benefit systems to that of the median OECD country, household incomes would fall by one-third less when workers lose their jobs during recessions. Moreover, countries with strong spending-side automatic stabilizers are better positioned to attenuate the adverse effects of atypical shocks, such as pandemics.

The design of social safety net programs can be improved toward more income stabilization by increasing the progressivity of net transfers through a reduction in the benefit withdrawal rate as earnings increase. Some countries (*Denmark, Finland*) provide strong income support when households become unemployed (through unemployment insurance and assistance), but they also have a large effective tax rate of 90 percent on labor income when recipients find a job—which could discourage participation in the labor market. Other countries without unemployment assistance (*Turkey*, *United States*) tend to place a higher weight on work incentives and have low effective tax rates upon the return to work (Figure 2.14).

Overall, spending-side automatic stabilizers can be improved while preserving work incentives (including through in-work wage subsidies, such as the earned income tax credit in the *United States*), which is critical for long-term growth.

Figure 2.14. Employment Income Replacement Rates When People Become Unemployed and Effective Tax Rates When They Return to Work
(Percent of GDP)

Social safety net programs should be designed to balance income stabilization and work incentives objectives.



Sources: OECD's tax-benefit web calculator; and IMF staff estimates.
Note: Based on OECD tax-benefit web calculator for a typical four-person household with two children and one working adult earning average employment income. Data labels use International Organization for Standardization (ISO) country codes. OECD = Organisation for Economic Co-operation and Development.

Box 2.1. Factors Underlying Low Growth and Low Interest Rates

The underlying determinants of low levels of growth, investment, interest rates, and inflation have been variously attributed to inadequate demand (Rachel and Summers 2019), weak supply potential (Gordon 2015), and the debt supercycle (Lo and Rogoff 2015), which refers to a persistent and rapid increase in debt throughout the economy by consumers, businesses, and governments.

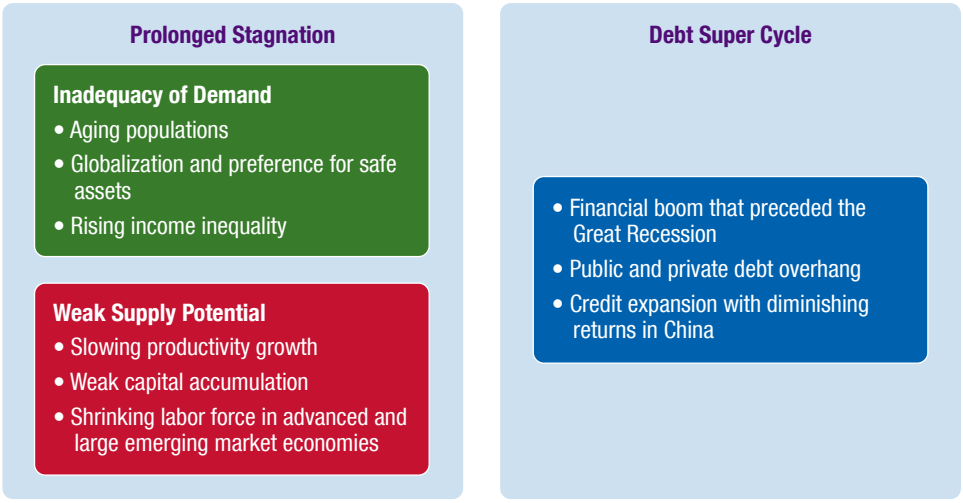
- Plausible explanations for inadequate aggregate demand include rising income inequality, aging populations, globalization, and greater demand for safe assets—partly from financial (re-)regulation and higher demand for reserves by emerging market and developing economies (Caballero, Farhi, and Gourinchas 2016; Gourinchas and Rey 2016, 2019).
- Reasons for weak supply potential include lower productivity growth, for example, from slowing innovation and rising market power (Philippon 2019), a trend decline in public investment-to-GDP ratios in advanced economies and the growth rate of investment per capita in emerging market and developing economies, and plateauing education attainments and labor participation rates, as well as a shrinking labor force in advanced economies and some emerging markets.
- Drivers of the global debt supercycle include the financial boom that preceded the global financial crisis and subsequently left advanced economies with an overhang of debt (governments, households, and firms) and lower growth (Chudik and others 2017), and continued credit expansions with diminishing returns on investment in China (Maliszewski and others 2016).

Although it is hard to disentangle the effects of weak aggregate demand from weak supply potential or a debt supercycle (Figure 2.1.1), there is a broad consensus among these competing theories on the need for more high-return investment (public and private) to foster long-term growth.

- If aggregate demand remains weak for a lengthy period because of a debt overhang, pessimistic expectations (Benigno and Fornaro 2018), rising inequality, or aging, then the real return on private investment would stay low. High-return public investment, in a low interest rate environment, could spur private sector activity.
- If growth weaknesses are supply driven, investing in physical and human capital as well as research and development can propel an economy over the longer term by bringing about innovation and technological change. This argument applies to all economies across income groups that have experienced a sharp productivity slowdown in recent years owing to the moderation of capital accumulation. Evidence shows that high-return investment, particularly if complemented with structural reforms such as those that foster competition and innovation, can durably raise long-term growth (IMF 2015b; Bakker 2019).

Figure 2.1.1. Drivers of Subdued Growth, Low Inflation and Interest Rates, and High Debt

Different theories conceptualize the underlying drivers of current global trends.



Sources: Gordon 2015; Lo and Rogoff 2015; Rachel and Summers 2019; and IMF staff summary.

Box 2.2. Tax Policy and Automatic Stabilizers

This box discusses how the design of the tax system can help stabilize the economy, with an emphasis on specific desirable features that certain countries have adopted.

The design of a country's tax system—which reflects economic considerations as well as political factors and societal attitudes toward redistribution—affects how the economy responds to economic shocks and, thus, the volatility of output and employment. For example, a progressive tax system, in which the tax rate on high incomes is larger than that on low incomes, helps stabilize the economy because taxpayers pay lower taxes in a recession than in a boom, so that their consumption and investment—and thus aggregate demand—will fluctuate less.[1] Moreover, the impact of a recession on net wages is cushioned, so that people are less likely to drop out of the labor force or to work fewer hours. Through these mechanisms, the tax system therefore acts as a so-called "automatic stabilizer" because the stabilization effect is embedded in the design of the system. By obviating the need for further action by policymakers when the shock occurs, automatic stabilizers prevent the lags between shocks and policy responses that stem from policymaking and legislative processes. Among Organisation for Economic Co-operation and Development countries, income taxes can automatically stabilize between 20 and 50 percent of income shocks (OECD 2019).

Among various taxes, those on income respond the most to the economic cycle, reflecting the progressive rate structure for personal income taxes and the close link to profitability for corporate income taxes (Baunsgaard and Symansky 2009). Likewise, taxes on goods and services (particularly if consumption is less volatile than income), as well as payroll taxes and social security contributions (particularly if capped at a nominal level), move with the cycle, though to a lesser extent than progressive income taxes.[2] Taxes on capital gains, financial transactions, and immobile property also respond to developments in asset prices. On the whole, progressive income taxes are the most effective for output stabilization.

Some tax-related automatic adjustments contribute little, if at all, to stabilizing output. For example, there are no strong stabilization properties from tax deductions (such as mortgage interest payments or certain types of investment), the earmarking of proceeds from particular taxes, nontax revenues loosely related to nominal GDP, specific taxes that are infrequently indexed (such as excises), and taxes collected with delays.

Furthermore, tax-related automatic stabilizers may not be sufficient to deliver an adequate fiscal response to large output shocks. Raising the progressivity of personal income taxes would, in principle, enhance automatic stabilizers. This increase, though, is likely to have a moderate additional impact on stabilizing output and needs to be balanced against disincentives to labor supply (McKay and Reis 2016). In addition, broadening the revenue base (for direct or indirect taxes) could also foster income stabilization (Amaglobeli and others 2019). Expenditure-side automatic stabilizers, such as unemployment benefits and social transfers (discussed in the main text), can complement revenue-side stabilizers.

Several tax-related instruments can strengthen automatic stabilizers (Baunsgaard and Symansky 2009) and can be tailored to respond to the ongoing pandemic. *Bonus depreciation* allows firms to automatically deduct a substantial portion of their new investment from taxable profits as depreciation during recessions. This measure seems to have boosted investment in the United States during the global financial crisis, especially by providing breathing space to the most liquidity-constrained firms (Zwick and Mahon 2017). Accelerated depreciation or super-deductions can encourage investment in health or hygiene products that are undersupplied during the pandemic.

Automatically allowing deduction of current corporate losses against past tax payments (*cyclical loss-carry backward*) can provide struggling companies with immediate tax refunds during recessions. This feature has been applied in several advanced economies in previous recessions (*Canada*, *France*, *Germany*, *United Kingdom*, *United States*), as well as during the current pandemic.

Governments can link *property taxes* more closely to the real estate cycle, by assessing property values annually (*United States*). This smooths the cycle by

[1]In the United States, Auerbach and Feenberg (2000) find that reduced income and payroll tax collection offset 8 percent of the loss of output. The Congressional Budget Office (2013) estimates that, through increased transfer payments and reduced taxes, automatic stabilizers supported activity during and in the aftermath of the global financial crisis.

[2]Taxpayer compliance may also deteriorate during sharp recessions, leading to additional revenue loss (Brondolo 2009). Although noncompliance would reinforce automatic stabilizers, it can easily become entrenched. Tax administrations should thus counter the recession-related deterioration in compliance.

Box 2.2 *(continued)*

increasing tax collections during property booms and reducing taxes during slumps.

Tax credits are preferable to deductions as a way of encouraging socially valuable activities (such as education and charitable contributions) while smoothing the cycle. The impact of tax credits on disposable income is fixed, whereas the impact of deductions declines during downturns as disposable income falls. *Uniform personal income tax credits* (that is, an equal credit for all individuals) are recommended because, under a deduction-based system, higher-income individuals would receive higher effective tax relief (Batchelder and Goldberg 2008). This proposed measure applies when the personal income tax is progressive. *Investment tax credits* are stabilizing because they reduce the cost of capital and stimulate investment when it tends to fall during recessions—that is, at a time when the stabilization is most needed (Blanchard, Dell'Ariccia, and Mauro 2010). These instruments are relevant in the current conjuncture. For instance, in *Sweden*, cyclical investment tax credits through the Swedish Investment Fund successfully served as countercyclical fiscal measures between the mid-1950s and the mid-1970s (Taylor, Baily, and Fischer 1982). During normal times, firms could deduct up to 40 percent of their taxable profit, allocate it to an investment fund, and draw on this fund freely for investment during downturns.

Corporate income tax collections based on current-year estimated income—as opposed to a corporate income tax based on actual income of the previous year—allow tax collections to be linked more closely to the current state of the economy. In this way, the tax could make stabilization timelier because tax collections would fall during downturns and reverse during a recovery.

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CHAPTER 3

STATE-OWNED ENTERPRISES: THE OTHER GOVERNMENT

Introduction

State-owned enterprises (SOEs) influence the economy and people's lives through the provision of goods and services in ways that are distinct from, and more varied than, the direct action of governments.[1] In many countries, SOEs provide basic services such as water, electricity, and transportation to people and firms, as well as loans to businesses. SOEs are diverse, varying in size, sector of operation, complexity, sophistication, and extent of government ownership and control. Some are essentially an arm of the government, whereas others have a mix of public and private owners (mixed ownership) and a greater commercial focus. Many SOEs are among the largest companies in low-income developing countries, emerging markets, and advanced economies.

SOEs have become more prominent in global markets, stimulating renewed interest and debate about their international impacts. Although a few SOEs have had operations abroad for decades, especially in the natural resources sector, SOE cross-border activity has diversified and increased in this century (Cuervo-Cazurra and others 2014). The growing internationalization of SOEs has fueled apprehension about their potential pursuit of noncommercial objectives or unfair competition given that they often benefit from government support, including subsidies or cheaper finance.

At the same time, many governments struggle to manage SOEs effectively. Widespread concerns exist that many SOEs are inefficient, involve significant risks to government budgets, and are a conduit for corruption (April 2019 *Fiscal Monitor*; Musacchio and Pineda Ayerbe 2019; OECD 2018b; Richmond and others 2019; Wilkinson 2018). Getting the most out of SOEs is critical because many governments rely on them to serve their citizens and to foster economic and social development. Drawing from countries' experiences with SOEs, this chapter focuses on how to use them wisely and improve their performance and addresses the following questions to guide the discussion, analysis, and recommendations:

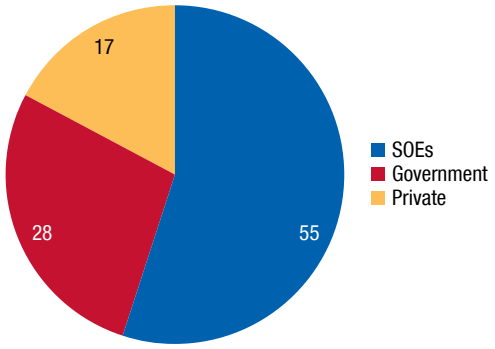
- Do SOEs deliver value for taxpayers' money? Specifically, are they fulfilling their economic and social policy mandates, while operating efficiently and not burdening the budget? Are policy mandates well defined, adequately funded, and contributing to economic and social goals?
- How can governments manage the challenges and risks associated with SOEs? Do governments have clear strategies and institutions with which to regularly evaluate SOE performance and assess whether each SOE is the best tool to achieve a policy goal?
- Does the internationalization of SOEs bring new challenges? SOEs frequently benefit from explicit or implicit government support. Does this support compensate only for the cost of pursuing policy mandates, or does it give SOEs competitive advantages over private firms? Can SOEs contribute to other global goals (for example, curbing domestic pollution and mitigating climate change)?

SOEs' Evolving Landscape

SOEs grew in size and importance throughout most of the twentieth century. European governments began nationalizing key industries in the early 1900s (France, Germany, Italy, Spain, United Kingdom). The trend continued in Central and Eastern Europe in the aftermath of World War II (Allen and Vani 2013; Musacchio and Lazzarini 2014) and in Africa and Asia with the end of colonialism in the 1950s and 1960s. By the early 1980s, SOEs accounted for 8 percent of output, on average, in advanced economies and 15 percent in developing countries (Sheshinski and Lopez-Calva 2003).

[1]Although no commonly accepted definition of an SOE (European Commission 2013; IMF 2014; OECD 2015) exists, there are some shared elements: (1) the entity has its own, separate legal personality; (2) the entity is at least partially controlled by a government unit; and (3) the entity engages predominantly in commercial or economic activities. As noted in the *Government Financial Statistics Manual 2014* (IMF 2014), assessing government control of an entity involves judgment. A government may exercise significant influence over corporate decisions even when it owns a small number of shares. For the quantitative empirical analyses in this chapter, a firm is considered state owned if the government owns at least 50 percent of its equity; in some exercises, the analysis focuses on cases where the governments owns at least 20 percent.

Figure 3.1. SOEs' Share of Infrastructure Investments in Emerging Markets and Low-Income Developing Countries
(Percent of total investment value, 2017)



Source: World Bank 2017.
Note: SOEs = state-owned enterprises.

Beginning in the 1980s, disappointment led to efforts to introduce a profit motive in SOEs through corporatization (that is, incorporating SOEs under the same commercial laws as private firms) and partial or full privatization in many countries. The transition to market economies that followed the dissolution of the Soviet Union in 1991 reinforced these trends. More recently, China's rapid growth combined with the large presence of SOEs in its domestic economy has generated renewed interest in whether SOEs can be used as vehicles for development. In contrast, other countries have recently announced new privatization plans (Brazil, Egypt, India, Morocco).

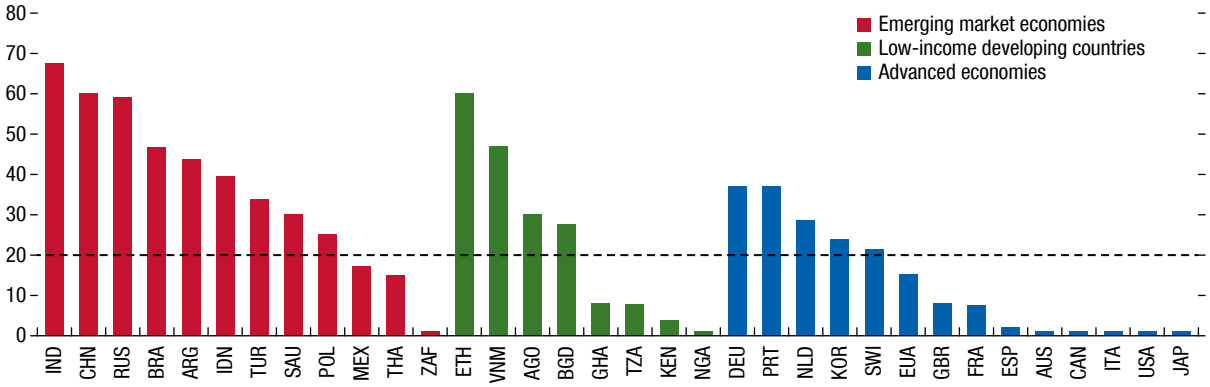
SOEs Are Diverse and Dominant in Core Sectors of Modern Economies

SOEs operate in virtually every country in the world. In some, they number in the thousands (China, Germany, Italy, Russia, Sweden, Ukraine) and are owned by national or subnational governments. SOEs owned by subnational governments, such as local bus, sewer, and water services, often outnumber SOEs owned by the central government. SOEs are among the largest corporations in some advanced economies (France, Italy, Norway) and comprise one-third or more of the largest firms in several emerging markets (China, India, Indonesia, Malaysia, Russia, Saudi Arabia, United Arab Emirates) (Kowalski and others 2013).

SOEs provide goods and services in almost all sectors of the economy but are especially prevalent in the key network sectors—banking, utilities, and transportation. They also manufacture everything from shoes to locomotive engines, manage real estate, and provide phone services. In Africa and Asia, SOEs dominate power generation. SOEs accounted for more than half of all infrastructure project commitments in emerging market economies and low-income developing countries in 2017 (Figure 3.1). Moreover, banking sector SOEs account for 40 percent or more of banking system assets in the BRIC economies (Brazil, Russia, India, China) and some low-income developing countries, and one-third or more in Germany and Portugal among advanced economies (Figure 3.2).

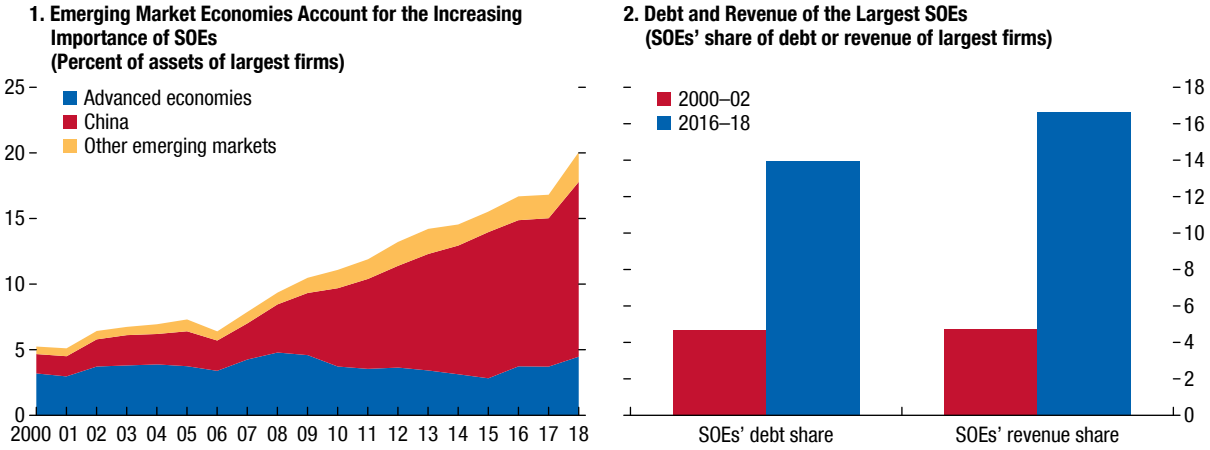
Figure 3.2. Public Banks' Share of Banking System Assets, 2016
(Percent)

In half of the G20 countries and several large developing economies, public banks hold around 20 to 60 percent of the banking system assets.



Sources: CEIC (China); central banks (Ethiopia, Italy, Japan); World Bank, Bank Regulation and Supervision Survey 2019.
Note: State-owned banks are those with at least 50 percent of equity owned by national or subnational governments. Data labels use International Organization for Standardization (ISO) country codes.

Figure 3.3. Share of Nonfinancial SOEs among the Largest Firms



Sources: S&P Capital IQ; UNCTAD; S&P Global UDI World Electric Power Plant database; and IMF staff estimates.
Note: Panel 1 shows the share of SOE assets among the world's 2,000 largest firms. Panel 2 shows aggregate average values of SOE debt and revenue among the world's 2,000 largest firms. The latter is a composite ranking of separate rankings of 2018 revenue and assets obtained from Capital IQ. SOE = state-owned enterprise.

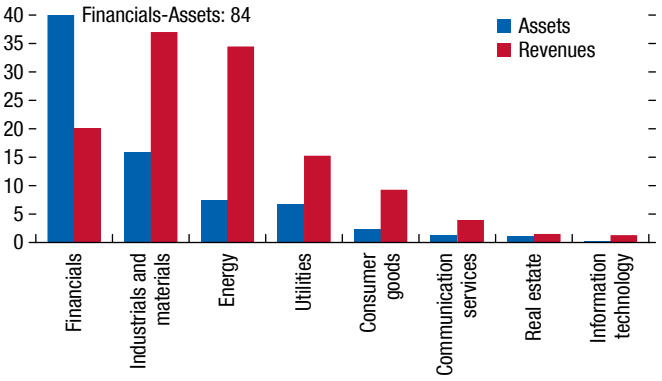
The Largest SOEs Have Become Global Players

Over the past decade, the share of SOE assets among the world's 2,000 largest firms has doubled to 20 percent (Figure 3.3, panel 1). At $45 trillion in 2018, these assets are equivalent to 50 percent of global GDP. An important factor has been the relatively high economic growth rate of emerging market economies and especially of China, where SOEs still play a large role in the domestic economy (see the country case study in Online Annex 3.1). However, the balance sheet expansion also reflects international activities, for example SOEs have accounted for 5–15 percent of annual cross-border acquisitions since 2008 (UNCTAD 2019). The same dynamics are behind the doubling of SOEs' share of debt and revenue of the world's largest firms since early 2000 (Figure 3.3, panel 2). The debt of the largest SOEs is $7.4 trillion, compared with $1.4 trillion in 2000. SOEs have become big players in global corporate debt markets. They now comprise one-third of the entire emerging market sovereign hard currency debt tracked in the most widely followed emerging market sovereign bond index (October 2019 *Global Financial Stability Report*). In terms of sectors, large SOEs are especially active in banking, energy, industrials, and utilities (Figure 3.4). For example, national oil companies are among the biggest oil companies in the world and control more than half of the global oil and gas production.

Many SOEs are no longer wholly owned by the government. Among the largest SOEs in the world, almost 60 percent have a mix of public and private sector owners. Greater prominence of mixed ownership originates in the European privatization strategies that began in the 1980s, in which governments chose to preserve a majority, or in some cases minority, position in the firms (OECD 2016a).[2,3] This approach

Figure 3.4. SOEs' Share of Assets, by Sector

(Percent of assets or revenues of largest firms, by sector)

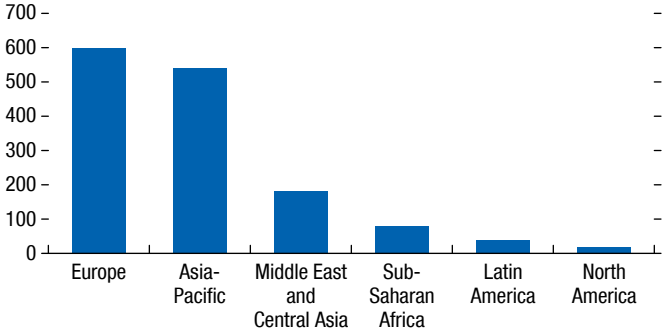


Sources: S&P Capital IQ; UNCTAD; S&P Global UDI World Electric Power Plant database; and IMF staff calculations.
Note: The figure shows the share of SOE assets and revenues by sector among the world's 2,000 largest firms. The latter is a composite ranking of separate rankings of 2018 revenue and assets obtained from Capital IQ. SOE = state-owned enterprise.

[2]The motivations for these approaches varied but included the intention to privatize gradually and to keep a presence in sectors viewed as strategic.

[3]At the end of 2000, governments retained control of more than 60 percent of the 141 privatized firms from developed economies that Bortolotti and Faccio (2009) analyzed.

Figure 3.5. Multinational SOEs around the World
(Number of firms per region)



Sources: UNCTAD; and IMF staff calculations.
Note: SOEs = state-owned enterprises.

to privatization subsequently gained traction with emerging markets (for example, Brazil and China) and emerging market and developing economies.

Today, many of the largest SOEs are also multinationals (state-owned multinational enterprises, or SOMNEs), several with mixed ownership. A SOMNE is an SOE that controls assets of other entities in countries other than its home country. SOMNEs are spread around the world (Figure 3.5), but most originate in China, members of the European Union, India, Malaysia, Russia, South Africa, and the United Arab Emirates (UNCTAD 2019).[4] Some are regional, whereas others are global players. In 2018, half of the top 10 (as measured by revenue) nonfinancial firms globally were SOMNEs. The list of the largest nonfinancial SOEs includes China National Petroleum, Volkswagen AG, Saudi Arabian Oil Company, and Russian firms Gazprom and Rosneft (Figure 3.6). SOEs evolve into SOMNEs for various reasons. Some desire to raise profitability, secure access to natural resources, or obtain technological knowledge. In other cases, some authors (for example, Cuervo-Cazurra and others 2014) have suggested that the objectives may have been partly political, as the business case seemed to be limited.

The Evolving Nature of SOEs Exacerbates Policy Challenges

The evolution of SOEs accentuates existing challenges. Mixed ownership blurs the distinction between *state owned* and *privately owned*—making it more difficult to ascertain when governments are influencing a firm's business decisions. For example, the state may have only a direct minority shareholding in a company but exercise significant control over strategic decisions through a golden share, which can give it special voting privileges, or through other mechanisms (such as indirect ownership whereby the government owns stakes in public banks, public pensions funds, or sovereign wealth funds, that in turn own shares in a company).[5]

The growing global reach of SOEs means SOE-induced competitive distortions in the home market may be spilling over to the global market. Governments often provide support to SOEs to compensate them for pursuing policy goals. This support can be in the form of budget compensation (such as subsidies or capital transfers) but can also include cheap debt and equity financing, special tax and regulatory provisions, a privileged market position, superior access to information, and rescues from bankruptcy. However, government support may not be linked to a specific public mandate or may exceed the net cost of the mandate. In this case, government support can give the SOE a competitive advantage over private firms. For example, Deutsche Post (and its predecessors) over a period of 25 years until 2000 used profits from its letter delivery monopoly to cross-subsidize below-cost selling in the market for business parcel delivery (Capobianco and Christiansen 2011). More fundamentally, public ownership itself can be a source of implicit government support. Private creditors may offer more favorable terms to an SOE than they would to similar private firms and expect that the government would bail out the SOE if needed. IMF staff estimates based on a sample of SOEs in 65 countries suggest that SOEs benefit from lower debt-financing costs, on average, relative to private firms (Figure 3.7).[6]

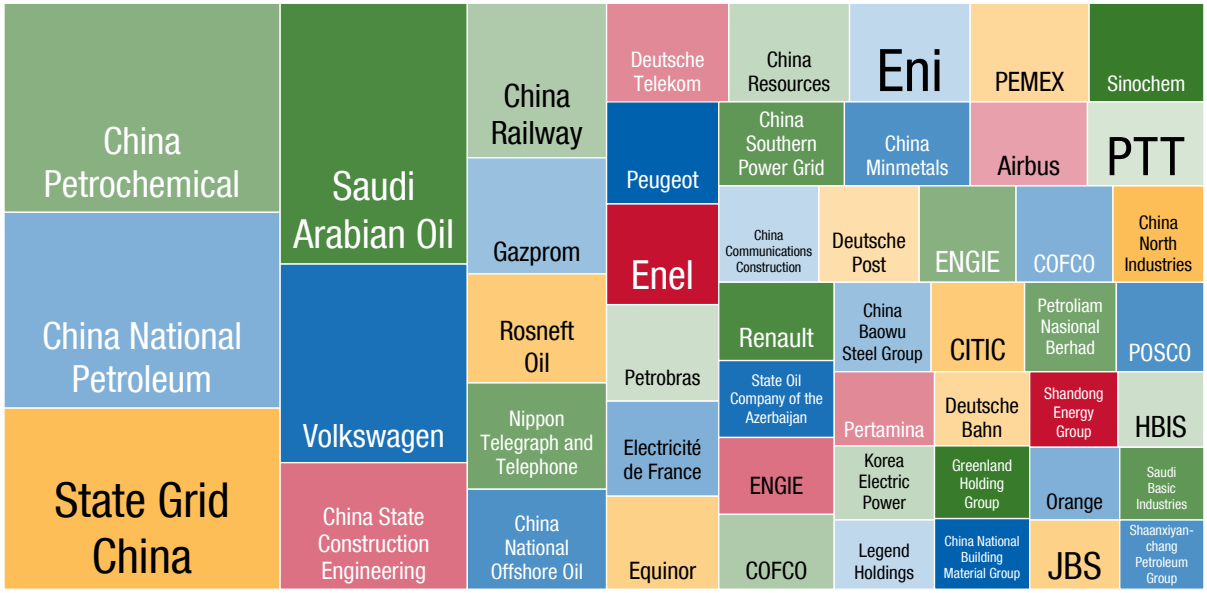
SOEs' government-bestowed competitive advantages can have economic and fiscal implications domestically and internationally. For example, the advantages may distort competition (that is, tilt the playing field in favor of SOEs) or sustain inefficient SOEs, possibly lowering growth and tax revenues. The concerns with

[4]The UNCTAD data set contains 1,500 SOMNEs identified by the United Nations as of 2018 and includes both publicly traded and non–publicly traded state-owned firms in 109 countries.

[5]For example, the German state of Lower Saxony has only 20 percent of the voting rights in Volkswagen but, legally, also has a veto right over key decisions such as factory closures, mergers, and acquisitions (Cremer 2017).

[6]For example, in Vietnam, the state-owned bus company has higher operational costs than its private competitors but benefits from lower borrowing costs resulting from government guarantees (PPIAF 2016).

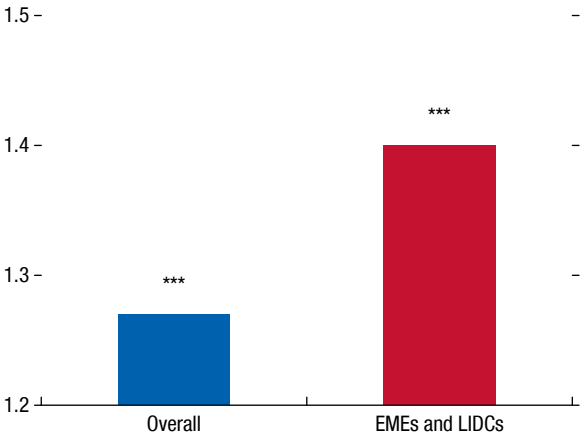
Figure 3.6. Top 50 Nonfinancial SOEs
(Percent of revenues relative to total revenues in largest 2,000 firms)



Sources: S&P Capital IQ; S&P Global UDI World Electric Power Plant database; UNCTAD; and IMF staff calculations.
Note: The largest 2,000 firms is a composite ranking of separate rankings of 2018 revenue and assets obtained from Capital IQ.

government support, for example, are present in the aluminum, semiconductor, and steel sectors. Recent studies of the aluminum and semiconductor sectors estimated that firms, including SOEs, in these industries received sizable government support through budget support, subsidized inputs, below-market loans, and equity financing (OECD 2019a, 2019b). Another study estimated that SOEs produced one-third of global steel output in 2016 amid private sector complaints that SOE peers received unfair government support (Mattera and Silva 2018). In all three sectors, overcapacity is a concern. Moreover, if foreign governments view SOEs' expansion abroad, either directly or indirectly supported by the home government, as a means to achieve foreign policy or national security goals, they may unilaterally take measures to counteract that expansion.

Figure 3.7. Private Firms' Interest Premium, 2000–17
(Percentage point difference to SOEs' interest rate)



Sources: Orbis; and IMF staff estimates.
Note: The sample includes 65 countries, of which 37 are emerging market and developing economies. Interest was calculated as firm interest paid in (t) divided by the stock of debt in (t–1). The analysis controls for firms' size and economic sector. EMEs = emerging market economies; LIDCs = low-income developing countries; SOEs = state-owned enterprises.
*** indicates statistical difference from zero at 1 percent significance level.

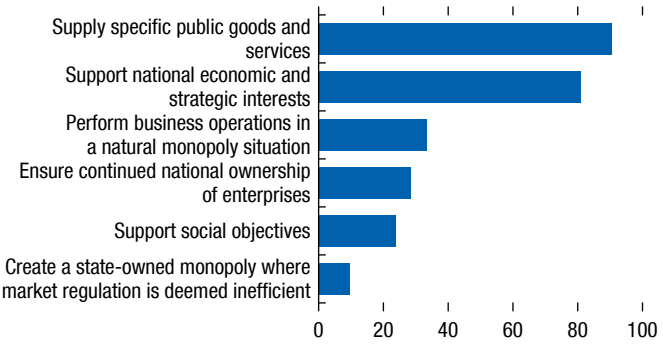
In the next sections, the chapter reviews international experiences on the old and new challenges that governments face in managing SOEs. The chapter also discusses how countries can boost SOEs ability to meet their public mandates in an efficient manner, while promoting fair competition.

Achieving Policy Objectives

Struggling to Meet Policy Mandates

Governments mandate SOEs to pursue a diverse set of policy goals (Figure 3.8). In general, government intervention through SOEs is often justified to correct market failures. One example of market failure is a natural monopoly, wherein the initial cost of building the

Figure 3.8. Objectives of SOEs in CESEE Countries
(Percent of respondents)



Source: Richmond and others 2019.
Note: Responses from governments of CESEE countries to a survey about the nonfinancial objectives of SOE ownership. CESEE = Central, Eastern and Southeastern European; SOE = state-owned enterprise.

infrastructure to provide the good or service, such as water and sewer systems, is so large that private firms may be reluctant to enter the market. Another example is when it is not possible to charge individuals for use of the good (for example, street lighting), which means that private firms may not provide enough of it. In other instances, SOEs are established to develop new sectors, especially in developing countries, such as the copper-mining sector in Chile in 1976 or the oil and gas sector in Ghana in 1983. However, SOEs can also be found producing goods and services in a competitive environment (for example, soft drinks, cars, or cleaning services) without a clear, specific policy mandate. SOEs are sometimes used to pursue broad macroeconomic goals, such as promoting credit growth.

SOEs, especially in emerging market economies and low-income developing countries, have faced challenges in trying to achieve policy mandates, often multiple ones, within a sustainable business model. A core problem has been that these mandates are not clearly specified or adequately costed. Another common weakness is limited transparency of SOE operations and their financial relations with government. These challenges lead to the following problems:

- *Unfunded mandates*: The lack of clear and funded mandates can weaken the financial health of SOEs.[7] For example, firms' lack of freedom to set prices or tariffs to cost-recovery levels—in an attempt to ensure the affordability of goods or services—could lead to systematic losses. This can result in a buildup of SOE debt, including arrears, and inefficient provision of the good or service (such as deterioration of the railway network from lack of maintenance) or limited accessibility (for example, the electricity grid not reaching rural areas) (Ter-Minassian 2017). Similarly, if an SOE is asked to promote employment, higher labor costs may weaken the firm's efficiency and financial viability.
- *Government bailouts:* The expectation that governments will eventually compensate, or bail out, the SOE for losses may provide managers with incentives to not pursue efficiency, to take larger risks, or to borrow excessively.
- *Weak governance and oversight:* In many countries, government agencies do not have sufficient information or capacity to properly monitor SOEs, and others lack guidelines for financial reporting by SOEs (Allen and Vani 2013). More generally, weak governance and corruption are among the main sources of the difficulties that SOEs face (April 2019 *Fiscal Monitor*; Wilkinson 2018).
- *Costly government dividend and tax policies:* SOEs should share their profits with the government; however, excessive dividend payouts, dictated by budgetary needs, could have implications for SOEs' ability to operate. For example, Argentina's state-owned oil company, YPF, paid dividends of $602 million in 2016 despite incurring a loss of more than $1 billion that year.

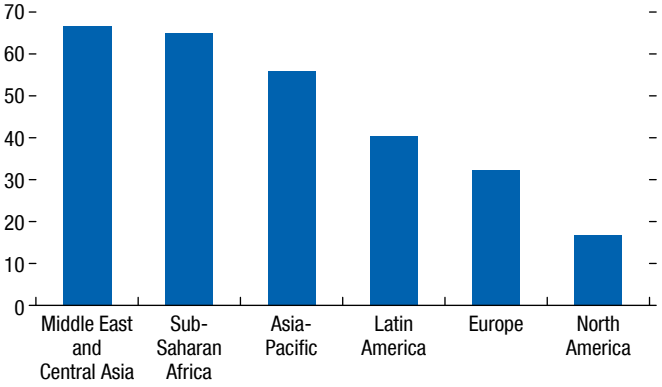
These challenges are particularly relevant in critical nonfinancial network sectors (power, water, ground transportation, energy) as well as in public banks. The rest of this section delves into these sectors.

Network Sectors: Special Challenges

Network industries, sectors in which a fixed infrastructure and a degree of standardization is needed to deliver the goods or services efficiently to end users, are critical for generating economic growth and achieving the Sustainable Development Goals. Safe water is essential for life and health. Reliable electricity saves businesses and consumers from having to invest in expensive backup systems. Affordable transportation underpins business activities and is key to generating

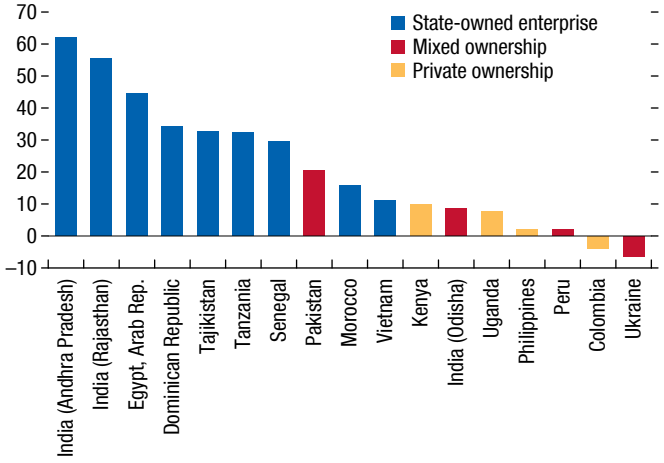
[7]Petri and Taube (2003) estimate quasi-fiscal activities in the energy sector at 26.7 percent of GDP in Azerbaijan in 1999 and 6.5 percent in Ukraine in 2000.

Figure 3.9. SOEs' Power Generation Capacity, 2017
(Percentage of total, by region)



Sources: S&P Global; UDI World Electric Power Plant database; and IMF staff calculations.
Note: SOEs = state-owned enterprises.

Figure 3.10. Gap between Costs and Electricity Tariffs
(Percent of total cost)



Source: World Bank 2019.
Note: Percent of total cost is the gap (the difference between total cost and the tariff) divided by total cost.

employment and advancing economic development. Thus, it is not surprising that the government intervenes in many of these industries, especially where the private sector has not begun operating.

SOEs dominate the power sector, especially transmission and distribution, given that these segments have characteristics of natural monopolies. Private investors are involved mainly in the generation of electricity, but SOEs are major players even there (Figure 3.9). In advanced economies, evidence is mixed on whether reforms, including privatization, delivered the anticipated efficiency gains (Gathon and Pestiau 1996, see Box 3.1). Government efforts to expand access and promote greater efficiency in power sectors in low-income developing countries have yielded mixed results. Access remains an urgent challenge—notable progress has been made, but 840 million people live without electricity, most in Africa.[8] Although private sector entrants contributed to expanding generation capacity, network expansion and access relied largely on SOEs. A common problem is the failure to achieve cost recovery (Figure 3.10). Below-cost tariffs reduce an SOE's capacity to invest—hurting access and growth—and weaken the financial situation of the firm.

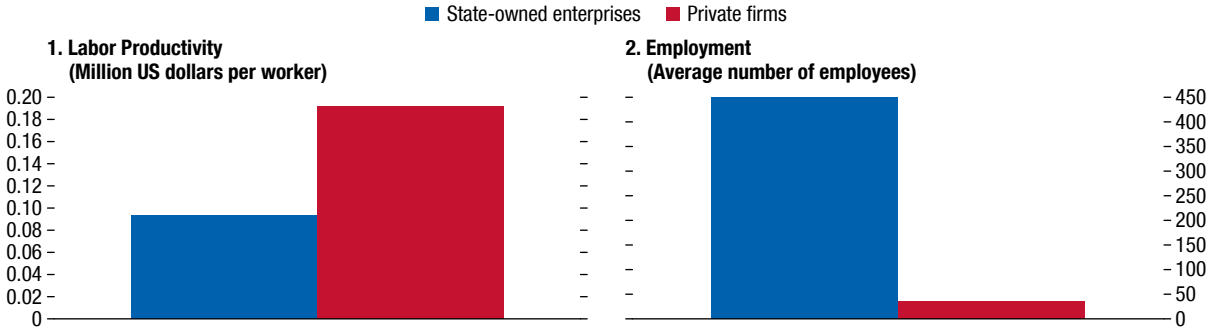
Specific features of the water sector also provide a rationale for government intervention (Menard and Peeroo 2011; World Bank 2004). Delivery systems require major investments in infrastructure, and potable water and adequate sewerage are essential for public health. Most countries have opted for a high degree of public provision through SOEs. Among advanced economies, public provision is dominant in the majority (for example, Australia, Germany, Japan, and the United States); only a few rely significantly on private providers (for example, Czech Republic, France, and England) (Pérard 2009). Recently, Paris (France), Berlin (Germany), and several US municipalities have remunicipalized water management (Warner and Aldag 2019).[9]

In developing countries, the challenge in the water sector is staggering. More than 2 billion people lack safely managed services, partly reflecting weak SOE performance (WHO and UNICEF 2017; World Bank 2004). The solutions are not easy but possible. There is growing awareness of the need for cost recovery, to ensure sustainability and improve service, while safeguarding provision to the poor. For example, in Burkina Faso, the public water utility has been instrumental in doubling the population's access to drinking water over the past two decades by introducing a progressive tariff grid (IMF 2015). In Mali, however, a private concession on water and electricity failed, despite having an independent regulator, owing to disagreement over the level of tariffs, political interference, and the government not paying its own

[8]See https://www.worldbank.org/en/news/press-release/2019/05/22/tracking-sdg7-the-energy-progress-report-2019

[9]Studies do not show significant performance differences between private and public provision of water; see, for example Perard (2009) and Suárez-Varela and others (2016).

Figure 3.11. National Oil Companies' Productivity and Employment



Sources: Orbis; Natural Resource Governance Institute; and IMF staff estimates.
Note: The sample includes 98 national oil companies and 1,520 private firms.

utility bills (Balance and Tremolet 2005; Estache and Wren-Lewis 2009).

Transportation is another crucial sector for economic activity and public well-being. The provision of public transportation, especially at the local level (trains, subways, buses), has involved significant government intervention justified by the need to ensure affordability as well as to address congestion, pollution, or accidents. Local SOEs commonly provide ground transportation in advanced economies, whereas informal private transportation services—often less safe and more polluting—are widespread in emerging market and economies. Allowing SOEs (or even private operators) to charge prices that cover investment and maintenance needs has proven challenging.[10]

Many oil-exporting countries have created national oil companies (NOCs) to exercise control over oil and gas exploration and garner potentially large profits for the state. However, NOCs are significantly less profitable and efficient than their private peers, partly owing to pressures from the government to engage in excessive hiring (Figure 3.11). Another issue is governments often have NOCs sell fuel at subsidized retail prices and undertake social spending. In some cases, NOCs take on most of the exploration of oil and gas, leaving governments with the costs and risks of exploration, instead of simply taxing profits. Moreover, the large profits create strong incentives for corruption (April 2019 *Fiscal Monitor*).

Are Public Banks an Appropriate Tool for Macro-Fiscal Management?

Government intervention in the financial system, including through public banks, is significant in many countries.[11] Although the presence of public banks—commercial banks that provide corporate and retail banking services to the general population and development banks that provide credit for development-related projects—has declined sharply since the 1990s as economic liberalization and financial globalization gained traction, they still have significant market share in several large economies.[12] State ownership of banks has been justified by the need to address market failures and promote economic development, although many banks also pursue profit maximization (see Box 3.2).[13] There is some recent renewed government interest in public banks, especially development

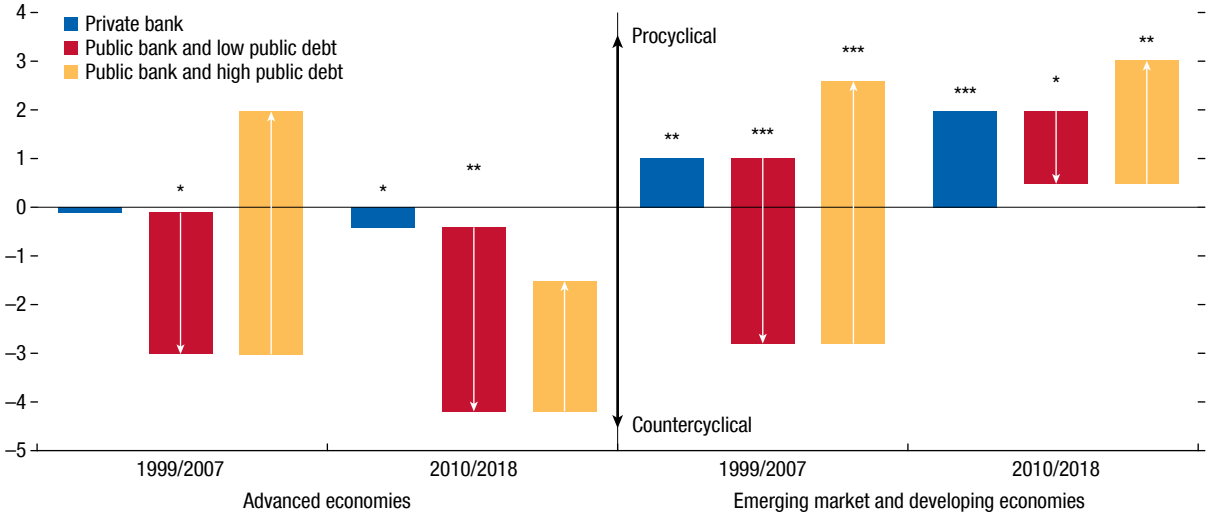
[10]For example, protests in Chile after a metro fare increase are in part rooted in the failed 2007 reform of the informal bus transportation system in the capital. The reform was intended to reduce congestion, pollution, and accidents through additional dedicated bus lines, modernization of the bus fleet, and fare integration with the metro (Gomez-Lobo 2012). The massive influx of passengers after the reform called for large investments that could not be covered by tariffs. The financial viability of the SOE operating the metro deteriorated rapidly, resulting in large direct subsidies from the government.

[11]This section focuses on public banks, but governments have also used SOEs in other financial areas, including insurance and mortgage markets (for example, in Canada and the United States, among many others).

[12]The global financial crisis led to a wave of large-scale recapitalizations and nationalizations of failing banks, notably in advanced economies, that has not been completely unwound (Igan and others 2019).

[13]On the role of public banks, see also Cull, Martinez-Peria, and Verrier (2017); Ferrari, Mare, and Skamnelos (2017); World Bank (2012); and Yeyati, Eduardo, and Panizza (2005).

Figure 3.12. Change in Loan Growth over the Cycle
(When GDP grows 1 percentage point above trend; percentage points)



Sources: Fitch Connect; and IMF staff estimates.
Note: Regressions control for several factors, including other bank characteristics (see Online Annex 3.3). Public banks are defined as banks with over 25 percent of equity owned by the government. Countries with high public debt are those above the 75th percentile of the distribution across the whole sample, roughly corresponding to 100 percent of GDP for AEs and 60 percent of GDP for EMDEs. AEs = advanced economies; EMDEs = emerging market and developing economies. ***, **, and * indicate statistical significance of the bars at the 1, 5, and 10 percent level, respectively. Bars indicate distance from zero for blue bar or preceding bars for the others.

banks, owing to their potential role in funding infrastructure investment.[14]

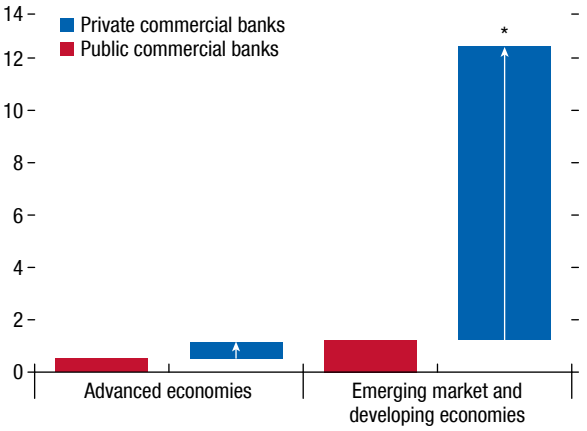
Governments also call on public banks to fight recessions. Public banks were used widely for this purpose during the global financial crisis, often financed by direct support from the governments' budgets (for example, loans or capital injections by Brazil, Canada, and India). Countries also raised credit ceilings of their public banks (for example, Finland and Korea) or issued special guarantees (for example, Mexico) for public banks to support key markets and firms (World Bank 2013).

There are, however, limits to the effectiveness of public banks in stabilizing the economy. Public bank lending has been less procyclical than private bank lending, on average, in the past 20 years but not in developing countries with high public debt levels (Figure 3.12). This different behavior likely reflects higher financing costs of and lower government subsidies to public banks in economies with tighter budget constraints. For example, in the case of the Brazilian development bank, BNDES, credit surged during the global financial crisis and for a few years during the strong postcrisis recovery but declined sharply during the recession of 2014–16, in part because soaring public deficits and debt closed the door on government lending to public banks (case study for Brazil, Online Annex 3.2). The quality of this rapid credit growth may not have been adequately assessed in the haste to extend credit, potentially leading to nonperforming loans in the future.

Public banks may also be used to fund the government and simultaneously receive support from the government. This sovereign-bank nexus potentially exacerbates the financial vulnerabilities of both (April 2019 *Global Financial Stability Report*; Dell'Ariccia and others 2018). Public banks tend to hold larger amounts of sovereign debt than do private banks, especially in emerging market and developing economies with higher public debt vulnerabilities (Figure 3.13). Moreover, during the sovereign debt crisis in Europe, domestic banks, particularly state-owned ones, were more likely to increase their holdings of domestic government bonds in fiscally distressed economies, suggesting a

[14]See, for instance, "National development banks are back in vogue" (*The Economist* 2019). Several new public development banks have been established since the global financial crisis, including PT Sarana Multi Infrastruktur in Indonesia (2008), Bpifrance (2012) and Société de financement local (2013) in France, the Development Bank of Nigeria (2013), and FinDev Canada (2017).

Figure 3.13. Bank Holdings of Government Bonds in Countries with High Public Debt
(Relative to countries with low public debt in percent of assets, 1999–2018)



Sources: Fitch Connect; and IMF staff estimates.
Note: The regressions control for several factors including bank characteristics (see Online Annex 3.3). Public banks are defined as those with more than 25 percent of equity owned by the government.
* indicates statistical difference from zero at 10 percent significance level.

"moral suasion" mechanism (Ongena, Popov, and Van Horen 2019). In India, government guarantees allowed public banks—even vulnerable ones—to expand credit during the global financial crisis with deposits moving from vulnerable private to "safer" public banks. However, the loan quality of these public banks soon deteriorated, increasing financial sector fragility and contingent liability risks for the government (Acharya and Kulkarni 2019).

Are SOEs Performing Efficiently?

Many governments demand that SOEs achieve their public mandates, perform efficiently, and compete with private firms. This section compares SOEs' financial performance with that of private firms and analyzes its determinants using data for about 1 million individual firms across 109 countries.[15] It also reviews evidence on governments' exposure to fiscal risks from SOEs.

SOE Financial Performance

A simple comparison reveals that profits and labor productivity are lower in SOEs than in private firms (Figure 3.14).[16] This finding is consistent with country or regional studies for China, Russia, and other countries in the Central, Eastern, and Southeastern European region (Abramov and others 2017; Lardy 2019; Richmond and others 2019). In part, this difference could reflect the cost of public mandates—for example, providing services at below-cost prices to underserved communities or promoting employment beyond what is efficient for the firm—but other factors may be at play. It is important to note that if the differences are because SOE's are less efficient, the resulting misallocation of resources can reduce economywide productivity (Song, Storesleten, and Zilibotti 2011).

The Role of Economic Sectors and State Ownership in SOE Performance

SOEs' performance gaps may reflect differences in the sectors in which they operate or in ownership. Cross-country evidence shows that SOEs are less productive than private firms in the same sectors[17] and that the productivity gap tends to be larger in sectors where there is usually more competition (for example, agriculture and manufacturing). In some of the regulated sectors (such as utilities), the gap is lower (Figure 3.15).

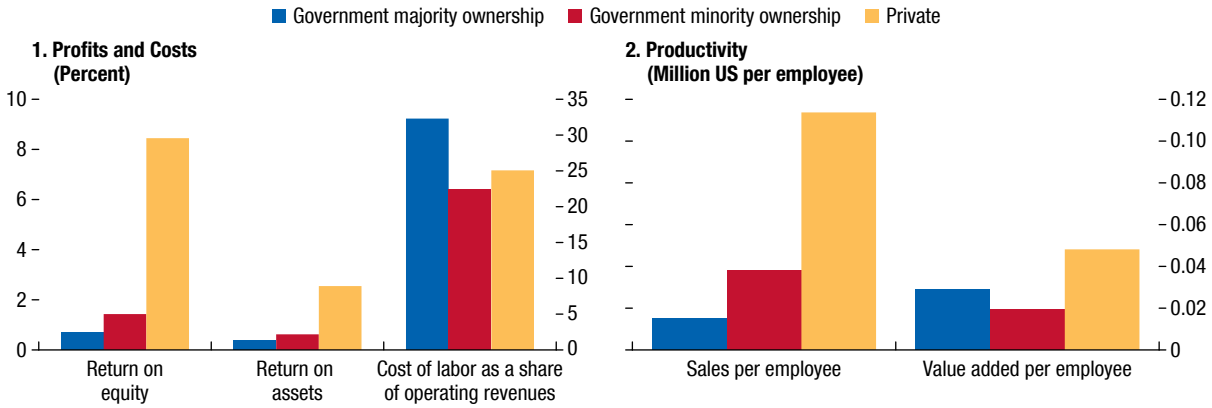
Mixed ownership also makes a difference in firm performance. Private owners put greater emphasis on profits and efficiency. Listed mixed-ownership enterprises are subject to greater monitoring by private investors and analysts (Biglaiser and Brown 2003; D'Souza, Megginson, and Nash 2005; Pargendler, Musacchio, and Lazzarini 2013). The evidence confirms that partial involvement of the private sector is beneficial (Megginson and Netter 2001; Vining and Boardman 1992). The analysis in this chapter indicates that firm productivity is lowest when the government has a majority position—private firms are three times more productive—but the gap is narrower when the government has a minority position (Figure 3.16).

[15]Of the 969,000 firms in the sample, about 949,000 are fully private, 15,000 are majority state owned, and 4,000 are minority state owned. The database includes mainly firms from advanced and emerging market economies with a smaller sample from low-income countries. The results are robust when constraining the analysis to countries where the coverage of firms is high. See Online Annex 3.4 for details.

[16]The analysis is based on SOE financial data, given that it is available for a large set of firms. For example, labor productivity is proxied by sales per employee, which does not necessarily only reflect differences in technical efficiency. If SOEs are restricted to charging lower prices relative to private firms, this would have a negative effect on sales per employee.

[17]The results in this section are similar for other performance measures. See Online Annex 3.4.

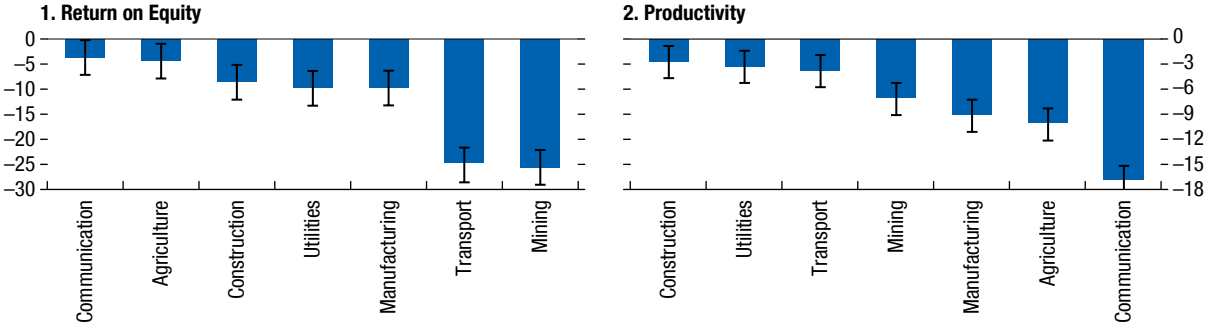
Figure 3.14. SOEs' Performance Relative to Private Firms



Sources: Authorities' annual reports on SOEs; Natural Resource Governance Institute; Orbis; and IMF staff estimates.
Note: The panels are based on median values. Weighted averages show a similar pattern. SOEs = state-owned enterprises.

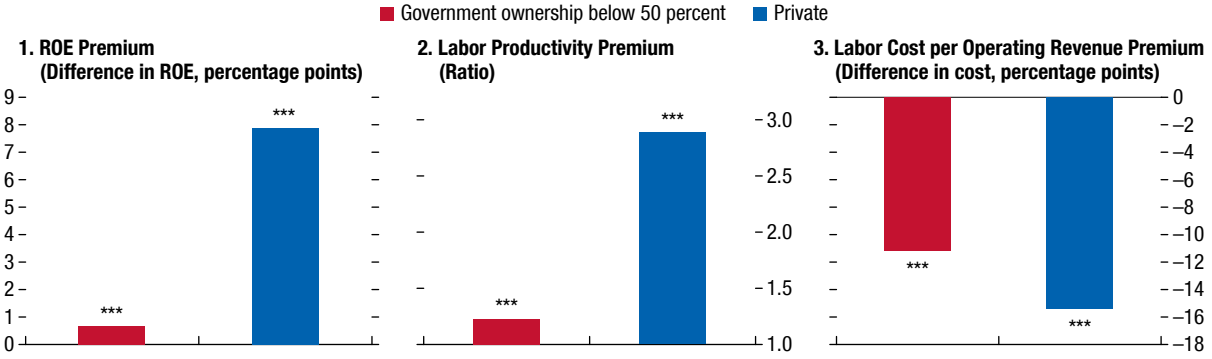
Figure 3.15. Relative Performance of SOEs, by Sector

(Percentage point difference in SOEs performance relative to private firms)



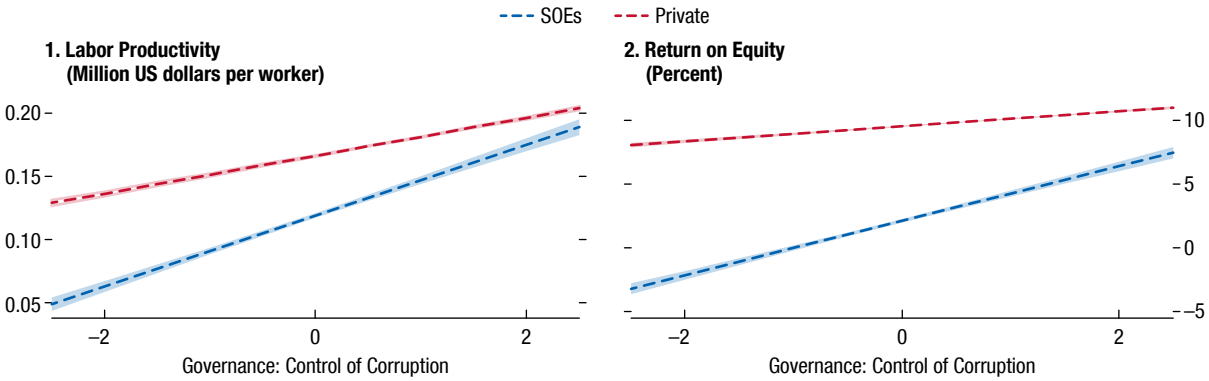
Sources: Authorities' annual reports on SOEs; Natural Resource Governance Institute; Orbis; and IMF staff estimates.
Note: For productivity (sales per employee), sales data are based on 2017 prices. SOEs are firms with 50–100 percent public sector ownership. Data are from 1999 to 2017. SOEs = state-owned enterprises.

Figure 3.16. Degree of State Ownership and Firms' Performance



Sources: Authorities' annual reports on SOEs; Natural Resource Governance Institute; Orbis; and IMF staff estimates.
Note: The panels show the performance of firms depending on the degree of state ownership and controlling for other factors. "Minority ownership" means that the government owns less than 50 percent of the company; "majority ownership" means that the government owns 50 percent or more. For productivity (sales per employee), sales data are based on 2017 prices. Data are from 1999 to 2017. The coefficients are relative to firms with government majority ownership. ROE = return on equity; SOEs = state-owned enterprises. *** indicate statistical difference from zero at 1 percent significance level.

Figure 3.17. Governance and Firms' Performance



Sources: Authorities' annual reports on SOEs; Natural Resource Governance Institute; Orbis, World Bank, Worldwide Governance Indicators; and IMF staff estimates.
Note: The panels illustrate the effect of control of corruption on firms' performance depending on the type of ownership. SOEs are firms for which the government owns 50 percent or more. The analysis controls for firm-specific characteristics, country-specific variables, and sector where the firm operates. The Control of Corruption Index provides a relative measure of perceived corruption. Data are from 1999 to 2017. SOE = state-owned enterprise.

There are also significant differences for return on equity, labor costs, and other measures of performance. Empirical studies on privatization complement these results (see Box 3.1).

Good Governance Is Critical

Weak governance in government harms all firms but has an especially deleterious effect on SOEs (Baum and others 2019). This subsection reports on the relationship between financial performance and a measure of countrywide perceived governance (control of corruption), controlling for the level of development and other factors.[18] The results show that as countrywide perceived governance improves, SOEs' performance and productivity gaps relative to private firms shrinks (Figure 3.17). SOEs that operate in countries with high levels of perceived corruption are one-third as productive as private firms, on average; in countries with strong governance, the productivity gap is 7 percent. Regarding profitability, the gap with private firms declines but remains significant—a difference of 4 percentage points in return on equity between SOEs and private firms in countries with good governance scores—which may reflect, at least in part, unfunded public mandates.

One possible driver of performance across different degrees of governance is the sector in which the SOE operates. Countries with better governance scores seem to be more selective, having SOEs in specific sectors, especially utilities and transportation, in which there is a stronger reason for intervention and the performance of SOEs is closer to that of private firms. These countries have fewer SOEs in areas in which private firms have significantly superior performance (for example, manufacturing).

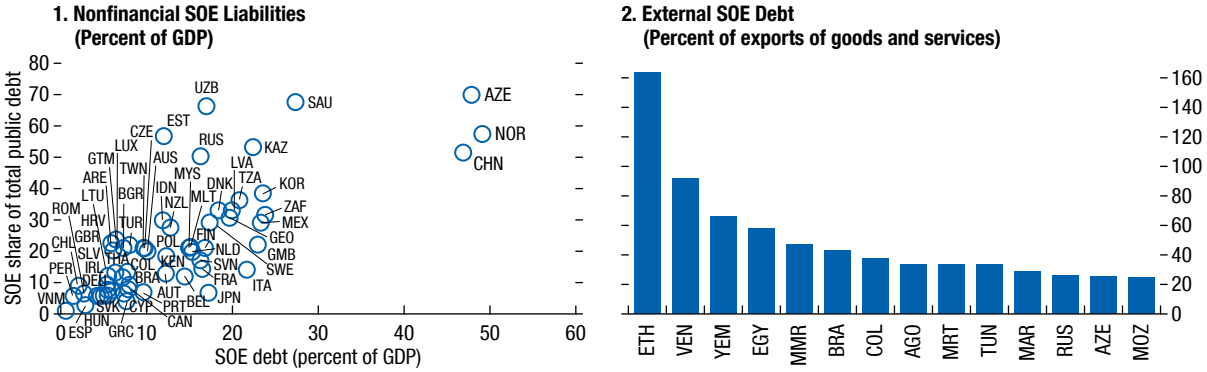
Fiscal Costs and Risks to the Government

SOE performance and the realization of fiscal risks from SOEs can significantly affect public finances. Over the years, governments have provided significant support to financial SOEs (mainly capital injections) and nonfinancial SOEs (predominantly recapitalizations and debt assumptions), with the maximum annual support to financial and nonfinancial SOEs reaching 18 and 16 percent of GDP, respectively (updated version of database by Bova and others 2016).[19] SOEs that operate in the airline, banking, mining, railway and utility sectors are among those that required costly support. For example, Italy's national airline is under bankruptcy protection and has received large loans or transfers from the government

[18]The Control of Corruption index from the Worldwide Governance Indicators (WGI), available since 1996, aggregates information from more than 30 different sources. Caution is needed in interpreting scores for any individual country given measurement error because the quality of underlying data can vary across countries and data sources.

[19]Governments have also provided significant support to private financial institutions and nonfinancial companies, most noticeably during the global financial crisis.

Figure 3.18. SOE Debt Vulnerability



Sources: IMF's Public Sector Balance Sheet (PSBS) database; Eurostat; S&P Capital IQ; and IMF staff calculations.
Note: Debt drawn from S&P Capital IQ is only for the largest SOEs in the country. S&P Capital IQ and Eurostat data are for 2017 or 2018. Debt data drawn from the PSBS database covers a range of years from 2012–2016 and, for some countries, represent total liabilities less equity. Data labels in the figure use International Organization for Standardization (ISO) country codes. SOE = state-owned enterprise.

Sources: World Bank 2020; WEO 2019; and IMF staff calculations.
Note: The figure includes both financial and nonfinancial SOEs. Data labels in the figure use International Organization for Standardization (ISO) country codes. SOE = state-owned enterprise.

in the past few years.[20] Similarly, South Africa's government-owned power company, Eskom, is receiving a rolling government bailout of 2⅓ percent of GDP over three years, although the cost may turn out larger (IMF 2019b). In Belarus, over the past years, the government on average provided 1½ percent of GDP in subsidies and about 2 percent of GDP in additional off-budget support (Richmond and others 2019).

More broadly, SOE debt levels can pose a risk to public sector finances, even in the absence of explicit government guarantees. In some countries, debt of the SOEs exceeds 20 percent of GDP and in several cases constitutes half or more of the public sector debt stock (Figure 3.18). In other countries, SOE external debt exceeds 25 percent of the countries' exports of goods and services (see also IMF 2020). Even if the debt was incurred to develop a natural resource, as in oil-exporting countries, the debt may increase the vulnerability of the government to shocks (for example, a fall in oil prices). In addition to debt, SOEs may have significant obligations to private parties through joint ventures, public-private partnerships, and power purchase agreements.

The realization of SOE risks may also have multiplier effects on the whole economy. When these risks materialize in public banks, credit growth may be curtailed, undermining economic activity. As for nonfinancial SOEs, the larger they are the more significant the impact of their financial imbalances can be for employment and investment. If financially impaired SOEs dominate a key economic sector such as power, they can also affect the financial system and competitiveness (for example, Ghana, see Online Annex 3.5). The public sector balance sheet approach can be used to show how a macroeconomic shock can have cascading effects through interrelationships between financially vulnerable SOEs (for example, in The Gambia) to the national budget (October 2018 *Fiscal Monitor*).

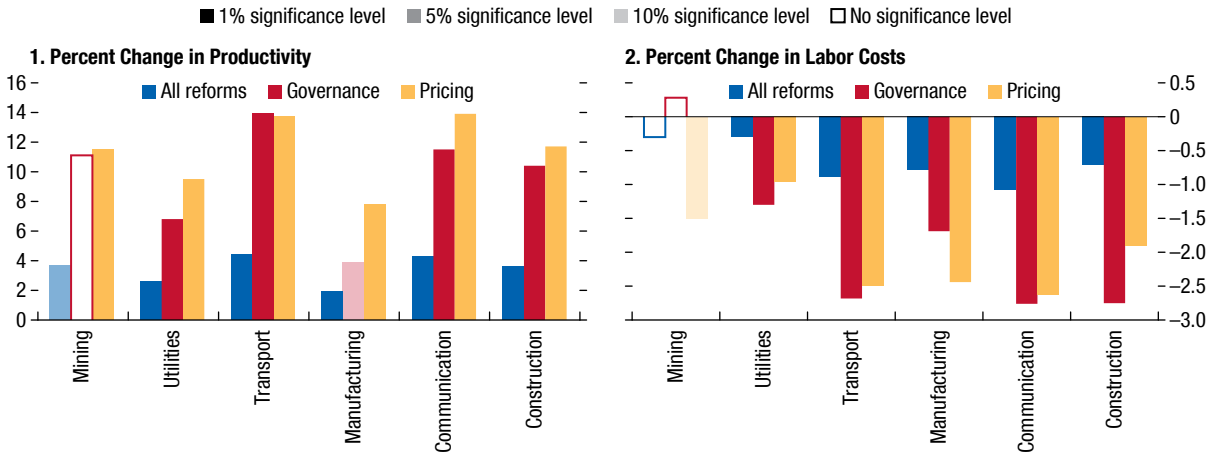
Reforms Can Help

The discussion so far suggests that there is scope for SOE reforms targeting governance and financial incentives to improve SOE performance. Some empirical cross-country evidence, although limited, indicates that SOE reforms can improve their efficiency (Megginson and Netter 2001). Taking advantage of a novel database for a sample consisting primarily of emerging market and developing economies, as well as a few advanced economies (members that had IMF-supported programs in 2002–17), we study the effect of SOE reforms in a cross-country setting.[21]

[20]Alitalia was privatized in 2009, but in 2014 the government took a minority stake. In 2017, the airline was put under special administration. In 2020, the company was formally reincorporated as a public holding.

[21]The information comes from data on structural conditionality in the context of IMF-supported programs. See Online Annex 3.6 for details.

Figure 3.19. Impact of SOE Reforms, 2002–17



Source: IMF staff estimates.
Note: "All reforms" includes the impact of financial target setting and arrears clearance in addition to governance and pricing reforms. "Pricing" includes, among others, implementation of automatic fuel prices and electricity tariffs adjustments. The coefficients measure the impact of SOE reforms on average productivity and average cost changes. The coefficients can be interpreted as the average improvement of productivity or costs following reforms. SOE = state-owned enterprise.

The reforms target (1) SOE governance (for example, SOE management, oversight, and transparency)—not governance in general; (2) public enterprise pricing (such as tariffs and automatic fuel price mechanisms); (3) arrears clearance; and (4) the achievement of specific financial targets.

The results show that some reforms positively affect financial performance.[22] Reforms of SOE governance and pricing improve financial variables for all sectors except for mining SOEs (Figure 3.19). For example, an implemented governance reform is associated with an increase in productivity of $10,000 per worker and a reduction of costs of 5 percent in the electricity sector. Reforms such as arrears clearance and financial targets have weaker or no impact, perhaps reflecting that if other structural reforms are not part of the package the underlying factors driving performance may not change.

These reforms require building and sustaining broad popular support over several years. It is also important that improvements in the financial health of SOEs be achieved while protecting the more vulnerable segments of the population from possible adverse effects. Jordan's and Ukraine's experiences provide two examples.

- Subsidies to Jordan's electricity company, NEPCO, were close to 6 percent of GDP in 2014 (for context, the share of total health spending was 7.5 percent of GDP in the same year). NEPCO undertook a series of reforms, including gradual tariff adjustments since 2012 and the installation of a liquefied natural gas plant to ensure cheaper inputs. At the same time, vulnerable households were supported by increased cash transfers. As a result, public transfers to NEPCO were eliminated as of 2015, and NEPCO has posted small positive or negative net operational balances since 2016.
- Ukraine's national oil and gas company, Naftogaz, turned from a loss-making firm receiving significant budget aid to a profitable company within a few years. Significant gas and heating price increases, along with restructuring and governance reforms as of 2014 were accompanied by the extension of utility subsidy programs for vulnerable households.

In both countries, ongoing efforts will be needed to sustain the reforms, including targeted support to the most vulnerable and continued efficiency gains.

[22]SOE reforms are implemented SOE reforms during IMF-supported programs. Governance reforms span a wide array of reforms related to monitoring, auditing, and management; structural reforms to a sector as a whole (if they are governance related); and others. Public enterprise pricing reforms primarily concern tariff structures and typically target SOEs in electricity, gas, oil, heating, and water sectors.

How to Get the Most Out of SOEs

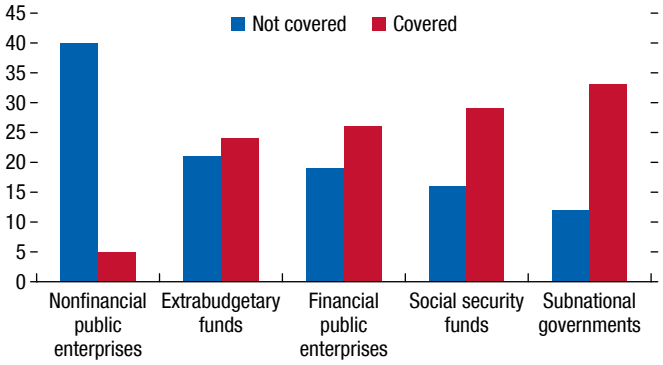
As the previous sections illustrate, SOEs can be difficult to manage and costly to the budget and the economy. This is particularly true when they are subject to excessive political interference and are used as vehicles to disguise off-budget spending and borrowing, patronage, or corruption. This section explores what countries can do to overcome these and other challenges and get the most out of SOEs. Although SOEs exist for many reasons, including historical and political circumstances, it is important to regularly review whether the rationale for each SOE remains valid and whether it delivers value for taxpayers' money. Given the potentially large costs, countries should use SOEs selectively and only where government intervention through SOEs can be most effective. The case is weaker for SOEs that operate in competitive sectors because private firms provide goods and services more efficiently. In contrast, experience suggests a stronger case for public intervention in sectors in which the government strives to achieve universal delivery of goods and services at affordable prices (for example, public utilities and ground transportation)—this is an area where SOEs are heavily present around the world.

For their SOEs to be successful, many countries will need to strengthen the link between SOEs and public sector goals, improve firm-level incentives, and enhance governance institutions. Some countries, for example, the Nordics (Online Annex 3.7), have built strong SOE frameworks that encompass these elements with the aim of ensuring they deliver value for taxpayers' money.

Aligning SOE Activities with Public Sector Goals

Consistency between SOE activities and general government policies is important to prevent the two parts of the public sector from working at cross purposes. For example, if SOEs accumulate significant debt when the rest of the public sector is aiming at fiscal adjustment, the government's efforts to reduce its borrowing costs may be undermined. Coverage of SOEs in the public accounts and provision of the right incentives for SOEs allow for better alignment of SOE actions and performance with overall government objectives.

Figure 3.20. Fiscal Coverage beyond the Central Government in Sub-Saharan Africa
(Number of countries)



Source: IMF staff survey of 45 countries in sub-Saharan Africa.

Consistency with the Broader Public Sector Goals

SOE financial operations and assets and liabilities should be fully integrated into the financial statements of the public sector. Applying such a public sector balance sheet approach would enhance transparency of SOE financial performance and relations with other parts of the public sector (October 2018 *Fiscal Monitor*). Some countries or regions already implement a public sector balance sheet approach (Australia, New Zealand, United Kingdom) or partially reflect SOEs' main financial indicators in the public accounts (for example, Latin America). But many others do not, as is the case in sub-Saharan Africa (Figure 3.20) and most of Europe.[23] Fully integrating SOEs into a public sector accounting framework will likely require an incremental approach in some countries. In the meantime, countries that currently report information only on central or general government fiscal results (revenue, expenditures, budget balance, and debt) should complement this reporting with memorandums that summarize government guarantees to SOEs (in addition to the recommended SOE financial disclosure practices outlined in the transparency section below).

Given that SOEs use public resources and pursue policy goals, it is important to ensure that they collectively operate consistently with the country's broader macro-fiscal objectives. Those objectives are often embedded in fiscal targets, such as the overall budget

[23]Based on IMF's Fiscal Transparency Evaluations since 2014, around 90 percent of the countries evaluated did not publish comprehensive information on the public sector.

balance or gross debt, that are set at levels to support macroeconomic goals—economic growth, inflation, and stability. Including nonfinancial SOEs in the fiscal targets would create greater incentives for fiscal discipline and transparency because (1) governments will likely exercise greater oversight over SOEs' overall borrowing and (2) governments' options to circumvent fiscal targets would be more limited. Inclusion would ensure that the broader fiscal policy goals are consistent across the public sector, for example, in keeping total public debt at safe levels.

The preference is to include nonfinancial SOEs in fiscal targets. Many governments in Latin America already include most nonfinancial SOEs in the fiscal targets and rules. At a minimum, governments should ensure comprehensive coverage in fiscal targets of at least nonfinancial SOEs that pose significant fiscal risks and for which the government is a majority shareholder (IMF 2007).[24,25] If this is not feasible, an SOE's debt should be included in public sector debt when the SOE poses a fiscal risk.

When considering the need for macroeconomic stabilization, it is appropriate to limit the use of SOEs and use more direct, transparent measures instead. Using SOEs to support employment during economic downturns is less efficient than monetary or fiscal policy tools. Likewise, forcing public banks to boost credit as the economy weakens could ultimately deteriorate the quality of their loan portfolio and increase risks. A case could be made for using public banks in situations of severe economic deterioration as part of a broader, and exceptional, policy action (as during a major global financial crisis). This approach requires fully transparent objectives and costs.

[24]SOEs have public mandates that imply that their finances and operations will likely deviate from commercial interests making the commercial orientation of an SOE ill-suited as a selection criterion. Past analysis by IMF staff finds that SOEs did not behave commercially because there was always some government-imposed mandate or constraint (for example, on setting prices or employment policies) (IMF 2005).

[25]Public banks are better kept outside fiscal targets given the nature of their financial operations. It is also important to keep close track of the performance of SOEs that routinely turn profits—as might be the case, for example, for a highly profitable national oil company—to ensure that such SOEs remain efficient and to recognize that such profits will ultimately accrue to the state. The case for inclusion of such SOEs in the fiscal targets needs to be counterbalanced against the possibility that they could obscure the underlying financial performance of the rest of the public sector.

Getting Incentives Right at the Firm Level

Governments must give SOEs the right incentives to deliver value for taxpayers' money. This is more challenging, but also more necessary, when SOEs operate in sectors with limited competition or when there are significant externalities (for example, when provision of a good is important for economic growth) or social mandates. To promote efficiency and a sustainable business model,

- *Getting the pricing policy right is key.* Pricing rules should be transparent and depoliticized (for example, published rules specifying how domestic fuel prices will adjust automatically to changes in the cost of supplying fuel). Preferably, prices should be set to ensure cost recovery (including to cover investment expenditure). The pricing policy in sectors with negative externalities (for example, fossil fuels that lead to pollution and health problems) should also be adjusted, protecting more vulnerable households.[26] If this is not possible—for example, because a large share of the population is poor and there is no social safety net—governments should appropriately compensate the SOE in a timely and transparent manner. Conversely, it is important to prevent excessively high prices if the SOE has monopoly power because high prices may lead to inefficiencies.
- *Independent regulatory agencies* need to balance different interests, ensuring that government and firms operate according to transparent and well-defined rules, especially when private investors are involved. For example, regulators can ensure tariffs in public utilities are set to balance affordability with the need to cover costs. In low-income countries, pooling resources in a single regulator overseeing several sectors can help build capacity.
- *Professional managers and the independence of managerial decisions are required to ensure the firm operates efficiently.* Firms need to have corporate governance structures that promote sound hiring, wage, and procurement policies. The next section discusses in greater detail some of the important features, including a professional board and a high degree of transparency.

[26]In some cases, a better approach would be to have a broader strategy, under which firms can charge prices that reflect costs with the government directly providing subsidies to the poorest households.

Other strategies that have been adopted to improve the SOE incentives include corporatization and allowing for participation of private minority shareholders. In OECD countries, most SOEs are incorporated according to company law and are generally subject to the same laws and regulations as private companies.[27] About half of those companies by value are listed on a national stock exchange (OECD 2017). Mixed ownership has been adopted by many countries to some degree over the past decades (for example, Brazil and China as well as European countries).

Strengthen Institutions

The starting point is a clear and comprehensive ownership policy aiming to get value for taxpayers' money out of SOEs (Allen and Alves 2016). Ownership policies should clearly state (1) the mandates, objectives, and a dividend policy for SOEs; (2) the approach to achieving professional boards of directors; (3) the functions carried out by the government as owner of the SOE and its coordination with fiscal risk oversight functions; and (4) the way the government exercises its ownership rights. To assess SOEs' effectiveness in achieving value for money, it is also important to distinguish and disclose commercial and noncommercial activities (policy mandates). Moreover, governments must develop the capacity to properly oversee the operations of the company while avoiding excessive intervention of public officials; enforce transparency requirements; and establish a sound SOE corporate governance framework. Implementation of anticorruption strategies to prevent the use of SOEs for private gain is also critical.

Effective Financial Oversight and Ownership

A strong oversight and control agency can yield better performance from SOEs (Musacchio and Pineda Ayerbe 2019). A centralized model provides the best potential for ensuring consistency between the ownership (for example, representation on company boards, strategic direction of firm) and financial oversight functions. A centralized model could take the form of an autonomous agency or holding company (as in Finland, France, Kenya, Malaysia, Peru, and Singapore). Holding companies exhibit advantages when managers have professional expertise and they protect SOEs from undue political interference.

It is critical to have one government unit responsible for the financial oversight of SOEs even when a holding company is in place. One unit makes oversight activities more coherent, while pooling experts from different areas. A central element of the oversight function is to identify, disclose, and mitigate fiscal risks. Fiscal risk assessments can be made for individual companies and for the SOE portfolio. The latter allows for evaluation of the combined risks for the government.[28] Oversight units can be located within ministries of finance (France) or public companies (such as UK Government Investments). The former model has the advantage of better integrating SOE risk oversight in the budget process and facilitating a broader assessment of fiscal risks. Moreover, SOE oversight units should be accountable to an institution representing the interests of the public (for example, parliament).

SOEs' investment plans, because of their direct fiscal costs and impact on growth, deserve special scrutiny. Government assessment of large investment (infrastructure) plans of SOEs should be informed by technical and economic appraisals based on standardized criteria. Furthermore, when projects involve direct budgetary costs—for instance through capital injections or on-lending to SOEs—they should be subject to a selection process to ensure the consistency of aggregate investment plans with medium-term fiscal objectives and the degree of fiscal risk. The effectiveness of the process requires close cooperation among the ministry of finance, SOEs, and line ministries, who are often tasked with the design of sectoral investment strategies. However, line ministries should not be given excessive control over ownership arrangements or strategic decisions because this might undermine SOE efficiency.

Several approaches exist to contain potential risks from the SOE sector. One possibility is to explicitly commit to a no-bailout clause. This approach has been used mostly in transition countries, such as Poland and Ukraine. A recommended approach is to subject SOEs to effective insolvency procedures such as those for private firms. For example, bankruptcy legislation in Italy, Korea, the Netherlands, Sweden, and the United Kingdom has the same insolvency procedures for SOEs as

[27]At the same time, company laws do not specifically address the relationship between the state and SOEs. The legal framework for SOEs must therefore consist of an additional layer, that could be an SOE law, that governs such a relationship.

[28]IMF staff have supported the development of SOE risk analysis templates in several countries during the past decade, most recently in Armenia (2015), Namibia (2018), and Serbia (2019).

for private companies.[29] Providing SOE management with incentives to manage risks (such as performance contracts and benchmarking) can help too. However, the latter approach is often difficult to implement.

Countries should also regularly review their SOE portfolios to assess whether the policy case for an SOE remains valid. For example, technological changes may mean the reason for the government intervention no longer exists (for example, it is possible that competitive mobile phone networks have undermined the need for state ownership in telecommunications). Several European countries conduct these reviews, either periodically or on an ad hoc basis (such as when a need arises to analyze an SOE). For example, Germany conducts a biennial review of its SOE portfolio during which each SOE's continued existence must be justified (OECD 2018a). In general, if the SOE is no longer relevant, options for freeing government resources for better uses include (1) selling the assets and closing the firm—with appropriate protection to workers and communities—if the business plan is not viable, and (2) privatizing the firm if the appropriate institutional preconditions are in place and the business plan is viable (Box 3.1).

Transparency

The financial and operational performance of the SOE along with its financial relations with the government must be disclosed. This can reduce the likelihood that SOEs will be used as vehicles for off-budget spending and borrowing, political patronage, or corruption. Unfortunately, financial information on SOEs in many countries is sparse. This is especially the case for NOCs, which manage large assets, particularly in the Middle East and sub-Saharan Africa (NRGI 2019).

Disclosure of SOE financial statements is the prevailing practice in advanced economies, whereas in emerging market economies disclosure is often restricted to listed SOEs. SOE financial statements should be audited by the national audit office or private audit firms approved by the national audit office. Finland, France, Ireland, New Zealand, and Sweden also publish performance assessments of at least their largest SOEs.

An annual report with detailed information and analysis of the performance of the SOE sector at the aggregate, sectoral, and company levels can be an effective communication tool. Countries such as India, Paraguay, the Philippines, and Sweden publish reports on the aggregate performance of the SOE sector. Brazil, Ghana, India, Korea, and Sweden also provide information at the individual SOE level. As highlighted earlier, ultimately, SOE financial data should also be integrated into a public sector balance sheet to provide a comprehensive view of the public finances.

Transparency is also needed on the financial interactions between the general government and SOEs. Government mandates to SOEs should be clearly defined, transparently disclosed in the budget, and compensated if needed.[30] Fiscal risks associated with SOEs, both at the public sector level and at the firm level, when relevant, should be regularly reported (including contingent liabilities). The assessment of SOE risks and the mitigation measures should be disclosed. Fiscal risk statements are a good vehicle for doing this, as in Austria, Georgia, and the Philippines. In South Africa, the budget review discloses the financial position and prospects of the largest loss-making nonfinancial SOEs (in addition to other SOEs) and describes ongoing risk mitigation measures.

SOE Corporate Governance

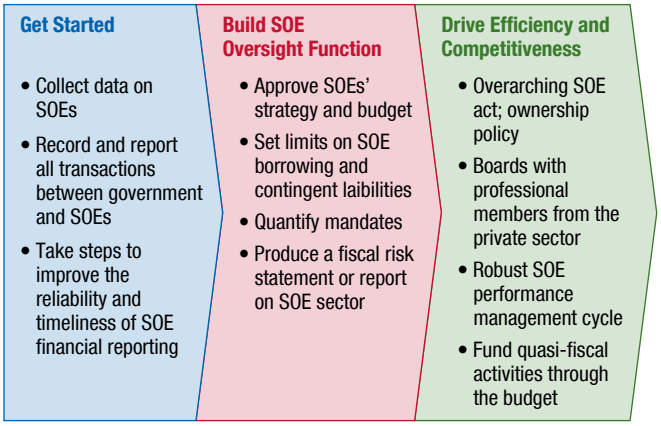
Governments should establish and enforce SOE corporate governance standards in line with good international practice.[31] The composition of SOE boards plays a significant role in the quality of corporate governance. At a minimum, governments should promote professional boards that can help ensure proper accountability. In some countries, some or all of the members of the boards of directors are required to be independent of the government (for example, Canada, Germany, the Netherlands, and Switzerland). Appropriate regulation of SOEs is another important element of corporate governance. In Chile, the Netherlands, Norway, and Sweden, at least the largest SOEs are subject to the same regulatory framework as listed private companies. A third attribute of good corporate governance is regularly assessing SOE management performance. This can be difficult but is possible. For example, New Zealand has a sound and effective performance contracting framework within which SOEs' goals are informed by risk oversight

[29]However, in some cases, countries still shield the firms from bankruptcy invoking national interest.

[30]The IMF's *Fiscal Transparency Handbook* recommends the disclosure of quasi-fiscal activities, including the rationale for undertaking them through SOEs rather than through the budget and the mechanisms used to compensate SOEs for any resulting deterioration in their financial positions.

[31]The OECD Guidelines on Corporate Governance of SOEs (OECD 2015) are an example of good standards.

Figure 3.21. Gearing SOE Oversight to Capacity



Source: IMF staff.
Note: SOE = state-owned enterprise.

and fiscal objectives. Implementing high corporate governance standards remains challenging in many low-income developing countries.

Transition to Better Oversight and Management of SOEs

Implementing a system for overseeing SOEs that meets all the requirements discussed previously takes time and resources. Some of these reforms may not be possible in the short term in low-capacity countries. In such cases, this argues for a risk-based and sequenced approach to building an oversight regime for SOEs with a focus on monitoring mainly SOEs that involve higher risks.

Figure 3.21 illustrates the three main pillars of reform. First, governments need to know their SOEs, as many countries do not have a firm grasp of the number or size of the SOEs they own. This will also allow regular reviews to determine which SOEs are still relevant. The second pillar focuses on building oversight with a strong emphasis on controlling fiscal risks. Third, policies and procedures need to incentivize government officials and SOE boards and management to strive for SOE efficiency. In some cases, it may be possible to pursue elements of different pillars simultaneously. The feasibility and speed of reforms will depend on country circumstances, including political economy considerations.

Being a Good "Global Citizen"

As SOEs have grown in scope and size, their drawbacks have spilled over to other countries, leading to calls for protectionist measures. As discussed previously, concerns that government support can provide SOEs with competitive advantages are growing.[32] As such, SOEs' activities may distort international markets (for example, aluminum, semiconductors, airlines, and steel), including when they are shielded from foreign competitors in their domestic markets. Another concern is that SOE expansion abroad is not always based on commercial objectives but may reflect other home country goals, such as control of natural resources, acquisition of technology, or political or diplomatic objectives. Moreover, SOEs are a major conduit for foreign bribes, with available data suggesting SOE officials received 80 percent of total bribes in foreign bribery cases (OECD 2014). SOEs in the power sector (generation of electricity) account for a substantial quantity of greenhouse gases (OECD 2018c), more than their private peers, and NOCs can have a significant impact on the environment in countries where they operate (for example, by polluting water or abandoning oil fields without cleaning them). Addressing these drawbacks can deliver domestic and global benefits.

The main benefits are domestic. Well-governed, transparent, and efficient SOEs that compete on a level playing field support productivity growth, better use public resources, and reduce local pollution. These benefits could also generate positive spillovers to other countries. Indeed, SOEs can play their part in the pursuit of global public goods, such as protecting the environment (for example, by moving toward cleaner sources of energy in the power sector, or by minimizing environmental damage when conducting oil and gas exploration). Likewise, SOEs can play a positive role in the global fight against corruption if governments improve general governance at home and impose effective anticorruption strategies, including when SOEs operate abroad.[33] Multilateral efforts would complement these domestic reforms.

Some advanced economies have taken steps toward fostering a level playing field

[32]The legal framework for state aid in the European Union provides an example of how some of the concerns could be addressed. It also contains a working definition: government support is a concern if it confers an advantage to certain firms and the advantage is selective, distorts competition, and affects trade between member states.

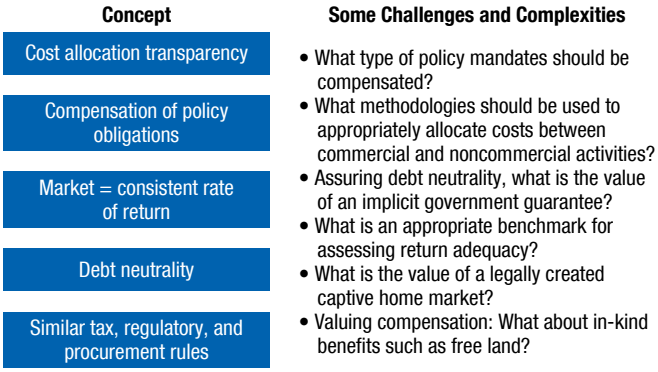
[33]Similarly, source countries need to enforce legislation against foreign bribery (as envisaged, for example, under the OECD anticorruption convention—see April 2019 *Fiscal Monitor*) to prevent their private firms from paying bribes to foreign SOE officials.

(i.e., competitive neutrality).[34] The EU and Australia have some of the most comprehensive approaches. For example, Australia requires SOEs to make compensatory payments to the national treasury for regulatory or debt-financing advantages (OECD 2016b). Other advanced economies have made a commitment to competitive neutrality, and most have laws and regulations that address potential uneven treatment of SOEs and private firms (OECD 2018a). Several countries have sought to address some elements of competitive neutrality across borders.[35] Multilateral institutions have also established disciplines (World Trade Organization) or guidelines (OECD 2015) that touch on the issue of competitive neutrality to varying degrees.

A more cooperative solution would be a multilateral agreement on general principles to ensure a level playing field between SOEs and private firms. These principles would guide SOE international behavior and recipient-country responses, which would build mutual trust. An approach akin to the Santiago Principles for sovereign wealth funds (International Working Group of Sovereign Wealth Funds 2008) may be worth considering, with appropriate adaptation to SOEs. The principles could cover areas such as transparency on mandates and the type and size of government support. They could also promote nondiscriminatory treatment. Adoption of the principles could be voluntary, at least initially.

Establishing effective principles would require significant technical work and political desire across countries. Detection and satisfactory resolution of SOE competitive advantages requires information that is frequently lacking on explicit and implicit government support for SOEs, the cost to the SOE of its noncommercial mandate (if any), SOE and comparator company finances, and the broader regulatory and legal environment in which the firms operate. Figure 3.22 highlights some of the issues that would need to be addressed to foster competitive neutrality. For example, the costs of an SOE's commercial and noncommercial mandates would need to be identified, separated, and disclosed, using a methodology to be agreed upon. Another important aspect would be to ensure that an SOE's cost of capital (interest on debt and return on equity) is similar to its private sector competitors, which would require benchmarking competitors' costs of capital and requiring the SOE to make compensatory payments to the budget if the SOE's cost of capital is lower than the benchmark. Challenges to establish common methodologies can be overcome, and an agreement on common principles would yield benefits domestically and globally by supporting trade and foreign direct investment.

Figure 3.22. Competitive Neutrality: Some Basics



Sources: OECD 2018a; and IMF staff.

Conclusion

SOEs have major economic and fiscal effects in many countries. SOEs are among the largest companies in the world and are now global players. At the same time, many SOEs are struggling. SOEs generally have low productivity, distort competition, and can be plagued by corruption. SOEs have fallen short, particularly in developing countries, in providing basic services, such as access to safe water, sanitation, and reliable electricity, to the entire population. Many have been a significant drain on the government budget and in some cases have contributed to economic and fiscal crises. Concern about the activities

[34]Competitive neutrality is usually defined as a situation in which no entity operating in an economic market is subject to undue competitive advantages or disadvantages (OECD 2012; UNCTAD 2019). Competitive neutrality concerns are not limited to SOEs; they may also apply to nonprofit entities that are active in the marketplace or to private entities receiving government support.

[35]For example, the Australia–United States Free Trade Agreement contains specific obligations on anticompetitive practices by SOEs. At the sectoral level, recent agreements between the United States and several Gulf countries and a revised EU directive on airline competition (EU 2019) have sought to address concerns about unfair SOE competition in the global airline industry. At the regional level, the Comprehensive and Progressive Agreement for Trans-Pacific Partnership, the agreement between the EU and Japan for an economic partnership (EU-Japan EPA), and the agreement between the United States, Mexico, and Canada each contain a chapter on SOEs that establishes rules to promote fair competition and prevent market distortion by governments.

of multinational SOEs is growing, which could fuel protectionist measures.

The model for using and managing SOEs should be strengthened in many countries. The stakes are high because SOEs provide core economic services and could be an important vehicle for achieving the Sustainable Development Goals. International experience provides lessons on how to move foward. Governments should not waste public resources in areas where intervention is not needed. The case for SOEs is weak when markets are competitive and private firms provide goods and services efficiently. Where SOEs play a dominant role, such as public utilities, improving their performance and achieving a sustainable business model are priorities. Governments will also need to find ways to attract private investment to complement the activities of SOEs, which are unlikely to be able to satisfy all development goals.

Governments need to set appropriate incentives and build sound institutions to ensure SOEs operate efficiently and fiscal costs are contained. A strong framework would include a clear and comprehensive ownership policy supported by appropriate government oversight and good corporate governance. Transparency of SOE activities and their relations with the government is critical to bolster accountability.

In view of the growing presence of SOEs in global trade and investment, ensuring a level competitive playing field is important to foster economic efficiency at home and to address international spillovers. Several countries have adopted rules with this aim. Some of these issues are also flagged in international trade and investment treaties. However, there is room for a more coordinated international approach that could benefit from setting global principles for multinational SOEs.

Box 3.1. Experience with Privatization

Privatization, done right, can mean improved firm performance, healthier public finances, and positive macroeconomic effects (Estrin and Pelletier 2018; Estrin and others 2009; Megginson and Netter 2001). The literature suggests that privatized firms outperform SOEs but underperform firms that have always been in private hands (Harrison and others 2019; Shirley and Walsh 2000). So, how can privatization be "done right" and what happens if necessary, conditions are not met?

Privatization has disappointed when complementary institutional and market reforms, as well as equity goals, are not pursued with equal vigor. The existence of a competitive market, the protection of property rights, and the privatization method are important to the outcome of the privatization (Hanousek, Kocenda, and Svejnar 2008; Havrylyshyn and McGettigan 1999). In Russia and Ukraine, for example, rapid mass privatization within a framework of weak governance and regulation often led to bid rigging and limited, if any, efficiency improvements (Rose-Ackerman and Palifka 2016). Estache and Trujillo (2008) find significant productivity gains after pre-2000 privatization in Latin American countries but point to employment loss and unequal distribution of privatization rents, especially for noncompetitive activities. Privatization reversals are also common where regulation is not effective. Power sector privatizations were reversed in the Dominican Republic, the Indian state of Odisha, and some African countries when tariffs remained too low or the utility was not yet functioning at a basic level (Foster and Rana 2020).

Sector dynamics are also relevant for privatization success. Take, for example, water supply, a natural monopoly. There could be a tension between ensuring affordable provision of water and adequate profits by the private firm. In Guinea, private participation in the sector increased access to water by 10 percent from 1986 to 1997 but made the price of water 40 times more expensive (Nellis 2008). Privatization was reversed in 2003.[1] Similarly, in California in the 1990s electricity generation was privatized in a push for higher efficiency and lower prices. Lobbying for deregulation, subsequent fraudulent behavior, and the search for higher company stock values resulted in several problems and a hike in electricity prices (Rose-Ackerman and Palifka 2016; Tillman 2009). Similar arguments against privatization have been raised for other sectors, including electricity transmission and other infrastructure (such as roads and railways).

Popular concerns about the impact of privatization have not always been warranted. Employees and labor unions oppose privatization because of the threat of layoffs (Andrews and Dowling 1998; Boix 1997; Chong, Guillenand, and López-de-Silanes 2011), as in Nicaragua and Argentina in the 1990s. However, privatization can lead to employment gains even if employment and wages in the former state firm fall (Davis and others 2000; Earle and Shpak 2019; Estache and Trujillo 2008). After Zambia Airways was liquidated, two new private airlines emerged, leading to higher employment in the sector (Kikeri 1998). McKenzie and Mookherjee (2003) find that utility prices, on average, fell by 50 percent in some Latin American countries after privatization, and in countries where prices rose, access to previously unavailable goods and services did too.

Realizing the benefits of privatization requires certain preconditions to achieve success: a solid regulatory framework, including a well-functioning legal system, an effective and independent regulator and strong property rights; and relatively low levels of corruption to permit a transparent sale process and prevent embezzlement of SOE assets in the run-up to privatization.[2] Moreover, privatized firms will be more likely to be efficient and to serve the public if there is sufficient competition in the underlying market or an independent regulator at the onset of privatization. Frequent renegotiation of contracts in the public services sector after privatization in Latin America indicates the failure of efforts to achieve competition in markets with too few bidders for the auctioned firms (Estache and Trujillo 2008). Low barriers to new domestic firm entry and openness to foreign direct investment can remedy this problem.

[1]See also Kirkpatrick and others (2006) and Tan (2012) for mixed results of private participation in the water sector.

[2]See, for example, Balza, Jimenez, and Mercado (2013); Estrin and Pelletier (2018); Gasmi and others (2013); Jomo (2008); Kikeri and Kolo (2005); Kikeri and Nellis (2004); Rose-Ackerman and Palifka (2016); and Zhang, Parker, and Kirkpatrick (2008) for discussions on the different preconditions and consequences of their absence.

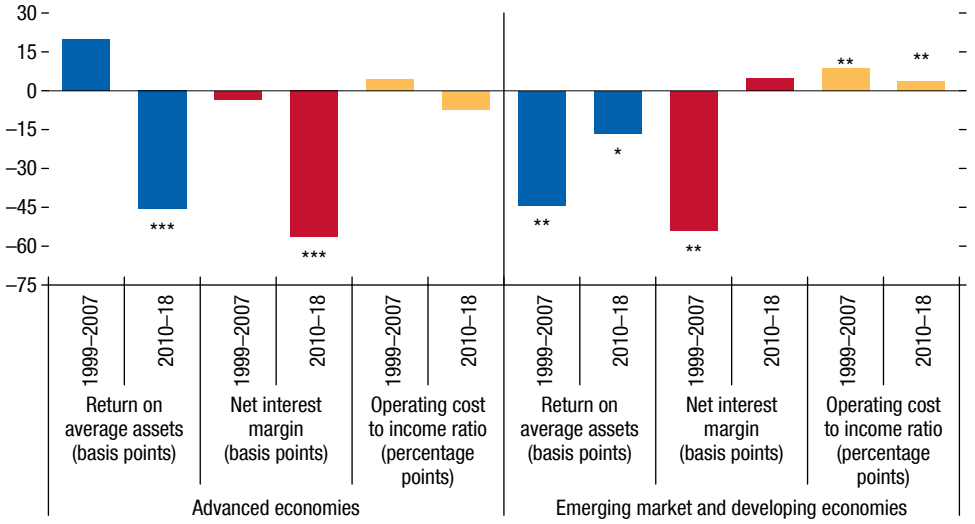
Box 3.2. State-Owned Banks

Public banks comprise two broad categories: commercial banks, which provide competitive banking services, and development banks, which provide credit for development-related projects, usually at subsidized rates, with funding coming from the budget or with government guarantees. In practice, the two types are hard to differentiate given that both have public mandates. One common stated objective is to finance socially valuable but financially unattractive or highly risky projects, such as lending to young, small, and innovative firms (for example, the Business Development Bank of Canada). Another is to finance capital-intensive infrastructure projects (for example, the Development Bank of Southern Africa).

Public banks have struggled to achieve their socioeconomic mandates. Studies have shown that greater state ownership of banks is associated with lower levels of financial development, weaker economic growth, and higher financial instability (Barth, Caprio, and Levine 2004; Beck and others 2008; La Porta, Lopez-de-Silanes, and Shleifer 2002). There is a concern that the state presence politicizes credit allocation (including lending to connected entities or other SOEs). For example, in Ukraine's state-owned banks, politically motivated lending led to massive losses in recent years and repeated recapitalizations by the state (Repko 2019). But public banks can also play a positive role. For example, Mexico's NAFIN is credited for fostering financial development, innovation, and inclusion (de La Torre, Gozzi, and Schmukler 2017).

The empirical evidence on financial performance is mixed. Public commercial banks operating in developing economies tend to have lower profitability and interest margins, higher overhead costs, and higher nonperforming loans than private banks, whereas no significant performance differences are found in advanced economies (for instance, Berger, Hasan, and Zhou 2009; Iannotta, Nocera, and Sironi 2007; Micco, Panizza, and Yanez 2007). A sample of more than 4,000 banks in 125 countries over the past two decades shows that public commercial banks are less profitable and cost-efficient than their private counterparts (see Online Annex 3.3), not even accounting for the substantial guarantees, subsidies, and preferential treatment that public banks enjoy. Comparing the decades before and after the global financial crisis, however, the findings suggest that the performance differences have narrowed between public and private commercial banks in emerging market and developing economies but widened in advanced economies (Figure 3.2.1). For emerging market and developing economies, one hypothesis is that greater government support for public commercial banks after the global financial crisis boosted their profitability. In advanced economies, the ultra-loose monetary policy after the crisis tended to have a disproportionate effect on public commercial banks because they lend more locally than their private peers.

Figure 3.2.1. Financial Performance of Public Relative to Private Commercial Banks



Source: Fitch Connect; and IMF staff estimates.
Note: Regressions control for several factors, including other bank characteristics. ***, **, and * indicate statistical difference from zero at 1, 5, and 10 percent significance level, respectively.

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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	Macedonia, former Yugoslav Republic of
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

"Above-the-line" measures Involve revenue raising and government expenditure, which affects the overall fiscal balance and government debt. In summary fiscal statements, these measures are typically recorded above the line of the overall fiscal balance.

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.

"Below-the-line" measures Generally involve the creation of assets or liabilities without affecting fiscal revenues and spending today. Examples include government provision of loans or equity injection in firms. In summary fiscal statements, these are typically recorded as the net acquisition of financial assets, which is below the line of the overall fiscal balance.

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).

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.

Fiscal stabilization Contribution of fiscal policy to output stability through its impact on aggregate demand.

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.)

Guaranteed minimum income A system of social welfare provision that guarantees a minimum income to all families, provided they meet certain eligibility criteria.

Liquid assets Assets that can be readily converted to cash.

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.

Net (financial) worth Net worth is a measure of fiscal solvency. It is calculated as assets minus liabilities. Net financial worth is calculated as financial assets minus liabilities.

Nonfinancial public sector General government plus nonfinancial public corporations.

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).

Procyclical fiscal policy Fiscal policy is said to be "procyclical" when it amplifies the economic cycle, for instance by raising taxes or cutting expenditures during an economic downturn.

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.

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 fiscal balance Extension of the cyclically adjusted 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).

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 2020–21. "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 April 8, 2020.

Data and Conventions

Country-specific data and projections for key fiscal variables are based on the April 2020 World Economic Outlook database, unless indicated otherwise, and compiled by the 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*.

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 follows 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 System of National Accounts (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 77.2 percent of GDP at the end of 2018.

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 19 percent, according to 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.

Islamic Republic of Iran: 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, 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 level 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, partly due to recent weak growth and fiscal outturns, 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, United States) 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; FOGADE (insurance deposit institution); and a sample of public enterprises, including Petróleos de Venezuela, S.A. (PDVSA); and 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 April 2020 *World Economic Outlook*, unless noted otherwise. For underlying assumptions other than on fiscal policy, see the April 2020 *World Economic Outlook*.

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

Argentina: Some key fiscal and external debt and financing variables are excluded from publication for 2020–21 as these are to a large extent linked to the ongoing debt restructuring.

Australia: Fiscal projections are based on data from the Australian Bureau of Statistics, the fiscal year 2019/20 midyear reviews of the Commonwealth and States, 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 2019–21 Stability Programme, 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 March 31. 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's assumptions following discussions with the authorities.

Canada: Projections use baseline forecasts in the December 2019 Federal Budget Update and the latest provincial budgets. The 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' budget projections, adjusted to reflect IMF staff projections for GDP and copper prices.

China: Fiscal expansion is estimated for 2019 and projected for 2020 owing to a series of tax reforms and expenditure measures in response to the economic slowdown.

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 assessment 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 2019 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: Fiscal projections are on a cash basis and are based on the authorities' 2019 budget, adjusted for newly available information and for the IMF staff 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 draft budgetary plan and data updates from the national statistical agency and ministry of finance, adjusted for the differences in the IMF staff's macroeconomic framework and assumptions concerning revenue elasticities. The estimate of gross debt includes portfolios of impaired assets and noncore business 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: IMF staff projections are based on a moderate tax policy, administration reforms, and a gradual increase in social and capital spending over the medium term in line with fiscal space.

Ireland: Fiscal projections are based on the country's Budget 2020.

Israel: Historical data are based on Government Finance Statistics data prepared by the Central Bureau of Statistics. Projections assume that a 2020 budget will be approved shortly and that the announced fiscal package will be implemented.

Italy: Fiscal plans included in the government's 2020 budget and announced measures since the outbreak of COVID-19 inform the IMF staff's estimates and projections. The IMF staff assumes that the automatic value-added tax hikes for future years will be canceled. The stock of maturing postal savings bonds is included in the debt projections.

Japan: The projections incorporate a stimulus package to be released in early April, whose size and composition are estimated by the IMF staff.

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

Korea: The medium-term forecast incorporates the medium-term path for overall fiscal balance in the 2020 budget and the medium-term fiscal plan announced by the government.

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 budget documents, also taking 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 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 2019–21 are based on the authorities' Bureau for Economic Policy Analysis budget projections, after adjusting for differences in macroeconomic assumptions. Historical data were revised following the June 2014 Central Bureau of Statistics release of revised macroeconomic data because of the adoption of the European System of National and Regional Accounts (ESA 2010) and the revision of data sources.

New Zealand: Fiscal projections are based on the fiscal year 2019/20 budget, the Half Year Economic and Fiscal Update 2019, 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.

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 previous years. Data are based on ESA 2010 beginning with 2005 (accrual basis). Projections are based on the 2020 budget and take into account any subsequent legislated fiscal measures. Announced but not legislated fiscal measures are not reflected in the projections.

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 2019 reflect legislated changes up to the end of 2018. Those for 2020 and beyond assume that the government target deficit is achieved by adjusting capital spending.

Russia: Projections for 2019–21 are based on the new oil price rule, with adjustments by the IMF staff.

Saudi Arabia: IMF staff baseline fiscal projections are based on the IMF staff's understanding of government policies as outlined in the 2020 Budget and recent government measures announced during March 2020 to address the adverse impact of COVID-19 and the sharp decline in oil prices. Exported oil revenues are based on World Economic Outlook (WEO) baseline oil price assumptions and staff's understanding of Saudi Arabia's current oil export policy.

Singapore: For fiscal year 2020, projections are based on budget, February 18, 2020, and supplementary budget, March 26, 2020. The IMF staff assumes that support packages in FY2020 are only for one year and assumes unchanged policies for the remainder of the projection period.

Slovak Republic: The current year projections take into consideration both the budget and developments to date. Next year and beyond reflect a no-policy-change scenario.

Spain: For 2020, fiscal projections are IMF staff projections, which assume no policy change except the public wage and pension measures included in the authorities' draft budgetary plan, as well as the measures adopted as of March 30 in response to the COVID-19 crisis. Fiscal projections for 2021 are IMF staff projections with an unchanged policy stance.

Sri Lanka: Fiscal projections are based on the authorities' medium-term fiscal strategy.

Sweden: Fiscal estimates for 2019 are based on the budget as official fiscal data for 2019 are not yet released. Projections for 2020 are based on the budget. The IMF staff makes fiscal projections for 2021 assuming convergence to Sweden's medium-term surplus target of 0.3 percent of GDP. The fiscal impact of cyclical developments is calculated using the 2014 Organisation for Economic Co-operation and Development elasticity[1] to take 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."

Thailand: For the projection period, the IMF staff assumes an implementation rate of 50 percent for the planned infrastructure investment programs.

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. Expenditure projections are based on the budgeted nominal values adjusted to

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

account for subsequent announcements of measures to respond to the outbreak of coronavirus. Revenue projections are adjusted for differences between the IMF staff's forecasts of macroeconomic variables (such as GDP growth and inflation) and the forecasts of these variables assumed in the authorities' fiscal projections (which did not incorporate the impact of the outbreak of coronavirus). The IMF staff's 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 the 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 the IMF staff's 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, and Economic Security Act; all signed in March 2020. Finally, fiscal projections are adjusted to reflect the IMF staff's forecasts for key macroeconomic and financial variables and different accounting treatment of financial sector support and of defined-benefit pension plans and are converted to a general government basis. Data are compiled using System of National Account 2008, 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; 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 the IMF staff projection of average inflation. Public external debt in relation to GDP is projected using the IMF staff estimate of the average exchange rate for the year. Considerable uncertainty surrounds these projections.

Vietnam: Fiscal data for 2015–17 are the authorities' estimates. 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 (the authorities use $55 a barrel) 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	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. ***(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					
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	Cameroon	Algeria
Cambodia	Honduras	Burkina Faso	Moldova	Congo, Republic of	Angola
Lao P.D.R.	Nicaragua	Cameroon	Somalia	Côte d'Ivoire	Azerbaijan
Myanmar		Chad	Sudan	Nigeria	Bahrain
Nepal		Congo, Democratic Republic of the	Tajikistan	Papua New Guinea	Brunei Darussalam
Papua New Guinea		Congo, Republic of	Uzbekistan	Timor-Leste	Cameroon
Timor-Leste		Côte d'Ivoire	Yemen	Yemen	Canada
Vietnam		Ethiopia			Colombia
		Ghana			Republic of Congo
		Guinea			Côte d'Ivoire
		Kenya			Ecuador
		Madagascar			Equatorial Guinea
		Mali			Gabon
		Mozambique			Indonesia
		Niger			Iran
		Nigeria			Iraq
		Rwanda			Kazakhstan
		Senegal			Kuwait
		Tanzania			Libya
		Uganda			Mexico
		Zambia			Nigeria
		Zimbabwe			Norway
					Oman
					Papua New Guinea
					Qatar
					Russia
					Saudi Arabia
					Syria
					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	Nominal
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	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; NFPC = nonfinancial public corporations; PS = public sector; 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 = debt securities 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 = 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 = debt securities 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,MPC,NFPC	C	NFPS	CG,SG,LG,SS,MPC,NFPC	C	NFPS	CG,SG,LG,SS,MPC,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; MPC = monetary public corporations, including central banks; 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 = debt securities 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 = 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 = debt securities 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.

[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 (SFIs/NMPC) without government guarantee.

[8] Gross debt covers banking system claims only.

[9] The fiscal accounts include the budgetary central government, social security, POGADE (insurance deposite institution); and a sample of public enterprises, including Petróleos de Venezuela, S.A. (PDVSA); 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
Democratic Republic of the Congo	GG	CG,LG	A	. . .	. . .	. . .	GG	CG,LG	Nominal
Republic of Congo	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	Current market
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 practice: 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 = debt securities 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 = 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 = debt securities 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, 2011–21

(Percent of GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Australia	–4.5	–3.5	–2.8	–2.9	–2.8	–2.5	–1.7	–0.9	–3.7	–9.7	–7.3
Austria	–2.6	–2.2	–2.0	–2.7	–1.0	–1.6	–0.7	0.2	0.4	–7.1	–1.6
Belgium	–4.3	–4.3	–3.1	–3.1	–2.4	–2.4	–0.7	–0.7	–1.7	–8.9	–6.0
Canada	–3.3	–2.5	–1.5	0.2	–0.1	–0.5	–0.1	–0.4	–0.4	–11.8	–3.8
Cyprus[1]	–5.7	–5.6	–5.2	–0.2	0.0	0.1	1.7	–4.4	2.7	–1.8	1.9
Czech Republic	–2.7	–3.9	–1.2	–2.1	–0.6	0.7	1.6	0.9	0.3	–4.7	–1.7
Denmark	–2.1	–3.5	–1.2	1.1	–1.3	–0.1	1.5	0.5	2.5	–7.0	–0.3
Estonia	1.1	–0.3	–0.2	0.7	0.1	–0.3	–0.4	–0.5	–0.4	–8.3	–3.0
Finland	–1.0	–2.2	–2.5	–3.0	–2.4	–1.7	–0.7	–0.8	–1.4	–6.7	–3.8
France	–5.2	–5.0	–4.1	–3.9	–3.6	–3.5	–2.8	–2.3	–3.0	–9.2	–6.2
Germany	–0.9	0.0	0.0	0.6	0.9	1.2	1.2	1.9	1.4	–5.5	–1.2
Greece	–10.3	–6.6	–3.6	–4.1	–2.8	0.6	1.0	0.9	0.4	–9.0	–7.9
Hong Kong SAR	3.8	3.1	1.0	3.6	0.6	4.4	5.5	2.3	–1.5	–6.9	0.0
Iceland	–5.4	–3.6	–1.8	–0.1	–0.8	12.4	0.6	0.8	–1.0	–6.7	–4.0
Ireland[1]	–12.8	–8.1	–6.2	–3.7	–2.0	–0.7	–0.3	0.1	0.3	–5.2	–0.8
Israel	–2.9	–4.3	–4.0	–2.3	–0.9	–1.4	–1.1	–3.6	–3.9	–10.2	–5.9
Italy	–3.6	–2.9	–2.9	–3.0	–2.6	–2.4	–2.4	–2.2	–1.6	–8.3	–3.5
Japan	–9.4	–8.6	–7.9	–5.6	–3.8	–3.7	–3.1	–2.4	–2.8	–7.1	–2.1
Korea	1.6	1.5	0.6	0.4	0.5	1.6	2.2	2.6	0.9	–1.8	–1.6
Latvia	–3.2	0.2	–0.6	–1.7	–1.5	–0.4	–0.8	–0.7	–0.4	–5.2	–3.7
Lithuania	–9.0	–3.1	–2.6	–0.7	–0.2	0.3	0.5	0.7	0.2	–7.6	–2.5
Luxembourg	0.5	0.3	1.0	1.3	1.4	1.8	1.4	2.7	2.7	–2.8	0.2
Malta	–2.4	–3.5	–2.4	–1.7	–1.1	0.9	3.4	1.9	1.3	–7.2	–0.4
The Netherlands	–4.4	–3.9	–2.9	–2.2	–2.0	0.0	1.3	1.5	1.7	–6.2	–2.1
New Zealand	–4.9	–2.2	–1.3	–0.4	0.3	1.0	1.3	1.4	–1.6	–5.2	–3.4
Norway	13.3	13.8	10.7	8.6	6.0	4.1	5.0	7.3	7.9	0.8	3.7
Portugal	–7.4	–5.7	–4.8	–7.1	–4.3	–2.0	–3.0	–0.4	0.2	–7.1	–1.9
Singapore	8.0	7.3	6.0	4.6	2.9	3.7	5.3	3.7	3.8	–3.5	1.8
Slovak Republic	–4.5	–4.4	–2.9	–3.1	–2.7	–2.5	–1.0	–1.1	–1.3	–5.9	–2.8
Slovenia	–6.6	–4.0	–14.6	–5.5	–2.8	–1.9	0.0	0.8	0.5	–6.6	–2.1
Spain[1]	–9.7	–10.7	–7.0	–5.9	–5.2	–4.3	–3.0	–2.5	–2.6	–9.5	–6.7
Sweden	–0.2	–1.0	–1.4	–1.5	0.0	1.0	1.4	0.8	0.4	–5.3	–1.6
Switzerland	0.7	0.4	–0.4	–0.2	0.6	0.3	1.2	1.4	0.9	–5.1	–1.9
United Kingdom	–7.5	–7.6	–5.5	–5.6	–4.6	–3.3	–2.5	–2.2	–2.1	–8.3	–5.5
United States[2]	–9.7	–8.0	–4.6	–4.0	–3.6	–4.3	–4.5	–5.7	–5.8	–15.4	–8.6
Average	–6.3	–5.5	–3.7	–3.1	–2.6	–2.6	–2.3	–2.6	–3.0	–10.7	–5.5
Euro Area	–4.2	–3.7	–3.0	–2.5	–2.0	–1.4	–0.9	–0.5	–0.7	–7.5	–3.6
G7	–7.4	–6.5	–4.3	–3.6	–3.0	–3.3	–3.2	–3.6	–3.8	–12.0	–6.2
G20 Advanced	–7.0	–6.1	–4.1	–3.4	–2.9	–3.1	–2.9	–3.2	–3.6	–11.5	–6.1

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 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, 2011–21

(Percent of GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Australia	–4.1	–2.9	–2.1	–2.1	–1.9	–1.6	–0.8	–0.1	–2.9	–8.8	–6.5
Austria	–0.4	0.0	0.2	–0.7	0.9	0.1	0.8	1.4	1.6	–6.0	–0.6
Belgium	–1.2	–1.2	–0.2	–0.2	0.2	0.0	1.3	1.1	0.0	–7.2	–4.6
Canada	–2.7	–1.8	–1.0	0.5	0.6	0.1	0.0	–0.2	–0.2	–11.5	–3.4
Cyprus[1]	–4.1	–2.9	–1.9	2.8	3.0	2.6	4.1	–2.1	5.1	0.6	4.2
Czech Republic	–1.7	–2.8	–0.2	–1.0	0.3	1.5	2.2	1.5	0.8	–4.2	–1.1
Denmark	–1.4	–3.0	–0.8	1.6	–0.6	0.4	1.7	0.4	2.3	–7.4	–0.6
Estonia	1.0	–0.4	–0.2	0.6	0.0	–0.4	–0.4	–0.5	–0.4	–8.3	–3.0
Finland	–1.0	–1.9	–2.4	–2.8	–2.3	–1.4	–0.4	–0.7	–1.2	–6.5	–3.7
France	–2.7	–2.5	–1.9	–1.8	–1.8	–1.8	–1.1	–0.7	–1.6	–7.9	–5.1
Germany	1.1	1.9	1.5	1.8	2.0	2.1	2.1	2.6	2.0	–4.9	–0.8
Greece	–2.7	–1.3	0.5	–0.1	0.8	3.7	4.1	4.2	4.0	–5.1	–4.4
Hong Kong SAR	1.9	1.3	–0.7	3.6	0.6	3.6	4.7	1.0	–2.7	–8.2	–1.2
Iceland	–2.8	–0.4	1.6	3.5	2.8	15.5	3.7	3.0	0.9	–4.9	–2.0
Ireland[1]	–10.3	–4.8	–2.6	–0.3	0.4	1.5	1.6	1.6	1.6	–3.9	0.3
Israel	0.6	–1.2	–1.0	–0.2	0.8	0.4	0.8	–1.5	–1.8	–8.1	–3.7
Italy	0.8	2.0	1.8	1.4	1.4	1.3	1.2	1.3	1.6	–4.8	–0.2
Japan	–8.3	–7.5	–7.0	–4.9	–3.2	–3.0	–2.7	–2.2	–2.6	–7.1	–2.2
Korea	0.9	1.0	0.2	0.0	0.2	1.4	1.8	2.2	0.5	–2.2	–1.8
Latvia	–1.8	1.7	0.9	–0.2	0.3	0.8	0.3	0.2	0.5	–4.2	–2.7
Lithuania	–7.9	–1.8	–1.4	0.5	0.8	1.1	1.1	1.0	0.3	–8.2	–3.0
Luxembourg	0.3	0.1	0.8	1.1	1.2	1.6	1.2	2.5	2.5	–2.9	0.0
Malta	0.8	–0.5	0.4	1.0	1.3	3.0	5.2	3.4	2.6	–5.9	0.9
The Netherlands	–3.0	–2.5	–1.6	–0.8	–0.8	1.1	2.2	2.3	2.3	–5.6	–1.4
New Zealand	–4.1	–1.3	–0.5	0.2	1.0	1.7	1.9	2.1	–0.9	–4.3	–2.6
Norway	11.3	11.9	8.8	6.3	3.5	1.5	2.6	5.1	5.8	–1.3	1.6
Portugal	–3.6	–1.4	–0.6	–2.7	0.0	1.9	0.7	2.8	3.2	–4.0	1.0
Singapore	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Slovak Republic	–3.1	–2.8	–1.2	–1.4	–1.2	–1.1	0.3	0.1	–0.1	–4.8	–1.8
Slovenia	–5.2	–2.6	–12.6	–2.7	0.0	0.7	2.1	2.6	2.0	–5.2	–0.8
Spain[1]	–7.8	–8.2	–4.1	–3.0	–2.6	–1.9	–0.7	–0.3	–0.6	–7.2	–4.3
Sweden	0.1	–0.8	–1.2	–1.4	0.0	1.0	1.4	0.8	0.3	–5.2	–1.5
Switzerland	1.1	0.8	–0.2	0.0	0.9	0.5	1.4	1.5	1.0	–4.9	–1.7
United Kingdom	–4.8	–5.3	–4.2	–3.8	–3.1	–1.8	–0.7	–0.6	–0.7	–7.2	–4.2
United States[2]	–7.4	–5.8	–2.6	–2.1	–1.7	–2.3	–2.5	–3.4	–3.6	–13.5	–6.5
Average	–4.5	–3.7	–2.1	–1.5	–1.2	–1.2	–0.9	–1.2	–1.6	–9.4	–4.2
Euro Area	–1.6	–1.0	–0.6	–0.2	0.1	0.5	0.8	1.1	0.8	–6.0	–2.2
G7	–5.3	–4.4	–2.5	–1.8	–1.4	–1.6	–1.5	–1.9	–2.2	–10.5	–4.7
G20 Advanced	–5.0	–4.1	–2.4	–1.8	–1.4	–1.5	–1.3	–1.6	–2.1	–10.1	–4.6

Source: IMF staff estimates and projections. Projections are based on staff assessment 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, 2011–19

(Percent of potential GDP)

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

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 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, 2011–19

(Percent of potential GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019
Australia	–4.1	–2.8	–2.0	–1.9	–1.7	–1.4	–0.7	0.0	–2.4
Austria	–1.0	–0.3	0.5	–0.1	1.5	0.4	0.6	0.8	1.0
Belgium	–1.2	–0.9	0.4	0.3	0.3	–0.1	0.8	0.3	–1.1
Canada	–2.6	–1.7	–1.0	0.0	0.6	0.5	–0.1	–0.4	–0.2
Cyprus	–4.6	–2.3	0.3	4.2	4.0	2.5	3.0	3.4	2.8
Czech Republic	–1.9	–2.0	1.4	0.1	0.3	1.6	1.8	1.3	0.7
Denmark	–0.1	–0.9	1.4	3.3	0.2	–0.5	0.6	–1.3	0.3
Estonia	1.7	0.1	0.4	1.1	0.6	0.2	–0.7	–1.2	–1.1
Finland	–1.8	–1.7	–1.3	–1.0	0.0	0.0	–0.4	–0.6	–1.1
France	–2.6	–2.2	–1.4	–1.4	–1.4	–1.6	–1.7	–1.8	–3.2
Germany	0.4	1.7	1.9	2.0	2.2	2.0	1.5	2.0	1.8
Greece	2.5	6.6	8.5	6.5	6.3	8.6	7.8	7.2	6.0
Hong Kong SAR[1]	–3.3	–2.6	–5.5	–0.8	–3.0	–1.7	–2.7	–4.6	–6.6
Iceland	–1.8	0.6	1.7	4.3	3.3	14.8	2.6	1.4	–0.5
Ireland[1]	–4.1	–2.3	–1.2	0.2	1.0	0.9	1.4	1.1	1.1
Israel	0.2	–1.1	–1.1	–0.4	1.1	0.5	0.8	–1.5	–1.9
Italy	1.1	3.4	3.7	3.4	3.0	2.5	1.7	1.6	1.9
Japan	–6.9	–6.5	–6.6	–4.7	–3.7	–3.4	–2.9	–2.1	–2.5
Korea	0.8	1.3	0.5	0.2	0.5	1.6	2.0	2.4	0.8
Latvia	–1.3	1.6	0.1	–0.2	0.1	0.7	0.0	–0.2	0.3
Lithuania	–6.4	–0.9	–1.0	0.6	1.2	1.6	1.0	0.8	–0.2
Luxembourg	0.1	1.1	1.4	1.2	1.0	0.9	0.6	2.0	2.2
Malta	1.2	0.5	1.6	1.3	0.3	2.7	5.1	2.9	2.3
The Netherlands	–2.9	–1.4	0.2	0.8	0.4	1.9	2.3	1.8	1.6
New Zealand	–2.9	–0.2	0.5	0.9	1.2	1.6	1.7	1.7	–0.3
Norway[1]	–6.5	–6.6	–7.1	–8.3	–9.6	–10.5	–10.6	–9.6	–10.3
Portugal	–1.8	2.1	3.2	0.8	2.5	3.6	1.2	2.7	2.8
Singapore	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Slovak Republic	–2.1	–1.7	0.0	–0.8	–1.7	–1.6	–0.3	–0.7	–0.6
Slovenia	–4.7	–0.5	–9.1	–0.5	2.0	2.1	2.7	2.5	2.0
Spain[1]	–4.9	–0.5	0.9	1.4	0.2	–0.2	–0.2	–0.1	–0.8
Sweden[1]	–0.1	–0.6	–0.6	–0.9	–0.8	0.3	0.4	–0.3	–1.1
Switzerland[1]	1.1	1.0	0.0	0.0	0.8	0.4	0.9	0.6	0.1
United Kingdom[1]	–3.3	–3.9	–3.0	–3.1	–2.9	–1.7	–0.8	–0.6	–0.6
United States[1,2]	–4.5	–2.8	–1.2	–0.7	–0.8	–1.6	–2.1	–3.3	–3.7
Average	–3.4	–2.2	–1.2	–0.7	–0.7	–0.9	–1.0	–1.4	–1.9
Euro Area	–1.3	0.1	1.1	1.1	1.1	1.0	0.7	0.8	0.4
G7	–3.7	–2.6	–1.5	–0.9	–0.8	–1.2	–1.4	–1.9	–2.3
G20 Advanced	–3.6	–2.5	–1.4	–0.9	–0.8	–1.1	–1.2	–1.7	–2.2

Source: IMF staff estimates and projections. Projections are based on staff assessment 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, 2011–21

(Percent of GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Australia	31.8	33.1	33.7	33.9	34.5	34.9	35.0	35.8	34.6	35.9	34.5
Austria	48.3	49.0	49.7	49.6	50.0	48.5	48.2	48.8	48.5	47.1	48.2
Belgium	51.0	52.2	53.0	52.5	51.3	50.7	51.2	51.4	50.3	49.4	49.7
Canada	38.3	38.4	38.5	38.5	40.0	40.3	40.4	40.7	40.8	34.8	39.5
Cyprus	36.5	36.4	37.0	40.3	39.7	37.7	38.6	39.2	42.2	40.6	42.3
Czech Republic	40.3	40.5	41.4	40.3	41.1	40.2	40.5	41.5	42.1	41.5	41.8
Denmark	54.4	54.5	54.6	56.4	53.2	52.4	52.8	51.4	53.6	49.1	51.3
Estonia	38.2	38.8	38.1	38.3	39.5	39.1	38.6	38.5	38.7	35.1	37.4
Finland	52.6	53.3	54.3	54.3	54.1	53.9	53.0	52.4	51.8	51.5	52.1
France	51.1	52.1	53.1	53.3	53.2	53.0	53.6	53.6	52.8	51.7	51.9
Germany	44.4	44.9	45.0	44.9	45.0	45.5	45.7	46.4	46.8	45.5	45.9
Greece	43.9	46.3	48.0	46.2	47.9	49.5	48.4	47.8	48.3	45.8	45.3
Hong Kong SAR	22.4	21.4	21.0	20.8	18.6	22.6	22.9	20.7	19.4	16.6	21.4
Iceland	38.8	40.2	40.6	43.7	40.6	56.9	43.5	43.1	40.9	38.5	38.9
Ireland	33.8	34.0	34.3	33.9	27.0	27.1	25.8	25.4	25.7	22.8	24.2
Israel	37.0	36.2	36.4	36.6	36.8	36.5	37.7	36.0	35.2	35.1	35.3
Italy	45.6	47.6	48.1	47.9	47.8	46.7	46.3	46.3	47.1	46.9	47.0
Japan	30.0	30.8	31.6	33.3	34.2	34.3	34.2	35.0	34.8	35.1	36.3
Korea	20.7	21.2	20.5	20.2	20.3	21.1	21.8	23.0	23.2	22.9	22.9
Latvia	35.6	37.3	36.7	36.1	36.1	36.2	35.9	37.5	37.5	35.8	34.3
Lithuania	32.6	32.1	32.1	33.4	34.2	33.6	32.8	33.9	34.4	33.7	34.3
Luxembourg	42.9	44.4	44.3	43.3	42.9	42.4	43.2	44.6	45.2	46.5	45.7
Malta	38.8	39.2	39.5	39.3	38.6	37.5	39.3	38.5	38.7	37.0	37.8
The Netherlands	41.5	42.0	42.8	42.8	41.8	42.8	43.7	43.5	43.8	41.0	42.5
New Zealand	37.4	37.5	37.3	37.3	37.7	37.6	37.1	37.9	36.7	37.2	35.5
Norway	56.9	56.4	54.4	54.2	54.5	54.8	54.6	55.6	57.8	53.7	56.5
Portugal	42.7	42.9	45.0	44.6	43.8	42.8	42.4	42.9	42.9	42.9	43.4
Singapore	17.6	17.2	16.9	17.2	17.3	18.9	19.0	17.7	18.2	17.8	17.7
Slovak Republic	37.0	36.6	39.4	40.2	43.1	40.2	40.6	40.8	40.2	41.3	42.2
Slovenia	44.2	45.4	45.7	45.3	45.9	44.3	44.0	44.3	43.7	42.3	43.7
Spain	36.4	37.9	38.8	39.2	38.7	38.1	38.2	39.2	39.3	36.8	37.5
Sweden	48.5	48.9	49.3	48.3	48.5	49.8	49.7	49.6	48.7	47.3	47.3
Switzerland	32.7	32.6	32.7	32.4	33.5	33.3	34.1	33.8	33.6	32.3	32.0
United Kingdom	36.0	36.0	36.3	35.5	35.7	36.1	36.6	36.6	36.6	36.4	36.8
United States	29.2	29.2	31.4	31.4	31.6	31.2	30.8	29.5	30.3	26.0	30.3
Average	35.4	35.6	36.8	36.9	36.5	36.3	36.3	36.0	36.2	33.6	35.9
Euro Area	45.1	46.2	46.8	46.8	46.3	46.2	46.2	46.5	46.5	45.2	45.7
G7	34.8	34.9	36.4	36.5	36.3	36.1	36.0	35.5	35.8	32.9	35.7
G20 Advanced	34.2	34.4	35.7	35.8	35.6	35.5	35.4	35.0	35.3	32.6	35.1

Source: IMF staff estimates and projections. Projections are based on staff assessment 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, 2011–21

(Percent of GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Australia	36.4	36.6	36.5	36.8	37.4	37.4	36.7	36.7	38.4	45.6	41.8
Austria	50.9	51.2	51.6	52.3	51.0	50.1	48.9	48.6	48.0	54.1	49.8
Belgium	55.3	56.5	56.1	55.6	53.7	53.1	51.9	52.1	51.9	58.2	55.7
Canada	41.6	40.9	40.0	38.4	40.0	40.8	40.6	41.0	41.2	46.7	43.3
Cyprus	42.2	42.0	42.2	40.5	39.6	37.6	36.9	43.6	39.4	42.4	40.4
Czech Republic	43.0	44.5	42.6	42.4	41.7	39.5	38.9	40.6	41.9	46.3	43.5
Denmark	56.4	58.0	55.8	55.2	54.5	52.5	51.2	50.9	51.1	56.1	51.5
Estonia	37.1	39.1	38.2	37.6	39.4	39.4	39.0	39.0	39.1	43.4	40.5
Finland	53.7	55.4	56.8	57.3	56.5	55.6	53.7	53.3	53.2	58.2	56.0
France	56.3	57.1	57.2	57.2	56.8	56.6	56.4	55.8	55.8	60.9	58.1
Germany	45.2	44.9	44.9	44.3	44.0	44.3	44.4	44.6	45.4	51.0	47.1
Greece	54.1	52.8	51.6	50.3	50.7	49.0	47.4	46.9	47.9	54.8	53.2
Hong Kong SAR	18.6	18.3	20.0	17.3	18.0	18.3	17.4	18.4	20.9	23.5	21.4
Iceland	44.2	43.8	42.4	43.8	41.4	44.5	42.9	42.3	41.9	45.2	42.9
Ireland	46.7	42.1	40.5	37.6	29.0	27.8	26.1	25.4	25.4	28.0	25.0
Israel	39.8	40.4	40.4	38.9	37.8	37.9	38.8	39.6	39.1	45.3	41.1
Italy	49.2	50.6	51.0	50.9	50.3	49.1	48.8	48.5	48.7	55.2	50.4
Japan	39.4	39.4	39.5	38.9	38.0	38.0	37.3	37.4	37.6	42.1	38.3
Korea	19.1	19.7	19.9	19.8	19.7	19.5	19.6	20.4	22.4	24.8	24.5
Latvia	38.8	37.1	37.2	37.8	37.6	36.6	36.7	38.2	37.8	41.0	38.0
Lithuania	41.6	35.2	34.7	34.0	34.4	33.3	32.2	33.2	34.1	41.4	36.8
Luxembourg	42.4	44.1	43.3	42.0	41.5	40.7	41.8	41.9	42.5	49.2	45.5
Malta	41.2	42.7	41.9	41.1	39.7	36.5	35.9	36.6	37.5	44.3	38.3
The Netherlands	46.0	45.9	45.7	44.9	43.8	42.8	42.4	42.1	42.2	47.2	44.6
New Zealand	42.3	39.7	38.6	37.7	37.4	36.6	35.8	36.4	38.3	42.4	38.9
Norway	43.5	42.7	43.7	45.5	48.5	50.7	49.6	48.2	49.9	52.9	52.8
Portugal	50.0	48.6	49.9	51.7	48.1	44.8	45.4	43.4	42.7	49.9	45.3
Singapore	9.7	9.8	10.9	12.6	14.4	15.2	13.7	14.0	14.3	21.3	15.9
Slovak Republic	41.4	41.0	42.3	43.3	45.8	42.7	41.5	41.8	41.5	47.2	44.9
Slovenia	50.9	49.4	60.3	50.8	48.7	46.2	44.1	43.5	43.1	48.9	45.8
Spain	46.2	48.7	45.8	45.1	43.9	42.4	41.2	41.7	41.9	46.3	44.2
Sweden	48.7	49.9	50.7	49.8	48.5	48.8	48.3	48.8	48.3	52.7	48.9
Switzerland	31.9	32.2	33.1	32.7	32.8	32.9	32.9	32.4	32.7	37.3	33.9
United Kingdom	43.5	43.6	41.8	41.1	40.3	39.5	39.1	38.8	38.7	44.7	42.2
United States[1]	38.9	37.2	36.0	35.5	35.2	35.5	35.2	35.1	36.1	41.4	38.9
Average	41.8	41.1	40.5	40.0	39.1	39.0	38.6	38.6	39.2	44.3	41.4
Euro Area	49.3	49.9	49.8	49.2	48.3	47.6	47.2	47.0	47.2	52.7	49.3
G7	42.2	41.4	40.7	40.1	39.3	39.4	39.1	39.1	39.6	44.9	41.9
G20 Advanced	41.2	40.4	39.8	39.2	38.5	38.5	38.3	38.3	38.9	44.1	41.2

Source: IMF staff estimates and projections. Projections are based on staff assessment 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, 2011–21

(Percent of GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Australia[1]	24.1	27.5	30.5	34.0	37.7	40.5	41.1	41.5	45.0	59.4	64.0
Austria	82.2	81.7	81.0	83.8	84.4	82.6	78.4	74.0	70.8	84.6	81.0
Belgium	103.5	104.8	105.5	107.0	105.2	104.9	101.8	100.0	99.0	114.8	114.8
Canada[1]	81.8	85.4	86.1	85.6	91.2	91.7	90.5	89.7	88.6	109.5	108.6
Cyprus	65.0	79.4	102.9	109.2	107.5	103.4	93.9	100.6	94.9	100.8	96.7
Czech Republic	39.8	44.5	44.9	42.2	40.0	36.8	34.7	32.6	30.8	37.5	36.6
Denmark	46.1	44.9	44.0	44.3	39.8	37.1	35.5	33.9	30.3	39.2	39.9
Estonia	6.1	9.8	10.2	10.4	9.8	9.2	9.2	8.3	8.4	20.0	21.1
Finland	48.2	53.6	56.2	59.8	63.0	62.6	60.8	59.1	59.7	70.0	71.6
France	87.8	90.6	93.4	94.9	95.6	98.0	98.4	98.4	98.5	115.4	116.4
Germany	79.8	81.1	78.7	75.7	72.1	69.2	65.3	61.9	59.8	68.7	65.6
Greece	180.6	159.6	177.9	180.2	177.8	181.1	179.3	184.8	179.2	200.8	194.8
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
Iceland	92.0	89.4	81.8	78.8	65.0	51.2	43.2	37.4	34.5	40.7	41.7
Ireland	111.1	120.0	120.0	104.5	76.8	74.0	67.8	63.6	58.6	63.3	60.0
Israel	68.8	68.5	67.1	65.9	63.9	62.0	60.5	60.9	61.4	76.2	78.0
Italy	119.7	126.5	132.4	135.3	135.3	134.8	134.1	134.8	134.8	155.5	150.4
Japan	221.9	228.7	232.2	235.8	231.3	236.4	234.5	236.5	237.4	251.9	247.6
Korea	30.3	30.8	33.7	35.5	37.3	37.6	36.7	37.9	40.7	46.2	49.2
Latvia	43.3	41.9	39.4	40.9	36.7	40.2	40.3	36.5	36.8	45.0	44.9
Lithuania	37.2	39.8	38.7	40.6	42.7	39.9	39.3	34.1	37.7	51.7	48.2
Luxembourg	18.7	21.7	23.7	22.7	22.0	20.1	22.3	21.0	22.0	23.4	23.2
Malta	70.2	67.8	68.4	63.4	58.0	55.5	50.4	45.6	42.8	51.4	47.6
The Netherlands	61.8	66.4	67.8	68.0	64.6	61.9	56.9	52.4	48.3	58.3	58.1
New Zealand	34.7	35.7	34.6	34.2	34.3	33.5	31.3	28.5	30.2	39.9	42.9
Norway	29.8	31.1	31.6	29.9	34.5	38.1	38.6	39.9	41.3	40.0	40.0
Portugal	114.4	129.0	131.4	132.9	131.2	131.5	126.0	121.9	117.7	135.0	128.5
Singapore	103.1	106.7	98.2	97.8	102.3	106.5	108.4	110.4	111.8	113.0	114.1
Slovak Republic	43.3	51.6	54.6	53.4	51.8	51.9	51.2	49.2	48.2	57.0	57.4
Slovenia	46.5	53.6	70.0	80.3	82.6	78.7	74.1	70.4	66.8	73.2	73.9
Spain	69.9	86.3	95.8	100.7	99.3	99.2	98.6	97.6	95.5	113.4	114.6
Sweden	37.2	37.6	40.3	45.0	43.9	42.3	40.7	38.8	34.8	42.4	41.1
Switzerland	42.9	43.7	42.9	43.0	43.0	41.8	43.2	41.0	39.3	46.4	46.4
United Kingdom	80.1	83.2	84.2	86.2	86.9	86.8	86.2	85.7	85.4	95.7	95.8
United States[1]	99.8	103.3	104.9	104.6	104.8	106.8	105.9	106.9	109.0	131.1	131.9
Average	102.5	106.7	105.2	104.6	104.2	106.7	104.5	103.9	105.2	122.4	121.9
Euro Area	87.6	90.7	92.6	92.8	90.8	90.0	87.8	85.9	84.1	97.4	95.6
G7	117.0	121.1	118.9	117.6	116.5	119.7	117.7	117.4	118.7	137.7	137.0
G20 Advanced	110.4	114.2	112.3	111.4	110.8	113.9	111.7	111.6	113.3	131.8	131.3

Source: IMF staff estimates and projections. Projections are based on staff assessment 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, 2011–21

(Percent of GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Australia[1]	8.0	11.0	13.0	15.4	17.8	18.9	18.8	19.5	23.2	35.0	40.0
Austria	60.3	60.5	60.4	59.1	58.3	57.0	55.8	50.7	48.2	60.5	58.3
Belgium[2]	91.6	92.0	92.5	93.3	92.0	91.1	88.2	86.7	86.1	101.0	101.8
Canada[1]	27.5	28.9	29.7	28.5	28.4	28.7	27.9	26.5	25.9	40.7	40.1
Cyprus	52.4	67.2	78.8	90.4	90.7	85.9	78.9	53.3	. . .	. . .	. . .
Czech Republic	26.8	28.3	29.1	29.4	28.3	25.1	21.7	19.9	16.8	. . .	. . .
Denmark	15.1	18.5	18.3	18.1	16.2	16.3	15.3	14.4	11.4	19.1	18.1
Estonia	–6.7	–4.7	–4.3	–3.9	–2.2	–2.6	–1.6	–1.8	–2.1	10.4	12.4
Finland[3]	5.0	9.4	12.9	17.2	18.5	21.3	22.0	24.3	25.0	33.1	35.3
France	76.4	80.0	83.0	85.5	86.3	89.2	89.5	89.6	89.8	106.7	107.6
Germany	60.3	59.6	58.6	55.0	52.1	49.3	45.7	42.9	41.3	49.2	47.3
Greece	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Hong Kong SAR[1]	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Iceland[4]	59.9	62.0	60.5	53.6	47.4	39.7	35.7	29.0	26.5	35.6	37.0
Ireland[5]	79.6	87.2	90.2	86.2	65.9	65.6	59.7	55.2	50.9	58.2	54.7
Israel	63.2	63.1	62.1	61.7	59.9	58.4	56.8	57.5	58.2	72.8	74.8
Italy	109.8	114.6	120.0	122.3	123.2	122.4	122.1	122.9	123.1	142.7	138.3
Japan	141.4	145.3	144.7	146.6	146.4	152.0	149.8	153.4	154.3	168.9	165.8
Korea	28.8	–1.9	1.8	3.3	6.0	6.1	6.3	7.5	10.3	15.8	18.7
Latvia	31.6	29.8	29.6	29.6	30.9	31.0	31.8	28.1	26.2	33.5	34.5
Lithuania	33.2	33.5	34.1	32.7	34.8	32.3	32.3	27.5	31.6	45.1	42.2
Luxembourg	–11.5	–10.7	–9.0	–10.8	–12.1	–11.5	–11.2	–10.7	–8.0	–7.7	–5.7
Malta	58.2	58.0	59.0	53.8	49.6	43.0	37.9	34.4	. . .	. . .	. . .
The Netherlands	48.5	52.1	53.7	54.8	52.8	51.1	46.2	42.5	41.6	47.3	47.1
New Zealand	6.6	8.5	8.6	8.0	7.4	6.7	5.6	4.8	8.0	16.4	20.7
Norway[6]	–47.4	–49.0	–60.1	–74.6	–85.6	–84.2	–79.3	–71.9	–105.9	–105.9	–108.5
Portugal	103.0	115.7	118.3	120.5	121.5	120.0	116.5	116.0	112.2	129.1	123.0
Singapore	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Slovak Republic	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Slovenia	32.3	36.6	45.2	46.5	50.3	52.3	51.9	45.9	. . .	. . .	. . .
Spain	56.4	71.8	80.9	85.2	85.0	86.1	84.5	82.7	81.1	97.7	99.7
Sweden	11.7	11.3	11.4	11.3	11.2	8.9	6.2	5.9	3.2	8.8	9.8
Switzerland	24.4	23.9	22.9	23.1	23.3	22.8	22.1	21.4	19.7	26.7	26.7
United Kingdom	71.8	74.8	75.9	78.0	78.4	77.8	76.7	75.9	75.5	85.9	85.9
United States[1]	76.9	80.8	81.6	81.4	81.1	82.1	82.1	83.2	84.1	107.0	107.3
Average	74.1	76.7	75.9	75.7	75.8	77.5	75.9	76.0	76.6	94.2	93.9
Euro Area	69.6	73.2	75.7	75.9	74.7	74.3	72.2	70.5	69.1	81.3	80.2
G7	85.7	88.8	87.7	87.1	86.6	88.5	87.2	87.6	88.1	107.0	106.3
G20 Advanced	80.7	82.6	81.6	81.3	81.1	83.0	81.6	82.0	83.1	101.3	100.9

Source: IMF staff estimates and projections. Projections are based on staff assessment 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 less currency and deposits.

[5] Net debt for Ireland is defined as gross general debt less 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 by excluding the equity and shares from financial assets and including 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, 2011–21
(Percent of GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Algeria	–0.1	–4.4	–0.4	–7.3	–15.3	–13.1	–6.6	–4.5	–5.1	–15.0	–10.1
Angola	8.1	4.1	–0.3	–5.7	–2.9	–4.5	–6.3	2.2	0.7	–6.0	–2.5
Argentina	–2.7	–3.0	–3.3	–4.3	–6.0	–6.7	–6.7	–5.5	–3.9	. . .	. . .
Azerbaijan	10.9	3.7	1.6	2.7	–4.8	–1.1	–1.4	5.5	8.4	–12.8	–9.7
Belarus[1]	–2.8	0.4	–1.0	0.1	–3.0	–1.7	–0.3	1.8	0.6	–4.6	–3.0
Brazil	–2.5	–2.5	–3.0	–6.0	–10.3	–9.0	–7.9	–7.2	–6.0	–9.3	–6.1
Chile	1.4	0.7	–0.5	–1.5	–2.1	–2.6	–2.6	–1.5	–2.6	–6.3	–3.5
China	–0.1	–0.3	–0.8	–0.9	–2.8	–3.7	–3.8	–4.7	–6.4	–11.2	–9.6
Colombia	–2.0	0.2	–1.0	–1.7	–3.5	–2.3	–2.5	–4.7	–2.2	–2.5	–1.3
Croatia	–7.9	–5.4	–5.3	–5.3	–3.3	–1.0	0.8	0.2	0.0	–6.5	–2.6
Dominican Republic	–3.1	–6.6	–3.5	–2.8	0.0	–3.1	–3.1	–2.2	–2.2	–4.4	–2.9
Ecuador[2]	–0.1	–0.9	–4.6	–5.2	–6.1	–8.2	–4.5	–3.1	–2.8	–7.0	–4.4
Egypt[3]	–9.6	–10.0	–12.9	–11.3	–10.9	–12.5	–10.4	–9.4	–7.4	–7.7	–6.6
Hungary	–5.2	–2.3	–2.6	–2.8	–2.0	–1.8	–2.5	–2.1	–2.0	–3.0	–1.6
India	–8.3	–7.5	–7.0	–7.1	–7.2	–7.1	–6.4	–6.3	–7.4	–7.4	–7.3
Indonesia	–0.7	–1.6	–2.2	–2.1	–2.6	–2.5	–2.5	–1.8	–2.2	–5.0	–4.0
Iran	0.6	–0.3	–0.9	–1.1	–1.8	–2.3	–1.8	–1.9	–5.6	–9.8	–7.7
Kazakhstan	5.8	4.4	4.9	2.5	–6.3	–4.5	–4.3	2.6	–0.6	–5.3	–2.7
Kuwait	33.3	32.4	34.1	22.4	5.6	0.3	6.3	9.0	4.8	–11.3	–14.1
Libya	–17.2	28.6	–5.1	–73.8	–130.8	–113.2	–43.5	–0.2	8.8	–7.2	–19.1
Malaysia[4]	–3.6	–3.1	–3.5	–2.6	–2.5	–2.6	–2.4	–3.3	–3.2	–4.2	–3.6
Mexico	–3.3	–3.7	–3.7	–4.5	–4.0	–2.8	–1.1	–2.2	–2.3	–4.2	–2.2
Morocco	–6.6	–7.2	–5.1	–4.8	–4.2	–4.5	–3.5	–3.7	–4.1	–7.1	–4.5
Oman	9.4	4.6	4.7	–1.1	–15.9	–21.3	–14.0	–7.9	–7.0	–16.9	–14.8
Pakistan	–6.7	–8.6	–8.4	–4.9	–5.3	–4.4	–5.8	–6.4	–8.8	–9.2	–6.5
Peru	2.0	2.1	0.7	–0.2	–2.1	–2.3	–2.9	–2.0	–1.4	–7.1	–2.6
Philippines	–0.3	–0.3	0.2	0.9	0.6	–0.4	–0.4	–1.6	–1.9	–3.4	–2.7
Poland	–4.9	–3.7	–4.2	–3.6	–2.6	–2.4	–1.5	–0.2	–0.7	–6.7	–3.5
Qatar	7.3	10.5	21.6	14.3	4.5	–5.4	–2.9	5.2	4.1	5.2	1.4
Romania	–4.3	–2.5	–2.5	–1.7	–1.4	–2.4	–2.8	–2.8	–4.6	–8.9	–7.0
Russia	1.4	0.4	–1.2	–1.1	–3.4	–3.7	–1.5	2.9	1.9	–4.8	–3.0
Saudi Arabia	11.6	11.9	5.6	–3.5	–15.8	–17.2	–9.2	–5.9	–4.5	–12.6	–9.0
South Africa	–4.1	–4.4	–4.3	–4.3	–4.8	–4.1	–4.4	–4.1	–6.3	–13.3	–12.7
Sri Lanka	–6.2	–5.6	–5.2	–6.2	–7.0	–5.3	–5.5	–5.3	–6.8	–9.4	–8.3
Thailand	0.1	–0.9	0.5	–0.8	0.1	0.6	–0.4	0.1	–0.8	–3.4	–1.7
Turkey	–0.7	–1.8	–1.5	–1.4	–1.3	–2.4	–2.2	–3.7	–5.3	–7.5	–6.7
Ukraine	–2.8	–4.3	–4.8	–4.5	–1.2	–2.2	–2.2	–2.2	–2.0	–8.2	–5.3
United Arab Emirates	5.3	9.0	8.4	1.9	–3.4	–2.8	–2.0	2.0	–0.8	–11.1	–7.1
Uruguay[5]	–0.4	–2.4	–1.9	–2.8	–2.2	–3.1	–2.7	–2.0	–2.9	–4.7	–3.8
Venezuela	–8.2	–10.4	–11.3	–15.6	–10.7	–10.8	–16.6	–31.3	–10.0	. . .	. . .
Average	–0.9	–0.9	–1.5	–2.5	–4.4	–4.8	–4.1	–3.8	–4.8	–9.1	–7.4
Asia	–1.6	–1.6	–1.8	–1.9	–3.3	–3.9	–4.0	–4.5	–6.0	–9.9	–8.6
Europe	–0.2	–0.7	–1.5	–1.4	–2.7	–2.9	–1.8	0.4	–0.7	–6.1	–4.2
Latin America	–2.7	–2.9	–3.2	–5.0	–6.8	–6.2	–5.4	–5.2	–4.0	–6.7	–4.0
MENAP	4.3	5.6	3.9	–1.5	–8.5	–9.6	–5.8	–2.9	–3.8	–9.8	–7.7
G20 Emerging	–1.1	–1.2	–1.8	–2.6	–4.5	–4.9	–4.3	–4.3	–5.4	–9.7	–8.1

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 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 due to 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 Non-Financial Public Sector (NFPS). Ecuadorian authorities, in the context of the EFF approved in March of 2019 and with the technical support from the IMF Staff, are undertaking revisions of the historical fiscal data for the net-lending borrowing of the NFSP with the view of correcting recently-identified statistical errors, mostly in the recording of revenues and expenditures of the local governments. Fiscal data reported in the table for 2018 and 2019 reflect the corrected series while the data for earlier years are still under revisions and will be corrected in the subsequent WEO releases as the authorities proceed with the corrections in the earlier years, going 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 prior to 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 (NFPS), which includes central government, local government, social security funds, nonfinancial public corporation, and Banco de Seguros del Estado. The coverage of the fiscal data was changed from consolidated public sector to NFPS 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 are affected by these transfers.

Table A10. Emerging Market and Middle-Income Economies: General Government Primary Balance, 2011–21

(Percent of GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Algeria	–1.3	–5.3	–0.5	–7.4	–15.8	–13.1	–6.3	–4.7	–5.6	–15.2	–9.9
Angola	9.0	5.0	0.4	–4.7	–1.1	–1.7	–3.0	6.7	6.1	1.8	4.8
Argentina	–1.6	–1.7	–2.6	–3.5	–4.4	–4.8	–4.2	–2.3	–0.5	. . .	. . .
Azerbaijan	10.9	3.8	1.7	2.9	–4.4	–0.7	–0.8	6.2	9.2	–11.9	–8.8
Belarus[1]	–1.7	1.7	0.0	1.1	–1.3	0.3	1.6	3.8	2.4	–2.3	–0.7
Brazil	2.9	1.9	1.7	–0.6	–1.9	–2.5	–1.8	–1.7	–1.0	–5.2	–2.1
Chile	1.5	0.8	–0.4	–1.3	–1.9	–2.4	–2.3	–1.1	–2.3	–5.8	–3.2
China	0.4	0.2	–0.3	–0.4	–2.3	–3.0	–3.1	–3.8	–5.5	–10.3	–8.6
Colombia	0.1	1.8	0.9	–0.2	–1.7	–0.4	–0.5	–2.5	0.7	0.6	1.6
Croatia	–5.6	–2.6	–2.6	–2.4	–0.2	1.8	3.2	2.3	1.8	–4.5	–0.4
Dominican Republic	–1.0	–4.2	–1.2	–0.4	2.3	–0.6	–0.5	0.4	0.6	–1.4	0.2
Ecuador[2]	0.5	–0.2	–3.5	–4.2	–4.7	–6.7	–2.3	–0.7	–0.1	–4.0	–1.1
Egypt[3]	–4.8	–4.9	–5.9	–4.2	–4.1	–4.3	–2.5	–0.4	1.2	1.4	1.0
Hungary	–1.5	1.9	1.7	1.0	1.3	1.2	0.2	0.2	0.2	–1.1	0.1
India	–4.0	–3.2	–2.4	–2.6	–2.7	–2.5	–1.6	–1.6	–2.6	–2.3	–2.2
Indonesia	0.5	–0.4	–1.0	–0.9	–1.2	–1.0	–0.9	0.0	–0.5	–3.2	–2.2
Iran	0.7	–0.2	–0.8	–1.1	–1.7	–2.2	–1.7	–1.8	–5.3	–8.7	–5.6
Kazakhstan	5.7	3.8	4.4	2.0	–5.9	–4.3	–5.2	1.8	–0.8	–5.4	–2.8
Kuwait[4]	26.5	25.4	25.8	12.7	–7.5	–14.2	–9.4	–3.0	–8.2	–24.9	–26.5
Libya	–17.2	28.6	–5.1	–73.8	–130.8	–113.2	–43.5	–0.2	8.8	–7.2	–19.1
Malaysia	–2.0	–2.1	–2.1	–0.9	–0.9	–0.8	–0.6	–1.4	–1.2	–1.8	–1.3
Mexico	–0.7	–0.9	–0.9	–1.7	–1.2	0.4	2.6	1.6	1.4	–0.4	1.5
Morocco	–4.4	–4.7	–2.5	–2.1	–1.4	–1.8	–0.9	–1.3	–1.5	–4.5	–1.9
Oman	8.9	3.3	2.6	–2.1	–16.1	–21.8	–13.4	–6.9	–5.5	–14.9	–12.8
Pakistan	–2.9	–4.2	–3.9	–0.3	–0.5	–0.1	–1.5	–2.1	–3.4	–2.7	–0.3
Peru	3.0	3.0	1.7	0.7	–1.2	–1.3	–1.9	–0.9	–0.2	–5.7	–1.0
Philippines	2.3	2.3	2.7	3.1	2.7	1.5	1.3	0.1	–0.2	–1.4	–0.8
Poland	–2.3	–1.1	–1.7	–1.7	–0.9	–0.7	0.1	1.2	0.7	–5.2	–1.9
Qatar	8.8	12.0	22.8	15.5	6.0	–3.9	–1.6	6.6	5.5	7.2	3.1
Romania	–2.8	–0.7	–0.8	–0.2	–0.1	–1.1	–1.7	–1.5	–3.5	–7.5	–5.5
Russia	1.7	0.7	–0.8	–0.7	–3.1	–3.2	–1.0	3.4	2.3	–4.4	–2.5
Saudi Arabia	11.6	11.7	5.2	–4.2	–17.9	–20.2	–11.1	–6.5	–4.5	–14.4	–8.4
South Africa	–1.5	–1.7	–1.4	–1.3	–1.6	–0.7	–0.8	–0.4	–2.3	–8.6	–7.5
Sri Lanka	–1.3	–0.9	–0.6	–2.0	–2.2	–0.2	0.0	0.6	–0.8	–3.0	–1.4
Thailand	0.9	0.0	1.3	–0.1	0.7	1.0	0.1	0.6	–0.3	–3.0	–1.2
Turkey	1.8	0.7	0.8	0.5	0.6	–1.0	–0.9	–2.2	–3.5	–4.7	–3.3
Ukraine	–0.8	–2.4	–2.3	–1.2	3.0	1.9	1.6	1.1	1.0	–4.4	–1.3
United Arab Emirates	5.5	9.3	8.8	2.2	–3.2	–2.7	–1.9	2.3	–0.4	–10.6	–6.6
Uruguay[5]	2.0	–0.1	0.5	–0.5	0.1	–0.5	–0.1	0.6	–0.5	–1.9	–0.9
Venezuela	–6.1	–6.9	–8.1	–11.9	–9.0	–10.6	–16.6	–31.3	–10.0	. . .	. . .
Average	0.8	0.6	0.1	–0.8	–2.7	–3.1	–2.4	–2.1	–3.0	–7.2	–5.5
Asia	–0.3	–0.4	–0.6	–0.6	–2.1	–2.6	–2.5	–3.1	–4.5	–8.3	–6.9
Europe	1.0	0.5	–0.3	–0.3	–1.5	–1.7	–0.8	1.4	0.4	–4.7	–2.6
Latin America	0.9	0.2	–0.1	–1.6	–2.5	–2.4	–1.4	–1.4	–0.3	–3.2	–0.7
MENAP	4.8	6.1	4.5	–0.9	–8.0	–9.2	–5.5	–2.2	–2.7	–8.5	–5.8
G20 Emerging	0.8	0.4	–0.2	–0.9	–2.7	–3.1	–2.4	–2.5	–3.6	–7.9	–6.2

Source: IMF staff estimates and projections. Projections are based on staff assessment 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 due to 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 Non-Financial Public Sector (NFPS). Ecuadorian authorities, in the context of the EFF approved in March of 2019 and with the technical support from the IMF Staff, are undertaking revisions of the historical fiscal data for the net-lending borrowing of the NFSP with the view of correcting recently-identified statistical errors, mostly in the recording of revenues and expenditures of the local governments. Fiscal data reported in the table for 2018 and 2019 reflect the corrected series while the data for earlier years are still under revisions and will be corrected in the subsequent WEO releases as the authorities proceed with the corrections in the earlier years, going 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 prior to the recent revision; therefore, data in the tables are not comparable to the authorities' numbers.

[4] Interest revenue is proxied by the IMF staffs estimate 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 (NFPS), which includes central government, local government, social security funds, nonfinancial public corporation, and Banco de Seguros del Estado. The coverage of the fiscal data was changed from consolidated public sector to NFPS 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 are affected by these transfers.

Table A11. Emerging Market and Middle-Income Economies: General Government Cyclically Adjusted Balance, 2011–19

(Percent of potential GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019
Algeria	–0.4	–3.1	2.2	–8.8	–17.9	–14.8	–9.4	–8.2	–11.2
Angola	2.9	–0.8	–2.7	–5.7	0.6	–1.5	–3.3	3.1	1.3
Argentina	–3.8	–3.0	–3.7	–3.5	–6.3	–6.1	–7.2	–5.1	–2.9
Azerbaijan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Belarus[1]	–3.6	–0.2	–1.5	–0.8	–2.3	–0.1	0.2	1.5	0.2
Brazil	–4.0	–3.8	–4.4	–7.5	–10.1	–7.5	–6.6	–6.0	–5.0
Chile[2]	–1.0	–0.4	–0.5	–0.5	0.5	–1.0	–2.0	–1.5	–2.8
China	–0.5	–0.4	–0.9	–0.9	–2.5	–3.4	–4.0	–5.0	–6.0
Colombia	–2.2	0.1	–1.5	–2.4	–3.9	–2.5	–2.2	–3.9	–1.6
Croatia	–8.8	–6.1	–6.3	–5.2	–2.9	–1.0	0.8	0.4	–0.1
Dominican Republic	–3.1	–6.3	–3.1	–4.9	–4.6	–4.2	–4.1	–3.8	–3.8
Ecuador[3]	–1.5	–2.3	–6.0	–6.4	–6.8	–7.7	–4.1	–4.3	–4.0
Egypt[4]	–9.6	–9.9	–13.2	–11.6	–11.4	–12.0	–10.7	–9.6	–7.4
Hungary	–4.1	0.2	–0.2	–1.4	–1.2	–1.0	–2.3	–2.7	–3.1
India	–8.6	–7.4	–6.7	–6.8	–7.1	–7.3	–6.1	–6.7	–7.0
Indonesia	–1.0	–1.9	–2.5	–2.3	–2.7	–2.5	–2.4	–1.7	–2.2
Iran	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Kazakhstan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Kuwait	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Libya	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Malaysia	–3.3	–3.3	–3.2	–2.5	–2.7	–2.7	–2.6	–4.1	–2.7
Mexico	–3.2	–3.7	–3.4	–4.2	–4.0	–3.9	–2.3	–2.0	–2.1
Morocco	–6.9	–7.7	–5.9	–6.3	–4.6	–4.8	–4.2	–3.9	–4.1
Oman	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Pakistan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Peru[2]	1.2	1.3	0.1	–0.1	–1.6	–1.9	–2.1	–1.7	–0.7
Philippines	0.0	–0.3	0.1	0.6	0.7	–0.4	–0.5	–1.7	–1.9
Poland	–5.3	–3.6	–3.6	–3.1	–2.3	–2.1	–1.7	–1.4	–2.1
Qatar	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Romania	–3.2	–1.2	–1.4	–0.7	–0.5	–2.0	–3.4	–3.6	–5.6
Russia	1.5	0.1	–1.6	–0.1	–3.1	–3.2	–1.0	2.9	2.0
Saudi Arabia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
South Africa	–3.7	–4.2	–4.1	–4.1	–4.2	–3.8	–3.8	–3.5	–4.7
Sri Lanka	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Thailand	0.1	–0.6	0.3	–0.4	0.5	0.9	–0.3	0.0	–0.7
Turkey	–1.1	–1.6	–1.9	–1.5	–1.5	–2.0	–3.1	–4.6	–5.9
Ukraine	–3.2	–4.5	–4.6	–3.3	0.8	–1.4	–1.6	–2.2	–1.8
United Arab Emirates	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Uruguay[5]	–1.6	–3.3	–2.9	–3.7	–2.3	–3.0	–2.7	–2.0	–2.5
Venezuela	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Average	–2.1	–2.0	–2.4	–2.7	–3.8	–4.0	–4.0	–4.1	–4.7
Asia	–1.9	–1.6	–1.8	–1.8	–3.0	–3.7	–4.1	–4.9	–5.6
Europe	–0.8	–1.1	–2.0	–1.1	–2.2	–2.4	–1.8	–0.2	–1.2
Latin America	–3.3	–3.0	–3.5	–5.2	–6.4	–5.4	–4.8	–4.1	–3.4
MENAP	–6.6	–7.7	–7.7	–9.8	–11.7	–11.3	–8.8	–7.9	–7.6
G20 Emerging	–2.0	–1.9	–2.4	–2.6	–3.9	–4.2	–4.2	–4.4	–5.0

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 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 due to 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 Non-Financial Public Sector (NFPS). Ecuadorian authorities, in the context of the EFF approved in March of 2019 and with the technical support from the IMF Staff, are undertaking revisions of the historical fiscal data for the net-lending borrowing of the NFSP with the view of correcting recently-identified statistical errors, mostly in the recording of revenues and expenditures of the local governments. Fiscal data reported in the table for 2018 and 2019 reflect the corrected series while the data for earlier years are still under revisions and will be corrected in the subsequent WEO releases as the authorities proceed with the corrections in the earlier years, going 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 prior to the recent revision; therefore, data in the tables are not comparable to the authorities' numbers.

[5] Data are for the nonfinancial public sector (NFPS), which includes central government, local government, social security funds, nonfinancial public corporation, and Banco de Seguros del Estado. The coverage of the fiscal data was changed from consolidated public sector to NFPS 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 are affected by these transfers.

Table A12. Emerging Market and Middle-Income Economies: General Government Cyclically Adjusted Primary Balance, 2011–19

(Percent of potential GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019
Algeria	–2.4	–4.5	2.1	–9.0	–18.6	–14.9	–8.9	–8.5	–11.9
Angola	4.0	0.2	–1.9	–4.6	2.0	0.8	–0.5	7.3	6.4
Argentina	–2.6	–1.7	–3.1	–2.8	–4.7	–4.2	–4.7	–1.9	0.4
Azerbaijan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Belarus[1]	–2.5	1.2	–0.5	0.2	–0.7	1.8	2.1	3.5	2.0
Brazil	1.7	0.8	0.5	–1.9	–1.8	–1.3	–0.7	–0.7	–0.1
Chile[2]	–0.9	–0.3	–0.4	–0.4	0.7	–0.7	–1.6	–1.1	–2.5
China	0.0	0.1	–0.4	–0.4	–2.0	–2.7	–3.3	–4.2	–5.1
Colombia	–0.1	1.7	0.5	–0.8	–2.1	–0.6	–0.2	–1.7	1.2
Croatia	–6.4	–3.3	–3.5	–2.3	0.2	1.8	3.2	2.5	1.8
Dominican Republic	–1.1	–4.0	–0.9	–2.5	–2.3	–1.6	–1.5	–1.2	–0.9
Ecuador[3]	–0.8	–1.6	–4.9	–5.4	–5.4	–6.1	–2.0	–1.8	–1.2
Egypt[4]	–4.7	–4.9	–6.1	–4.5	–4.6	–3.9	–2.7	–0.5	1.3
Hungary	–0.4	4.2	3.9	2.2	2.1	1.9	0.2	–0.4	–0.8
India	–4.2	–3.1	–2.2	–2.4	–2.6	–2.7	–1.4	–2.0	–2.2
Indonesia	0.2	–0.7	–1.3	–1.1	–1.3	–1.0	–0.8	0.0	–0.4
Iran	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Kazakhstan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Kuwait	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Libya	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Malaysia	–1.7	–2.3	–1.9	–0.8	–1.1	–0.9	–0.8	–2.2	–0.7
Mexico	–0.6	–0.9	–0.7	–1.5	–1.2	–0.8	1.4	1.8	1.6
Morocco	–4.7	–5.2	–3.3	–3.6	–1.9	–2.2	–1.7	–1.5	–1.5
Oman	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Pakistan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Peru[2]	2.2	2.3	1.1	0.8	–0.6	–0.9	–1.1	–0.6	0.4
Philippines	2.6	2.3	2.6	2.9	2.7	1.4	1.2	0.1	–0.2
Poland	–2.8	–0.9	–1.1	–1.2	–0.6	–0.4	–0.1	0.1	–0.7
Qatar	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Romania	–1.8	0.5	0.2	0.8	0.7	–0.7	–2.3	–2.3	–4.4
Russia	1.8	0.3	–1.2	0.3	–2.8	–2.8	–0.5	3.4	2.4
Saudi Arabia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
South Africa	–1.2	–1.5	–1.2	–1.1	–1.0	–0.4	–0.2	0.2	–0.7
Sri Lanka	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Thailand	1.0	0.3	1.1	0.3	1.1	1.3	0.2	0.6	–0.2
Turkey	1.5	0.8	0.4	0.5	0.4	–0.7	–1.7	–3.1	–4.1
Ukraine	–1.2	–2.6	–2.2	0.0	4.7	2.6	2.1	1.1	1.2
United Arab Emirates	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Uruguay[5]	0.9	–1.0	–0.5	–1.4	0.0	–0.4	–0.2	0.6	–0.1
Venezuela	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Average	–0.2	–0.3	–0.7	–0.9	–1.8	–2.1	–2.0	–2.2	–2.8
Asia	–0.6	–0.4	–0.6	–0.6	–1.8	–2.4	–2.6	–3.4	–4.1
Europe	0.6	0.3	–0.7	0.2	–0.9	–1.2	–0.6	0.9	–0.1
Latin America	0.4	0.1	–0.3	–1.7	–2.0	–1.5	–0.8	–0.3	0.3
MENAP	–4.1	–4.8	–3.4	–5.5	–7.3	–6.1	–4.2	–2.9	–2.6
G20 Emerging	–0.1	–0.2	–0.7	–0.8	–2.0	–2.3	–2.2	–2.5	–3.2

Source: IMF staff estimates and projections. Projections are based on staff assessment 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 due to 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 Non-Financial Public Sector (NFPS). Ecuadorian authorities, in the context of the EFF approved in March of 2019 and with the technical support from the IMF Staff, are undertaking revisions of the historical fiscal data for the net-lending borrowing of the NFSP with the view of correcting recently-identified statistical errors, mostly in the recording of revenues and expenditures of the local governments. Fiscal data reported in the table for 2018 and 2019 reflect the corrected series while the data for earlier years are still under revisions and will be corrected in the subsequent WEO releases as the authorities proceed with the corrections in the earlier years, going 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 prior to the recent revision; therefore, data in the tables are not comparable to the authorities' numbers.

5 Data are for the nonfinancial public sector (NFPS), which includes central government, local government, social security funds, nonfinancial public corporation, and Banco de Seguros del Estado. The coverage of the fiscal data was changed from consolidated public sector to NFPS 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 are affected by these transfers.

Table A13. Emerging Market and Middle-Income Economies: General Government Revenue, 2011–21
(Percent of GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Algeria	40.0	39.1	35.8	33.3	30.5	28.6	32.6	33.7	32.5	27.2	29.1
Angola	45.5	41.3	36.7	30.7	24.1	17.5	17.5	21.9	20.2	17.5	19.4
Argentina	32.2	33.8	34.3	34.6	35.4	34.9	34.5	33.8	33.9	. . .	. . .
Azerbaijan	44.6	40.3	39.4	39.1	33.9	34.3	34.2	38.6	42.2	30.6	30.9
Belarus[1]	37.5	39.3	39.8	38.9	38.8	39.0	38.7	39.6	39.2	36.0	36.6
Brazil	35.1	34.7	34.5	32.5	28.2	30.7	30.5	30.9	31.9	30.5	31.3
Chile	24.2	23.8	22.6	22.3	22.8	22.6	22.8	23.9	23.2	21.5	24.5
China	27.0	27.9	27.7	28.1	28.8	28.2	27.8	28.3	27.6	25.8	26.6
Colombia	28.2	29.2	29.0	29.5	27.8	27.7	26.8	30.0	31.6	28.5	29.4
Croatia	41.1	43.0	42.9	43.4	45.3	46.5	46.1	46.2	46.5	42.4	44.7
Dominican Republic	12.9	13.6	14.2	14.2	16.6	13.9	14.0	14.2	14.4	13.6	14.1
Ecuador[2]	39.3	39.3	39.2	38.4	33.6	30.3	32.0	35.1	33.4	30.1	31.0
Egypt[3]	20.9	20.8	21.7	24.4	22.0	20.3	21.8	20.7	20.1	20.3	20.9
Hungary	44.1	47.0	47.6	47.4	48.6	45.4	44.5	44.5	44.0	43.5	42.5
India	19.3	19.8	19.6	19.1	19.9	20.1	19.9	20.2	19.7	19.5	19.5
Indonesia	17.0	17.2	16.9	16.5	14.9	14.3	14.1	14.9	14.2	12.4	12.5
Iran	18.9	13.9	13.5	14.3	16.1	17.3	17.5	15.8	11.5	9.4	10.8
Kazakhstan	27.0	26.3	24.8	23.7	16.6	17.0	19.8	21.4	19.9	18.0	18.0
Kuwait	72.3	71.2	72.3	66.6	60.0	54.1	57.7	58.4	57.0	52.9	48.0
Libya	42.4	74.2	83.0	69.3	51.2	31.7	52.4	85.6	103.7	163.9	98.6
Malaysia	23.5	25.4	24.3	23.3	22.2	20.1	19.5	19.4	20.7	19.3	17.8
Mexico	24.4	24.5	24.1	23.4	23.5	24.6	24.7	23.5	23.3	22.5	22.7
Morocco	27.2	28.0	27.8	28.0	26.5	26.1	26.6	26.2	25.9	27.6	26.4
Oman	48.7	48.7	49.5	46.3	34.9	29.9	31.8	37.4	36.9	30.6	32.0
Pakistan	12.6	13.0	13.5	15.2	14.5	15.5	15.5	15.2	12.8	14.3	15.8
Peru	21.8	22.4	22.3	22.4	20.3	18.8	18.3	19.4	20.0	18.2	20.4
Philippines	17.6	18.6	18.8	19.0	19.4	19.1	19.6	20.2	20.8	19.7	20.2
Poland	39.0	39.1	38.4	38.7	39.1	38.7	39.8	41.4	42.1	41.1	41.7
Qatar	35.8	41.5	49.9	47.7	46.8	34.8	30.5	32.9	34.4	35.5	28.8
Romania	32.5	32.5	31.5	32.1	32.8	28.9	28.0	29.1	29.0	29.1	27.8
Russia	34.7	34.5	33.5	33.9	31.9	32.9	33.4	35.4	35.8	31.8	32.5
Saudi Arabia	44.4	45.2	41.2	36.7	25.0	21.5	24.1	30.7	31.2	26.1	28.7
South Africa	26.8	26.9	27.3	27.6	28.2	28.6	28.2	29.0	29.1	26.9	26.7
Sri Lanka	13.6	12.2	12.0	11.6	13.3	14.1	13.8	13.5	12.6	9.7	11.4
Thailand	21.2	21.4	22.2	21.4	22.3	21.9	21.1	21.4	21.0	20.3	20.8
Turkey	32.7	32.6	32.7	31.8	32.1	32.7	31.4	31.3	29.3	28.5	29.2
Ukraine	42.9	44.7	43.3	40.3	41.9	38.3	39.3	39.6	39.5	39.2	39.7
United Arab Emirates	36.5	38.1	38.7	35.0	29.0	28.9	29.2	31.4	31.2	26.8	27.7
Uruguay[4]	28.4	27.8	29.6	28.9	28.9	29.4	29.7	31.2	30.8	29.8	30.2
Venezuela	31.1	29.8	28.4	34.6	19.7	14.3	20.0	14.9	13.0	. . .	. . .
Average	29.0	29.5	29.1	28.5	27.3	26.8	26.8	27.6	27.1	25.3	25.9
Asia	24.4	25.3	25.4	25.6	26.2	25.6	25.2	25.8	25.2	23.8	24.5
Europe	35.3	35.2	34.5	34.4	33.4	33.8	33.8	35.2	35.1	33.0	33.4
Latin America	30.8	30.6	30.3	29.5	26.8	27.4	27.9	27.8	28.1	26.6	27.3
MENAP	33.8	36.2	35.4	32.6	26.5	24.1	25.6	28.5	27.5	24.6	25.0
G20 Emerging	28.6	29.0	28.6	28.2	27.4	27.2	27.0	27.6	27.1	25.2	25.9

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 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 due to 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 Non-Financial Public Sector (NFPS). Ecuadorian authorities, in the context of the EFF approved in March of 2019 and with the technical support from the IMF Staff, are undertaking revisions of the historical fiscal data for the net-lending borrowing of the NFSP with the view of correcting recently-identified statistical errors, mostly in the recording of revenues and expenditures of the local governments. Fiscal data reported in the table for 2018 and 2019 reflect the corrected series while the data for earlier years are still under revisions and will be corrected in the subsequent WEO releases as the authorities proceed with the corrections in the earlier years, going 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 prior to the recent revision; therefore, data in the tables are not comparable to the authorities' numbers.

[4] Data are for the nonfinancial public sector (NFPS), which includes central government, local government, social security funds, nonfinancial public corporation, and Banco de Seguros del Estado. The coverage of the fiscal data was changed from consolidated public sector to NFPS 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 are affected by these transfers.

Table A14. Emerging Market and Middle-Income Economies: General Government Expenditure, 2011–21
(Percent of GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Algeria	40.1	43.5	36.2	40.6	45.8	41.7	39.2	38.2	37.5	42.1	39.2
Angola	37.4	37.2	37.0	36.5	27.1	22.0	23.8	19.7	19.5	23.5	21.9
Argentina	34.9	36.8	37.6	38.9	41.4	41.5	41.2	39.3	37.7	. . .	. . .
Azerbaijan	33.7	36.6	37.8	36.4	38.7	35.4	35.6	33.1	33.7	43.4	40.6
Belarus[1]	40.3	38.9	40.8	38.8	41.8	40.7	39.0	37.8	38.6	40.6	39.6
Brazil	37.6	37.2	37.4	38.5	38.5	39.7	38.3	38.1	37.9	39.9	37.5
Chile	22.8	23.1	23.1	23.8	24.9	25.3	25.4	25.4	25.8	27.8	28.0
China	27.1	28.2	28.6	29.0	31.6	31.9	31.6	32.9	34.0	37.0	36.2
Colombia	30.2	29.1	30.0	31.3	31.3	30.0	29.3	34.7	33.8	30.9	30.7
Croatia	49.0	48.3	48.3	48.7	48.6	47.6	45.4	46.0	46.6	48.9	47.3
Dominican Republic	15.9	20.1	17.7	17.0	16.7	17.0	17.1	16.3	16.6	18.0	16.9
Ecuador[2]	39.5	40.3	43.7	43.6	39.7	38.6	36.5	38.2	36.2	37.2	35.4
Egypt[3]	30.5	30.8	34.6	35.7	33.0	32.7	32.2	30.1	27.5	27.9	27.5
Hungary	49.4	49.4	50.2	50.2	50.6	47.2	47.0	46.7	46.1	46.4	44.1
India	27.6	27.4	26.6	26.2	27.1	27.2	26.2	26.5	27.1	27.0	26.8
Indonesia	17.7	18.8	19.1	18.6	17.5	16.8	16.6	16.6	16.4	17.4	16.5
Iran	18.3	14.3	14.4	15.4	17.9	19.5	19.3	17.7	17.1	19.2	18.5
Kazakhstan	21.2	21.9	19.8	21.3	22.9	21.5	24.1	18.8	20.5	23.2	20.7
Kuwait	39.1	38.8	38.1	44.3	54.4	53.8	51.4	49.4	52.3	64.2	62.0
Libya	59.7	45.7	88.1	143.1	181.9	144.9	95.9	85.8	94.9	171.2	117.6
Malaysia	27.1	28.5	27.8	26.0	24.7	22.7	21.9	22.7	23.9	23.0	21.4
Mexico	27.7	28.2	27.8	28.0	27.5	27.4	25.7	25.7	25.7	26.7	24.9
Morocco	33.8	35.2	32.9	32.9	30.7	30.5	30.0	29.9	30.0	34.7	30.9
Oman	39.3	44.1	44.9	47.4	50.9	51.2	45.8	45.4	43.8	47.5	46.8
Pakistan	19.3	21.7	21.8	20.1	19.8	19.9	21.3	21.6	21.6	23.5	22.3
Peru	19.7	20.3	21.5	22.6	22.4	21.1	21.2	21.4	21.3	25.3	23.0
Philippines	17.9	18.9	18.7	18.1	18.8	19.5	20.0	21.9	22.7	23.1	22.9
Poland	43.9	42.9	42.6	42.4	41.7	41.1	41.2	41.6	42.8	47.9	45.2
Qatar	28.5	31.0	28.3	33.4	42.3	40.1	33.5	27.7	30.3	30.2	27.4
Romania	36.7	35.0	34.0	33.8	34.2	31.3	30.8	32.0	33.6	38.0	34.8
Russia	33.2	34.1	34.7	34.9	35.3	36.6	34.8	32.5	33.8	36.6	35.5
Saudi Arabia	32.8	33.2	35.5	40.2	40.8	38.7	33.3	36.6	35.6	38.7	37.7
South Africa	30.9	31.4	31.6	31.9	32.9	32.7	32.6	33.2	35.3	40.2	39.4
Sri Lanka	19.9	17.8	17.2	17.9	20.4	19.5	19.3	18.7	19.4	19.2	19.7
Thailand	21.1	22.3	21.6	22.2	22.2	21.3	21.5	21.4	21.8	23.7	22.5
Turkey	33.4	34.4	34.2	33.2	33.4	35.1	33.6	34.9	34.6	36.0	35.9
Ukraine	45.7	49.0	48.1	44.8	43.0	40.6	41.5	41.7	41.5	47.4	45.0
United Arab Emirates	31.2	29.1	30.3	33.1	32.4	31.7	31.1	29.4	32.0	38.0	34.8
Uruguay[4]	28.7	30.2	31.4	31.7	31.1	32.5	32.4	33.2	33.7	34.5	34.0
Venezuela	39.4	40.3	39.7	50.1	30.3	25.2	36.6	46.2	23.0	. . .	. . .
Average	29.9	30.4	30.6	31.0	31.7	31.6	31.0	31.4	31.9	34.4	33.3
Asia	26.0	26.9	27.2	27.4	29.5	29.6	29.2	30.3	31.2	33.7	33.0
Europe	35.5	35.9	35.9	35.8	36.1	36.6	35.6	34.9	35.8	39.1	37.6
Latin America	33.4	33.5	33.5	34.5	33.6	33.6	33.3	33.0	32.1	33.2	31.3
MENAP	29.5	30.6	31.5	34.1	35.0	33.7	31.4	31.4	31.3	34.4	32.7
G20 Emerging	29.7	30.2	30.4	30.7	31.9	32.0	31.3	31.9	32.5	34.9	33.9

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 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 due to 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 Non-Financial Public Sector (NFPS). Ecuadorian authorities, in the context of the EFF approved in March of 2019 and with the technical support from the IMF Staff, are undertaking revisions of the historical fiscal data for the net-lending borrowing of the NFSP with the view of correcting recently-identified statistical errors, mostly in the recording of revenues and expenditures of the local governments. Fiscal data reported in the table for 2018 and 2019 reflect the corrected series while the data for earlier years are still under revisions and will be corrected in the subsequent WEO releases as the authorities proceed with the corrections in the earlier years, going 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 prior to the recent revision; therefore, data in the tables are not comparable to the authorities' numbers.

[4] Data are for the nonfinancial public sector (NFPS), which includes central government, local government, social security funds, nonfinancial public corporation, and Banco de Seguros del Estado. The coverage of the fiscal data was changed from consolidated public sector to NFPS 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, 2011–21
(Percent of GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Algeria	9.3	9.3	7.6	7.7	8.7	20.5	27.1	38.1	46.3	61.0	65.8
Angola	29.6	26.7	33.1	39.8	57.1	75.7	69.3	89.0	109.8	132.2	124.3
Argentina	38.9	40.4	43.5	44.7	52.6	53.1	57.1	86.1	88.7	. . .	. . .
Azerbaijan	5.0	5.8	6.2	8.5	18.0	20.6	22.5	18.7	18.0	21.0	21.8
Belarus[1]	58.2	36.9	36.9	38.8	53.0	53.5	53.2	47.5	41.9	59.6	54.7
Brazil[2]	61.2	62.2	60.2	62.3	72.6	78.3	83.7	87.1	89.5	98.2	98.2
Chile	11.1	11.9	12.7	15.0	17.3	21.0	23.6	25.6	27.9	32.3	34.8
China	33.8	34.4	37.0	40.0	41.4	44.2	46.1	49.1	54.4	64.9	70.1
Colombia	35.8	34.0	37.6	43.3	50.4	49.8	49.4	53.8	52.9	57.8	55.3
Croatia	64.4	70.1	81.2	84.7	84.4	81.0	78.0	75.1	72.0	84.6	81.8
Dominican Republic	39.1	42.3	46.7	44.9	44.7	46.6	48.9	50.4	53.6	60.9	58.2
Ecuador[3]	16.8	17.5	20.0	27.1	33.8	43.2	44.6	46.1	49.6	63.0	65.1
Egypt[4]	72.8	73.8	84.0	85.1	88.5	96.8	103.2	92.7	83.8	87.4	90.7
Hungary	80.8	78.6	77.4	76.8	76.2	75.5	72.9	70.2	66.3	69.2	66.2
India	68.3	67.7	67.4	66.8	68.8	68.7	69.4	69.4	71.9	74.3	73.8
Indonesia	23.1	23.0	24.8	24.7	27.0	28.0	29.4	30.1	30.4	36.9	37.6
Iran	8.9	12.1	10.7	11.8	38.4	47.5	39.5	31.8	29.7	34.4	32.8
Kazakhstan	10.2	12.1	12.6	14.5	21.9	19.7	19.9	20.3	20.2	23.1	23.7
Kuwait	4.6	3.6	3.1	3.4	4.7	10.0	20.5	14.8	11.6	18.9	36.1
Libya	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Malaysia	51.9	53.8	55.7	55.4	57.0	55.8	54.4	55.6	57.2	63.0	59.9
Mexico	42.9	42.7	45.9	48.9	52.8	56.8	54.0	53.7	53.4	61.4	59.0
Morocco	52.5	56.5	61.7	63.3	63.7	64.9	65.1	65.3	65.8	73.7	72.9
Oman	5.2	4.9	5.0	4.9	15.5	32.7	46.4	53.5	62.6	78.3	85.8
Pakistan	58.9	63.2	63.9	63.5	63.3	67.6	67.1	71.6	83.5	85.4	83.3
Peru	23.0	21.2	19.9	20.6	24.1	24.5	25.4	26.2	26.7	36.5	37.1
Philippines	47.5	47.9	45.7	42.1	41.5	39.0	39.9	38.9	38.6	42.9	42.9
Poland	54.1	53.7	55.7	50.4	51.3	54.2	50.6	48.9	46.7	53.9	53.5
Qatar	33.5	32.1	30.9	24.9	35.5	46.7	49.8	44.6	52.3	57.4	50.6
Romania	34.2	37.8	39.0	40.5	39.4	38.9	36.8	36.4	37.3	43.9	47.3
Russia	10.3	11.2	12.3	15.1	15.3	14.8	14.3	13.6	14.0	17.9	17.1
Saudi Arabia	5.4	3.0	2.1	1.6	5.8	13.1	17.2	19.0	22.8	34.0	38.6
South Africa	38.2	41.0	44.1	47.0	49.3	51.5	53.0	56.7	62.2	77.4	85.6
Sri Lanka	71.1	69.6	71.8	72.2	78.5	79.0	77.9	83.8	86.8	92.3	92.1
Thailand	39.1	41.9	42.2	43.3	42.6	41.7	41.8	42.0	41.1	48.1	48.9
Turkey	36.4	32.7	31.4	28.6	27.5	28.2	28.2	30.4	33.1	39.3	40.7
Ukraine	36.9	37.5	40.5	70.3	79.5	81.2	71.6	60.6	50.1	66.5	63.8
United Arab Emirates	21.5	21.2	16.0	14.2	16.7	19.4	22.1	21.8	26.6	33.6	33.2
Uruguay[5]	44.7	54.1	54.3	55.5	62.9	61.4	60.8	63.2	67.4	71.7	70.3
Venezuela	31.7	30.1	33.2	25.1	11.0	5.1	19.7	31.4	232.8	. . .	. . .
Average	37.1	37.0	38.2	40.3	43.7	46.5	48.0	49.7	53.2	62.0	64.6
Asia	39.7	39.7	41.4	43.5	44.9	47.1	48.8	50.9	55.1	64.1	68.0
Europe	26.6	25.3	26.2	28.2	30.5	31.5	29.7	29.4	29.2	36.5	36.3
Latin America	47.5	47.1	47.8	50.1	53.9	57.4	62.2	66.6	70.5	78.0	76.2
MENAP	22.1	23.4	23.5	23.4	33.0	40.6	40.3	38.8	41.9	51.2	52.8
G20 Emerging	37.9	37.4	38.6	41.0	44.0	46.6	48.5	50.6	54.2	63.3	66.5

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 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 due to 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 includes 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 prior to the recent revision; therefore, data in the tables are not comparable to the authorities' numbers.

[5] Data are for the nonfinancial public sector (NFPS), which includes central government, local government, social security funds, nonfinancial public corporation, and Banco de Seguros del Estado. The coverage of the fiscal data was changed from consolidated public sector to NFPS with the October 2019 submission. With this narrower coverage, the central bank balances are not included in fiscal data. and capitalization bonds issued in the past by the government to the central bank are now part of the NFPS debt. Historical data were also revised accordingly. Debt estimates prior to 2012 are preliminary.

Table A16. Emerging Market and Middle-Income Economies: General Government Net Debt, 2011–21
(Percent of GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Algeria	–31.1	–29.0	–29.5	–21.8	–7.6	13.3	21.4	25.3	37.5	51.1	56.7
Angola	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Argentina	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Azerbaijan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Belarus	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Brazil	34.5	32.2	30.5	32.6	35.6	46.2	51.4	53.7	55.7	62.8	64.9
Chile	–8.6	–6.8	–5.6	–4.4	–3.4	0.9	4.4	5.7	6.3	12.8	16.4
China	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Colombia	27.2	24.8	26.9	32.9	42.1	38.6	38.6	43.2	44.1	46.2	44.4
Croatia	53.3	58.5	65.8	69.8	71.1	68.9	66.1	63.2	. . .	. . .	. . .
Dominican Republic	31.9	37.6	40.3	38.5	37.8	38.9	40.6	41.7	43.7	51.3	49.5
Ecuador	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Egypt[1]	61.3	63.5	73.7	77.1	78.8	88.2	93.9	81.3	74.4	78.6	82.7
Hungary	72.8	70.9	71.1	70.6	70.9	68.5	65.9	63.2	59.3	62.2	59.2
India	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Indonesia	17.8	18.6	20.6	20.4	22.0	23.5	25.3	26.3	26.9	33.4	34.5
Iran	–2.5	1.3	–5.6	–5.6	21.7	34.5	28.8	26.3	27.6	33.8	32.4
Kazakhstan	–12.7	–15.9	–17.6	–19.1	–30.8	–23.8	–15.8	–15.8	–14.2	–16.0	–11.6
Kuwait	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Libya	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Malaysia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Mexico	37.2	37.2	40.0	42.6	46.5	48.7	45.8	44.9	45.1	53.1	50.7
Morocco	52.1	56.0	61.2	62.8	63.1	64.4	64.7	65.0	65.5	73.4	72.6
Oman	–16.8	–15.6	–28.8	–27.6	–22.8	–1.0	13.4	32.3	41.2	58.5	69.6
Pakistan	55.8	59.2	60.1	58.0	58.2	61.3	61.5	66.1	75.2	78.3	77.0
Peru	6.1	2.8	1.5	2.7	5.3	7.0	8.7	10.2	11.2	18.7	20.0
Philippines	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Poland	48.3	47.9	50.9	44.6	46.5	47.9	44.6	42.4	41.9	49.1	48.7
Qatar	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Romania	27.4	29.0	29.6	29.7	29.7	27.7	28.3	28.0	29.1	35.7	39.2
Russia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Saudi Arabia	–37.0	–47.1	–50.9	–47.1	–35.9	–17.1	–7.7	–0.1	5.0	18.9	27.2
South Africa	31.3	34.8	37.9	40.7	43.6	45.4	47.8	51.0	55.9	72.8	81.3
Sri Lanka	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Thailand	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Turkey	31.1	27.5	25.9	23.8	23.0	23.4	22.3	24.1	26.5	32.7	34.7
Ukraine	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
United Arab Emirates	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Uruguay[2]	32.0	41.5	43.2	45.2	49.7	49.7	49.5	52.1	56.4	60.8	59.5
Venezuela	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Average	24.1	22.7	22.9	24.2	28.6	34.6	36.0	36.8	38.3	45.8	47.6
Asia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Europe	34.8	32.0	31.6	29.6	28.8	31.0	30.1	30.7	30.6	36.9	38.1
Latin America	31.2	29.6	29.7	32.3	35.7	41.1	43.3	44.1	45.3	51.7	52.2
MENAP	–0.6	–2.5	–3.4	–0.1	15.3	29.2	29.7	31.1	35.2	46.6	50.1
G20 Emerging	24.8	21.9	21.7	23.2	26.1	32.1	35.1	36.3	38.1	45.8	48.3

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 C. MENAP = Middle East, North Africa, and Pakistan.

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

[2] Data are for the nonfinancial public sector (NFPS), which includes central government, local government, social security funds, nonfinancial public corporation, and Banco de Seguros del Estado. The coverage of the fiscal data was changed from consolidated public sector to NFPS with the October 2019 submission. With this narrower coverage, the central bank balances are not included in fiscal data. and capitalization bonds issued in the past by the government to the central bank are now part of the NFPS debt. Historical data were also revised accordingly. Debt estimates prior to 2012 are preliminary.

Table A17. Low-Income Developing Countries: General Government Overall Balance, 2011–21
(Percent of GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Bangladesh	–3.6	–3.0	–3.4	–3.1	–4.0	–3.4	–3.3	–4.6	–5.2	–6.4	–6.0
Benin	–1.0	–0.2	–1.4	–1.7	–5.6	–4.3	–4.2	–3.0	–0.5	–2.8	–2.2
Burkina Faso	–2.0	–2.8	–3.5	–1.7	–2.1	–3.1	–6.9	–4.4	–3.0	–5.0	–3.5
Cambodia	–4.7	–4.5	–2.6	–1.6	–0.6	–0.3	–0.8	0.7	0.4	–1.9	–1.7
Cameroon	–2.4	–1.4	–3.7	–4.3	–4.4	–6.1	–4.9	–2.5	–2.3	–4.5	–3.6
Chad	2.4	0.5	–2.1	–4.2	–4.4	–1.9	–0.2	1.9	–0.2	–0.4	–2.2
Congo, Democratic Republic of the	–1.0	1.8	1.9	0.0	–0.4	–0.5	1.4	0.0	–2.1	–1.2	–0.3
Congo, Republic of	17.0	9.4	–3.6	–13.6	–24.8	–20.4	–7.4	6.6	5.8	5.7	6.1
Côte d'Ivoire	–2.9	–2.3	–1.6	–1.6	–2.0	–3.0	–3.3	–2.9	–2.3	–5.3	–2.5
Ethiopia	–1.6	–1.2	–1.9	–2.6	–1.9	–2.3	–3.2	–3.0	–2.5	–3.0	–3.4
Ghana	–5.5	–8.4	–9.2	–8.0	–4.1	–6.9	–4.1	–7.0	–7.4	–10.0	–5.4
Guinea	–0.9	–2.5	–3.9	–3.2	–6.9	–0.1	–2.1	–1.1	–0.5	–4.3	–4.1
Haiti	–2.5	–4.7	–7.0	–6.3	–2.5	0.0	0.3	–1.7	–2.4	–5.1	–3.0
Honduras	–2.9	–3.5	–5.7	–2.9	–0.8	–0.4	–0.4	0.2	0.1	0.0	–0.5
Kenya	–4.1	–5.0	–5.7	–7.4	–8.1	–8.5	–7.9	–7.4	–7.8	–7.7	–6.9
Kyrgyz Republic	–4.7	–5.9	–3.7	–3.1	–2.5	–5.8	–3.7	–0.6	–0.1	–9.6	–6.4
Lao P.D.R.	–1.4	–2.3	–4.0	–3.1	–5.6	–5.1	–5.5	–4.7	–5.1	–6.2	–5.5
Madagascar	–2.0	–2.2	–3.4	–2.0	–2.9	–1.1	–2.1	–1.3	–1.4	–4.0	–4.8
Mali	–3.4	–1.0	–2.4	–2.9	–1.8	–3.9	–2.9	–4.8	–1.7	–5.8	–3.3
Moldova	–2.0	–1.9	–1.6	–1.6	–1.9	–1.8	–0.8	–1.1	–1.5	–5.5	–3.3
Mozambique	–4.4	–3.6	–2.6	–10.3	–6.7	–5.5	–2.9	–6.9	–0.2	–7.7	–6.1
Myanmar	–4.4	–2.7	–1.7	–1.3	–2.8	–3.9	–2.7	–3.0	–3.5	–4.7	–4.6
Nepal	–0.8	–1.3	1.8	1.5	0.7	1.4	–3.1	–6.7	–4.6	–6.0	–5.0
Nicaragua	–0.1	–0.1	–0.7	–1.3	–1.4	–1.7	–1.6	–3.2	–0.4	–4.4	–5.2
Niger	–1.1	–0.8	–1.9	–6.1	–6.8	–4.5	–4.1	–3.0	–3.6	–4.2	–3.3
Nigeria	0.4	0.2	–2.3	–2.1	–3.2	–4.0	–5.4	–4.3	–5.0	–6.4	–5.8
Papua New Guinea	2.2	–1.2	–6.9	–6.3	–4.6	–4.7	–2.5	–2.6	–4.1	–5.0	–3.9
Rwanda	–0.9	–2.5	–1.3	–4.0	–2.8	–2.3	–2.5	–2.6	–5.2	–8.1	–4.6
Senegal	–4.9	–4.1	–4.3	–3.9	–3.7	–3.3	–3.0	–3.6	–3.9	–5.6	–3.3
Somalia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Sudan	–2.3	–7.4	–5.8	–4.7	–3.8	–4.5	–6.5	–7.9	–10.8	–16.9	–20.6
Tajikistan	–2.1	0.6	–0.9	–0.1	–2.0	–9.0	–6.0	–2.8	–2.1	–6.4	–3.0
Tanzania	–3.5	–4.1	–3.8	–2.9	–3.2	–2.1	–1.2	–1.9	–2.9	–3.8	–4.4
Timor-Leste	–25.1	–39.1	–14.4	–37.5	–33.1	–54.9	–33.4	–28.0	–32.1	–27.5	–38.9
Uganda	–2.3	–2.6	–3.5	–4.0	–3.9	–4.1	–3.2	–3.8	–6.7	–6.8	–6.6
Uzbekistan	5.7	6.4	2.5	2.2	0.0	1.0	1.6	2.1	0.0	–3.3	–1.3
Vietnam	–0.9	–5.5	–6.0	–5.0	–5.2	–3.1	–2.0	–3.5	–3.3	–5.2	–4.1
Yemen	–4.5	–6.3	–6.9	–4.1	–10.0	–9.2	–5.3	–6.7	–3.8	–8.0	–8.1
Zambia	–1.8	–2.8	–6.2	–5.8	–9.5	–6.1	–7.7	–8.2	–7.6	. . .	. . .
Zimbabwe	–2.2	0.8	–0.6	–0.4	–1.4	–6.2	–8.1	–4.5	–2.6	–4.9	–1.5
Average	–1.2	–2.0	–3.3	–3.2	–3.8	–3.7	–3.6	–3.8	–4.1	–5.7	–4.9
Oil Producers	0.2	–0.3	–2.8	–2.7	–4.0	–4.7	–5.1	–3.9	–4.3	–6.1	–5.3
Asia	–2.2	–4.0	–4.3	–3.7	–4.2	–3.3	–2.7	–3.9	–4.1	–5.6	–4.9
Latin America	–2.0	–2.8	–4.6	–3.2	–1.3	–0.7	–0.6	–1.2	–0.5	–2.1	–2.1
Sub-Saharan Africa	–0.9	–1.2	–3.0	–3.2	–3.8	–4.3	–4.5	–4.0	–4.3	–5.6	–4.8
Others	–0.2	–1.3	–2.5	–1.6	–3.3	–2.9	–2.7	–2.8	–3.4	–7.4	–6.3

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 A18. Low-Income Developing Countries: General Government Primary Balance, 2011–21

(Percent of GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Bangladesh	–1.9	–1.1	–1.4	–1.0	–1.9	–1.5	–1.6	–2.8	–3.2	–4.3	–3.7
Benin	–0.7	0.2	–1.0	–1.4	–5.0	–3.4	–2.8	–1.4	1.1	–1.0	0.0
Burkina Faso	–1.5	–2.1	–3.0	–1.1	–1.5	–2.2	–6.0	–3.3	–1.7	–3.7	–2.1
Cambodia	–4.4	–4.2	–2.3	–1.3	–0.3	0.1	–0.5	1.1	0.8	–1.5	–1.4
Cameroon	–2.0	–1.1	–3.3	–3.9	–4.0	–5.3	–4.0	–1.6	–1.5	–3.5	–2.6
Chad	3.0	0.9	–1.5	–3.6	–2.7	0.1	1.3	3.0	0.8	0.6	–1.3
Congo, Democratic Republic of the	–0.3	2.3	2.4	0.3	–0.1	–0.2	1.6	0.4	–1.7	–0.6	0.2
Congo, Republic of	17.1	9.4	–3.4	–13.4	–23.9	–17.8	–5.3	8.8	8.5	7.6	7.7
Côte d'Ivoire	–1.6	–1.0	–0.6	–0.7	–0.9	–1.7	–2.1	–1.6	–0.8	–3.3	–1.0
Ethiopia	–1.2	–0.9	–1.6	–2.2	–1.5	–1.9	–2.8	–2.5	–2.0	–2.5	–2.8
Ghana	–3.5	–5.8	–5.6	–3.4	1.0	–1.5	1.2	–1.4	–1.7	–4.6	–0.4
Guinea	0.5	–1.2	–3.0	–2.2	–6.1	0.9	–1.1	–0.3	0.0	–3.6	–3.2
Haiti	–2.1	–4.4	–6.7	–5.9	–2.3	0.3	0.5	–1.4	–1.9	–4.8	–2.6
Honduras	–3.2	–3.6	–5.6	–2.6	0.0	0.2	0.2	0.8	0.8	0.6	0.5
Kenya	–2.2	–2.9	–3.3	–4.8	–5.3	–5.3	–4.5	–3.7	–4.0	–3.8	–2.9
Kyrgyz Republic	–3.7	–4.9	–2.9	–2.3	–1.7	–4.9	–2.9	0.4	0.8	–8.3	–5.1
Lao P.D.R.	–0.9	–1.7	–3.2	–2.4	–4.8	–4.2	–4.6	–3.5	–3.4	–3.6	–2.9
Madagascar	–1.3	–1.6	–2.8	–1.5	–2.2	–0.4	–1.4	–0.6	–0.7	–3.2	–4.1
Mali	–2.8	–0.4	–1.9	–2.3	–1.2	–3.3	–2.0	–3.9	–0.7	–4.7	–2.1
Moldova	–1.4	–1.3	–1.1	–1.1	–1.2	–0.6	0.3	–0.3	–0.7	–4.6	–2.4
Mozambique	–3.6	–2.7	–1.8	–9.2	–5.5	–3.0	0.0	–2.4	3.2	–4.2	–2.9
Myanmar	–3.1	–1.3	–0.4	–0.1	–1.6	–2.6	–1.4	–1.1	–1.9	–2.9	–2.8
Nepal	0.0	–0.5	2.6	2.1	1.1	1.7	–2.8	–6.2	–4.0	–5.4	–4.3
Nicaragua	0.4	0.5	–0.4	–0.9	–1.0	–1.1	–0.7	–2.1	0.9	–3.1	–3.9
Niger	–0.8	–0.6	–1.7	–5.8	–6.3	–3.8	–3.4	–2.1	–2.6	–3.1	–2.1
Nigeria	1.2	1.2	–1.3	–1.2	–2.0	–2.7	–4.0	–2.6	–3.3	–4.4	–4.0
Papua New Guinea	3.2	–0.2	–5.8	–4.6	–2.9	–2.8	–0.4	–0.2	–1.7	–2.4	–1.6
Rwanda	–0.5	–2.0	–0.4	–3.2	–1.9	–1.3	–1.5	–1.4	–3.9	–6.4	–3.1
Senegal	–3.7	–3.0	–3.1	–2.6	–2.2	–1.6	–1.1	–1.7	–1.9	–3.5	–1.2
Somalia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Sudan	–1.3	–6.2	–5.3	–3.9	–3.1	–4.1	–6.0	–7.6	–10.6	–16.6	–20.5
Tajikistan	–1.6	1.1	0.1	0.4	–1.5	–8.3	–5.5	–1.7	–1.2	–5.2	–2.2
Tanzania	–2.8	–3.1	–2.6	–1.6	–1.7	–0.6	0.4	–0.2	–1.1	–1.9	–2.4
Timor-Leste	–25.1	–39.1	–14.4	–37.5	–33.1	–54.9	–33.4	–27.9	–31.9	–26.9	–38.0
Uganda	–1.5	–1.5	–2.3	–2.7	–2.5	–2.0	–1.2	–1.9	–4.2	–4.3	–4.0
Uzbekistan	5.7	6.3	2.4	2.1	–0.2	0.9	1.4	1.7	–0.1	–3.5	–1.3
Vietnam	–0.1	–4.5	–4.8	–3.7	–3.6	–1.5	–0.4	–1.9	–1.7	–3.7	–2.4
Yemen	–0.2	–0.9	–1.5	1.5	–3.0	–3.3	–5.1	–6.6	–3.6	–7.7	–6.2
Zambia	–0.8	–1.5	–4.7	–3.6	–6.7	–2.7	–3.7	–3.6	–1.6	…	…
Zimbabwe	–1.9	1.0	0.0	0.3	–0.5	–5.6	–7.3	–3.6	–2.1	–4.3	–0.6
Average	–0.2	–0.9	–2.1	–1.9	–2.4	–2.2	–2.1	–2.1	–2.3	–3.8	–3.0
Oil Producers	1.2	0.9	–1.6	–1.5	–2.5	–3.2	–3.8	–2.4	–2.8	–4.2	–3.5
Asia	–1.1	–2.7	–2.9	–2.2	–2.6	–1.7	–1.2	–2.3	–2.4	–3.9	–3.0
Latin America	–2.0	–2.6	–4.3	–2.8	–0.8	–0.2	0.0	–0.5	0.3	–1.4	–1.2
Sub-Saharan Africa	0.0	–0.2	–1.9	–2.0	–2.4	–2.7	–2.8	–2.0	–2.3	–3.5	–2.7
Others	1.1	0.2	–1.1	–0.2	–1.7	–1.8	–2.5	–2.7	–3.2	–7.1	–5.8

Source: IMF staff estimates and projections. Projections are based on staff assessment 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, 2011–21

(Percent of GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Bangladesh	10.4	11.2	11.2	10.9	9.8	10.1	10.2	9.7	9.9	9.5	9.9
Benin	13.7	14.0	13.5	12.6	12.6	11.1	13.6	13.6	14.2	13.9	14.5
Burkina Faso	18.4	19.9	21.7	19.2	18.3	18.6	19.2	19.4	20.9	19.5	20.9
Cambodia	15.9	17.2	18.7	20.1	19.6	20.8	21.6	23.9	24.3	23.2	22.9
Cameroon	16.3	16.3	16.3	16.6	16.5	14.8	15.0	16.1	16.3	13.9	14.5
Chad	24.8	24.4	20.7	17.8	14.0	12.4	14.6	15.3	14.2	17.4	15.6
Congo, Democratic Republic of the	13.0	15.5	14.6	18.5	16.8	14.0	11.7	11.1	10.9	11.2	13.4
Congo, Republic of	46.4	49.1	50.6	48.1	32.6	34.1	27.9	29.2	31.6	29.5	30.3
Côte d'Ivoire	10.3	13.9	14.2	13.6	14.5	14.7	15.1	14.9	15.0	14.4	15.0
Ethiopia	16.6	15.5	15.8	14.9	15.4	15.9	14.7	13.1	12.8	13.2	13.5
Ghana	14.1	13.7	12.5	13.4	14.9	13.4	13.9	14.5	13.8	13.1	14.7
Guinea	15.1	17.5	14.8	17.0	14.8	16.0	15.3	14.5	14.1	14.7	15.7
Haiti	22.0	23.8	20.9	19.0	19.2	18.7	17.7	17.3	12.1	12.8	15.4
Honduras	23.0	22.9	23.8	24.7	25.2	27.0	26.5	26.4	25.9	25.7	26.3
Kenya	19.5	19.1	19.7	19.8	19.1	19.2	18.3	18.2	18.1	17.9	17.5
Kyrgyz Republic	32.7	34.7	34.4	35.4	35.6	33.1	33.3	32.5	34.0	28.5	30.2
Lao P.D.R.	18.8	22.4	20.2	21.9	20.2	16.0	16.1	16.2	15.1	14.0	14.9
Madagascar	10.0	9.3	9.3	10.6	10.2	12.4	12.8	12.9	13.9	12.4	12.5
Mali	17.1	14.6	17.4	17.1	19.1	18.3	20.1	15.7	21.4	20.9	20.7
Moldova	30.5	31.7	30.9	31.8	30.0	28.6	29.8	30.5	30.0	29.0	30.5
Mozambique	25.0	25.2	29.6	30.4	26.0	23.9	27.1	26.0	30.4	28.5	29.9
Myanmar	9.5	15.5	20.8	22.5	21.4	19.6	18.3	18.8	18.0	17.6	17.5
Nepal	17.8	18.0	19.6	20.4	20.8	23.3	24.1	25.3	26.0	25.3	26.1
Nicaragua	23.5	23.9	23.5	23.3	23.9	25.1	25.5	24.3	27.1	25.1	24.8
Niger	13.2	15.9	18.6	17.5	17.5	15.0	15.4	18.1	18.0	19.0	18.4
Nigeria	17.7	14.7	11.5	10.9	7.9	6.0	6.6	8.5	7.9	5.1	5.3
Papua New Guinea	21.9	21.2	20.7	20.8	18.3	16.1	15.9	17.8	15.4	14.7	15.1
Rwanda	24.7	22.9	25.5	24.2	24.6	23.5	22.9	24.1	23.6	21.4	23.6
Senegal	18.2	18.6	17.7	19.2	19.3	20.7	19.5	18.8	20.2	19.3	19.5
Somalia	. . .	. . .	2.8	3.7	3.5	4.1	6.0	5.7	6.8	9.9	11.5
Sudan	15.9	9.1	9.6	8.8	8.4	7.0	7.2	8.9	7.8	6.9	5.9
Tajikistan	24.9	25.1	26.9	28.4	29.9	29.9	29.7	29.1	27.4	26.3	26.6
Tanzania	15.4	15.4	15.0	14.4	14.0	14.8	15.4	14.6	13.7	14.0	14.2
Timor-Leste	106.6	91.6	81.8	73.5	64.6	56.2	52.7	58.2	56.4	45.1	45.1
Uganda	12.7	11.8	11.1	11.6	12.9	12.6	12.8	13.6	15.1	15.5	16.0
Uzbekistan	30.6	31.6	29.1	28.3	25.6	25.4	24.7	27.8	28.2	25.8	26.1
Vietnam	20.3	18.0	18.5	17.7	19.2	19.1	19.6	19.5	19.0	18.1	18.5
Yemen	25.3	29.9	23.9	23.6	12.3	8.5	3.8	5.5	6.5	5.0	9.1
Zambia	17.7	18.7	17.6	18.9	18.8	18.2	17.5	18.9	19.4	. . .	. . .
Zimbabwe	21.1	21.2	20.3	20.0	19.1	17.1	14.4	13.2	13.7	12.7	12.4
Average	17.9	17.2	16.2	15.9	14.6	14.2	14.4	14.9	14.7	13.6	14.0
Oil Producers	18.7	16.8	13.9	13.3	9.9	8.3	8.8	10.5	9.9	7.4	7.8
Asia	15.9	16.1	16.9	16.7	16.4	16.0	16.1	16.1	15.9	15.1	15.5
Latin America	22.9	23.4	23.1	23.1	23.6	24.9	24.5	23.9	23.7	23.1	23.9
Sub-Saharan Africa	17.4	16.1	14.4	14.2	12.5	11.9	12.4	13.1	12.8	11.5	11.8
Others	24.0	24.7	22.3	21.7	18.1	17.6	16.8	18.7	19.3	18.8	20.2

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 A20. Low-Income Developing Countries: General Government Expenditure, 2011–21
(Percent of GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Bangladesh	14.0	14.2	14.6	14.0	13.8	13.4	13.6	14.3	15.1	15.9	15.9
Benin	14.7	14.2	14.9	14.2	18.2	15.4	17.8	16.6	14.7	16.8	16.6
Burkina Faso	20.4	22.7	25.3	20.9	20.4	21.6	26.1	23.8	23.9	24.5	24.4
Cambodia	20.6	21.7	21.4	21.7	20.3	21.1	22.4	23.1	23.9	25.0	24.7
Cameroon	18.6	17.8	20.0	20.9	20.9	20.9	19.8	18.5	18.7	18.4	18.2
Chad	22.4	23.9	22.8	22.0	18.3	14.4	14.9	13.3	14.4	17.9	17.9
Congo, Democratic Republic of the	14.0	13.7	12.7	18.5	17.2	14.5	10.4	11.1	12.9	12.3	13.7
Congo, Republic of	29.5	39.7	54.3	61.7	57.4	54.5	35.2	22.5	25.8	23.8	24.1
Côte d'Ivoire	13.2	16.1	15.9	15.2	16.5	17.7	18.4	17.8	17.3	19.7	17.5
Ethiopia	18.2	16.6	17.8	17.5	17.3	18.2	18.0	16.1	15.3	16.2	16.9
Ghana	19.6	22.1	21.7	21.4	18.9	20.3	18.0	21.5	21.2	23.0	20.1
Guinea	16.0	20.0	18.6	20.2	21.7	16.1	17.3	15.6	14.6	18.9	19.8
Haiti	24.5	28.6	28.0	25.2	21.7	18.7	17.5	19.0	14.5	17.9	18.4
Honduras	25.9	26.4	29.6	27.6	26.0	27.4	26.9	26.2	25.8	25.8	26.8
Kenya	23.6	24.2	25.4	27.2	27.2	27.7	26.1	25.6	25.9	25.6	24.4
Kyrgyz Republic	37.4	40.6	38.1	38.5	38.1	38.9	37.0	33.1	34.2	38.1	36.6
Lao P.D.R.	20.2	24.7	24.2	25.0	25.8	21.1	21.6	20.9	20.3	20.3	20.4
Madagascar	12.0	11.5	12.7	12.6	13.0	13.5	14.9	14.3	15.3	16.4	17.3
Mali	20.6	15.5	19.8	20.0	20.9	22.2	22.9	20.4	23.1	26.7	24.0
Moldova	32.6	33.7	32.4	33.4	31.9	30.3	30.6	31.6	31.5	34.5	33.8
Mozambique	29.4	28.8	32.2	40.7	32.7	29.4	30.0	32.9	30.6	36.3	35.9
Myanmar	13.9	18.1	22.6	23.8	24.2	23.4	21.0	21.8	21.5	22.2	22.2
Nepal	18.6	19.3	17.8	18.8	20.1	21.9	27.2	31.9	30.6	31.2	31.1
Nicaragua	23.5	24.1	24.2	24.6	25.3	26.8	27.0	27.5	27.5	29.5	30.0
Niger	14.3	16.7	20.5	23.7	24.3	19.5	19.5	21.1	21.5	23.2	21.7
Nigeria	17.4	14.5	13.8	13.1	11.1	10.0	12.0	12.8	12.8	11.5	11.2
Papua New Guinea	19.7	22.4	27.6	27.1	22.9	20.9	18.4	20.4	19.5	19.6	19.0
Rwanda	25.6	25.3	26.8	28.3	27.4	25.8	25.4	26.7	28.8	29.5	28.3
Senegal	23.1	22.8	22.0	23.1	23.0	24.0	22.5	22.4	24.1	25.0	22.8
Somalia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Sudan	18.2	16.5	15.3	13.5	12.2	11.6	13.7	16.7	18.7	23.8	26.5
Tajikistan	27.0	24.5	27.8	28.5	31.9	38.9	35.6	31.9	29.5	32.7	29.6
Tanzania	18.9	19.5	18.8	17.3	17.2	16.9	16.6	16.6	16.6	17.8	18.6
Timor-Leste	131.7	130.7	96.1	111.0	97.7	111.1	86.1	86.2	88.5	72.6	84.0
Uganda	15.0	14.4	14.6	15.6	16.8	16.7	16.0	17.4	21.9	22.3	22.6
Uzbekistan	24.9	25.2	26.6	26.1	25.6	24.3	23.1	25.6	28.2	29.2	27.5
Vietnam	21.2	23.5	24.5	22.8	24.4	22.2	21.5	22.9	22.3	23.3	22.6
Yemen	29.8	36.2	30.8	27.8	22.3	17.7	9.1	12.1	10.3	12.9	17.2
Zambia	19.5	21.5	23.8	24.7	28.3	24.3	25.2	27.2	27.0	. . .	. . .
Zimbabwe	23.2	20.4	20.9	20.4	20.5	23.4	22.5	17.7	16.3	17.6	13.9
Average	19.2	19.2	19.5	19.1	18.4	17.9	18.1	18.7	18.7	19.3	18.9
Oil Producers	18.5	17.1	16.7	16.0	13.8	13.1	13.9	14.4	14.2	13.5	13.1
Asia	18.1	20.1	21.2	20.4	20.6	19.3	18.9	20.0	20.0	20.7	20.4
Latin America	24.9	26.2	27.7	26.2	24.9	25.6	25.2	25.1	24.2	25.3	26.0
Sub-Saharan Africa	18.4	17.3	17.5	17.4	16.3	16.2	16.9	17.0	17.1	17.2	16.6
Others	24.2	26.0	25.1	23.6	21.7	20.9	19.8	22.0	23.2	26.5	26.8

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, 2011–21
(Percent of GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Bangladesh	36.6	36.2	35.8	35.3	33.7	33.3	33.4	34.6	35.7	38.9	40.1
Benin	21.9	19.5	18.5	22.3	30.9	35.9	39.6	41.0	39.4	39.8	38.8
Burkina Faso	24.5	25.2	25.9	26.6	31.4	33.3	33.5	37.7	40.0	43.0	43.3
Cambodia	29.7	31.5	31.7	31.9	31.2	29.1	30.0	28.6	28.5	31.3	31.7
Cameroon	15.7	15.4	18.2	21.5	32.0	33.3	37.7	39.5	40.9	45.2	45.9
Chad	30.6	28.8	30.6	39.5	43.9	51.5	49.8	48.4	44.2	47.2	46.5
Congo, Democratic Republic of the	25.0	21.8	19.1	16.8	17.0	21.7	19.1	15.3	14.7	15.7	13.2
Congo, Republic of	36.3	39.1	43.5	53.8	103.1	118.8	117.7	90.3	95.3	120.0	106.9
Côte d'Ivoire	50.0	32.6	31.4	32.4	34.2	35.6	36.9	39.7	37.8	42.1	40.7
Ethiopia	45.3	42.2	47.5	47.6	54.5	55.8	57.7	61.1	57.6	56.9	57.6
Ghana	31.4	35.6	43.2	51.2	55.1	57.3	57.2	59.1	63.2	67.6	65.5
Guinea	58.1	27.2	34.0	35.1	41.9	42.5	40.5	38.0	34.5	43.8	45.3
Haiti	23.7	27.6	31.0	35.5	38.5	40.3	38.0	39.7	47.7	47.8	45.4
Honduras	24.6	29.2	39.4	37.1	37.1	38.2	38.9	40.1	40.6	43.1	42.3
Kenya	43.0	43.9	44.0	48.6	51.4	54.5	55.2	60.1	60.8	64.5	66.8
Kyrgyz Republic	50.1	50.5	47.1	53.6	67.1	59.1	58.8	54.8	54.1	69.2	68.2
Lao P.D.R.	43.0	46.1	49.5	53.5	53.1	54.2	55.8	57.4	60.6	69.0	68.8
Madagascar	29.9	30.4	36.2	37.8	44.1	40.3	40.0	39.9	38.4	41.0	41.3
Mali	24.0	25.4	26.4	26.9	30.7	36.0	36.0	37.7	40.5	44.7	45.3
Moldova	24.2	25.9	24.9	30.3	37.8	35.6	31.8	29.7	27.3	32.6	33.3
Mozambique	34.7	37.4	50.1	64.3	87.4	119.9	102.4	107.2	109.0	125.4	124.9
Myanmar	47.7	46.0	43.1	32.9	35.8	37.8	38.3	36.3	38.2	38.9	38.0
Nepal	31.7	34.3	32.2	28.2	25.6	27.9	26.1	30.2	30.1	36.3	38.8
Nicaragua	28.8	27.9	28.8	28.7	28.9	30.9	34.1	37.4	41.4	46.5	50.6
Niger	14.8	18.2	19.6	22.1	29.9	33.0	39.6	39.0	42.0	47.1	45.8
Nigeria[1]	17.6	17.7	18.6	17.5	20.3	23.4	25.3	27.2	29.4	35.3	37.0
Papua New Guinea	16.3	19.1	24.9	26.9	29.9	33.7	32.5	36.8	38.4	43.2	44.2
Rwanda	15.7	15.8	19.8	20.4	27.2	29.3	32.3	34.8	38.6	55.1	57.1
Senegal[2]	32.7	34.2	36.8	42.4	44.5	47.5	61.1	62.1	64.2	67.4	67.6
Somalia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Sudan	78.1	117.7	105.8	84.4	92.2	127.9	159.6	185.6	200.3	295.2	304.6
Tajikistan	35.3	32.3	29.1	27.7	34.7	42.1	50.4	47.9	44.6	51.8	51.3
Tanzania	27.8	29.2	31.4	34.6	37.1	37.0	37.7	38.6	38.1	40.0	41.8
Timor-Leste	0.0	0.0	0.5	1.5	2.8	4.6	6.6	9.3	14.4	15.4	21.7
Uganda	20.5	21.4	24.3	26.4	29.0	31.4	33.7	35.6	40.0	46.3	50.7
Uzbekistan	6.8	7.2	6.6	6.4	7.1	8.6	20.2	20.4	29.3	36.9	36.8
Vietnam	35.8	38.3	41.4	43.6	46.1	47.6	46.3	44.2	42.9	45.7	45.5
Yemen	45.7	47.3	48.2	48.7	65.5	79.6	84.3	63.5	56.8	68.8	64.0
Zambia	20.8	25.4	27.1	36.1	62.3	61.6	63.1	75.0	85.7	. . .	. . .
Zimbabwe	41.4	37.2	38.6	40.3	41.8	54.2	52.9	37.3	11.0	3.2	2.6
Average	30.4	31.1	32.2	32.2	36.4	40.2	42.3	42.6	43.0	47.4	47.7
Oil Producers	21.7	20.8	21.9	21.5	25.9	29.7	31.9	32.8	33.7	39.4	40.0
Asia	36.4	37.5	38.6	38.2	38.9	39.8	39.2	38.9	39.1	42.1	42.6
Latin America	25.6	28.5	34.5	34.3	34.9	36.3	37.3	39.2	42.1	44.8	44.9
Sub-Saharan Africa	24.9	24.6	26.4	27.4	32.5	37.0	39.4	41.0	41.5	46.1	46.6
Others	44.2	50.9	47.0	41.9	48.7	59.1	76.3	75.1	75.1	92.5	89.8

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] Debt includes overdrafts from the Central Bank of Nigeria and liabilities of the Asset Management Corporation of Nigeria.

[2] From 2017 onwards Senegal data includes the whole of the public sector, while up until 2016 only central government debt stock was taken into account.

Table A22. Low-Income Developing Countries: General Government Net Debt, 2011–21
(Percent of GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Bangladesh	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Benin	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Burkina Faso	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Cambodia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Cameroon	12.6	13.1	15.9	19.9	27.8	31.6	34.4	37.0	38.6	42.7	43.6
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	53.8	55.0
Ghana	28.6	34.0	40.2	46.3	50.9	52.2	52.0	57.8	58.4	63.2	61.6
Guinea	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Haiti	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Honduras	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Kenya	39.1	40.1	40.1	44.4	46.3	49.1	49.4	54.4	56.7	61.1	62.4
Kyrgyz Republic	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Lao P.D.R.	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Madagascar	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Mali	17.5	21.3	20.2	19.7	23.1	30.0	31.1	34.3	34.4	33.5	32.0
Moldova	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Mozambique	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Myanmar	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Nepal	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Nicaragua	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Niger	12.1	14.5	15.4	17.2	25.9	29.7	35.5	36.1	38.2	43.3	42.4
Nigeria[1]	12.6	10.8	11.7	13.8	15.9	19.0	20.9	23.0	25.7	31.8	33.9
Papua New Guinea	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Rwanda	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Senegal	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Somalia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Sudan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Tajikistan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Tanzania	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Timor-Leste	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Uganda	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Uzbekistan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Vietnam	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Yemen	42.3	45.3	46.7	47.8	64.5	78.5	83.3	62.8	56.2	68.3	63.6
Zambia	16.4	20.1	25.2	31.8	56.1	51.3	55.9	66.4	75.2	97.3	99.7
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 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, 2020–21 (percent)	Precrisis Overall Balance, 2000–07	Projected Overall Balance, 2020–21	Nonresident Holding of General Government Debt, 2019 (percent of total)[5]
Australia	0.7	22.6	1.2	43.3	12.7	7.5	7.9	3.2	1.1	–8.5	40.4
Austria	0.6	16.6	0.9	38.5	13.8	10.4	8.1	2.4	–2.2	–4.3	79.1
Belgium	0.5	18.9	1.7	66.6	21.1	10.0	11.5	2.3	–0.6	–7.5	68.6
Canada	0.9	18.4	1.2	42.3	22.4	5.4	20.2	5.8	1.1	–7.8	22.9
Cyprus	0.7	21.4	. . .	. . .	8.1	7.1	14.1	1.3	–2.3	0.1	79.3
Czech Republic	0.1	21.0	0.6	21.3	8.2	6.1	6.1	0.1	–3.8	–3.2	42.2
Denmark	–0.9	–31.9	1.3	40.8	10.7	8.0	4.9	1.8	2.5	–3.6	34.7
Estonia	–0.7	–19.1	0.4	18.7	. . .	0.4	45.6	–1.7	1.4	–5.7	84.4
Finland	1.1	14.1	1.2	38.6	15.9	6.3	11.0	1.5	4.0	–5.3	67.9
France	0.4	–0.3	1.2	43.9	19.7	7.8	14.8	2.4	–2.7	–7.7	58.7
Germany	1.2	35.1	0.7	31.9	11.0	5.9	11.6	0.9	–2.5	–3.4	54.3
Hong Kong SAR	1.5	51.2	. . .	. . .	. . .	. . .	. . .	–0.8	0.0	–3.5	. . .
Iceland	1.5	50.1	1.4	52.0	11.2	12.8	3.2	5.8	1.1	–5.4	28.6
Ireland	0.7	27.5	0.6	24.0	13.1	10.8	5.9	1.7	1.4	–3.0	65.4
Israel	0.3	16.2	0.3	12.2	. . .	6.4	12.0	4.6	–3.2	–8.0	14.0
Italy[6]	1.7	50.6	0.8	31.9	28.3	6.8	22.9	4.5	–3.0	–5.9	34.6
Japan	–1.3	–12.9	1.9	60.9	45.6	8.2	30.9	1.4	–6.0	–4.6	12.2
Korea	1.8	72.3	2.1	78.2	4.3	7.9	5.8	0.1	1.9	–1.7	13.6
Latvia	–0.8	–22.2	0.4	17.0	. . .	9.7	4.6	1.7	–1.3	–4.4	85.2
Lithuania	0.1	0.7	0.9	31.9	12.7	7.2	7.2	0.4	–1.8	–5.1	86.4
Luxembourg	1.2	47.3	0.7	31.4	. . .	5.0	4.6	–0.8	2.4	–1.3	39.4
Malta	–0.7	–9.9	. . .	. . .	13.3	8.2	6.2	–0.7	–4.9	–3.8	15.9
The Netherlands	0.5	17.8	1.8	64.7	12.3	7.5	7.7	3.5	–0.8	–4.2	46.6
New Zealand	1.5	44.4	1.7	60.6	8.0	7.6	5.3	3.6	3.2	–4.3	55.1
Norway	0.7	19.3	2.0	71.0	. . .	4.7	8.4	3.4	13.1	2.2	40.2
Portugal	0.8	19.7	1.1	41.1	18.6	6.4	21.2	3.6	–4.5	–4.5	57.6
Singapore[7]	1.0	36.4	. . .	. . .	18.3	4.0	28.3		2.8	–0.8	. . .
Slovak Republic	–0.7	–12.3	0.5	19.6	9.2	8.6	6.6	1.6	–5.3	–4.3	65.2
Slovenia	1.1	55.4	0.8	31.2	11.0	8.8	8.3	2.4	–2.2	–4.4	69.1
Spain	0.3	26.1	1.1	44.6	23.0	7.5	15.1	4.5	0.4	–8.1	57.0
Sweden	–0.6	–22.9	0.5	19.4	9.4	4.9	8.6	1.4	1.2	–3.5	31.6
Switzerland	0.3	13.9	2.2	79.9	6.7	11.1	4.2	1.9	–0.3	–3.5	10.3
United Kingdom	0.3	11.1	1.3	49.1	17.8	14.8	6.5	2.2	–1.9	–6.9	36.1
United States	1.1	29.4	5.0	164.7	38.5	5.8	22.7	1.8	–3.1	–12.0	29.4
Average	0.7	22.2	2.9	97.8	28.7	7.1	18.5	2.1	–2.2	–8.1	34.9
G7	0.7	21.6	3.3	110.2	32.7	7.0	20.9	2.0	–3.1	–9.1	32.7
G20 Advanced	0.8	23.6	3.2	106.9	30.9	7.0	19.9	2.0	–2.8	–8.8	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 European Union 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 to the previous vintages of the pension update due to new baseline pension numbers from the sources of World Bank and International Labour Organization (ILO), as well as new labor force participation rate numbers from the ILO. These two changes not only affect countries without country authority projections but also those with such projections (excluding EU countries covered by the 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, 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 third quarter of 2019 or latest available from the Joint External Debt Hub (JEDH), Quarterly External Debt Statistics, which include marketable and nonmarketable debt. For some economies, tradable instruments in the JEDH 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] 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, 2020–21 (percent)	Precrisis Overall Balance, 2000–07	Projected Overall Balance, 2020–21	Nonresident Holding of General Government Debt, 2019 (percent of total)[5]
Algeria	3.2	129.6	0.7	28.3	. . .	. . .	. . .	1.1	7.4	–12.5	1.8
Angola	0.0	1.9	0.1	4.3	. . .	10.3	12.9	–8.2	2.5	–4.2	. . .
Argentina	. . .	. . .	. . .	. . .	. . .	10.6	. . .	. . .	0.0	. . .	43.2
Azerbaijan	4.0	125.6	0.2	7.0	. . .	6.0	3.5	11.5	6.3	–11.2	. . .
Belarus	4.9	136.9	0.5	18.7	. . .	5.2	11.4	–0.1	–7.2	–3.8	62.6
Brazil[6]	4.2	172.7	0.8	29.5	18.5	6.3	15.6	4.4	–3.6	–7.7	10.9
Chile	–0.6	–12.3	0.9	34.8	7.4	10.2	3.2	0.0	2.4	–4.9	34.6
China	2.5	110.1	0.7	25.3	. . .	. . .	. . .	–5.3	–1.8	–10.4	. . .
Colombia	–0.1	–18.9	1.0	39.4	4.1	8.2	7.0	2.0	–1.9	–1.9	29.7
Croatia	–0.5	–33.0	0.9	32.0	15.5	4.7	18.1	4.1	–4.1	–4.5	36.0
Dominican Republic	0.2	8.1	0.4	15.2	7.0	8.6	7.0	0.5	–2.0	–3.6	48.4
Ecuador	0.7	31.1	0.7	25.7	12.9	5.9	10.7	8.1	1.2	–5.7	69.6
Egypt	1.0	41.8	0.2	8.4	35.0	3.4	26.1	1.7	–4.6	–7.1	23.2
Hungary	–0.8	–4.7	0.7	25.6	17.0	3.6	19.1	–0.5	–6.4	–2.3	36.0
India	0.8	33.4	0.2	8.8	11.0	9.6	7.8	–0.6	–8.6	–7.4	5.3
Indonesia	0.2	10.8	0.2	6.6	7.9	8.6	4.3	–1.4	–0.7	–4.5	57.1
Iran	1.7	99.2	. . .	. . .	. . .	. . .	. . .	–18.3	3.1	–8.8	. . .
Kazakhstan	2.1	61.3	0.2	9.4	. . .	7.4	3.1	1.7	4.7	–4.0	35.3
Kuwait	7.2	369.5	0.5	18.0	. . .	2.2	8.6	11.5	29.0	–12.7	. . .
Malaysia	1.9	76.5	0.4	13.7	10.8	7.7	8.2	–0.8	–3.8	–3.9	22.5
Mexico	0.5	17.7	0.5	18.6	11.6	8.0	7.6	5.9	–2.0	–3.2	29.7
Morocco	1.8	66.5	0.4	14.3	12.8	6.2	12.0	2.5	–3.3	–5.8	20.2
Oman	0.5	25.2	0.4	19.7	. . .	8.6	9.1	11.4	10.0	–15.9	. . .
Pakistan	0.2	10.6	0.1	2.9	51.2	2.5	34.8	–1.6	–2.9	–7.8	29.2
Peru	0.3	14.5	0.5	21.5	9.1	11.7	3.1	3.4	–0.4	–4.9	26.8
Philippines	0.2	10.2	0.2	6.4	8.3	7.7	5.6	–1.3	–2.4	–3.0	25.6
Poland	–0.1	–3.8	0.7	25.6	11.8	4.8	11.2	0.4	–4.1	–5.1	43.6
Qatar	1.0	51.8	0.5	21.2	. . .	9.4	6.1	10.7	9.0	3.3	. . .
Romania	–0.8	–5.9	0.6	23.3	12.7	6.5	6.8	0.9	–2.6	–7.9	48.4
Russia	3.1	87.8	0.5	18.2	6.1	6.5	2.8	6.8	4.2	–3.9	27.4
Saudi Arabia	1.9	86.7	0.5	22.9	. . .	9.0	3.8	10.8	6.9	–10.8	41.9
South Africa	0.3	13.2	0.5	20.0	22.5	12.7	6.1	5.6	–0.6	–13.0	32.4
Sri Lanka	0.7	28.9	0.3	9.8	22.0	5.5	16.9	1.2	–6.9	–8.9	48.1
Thailand	3.7	135.2	0.5	19.4	8.7	7.1	6.8	2.6	–0.4	–2.6	15.3
Turkey[7]	0.3	37.9	0.7	27.0	12.6	5.5	7.3	–0.6	–5.8	–7.1	39.5
Ukraine	0.8	43.8	0.5	18.0	17.6	8.3	8.0	2.4	–2.4	–6.7	55.6
United Arab Emirates	0.8	41.4	0.4	17.9	. . .	. . .	. . .	7.6	9.1	–9.1	. . .
Uruguay[8]	–0.2	1.4	0.8	32.8	18.8	12.4	5.8	–5.5	–1.8	–4.3	44.2
Venezuela	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	0.1	–5.0	. . .
Average	1.9	82.8	0.6	21.4	13.6	7.1	9.7	–2.2	–1.1	–8.3	17.5
G20 Emerging	2.1	90.8	0.6	21.9	12.7	7.1	9.2	–2.6	–1.9	–8.9	14.6

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 European Union 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 to the previous vintages of the pension update due to new baseline pension numbers from the sources of World Bank and International Labour Organization (ILO), as well as new labor force participation rate numbers from the ILO. These two changes not only affect countries without country authority projections but also those with such projections. 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 at 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 (JEDH), Quarterly External Debt Statistics, which include marketable and nonmarketable debt. For some countries, tradable instruments in the JEDH 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] Average-term-to-maturity for Turkey is in accordance with the published data for central government debt securities as of January 2020.

[8] Data are for the nonfinancial public sector (NFPS), which includes central government, local government, social security funds, nonfinancial public corporation, and Banco de Seguros del Estado. The coverage of the fiscal data was changed from consolidated public sector to NFPS 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, 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, 2020–21 (percent)	Precrisis Overall Balance, 2000–07	Projected Overall Balance, 2020–21	Nonresident Holding of General Government Debt, 2019 (percent of total)[4]
Bangladesh	0.2	12.7	0.1	3.6	4.9	7.9	–4.6	–2.8	–6.2	39.0
Benin	0.0	1.0	0.2	7.7	3.2	12.6	–0.2	–1.7	–2.5	69.4
Burkina Faso	0.0	2.9	0.2	9.1	1.3	33.4	–2.5	–1.6	–4.3	54.5
Cambodia	0.3	10.0	0.1	5.5	. . .	. . .	–2.0	–3.2	–1.8	94.9
Cameroon	0.0	2.5	0.1	3.3	5.6	8.1	–0.6	5.3	–4.0	65.6
Chad	0.0	0.0	0.1	3.9	. . .	. . .	1.1	–2.4	–1.3	. . .
Congo, Democratic Republic of the	. . .	. . .	0.1	2.3	. . .	. . .	–5.9	–0.6	–0.7	. . .
Congo, Republic of	0.2	11.0	0.1	5.4	. . .	. . .	13.3	4.8	5.9	. . .
Côte d'Ivoire	0.0	2.0	0.1	4.0	. . .	. . .	–1.9	–0.7	–3.9	. . .
Ethiopia	0.0	0.9	0.1	4.0	. . .	. . .	–16.1	–4.8	–3.2	. . .
Ghana	0.3	10.2	0.2	9.3	1.0	66.2	–3.4	–3.3	–7.7	. . .
Guinea	0.0	0.0	0.3	9.9	. . .	. . .	–10.0	–2.5	–4.2	. . .
Haiti	. . .	. . .	0.1	3.6	. . .	. . .	–15.9	–2.4	–4.1	. . .
Honduras	0.2	6.1	0.5	20.2	2.7	16.1	0.7	–2.0	–0.3	. . .
Kenya	0.4	24.3	0.2	6.2	6.9	9.3	–3.0	–1.4	–7.3	48.4
Kyrgyz Republic	4.8	141.9	0.3	9.8	. . .	. . .	–7.4	–4.8	–8.0	82.4
Lao P.D.R.	0.2	8.1	0.1	3.9	. . .	. . .	–4.2	–2.6	–5.9	. . .
Madagascar	0.2	11.2	0.1	5.3	. . .	. . .	–6.1	–3.2	–4.4	56.1
Mali	–0.1	–0.6	0.1	3.1	2.1	21.1	–1.7	1.3	–4.6	. . .
Moldova	5.6	172.3	0.7	25.2	5.1	6.3	–2.3	–0.4	–4.4	51.1
Mozambique	–0.1	–0.4	0.3	13.4	1.2	100.8	–5.7	–2.9	–6.9	. . .
Myanmar	0.3	12.4	. . .	. . .	. . .	. . .	–5.7	–4.1	–4.7	. . .
Nepal	0.2	14.8	0.1	5.1	. . .	. . .	–7.6	–1.0	–5.5	. . .
Nicaragua	0.9	43.9	0.6	22.5	2.3	20.1	2.1	1.4	–4.8	78.7
Niger	0.0	–1.0	0.1	4.6	. . .	. . .	–3.8	2.0	–3.8	. . .
Nigeria	0.0	1.1	0.1	2.2	5.0	7.1	–3.6	2.3	–6.1	. . .
Papua New Guinea	0.1	2.7	0.3	12.7	. . .	. . .	0.0	1.8	–4.4	36.0
Rwanda	0.1	3.0	0.2	9.4	3.4	16.3	–6.6	–0.5	–6.4	88.9
Senegal	0.0	2.4	0.2	6.2	11.3	5.9	–2.6	–0.9	–4.4	. . .
Somalia	. . .	. . .	. . .	. . .	. . .	. . .		. . .	. . .	. . .
Sudan	0.0	1.5	0.2	6.5	. . .	. . .	–43.5	–0.9	–18.8	. . .
Tajikistan	0.5	16.6	0.2	6.7	. . .	. . .	–6.0	–2.8	–4.7	76.0
Tanzania	0.2	11.6	0.1	4.5	6.0	6.6	–2.7	–1.8	–4.1	. . .
Timor-Leste	. . .	. . .	. . .	. . .	. . .	. . .	2.0	–2.8	–33.2	. . .
Uganda	0.0	3.7	0.1	3.9	3.7	12.5	–1.8	–0.8	–6.7	62.2
Uzbekistan	3.6	122.7	0.3	12.4	. . .	. . .	–14.3	–2.5	–2.3	. . .
Vietnam	2.2	86.2	0.3	10.5	8.0	5.7	–4.1	–1.4	–4.6	. . .
Yemen	0.2	9.2	0.1	5.2	. . .	. . .	–7.4	–0.7	–8.0	. . .
Zambia	0.1	5.3	0.2	7.9	4.2	26.4	. . .	–0.4	. . .	. . .
Zimbabwe	0.0	7.8	. . .	. . .	2.6	1.2	–31.1	. . .	–3.2	. . .
Average	0.7	26.3	0.2	5.9	1.9	2.7	–5.2	–0.2	–5.2	18.9

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. 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 to the previous vintages of the pension update due to new baseline pension numbers from the sources of World Bank and International Labour Organization (ILO), as well as new labor force participation rate numbers from the ILO. These two changes not only affect countries without country authority projections but also those with such projections. 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 at the advanced economy historic 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] 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 (JEDH), Quarterly External Debt Statistics, which include marketable and nonmarketable debt. For some countries, tradable instruments in the JEDH 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.

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IMF EXECUTIVE BOARD DISCUSSION OF THE OUTLOOK, APRIL 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 April 7, 2020.*

Executive Directors broadly shared the assessment of the global economic outlook, risks, and policy priorities. They agreed that the outlook is dominated by the global health crisis from the COVID-19 pandemic, and the extreme uncertainty about its course, intensity, and impact. The expected sharp contraction of the global economy in 2020 is likely much worse than during the 2008–09 global financial crisis (GFC), as a significant portion of the global economy has been shut down. Directors noted that the projected global recovery in 2021 is predicated on the pandemic fading in the second half of 2020 and the effectiveness of policy actions to contain its economic fallout.

Directors agreed that, amid the exceptionally large degree of uncertainty, risks of a worse outcome predominate. Some Directors indicated their interest in additional scenario analysis, including possibly more positive developments than assumed in the baseline projections. Directors observed that the economic fallout depends on factors that interact in ways that are hard to predict, including the pathway of the pandemic, the intensity and efficacy of the necessary containment efforts, the extent of supply disruptions, and the repercussions of the substantial tightening in global financial conditions. As a result, many countries face a multi-layered crisis comprising a health shock, domestic economic disruptions, plummeting external demand, and capital flow reversals. For many low-income developing countries, the challenges have been compounded by high and rising debt levels, capacity constraints, and a collapse in commodity prices.

Directors agreed that effective policies are urgently needed to forestall worse outcomes. The immediate priority is to reduce contagion and protect lives, especially by fully accommodating additional health care expenditures to strengthen the capacity and resources of the health sector. Economic and financial policies will need to focus on supporting vulnerable people and businesses, safeguarding the financial system, and reducing scarring effects from the unavoidable severe slowdown. Directors emphasized that these supporting measures should be scaled back gradually and flexibly as the pandemic fades. Once containment measures can be lifted, policy focus will have to shift to securing a robust recovery while ensuring debt overhangs do not weigh on activity over the medium term.

Directors acknowledged that the pandemic has elevated the need for fiscal policy action to an unprecedented level. They noted in particular the need for large timely, temporary, and targeted fiscal support lifelines to protect the most-affected people and viable firms, including government-funded paid sick and family leaves, cash or in-kind transfers, unemployment benefits, wage subsidies, tax relief, and deferral of tax payments. Good governance, including transparency in budget execution and communication, is crucial to manage fiscal risks and maintain public trust. Most Directors acknowledged that broad-based, coordinated fiscal stimulus will be more effective in boosting aggregate demand during the recovery phase, mindful of the need to preserve sound public finances and debt sustainability.

Directors welcomed the extraordinary actions taken by many central banks to ease monetary policy, provide ample liquidity to financial institutions and markets, including through enhanced U.S. dollar swap lines, and maintain the flow of credit to households and firms by setting up emergency facilities. They noted that authorities could consider extending these measures to a broader range of market segments. Some Directors also called for an extension of swap lines to provide foreign currency liquidity to a broader group of countries, and a few encouraged utilizing regional financing arrangements. Directors considered that, as banks generally have larger capital

and liquidity buffers now relative to the GFC, they should be encouraged to use the existing buffers to absorb losses and prudently re-negotiate loan terms for firms and individuals, using the flexibility within existing regulatory frameworks. Any regulatory relief would need to be reassessed once conditions permit.

Directors noted that the pandemic also triggered a record reversal of portfolio flows from emerging and frontier markets. They recommended, where feasible and appropriate, allowing exchange rates to act as a shock absorber, and intervening in foreign exchange markets as needed to reduce excessive volatility and ease liquidity constraints. Macroprudential measures, and in near-crisis situations, temporary capital flow management measures may be necessary as part of the policy package and should be phased out as global financial sentiment recovers. Sovereign debt managers should also develop contingency plans to deal with limited access to external financing.

Directors underscored that both the containment and recovery will also require strong multilateral cooperation to complement national policy efforts. Global cooperation is essential to address shared challenges, especially to channel aid and medical resources to countries with weak health systems, and help financially constrained countries facing twin health and funding shocks. Directors noted that multilateral cooperation is also necessary to ensure a strong global financial safety net and better access to international liquidity across countries. They stressed the critical role for the IMF in supporting its member countries, in collaboration with other international financial institutions. Directors welcomed the IMF's crisis response package, in particular the enhancement of the emergency financing toolkit, provision of debt service relief for the poorest members, and fund-raising for the Catastrophe, Containment and Relief Trust.

The IMF and COVID-19 crisis

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. Visit IMF.org/COVID19 to access the latest analysis and research from IMF staff in response to the pandemic.

IMF COVID-19 Hub

Latest news, blogs, Factsheets, Podcasts, and all the information on the IMF's response to the crisis IMF.org/COVID19

Policy Tracker

Learn more about key policy responses governments are taking to limit the human and economic impact of this global pandemic by country at IMF.org/COVID19policytracker

Emergency Financing

The IMF has secured $1 trillion in lending capacity, serving and responding fast to an unprecedented number of emergency financing requests from over 90 countries so far. This list includes emergency assistance by region approved by the IMF's Executive Board. IMF.org/COVID19lendingtracker

Special Series

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"A global crisis like no other needs a global response like no other."

—Kristalina Georgieva

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