INTERNATIONAL MONETARY FUND

FISCAL MONITOR

On the Path to Policy Normalization

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The following symbols have been used throughout this publication:

. . . to indicate that data are not available

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

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

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

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

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

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

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

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

FURTHER INFORMATION

Corrections and Revisions

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

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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 2023 *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 of the April 2023 *Fiscal Monitor*.

The *Fiscal Monitor* is prepared by the IMF Fiscal Affairs Department under the general guidance of Vitor Gaspar, Department Director. The project was directed by Paolo Mauro, Deputy Director; and Paulo Medas, Division Chief. The main authors of Chapter 1 in this issue are Francesca Caselli (team lead) and Gee Hee Hong (team co-lead), Enrico Di Gregorio, Gabriel Hegab, Salma Khalid, Andresa Helena Lagerborg, and Jiae Yoo, with contributions from David Amaglobeli, Mengfei Gu, Emine Hanedar, Samir Jahan, Delphine Prady and Céline Thévenot, and research support from Chenlu Zhang and Victoria Haver. The main authors of Chapter 2 are Marcos Poplawski-Ribeiro (team lead), Carlos Eduardo Gonçalves (team co-lead), Chadi Abdallah, Vybhavi Balasundharam, Yongquan Cao, Daniel Garcia-Macia, Andres Ghini, Ting Lan, Anh Dinh Minh Nguyen, Julieth Pico Mejía, and Alberto Tumino, with research support from Kardelen Cicek, Arika Kayastha, Zhonghao Wei, and Andrew Womer. The Methodological and Statistical Appendix was prepared by Chenlu Zhang under the guidance of Jiae Yoo. Meron Haile and Andre Vasquez provided excellent coordination and editorial support. Wala'a El Barasse from the Communications Department led the editorial team for the report, with production and editorial support from Rumit Pancholi, Nancy Morrison, Lucy Scott Morales, Michael Harrup, Linda Long, David Einhorn, Harold Medina (and team), and The Grauel Group.

Inputs, comments, and suggestions were received from other departments in the IMF, including area departments—namely, the African Department, Asia and Pacific Department, European Department, Middle East and Central Asia Department, and Western Hemisphere Department—as well as the Communications Department, Institute for Capacity Development, Legal Department, Monetary and Capital Markets Department, Research Department, Secretary's Department, Statistics Department, and Strategy, Policy, and Review Department. Chapter 2 of the *Fiscal Monitor* also benefited from comments by Olivier Blanchard, Devrim Demirel, Karen Dynan, Joe Gagnon, Patrick Honohan, Jim McHugh, Adam Posen, and participants of the Peterson Institute for International Economics (PIIE)-IMF Workshop on "Fiscal Policy and Inflation." Both projections and policy considerations are those of the IMF staff and should not be attributed to Executive Directors or to their national authorities.

FOREWORD

COVID-19 became a major pandemic and overwhelmed health systems around the world. Amid tremendous uncertainty, governments enacted lockdowns. These developments triggered the sharpest contraction in economic activity recorded in quarterly national accounts, and financial markets initially crashed down in a fear spiral. The pandemic and its repercussions shaped public finances in the last three years and will continue to have a bearing even as the pandemic recedes.

After providing extraordinary support in 2020–21, fiscal policy is returning to normal. In many countries, the reduction in public deficits started already in 2021, and additional countries joined the trend in 2022 with monetary and fiscal policy tightening in almost three-quarters of countries. During the pandemic, many countries suspended fiscal rules, activated escape clauses, or modified fiscal targets to allow for the extraordinary policy response. Now, most plan to revisit their fiscal rules and frameworks before re-enacting them.

For the world, public debt-to-GDP ratios fell sharply in 2021 and 2022, bringing them about halfway back from the increase of about 15 percentage points of GDP in 2020. However, going forward, debt ratios are projected to start going up again in 2023 and continue to increase by about 1¼ percentage points per year over the medium term through 2028. Taken together, the level of public debt is now more elevated and projected to grow faster than foreseen before the pandemic, at the same time that real interest rates are also rising.

Developments in the United States and China shape these global public debt trends. In the United States, public debt to GDP is projected to increase by almost 3 percentage points of GDP per year from 2024, about twice the pace projected before the pandemic. By 2028 the United States' public debt ratio is projected to exceed 135 percent of GDP, surpassing the pandemic peak. For China, the public debt to GDP ratio is projected to increase continuously to reach 105 percent in 2028. The annual increase in the debt ratio, projected for China, is even more substantial than for the United States (4.5 against 2.8 percentage points). Excluding the United States and China, public debt ratios worldwide would be declining—albeit slowly—from 2023 to 2028.

Another legacy of the pandemic was the rapidly rising prices, especially of food and energy, which increased early in the pandemic, and later accelerated with the Russian invasion of Ukraine. The surge in inflation in 2021 and 2022 helped reduce debt ratios. The inflation surprise contributed about 9.4 percentage points of GDP (about 1¼ times the observed decline). The *Fiscal Monitor* looks at the effects of inflation on public finances and household budgets. It documents that inflation surprises erode the value of government debt for bondholders. More generally, inflation surprises benefit net debtors and penalize net creditors. Across households, the wealth effects of inflation are strongly influenced by age, with young households (net borrowers) benefiting and old households (net lenders) suffering from an erosion of wealth. In addition, the distributive effects of inflation depend on consumption patterns and the composition of incomes.

Fiscal policy can and should support monetary policy in bringing inflation back to target in a timely manner. Stronger fiscal balances contribute to cooling off aggregate demand and, hence, moderate the required increase in policy rates. In addition, rebalancing public finances helps limit public finance risks, and a more balanced policy mix contributes to financial stability, reducing the risk of observing fiscal-financial feedback loops.

The *Fiscal Monitor* looks at the possibility of fiscal policy contributing to disinflation while protecting the vulnerable. The results of our Chapter 2 indicate that when monetary policy acts alone or fiscal policies are not adequately targeted, the poorest households bear the brunt of the costs of disinflation. Higher interest rates are less costly for wealthier families as they have financial buffers and benefit from asset income. Fiscal tightening with targeted transfers moderates interest rate increases and allows for smaller declines in total

private consumption (and no fall at all in the consumption of the poorest households).

Among the existential threats today's world faces, climate change stands out as one of the top threats. Under unchanged policies, emissions in this decade will likely increase and the path to limit temperature increases to 2° C above pre-industrial levels will be missed. In the end, collective global actions are urgently needed. One crucial argument comes from the fact that the countries that contribute least to global warming are the most vulnerable. Climate change is the topic of the forthcoming October 2023 *Fiscal Monitor*.

Vitor Gaspar
Director of the Fiscal Affairs Department

EXECUTIVE SUMMARY

Chapter 1: On the Path to Policy Normalization

Three years since the outbreak of the COVID-19 pandemic, fiscal policy is returning to normal. After providing extraordinary support simultaneously in 2020, both monetary and fiscal policy tightened in nearly three-quarters of countries in 2022 amid high inflation and the expiration of pandemic-related spending measures. This shift occurred in a highly volatile environment. Just as economies rebounded swiftly from a deep COVID-19-related recession with continued strains in fiscal space, governments were confronted with a cost-of-living crisis, *Russia*'s invasion of *Ukraine,* and instability in the financial sector.

Households and economies, supported by governments, have demonstrated resilience in the face of these challenges. The global economy has recovered swiftly. The economic and social fabric has thus far withstood disruptions to energy supply. But the multiple shocks have reversed gains in poverty reduction, likely pushing the global goal of eradicating extreme poverty by 2030 farther into the future. Lack of fiscal space amid high borrowing costs in developing countries has further stymied progress toward other Sustainable Development Goals—progress that was already slow prior to the pandemic. Food prices in domestic currencies remain high in several countries, owing in part to exchange rate depreciations. Beyond the near-term imperative to safeguard poorer households, long-standing challenges—including the climate agenda and population aging—have likewise become more pressing.

Public finances have undergone major swings, reflecting the unprecedented shocks and government actions. Following a historic surge in public debt to nearly 100 percent of GDP in 2020 as a result of economic contraction and massive government support, fiscal deficits have since declined, as exceptional measures have come to an end. With strong nominal GDP growth in 2021–22, global debt posted the steepest decline in 70 years and stood at about 92 percent of GDP at the end of 2022, still about 8 percentage points above the level at the end of 2019. Primary deficits are falling rapidly and moving closer to prepandemic levels in many countries, but overall deficits have fallen somewhat less owing to rising interest payments. These sizable reductions in debts and deficits stem in large part from atypical growth and inflation dynamics. In 2022, most countries experienced revenue surprises amounting to 3.1 percent of GDP on average for advanced economies and 2.5 percent for emerging market and developing economies, with particularly large revenue windfalls in oil exporters. Many countries saved part of the extra revenues, but many others increased spending to counter the cost-of-living crisis. In some cases, particularly countries with large initial debt stocks in domestic currency, debt ratios fell by more than 10 percentage points in a year as nominal GDP surged. However, debt dynamics deteriorated in emerging market economies and low-income developing countries with sizable shares of debt in foreign currency, as currency depreciation and rising interest rates came together with inflation.

The near-term fiscal outlook remains complex, and it is crucial that fiscal and monetary policies are closely aligned to deliver price and financial stability while responding to an uncertain economic environment and rapidly changing financial conditions. In 2023, overall fiscal deficits are expected to increase slightly to 5 percent of GDP on average, as governments face higher interest bills and pressures to increase public spending, including spending on wages and pensions, to catch up with past inflation. Risks are firmly to the downside (see the April 2023 *World Economic Outlook* and *Global Financial Stability Report*). Instability in the financial sector, if it intensifies, could also put pressure on public sector balance sheets as governments may be called to help.

A tighter fiscal policy—while providing targeted support to the most vulnerable—should complement efforts by the monetary authorities to bring inflation back to target, making it possible for central banks to increase interest rates by less than otherwise (see Chapter 2). Policies will need to be ready to adjust if risks materialize. If inflation proves to be stickier than expected, it will require tighter

policies for longer. In a scenario of systemic financial stress, fiscal policy may need to intervene swiftly to facilitate the resolution process and minimize its costs, while mitigating moral hazard (October 2016 *Fiscal Monitor*). Governance principles, supported by strong insolvency and bankruptcy procedures, should be applied in the decision-making process to safeguard public funds. The appropriate policy package will crucially depend on the available room for fiscal policy action. Given downside risks, fiscal and monetary policies should stand ready to respond if economic growth turns out significantly weaker than expected and unemployment rises. Governments should allow automatic stabilizers to work, especially where inflation is under control and fiscal space is available.

Over the medium term, fiscal deficits are projected to remain above prepandemic levels in the next few years. The fiscal outlook is subject to significant uncertainty as the global economy rebounds from a series of shocks. Much will depend on the pace of long-term (potential) economic growth and the future course of global interest rates (see Chapter 2 of the April 2023 *World Economic Outlook*). Under current projections, the envisaged gradual and moderate fiscal tightening will not be sufficient to prevent public debt ratios from resuming an upward trend, as nominal GDP slows, driven by some large advanced and emerging market economies. Interest payments as a share of revenues in emerging market economies and low-income developing countries are expected to remain higher over the medium term than before the pandemic. In low-income developing countries, concerns persist regarding heightened debt vulnerabilities because of high debt levels, with 39 countries already in or near debt distress. Despite multiple waves of tax reforms in these countries, revenues remain stubbornly insufficient at 13.5 percentage points of GDP lower than revenues in advanced economies. This calls for renewed efforts to raise tax capacity.

Recent crises have taught us that fiscal policy is a powerful tool to foster resilience. To that end, however, governments will need to give greater priority to rebuilding fiscal buffers. Countries should develop credible risk-based fiscal frameworks that promote consistent macroeconomic policies, reduce debt vulnerabilities over time, and build up the necessary room to handle future shocks.

The international community needs to work together to find joint solutions to the multiple challenges that lie ahead. For the most vulnerable economies, it is urgent to strengthen the international financial architecture, especially in debt resolution and enhancement of the Global Financial Safety Net. The latter is a set of institutions and mechanisms that provide insurance against crises and financing to mitigate their impact. Many low-income countries need further international efforts to address sovereign debt vulnerabilities, including debt relief, so that they can make progress toward the Sustainable Development Goals.

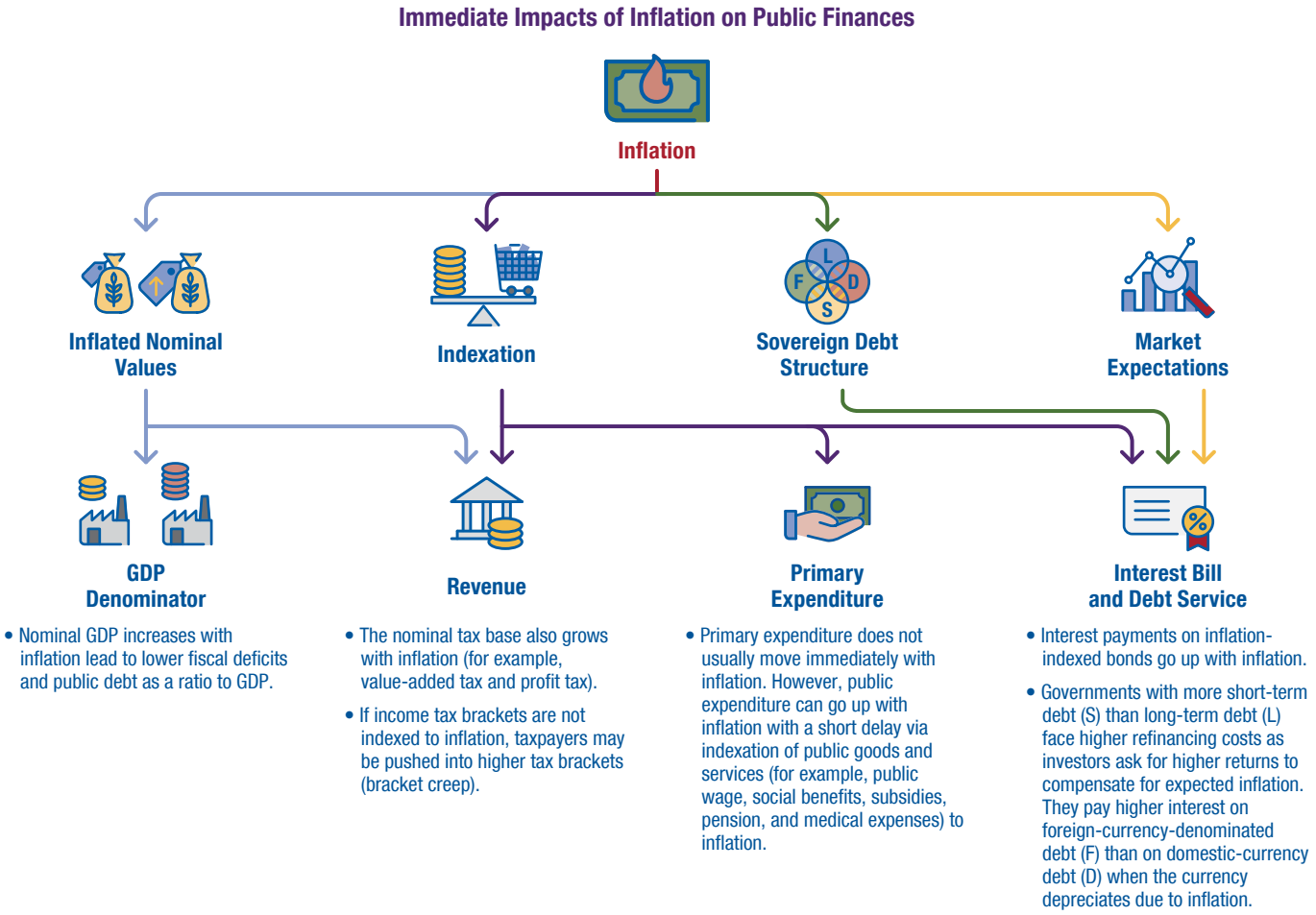
Finally, the recent energy crisis has demonstrated the urgency of pressing ahead with the transition to renewable energy, which would safeguard energy security and mitigate climate change. International cooperation on energy strategy, including carbon taxes and subsidies, would help achieve climate goals and avoid trade tensions.

Chapter 2: Inflation and Disinflation: What Role for Fiscal Policy?

The upsurge in inflation since 2021—the sharpest in more than three decades—has called on policymakers to respond. Government policies need to be informed by an understanding of how inflation affects various groups in society through uneven impacts on the budgets of different households. This chapter examines the multifaceted impact of inflation on fiscal variables (see infographic) and the distribution of well-being, and it explores how fiscal policy can do its part to curb inflation while supporting the vulnerable.

Governments influence how the costs of inflation are distributed not only through discretionary intervention but also through automatic indexation of pensions, transfers to poorer households via social safety nets, wages of civil servants, and tax thresholds. A survey of current international practices shows that indexation varies considerably across countries. Pensions are the most commonly indexed—in nearly all advanced economies and about 40 percent of emerging market and developing economies—followed by cash transfers to vulnerable groups and public wages.

The impact of inflation on the fiscal accounts also depends on redistribution—in this case, between the public sector and the private sector. Unexpected inflation erodes the real (inflation-adjusted) value



Source: IMF staff analysis.
Note: The infographic depicts channels of inflation's immediate impact on fiscal variables, occurring before a policy response.

of government debt, with bondholders taking the brunt of the hit. For countries with debt exceeding 50 percent of GDP, each 1 percentage point surprise increase in inflation is estimated to reduce public debt by 0.6 percentage point of GDP, with the effect lasting over the medium term. These effects are smaller or negligible for countries with a large share of debt denominated in foreign currency. When inflation is expected, it is not associated with a decline in debt ratios, highlighting that inflating debt away is neither a desirable nor a sustainable strategy. Likewise, deficit-to-GDP ratios initially decline as the nominal (current monetary) values of the economy's output increase and, consequently, the tax base rises, generating more tax revenue, while spending fails to keep up. But such effects dissipate over time.

In addition, the chapter shows that redistributive effects of inflation on households are more complex than usually thought. Based on surveys of thousands of households in *Colombia*, *Finland*, *France*, *Kenya*, *Mexico*, and *Senegal*, estimates are provided for the price acceleration from the second quarter of 2021 to the second quarter of 2022 for three channels (see Chapter 1 for more recent developments on the relationship between inflation and public finances): (1) real incomes (wages and pensions), (2) losses in net nominal assets, and (3) faster-than-average price rises for the main goods and services consumed by a given group (such as food prices, which hurt the poor during the period studied). Results show that changes in real income were the most important and differed the most across countries but less so across income groups. Losses on net nominal assets were larger for older groups than for young adults (who often have outstanding mortgage debt) in countries with sizable household credit markets. During the period considered, the estimated impact of inflation

on the poverty rate (prior to new policy measures in response) is about 1 percentage point in three countries in the sample (*France*, *Mexico*, *Senegal*).

Fiscal policy also influences aggregate demand and inflation, with its ultimate impact depending on the monetary authorities' response. Estimates indicate that an increase in public spending of 1 percentage point of GDP led to an increase in inflation of 0.8 percentage point in the 1950–85 period and of 0.5 percentage point thereafter. The difference arguably stems from a more forceful response by central banks to rising inflationary pressure in the post-1985 era. Analysis using a model that embeds inequality in incomes, consumption, and asset holdings shows that a reduction in the fiscal deficit leads to a similar level of disinflation but requires a smaller increase in interest rates than when central banks act alone. The analysis also shows that deficit reduction combined with transfers to the poorest yields a smaller drop in total private consumption and a consumption path associated with less inequality across households. These effects are even more important when public debt is high because fiscal restraint limits the rise in the cost of borrowing and reduces debt vulnerabilities.

The chapter offers several lessons for policymakers at the current juncture:

- Although surprise inflation may occasionally offer some breathing room for debt ratios, attempts to keep surprising bondholders have historically proved futile or harmful.
- When reviewing automatic or discretionary indexation, policymakers need to decide which programs and groups to protect from income erosion while avoiding excessive indexation or other policies that make inflation more persistent. The impact of decisions about public wages (including choices regarding indexation) on private wage setting should also be carefully assessed.
- When considering new measures or reforms against the backdrop of significant inflation, policymakers should consider that different groups of households may already be experiencing sizable distributive effects.
- Fiscal policy—involving tough policy choices on what budget items to cut and which to protect or expand—can support monetary policy in the effort to bring down inflation while protecting those most affected by the cost-of-living crisis.

CHAPTER 1

ON THE PATH TO POLICY NORMALIZATION

Introduction

As the global economy recovered from COVID-19-related disruptions and as exceptional measures by governments largely came to an end, fiscal policy moved to a tightening stance in 2021–22 amid high inflation and the need to reduce debt vulnerabilities. Nearly three-quarters of economies tightened both fiscal and monetary policy in 2022, up from a quarter in 2021 (Figure 1.1). With signs of easing inflationary pressures, the global economy is now entering a new phase (April 2023 *World Economic Outlook*). The effects of policy tightening will weigh on economic activity. Governments will need to manage high debt against a backdrop of modest growth and less favorable financing conditions in the medium term (Figure 1.2).

Over 2021–22, global public debt declined to about 92 percent of GDP—reversing half of the record increase in 2020—because of the economic rebound following the COVID-19 crisis, inflation surprises, and the end of exceptional fiscal support measures enacted during the pandemic.[1] The pace of fiscal retrenchment and decline in debt varied from country to country depending on how fast they exited the pandemic and how subsequent shocks affected them. In emerging markets and low-income developing countries, which have lower levels of domestic currency debt, inflation surprises provided less relief for public debt ratios.

The near-term fiscal outlook remains complex, and risks are firmly to the downside with significant uncertainty surrounding the growth outlook and rapidly changing financial conditions (April 2023 *Global Financial Stability Report*). The pace of fiscal tightening is projected to slow in 2023 as economies face spending pressures. Ongoing geopolitical tensions may lead to further increases in defense spending and fiscal support to address negative effects from disruptions to international trade. Industrial policies, including government subsidies, may also emerge to foster import substitution. Progress on reducing global poverty stalled in 2022, with about 7 percent of the world's population now projected to be in extreme poverty in 2030, which will fall far short of the goal of eradicating extreme poverty. Low-income developing countries, many of which are in or near debt distress or have limited fiscal space, face a particularly difficult balancing act. Many developing countries are grappling with tighter budgetary constraints. Low and stagnant levels of revenue have also hampered progress in achieving the Sustainable Development Goals, and food insecurity has even reversed the progress made in combatting hunger prior to the pandemic.

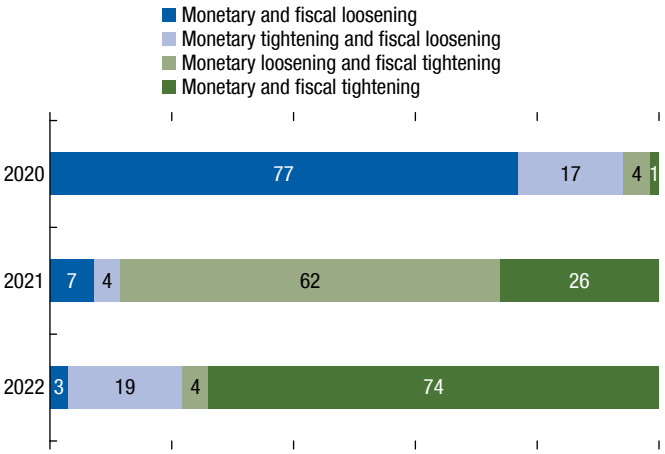
Governments will need to continue to balance their efforts between rebuilding fiscal buffers, supporting disinflation, and protecting the most vulnerable amid considerable uncertainty about future economic growth as the global economy adjusts after massive shocks. In the event that inflation turns out to be stickier than expected, further monetary tightening will be needed and will weigh on economic activity. Downside growth risks could also be magnified if financial sector instabilities intensify (see Chapter 1 of the April 2023 *World Economic Outlook*) and increase stress on public finances, as governments may be called to support the private sector. Global growth could also be adversely impacted by a faltering in China's recovery and an escalation of *Russia*'s war in *Ukraine,* which could renew tensions in energy markets and exacerbate food insecurity in low-income countries.

Over the medium term, under current policies, public debt is expected to rise to close to the record levels seen at the height of the pandemic. Its path will depend crucially on the pace of economic growth and whether borrowing costs, which remain elevated in emerging market economies (Figure 1.3),

The authors of this chapter are Francesca Caselli (team lead) and Gee Hee Hong (team co-lead), Enrico Di Gregorio, Gabriel Hegab, Salma Khalid, Andresa Helena Lagerborg, and Jiae Yoo, with contributions from David Amaglobeli, Mengfei Gu, Emine Hanedar, Samir Jahan, Delphine Prady, and Céline Thévenot; research support from Chenlu Zhang and Victoria Haver, and under the guidance of Paolo Mauro and Paulo Medas.

[1]Inflation surprises refer to the component of actual inflation that was not expected. For public finances, it is critical to distinguish the unexpected component of high inflation for the reasons discussed later in this chapter and in Chapter 2 of the April 2023 *Fiscal Monitor*.

Figure 1.1. Monetary and Fiscal Policy Mix
(Percentage of economies)



Sources: IMF, World Economic Outlook database; and IMF staff calculations.
Note: The sample includes 34 advanced economies, 48 emerging market economies, and 16 low-income developing countries. Fiscal policy is tightening (loosening) if the annual change in the primary balance is positive (negative or zero). Monetary policy is tightening (loosening) if the annual change in the policy rate is positive (negative or zero). The policy rate is proxied by nominal short-term interest rates in the World Economic Outlook database and from central bank websites.

will gradually return to low prepandemic levels (see Chapter 2 of the April 2023 *World Economic Outlook*). Debt sustainability risks are exacerbated by large contingent liabilities contracted as governments provided exceptional support during the pandemic and by the sovereign-bank nexus. Related fiscal risks typically manifest themselves in weak growth and tight financial conditions (Bova and others 2016; Battersby and others 2022; Chapter 2 of the April 2022 *Global Financial Stability Report*).

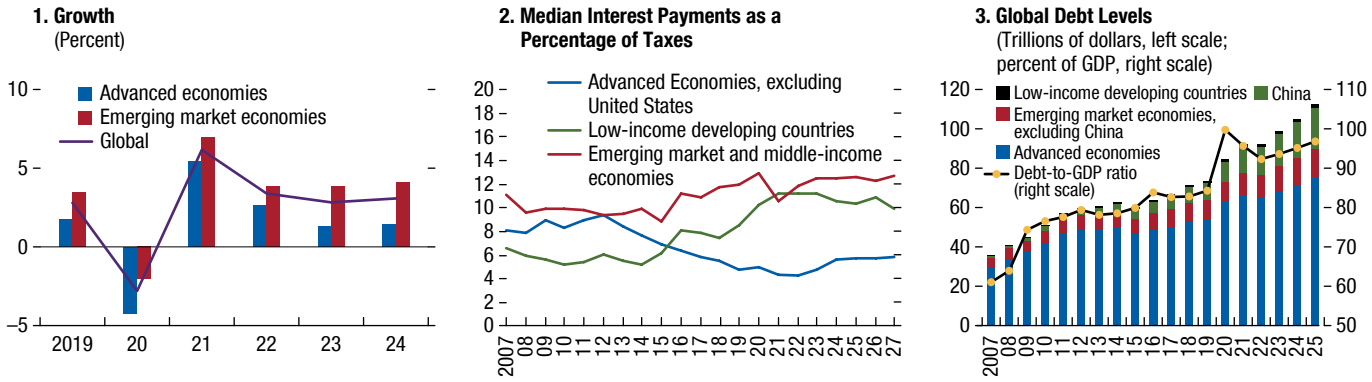
Long-standing challenges—including the climate agenda and population aging—have become more pressing. The energy crisis should provide momentum to press ahead with the transition to renewable sources of energies. Climate change calls for international coordination in areas such as carbon pricing and investment in renewable energy. The global community should give priority to agreements on climate change mitigation and adaptation, while ensuring financing for the climate transition, especially in low-income countries. The breadth of risks and challenges argues for enhancing medium-term fiscal frameworks to address debt vulnerabilities in a credible manner.

Recent Fiscal Developments and Outlook

Fiscal deficits fell to 4.7 percent of GDP on average in 2022, about half of the levels observed in 2020 at the height of the COVID-19 pandemic (Table 1.1). The large shifts in deficits and debt reflect several shocks that have hit economies around the globe in recent years—the pandemic, the war in *Ukraine,* and energy and food price shocks—and the exceptional policy response. But there is substantial heterogeneity both across and within income groups (Figure 1.4). In advanced economies, primary fiscal deficits fell for the second year in a row in 2022, from levels well above those in other income groups at the peak of the pandemic. In emerging markets (excluding *China*), primary balances nearly returned to their prepandemic averages. In low-income developing countries, primary balance improved compared to the height of the pandemic, albeit by a smaller margin compared to other income groups.

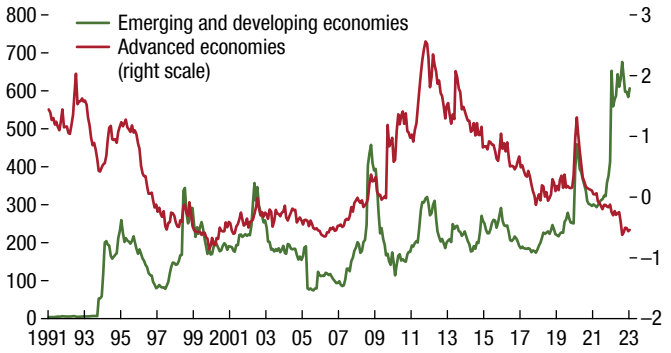
In some countries, primary deficits improved by more than expected in the beginning of 2022, partly

Figure 1.2. Low Growth, Rising Rates, and High Debt



Sources: IMF, World Economic Outlook database; and IMF staff calculations.
Note: In panel 2, the United States (US) is excluded due to missing values from the World Economic Outlook database.

Figure 1.3. Sovereign Spreads by Income Group
(Basis points)



Source: DataStream, Global Financial Data.
Note: Emerging Markets Bond Index (EMBI) spreads, if available, or the government 10-year bond spread over US or German bonds. Averages are weighted by GDP in US dollars. Latest observation is March 1, 2023.

reflecting higher-than-expected inflation (Figure 1.5; see the next subsection for a more in-depth discussion). Commodity-rich countries (*Australia* and *Canada*) benefited from positive terms-of-trade shocks. Deficits declined by less in countries where governments adopted measures to address a cost-of-living crisis.

The decline in public debt in 2022 was notable for advanced and emerging market economies (excluding *China*), although their debt ratios remain about 8 and 4 percentage points above prepandemic levels, respectively (Table 1.2). The public-debt-to-GDP ratio in low-income developing countries remained elevated at about 48 percent, a level not seen since the early 2000s.

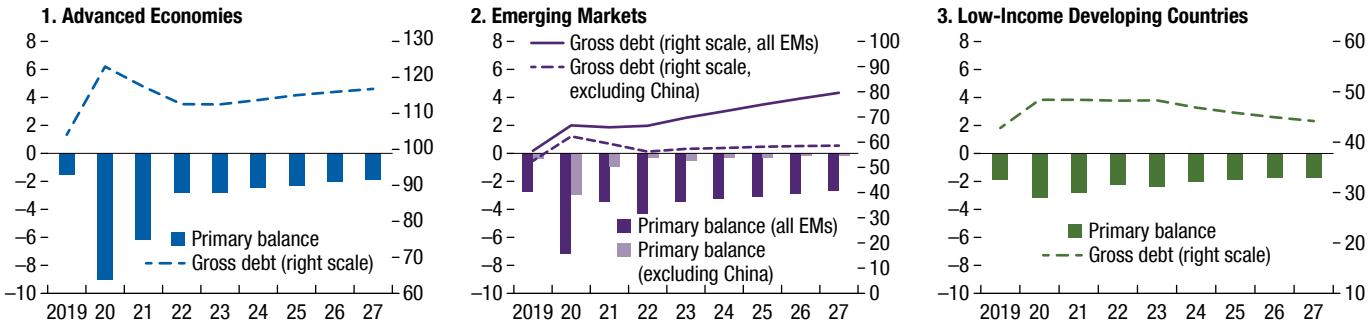
Over the medium term, the projected gradual and moderate fiscal tightening will likely not prevent an increase in global public debt. After declining for two years, public debt is expected to resume an upward trend, driven by some large advanced and emerging market economies. This worse debt dynamics reflects both higher primary deficits (e.g., advanced economies) and higher interest bills (especially in emerging markets). Whether this projected upward trend will materialize is subject to uncertainty, however, as economies and policies are still normalizing after the substantial shocks of the last few years. In addition, global prices for energy have recently come down from their peaks in March 2022 by more than 30 percent, and even 70 percent in the case of the European gas price. Nonetheless, although international food prices have also fallen from their peaks, domestic food prices remain near record levels in many countries.

Advanced Economies: Falling Deficits, at a Diverse Pace

The average primary balance in advanced economies improved by 3.4 percentage points in 2022—for a cumulative improvement of 6.2 percentage points since 2020 (Figure 1.4, panel 1). The cyclically adjusted primary balance in these economies improved by 2.1 percentage points, on average, in 2022 (Figure 1.6). Even so, the average primary deficit as a share of GDP remained about 1.3 percentage points above prepandemic levels.

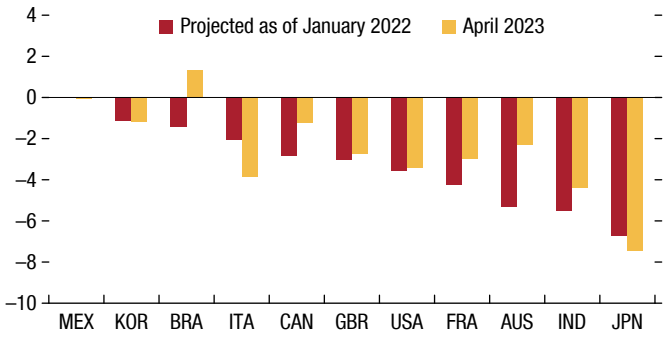
These averages conceal important differences across countries, however. Fiscal tightening was significant in the *United States,* with a 4.6 percentage point decline in its cyclically adjusted primary balance in 2022 alone, reflecting the economic recovery from

Figure 1.4. General Government Primary Balance and Debt, 2019–27
(Percent of GDP)



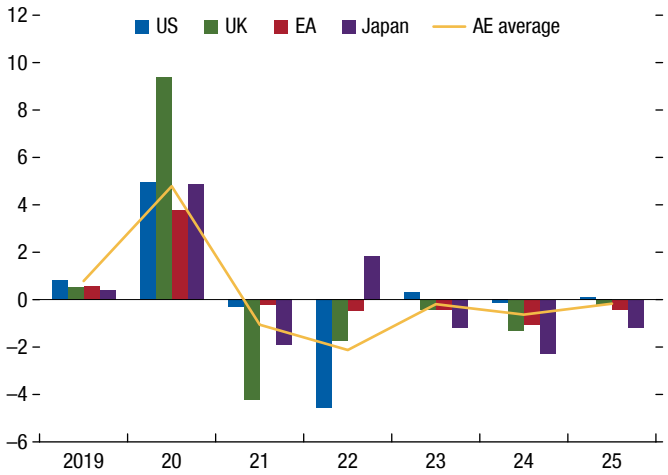
Sources: IMF, World Economic Outlook database; and IMF staff calculations.
Note: Averages are weighted by purchasing-power-parity-adjusted nominal GDP in US dollars. EMs = emerging markets.

Figure 1.5. Projected and Actual Primary Balance for 2022
(Percent of GDP)



Sources: IMF, World Economic Outlook database; and IMF staff calculations.
Note: The figure compares the projected primary balance from the January 2022 *World Economic Outlook Update* with the actual primary balance from the April 2023 *World Economic Outlook*. Data labels in the figure use International Organization for Standardization (ISO) country codes.

Figure 1.6. Fiscal Impulse: Advanced Economies
(Percentage points)



Sources: IMF, World Economic Outlook database; and IMF staff calculations.
Note: The fiscal impulse is calculated as the annual change in the cyclically adjusted primary balance, multiplied by –1. A positive (negative) fiscal impulse implies an expansionary (contractionary) fiscal stance. Advanced economy (AE) averages are weighted by purchasing-power-parity-adjusted nominal GDP in US dollars. EA = euro area; UK = United Kingdom; US = United States.

the pandemic. With rebounding private activity and households drawing on excess savings built up during the pandemic, overall demand weathered the withdrawal of governments' support. The improvements in the cyclically adjusted primary balance in the *euro area* and the *United Kingdom* were smaller at 0.5 and 1.8 percentage point each, because further support measures were taken in response to a deterioration of the terms of trade stemming from *Russia*'s invasion of *Ukraine*. *Japan* announced a series of fiscal packages throughout the year, including measures to mitigate the deterioration in the cost of living. Other economies in Asia (*Hong Kong SAR*, *Korea*) also loosened their fiscal stances in 2022.

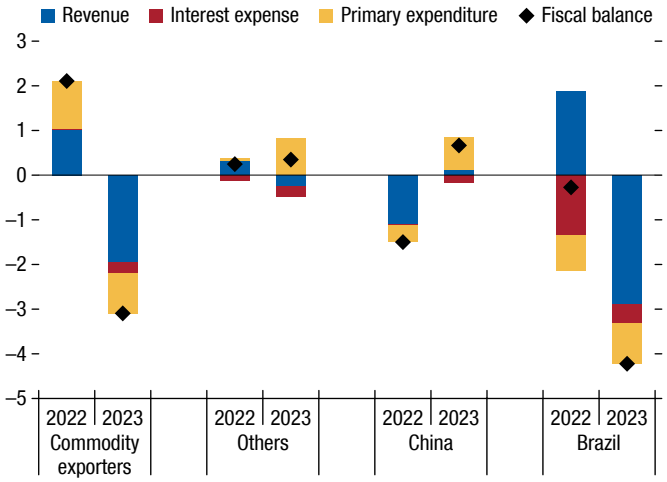
The average debt-to-GDP ratio in advanced economies shed 10 percentage points between the end of 2020 and the end of 2022, thanks to favorable contributions from growth and inflation surprises. Nevertheless, the average current public-debt-to-GDP ratio of about 113 percent of GDP stands above its prepandemic levels. Over the medium term, fiscal tightening is projected to moderate or abate among advanced economies as a group. Under current projections for higher interest payments and lackluster growth, public debt would rise to about 118 percent of GDP over the medium term. Countries facing mounting pressures to engage in age-related spending (*Japan*), those contemplating further increases in public wages and other social spending (*United Kingdom*), and those expanding tax incentives, grants, and other fiscal measures to promote a transition to clean energy (*United States*) have steeper upward trajectories.

Emerging Markets: Growth Fears and Varied Headwinds

Following fiscal adjustment in 2021, primary deficits declined further by 1.1 percentage points in 2022, on average, in emerging markets excluding *China*. The decline was largely driven by positive revenue surprises compared to the October 2022 *Fiscal Monitor,* but with large cross-country differences (Figure 1.7). Primary surpluses increased by more than 2 and 5 percentage points, respectively, in non-oil commodity exporters and oil-producing economies (excluding *Russia*), which benefited from an upswing in commodity prices and from keeping expenditures in check. However, some large countries among the emerging market economies group experienced different fiscal trends. In *China*, the government introduced fiscal measures to alleviate growth headwinds from COVID-19-related policies and concerns about its ailing real estate market. Support included a series of tax and other relief measures for small and medium-sized enterprises.

The overall deficit in emerging market economies (excluding *China*) is set to widen in 2023 by

Figure 1.7. Drivers of Changes in the Fiscal Balance, 2022–23
(Percent of GDP)



Sources: IMF, World Economic Outlook database; and IMF staff calculations.
Note: The figure shows annual changes in the fiscal balance (diamond) and contributions from revenues (blue), interest expenses (red), and primary expenditures (yellow). Positive (negative) values show improvement (deterioration) compared with the previous year. Positive values from primary expenditures, for instance, imply a reduction in primary expenditures as a share of GDP compared with the previous year.

1.6 percentage points, on average. Many emerging market economies are projected to cut primary spending further in 2023 from their 2022 levels. However, countries will continue to see higher interest bills following the large increase in financing costs (Figure 1.3), and revenues are expected to decline. The fiscal position among commodity exporters and oil producers is likely to deteriorate as their revenues decline by about 2 percentage points with a decline in commodity prices expected in 2023. In *Brazil*, the primary balance is projected to worsen with the extension of social support and 2022 tax reductions, although some compensating measures are being considered to lower the deficits. In *Chile*, the primary balance is projected to deteriorate by 2.4 percentage points in 2023 with weaker revenue collection. In *China*, on the other hand, the primary balance is expected to increase in 2023, as not all temporary measures introduced in 2022 may be extended.

With moderate fiscal adjustments in the medium term, the average government-debt-to-GDP ratio in emerging markets excluding *China* is projected to rise to about 59 percent of GDP through 2028, above its prepandemic level, with some countries facing growing concerns about debt vulnerabilities. The debt-to-GDP ratio in oil producers and exporters has already declined, reaching levels in 2022 close to those seen before the pandemic. In *China*, debt and associated gross financing needs are expected to be on an upward trajectory over the medium term under current policies. In *Brazil*, the decline in debt from revenue overperformance and inflation surprises in 2021–22 is projected to reverse over the medium term.

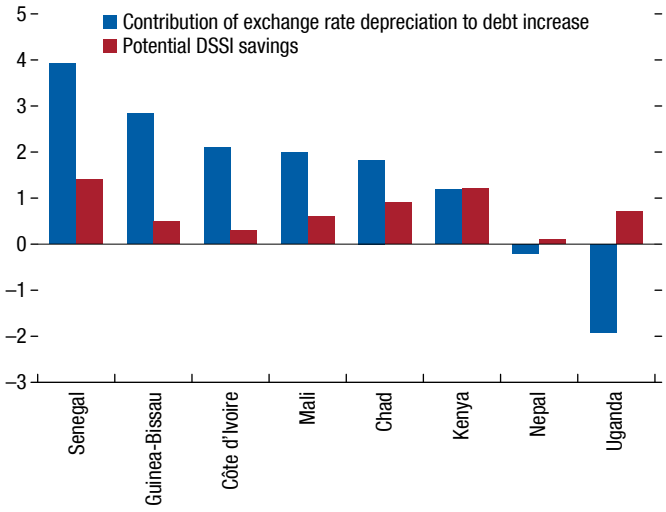
Low-Income Developing Countries: Rising Debt Vulnerabilities amid Low Revenues

Low-income developing countries have been hit by several concomitant shocks, including the COVID-19 pandemic and the cost-of-living and food security crises, which have taken their toll on public finances. Fiscal deficits in low-income developing countries, at an average 4.2 percent of GDP in 2022, showed moderate improvements relative to the worst of the pandemic. Primary spending remained stable at 16.9 percent of GDP, just below its 2021 level, on average, as countries increased fuel subsidies and social spending to respond to rising energy and food import prices. The increase in spending was larger among commodity exporters (*Burundi*, *Democratic Republic of Congo*) and oil exporters (*Nigeria*, *Yemen*), with the latter group benefitting from more fiscal space thanks to high energy prices. In non-oil commodity exporters, the average fiscal deficit rose by 0.6 percentage points in 2022, reversing the improvement in 2021, as both primary spending and debt service payments increased. For commodity importers, fiscal deficits narrowed by 1.1 percentage point, on average, with the decreases driven by spending cuts including a reduction in fuel subsidies (*Kenya*) and slower execution of infrastructure spending (*Vietnam*), or new tax measures (*Kenya*).

Fiscal deficits in low-income developing countries are expected to remain stable on average in 2023 at 4.2 percent of GDP, despite a deterioration of 0.3 percent of GDP in non-commodity exporting countries. In contrast, commodity exporters will reduce their deficit by 0.4 percentage point in 2023, driven by spending cuts, including reductions in fuel subsidies (*Democratic Republic of Congo*, *Mauritania*), even as progress in revenue mobilization weakens, reflecting lower commodity prices and slowing growth.

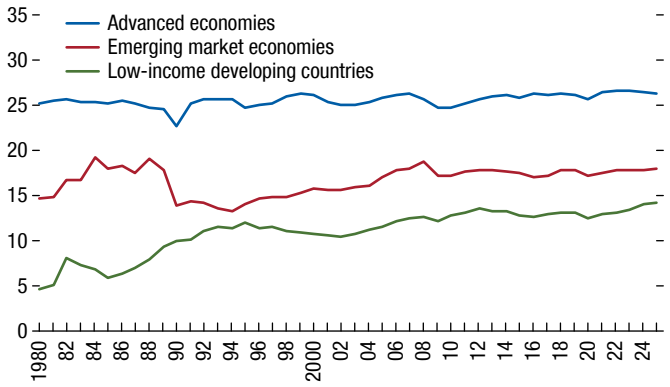
In addition to the multiple shocks that have occurred since the pandemic, some international debt

Figure 1.8. Impact of Exchange Rate Depreciation on Debt Change, and Potential Debt Service Suspension Initiative Savings, 2021–22
(Percent of GDP)



Sources: IMF, World Economic Outlook database; World Bank; and IMF staff calculations.
Note: The figure shows the impact of exchange rate depreciation in 2022 on changes in the debt ratio between the end of 2021 and the end of 2022. It also shows estimated debt service payments owed between January and December 2021. Estimated debt service payments owed to all official bilateral creditors as per the World Bank Debtor Reporting System and International Debt Statistics (IDS) definitions and classifications. Estimates are derived from annual IDS projections based on end-2020 external public and publicly guaranteed debt outstanding and disbursed. DSSI = Debt Service Suspension Initiative.

Figure 1.9. Total Tax Collection
(Percent of GDP)



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

relief measures have expired, such as the Debt Service Suspension Initiative (DSSI) that ended in 2021. At the beginning of 2023, 11 countries were in debt distress and another 28 countries were at high risk of debt distress. Average public debt in low-income developing countries in 2022 remained stable at 48.2 percent of GDP, just below the level in 2020. However, the debt burden soared for countries with a high share of foreign currency borrowing, as their exchange rates depreciated (Figure 1.8).

Over the medium term, average debt is projected to decline from 48.3 percent of GDP in 2023 to 43.2 percent of GDP in 2028, still above prepandemic levels but featuring significant projected declines in large countries (*Ethiopia*, *Kenya*, *Uzbekistan*, *Vietnam*). Nevertheless, debt-servicing burdens are expected to climb above prepandemic levels. In some low-income developing countries, debt is projected to continue rising (*Nigeria*), and some have asked for debt relief under the Group of Twenty (G20) Common Framework (*Chad*, *Ethiopia*, *Ghana*, *Zambia*). *Chad* recently reached a debt treatment agreement with creditors under the framework.

Low-income developing countries have also made limited progress in ramping up their tax capacity, as is needed to achieve the Sustainable Development Goals and manage their debt burdens. In 2022, tax-to-GDP ratios in low-income developing countries remained, on average, 4.7 and 13.5 percentage points lower than those in emerging markets, and advanced economies, respectively (Figure 1.9). In some cases, total revenues remain exceptionally low (*Nigeria* at 8.8 percent and *Bangladesh* at 8.7 percent of GDP). Tax revenues-to-GDP ratios, on average, surpassed prepandemic levels in 2022, but in 28 of 57 countries for which tax revenue data exist, tax collection remains below its prepandemic levels (*Cameroon*, *Ethiopia*, *Honduras*, *Tanzania*, and *Vietnam*, among others). Stronger efforts will be needed to increase revenue capacity, which has been stagnant for the past 20 to 30 years (revenues can fluctuate significantly, especially in commodity-rich countries). Progress has been sluggish, especially in the decade following the global financial crisis, in mobilizing revenues from personal income, corporate, and indirect taxes, despite waves of tax reforms that have included the adoption of large taxpayer units to monitor and maintain relationships with large businesses and, in some cases, high-net-worth individuals (Box 1.1 and Online Annex 1.1).[2]

[2]However, the benefits of better monitoring and servicing of corporate taxpayers seem to materialize over longer stretches of time, and with considerable variability in magnitude (Online Annex 1.1).

Table 1.1. General Government Fiscal Balance, 2018–28: Overall Balance
(Percent of GDP)

						Projections					
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
World	**–2.9**	**–3.6**	**–9.6**	**–6.6**	**–4.7**	**–5.0**	**–4.6**	**–4.5**	**–4.3**	**–4.2**	**–4.2**
Advanced Economies	**–2.4**	**–3.0**	**–10.2**	**–7.5**	**–4.3**	**–4.4**	**–4.2**	**–4.1**	**–3.9**	**–3.8**	**–3.9**
Canada	0.4	0.0	–10.9	–4.4	–0.7	–0.4	–0.4	–0.3	–0.2	–0.1	0.0
Euro Area	–0.4	–0.6	–7.1	–5.4	–3.8	–3.7	–2.8	–2.3	–2.1	–2.0	–1.9
France	–2.3	–3.1	–9.0	–6.5	–4.9	–5.3	–4.8	–4.5	–4.1	–3.9	–4.0
Germany	1.9	1.5	–4.3	–3.7	–2.6	–3.7	–1.9	–0.9	–0.7	–0.5	–0.5
Italy	–2.2	–1.5	–9.7	–9.0	–8.0	–3.7	–3.3	–2.3	–1.8	–1.3	–0.7
Spain[1]	–2.6	–3.1	–10.1	–6.9	–4.5	–4.5	–3.5	–3.8	–4.0	–4.0	–4.0
Japan	–2.5	–3.0	–9.1	–6.2	–7.8	–6.4	–4.0	–2.9	–3.1	–3.4	–3.7
United Kingdom	–2.2	–2.2	–13.0	–8.3	–6.3	–5.8	–4.4	–4.2	–3.9	–3.9	–3.7
United States[2]	–5.3	–5.7	–14.0	–11.6	–5.5	–6.3	–6.8	–7.1	–6.9	–6.6	–6.8
Other Advanced Economies	1.2	–0.1	–4.8	–1.3	0.2	0.7	0.7	0.7	0.7	0.6	0.6
Emerging Market and Developing Economies	**–3.5**	**–4.5**	**–8.6**	**–5.2**	**–5.2**	**–5.8**	**–5.3**	**–5.0**	**–4.8**	**–4.7**	**–4.7**
Emerging Markets excl. China	**–3.0**	**–3.4**	**–8.2**	**–4.5**	**–3.4**	**–5.0**	**–4.4**	**–4.1**	**–3.8**	**–3.7**	**–3.6**
Excluding MENA Oil Producers	–3.7	–4.8	–8.9	–5.5	–6.0	–6.3	–5.7	–5.5	–5.2	–5.1	–5.0
Asia	–4.2	–5.8	–9.7	–6.5	–7.4	–6.8	–6.3	–6.2	–6.0	–5.9	–5.9
China[3]	–4.3	–6.1	–9.7	–6.0	–7.5	–6.9	–6.4	–6.3	–6.2	–6.1	–6.0
India	–6.4	–7.7	–12.9	–9.6	–9.6	–8.9	–8.3	–7.9	–7.7	–7.7	–7.6
Europe	0.3	–0.6	–5.5	–1.9	–2.8	–5.8	–4.0	–3.5	–2.9	–2.7	–2.4
Russian Federation	2.9	1.9	–4.0	0.8	–2.2	–6.2	–2.8	–1.8	–0.8	–0.3	0.2
Latin America	–5.0	–4.1	–8.8	–4.5	–3.9	–5.2	–4.4	–3.7	–3.2	–3.0	–2.7
Brazil	–7.0	–5.8	–13.3	–4.3	–4.6	–8.8	–8.2	–6.6	–5.5	–4.9	–4.4
Mexico	–2.2	–2.3	–4.4	–3.9	–4.4	–4.1	–2.7	–2.7	–2.7	–2.7	–2.7
MENA	–1.7	–2.5	–8.5	–2.1	2.6	–1.0	–1.7	–2.0	–1.9	–1.9	–2.1
Saudi Arabia	–5.5	–4.2	–10.7	–2.3	2.5	–1.1	–1.2	–0.8	–0.3	–0.1	–0.3
South Africa	–3.7	–4.7	–9.6	–5.6	–4.5	–5.9	–6.1	–6.7	–6.3	–6.3	–6.5
Low-Income Developing Countries	**–3.3**	**–3.5**	**–5.0**	**–4.7**	**–4.2**	**–4.2**	**–4.0**	**–3.8**	**–3.7**	**–3.7**	**–3.6**
Kenya	–6.9	–7.4	–8.1	–7.1	–6.0	–5.2	–4.4	–3.9	–3.9	–4.0	–3.9
Nigeria	–4.3	–4.7	–5.6	–6.0	–5.5	–5.3	–5.4	–5.6	–5.8	–6.0	–6.1
Vietnam	–1.0	–0.4	–2.9	–3.4	–2.5	–3.3	–3.1	–2.9	–2.5	–2.3	–2.0
Oil Producers	**0.4**	**–0.1**	**–7.5**	**–1.1**	**2.0**	**–0.3**	**0.1**	**0.0**	**0.0**	**–0.1**	**–0.2**
Memorandum											
World Output (percent)	**3.6**	**2.8**	**–2.8**	**6.3**	**3.4**	**2.8**	**3.0**	**3.2**	**3.2**	**3.1**	**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, 2022 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. MENA = Middle East and North Africa.

[1] Including financial sector support.

[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 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.

[3] *China*'s deficit and public debt numbers presented in this table cover a narrower perimeter of the general government than IMF staff's estimates in *China* Article IV reports (see IMF 2023 for a reconciliation of the two estimates).

What Explains the Unusually Large Movements in Deficits and Debt?

Since early 2020, public finances worldwide have been hit by large shocks and subject to exceptional policies that make it more complex to understand developments in fiscal variables and policy stances. This section takes a deeper look at these developments to inform policies.

Inflation Surprises and Declining Debt Ratios

Since the onset of the COVID-19 pandemic, debt dynamics have been characterized by unprecedented fluctuations (IMF 2022).[3] The largest one-year debt surge since World War II took place in 2020, with

[3]The exceptional debt dynamics have been both for public and private debt (Gaspar, Medas, and Perrelli, 2022).

Table 1.2. General Government Debt, 2018–28

(Percent of GDP)

						Projections					
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Gross Debt											
World[1]	**82.8**	**84.3**	**99.7**	**95.5**	**92.1**	**93.3**	**94.6**	**96.1**	**97.3**	**98.4**	**99.6**
Advanced Economies	**102.9**	**104.0**	**122.9**	**117.4**	**112.5**	**112.4**	**113.6**	**115.0**	**115.9**	**116.7**	**117.8**
Canada[2]	90.8	90.2	118.9	115.1	106.6	105.1	102.2	99.2	96.2	93.6	91.1
Euro Area	85.6	83.5	96.6	94.9	90.9	89.8	89.0	87.9	86.9	86.2	85.4
France	97.8	97.4	114.7	112.6	111.1	111.4	112.4	112.8	113.3	114.2	115.0
Germany	61.3	58.9	68.0	68.6	66.5	67.2	66.5	64.4	62.3	60.9	59.6
Italy	134.4	134.1	154.9	149.8	144.7	140.3	140.0	138.5	136.9	134.8	131.9
Spain	100.4	98.2	120.4	118.4	112.0	110.5	108.3	107.9	108.3	108.7	109.3
Japan	232.4	236.4	258.7	255.4	261.3	258.2	256.3	257.6	259.2	261.5	264.0
United Kingdom	85.2	84.5	105.6	108.1	102.6	106.3	109.7	112.8	112.7	113.0	113.1
United States[2]	107.4	108.7	133.5	126.4	121.7	122.2	125.8	129.1	131.8	134.0	136.2
Emerging Market and Developing Economies	**52.7**	**55.1**	**64.8**	**64.3**	**64.6**	**67.5**	**69.8**	**72.2**	**74.3**	**76.3**	**78.1**
Emerging Markets excl. China	**51.0**	**52.6**	**62.3**	**59.4**	**56.2**	**57.3**	**57.7**	**58.2**	**58.4**	**58.6**	**58.7**
Excluding MENA Oil Producers	55.3	57.6	67.5	67.1	68.4	71.4	74.1	76.8	79.3	81.7	83.8
Asia	56.5	59.8	70.2	71.5	75.1	79.1	82.6	86.2	89.4	92.5	95.4
China[3]	56.7	60.4	70.1	71.8	77.1	82.4	87.2	92.0	96.5	100.8	104.9
India	70.4	75.0	88.5	84.7	83.1	83.2	83.7	83.8	83.8	83.7	83.6
Europe	29.0	28.5	37.0	34.7	32.7	36.9	37.9	38.6	39.0	39.2	39.2
Russian Federation	13.6	13.7	19.2	16.5	19.6	24.9	25.3	25.3	24.3	23.2	21.5
Latin America	67.4	68.3	77.3	71.9	69.7	68.6	69.3	70.1	70.3	70.3	70.1
Brazil[4]	85.6	87.9	96.8	90.7	85.9	88.4	91.5	93.7	95.2	96.0	96.2
Mexico	53.6	53.3	60.1	58.7	56.0	55.6	55.8	56.3	56.9	57.5	57.9
MENA Region	40.3	43.9	55.4	52.1	43.0	42.5	41.2	41.6	42.0	42.3	42.5
Saudi Arabia	17.6	21.6	31.0	28.8	22.6	23.6	23.1	22.3	21.5	20.7	19.9
South Africa	51.7	56.2	69.0	69.0	71.0	72.3	74.0	77.1	80.0	82.4	84.9
Low-Income Developing Countries	**41.7**	**42.8**	**48.4**	**48.4**	**48.2**	**48.3**	**46.8**	**45.8**	**44.9**	**44.2**	**43.2**
Kenya	56.4	59.1	67.8	67.0	67.9	66.6	65.4	64.1	62.7	61.1	59.5
Nigeria	27.7	29.2	34.5	36.5	38.0	38.8	39.0	40.3	41.5	42.3	43.1
Vietnam	43.5	40.8	41.3	39.3	37.1	36.3	35.4	34.6	33.8	32.9	31.3
Oil Producers	**44.4**	**45.7**	**60.4**	**56.0**	**49.1**	**50.5**	**49.9**	**49.4**	**48.8**	**48.3**	**47.7**
Net Debt											
World[1]	**67.2**	**68.2**	**80.0**	**77.9**	**74.6**	**75.3**	**76.8**	**77.9**	**78.7**	**79.4**	**80.2**
Advanced Economies	**73.9**	**74.7**	**86.8**	**84.6**	**81.6**	**82.5**	**84.3**	**85.7**	**86.7**	**87.6**	**88.7**
Canada[2]	11.6	8.5	15.7	15.4	13.9	14.1	13.9	13.7	13.1	12.5	12.0
Euro Area	70.6	69.0	79.0	77.8	74.8	74.5	74.3	73.7	73.2	72.8	72.4
France	89.2	88.9	101.7	100.6	99.0	99.4	100.4	100.8	101.3	102.2	103.0
Germany	42.2	40.1	45.4	45.6	45.1	46.7	46.8	45.6	44.3	43.5	42.7
Italy	121.8	121.7	141.4	137.3	133.0	129.3	129.4	128.2	126.9	125.1	122.6
Spain	84.9	83.7	103.0	102.3	97.4	96.6	95.2	95.3	96.1	96.9	97.9
Japan	151.1	151.7	162.3	156.9	162.7	161.0	159.3	159.2	159.4	160.2	161.3
United Kingdom	75.4	74.6	94.5	96.7	91.9	95.1	98.2	101.0	100.9	101.2	101.2
United States[2]	81.1	83.1	98.3	98.3	94.2	95.5	99.8	103.1	105.7	108.0	110.5

Source: IMF staff estimates and projections.

Notes: 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, 2022 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. MENA = Middle East and North Africa.

[1] Gross and net debt averages do not include the debt incurred by the European Union and used to finance the grants portion of the NextGenerationEU (NGEU) package. This totaled €58 billion (0.4 percent of EU GDP) as of December 31, 2021, and €158 billion (1 percent of EU GDP) as of February 16, 2023. Debt incurred by the European Union and used to on-lend to member states is included within member state debt data and regional aggregates.

[2] For cross-economy comparability, gross and 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.

[3] *China*'s deficit and public debt numbers presented in this table cover a narrower perimeter of the general government than IMF staff's estimates in *China* Article IV reports (see IMF 2023 for a reconciliation of the two estimates).

[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.

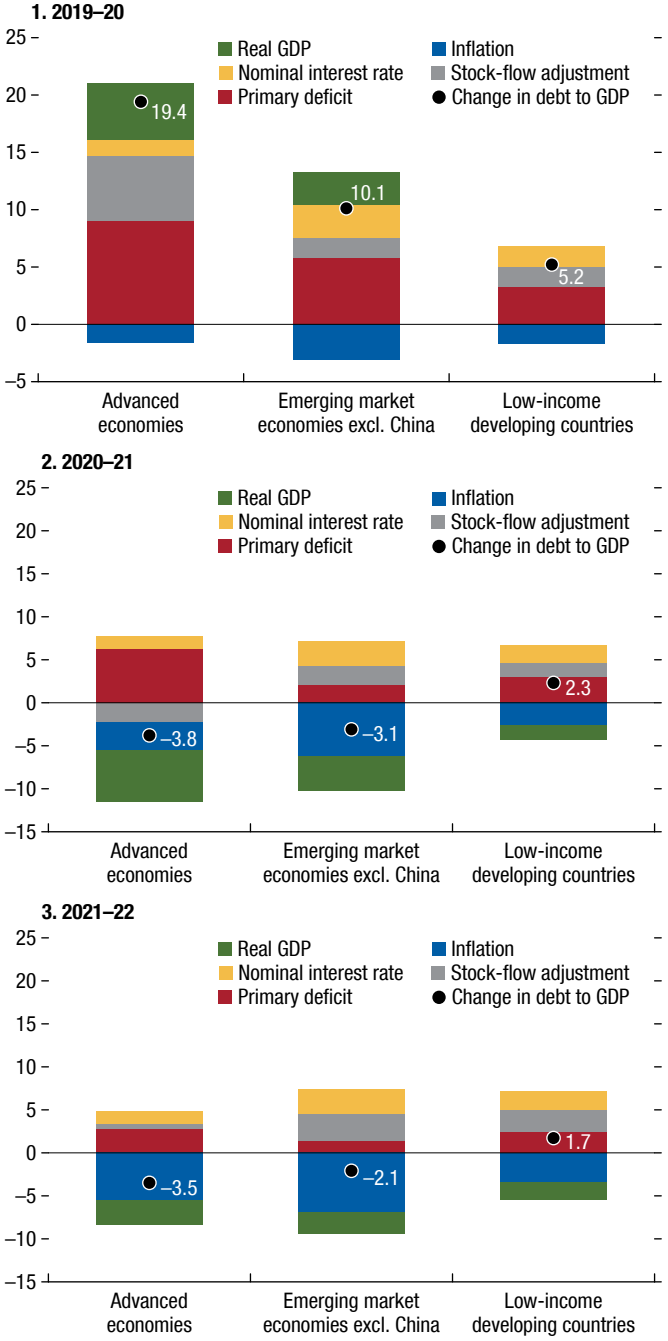
global public debt reaching almost 100 percent of GDP, reflecting a pandemic-induced economic contraction and associated fall in tax revenues, as well as unprecedented policy responses deployed by governments (Figure 1.10, panel 1). In the subsequent two years, debt declined at an unusually fast pace (Figure 1.10, panels 2 and 3). The global trends mask large differences across country groups, however. In advanced and emerging market economies, public debt fell, despite positive (yet declining) primary deficits, thanks to the growth rebound and inflation surprises. In low-income developing countries, however, a combination of exchange rate depreciation, primary deficits, and nominal interest rates more than offset the impact of inflation surprises, leading to a small increase in their overall debt-to-GDP ratios (Figure 1.10, panel 3).[4]

The role of inflation surprises in debt reduction during 2022 was shaped by individual countries' debt size and composition (Figure 1.11). Countries with high initial levels of debt, combined with large inflation surprises and strong growth, experienced significant debt declines (*Greece*). In some emerging market economies, on the other hand, rising interest rates almost fully offset the impact of inflation surprises (*India*). In some low-income developing countries, overall debt increased as nominal exchange rate depreciation and primary deficits more than offset the effects of inflation (*Senegal*).

Looking ahead, as fiscal and monetary policies normalize, inflation subdues, and real interest rates rise, debt dynamics are also expected to change. Under current projections, advanced and emerging market economies will require larger primary balances to prevent a further rise in debt ratios. However, there is great uncertainty surrounding the projections, namely for long-run growth and interest rates, and debt developments may prove different than initially expected, as the experience after the global financial crisis showed. Compared with forecasts prepared in 2010, fiscal consolidation did not materialize, and debt ratios remained stable thanks to lower-than-expected interest rates (Han, Mauro, and Ralyea, forthcoming).

[4]The difference with respect to Table 1.2 is driven by country coverage.

Figure 1.10. Drivers of Change in General Government Debt
(Change in end-of-year debt stocks as percentage of GDP)



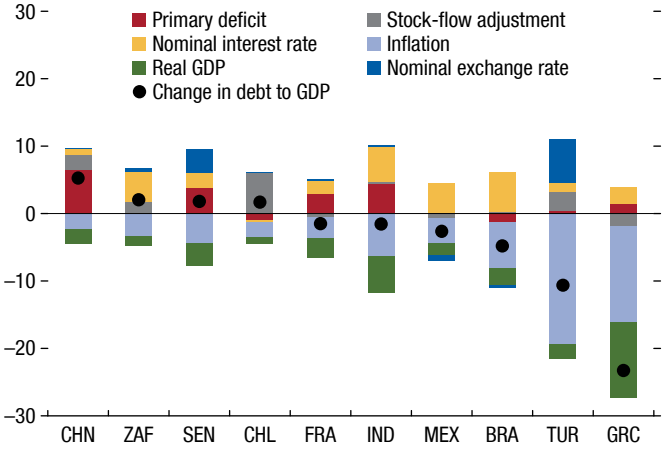
Sources: IMF, World Economic Outlook database; and IMF staff calculations.
Note: The figure shows contributions to changes in the debt-to-GDP ratio, following Escolano (2010). Stock-flow adjustment includes effects of exchange rate depreciations. GDP deflators are used for inflation. The country averages are constructed by weighting the debt change by nominal fiscal year GDP in dollars in the most recent year of the change. Selected groups of countries. Excl. = excluding.

Inflation Spikes and the Budget Balance

In addition to the debt-to-GDP ratio, inflation surprises can also affect budgetary aggregates, such as the overall fiscal balance (see Chapter 2 for an analysis of various channels and their implications). High inflation may also make conventional fiscal indicators an inaccurate gauge of policy efforts (Tanzi, Blejer, and Teijeiro 1987). For instance, an improvement in a country's overall balance may partly reflect tax buoyancy from an inflation surprise (combined with budget spending targets set in nominal terms) rather than consolidation measures.[5]

In 2022, most governments enjoyed positive revenue surprises, stemming in part from tax buoyancy related to inflation surprises (Figure 1.12; see also Online Annex 1.4 for the effect of inflation surprises on primary balances and debt).[6] On average, these revenue surprises amounted to 3.1 percent of GDP in advanced economies and 2.5 percent in emerging market economies. Commodity exporters (for example, *Australia*, *Brazil*, *Saudi Arabia*) experienced even larger revenue surprises, reflecting positive terms of trade shocks, while the benefits were smaller for commodity importers, especially for those that experienced a large fall in the terms of trade. Some countries saved, to different degrees, part of the resulting windfalls

Figure 1.11. Drivers of Annual Change in General Government Debt, 2021–22
(Percent of GDP)



Sources: IMF, World Economic Outlook database; and IMF staff calculations.
Note: The figure shows contributions to changes in the debt-to-GDP ratio, following Escolano (2010). The sample includes a selected set of countries for which the share of general government debt in foreign currency is available. GDP deflators are used for inflation. Data labels in the figure use International Organization for Standardization (ISO) country codes.

(difference between dark and light blue bars in Figure 1.12). Even when countries did not save the surprise revenue, some observed significant drops in debt ratios due to rising nominal GDP. However, neither the size of a country's revenue surprise nor its overall fiscal deficit displays a close association with its inflation rate, suggesting that additional factors were at play.

An important source of variation of spending across countries in 2022 was the surge in energy and food prices, which prompted several governments to introduce measures to support people and firms. An analysis of subcomponents of expenditures reveals that some countries (*France*, *Germany*, *Italy*, *Mexico*) allocated a substantial portion of this additional spending to "other spending," which includes subsidies (Figure 1.13).

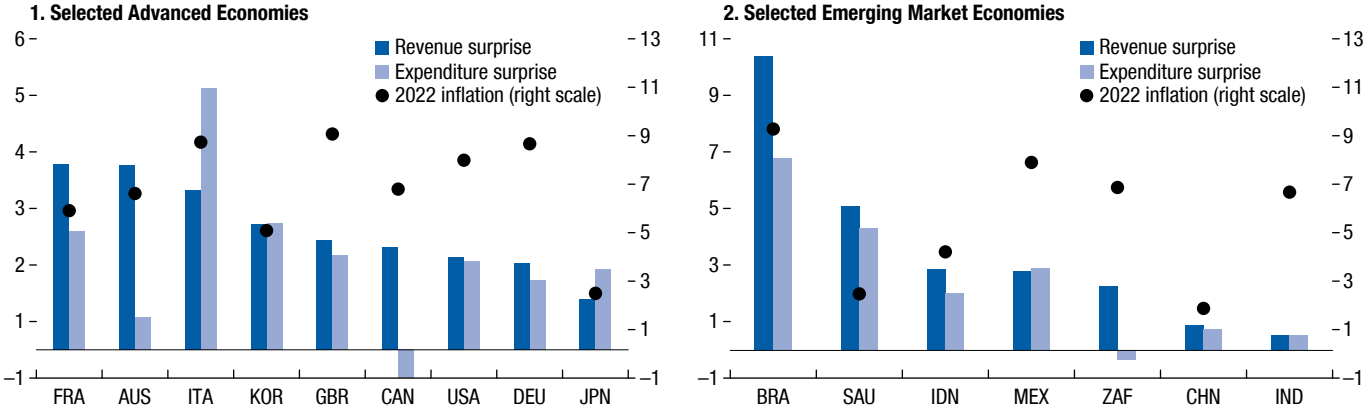
Challenges for Governments amid Spending Pressures

Inflation surprises may lead to a persistent increase in some spending items, for instance, through backward-looking indexation practices (see Chapter 2 for indexation practices by countries). More generally, governments are likely to confront social and economic pressures to compensate various groups for past and future increases in the cost of living. In 2022, several governments introduced ad-hoc adjustments to compensation to civil servants and pension

[5]A country's fiscal balance may also not accurately measure the fiscal impulse, as interest payments may include an inflationary component that has no relevance to aggregate demand. Some argue that if the inflationary component of interest rates is not removed from interest payments, the deficit will be overstated by the size of the amortization element included, which has no relevance to the aggregate demand. To alleviate this issue, alternative measures of a country's fiscal deficit have been proposed, such as the "operational balance," which excludes the inflation-induced portion of interest payments from deficit calculations (Blejer and Cheasty 1991).

[6]The amount of the revenue surprise saved by government is calculated as the difference between realized and projected revenues ("revenue surprise") and an "expenditure surprise" calculated the same way. Projected revenues and expenditures used are from the January 2022 *World Economic Outlook* vintage, which pre-dates the economic implications of *Russia*'s invasion in *Ukraine*. Both actual and projected revenue and expenditures are divided by 2022 GDP from the April 2023 World Economic Outlook database. Hence, inflation surprises in 2022 should mostly drive revenue surprises. Nevertheless, the surprises may include factors other than inflation surprises, namely, terms-of-trade shocks and measures taken by government to address the cost-of-living crisis, both on the revenue and expenditure side. For example, the *United Kingdom* introduced reductions in fuel duties and rebates in council taxes, affecting 80 percent of households in the country, to dampen price pressures. Online Annex 1.4 also presents an alternative exercise that assesses how the indexation of tax brackets and expenditure items (public wages, pensions, and social transfers) has affected primary balances across a select group of countries at different income levels.

Figure 1.12. What Share of Revenue Surprises Was Saved?
(Percent of 2022 GDP)



Sources: IMF, World Economic Outlook database; and IMF staff calculations.
Note: The revenue (expenditure) surprise is the difference between actual and projected revenues (expenditures), divided by actual 2022 GDP. All variables are in nominal terms. Projections are from the January 2022 *World Economic Outlook Update* vintage, which predates *Russia*'s invasion of *Ukraine*. Figures for 2022 are from the April 2023 World Economic Outlook database. Data labels in the figure use International Organization for Standardization (ISO) country codes.

benefits to mitigate surges in energy and food prices (Amaglobeli and others 2023).[7] Because inflation surprises eroded public wages in real terms in 2021 and 2022 (Figure 1.14), countries will likely experience significant spending pressures as indexation operates with a lag or if workers request compensation. Past evidence shows that fiscal consolidations undertaken in higher-inflation environments are shorter, but have a larger effect on reducing debt, than those undertaken in a low-inflation environment.[8] An empirical analysis of fiscal consolidations in 25 advanced and emerging market economies reveals that consolidations improved the cyclically adjusted primary balance more when inflation was high (defined as above the 75th percentile of the distribution of Consumer Price Index inflation, or 4.6 percent) than when it was low (below the 25th percentile of the distribution of Consumer Price Index inflation, or 1.7 percent) (Figure 1.15, panel 1). When inflation was high, fiscal consolidations also resulted in larger debt reductions (Figure 1.15, panel 2).[9]

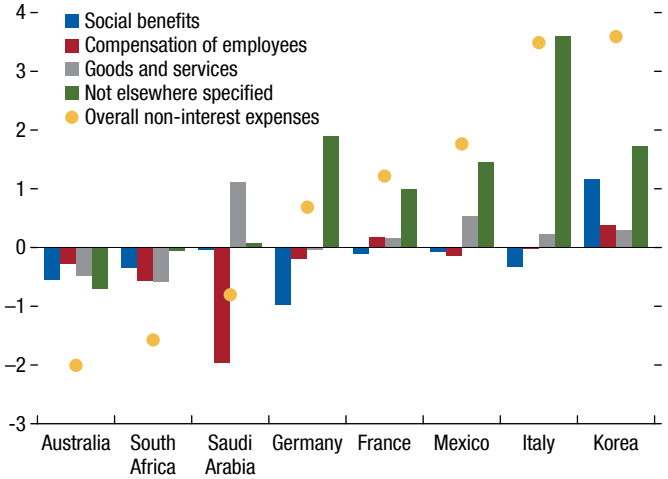
[7]One-off adjustments to pensions or transfers to pensioners were introduced (*Czech Republic*, *Germany*, *Hungary*, *Portugal*, *Sri Lanka*), as well as increases in minimum wages (*Andorra*, *Argentina*, *Türkiye*) and wages for civil servants (*Bosnia and Herzegovina*, *Democratic Republic of Congo*, *France*, *Sri Lanka*).

[8]Fiscal adjustment under very low (close to zero) inflation requires cutting nominal spending and can prove more challenging (Bandeira and other 2018). Moreover, downward wage rigidities also make cutting spending more difficult when inflation is particularly low.

[9]Point estimates suggest that fiscal consolidations during high inflation reduced debt, but the effect was not statistically significant. See Online Annex 1.2 for more details on the methodology and the dataset.

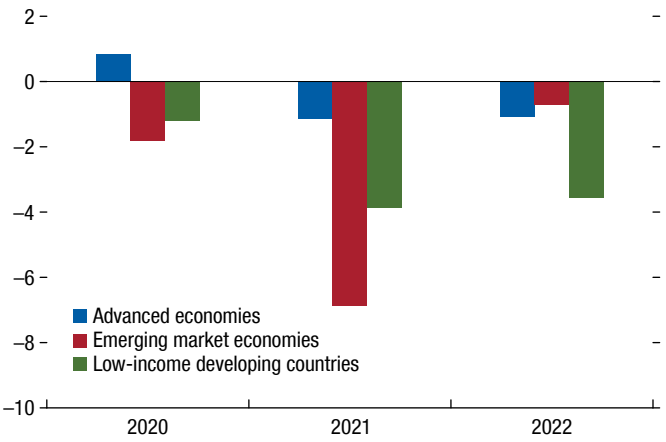
Governments will need to find the right balance between avoiding excessive real cuts in some spending items and achieving an appropriate overall fiscal stance consistent with reducing inflation, deficits, and debt. Clear communication by governments can help to steer the public's expectations and avoid de-anchoring inflation expectations—especially in countries where public wages influence private

Figure 1.13. Inflation Effects on Different Types of Expenditures: Expenditure Forecast Errors
(Percentage points)



Sources: IMF, World Economic Outlook database; and IMF staff calculations.
Note: Figure includes only Group of Twenty countries that report data for all spending categories depicted.Bars report the difference between government expenditure, and its components for 2022, as a share of GDP, in the January 2022 *World Economic Outlook Update*, and those from the April 2023 World Economic Outlook database.

Figure 1.14. Difference in Projected and Actual Real Public Wage Growth
(Percentage points)



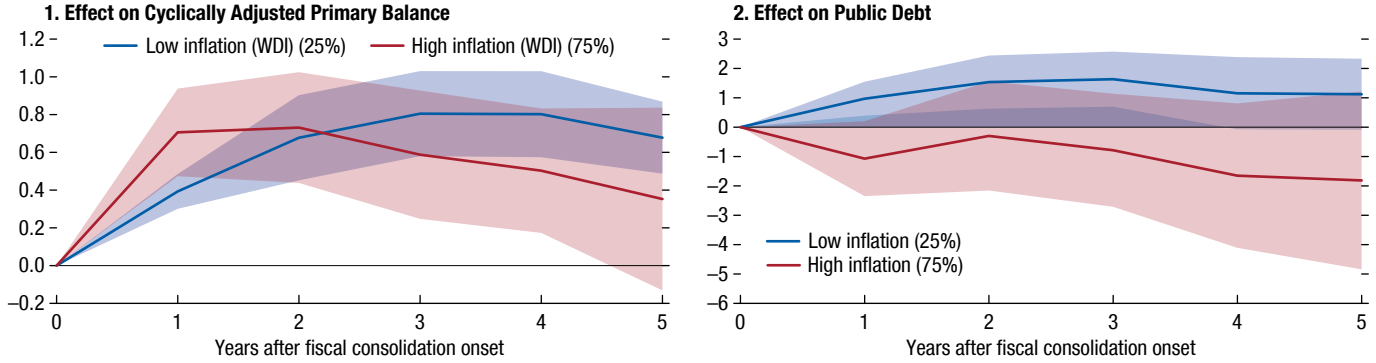
Sources: IMF, World Economic Outlook database; and IMF staff calculations.
Note: Bars plot the difference between the real public wage growth projected in the October 2019 *World Economic Outlook* and actual real public wage growth based on the April 2023 *World Economic Outlook*.

sector wages. Indexing public wages, pensions, and welfare payments may reduce uncertainty and compensate for losses in real incomes (see Chapter 2). However, pervasive indexation can harm public finances and make inflation more persistent—eventually requiring a more disruptive monetary and fiscal tightening.

In general, governments can prepare budgets consistent with inflation targets but incorporate some flexibility to respond to inflation surprises. The degree of real adjustments should be decided in the context of a budget set consistently with broader fiscal goals, while prioritizing different programs, including social benefits for vulnerable households. Automatic indexation of wages to inflation or other variables outside government control may lead to spending increases that are inconsistent with a government's fiscal objectives (IMF 2016). Governments should preferably adopt systematic, rules-based, and regular benefit adjustment regimes that allow for some flexibility. Social benefits should typically be adjusted once a year, but in the current high-inflation environment, applying interim adjustments may be necessary to shield vulnerable households from significant losses in their purchasing power.

Large inflation surprises also complicate choices when governments must comply with expenditure rules. An expenditure rule expressed in nominal terms can imply large cuts in real government expenditures if inflation surprises on the upside. It may in some cases be appropriate to set up a rule this way, especially if reducing inflation requires curbing excess demand pressures, but it may also involve difficult policy choices. Some countries (for example, *Sweden*) already include safety margins in their budgets to

Figure 1.15. Effects of Fiscal Consolidation: High Inflation versus Low Inflation
(Percent of GDP)



Source: IMF staff calculations.
Note: Based on fiscal consolidations in 25 countries (15 advanced economies and 10 emerging market economies) from 1985 to 2016. Fiscal consolidation episodes and sizes are constructed using a news-based narrative approach from DeVries and others (2011), Alesina and others (2013), and David, Guajardo, and Yépez (2022). Coefficients measure the impact of fiscal consolidations on the cyclically adjusted primary balance and debt-to-GDP ratio in low- and high-inflation periods (defined as the 25th and 75th percentiles of Consumer Price Index inflation, respectively) using panel local projection estimations, controlling for two-way fixed effects and lags of real GDP growth and real GDP per capita. Shaded areas denote 90 percent confidence intervals for the respective scenarios. Standard errors are clustered at the country level.

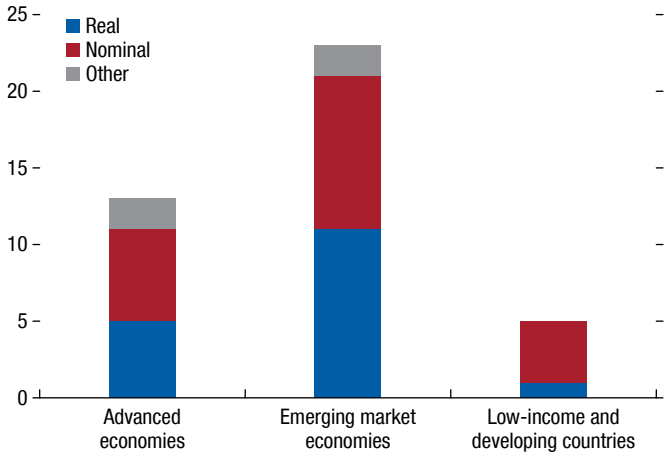
allow for growth and inflation surprises based on historical averages.

If expenditure limits are set in real terms, compliance is not as affected by the level of inflation. However, spending rules set in real terms may also be more complicated and less transparent in terms of how they account for inflation surprises. For example, in some countries, the degree of indexation allowed varies by type of spending, may be done with a lag, and may create space to increase other spending. Moreover, spending rules set in real terms may result in countries fully accommodating inflation surprises, making higher inflation more entrenched. Ceilings on real spending growth are relatively more frequent in emerging market economies than in other groups of economies (Figure 1.16). The 2016 expenditures rule in *Brazil* was set in real terms and is currently being revised. This 2016 rule had set a ceiling on federal government real primary expenditure, with some exclusions, and indicates that nominal expenditure can grow in line with inflation. In *Finland,* the rule sets annual limits to government expenditure for the four-year term of office of the government, with limits set in real terms for primary noncyclical expenditure.

Ultimately, fiscal rules may need to be designed for periods with broadly stable inflation and safety margins used to deal with upside surprises. In the context of the pandemic, countries also took advantage of fiscal rules being suspended or escape clauses being activated to adjust policies flexibly amid the different large shocks they faced.

More generally, as countries return to fiscal rules, it is timely to reflect on how to improve rule-based fiscal frameworks. Such frameworks should be designed with the right balance between having enough flexibility to adjust to shocks and being credible. Key elements of a revamped fiscal framework include feasible and stable medium-term fiscal plans with transparent fiscal anchors, flexibility to respond to shocks, risk-based rules that ensure a path to debt sustainability and buildup of fiscal buffers, and the strengthening of institutions to increase credibility and accountability (more transparency and upgraded independent fiscal councils). Shocks or surprises can then be accommodated within a well-defined framework depending on an assessment of risks and consistent with medium-term debt sustainability (Caselli and others 2022).

Figure 1.16. Number of Countries with Expenditure Rules as of 2022



Sources: IMF, Fiscal Rules Database (2022); and IMF staff calculations.

Ongoing Food and Energy Crises

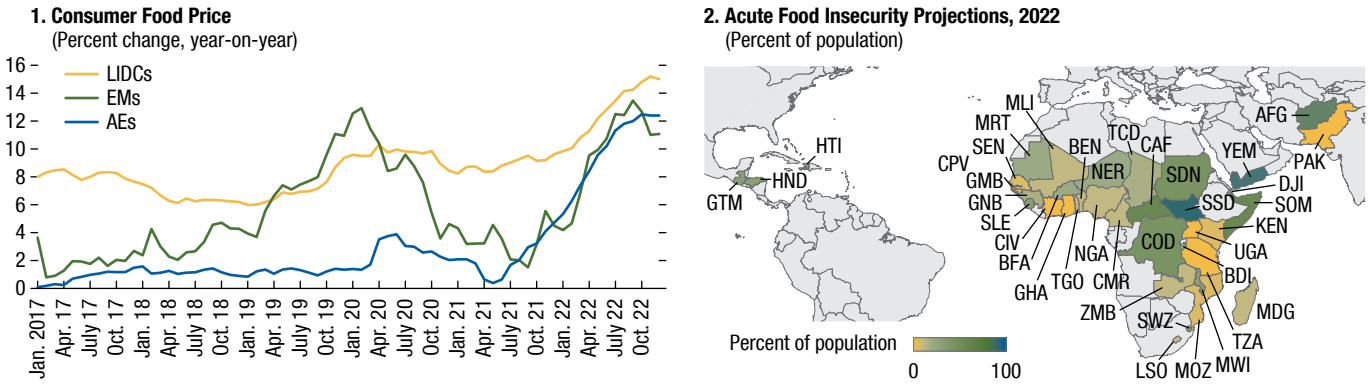
Even as price pressures have subsided, countries have continued to cope with the aftermath of global food and energy price shocks and the high level of uncertainty surrounding the economic outlook and its fiscal implications. Governments have introduced a wide array of measures to mitigate the shocks (Amaglobeli and others 2023), and many of these measures have been extended in 2023.

Tackling Food Insecurity in Low-Income Developing Countries

The war in *Ukraine* has intensified price pressures in global food product markets in a context of already-soaring commodity prices and surging inflation from demand recovery and supply chain disruptions. Although global commodity food prices have fallen from their peak levels in mid-2022, domestic prices continue to be elevated, and the risks to food production will continue to threaten food price stability in 2023. The persistent conflict in *Ukraine* may further disrupt cereal production and prolong overly high costs of fertilizers.

Low-income developing countries continued to suffer the most from persistently high food price inflation throughout the pandemic (Figure 1.17, panel 1). Food accounts for a larger share of household consumption baskets in low-income countries. In addition, high reliance on imported food makes

Figure 1.17. Food Prices and Food Insecurity



Sources: Haver Analytics; Rother and others 2022; and IMF staff calculations.
Note: The map is from Rother and others (2022). Panel 2 includes data for 39 countries. The projection period varies by country between January 2022 and February 2023. See IPC Technical Manual Figure 27 for a detailed description of the classification system. The boundaries, colors, denominations, and any other information shown on the maps do not imply, on the part of the International Monetary Fund, any judgment on the legal status of any territory or any endorsement or acceptance of such boundaries. AEs = advanced economies; EMs = emerging markets; LIDCs = low-income developing countries.

households in low-income countries vulnerable to movements in exchange rates.[10] In many of these countries, high oil prices have exacerbated domestic food price inflation through their impact on transport and food distribution costs.

About 860 million people worldwide were estimated to be malnourished in August 2022, a steep increase from less than 800 million in 2021. Of these, 345 million people were suffering from acute food insecurity. Many live in sub-Saharan Africa, often in fragile and conflict-affected states (FAOSTAT 2023) (Figure 1.17, panel 2). Extreme weather events and conflicts (for example, those in *Chad*, *Somalia*, *Sudan*, and *Yemen* and in the north of *Mozambique*) also contribute to food insecurity by impeding domestic food production. Meanwhile, the coverage and adequacy of social safety nets is weak, and many of the countries most affected also face tight budget constraints. As a result, food insecurity is expected to peak at unprecedented levels in 2023 (World Bank 2023). Recent projections suggest that almost 8 percent of the world's population could still be facing hunger in 2030 (FAO and others 2022).

[10]The global food import bill increased by 10 percent year-over-year in 2022 alone, surpassing historical records (FAO and others 2022). The average import share of total wheat consumption in low-income countries is 80 percent, compared with 50 percent for other importing countries.

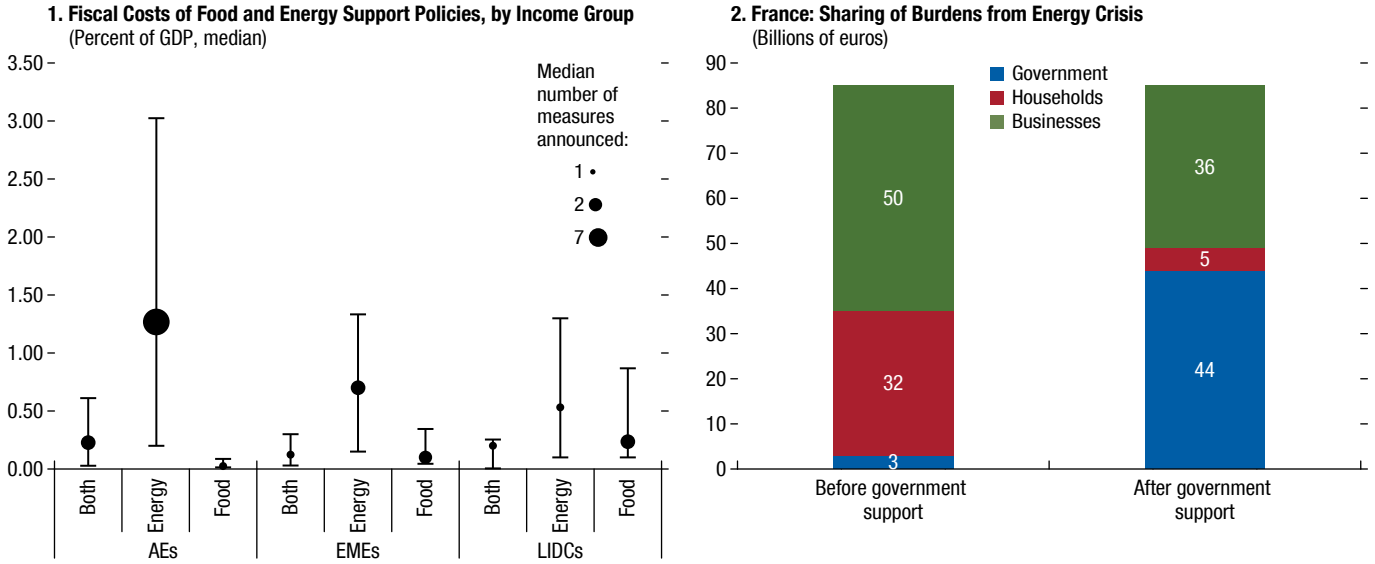
Strong and timely action across countries is necessary to mitigate the food crisis (April 2022 *Fiscal Monitor*). International humanitarian assistance, backed by the full funding of the World Food Programme, is crucial to adequately and swiftly help vulnerable households facing food insecurity. Effective fiscal policy measures at the domestic level should focus on improving social assistance while building resilient public infrastructure to improve poorer households' access to affordable food, facilitate expansion of climate-resilient agricultural production, and support quicker recovery from adverse climate events. The IMF's new food shock window under its Rapid Credit Facility and Rapid Financing Instrument is designed to help member countries fill the balance of payments gap associated with global food price shocks and to support the most vulnerable through feeding programs and cash and in-kind transfers.

From Energy Crisis to Clean Energy Transition

The softening of global energy prices is providing breathing room for governments, but risks remain. Ensuring energy security, while accelerating the green transition, remains a policy priority.

The large volatility in energy prices in the last two years led governments around the world to take measures to protect households. The International Energy Agency estimates global fossil fuel

Figure 1.18. Fiscal Costs of Energy Price Increases



Sources: Updated results of the DEFPA IMF Country Desk Survey from Amaglobeli and others (2023); Direction Générale du Trésor; and Ministry of the Green Transition.
Note: In panel 1, whiskers reflect the 20th and 80th percentiles. Dots reflect the median and the number of policies announced. In panel 2, "Before government support" shows counterfactual sharing of the energy cost burden among economic agents. The projected increase in the energy price for 2022 uses futures price as of August 2022, with France's imported energy mix incorporated. "After government support" shows projected sharing after measures introduced are incorporated. Energy consumption data are from a 2019 survey by Ministry of the Green Transition, and the share is assumed to remain the same. AEs = advanced economies; EMEs = emerging market economies; LIDCs = low-income developing countries.

consumption subsidies doubled from the previous year to an all-time high of $1 trillion.[11] In addition, countries spent an additional 0.5 trillion on other spending measures to help households (more than two-thirds of them in Europe). Countries with existing energy subsidies have faced substantial fiscal costs, which exceeded 2 percent of GDP in 2022 alone for some countries (*Bolivia*, *Cameroon*, *Ecuador*, *Iraq*, *Malaysia*, *Nigeria*, *Uzbekistan*). Newly announced policy measures have encompassed targeted measures (*Argentina*, *Georgia*, *Thailand*) and untargeted measures (*Chile*, *Ecuador*, *Jordan*, *Oman*) to dampen the impact of international prices on domestic prices (Figure 1.18, panel 1). Suppressing price signals through energy subsidies can hamper global energy security by continuing to encourage higher energy demand, pushing energy prices higher for other countries. The focus should be on strengthening social safety nets, including targeted cash transfers, and on measures to promote energy efficiency. Countries also need to accelerate their efforts to transition to renewable energy over time.

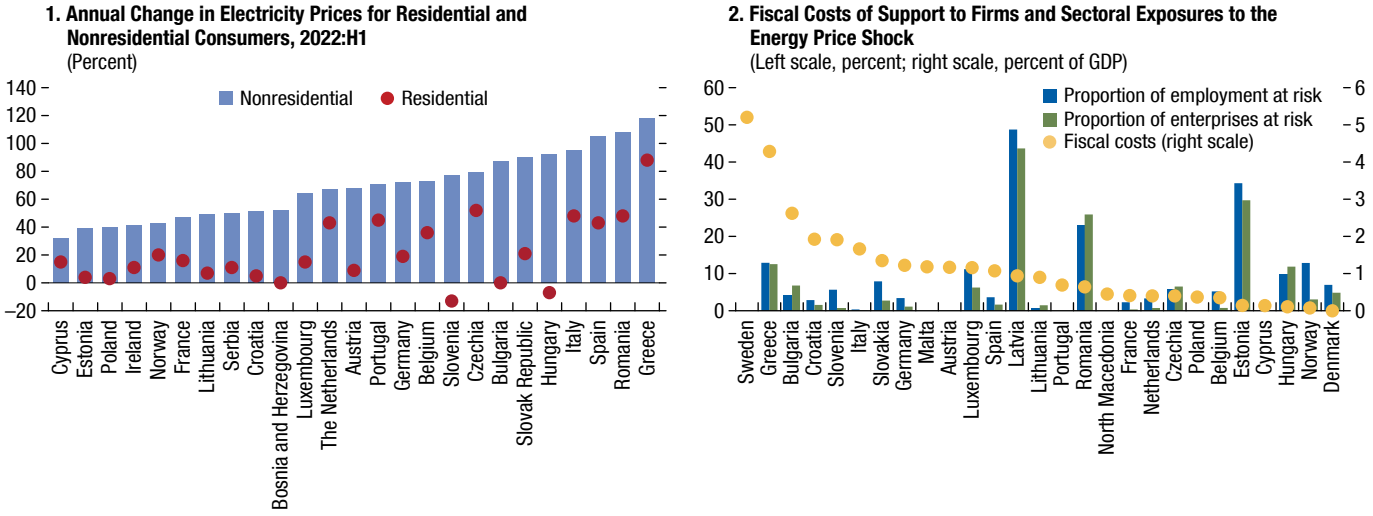
[11]The subsidies are mainly concentrated in emerging market and developing economies, and more than half were in fossil-fuel exporting countries (IEA 2023).

Europe provides a stark example of the effects of the energy crisis, as well as lessons on the effectiveness of policies, as the shock has been particularly severe owing to European countries' reliance on Russian natural gas. Contrary to fears of a large drag on businesses, however, economies in European countries have thus far shown resilience. Energy consumption has fallen—for example, electricity consumption decreased an average of 7 percent across European countries in the fourth quarter of 2022 compared with the same period in 2021,[12] reflecting various factors, including increases in energy prices (which provide incentives for energy efficiency) and unusually warm weather. Major energy supply disruptions, such as power outages and rationing, have largely been avoided. Increases in energy prices have disproportionately affected energy-intensive sectors and firms with low energy efficiency. Manufacturing activity has also slowed in energy-intensive sectors compared with other sectors. But overall, economic activity and labor markets have remained resilient.

The more-benign-than-expected effects of the energy crisis have also reflected significant measures

[12]According to the European Network of Transmission System Operators for Electricity.

Figure 1.19. Impact of Energy Cost Increases for Firms and Fiscal Costs



Sources: Panel 1. Eurostat; Panel 2. Eurostat (bars), Arregui and others 2022 (yellow dots); and IMF staff calculations.
Note: In panel 1, changes are calculated based on annual electricity prices for residential and nonresidential consumers in euros. Panel 2 uses the country-level two-digit NACE2 industry classification for manufacturing and construction sectors. See Online Annex 1.3 for details.

taken by governments, such as procuring alternative sources of energy, as well as shielding—to some degree—households and firms from the steep rise in energy prices. In some cases, governments have shouldered a large share of the fiscal burden, as in the case of *France* (Figure 1.18, panel 2). Fiscal costs related to the energy crises were sizable for all income groups. For European countries, these costs are expected to remain elevated in 2022–23 at an average of 2–3 percent of GDP. The size of the energy bill reflects not only the unusually large shock but also the implementation of broad-based and untargeted measures (for example, intervention in wholesale or retail energy markets and end-user price cuts through value-added taxes and other fees and taxes; see Arregui and others 2022).

Although countries initially directed support mainly to households, over time they have expanded their support for firms, which experienced a larger price shock than households (Figure 1.19, panel 1). Some countries have provided support to ailing energy companies to avoid supply disruptions (*Finland*, *Sweden*). Whereas some countries have supported small and medium enterprises or firms in specific nonenergy sectors (*France*, *Luxembourg*, *Norway*), others have subsidized energy or reduced ad valorem taxes for all firms (*Germany*, *Greece*, *United Kingdom*). A few countries have provided support conditional on efforts to increase energy efficiency (*Bulgaria, Luxembourg*).

One question is whether countries have appropriately designed their support to firms in a way that reflects the size of the shock and potential economic risks (for example, loss of jobs). A cross-country comparison reveals that the fiscal cost of countries' support measures to firms has not been proportionate to countries' exposures to energy price increases (Figure 1.19, panel 2; see also Online Annex 1.3 for details). In addition, the capacity of firms to cope with energy price increases differs from that of households and across sectors. Unlike during the pandemic, when public health measures disrupted normal business operations, firms have margins of adjustment to dampen increases in energy costs. Firms can pass cost increases on to consumers by adjusting prices, reallocating inputs for production, or switching to alternative energy sources (Bialek, Schaffranka, and Schnitzer 2023). Early evidence shows that firms have been adapting to energy price shocks by swiftly increasing investments in energy efficiency and renewable technologies (European Investment Bank and Ipsos Public Affairs 2022; Ifo Institute 2022).

The recent crisis offers some general lessons on the decision of when and how to support firms. In general, allowing energy prices to fluctuate creates incentives

for firms to adjust their energy demand. Moreover, governments can take actions to ensure energy security, including finding additional sources of energy and accelerating transition to renewable energy, and they did so in the recent crisis. But other reasons have also been given to justify government support:

- *Preventing large-scale bankruptcies* to reduce the risk of economic disruption. If firms pass prices through to final products, government measures that temporarily shield firms from price shocks just delay the inevitable transition to renewable sources of energy at a cost to the budget. If governments decide in the face of large shocks to support sectors that are more vulnerable, such support should be temporary and linked with incentives to promote energy efficiency and transition to renewable energy sources.
- *Dampening price pressures in a high-inflation environment*, as passing high energy costs through to final products may have second-round effects and add price pressures. Such an approach assumes the energy shock is short-lived, because it would otherwise risk prolonging the inflation episode. In addition, measures that shield firms from higher energy prices can carry large immediate budgetary costs or contingent liabilities (for example, forcing electricity companies to take the losses).
- *Maintaining the competitiveness of domestic firms,* given the wedge between domestic energy prices and those of international competitors when energy price shocks have uneven global effects. To boost competitiveness in the face of a more persistent shock, government support should focus on productivity-enhancing measures and encourage firms to be energy efficient, rather than providing temporary relief through price-distorting measures.

Policy Conclusions

Fiscal policy has entered a period of normalization, with the priority turning to ensuring a consistent policy mix to deliver price and financial stability and reduce debt vulnerabilities.

Fiscal deficits and public debt ratios have fallen since 2020, and inflation surprises have helped the adjustment of public balance sheets in some countries. But relying on inflation to keep reducing debt is not a sustainable approach, as bondholders would demand higher interest rates to compensate for higher and more volatile inflation. Moreover, deficits and debts generally remain above prepandemic levels, which means that additional fiscal efforts will be needed in the years ahead.

In the present environment of high inflation, rising interest rates, and elevated debt, it is critical that fiscal and monetary policies are aligned to ensure price and financial stability. In many countries, fiscal policy should tighten to help ease inflation pressures, thereby allowing central banks to raise interest rates by less than otherwise (see Chapter 2). Such fiscal restraint should protect priority areas and manage heightened social demands from the cost-of-living crisis amid a slowdown in economic growth. Even so, spending pressures will need to be contained, as different groups may seek to be compensated for past inflation. Full compensation could make inflation more persistent and require additional monetary and fiscal tightening in the future. An overall fiscal tightening that protects the vulnerable through targeted measures can help countries achieve an appropriate policy mix (see Chapter 2).

Given heightened uncertainty, fiscal policy should stand ready to respond in case risks materialize. If elevated inflation proves more persistent, the policy mix will need to remain tighter for longer. Should systemic financial stress arise, fiscal policy may need to intervene swiftly to facilitate the resolution process and minimize its economic costs, while mitigating moral hazard (October 2016 *Fiscal Monitor*). Governance principles, supported by strong insolvency and bankruptcy procedures, should be applied in the decision-making process to safeguard public funds. In the event that economic growth turns out significantly weaker than expected and labor market conditions deteriorate, governments should allow automatic stabilizers to work, especially where inflation is under control and fiscal space is available.

Over the medium term, the challenge will be to reduce debt vulnerabilities and rebuild fiscal buffers. Projections suggest that modest fiscal adjustments will not be enough to prevent a rise in debt in many countries, especially in some large advanced and emerging market economies. Pressure on public sector balance sheets could be exacerbated from support to the private sector in a scenario of heightened financial turbulence. Building a credible medium-term fiscal

framework can guide the process and could include revamped fiscal rules, which many countries are considering (see Box 1.2).[13] In particular,

- Countries can enhance medium-term fiscal frameworks to combine more flexible rules or targets with strengthened institutions. A credible and well-communicated fiscal framework that promotes consistent macroeconomic policies and addresses concerns with debt sustainability will be critical. Interactions between fiscal and monetary policy should be considered, implying a need for fiscal policy to support monetary tightening in view of large inflation surprises.
- Fiscal plans should put a greater emphasis on risk assessment. Medium-term fiscal policy should be anchored by debt sustainability objectives and build up sufficient fiscal buffers over time, consistent with the expanded role of fiscal policy in times of crises. Risk-based frameworks should (1) provide incentives to build up buffers over time, even when there is no immediate high risk of debt distress; (2) prescribe more ambitious fiscal consolidation paths for countries with high debt sustainability risks; and (3) incorporate well-defined escape clauses to allow greater flexibility when countries are hit by shocks.

Low-income countries currently face severe challenges. Increasing revenue collection is necessary to restore fiscal sustainability and help achieve the Sustainable Development Goals. In many countries, tax systems and administration have improved significantly since the early 1990s, with the introduction of value-added taxes, large taxpayer units, and, more recently, electronic filing. However, revenue growth has disappointed in general (Box 1.1), which calls for rethinking tax systems and boosting tax revenues by adopting and implementing medium-term revenue strategies. These should include reducing levels of informality, establishing effective reporting and auditing systems in synergy with digitalization efforts, and improving incentives for tax compliance in a cost-effective manner. Tax policy settings need to be redesigned, revenue agencies reformed, and legal frameworks strengthened to build efficient, equitable, and effective tax policy frameworks.

[13]Two recent IMF staff papers discuss these revamped rules. Davoodi and others (2022) provide an account of recent trends relating to fiscal rules and fiscal councils, and Caselli and others (2022) discuss the return to fiscal rules.

The recent energy crisis has highlighted the need to press ahead with an energy transition consistent with climate goals and energy security. The energy crisis should provide momentum for countries to accelerate a clean energy transition with a faster shift to low-carbon energy (for example, the EU Innovation Fund for demonstrating innovative low-carbon technologies) and more resilient and efficient energy systems.

The COVID-19 pandemic and increased geopolitical tensions have tested international relations and raised questions about the benefits of global integration (Aiyar and others 2023). Now more than ever, however, international cooperation is crucial to tackle these urgent global challenges. Countries should avoid unilateral actions, such as the introduction of export restrictions. Moreover, international cooperation is needed to help highly indebted low-income developing economies. It is urgent to strengthen the international financial architecture, especially in the areas of debt resolution and enhancing the Global Financial Safety Net. The latter is a set of institutions and mechanisms that provide insurance against crises and financing to mitigate their impact. In some cases, a comprehensive approach that encompasses a country's fiscal consolidation efforts as well as debt restructuring—renegotiation of terms of servicing of existing debt—may be necessary.[14]

Regarding the climate agenda, global coordination of carbon pricing, investment in renewable energy, subsidies to promote a green transition, and data transparency and sharing are needed for a number of reasons, among them to avoid trade tensions. International agreements on climate change mitigation and on ensuring financing for the climate transition and adaptation, especially in low-income countries, should be priorities for the global community. Furthermore, international cooperation on taxation, including in the areas of corporate taxation, transparency, and carbon pricing, can encourage necessary investments by mobilizing resources to address common concerns that countries face around the world (April 2022 *Fiscal Monitor*; see also de Mooij, Klemm, and Waerzeggers 2023).

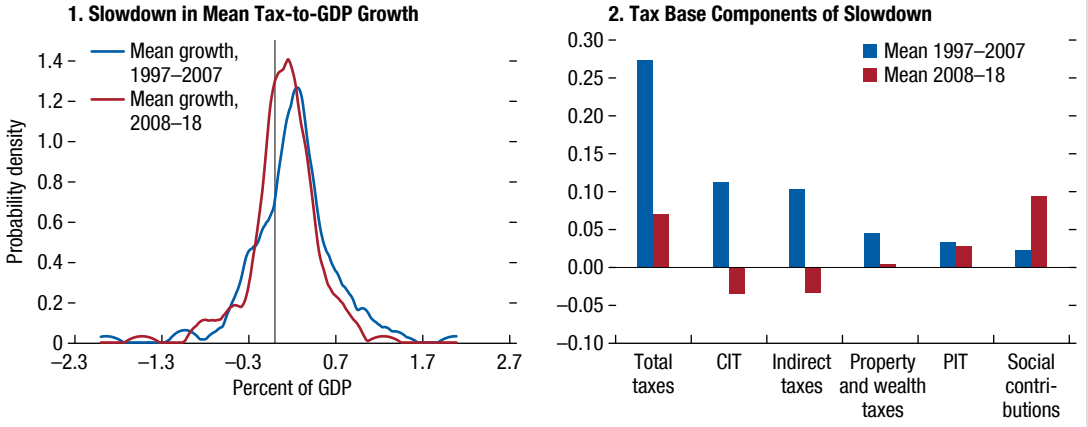
[14]See Chapter 3 of the April 2023 *World Economic Outlook* for a discussion of debt restructuring and the effectiveness of reductions in the face value of debt, particularly, under coordinated and large-scale initiatives for debt reductions such as the G20 Common Framework for highly indebted low-income countries.

Box 1.1. Improving Tax Capacity in Emerging Market and Developing Economies

In the decade before the COVID-19 pandemic, countries made mixed progress in mobilizing domestic revenue, including revenue to fund the Sustainable Development Goals agenda. On average, tax collection in emerging market and developing economies stagnated after the global financial crisis, mostly owing to slow progress in personal income tax collection (against the backdrop of stubbornly large informal sectors), as well as weak corporate income and indirect tax performance (Figures 1.1.1 and 1.1.2).

Difficulties in implementing the significant transformations in emerging market and developing economies over the past 30 years can partly account for the slower progress in mobilizing revenues. Since the 1990s, a number of countries have reshaped their tax systems, changing both their tax policies—by introducing value-added taxes, for instance—and their tax administration practices—by segmenting taxpayers according to risk, including by establishing large taxpayer units (see Online Annex 1.1) and initiating the expansion of electronic services. Emerging market and developing economies that established large taxpayer units are found to have increased their total-tax-to-GDP ratios from 0.5 percent of GDP to as much as 3.6 percent of GDP after about two decades of the units' operations. As reform waves have abated, however, translating new tax systems into higher tax collection has often been undermined by unstable political leadership and frequent staff turnover, inadequate human and financial resources, and the lack of a comprehensive vision of tax capacity as part of state capacity (Gaspar, Jaramillo, and Wingender 2016).

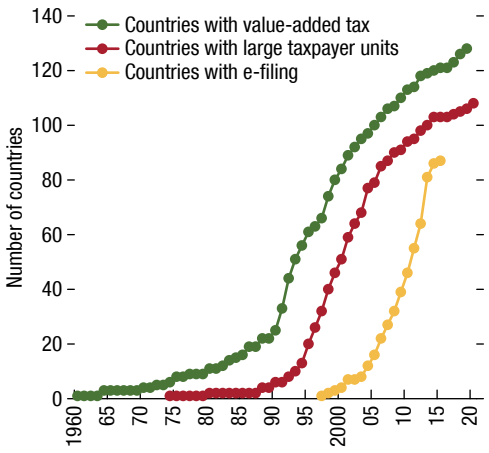
Figure 1.1.1. Low Growth in Tax Revenues and Its Drivers



Sources: Bachas and others 2022; and IMF staff calculations.
Note: In panel 1, *x*-axis is percent of GDP, *y*-axis is the density. In panel 2, bars reflect decade average of year fixed effects in a panel regression of the yearly change in the tax-to-GDP ratio on year and country fixed effects, with each country weighted by its share of GDP in the same year. CIT = corporate income tax; PIT = personal income tax.

Box 1.1 *(continued)*

Figure 1.1.2. Tax Reform Waves in Emerging Market and Developing Economies



Sources: Bachas, Fattal Jaef, and Jensen 2019; International Survey on Revenue Administration; Organisation for Economic Co-operation and Development; World Bank; and IMF staff calculations.

Climate change, aging, digitalization, and the increasing international activity of taxpayers highlight the importance of building skilled and responsive administrations that can meet complex challenges. One such comprehensive approach to reform is to adopt a medium-term revenue strategy. Currently, 26 countries are engaging with such strategies. The experiences of *Papua New Guinea* and *Uganda*, among the earliest adopters, show the importance of seeking broad consensus with civil society and ensuring cooperation across all parts of government.

Box 1.2. Revamping Fiscal Rules and Fiscal Frameworks

Many countries are considering reforming their fiscal frameworks as they emerge from the COVID-19 pandemic. The global health and economic crisis stemming from the pandemic led to a fiscal response of unprecedented magnitude worldwide, with many countries activating escape clauses or suspending their fiscal rules to create flexibility. Now countries need to decide whether to return to fiscal rules and, if so, how fast and which ones.

The European Union's extension of its escape clause until 2023 provides a window of opportunity to reform the union's fiscal governance framework. The European Commission's reform guidance, published in November 2022, aims to simplify the current framework by reducing the number of indicators and rules.[1] It proposes a move toward a risk-based framework centered on comprehensive debt sustainability analysis, binding multi-annual fiscal plans, and the introduction of a single operational tool focused on (net primary) expenditures. Countries would be required to ensure that debt is on a plausible debt reduction path at the end of a four-year and seven-year adjustment period for countries with "substantial" and "moderate" debt challenges, respectively. The proposal also creates incentives for investment and reforms that enhance sustainable growth and address common EU priorities (by postponing the debt reduction requirement) and recognizes the need to improve compliance by strengthening national ownership through a greater role for national fiscal councils, in addition to enhancing "smart" ex post enforcement.

A number of other countries have initiated reforms of their fiscal frameworks as their situations have continued to normalize. After a two-year suspension of its fiscal rule in 2020–21, *Colombia* enhanced its fiscal framework in 2021 by outlining a transition path toward a structural primary balance rule with a new debt anchor and by introducing an autonomous fiscal rule oversight committee (the *Comité Autónomo de la Regla Fiscal*). *Uruguay* introduced an expenditure rule in 2020 as a new pillar of its fiscal framework and established a committee of experts and advisory council. Also in 2020, *Ecuador* revised its expenditure rule and introduced new rules regarding budget balance and debt that reflect its updated medium-term fiscal strategy. In 2022, *Chile* introduced a new debt sustainability objective and escape clause applicable only after 2026 to signal commitment to a gradual fiscal consolidation path. Several other countries have transitioned to a rules-based fiscal responsibility framework in the aftermath of COVID-19. *Antigua and Barbuda* adopted expenditure, revenue, and debt rules in 2021. Also in 2021, *Dominica* established a debt ceiling of 60 percent of GDP, to be achieved by 2035, and set a primary balance rule of maintaining a primary surplus of 2 percent of GDP in all years when debt exceeds 60 percent. Discussions surrounding fiscal framework reform are ongoing in many more countries.

[1]For instance, the revised framework would eliminate the procedure for significant deviation from the medium-term objective for the structural balance, as well as the one-twentieth debt reduction rule, which currently implies an unrealistic pace of debt reduction for many countries.

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CHAPTER 2

INFLATION AND DISINFLATION: WHAT ROLE FOR FISCAL POLICY?

Introduction

The upsurge in inflation that began in 2021—the sharpest in more than three decades—has affected fiscal accounts, worsened poverty, and altered the distribution of households' well-being, calling on policymakers to respond. This chapter analyzes these developments and explores how fiscal policy can do its part to curb inflation while supporting the vulnerable.[1]

Most people strongly dislike high and variable inflation,[2] which causes many distortions in the economy (Agarwal and Kimball 2022), including greater uncertainty. Relative prices of goods and services may become blurred—no longer reflecting relative demand and supply conditions and making everyday decisions about consumption, investment, and production decisions harder for households, financiers, and firms. Inflation is more likely to become persistent if, akin to a tug-of-war, each group in the economy—employers and workers, producers and consumers, and retailers and their suppliers—tries to hold on to its share of prosperity at the expense of others. If such social tensions lead to inconsistent macroeconomic policies (for example, monetary policy that is too loose), high inflation will persist longer, ultimately prolonging a costly phenomenon for everyone.

Inflation often leads to a rise in poverty from loss of purchasing power (Cardoso 1992), and, as with any adversity, poor families tend to suffer disproportionately more because they consume more as share of their income and they lack buffers in the form of accumulated savings. But the distributive effects of inflation stemming from its uneven impacts on the budgets of different households are far more complex. In turn, these depend on various factors, including the source of price increases (for example, food or energy prices) and their form (demand, or wage push); households' consumption baskets, sources of income, and the size and composition of their balance sheets (for example, their position as net borrowers or lenders); and policy design and responses (such as indexation of wages, pensions, and social safety nets). Government policies need to be informed by an understanding of how inflation affects various groups in society. Greater availability of household data makes it possible to analyze how big those effects are, which channels affect them, and how they vary across households.[3]

The impact of inflation on the fiscal accounts also depends on redistribution—in this case, between the public sector and the private sector. An unexpected bout of inflation erodes the real (inflation-adjusted) value of public debt, at least in the near term, with bondholders bearing the loss. Likewise, deficit-to-GDP ratios decline because the nominal (current monetary) values of the economy's output and of tax bases will generally rise, generating more revenues, while spending—often set in nominal terms in the budget—initially fails to keep up. Without indexation, real incomes decline for civil servants, pensioners, and recipients of welfare transfers. The quality of public services may also suffer as nominal spending ceilings clash with higher costs of goods and services. The early decline in deficits as a share of GDP may not last over the medium term; yet, as inflation becomes expected, spending catches up, and the cost of borrowing rises as investors require an inflation risk premium

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[1]Although the spike in prices during 2021–22 was initially concentrated in food and energy, this chapter discusses inflation more generally as a sustained rise in the prices of many goods and services, which may originate from different sources. The analysis measures inflation using the Consumer Price Index (CPI), complementing it with the GDP deflator in specific exercises. For recent developments on the relationship between inflation and public finances, see also Chapter 1.

[2]See survey results in Shiller (1997), Scheve (2001), and Prati (2022).

[3]Empirical analyses of historical episodes have been constrained by limited availability of comparable data. A study based on surveys of overall incomes of households in *Israel* with at least one employee, for the period 1950–91 (including the hyperinflation of the mid-1980s), reports evidence of a statistically significant correlation between inflation and inequality in incomes (Dahan 1996).

and central bank policy rates are hiked. Initial fiscal gains may even be reversed in some cases, notably if growth falters.

High and volatile inflation thus makes fiscal management more challenging, potentially undermining the credibility of economic institutions and of the fiscal framework. Fiscal planning and budget preparation become more complex not only because of uncertainty regarding prices, wages, and interest rates but also because the overall fiscal stance affects inflation through aggregate demand and through inflation expectations (Coibion, Gorodnichenko, and Weber 2021).

Governments can influence how the costs of inflation are allocated, via indexation or discretionary policy decisions. They could choose, for example, to let inflation quietly increase taxation while eroding public pensions, wages, and transfers or instead seek to keep the real values of these variables unchanged. They could also make the tax or transfer more or less progressive by adjusting some items but not others. Further complicating policymakers' task, widespread indexation of public wages and other expenditure items would entrench inflation expectations and make inflation more persistent. Such anticipation of inflation makes price stability harder to achieve. Similarly, if untargeted support outlasts spikes in energy prices or other prices that originally motivated it, fiscal costs and contributions to aggregate demand would be unnecessarily prolonged (October 2022 *Fiscal Monitor*, Chapter 1). High inflation can lead to policy mistakes that may ultimately hamper investment and economic growth, whereas price stability helps all individuals in the economy.

Against this backdrop, it is timely to review what we know about these variegated interactions between inflation and fiscal variables and draw lessons for the conduct of fiscal policy. The chapter analyzes the following questions:

- *How does inflation affect fiscal accounts? And how do the effects depend on institutional features of the tax and benefit system, such as indexation?* The section "Impact of Inflation on Public Finances" reviews the mechanisms through which inflation affects public finance; surveys indexation practices across the world; and estimates the impact of inflation on public debts, deficits, expenditures, and revenues in the near and medium term.
- *How large are the distributive effects of inflation across households in countries at different levels of economic and financial development, and what is the role of fiscal policy?* The section "Distributive Effects of Inflation and Fiscal Policy Support" analyzes the impact of inflation on poverty and the distribution of consumption, income, and net wealth, using household surveys for six countries at different levels of economic and financial development.
- *What is the role of fiscal policy in the efforts to promote price stability?* The section "Disinflating and Distributing" estimates the impact of fiscal policy on inflation through aggregate demand. Using model simulations that allow for distributive effects, it explores how fiscal policy can support monetary policy to curb inflation while protecting vulnerable households.

The conclusion summarizes the chapter's policy implications.

Impact of Inflation on Public Finances

Inflation can affect fiscal aggregates through multiple channels, with varying effects over time (Dynan 2022; US CBO 2022a).

Direct Channels of Impact

The main direct channels through which inflation affects public finances, abstracting from subsequent fiscal and monetary policy reactions, are listed below and sketched out in the Executive Summary.

- *Inflated nominal values for GDP and the tax base.* Higher nominal output lowers debt and deficits as a share of GDP. The nominal tax base also grows with inflation. For example, more revenues from value-added taxes are collected as the prices of underlying goods and services go up. For some taxes, such as income taxes, revenues may increase even more than one-for-one with inflation, including because some taxpayers may jump over nominal thresholds to higher tax brackets (*bracket creep*).[4] These effects also depend on the degree of

[4]Beer, Griffiths, and Klemm (2023) analyze further channels through which inflation affects the real value of collected tax revenues, including the erosion of such revenues if inflation is high and they are collected with a lag (Tanzi 1977).

indexation (in this case, of thresholds), discussed later in the chapter.

- *Inertia in nominal spending*. The net response of the fiscal balances to inflation depends on whether expenditure keeps pace with revenues. During the budget year, this is seldom the case because spending caps are usually set in nominal terms, although indexation of some important items such as public wages and transfers may lead in some cases to automatic adjustments to inflation in the same year. Ad hoc adjustments or new measures such as introduction or enhancement of subsidies (for example, in response to higher food or energy prices) can also speed up the rise in nominal spending.
- *Sovereign debt size and structure, and investors' response.* The larger the debt, the greater the potential erosion from inflation. This effect is attenuated, however, if a portion of the debt is inflation-linked (as inflation automatically leads to higher borrowing costs), is denominated in foreign currency (as inflation leads to depreciation, potentially resulting in higher repayments when expressed in domestic currency), has a floating rate (as inflation prompts higher policy, and hence higher short-term benchmark rates), or has a greater share of short-term bonds that are maturing and need to be rolled over (as investors will ask for higher rates on newly issued bonds). When governments issue new debt, investors may require higher returns to compensate not only for expected inflation but also for higher inflation volatility (an inflation risk premium)—and, for countries where economic prospects are uncertain and the debt ratio remains high or keeps rising, a default premium.

International Practices with Inflation Indexation

Countries' practices vary regarding how much tax or budget items are indexed to inflation or adjusted to inflation by policy measures. This has consequences for how their public finances evolve in the face of inflation surprises. Indexation of politically salient expenditure items such as pensions or wages is often a prominent topic in public discourse. The effects on the revenue side, while less discussed, are no less relevant. If income tax thresholds are not adjusted to inflation, for example, taxpayers may be pushed into higher tax brackets (*bracket creep*), or the value of their tax allowances and deductions may be eroded.

The degree of indexation involves trade-offs. On one hand, indexing public wages, pensions, or welfare transfers reduces uncertainty and preserves purchasing power for civil servants, retirees, and low-income households. It may also prevent distortionary gaps between public and private wages or a possible brain drain from the public sector. On the other hand, indexation sustains real expenditures, contributing to aggregate demand and potentially making inflation more persistent. If public wages are a benchmark for private wages (as in many countries), indexation of public wages could prolong wage and inflationary pressures (Box 2.1). Widespread indexation can limit the scope for discretionary cuts.

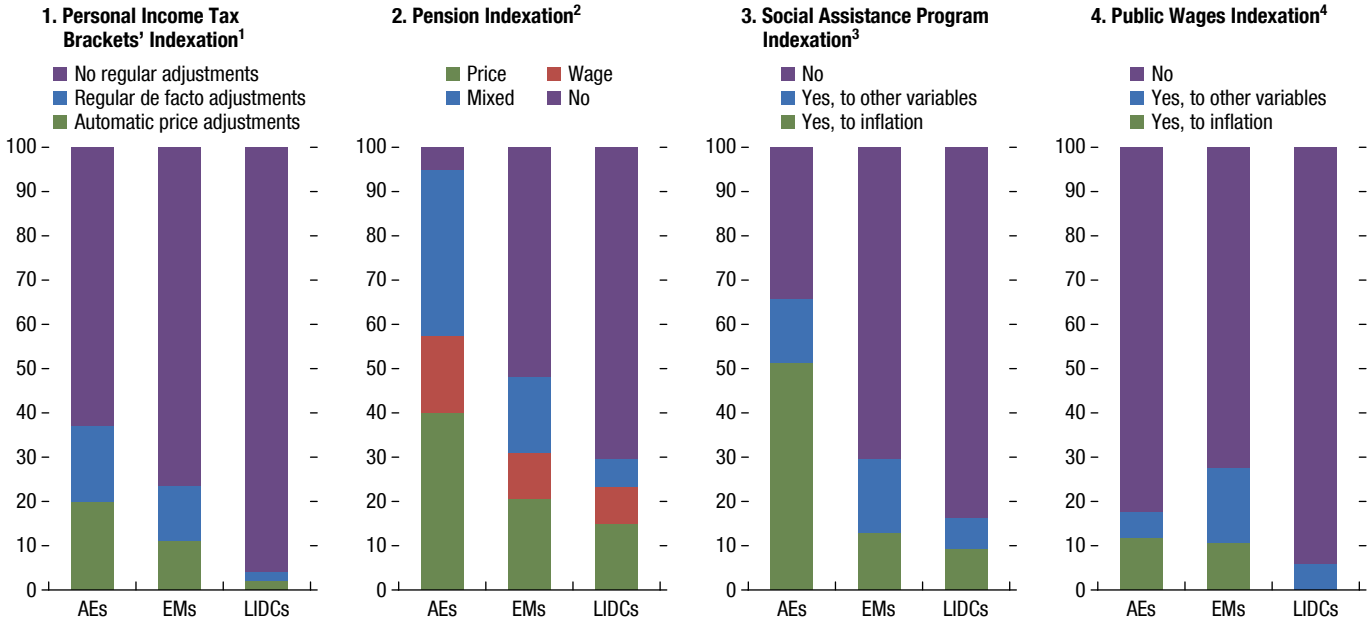
Countries have taken different approaches to indexation policies (Figure 2.1). A minority of countries index or regularly adjust their income tax rate brackets to minimize *bracket creep*.

Indexation is more common for some important expenditure items, especially pensions. Nearly all advanced economies, about 50 percent of emerging market economies, and 30 percent of low-income developing countries have some form of indexation. Pension indexation has become more prevalent recently, but many countries have made it less generous to reduce the burden on the budget and safeguard the sustainability of pension systems (OECD 2022a). Countries have moved from wage indexation toward price indexation as nominal wage increases have tended to exceed price inflation in the past, reflecting productivity gains.[5] Many countries further index their social assistance programs, with around half of advanced economies linking several of their benefits to inflation (OECD 2022c). By contrast, most countries do not index public wages to inflation—a practice that has become less prevalent in recent decades, perhaps because inflation had been low. But the pressure to index wages may return if high inflation persists (Suthaharan and Bleakley 2022).[6]

[5]In 2022, such a strategy may have been costlier than predicted given that inflation rose faster than nominal wages (OECD 2022d).

[6]For public wages, their increases in most countries tend to be related to the political cycle rather than to indexation (Gaspar, Gupta, and Mulas-Granados 2017).

Figure 2.1. Indexation Policies Vary across the World and across Budget Items
(Percentage of countries in each income group)



Sources: IMF staff analysis based on an IMF survey and using additional data from Beer, Griffiths, and Klemm (2023); IMF Pay Systems database (2016); International Social Security Association database; OECD (2022c); and US Social Security Administration databases.
Note: Panels include data for 2016–23. Observations vary from 116 to 176 countries in each panel (see Online Annex 2.1 for details). Price indexation includes different measures of inflation, for example, "core," or measures that include only urban workers or exclude fuel, tobacco, alcohol, and others. Even with automatic indexation, discretionary approval stages may be part of the framework that result in ad hoc adjustments. AEs = advanced economies; EMs = emerging market economies; LIDCs = low-income developing countries.
[1]"Regular de facto adjustments" means that personal income tax thresholds are regularly revised but not automatically.
[2]"Mixed" indexation refers to an adjustment that includes a mix of price, wages, and other variables.
[3]Social assistance programs include major fixed cash transfer programs. "Yes" means that majority of benefits are indexed in the country.
[4]"No" means that inflation does not play an automatic or mandatory role in the setting of public wages. Indexation includes both partial and full indexation.

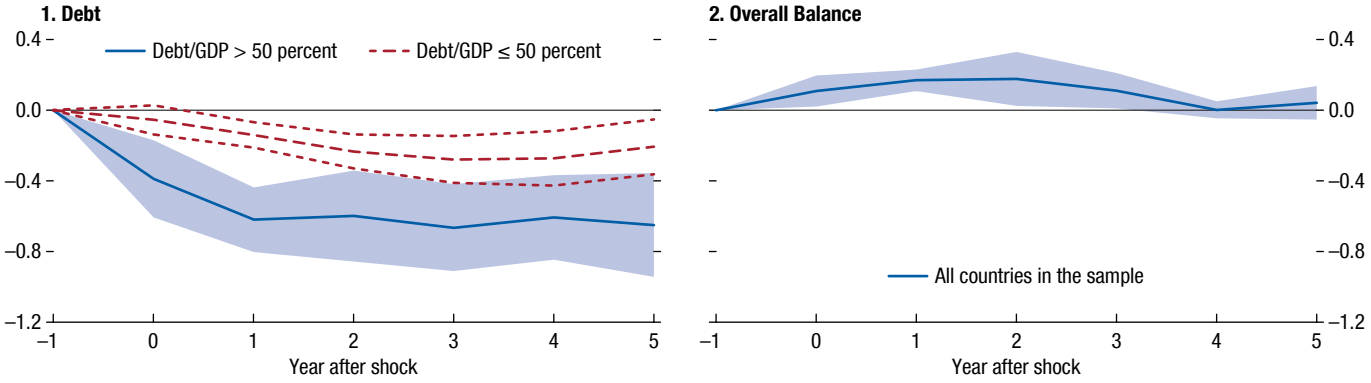
Effects of Inflation on Public Finances over the Medium Term

Inflation surprises often improve debt and budget balances in the near term, but are these gains maintained over the medium term? To answer this question, the chapter employs both quarterly and annual data.[7] The effects of inflation on public finance could ebb over time for three main reasons. First, public spending could catch up with revenues through indexation. Second, public policies and decisions, including for wages or pensions, could lead to higher spending over time, reducing any initial gains for public finance indicators. Third, most central banks have the statutory objective of maintaining price stability, using adjustments in their policy rates to do so, which may lead to a tightening of financial conditions for agents in the economy, including the government. Even so, the adjustment of interest expense may be gradual if the structure of public debt is mostly in its own currency and in long maturities and if the country's monetary authority has a reputation for maintaining price stability. In such cases, exchange rate risks may be muted and market expectations well anchored. A debt structure with longer maturities will facilitate less pass-through of interest rates to increases in public interest payments in the medium term.

Analysis using historical annual data (1962–2019) for 85 economies shows that, on average, spikes in

[7]Recent attempts to answer this question have used different methods, including event studies (Blanco, Ottonello, and Ranosova 2022), model-based simulations (Bénassy-Quéré 2022), and surprises in *World Economic Outlook* forecasts (October 2022 *Fiscal Monitor*, Chapter 1). The US Congressional Budget Office's 2002 workbook allows users to simulate alternative economic scenarios by specifying different values for inflation (and three other economic variables) for the *United States*, comparing them to its baseline projections (US CBO 2022b). The estimates in this section use the local projection method (Jordà 2005). The annual historical data include many more (emerging market) economies, allowing the research of samples where inflation is higher, more volatile, and less surprising (more persistent). Quarterly data provide more accurate estimates of the immediate effects of CPI inflation on fiscal variables. See Online Annex 2.2.

Figure 2.2. Reaction to a 1 Percentage Point Growth Spike in the GDP Deflator
(Percent of GDP)



Source: IMF staff estimates using data from the IMF Public Finances in Modern History and World Economic Outlook databases.
Note: The data cover the period 1962–2019. Fixed effects ordinary least squares regressions use the GDP deflator as the inflation indicator and include 85 countries. Countries with populations of less than 1 million in 2019 are excluded as well as observations with annual GDP deflator inflation higher than 30 percent in absolute terms or for which the original data source changes. The panels plot the average impulse response and the 90 percent confidence bands, with standard errors clustered at the country level. Average debt to GDP in the sample is approximately 50 percent. See Online Annex 2.2.

the growth of the GDP deflator tend to reduce the debt-to-GDP ratio persistently (Figure 2.2).[8] The drop in the debt-to-GDP ratio is larger in economies with higher initial debt, as expected, with an initial spike of 1 percentage point in the growth of the GDP deflator[9] associated with a persistent cumulative decline in the debt ratio of 0.6 percentage point of GDP (see also Chapter 1 for recent developments on the relationship between inflation and debt). The reduction in the debt ratio is caused by a hike in the GDP denominator and an initial rise in fiscal balances. The debt and fiscal balance reactions to a spike in the growth of the GDP deflator are similar between advanced and emerging market economies. Yet the drop in debt is significantly smaller in countries with flexible exchange rates, as in those countries, inflation tends to be associated with exchange rate depreciation, increasing the value of foreign-currency-denominated debt relative to domestic GDP (see Online Annex 2.2).

Whereas unexpected spikes in inflation reduce the debt ratio, increases in inflation *expectations* do not. The latter are associated with a faster rise in both primary spending and interest expense, and a smaller increase in the nominal GDP denominator. The difference in the effects of surprise versus expected inflation is larger for countries with high initial debt levels (Figure 2.3). Both results underscore that attempting to inflate public debt away is neither a desirable nor a sustainable strategy. If inflation surprises frequently, agents will adjust their inflation expectations accordingly and demand protection against it, leading to higher spreads owing to the inflation risk.

Estimates using quarterly data from the first quarter of 1999 to the fourth quarter of 2019 for 28 advanced economies confirm that CPI inflation spikes tended to improve the overall and primary fiscal balances in the short term (Figure 2.4).[10] High-frequency data capture the immediate effects of inflation on public

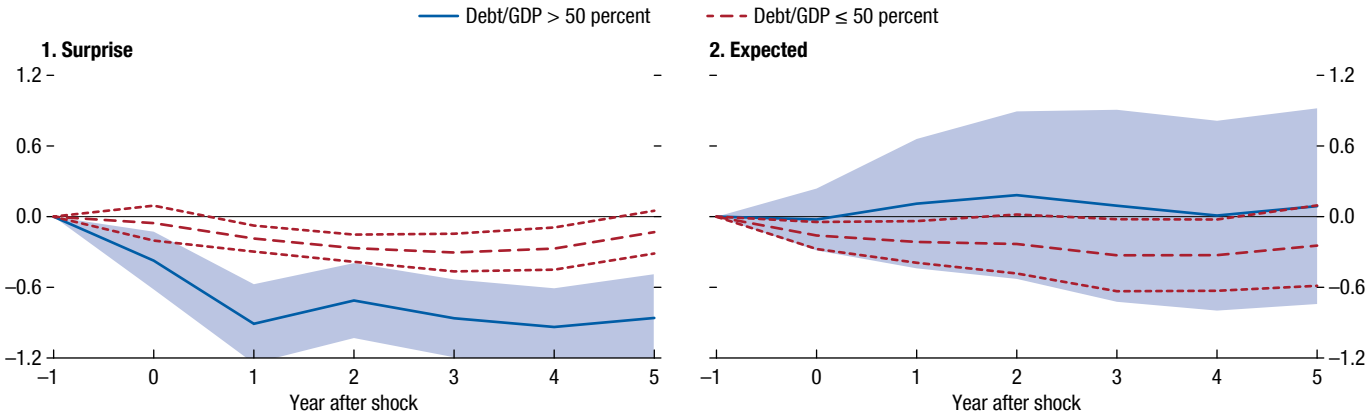
[8]The result is qualitatively robust to the use of CPI inflation. To capture inflation from all sources, the estimates employ ordinary least squares regressions (panels with fixed effects). The analysis excludes countries with 2019 population of less than 1 million.

[9]Throughout the chapter, a "spike" in inflation refers to a sudden rise in inflation followed by a gradual decline. Specifically, when using annual data, a spike is a 1 percentage point increase in the GDP deflator growth rate, followed by gradual decline in subsequent years (see Online Annex Figure 2.2.1). When using quarterly data, the spike in CPI inflation stems from a 1 percentage point increase in commodity import inflation (weighted by GDP), with CPI inflation petering out after three quarters (see Figure 2.4, panel 1).

[10]Regressions with quarterly data are estimated using instrumental variables. CPI inflation spikes are instrumented by the change in the price growth of the commodity import basket, also interacted with an exchange rate peg dummy (lagged). Commodity price spikes tend to be more surprising and tend to pass through to prices of various goods and services (see Choi and others 2018). The correlation is clear for countries with more flexible exchange rate regimes. For these countries, commodity import price rises tend to lead to exchange rate depreciations and so to more inflation. This approach implies that results capture mainly the impact of imported inflation shocks, which may differ from domestically driven shocks affecting the GDP deflator more directly. See Online Annex 2.2 for details.

Figure 2.3. Debt Reaction to Surprise versus Expected Growth Spikes in the GDP Deflator

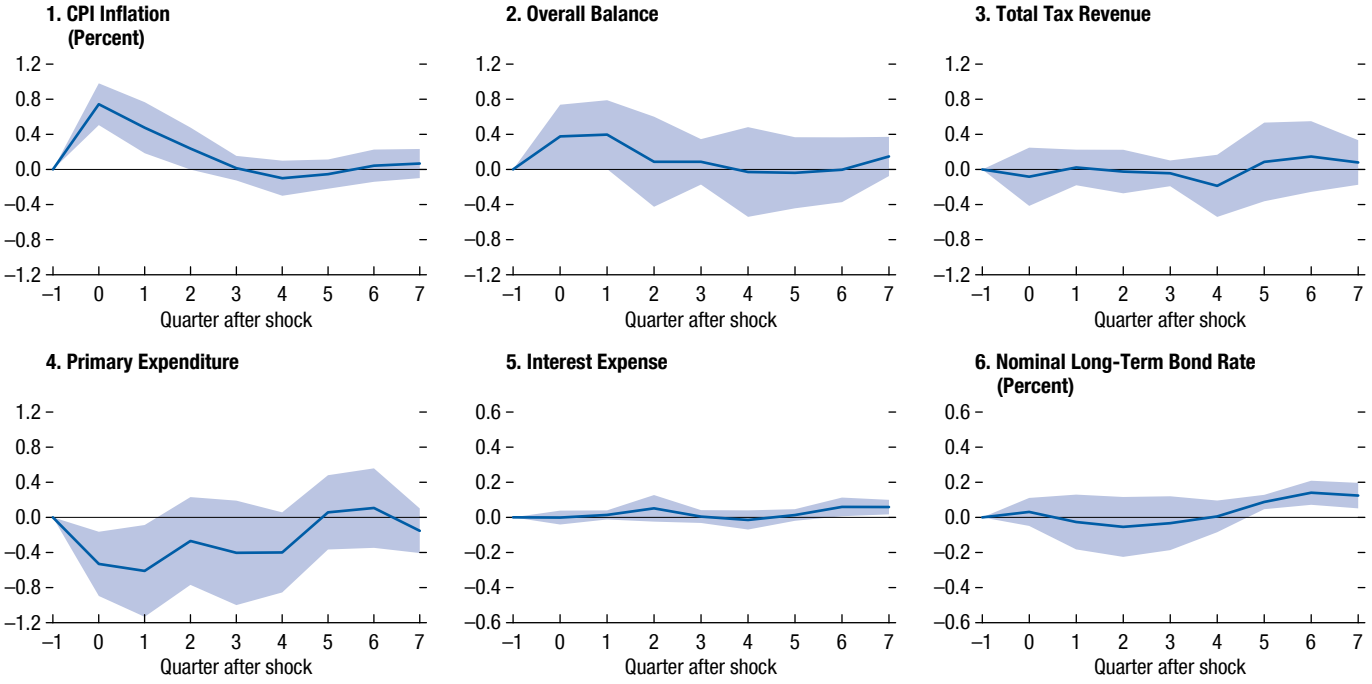
(Percent of GDP)



Source: IMF staff estimates using data from the IMF Public Finances in Modern History and World Economic Outlook databases.
Note: Fixed effects ordinary least squares regressions include 85 countries during the period with available data 1992–2019. Countries with population of less than 1 million in 2019 are excluded as well as observations with annual surprise or expected inflation higher than 30 percent in absolute terms or for which the original data source changes. Expected inflation is defined as the one-year-ahead forecast; surprise inflation is realized minus expected inflation. The panels plot the average impulse response and the 90 percent confidence bands (blue shaded areas and red short-dashed lines), with standard errors clustered at the country level. See Online Annex 2.2 for details.

Figure 2.4. Estimated Initial Gains to Fiscal Balances from CPI Inflation Spikes

(Percent of GDP, unless stated otherwise)



Sources: IMF staff estimates using data from Gruss and Kebhaj (2019); Ilzetzki, Reinhart, and Rogoff (2019); and IMF International Financial Statistics and World Economic Outlook databases.
Note: Regressions are estimated between the first quarter of 1999 and the fourth quarter of 2019 using instrumental variables and control for quarter indicator variables and country and year fixed effects (fixed effects two-stage least squares). The panels plot the average impulse response and the 90 percent confidence bands (blue shaded area) with standard errors clustered at the country level. See Online Annex 2.2 for details. CPI = Consumer Price Index.

finance before policies have time to react. The findings suggest that for each 1 percentage point initial increase in inflation, budget balances go up by 0.5 percent of GDP. Revenue broadly rises in line with nominal GDP, whereas primary expenditures tend to be stable in nominal terms in initial quarters. Interest expense climbs gradually over time given that debt in the sample features mainly fixed rates and long maturities, slowing the pickup in effective nominal rates of public bonds.

The quarterly data further enable empirical exercises for budget subcomponents, revealing different patterns among them (see Online Annex 2.2). While total tax revenue in nominal terms grows by about the same magnitude as inflation, some items (profit and income taxes) rise proportionally more. On the expenditure side, some expenditure categories are sticky, especially compensation of employees and social benefits. Over time, automatic or de facto indexation brings those expenditures back to their initial levels in real terms.

Distributive Effects of Inflation and Fiscal Policy Support

Beyond the overall impact of inflation on the fiscal accounts, analyzing the effects of inflation on the distribution of households' well-being is key to understanding how policies, including social protection, can be designed to take such effects into consideration. Such an analysis can also be useful for exploring the political feasibility of other policies or reforms by identifying potential pressure points (relative winners and losers among those who stand to gain or lose from inflation). As the discussion that follows shows, for example, the impact of inflation in countries with sizable mortgage markets is more adverse—as a share of household income—for those older than age 65 (usually net holders of nominal assets) than for people in their 30s to 40s (who often have mortgage debt outstanding). When considering the design, timing, and preparatory work for reforms to pensions or health care, it would be helpful to consider that inflation is already placing a burden on the households and groups that would be more affected. This section uses household-level data for distinct countries and economic groups to examine such distributive effects.

Channels for Distributive Effects of Inflation across Households

Inflation affects the distribution of households' well-being through three main channels:[11]

- *Differences in price increases across goods combined with differing consumption patterns (consumption basket channel).* If the prices of some goods rise more than those of others, households with a higher share of higher-priced goods in their consumption baskets will suffer more. For example, spikes in food prices may hurt the consumption of the poor more than other households because food constitutes a larger share of consumption (and income) for the poor (Baez Ramirez, Inan, and Nebiler 2021). If inflation becomes equally widespread across goods and services, this differential effect abates.
- *Impact on households' real incomes (income channel).* Real incomes may be significantly eroded if wages, pensions, or other transfers do not keep pace with inflation. The extent and distribution of such erosion depends not only on features of the labor market and pension or transfer systems but also on the source of price changes. During the price surge of 2021, which was driven by commodity prices, for example, real wages fell in most commodity-importing countries but rose in some commodity-exporting countries. In some historical episodes during which inflation originated from a worker-led push for compensation, real wages may have risen.[12] Moreover, if price and wage changes stem from the sudden emergence of imbalances in demand and supply for certain sectors or skills, some workers may benefit (or be harmed) disproportionately. Likewise, wage and pension indexation may serve some workers or retirees to the detriment of others (Süssmuth and Wieschemeyer 2022).
- *Impact on the real value of households' initial stock of assets and liabilities (wealth channel).* Inflation is expected to lead to a change in relative asset prices and a reduction in real terms of households'

[11]See also Online Annex 2.3 and Cardoso and others (2022). The term "well-being" is a shorthand for the sum of these three effects. The analysis does not estimate welfare using utility functions, nor does it consider households' behavioral responses.

[12]According to Hirschman (1985, 60), the experience in *Argentina* in 1946–55 could be interpreted as an attempt at redistribution toward lower-income groups through higher wages, social security, and transfers, which were also associated with higher inflation.

initial liabilities. A surprise hike in inflation in principle helps net borrowers and hurts net lenders (Doepke and Schneider 2006). In countries featuring developed financial and credit markets, wealth effects are potentially relevant. The change in relative asset prices means that portfolio composition also matters. Families holding cash as their main asset tend to be hit the most (Albanesi 2007). Likewise, holders of bank deposits and fixed-rate government bonds usually incur real losses from inflation. Instead, historically, home or land ownership has served as good protection against inflation, and mortgage borrowers have often benefited from it (Box 2.2).

Estimation

The effects through these three channels are estimated for six economies, using a new rich set of statistics and household survey data. The sample encompasses low-income and developing countries (*Kenya* and *Senegal*), emerging market economies (*Colombia* and *Mexico*), and advanced economies (*Finland* and *France*). These countries also vary with respect to past inflation histories, status as commodity exporters or importers, and availability and use of mortgage and other household credit markets. The wealth channel is estimated only for *Colombia*, *Finland*, and *France*, given data constraints.

To illustrate, the analysis focuses on observed price developments during the initial upsurge in global prices in the aftermath of the COVID-19 pandemic; that is, the second quarter of 2021 to the second quarter of 2022. This rise was concentrated in food and energy prices and was associated with a cost-of-living crisis for millions of people across the world. All countries in the sample faced significant headline inflation, ranging from 6.1 percent in *France* to 9.2 percent in *Colombia* during the period considered. Prices of food spiked the least in *Finland* and *France*, whereas energy prices in those countries rose the most (Online Annex 2.3).[13]

The consumption basket channel is illustrated by reporting averages, by quintile, of household-specific inflation and the contributions of various components of household consumption baskets (food and nonalcoholic beverages; housing, water, electricity, gas, and other fuels; transportation; other) for the second quarter of 2021 to the second quarter of 2022 (Figure 2.5). A household's specific inflation is the weighted average of the percentage price hikes (in each country) for each given consumption category, with the weights derived from the individual household's consumption basket as reported in the survey.

Household-specific inflation levels are higher for households in lower income quintiles in *Colombia*, *Kenya*, *Mexico*, and *Senegal*, reflecting a larger contribution from food price increases for the lower quintiles (Figure 2.5). In turn, this stemmed from a combination of (1) more rapid increases in food prices than in other goods and (2) the well-known universal pattern whereby the share of food in total consumption declines with income per person.[14] For *Finland* and *France*, household-specific inflation rates are nearly the same across income quintiles. In these two countries, the contribution from food prices was limited because the rise in food prices was less pronounced, and food accounts for a share of consumption that is lower and roughly the same across quintiles. Energy prices rose faster and account for a sizable portion of the overall increase, although the effect was felt through utilities at the lower quintiles and transportation (which includes fuel) at the higher quintiles.[15] More recently, energy prices have adjusted down to levels seen before *Russia's* invasion of *Ukraine* (see Chapter 1), and these consumption basket channels may abate or even reverse. However, as found in new evidence reported in Box 2.3, changes in relative prices can on occasion persist or widen for several years, with meaningful implications for the budgets of different groups.

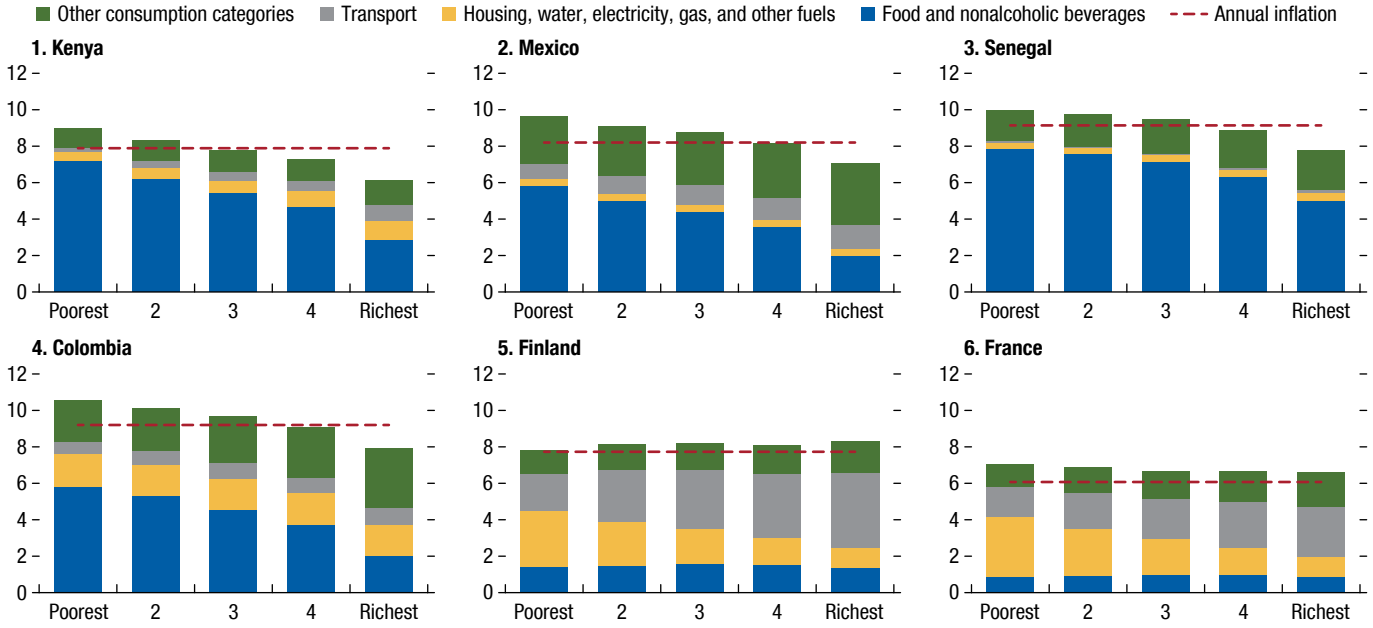
Although the effects occurring through the consumption basket channel were sizable during the period analyzed, they may become negligible (or reverse) when other sample periods are considered that

[13]See Online Annex 2.3 for the details, including the assumptions for the income and wealth estimates. Online Annex 2.3 further analyzes total net wealth, including real assets, such as dwellings.

[14]In developing or emerging market economies such as *Colombia*, *Kenya*, *Mexico*, and *Senegal*, the poorest households spend 40–50 percent of their budget on food, compared with 15–30 percent for their richest quintiles. In advanced economies such as *Finland* and *France*, the budget share spent on food is roughly constant across quintiles at 10–15 percent. In the *United States* too, transportation represents a large expenditure share for the middle/upper class (*The Economist* 2023).

[15]Whereas energy used for utilities in these countries is a larger share of consumption for lower-income households, the share of transportation in total consumption rises with household income (see Hellebrandt and Mauro 2015 for international evidence).

Figure 2.5. Household-Specific Levels of Inflation per Quintile, 2021–22
(Percent)



Source: IMF staff calculations.
Note: The figure covers the period from the second quarter of 2021 to the second quarter of 2022. In *Colombia* and *Mexico*, and in *Finland* and *France*, quintiles are built using per capita income. For *Kenya* and *Senegal*, the quintiles use per capita consumption (as a proxy for their income). See Online Annex 2.3 for details.

encompass, for example, food price increases similar to (or lower than) the general price index.[16]

Whereas the consumption basket channel appropriately received much attention in several recent analyses,[17] the other two channels often have had even greater impacts. The income channel was generally the most prominent, but its sign differed across countries (Figure 2.6, blue bars).[18] In *Finland*, *France*, *Kenya*, and *Senegal*, nominal changes in remuneration of families through wages, pensions, and other income failed to keep pace with price hikes. In *Colombia* and *Mexico*, real incomes rose. The fact that these two countries are oil exporters may explain why nominal income increased there more recently. Institutional factors may be at play too—for example, wage and pension indexation is widespread in *Colombia* and *Mexico*. In most countries, the impact of inflation via this channel did not vary much across quintiles and, to the extent it did, there was no clear pattern, with several characteristics playing important roles (including the gender of the head of household; Mao 2022).

Effects occurring through the wealth channel are also significant in the countries for which data are available (Figure 2.6, green bars) and present the most complex interactions with household income, age of the head of the household, and country-specific mortgage and household credit markets.[19] In *Finland* and *France*, real losses from the erosion of net nominal assets (or gains from erosion of net nominal liabilities)

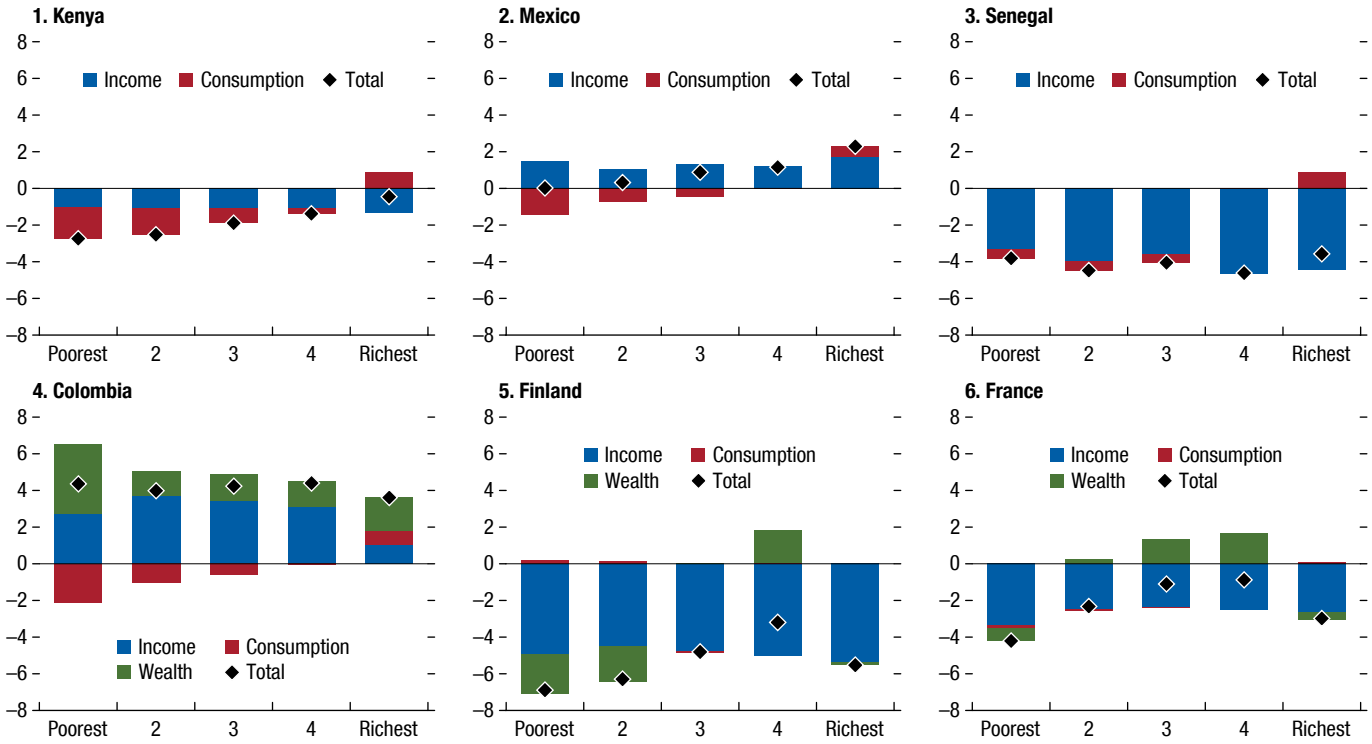
[16]In all countries except *Finland*, the consumption channel is negative at the bottom of the income distribution and positive at the top. The finding confirms the evidence shown above on the cost of living in *Colombia*, *Kenya*, *Mexico*, and *Senegal* increasing more for poor households than for rich households.

[17]See, for example, OECD (2022b) for Organisation for Economic Co-operation and Development economies; Charalampakis and others (2022), Claeys and Guetta-Jeanrenaud (2022), and Mohrle and Wollmershauser (2021) for *European countries*; and Autor, Dube, and McGrew (forthcoming), Jaravel (2022), and US CBO (2022c) for the *United States*.

[18]Figure 2.6 assumes changes in nominal values of incomes, assets, and liabilities in line with the data discussed in Online Annex 2.3. The annex includes another simulation in which those financial resources are assumed to remain constant in nominal terms, allowing for a study of the immediate effects of an unexpected inflationary shock. In that scenario, the total immediate effects of inflation on households' incomes are negative in all countries, with the fall in real income being equal to the level of inflation.

[19]Emerging market and advanced economies generally have more developed financial markets and higher household debt levels (Bahadir and Gumus 2016; Jordà, Schularick, and Taylor 2016). Credit for large real assets, such as dwellings, is less widespread in low-income countries. For an analysis of the penetration of mortgage loans in those economies, see Badev and others (2014).

Figure 2.6. Income, Consumption, and Wealth Channels, 2021–22
(Percent of household income)



Source: IMF staff calculations, as described in Online Annex 2.3.
Note: The figure covers the period from the second quarter of 2021 to the second quarter of 2022. For *Colombia*, results are based on the financial inclusion module of the Great Integrated Household Survey (GEIH) to include the wealth effect. Results for income and consumption basket channels using a representative survey are similar.

differ significantly across household income groups. Families in the fourth quintile in *Finland* and the third and fourth quintiles in *France* are, on average, net borrowers (at least in terms of liquid assets and liabilities) and thus experience net wealth gains from inflation.[20] Conversely, families in the two lowest quintiles in *Finland* and, to a lesser extent, those in the lowest and highest quintiles in *France* are net lenders (or holders of net nominal assets) and experience losses. In *Colombia*, households for all income groups report, on average, that they have net liquid liability positions.[21] The positive size of the wealth effect is significant, in comparison with the other effects, and does not present a straightforward association with income—the largest gains are for the lowest and highest income quintiles.

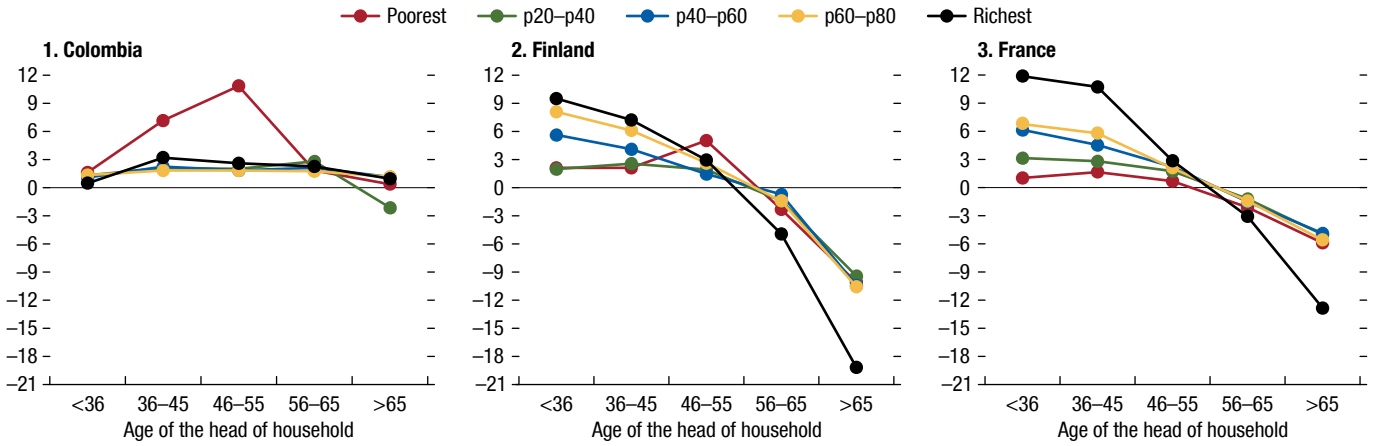
Considering the overall impact of inflation and the relative importance of the three channels (consumption basket, income, and wealth) in different countries and for different income groups, it becomes apparent that the impact of inflation on well-being is variegated and depends on several factors. In *Kenya*, during the period considered, the impact of inflation was worse the lower the income group, largely owing to the stronger impact of food prices on the poor. The pattern is similar, though less pronounced, in *Mexico*, whereas in *Senegal*, the income channel drove most of the action, with little variation across quintiles. In *Colombia*, the overall impact of inflation was similar across income quintiles, as the income and wealth channels masked the pattern stemming from the consumption basket channel. In *Finland* and *France*, the middle quintiles were less affected than the highest and lowest. While the income channel was the most sizable, variation across quintiles reflected the wealth channel.[22]

[20]The conclusions may depend on whether real assets, including dwellings, are considered (see Online Annex 2.3).

[21]Although this would merit further analysis, the asset counterpart to these positions could be with financial institutions (including informal ones). The survey does not include information about ownership of these assets.

[22]For inequality trends by income percentile in the *United States* caused by inflation see Autor, Dube, and McGrew (forthcoming).

Figure 2.7. Wealth Effect by Age and Income Brackets, 2021–22
(Percent of household income)



Source: IMF staff calculations, as described in Online Annex 2.3.
Note: The figure covers the period from the second quarter of 2021 to the second quarter of 2022. Each line in the panels corresponds to the income brackets. The wealth effect differs, on average, across generations: Young people are net borrowers, whereas elderly people tend to be net lenders. Therefore, the wealth effect is usually positive for young people and negative for older households. p = percentile.

Table 2.1. Total Effect of Inflation on Saving Capacity by Age-Income Groups
(Percent of household income)

	Spain				Colombia					Finland					France				
	Income Quartile				Income Quintile					Income Quintile					Income Quintile				
Age	Poorest	Second	Third	Richest	Poorest	Second	Third	Fourth	Richest	Poorest	Second	Third	Fourth	Richest	Poorest	Second	Third	Fourth	Richest
<36	–2.6	–2.9	–2.4	–2.9	9.0	–8.4	–8.1	–7.4	–7.7	–6.2	–6.1	–2.8	0.1	1.6	–5.1	–3.1	0.2	0.9	6.0
36–45	–0.9	–0.3	–1.0	–2.0	–3.4	–8.0	–7.2	–7.1	–5.0	–5.8	–5.5	–3.7	–1.7	–0.7	–4.3	–3.0	–1.2	0.1	5.0
46–55	–3.5	–3.5	–3.9	–4.4	–0.7	–8.5	–8.2	–7.5	–5.7	–3.3	–6.0	–6.6	–5.3	–4.9	–5.2	–4.1	–3.7	–3.8	–2.9
56–65	–8.3	–6.2	–6.9	–6.8	–10.1	–7.6	–8.1	–7.6	–6.2	–10.4	–9.3	–8.7	–9.3	–12.9	–7.8	–6.9	–7.3	–7.1	–8.9
>65	–12.7	–9.6	–9.8	–9.7	–11.3	–13.0	–9.1	–8.4	–7.8	–17.3	–16.9	–18.2	–18.2	–27.0	–11.2	–10.4	–10.4	–11.2	–18.5

Sources: Cardoso and others (2022) for *Spain* and IMF staff calculations for *Colombia*, *Finland*, and *France*.
Note: Age brackets are based on the age of the head of household. See Online Annex 2.3 for details.

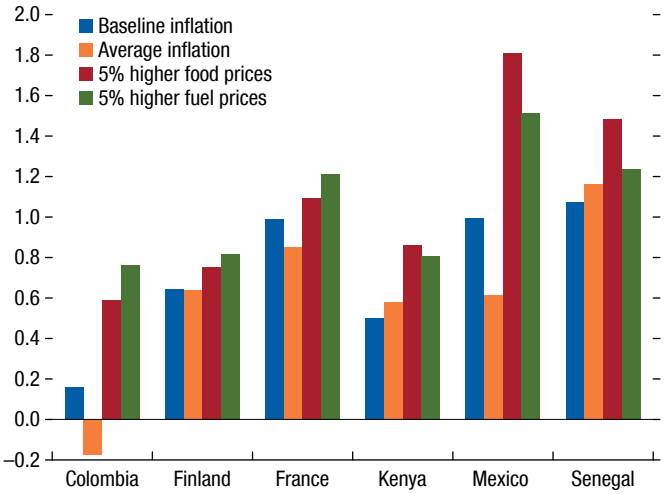
Redistributive wealth effects of inflation are also strongly influenced by the age of the head of household, especially in countries with sizable markets for mortgages. Figure 2.7 shows that for *Finland* and *France*, young families, which tend to be net borrowers (for example, via mortgages), experience gains through the wealth channel. For most families, a mortgage is the largest loan they ever undertake to gain ownership of their largest asset—their home. In contrast, older age groups, which typically do not have mortgages and are net holders of nominal assets, experience wealth erosion. This pattern holds within each income quintile and in these countries is most pronounced within the highest income quintile, which has the easiest access to credit and asset markets. No clear pattern is identified in *Colombia*, however. To sum up, in advanced economies, a group highly exposed to losses from inflation would consist of retirees who live in a rental apartment and hold their savings in nominal assets and whose pension is not indexed.

The importance of age is further corroborated by results for *Spain* by Cardoso and others (2022). Table 2.1 compares their results with those in this chapter.

Poverty

The analysis further suggests a likely increase in poverty in all economies analyzed. Figure 2.8 displays the change in absolute poverty headcount following four

Figure 2.8. Changes in Poverty from Different Types of Price Increase Shocks (Excluding New Policy Measures Responding to Inflation)
(Percentage points)



Source: IMF staff calculations.
Note: Baseline inflation refers to household inflation calculated based on observed inflation from the first quarter of 2021 to the second quarter of 2022. Results can be considered as a ceiling because the estimation does not take into account new measures taken by the government or households to respond to the effects of inflation.

scenarios of price hikes:[23] (1) baseline or actual inflation (and distribution across goods and services) in each country from the second quarter of 2021 to the second quarter of 2022, (2) an average or widespread price hike in all goods and services, whose increase remains equal to the country's inflation level, (3) a 5 percent hike in the price of food and nonalcoholic beverages on top of observed price rises, and (4) a 5 percent spike in energy prices on top of observed price rises.

The estimated impact of inflation (observed baseline) on the poverty rate, prior to new compensatory measures, is as high as about 1 percentage point in *France*, *Mexico*, and *Senegal*. Such increases in poverty already consider the growth of nominal income, which helped contain the adverse effects of inflation on poverty. In the countries studied, the mitigating effect of the growth in nominal income on poverty varies, with some countries experiencing little to no effect, while others, like *Colombia*, experienced a significant reduction in the poverty headcount (0.4 percentage point). Rises in food prices had a disproportionate impact on vulnerable populations during the period considered. The effect of a rise in food prices is larger in *Kenya*, *Senegal*, and *Mexico*, whereas energy price hikes are more important for *Colombia*, *Finland*, and *France*. If the pace of increases in food and energy prices declines below average consumer price inflation, a significant source of increases in poverty may subside.

Disinflating and Distributing

The previous sections show how inflation affects public finances and households. Now the analysis turns to whether and how fiscal policy affects inflation. Understanding the specific channels through which public policies affect inflation and how those policies can contribute to the mix of instruments meant to restore price stability are two complex and interconnected issues. Monetary and fiscal policies have their own distributional effects. In addition, their overall impacts on the macroeconomy vary according to the structure of wealth and income inequality. Recent studies (often using a so-called Heterogeneous Agent New Keynesian [HANK] approach) have indicated that the role played by fiscal policy in aggregate demand and inflation management may be larger than typically assumed. These studies have also considered monetary policy's possible effect on distribution.

This section discusses how fiscal policy may lead to, or may help deal with, moderately high inflation. It does not speak to cases of instability, such as episodes of debt distress, which currently apply to a small set of emerging markets. Situations in which the government does not adjust the primary balance to stabilize public debt and central banks are less independent—both usually associated with the economic concept of *fiscal dominance*—are outside the scope of this chapter.[24] Instead, the standard assumption that central banks pursue their objective of price stability, unhindered by concerns about public debt, holds. Public finances matter for inflation via their impact on aggregate demand.[25] They also contribute to the price stability goal if they are aligned with monetary policy, bringing credibility to the overall macroeconomic framework. Hence, by taming spending, governments can help monetary policy curb inflation at lower costs for the

[23]Poverty headcount is the share of the population whose income falls below international poverty lines set by the World Bank.

[24]See Leeper (1991), Sims (1994), and Cochrane (1998), who initially developed the Fiscal Theory of the Price Level.

[25]Over time, such effects of fiscal policy can be offset by monetary policy through the rise in interest rates.

overall economy (see, for example, Adrian and Gaspar 2022; and Erceg and Lindé 2012).

Fiscal policy support for monetary policy in disinflating is important for two additional reasons. First, monetary tightening[26] can have unwelcome distributive effects—for example, via more expensive credit for small firms (Alfaro, Faia, and Minoiu 2022; Haltom 2012) and because the poor do not hold interest-bearing assets.[27] Second, a disinflation strategy that relies solely on monetary policy is accompanied by real interest rates that are too high, and this can pose a challenge for debt dynamics. Government policies, in turn, can be more agile and contemplate other objectives if the right fiscal tool is employed.[28] Different fiscal policies can be calibrated and used to support the disinflation effort while mitigating the increase in poverty and income inequality at the same time. Monetary policy does not have the mandate to address income inequality, nor can it be targeted in the way that fiscal policy can.

In effect, the discussion in this chapter is geared toward policies that can help reduce overall inflationary pressures while providing temporary support (preferably targeted cash transfers) to the most vulnerable. It does not advocate the use of specific fiscal instruments to cap specific prices. As during the recent episode, some countries have adopted price controls or subsidies, put the squeeze on profits of state-owned enterprises, or cut taxes to try limit price increases and inflation (see Chapter 1 and the October 2022 *Fiscal Monitor*). However, such actions can be costly to the budget, lead to shortages and rationing, and prove ultimately ineffective and potentially make inflation more persistent.

[26]In the analysis, monetary tightening is captured by central banks' hikes in interest rates. However, in the current inflationary episode, many central banks—which have used *quantitative easing* to support firms and households during the recent years of very low interest rates and the pandemic—may also restrict their policies through *quantitative tightening*. For example, some monetary authorities may stop purchasing corporate bonds, which was guaranteeing a supply of liquidity for some firms. Other central banks may even consider selling a portion of the corporate bonds they hold on their balance sheets. While those policies may have implications for (dis)inflation, they are not considered explicitly in this chapter's exercises.

[27]Yet low interest rates are also shown to inflate stock prices, benefiting the rich (Auclert 2019), so a monetary tightening may have the opposite effect, depending on country characteristics.

[28]Public investment projects, for instance, have long lags of execution that are usually higher than those of monetary policy.

Historical Evidence of the Impact of Fiscal Policy on Inflation

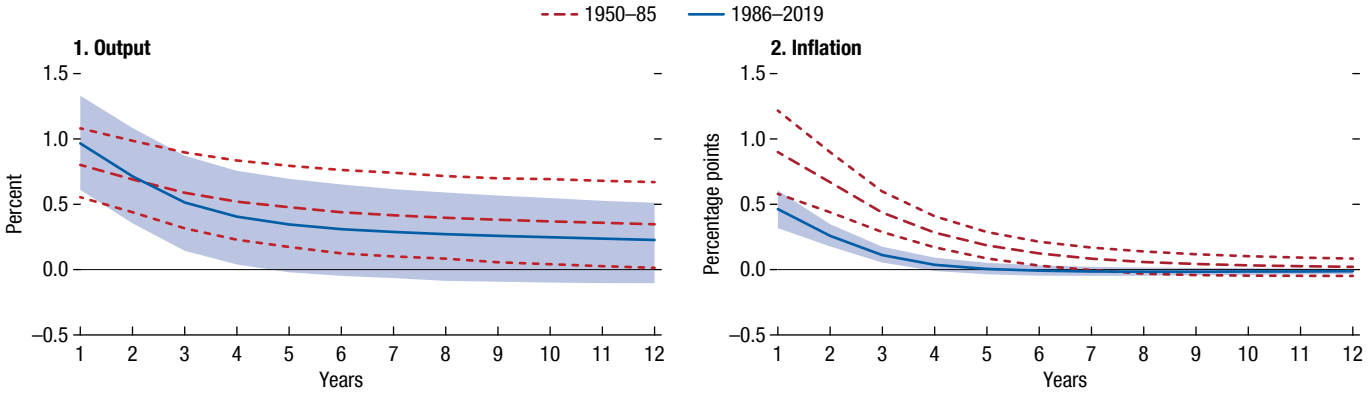
To assess the effect of public spending on inflation, as motivated by the recent spending surge, for a broad sample of economies, an empirical analysis is pursued using historical data from 1950 for 17 advanced economies, for two periods: 1950–85 and 1986–2019. The split in 1985 is aimed at dividing the sample into an earlier period of relatively passive monetary policy in advanced economies and a later period of more active monetary policy that anchors inflation expectations (see Banerjee and others 2022). The analysis focuses on public spending given that the recent debate relates to the large spending surge during COVID-19 (Gopinath 2022), as during the two world wars (Box 2.4).

The analysis shows that the effect of public spending on inflation varied over time (Figure 2.9). A 1 percent-of-GDP rise in government spending in the pre-1985 period leads to an average hike in inflation of almost 1 percentage point in the same year, phasing out slowly. For the post-1985 period, the same shock leads to an average increase in inflation of roughly half that size and, differently from the first case, it flattens out after three to four years. Monetary policy responses to forces pushing inflation up in both periods varied markedly. In the earlier part of the sample, central banks were more likely to accommodate fiscal expansions, thus allowing for a higher pass-through from those expansions to inflation. After 1985, central banks more often tightened monetary policy in response to fiscal expansions to slake their inflationary effects.

Ascertaining a causal impact of public spending on inflation (rather than vice versa, or the impact of a third factor on both variables) involves the same thorny methodological challenges faced by studies that have sought to estimate the fiscal multiplier for output (Ramey 2019; April 2012 *Fiscal Monitor*, Chapter 1). Following Ramey and Zubairy (2018), this chapter analyzes increases in government purchases that follow news about extra military spending in the *United States*. The methodological advantage is that such news is not caused by the economic cycle, and the only impact on the US economy occurs through additional spending.[29] As shown in Figure 2.10, there is a clear positive effect

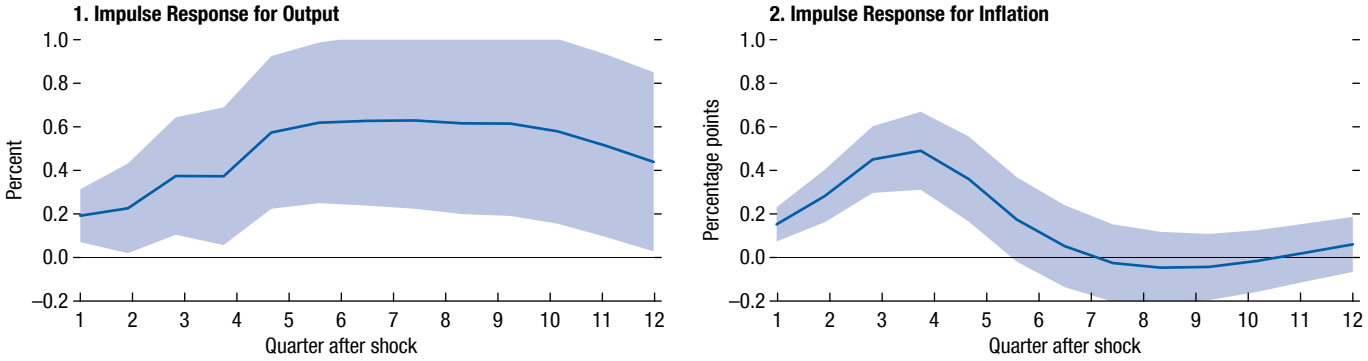
[29]Specifically, a structural vector autoregression model is estimated, with public spending identified by quarterly news of additional military spending in the *United States* from the first quarter of 1939 to the fourth quarter of 2015 (Ramey and Zubairy 2018). See Online Annex 2.4.

Figure 2.9. Panel Evidence of the Fiscal Policy Impact on Inflation, 1950–2019



Sources: IMF staff analysis using the IMF Public Finances in Modern History database; and Jordà, Schularick, and Taylor (2017).
Note: The panels plot average impulse responses and the 90 percent confidence bands (shaded blue area and short-dashed lines). See Online Annex 2.4 for further details.

Figure 2.10. Fiscal Policy Impact on Inflation in the United States, 1939–2015



Sources: IMF staff estimates using the Ramey and Zubairy (2018) database; and IMF World Economic Outlook database.
Note: The figure covers the period from the first quarter of 1939 to the fourth quarter of 2015. The panels plot the average impulse responses (solid blue line) and the 90 percent confidence bands (blue shaded areas). See Online Annex 2.4.

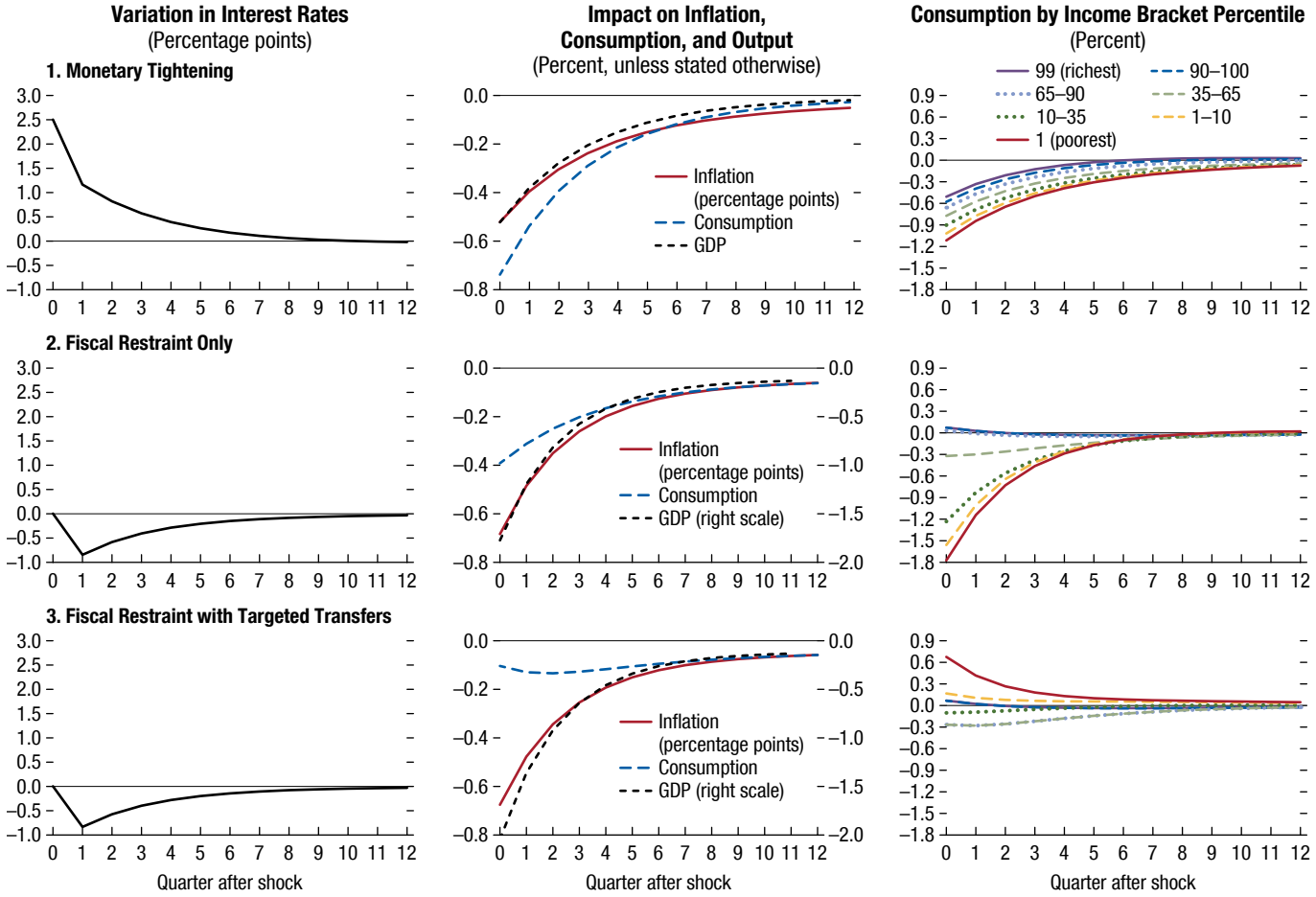
on inflation. As the blue line in panel 1 indicates, following the news of additional military spending, output increases in subsequent quarters, confirming the presence of a positive fiscal multiplier (see Online Annex 2.4). The novel result is the response of annual inflation: It rises and reaches the highest level in less than one year after the spending news, with inflation going up by an additional 0.5 percentage point than otherwise.

Fiscal Policy and Disinflation: Lessons from an Economic Model with Income Distribution

To illustrate and understand some of the main consequences of varied monetary-fiscal mixes, the analysis turns to a (simple) version of a state-of-art class of models that include a richer description of the households' income and wealth distribution—the HANK model (McKay and Reis 2016; Kaplan, Moll, and Violante 2018; Bayer, Born, and Luetticke 2023). Such a model allows for the impact of different types of public policies—fiscal and monetary—on the households' income distribution. Specifically, the analysis here focuses on how different forms of fiscal restraint by the government can help monetary policy achieve price stabilization. At the same time, their distributive effects across households are analyzed and considered for policy design.

The model has five crucial ingredients: (1) The government issues short-term debt that is held mostly by the higher-income groups; (2) when debt rises above 90 percent of GDP, taxes are gradually increased to guarantee that debt returns to that value; (3) transfers for lower-income people boost overall private

Figure 2.11. Disinflating via Different Policy Tightening Options in the HANK Model
(Deviation from long-term value)



Source: IMF staff calculations based on the model calibration in Auclert and others (2021).
Note: See Online Annex 2.4 for details. HANK = Heterogeneous Agent New Keynesian.

consumption because these groups consume a high share of any extra dollar of income they receive; (4) the central bank increases real interest rates when inflation goes above target (specifically, the central bank follows a so-called Taylor rule); and (5) taxes on labor income are progressive, meaning that higher-income families pay a higher share of their income in taxes, compared with lower-income families.[30]

Calibrating the model for the *United States* (Auclert and others 2021), the analysis examines three combinations of policies to reduce inflation: (1) an increase in the nominal interest rate above what the Taylor rule would suggest, with fiscal policy taking no further action than required for a gradual return to its debt target (90 percent); (2) untargeted fiscal tightening—that is, a reduction in overall spending across all budget items; and (3) targeted fiscal tightening composed of an overall cut in spending items while increasing transfers to families in the lowest 10 percent of the income distribution.

In the first scenario, nominal interest rates are raised by 250 basis points to bring inflation down by about 2 percent in roughly two years (Figure 2.11). Output and consumption fall throughout this period. The poorest families cut their consumption the most because they have no assets to draw from.

The second scenario simulates a cut in overall public spending amounting to 1 percent of GDP while monetary policy is also actively following a Taylor rule. This leads again to a contraction in aggregate demand and output, with inflation falling by a total of

[30]In this version of model, the production function includes labor and a productivity term but not capital.

2 percentage points in eight quarters (as a response the central bank cuts interest rates, which in the real world should be interpreted as being able to raise them by less). The drop in aggregate demand affects everyone, but the impact is proportionately more cushioned for higher-income families by the decline in taxation.

In the third scenario, a fiscal tightening of the same overall size (1 percent of GDP) but with a different composition is simulated. While the fiscal effort in other spending items is greater than before (by 1.5 percent of GDP), targeted transfers to the poorest 10 percent of families are in turn increased by 0.5 percent of GDP. The results show that in such a scenario, both GDP and inflation go down. But because the poor households receiving transfers consume a high share of their extra income, aggregate consumption decreases by less than in the other simulations. The consumption of those targeted households goes up with the transfers. To summarize, a generalized fiscal contraction helps contain inflation, with a smaller drop in private consumption than in the monetary policy scenario, but its impact favors higher-income groups at the expense of the lower-income groups. These adverse distributional effects can be remedied if the fiscal contraction is accompanied by a targeted transfer program.

Conclusions

The evidence presented in this chapter highlights the pattern that inflationary surprises are historically associated with an initial rise in fiscal balances in the short term and a fall in public debt that often persists into the medium term. However, expected inflation is not associated with a fall in debt ratios, stressing that inflating debt away is neither a desirable nor a sustainable strategy. Unexpected inflation may offer some breathing room for debt ratios, but attempts to keep surprising bondholders have historically proved futile or harmful. The impact on debt is more significant for countries with large amounts of debt, especially when it is denominated in local currency, long term, and unindexed. For countries with debt exceeding 50 percent of GDP, each 1 percentage point surprise increase in inflation is estimated to reduce public debt by 0.6 percentage point of GDP, with the effect lasting for several years.

Current practices on indexation vary considerably across countries. Among budget items, pensions are the most commonly indexed, followed by transfers to lower-income groups and public sector wages. When reviewing automatic or discretionary indexation going forward, policymakers need to decide which groups and programs to protect from income erosion while avoiding policies that make inflation more persistent. Policymakers should carefully assess the impact of public wage setting during periods of high inflation, including through indexation, on the setting of private wages. Policymakers also need to consider potential effects of inflation on the structure of the tax system.

The redistributive effects of inflation on households are more complex than usually thought. Analysis of the recent surge in inflation highlights the importance of changes in families' incomes and net assets for the distributive effect, especially in countries with more developed financial and credit markets. Policy reforms should consider the redistribution that inflation drives from net lenders to net borrowers, usually associated with old and young families, respectively. During the period considered, the poverty rate rose by 1 percentage point or more in three countries of the sample (*France*, *Mexico*, *Senegal*).

While monetary policy is in the driver's seat in the battle against inflation, fiscal policy can help. Well-targeted fiscal restraint can be designed to support monetary policy in attaining price stability while protecting the vulnerable from the cost-of-living crisis. The chapter documents the empirical association between fiscal policies and developments in inflation. Estimates suggest that 1 percentage point of GDP in additional public spending resulted in higher inflation by 0.8 percentage point in a sample covering the 1950–85 period and by 0.5 percentage point thereafter. Moreover, through an economic model capturing income distribution, the chapter shows that *targeted* fiscal restraint—involving tough policy choices on what budget items to cut and which to protect or expand—can bring inflation down at lower cost to aggregate consumption and income inequality while protecting lower-income families.

Box 2.1. Does Public Wage Policy Make Inflation More Persistent?

This box explores the interplay between public wages, private wages, and inflation. Public wage setting needs to be mindful of developments in prices and private wages to attract and retain qualified civil servants while avoiding a wage-price spiral.

Public wage setting is important to attract and retain qualified civil servants. At the same time, public wage hikes can increase aggregate demand or influence wage setting in the broader economy, depending on labor market institutions (such as the density of unions or the degree of centralization of bargaining) and the size of the public sector.

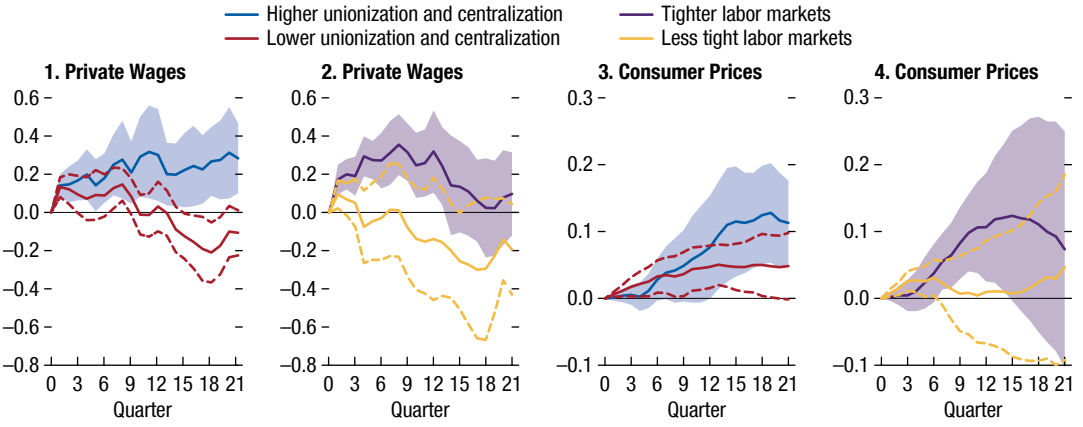
Applying the approach of Abdallah, Coady, and Jirasavetakul (2023) to an expanded country sample, this box estimates the effects of public wage spikes on private wages over the medium term using data from 30 member countries of the Organisation for Economic Co-operation and Development from the first quarter of 1990 to the second quarter of 2022. Changes in government wages are assumed to be predetermined with respect to the behavior of macroeconomic variables, as usually identified in the literature (see Blanchard and Perotti 2002; and Jørgensen and Ravn 2022).

The results suggest that, considering labor market institutions and conditions, public wages may have a significant and lasting effect on private wages and core Consumer Price Index (CPI) inflation in the sample (Figure 2.1.1). For countries with higher union density and centralization of wage bargaining, the peak responses of private wages and core CPI inflation to spikes in public wages are 0.32 percentage point and 0.12 percentage point, respectively. They also last for many quarters after the spike.

Prevailing macroeconomic conditions can also matter for the transmission of government wage shocks. For instance, workers' bargaining power is typically greater when labor markets are tight. Similarly, firms may have more pricing power when aggregate demand is strong. Figure 2.1.1 suggests that the impacts of government wage hikes on private wages and core CPI are significantly larger and longer-lasting when labor markets are tighter.

The findings imply that during periods of high inflation and tight labor markets, public wage policy should balance the need to attract and retain high-quality civil servants against the risk of fomenting inflationary pressures.

Figure 2.1.1. Effects of Public Wage Spikes on Private Wages and Core CPI Inflation
(Percent for the response of private wages; percentage points for core CPI)



Source: IMF staff calculations based on Abdallah, Coady, and Jirasavetakul (2023).
Note: Shaded areas and dashed lines represent the 90 percent confidence bands of the impulse responses. CPI = Consumer Price Index.

Box 2.2. Inflation Effect via the Wealth Channel during Historical Episodes

This box takes a historical perspective on the redistributive effect of inflation on households' assets and liabilities.

Some patterns of redistribution from inflation through the net wealth channel hold true in many historical episodes. Net holders of cash, bank deposits, and local currency (unindexed) bonds suffer real losses, while net borrowers (notably for fixed-rate mortgages) gain. Moreover, stockholders lose if inflation is joined by economic disruption. Homeowners and landowners have usually been shielded, but public policies, such as rent control or taxation, sometimes have partially undone such protection.

Comparing the portfolios of different demographic groups for a sample of more than 60,000 households in the *United States*, Wolff (1979) analyzed the impact of the 1969–75 period of inflation through the net wealth channel. The biggest gainers were homeowners who had large mortgages. Low-income households also gained if they had a mortgage. Homeowners gained relative to renters, middle-aged households gained relative to younger and older ones, married couples gained relative to singles, and Whites gained relative to non-Whites. Inequality of wealth declined because lower-wealth groups had higher debt-to-asset ratios.

But the inflation protection of homeownership can be undone, at least in part, by government policies, as seen in *France* and *Germany*, for example, in the aftermath of World War I. Inflation once again hit net holders of nominal assets hardest, but homeowners were not unscathed. In *France*, rent control was severe during both world wars. Combined with inflation, this resulted in rents falling to one-tenth of their value in real terms between 1913 and 1950 (Piketty 2003). Likewise, in *Germany*, real estate lost one-fifth of its value during 1913–27 owing to a mix of rent regulation and taxation (Albers, Bartels, and Schularick 2022). The only asset that gained was land, with a strong rural-urban divide in the effect of inflation.

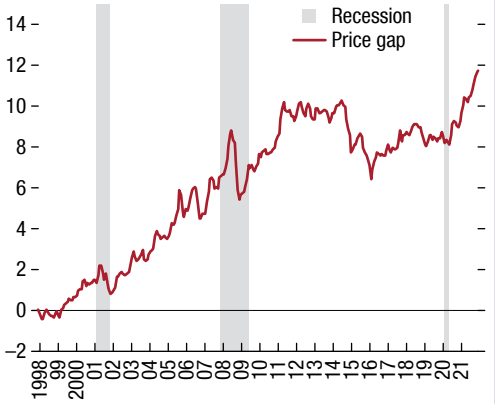
Box 2.3. Price Hikes and the Middle Class in the United States

The box shows that middle-income families in the United States *experienced sharper rises in the cost of their consumption baskets, compared with higher-income families, not only during times of rapid inflation but also during the past two decades more generally.*

Using US Bureau of Labor Statistics Consumer Expenditure Surveys, estimates show that prices rose faster for goods and services that make up a large share of the consumption baskets of US middle-income households as of 2021, confirming the findings by Cravino, Lan, and Levchenko (2020) (Online Annex 2.3).

New analysis reveals that such a price gap for goods and services consumed by the middle class constitutes a longer time trend. The relative price of the consumption basket for a middle-class family (40th–60th income percentiles) rose by 11.7 percent relative to the consumption basket of a higher-income family (top fifth percentile) between 1998 and 2021 (Figure 2.3.1). Potential factors underlying this difference include product innovations and price changes in imported goods (Cravino and Levchenko 2017; Jaravel 2019). These divergent price paths, along with static US middle incomes (Mishel and Bivens 2021), suggest a widening in the purchasing power of the two groups.

Figure 2.3.1. Inflation Differentials between Middle- and High-Income Families
(Percentage points)



Sources: IMF staff analysis based on Cravino, Lan, and Levchenko (2020); and US Bureau of Labor Statistics.
Note: Price gap is the accumulated inflation gap since 1998 between top 5th and 40th–60th income percentiles.

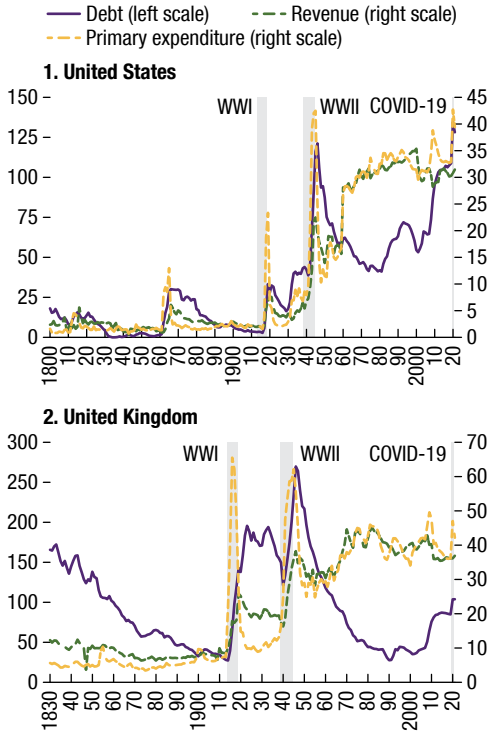
Box 2.4. Surges in Government Spending: A Historical Perspective

This box shows that large-scale fiscal support during the pandemic bears some similarities to war-related surges in public spending, which were followed by sustained inflation. Will history rhyme?

The economic impact and ensuing policy response of the COVID-19 pandemic have been compared with those of war periods (Dell'Ariccia and others 2020; Hall and Sargent 2022). Figure 2.4.1 shows that the hikes in debt and public primary expenditure in 2020 constitute one of the largest *annual* increases since the 1800s.

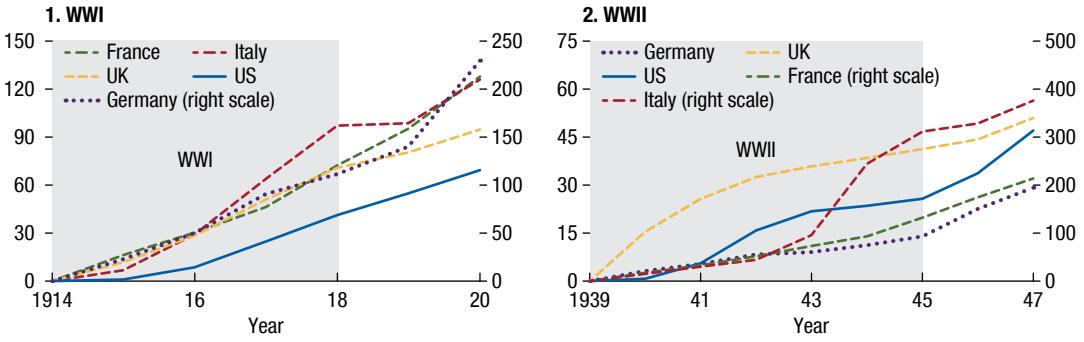
During World War I and World War II, several tactics were used for marketing government bonds (Eichengreen and others 2021), including forcing banks to buy bonds and imposing ceilings on Treasury rates. In more recent episodes, central banks purchased sovereign bonds in the secondary markets to reduce deflationary pressures. Even so, they enlarged balance sheets and raised their ratio of sovereign bonds to total assets (Ferguson, Schaab, and Schularick 2015; October 2020 *Global Financial Stability Report*, Chapter 1). Historically, wars have often been followed by a persistent rise in inflation (Bonam and Smădu 2021). After World War I, prices kept going up, reaching levels more than 70 percent higher in the *United States* and more than 90 percent higher in *France*, *Italy*, and the *United Kingdom* (Figure 2.4.2).

Figure 2.4.1. Surges in Public Expenditure, Revenue, and Debt over a Historical Span
(Percent of GDP)



Sources: IMF Public Finances in Modern History database; and IMF staff calculations.
Note: WWI = World War I; WWII = World War II.

Figure 2.4.2. Price Level Rises with the World Wars
(Percent)



Source: IMF staff analysis using the Jordà-Schularick-Taylor Macro-history Database.
Note: The lines are calculated by 100 × (ln P_t – ln $P_{start\text{-}of\text{-}war}$), in which P_t is the Consumer Price Index. WWI = World War I; WWII = World War II.

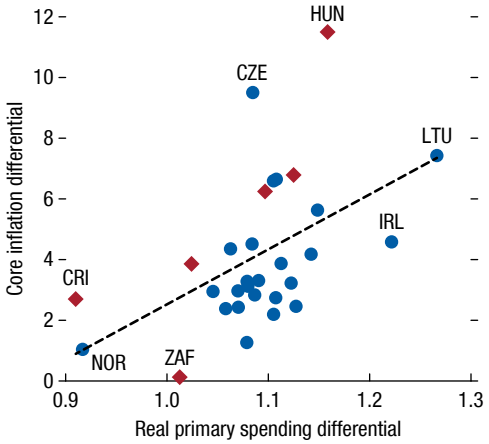
Box 2.4 *(continued)*

In *Austria*, *Germany*, *Hungary*, and *Poland*, inflation surged and turned into hyperinflation in the early 1920s and was brought down only by putting an end to financing government spending while adjusting the budgets into balance (Sargent 1982). During World War II, similar price surges were also observed. After the war, prices remained elevated in most countries, compared with before the war. Price levels were about 50 percent higher in the *United Kingdom* and in the *United States* and more than 200 percent higher in *France* and *Italy*.

Some authors have suggested that differences in fiscal policy during the COVID-19 pandemic relate to differences in inflation (de Soyres, Santacreu, and Young 2022). As shown in Figure 2.4.3, a small cross-section of countries, those where real spending grew more in the past three years, also experienced a larger increase in core inflation (that is, inflation excluding changes in energy and food prices).

As noted in the chapter, surprise inflation and the rebound in growth contributed to debt reduction in 2021 and 2022. Moderate inflation has reduced debt in the past when combined with financial repression—which, however, brings its own costs (Esteves and Eichengreen 2022; Mauro and Zhou 2021).

Figure 2.4.3. Correlation between 2022 Changes in Fiscal Policy and in Core Inflation since 2019
(Percent)



Source: IMF staff calculations using the World Economic Outlook database.
Note: Blue dots represent advanced economies. Red diamonds represent emerging market economies. Core inflation differential = core inflation in 2022 minus core inflation in 2019. Real primary spending differential = real primary spending in 2022 divided by real primary spending in 2019. Data labels in the figure use International Organization for Standardization (ISO) country codes.

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ECONOMY ABBREVIATIONS

Code	Name
AFG	Afghanistan
AGO	Angola
ALB	Albania
AND	Andorra
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

Code	Name
DNK	Denmark
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

Code	Name
KNA	St. Kitts and Nevis
KOR	Korea
KWT	Kuwait
LAO	Lao P.D.R.
LBN	Lebanon
LBR	Liberia
LBY	Libya
LCA	St. Lucia
LKA	Sri Lanka
LSO	Lesotho
LTU	Lithuania
LUX	Luxembourg
LVA	Latvia
MAR	Morocco
MDA	Moldova
MDG	Madagascar
MDV	Maldives
MEX	Mexico
MHL	Marshall Islands
MKD	North Macedonia
MLI	Mali
MLT	Malta
MMR	Myanmar
MNE	Montenegro
MNG	Mongolia
MOZ	Mozambique
MRT	Mauritania
MUS	Mauritius
MWI	Malawi
MYS	Malaysia
NAM	Namibia
NER	Niger
NGA	Nigeria
NIC	Nicaragua
NLD	Netherlands, The
NOR	Norway
NPL	Nepal
NRU	Nauru
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
SSD	South Sudan
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	Türkiye
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

Automatic stabilizers Revenue and some expenditure items built in the budget 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.

Burden or incidence Refers to whose economic welfare is reduced by a policy and by how much. It is quite different from the formal or legal incidence—fuel suppliers, for example, may be responsible for remitting tax payments to the national tax authority, but they may bear little economic incidence if they can charge higher prices.

Carbon tax or carbon pricing A tax imposed on CO_2 releases emitted largely through the combustion of carbon-based fossil fuels. Administratively, the easiest way to implement the tax is through taxing the supply of fossil fuels—coal, oil, and natural gas—in proportion to their carbon content.

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.

Cost of living The level of prices relating to the consumption of everyday goods and services.

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

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

Debt Service Suspension Initiative (DSSI) An initiative in which bilateral official creditors provide during a limited period a suspension of debt service payments for the poorest countries (73 low-income and lower-middle-income countries) that request the suspension.

Disinflating Bringing inflation down or restoring price stability.

Excess savings The amount by which actual savings exceed the projected savings for a given period.

Expenditure ceiling An instrument for enforcing aggregate expenditure discipline.

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

Fiscal consolidation Fiscal policy that reduces government deficits and government debt.

Fiscal council A permanent agency with a statutory or executive mandate to assess publicly and independently fiscal policy, fiscal plans, and fiscal performance against official objectives, such as long-term sustainability of public finances and macroeconomic stability.

Fiscal dominance Situation in which governments do not adjust the primary balance to stabilize public debts, and monetary policy becomes ineffective.

Fiscal framework The set of rules, procedures, and institutions that guide fiscal policy.

Fiscal impulse The term is synonymous to fiscal stimulus and is measured as the change in the cyclically adjusted primary balance.

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 rules Lasting constraints on fiscal policy through predetermined numerical limits on aggregate fiscal indicators (such as the budget balance, government expenditure, debt).

Fiscal space The room for undertaking discretionary fiscal policy (increasing spending or reducing taxes) relative to existing plans without endangering market access and debt sustainability.

Fiscal stance An assessment of the fiscal stance refers to a sense of the impact of fiscal policy on domestic demand and financial resources.

Fixed cash transfer programs Cash transfer programs that include fixed payments to recipients in a regular frequency.

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 financing needs (also *gross financing needs*) Overall new borrowing requirement plus debt maturing during the year.

Government guarantees Governments can undertake payment of a debt or liabilities in the event of a default by the primary creditor. The most common type is a government-guaranteed loan, which requires government to repay any amount outstanding on a loan in the event of default. In some contracts, governments provide a revenue or demand guarantee. The budget costs related to guarantees are usually not recognized in the budget without any upfront cost, but they create a contingent liability, with the government exposed to future calls on guarantees and fiscal risks.

Green transition A general concept of moving from a carbon-based economy to a more sustainable economy.

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.)

Gross financing needs See ***Government financing needs***

Headline fiscal balance See ***Overall fiscal balance***

Heterogeneous Agents New Keynesian approach Economic models with incomplete markets and income inequality coupled with wages or prices (New Keynesian) rigidities.

Hyperinflation It is an excessive, and out-of-control general price increase process, typically used when inflation surpasses 50 percent of inflation in the year.

In-kind benefits/transfers Government social assistance provided in terms of specific goods (for example, food) or services (for example, health care) instead of cash.

Inflation A general increase in the price level of goods and services in the economy leading to a fall in the purchasing value of money.

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.

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.

Price stickiness Prices tend to stay the same or change gradually and less frequently when demand or costs change.

Price subsidies Price subsidies are measure that keep prices for end users below market levels, or for suppliers above market levels. Subsidies can take various forms including direct transfers, but also indirect support such as tax exemptions, price controls, or rebates.

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

Public debt See ***Gross debt***

Public works programs A subset of social protection programs that provide income transfers to the poor through employment, generally in public labor-intensive infrastructure development initiatives such as rural roads, irrigation, and tree plantation and are often designed to smooth income particularly during "slack" or "hungry" periods of the year.

Quantitative easing Form of monetary policy in which a central bank purchases securities—public or private—to reduce long-term interest rates.

Quantitative tightening Also known as balance sheet normalization, these are monetary policies aimed at reducing a central bank's balance sheet.

Ricardian equivalence It is an economic theory that says that if government spending is financed by current deficits, future taxes will have to increase to compensate the current debt-increasing operation.

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

Stock-flow adjustments Change in the gross debt explained by factors other than the overall fiscal balance (for example, valuation changes).

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

Sustainable Development Goals A collection of 17 goals set by the United Nations General Assembly in 2015 covering global warming, poverty, health, education, gender equality, water, sanitation, energy, urbanization, environment, and social justice. Each goal has a set of targets to achieve, and in total, there are 169 targets.

Tanzi effect It is an economic situation involving a period of high inflation in a country which results in a decline in the volume of tax collection and a deterioration of real tax proceeds being collected by the government of that country owing to the time elapsed between the moment the taxable event occurs, and the collection of the tax becomes effective.

Taylor rule It is a guideline for central banks on how to manipulate interest rates so as to stabilize inflation and the economy.

Terms of trade The relative price of exports in terms of imports, defined as the ratio of export to import prices.

METHODOLOGICAL AND STATISTICAL APPENDIX

This appendix comprises four sections. "Data and Conventions" describes the data and conventions used to calculate economy group composites. "Fiscal Policy Assumptions" summarizes the country-specific assumptions underlying the estimates and projections for 2023–28. "Definition and Coverage of Fiscal Data" summarizes the classification of countries in the various groups presented in the *Fiscal Monitor* and details 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 on the basis of information available through April 3, 2023.

Data and Conventions

Country-specific data and projections for key fiscal variables are based on the April 2023 World Economic Outlook database, unless indicated otherwise, and compiled by IMF staff. Historical data and projections are based on the information IMF country desk officers gather in the context of their missions and through their ongoing analysis of the evolving situation in each country; data are updated continually as more information becomes available. Structural breaks in data may be adjusted to produce smooth series through splicing and other techniques. IMF staff estimates serve as proxies when complete information is unavailable. As a result, *Fiscal Monitor* data may differ from official data in other sources, including the IMF's *International Financial Statistics* and the *Government Finance Statistics Manual* (GFSM 2014).

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

Country classification in the *Fiscal Monitor* divides the world into three major groups: 41 advanced economies, 95 emerging market and middle-income economies, and 59 low-income developing countries. *Fiscal Monitor* tables display 37 advanced economies, 39 emerging market and middle-income economies, and 40 low-income developing countries. The countries in the tables generally represent the largest countries within each group based on the size of their GDP in current US dollars. Data for the full list of economies can be found at https://www.imf.org/external/datamapper/datasets/FM. The seven largest advanced economies as measured by GDP (Canada, France, Germany, Italy, Japan, the United Kingdom, and the 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 membership has increased over time. Data for most European Union (EU) member countries have been revised following their adoption of the updated 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 (set at $2,700, as of 2016, as measured by the World Bank Atlas method), structural features consistent with limited development and structural transformation, and external financial relationships insufficiently open for the countries to be considered 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 for advanced economies refer to the general government, whereas data for emerging market and developing economies often refer to only the central government or the budgetary central government (for specific details, see Tables B–D). All fiscal data refer to calendar years, except in the cases of The Bahamas, Bangladesh, Barbados, Bhutan, Botswana, Dominica, Egypt, Eswatini, Ethiopia, Fiji, Haiti, Hong Kong Special Administrative Region, India, the Islamic Republic of Iran, Jamaica, Lesotho, Malawi, the Marshall Islands, Mauritius, Micronesia, Myanmar, Namibia, Nauru, Nepal, Pakistan, Palau, Puerto Rico, Rwanda, Samoa, Singapore, St. Lucia, Thailand, Tonga, and Trinidad and Tobago, 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 Twenty (G20) member aggregate refers to the 19 country members and does not include the EU.

In most advanced economies, and in some large emerging market and middle-income economies, fiscal data follow the GFSM 2014 or are produced using a national accounts methodology that follows the 2008 System of National Accounts (SNA) or ESA 2010, both 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 based on the 1986 GFSM. The overall fiscal balance refers to net lending and borrowing by 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. Whereas attempts are made to align gross and net debt data with the definitions in the GFSM, data limitations or specific country circumstances can cause these data to 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 always refer to a territorial entity that is a state as understood by international law and practice. As used here, "country" also covers some territorial entities that are not states but whose statistical data are maintained separately and independently.

Australia: For cross-economy 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, and the United States) are adjusted to exclude the 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 data 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 authorities' definition of general government gross debt excludes government securities held by the central bank; except the stock of Treasury securities the central bank uses for monetary policy (those pledged as security reverse repurchase agreement operations). According to the authorities' definition, gross debt amounted to 73.4 percent of GDP at the end of 2022.

Canada: For cross-economy 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, and the United States) are adjusted to exclude unfunded pension liabilities of government employees, defined-benefit pension plans. Canada's net debt corresponds to net financial liabilities as reported by Statistics Canada and includes equity and investment fund shares, which Canada has built up substantially. Statistics Canada has made a recent methodological change to value assets at market value instead of book value, which has decreased net debt.

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

China: Deficit and public debt numbers cover a narrower perimeter of the general government than IMF staff's estimates in China Article IV reports (see IMF 2023 for a reconciliation of the two estimates). Public debt data include central government debt as reported by the Ministry of Finance, explicit local

government debt, and shares of contingent liabilities the government may incur, based on estimates from the National Audit Office estimate. IMF staff estimates exclude central government debt issued for China Railway. Relative to the authorities' definition, consolidated general government net borrowing excludes transfers to and from stabilization funds but includes state-administered funds, state-owned enterprise funds, and social security contributions and expenses, as well as some 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 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). 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. Gross debt refers to the nonfinancial public sector, excluding Ethiopian Airlines.

Fiji: Data are on a fiscal year basis.

Greece: General government gross debt follows the GFSM 2014 definition and includes the stock of deferred interest.

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-economy 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, and the United States) are adjusted to exclude the unfunded pension liabilities of government employees defined-benefit pension plans.

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

India: Data are on a fiscal year basis.

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

Ireland: For 2015, if the conversion of the government's remaining preference shares to ordinary shares in one bank is excluded, then the fiscal balance is –1.1 percent of GDP. Cyclically adjusted balances reported in Appendix 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.

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

Myanmar: Data are on a fiscal year basis.

Nepal: Data are on a fiscal year basis.

Norway: Cyclically adjusted balances correspond to the cyclically adjusted non-oil overall or primary balance. These variables are a percentage 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 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 account for output and employment gaps.

Switzerland: Data submissions at the cantonal and commune levels may be 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.

Türkiye: Projections in the *Fiscal Monitor* are based on the IMF-defined fiscal balance, which excludes some revenue and expenditure items included in the authorities' headline balance.

Turkmenistan: IMF staff estimates, and projections of the fiscal balance exclude receipts from domestic bond issuances as well as privatization operations,

in line with GFSM 2014. The authorities' official estimates, which are compiled using domestic statistical methodologies, include bond issuance and privatization proceeds as part of government revenues.

United States: For cross-economy comparability, expenditures and fiscal balances 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. Data for the United States may thus differ from data published by the US Bureau of Economic Analysis. In addition, gross and net debt levels reported by the Bureau of Economic Analysis and national statistical agencies for other economies that have adopted the 2008 SNA (Australia, Canada, and Hong Kong Special Administrative Region) are adjusted to exclude the unfunded pension liabilities of government employees defined-benefit pension plans.

Uruguay: Starting in October 2018, Uruguay's 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 2018–22 are affected by these transfers, which amounted to 1.2 percent of GDP in 2018, 1.1 percent of GDP in 2019, 0.6 percent of GDP in 2020, and 0.3 percent of GDP in 2021 and are projected to be 0.1 percent of GDP in 2022 and 0 percent thereafter. See IMF Country Report 19/64 for further details. The disclaimer about the public pension system applies only to the revenues and net lending/borrowing series. The coverage of the fiscal data for Uruguay was changed from consolidated public sector to nonfinancial public sector with the October 2019 *World Economic Outlook*. In Uruguay, nonfinancial public sector coverage includes central government, local government, social security funds, nonfinancial public corporations, and Banco de Seguros del Estado. Historical data were also revised accordingly. Under this narrower fiscal perimeter—which excludes the central bank—assets and liabilities held by the nonfinancial public sector where the counterpart is the central bank are not netted out in debt figures. In this context, capitalization bonds issued in the past by the government to the central bank are now part of the nonfinancial public sector debt. Gross and net debt estimates for 2008–11 is preliminary.

Venezuela: Fiscal accounts include the budgetary central government, social security funds, FOGADE (insurance deposit institution), and a sample of public enterprises, including Petróleos de Venezuela, S.A. (PDVSA). Data for 2018–21 are IMF staff estimates.

Fiscal Policy Assumptions

Historical data and projections of key fiscal aggregates are in line with those of the April 2023 *World Economic Outlook*, unless noted otherwise. For underlying assumptions other than on fiscal policy, see the April 2023 *World Economic Outlook*.

Short-term fiscal policy assumptions are based on officially announced budgets, adjusted for differences between the national authorities and IMF staff regarding macroeconomic assumptions and projected fiscal outturns. Medium-term fiscal projections incorporate policy measures judged likely to be implemented. When 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.

Afghanistan: All data and projections for 2021–28 are omitted because of an unusually high degree of uncertainty and given that the IMF has paused its engagement with the country due to a lack of clarity within the international community regarding the recognition of a government in Afghanistan.

Algeria: Starting with the October 2022 *Regional Economic Outlook*, total government expenditure and net lending/borrowing include policy lending by the government which mostly reflects support to the pension system and other public sector entities.

Argentina: Fiscal projections are based on the available information regarding budget outturn, budget plans, and IMF-supported program targets for the federal government; on fiscal measures announced by the authorities; and on IMF staff macroeconomic projections.

Australia: Fiscal projections are based on data from the Australian Bureau of Statistics, the fiscal year (FY)2022/23 budget published by the Commonwealth government in October 2022, the FY2022/23 budget published by the respective state/territory governments, and the IMF staff's estimates and projections.

Austria: Fiscal projections are based on the 2023 budget and the Austria Medium Term Strategy Programme. The NextGenerationEU (NGEU) fund and the latest announcement on fiscal measures have also been incorporated.

Belgium: Projections are based on the Belgian Stability Program 2022–25, the 2023 Budgetary Plan, and other available information on the authorities' fiscal plans, with adjustments for the IMF staff's assumptions.

Brazil: Fiscal projections for 2023 reflect the current policy in place.

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

Canada: Projections use the baseline forecasts from the Government of Canada's Fall Economic Statement 2022 and the latest provincial budgets. The IMF staff makes some adjustments to these forecasts, including those for differences in macroeconomic projections. The IMF staff's forecast also incorporates the most recent data releases from Statistics Canada's National Economic Accounts, including quarterly federal, provincial, and territorial budgetary outturns.

Chile: Projections are based on the authorities' budget projections, adjusted to reflect the IMF staff's projections for GDP, copper prices, depreciation, and inflation.

China: Staff fiscal projections incorporate the 2023 budget as well as estimates of off-budget financing.

Colombia: Projections are based on the authorities' policies and projections reflected in the 2022 Financing Plan and the 2022 Medium-Term Fiscal Framework, adjusted to reflect IMF staff macroeconomic assumptions.

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

Czech Republic: The fiscal projections are based on the authorities' latest-available convergence program, budget and medium-term fiscal framework, as well as IMF staff's macroeconomic framework. Structural balances are net of temporary fluctuations in some revenues and one-offs. COVID-19–related one-offs are however included.

Denmark: Estimates for the current year are aligned with the latest official budget numbers, adjusted where appropriate for the IMF staff's macroeconomic assumptions. Beyond the current year, the projections incorporate key features of the medium-term fiscal plan as embodied in the authorities' latest budget. Structural balances are net of temporary fluctuations in some revenues (for example, North Sea revenue, pension yield tax revenue) and one-offs (COVID-19–related one-offs are, however, included).

Ecuador: The authorities are undertaking revisions of the historical fiscal data with technical support from the IMF.

Egypt: Fiscal projections are mainly based on budget sector operations. Projections are based on the budget for FY2022/23 and the Fund's macroeconomic outlook.

Estonia: The forecast incorporates the authorities' Draft Budgetary Plans for 2023 (as of October 2022), adjusted for publicly available information (for example, measures to mitigate the impacts of high inflation and the cost-of-living crisis) for IMF staff's macroeconomic scenario.

Finland: Fiscal projections are based on the authorities' projections which reflect their latest medium-term fiscal plan, adjusting where appropriate for the IMF staff's macroeconomic and other assumptions.

France: Projections for 2022 and projections for 2023 onward are based on the 2018–23 budget laws, the 2023 amended social security finance bill, Stability Program 2022–27, draft medium-term programming bill, and other available information on the authorities' fiscal plans, adjusted for differences in revenue projections and assumptions on macroeconomic and financial variables.

Germany: The IMF staff's projections for 2023 and beyond are based on the 2023 budgets and data updates from the national statistical agency (Destatis) and the ministry of finance, adjusted for differences in the IMF staff's macroeconomic framework and assumptions concerning revenue elasticities.

Greece: Data since 2010 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 for expenditures.

Hungary: Fiscal projections include the IMF staff's projections of the macroeconomic framework and fiscal policy plans announced in the 2023 budget.

India: Projections are based on available information on the authorities' fiscal plans, with adjustments for the IMF staff's 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 disinvestment and license-auction proceeds, net versus gross recording of revenues in certain minor categories, and some public sector lending. Starting with FY2020/21 data, expenditure also includes the off-budget component of food subsidies, consistent with the revised treatment of food subsidies in the budget. The IMF staff adjusts expenditure to take out payments for previous years' food subsidies, which are included as expenditure in budget estimates for FY2020/21.

Indonesia: The IMF staff's projections are based on maintaining a neutral fiscal stance going forward, accompanied by moderate tax policy and administration reforms, some expenditure realization, and a gradual increase in capital spending over the medium term in line with fiscal space.

Ireland: Fiscal projections are based on the country's Budget 2023.

Italy: The IMF staff's estimates and projections are informed by the fiscal plans included in the government's 2023 budget and amendments. The stock of maturing postal bonds is included in the debt projections.

Japan: The projections reflect fiscal measures the government has already announced, with adjustments for the IMF staff's assumptions.

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

Korea: The forecast incorporates the overall fiscal balance in the 2022 annual budget and two supplementary budgets, the proposed 2023 budget and medium-term fiscal plan, and IMF staff's adjustments.

Lebanon: For Lebanon, data and projections for 2021–28 is omitted owing to an unusually high degree of uncertainty.

Libya: IMF staff judgement based on 2021 fiscal accounts.

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

Malta: Projections are based on the authorities' latest budget document, adjusted for IMF staff's macroeconomic and other assumptions.

Mexico: The 2020 public sector borrowing requirements estimated by the IMF staff adjusts for some statistical discrepancies between above-the-line and below-the-line numbers. Fiscal projections for 2022 and 2023 are informed by the estimates in Criterios 2023; projections for 2024 onward assume continued compliance with rules established in the Federal Budget and 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 made based on budget numbers and changed macro environment.

The Netherlands: Fiscal projections for 2023–28 are based on the IMF staff's forecast framework and are also informed by the authorities' draft budget plan and Bureau for Economic Policy Analysis projections.

New Zealand: Fiscal projections are based on the FY2022/23 budget (May 2022) and the IMF staff's estimates.

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

Norway: The fiscal projections are based on the 2023 budget and subsequent ad-hoc updates.

Philippines: Revenue projections reflect the IMF staff's macroeconomic assumptions and incorporate the updated data. Expenditure projections are based on budgeted figures, institutional arrangements, and current data in each year.

Poland: Data is on ESA-95 2004 and prior. Data is on ESA-2010 beginning 2005 (accrual) basis. Projections begin in 2022, based on the 2022 and 2023 budgets and subsequently announced fiscal measures.

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. Projections for 2023 reflect information available in the 2023 budget proposal.

Romania: Fiscal projections reflect legislated changes up to the end of 2022. Medium-term projections include a gradual implementation of recovery measures from the temporary recovery instrument NGEU.

Russian Federation: The fiscal rule was suspended last year by the government in response to the sanctions imposed after the invasion of Ukraine, allowing for windfall oil and gas revenues above benchmark to

be used to finance a larger deficit in 2022. Savings accumulated in the National Welfare Fund can also now be used in this way. A new fiscal rule will become fully effective in 2025. The new rule allows for higher oil and gas revenues to be spent, but it simultaneously targets a smaller primary structural deficit.

Saudi Arabia: The IMF staff's baseline fiscal projections are primarily based on its understanding of government policies as outlined in the 2022 and 2023 budget statement. Export oil revenues are based on *World Economic Outlook* baseline oil price assumptions and the IMF staff's understanding of current oil policy under the OPEC+ (Organization of the Petroleum Exporting Countries, including Russia and other non-OPEC oil exporters) agreement.

Singapore: FY2020 figures are based on budget execution. FY2021 projections are based on revised figures based on budget execution through the end of 2021. FY2022 projections are based on the initial budget of February 18, 2022. The IMF staff assumes gradual withdrawal of remaining pandemic-related measures and the implementation of various revenue measures announced in the FY2022 budget for the remainder of the projection period. These include (1) an increase in the Goods and Services Tax from 7 percent to 8 percent on January 1, 2023, and to 9 percent on January 1, 2024; (2) an increase in property taxes in 2023 for non-owner-occupied properties (from 10–20 percent to 12–36 percent) and for owner-occupied properties with an annual value in excess of $30,000 (from 4–16 percent to 6–32 percent); and (3) an increase of the carbon tax from S$5 per tonne to S$25 per tonne in 2024 and 2025 and S$45 per tonne in 2026 and 2027.

Slovak Republic: The fiscal projection is based on the 2022 Stability Program and takes into consideration of available data for 2022.

Spain: Fiscal projections for 2022 include COVID-19- and energy-related support measures, a legislated increase in pensions, and legislated revenue measures. Fiscal projections from 2023 onward assume energy support measures amounting to 1 percent of GDP in 2023. Projections for 2021–25 reflect disbursements under the EU Recovery and Resilience Facility.

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

Sweden: Fiscal estimates for 2022 and 2023 are based on the authorities' budget bill and have been updated with the authorities' latest interim forecast. The impact of cyclical developments on the fiscal accounts is calculated using the 2014 Organisation for Economic Co-operation and Development elasticity to take into account output and employment gaps.

Switzerland: The projections assume that fiscal policy is adjusted as necessary to keep fiscal balances in line with the requirements of Switzerland's fiscal rules.

Türkiye: The basis for the projections is the IMF-defined fiscal balance, which excludes some revenue and expenditure items that are included in the authorities' headline balance.

Ukraine: Projections for 2024–28 are omitted due to an unusually high degree of uncertainty.

United Kingdom: Fiscal projections are based on the latest GDP data published by the Office for National Statistics on January 21, 2023, and forecasts by the Office for Budget Responsibility from March 15, 2023. Revenue projections are adjusted for differences between the IMF staff's forecasts for macroeconomic variables (such as GDP growth and inflation) and the forecasts for these variables assumed in the authorities' fiscal projections. IMF baseline projections take Office for Budget Responsibility forecasts only as a reference and do not necessarily assume that the new fiscal rules announced on November 17, 2022, will be met at the end of the forecast period. 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 Office for Budget Responsibility. Data are presented on a calendar year basis.

United States: Fiscal projections are based on the February 2023 Congressional Budget Office baseline, adjusted for the IMF staff's policy and macroeconomic assumptions. Projections incorporate the effects of the Bipartisan Infrastructure Law and Inflation Reduction Act. 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.

Uruguay: Historical fiscal and monetary data are from the Uruguayan authorities. Projections are based on

the authorities' policies and projections, adjusted to reflect IMF staff macroeconomic assumptions and assessment of policy plans.

Venezuela: Projections for 2023–28 are omitted due to an unusual high degree of uncertainty.

Vietnam: Projections starting 2022 use authorities' 2022 budget numbers and IMF staff own projections.

Yemen: Hydrocarbon revenue projection are based on *World Economic Outlook* assumptions for hydrocarbon prices and authorities' projections for oil and gas production. Non-hydrocarbon revenues largely reflect authorities projection and the evolution of other key indicators. Over the medium term, we assume conflict resolution, a recovery in economic activity, and additional expenditures associated with reconstruction costs.

Zambia: General government net and gross debt projections for 2023–28 is omitted due to ongoing debt restructuring.

Definition and Coverage of Fiscal Data

Table A. Economy Groupings

The following groupings of economies are used in the *Fiscal Monitor.* Data for all the economies can be found here: https://www.imf.org/external/datamapper/datasets/FM

Advanced Economies	Emerging Market Economies	Low-Income Developing Countries	G7 Countries	G20[1] Countries	Advanced G20[1] Countries	Emerging G20 Countries
Andorra	Albania	Afghanistan	Canada	Argentina	Australia	Argentina
Australia	Algeria	Bangladesh	France	Australia	Canada	Brazil
Austria	Angola	Benin	Germany	Brazil	France	China
Belgium	Antigua and Barbuda	Bhutan	Italy	Canada	Germany	India
Canada	Argentina	Burkina Faso	Japan	China	Italy	Indonesia
Croatia	Armenia	Burundi	United Kingdom	France	Japan	Mexico
Cyprus	Aruba	Cambodia	United States	Germany	Korea	Russia
Czech Republic	Azerbaijan	Cameroon		India	United Kingdom	Saudi Arabia
Denmark	Bahrain	Central African Republic		Indonesia	United States	South Africa
Estonia	Barbados	Chad		Italy		Türkiye
Finland	Belarus	Comoros		Japan		
France	Belize	Congo, Democratic Republic of the		Korea		
Germany	Bolivia	Congo, Republic of		Mexico		
Greece	Bosnia and Herzegovina	Côte d'Ivoire		Russia		
Hong Kong SAR	Botswana	Djibouti		Saudi Arabia		
Iceland	Brazil	Eritrea		South Africa		
Ireland	Brunei Darussalam	Ethiopia		Türkiye		
Israel	Bulgaria	Gambia, The		United Kingdom		
Italy	Cabo Verde	Ghana		United States		
Japan	Chile	Guinea				
Korea	China	Guinea-Bissau				
Latvia	Colombia	Haiti				
Lithuania	Costa Rica	Honduras				
Luxembourg	Dominica	Kenya				
Macao SAR	Dominican Republic	Kiribati				
Malta	Ecuador	Kyrgyz Republic				
Netherlands, The	Egypt	Lao P.D.R.				
New Zealand	El Salvador	Lesotho				
Norway	Equatorial Guinea	Liberia				
Portugal	Eswatini	Madagascar				
Puerto Rico	Fiji	Malawi				
San Marino	Gabon	Mali				
Singapore	Georgia	Mauritania				
Slovak Republic	Grenada	Moldova				
Slovenia	Guatemala	Mozambique				
Spain	Guyana	Myanmar				
Sweden	Hungary	Nepal				
Switzerland	India	Nicaragua				
Taiwan Province of China	Indonesia	Niger				
United Kingdom	Iran	Nigeria				
United States	Iraq	Papua New Guinea				
	Jamaica	Rwanda				
	Jordan	São Tomé and Príncipe				
	Kazakhstan	Senegal				
	Kosovo	Sierra Leone				
	Kuwait	Solomon Islands				
	Lebanon	South Sudan				
	Libya	Somalia				
	Malaysia	Sudan				
	Maldives	Tajikistan				
		Tanzania				

Table A. Economy Groupings *(continued)*

Advanced Economies	Emerging Market Economies	Low-Income Developing Countries	G7 Countries	G20[1] Countries	Advanced G20[1] Countries	Emerging G20 Countries
	Marshall Islands	Timor-Leste				
	Mauritius	Togo				
	Mexico	Uganda				
	Micronesia	Uzbekistan				
	Mongolia	Vietnam				
	Montenegro	Yemen				
	Morocco	Zambia				
	Namibia	Zimbabwe				
	Nauru					
	North Macedonia					
	Oman					
	Pakistan					
	Palau					
	Panama					
	Paraguay					
	Peru					
	Philippines					
	Poland					
	Qatar					
	Romania					
	Russia					
	Samoa					
	Saudi Arabia					
	Serbia					
	Seychelles					
	South Africa					
	Sri Lanka					
	St. Kitts and Nevis					
	St. Lucia					
	St. Vincent and the Grenadines					
	Suriname					
	Thailand					
	Bahamas, The					
	Tonga					
	Trinidad and Tobago					
	Tunisia					
	Türkiye					
	Turkmenistan					
	Tuvalu					
	Ukraine					
	United Arab Emirates					
	Uruguay					
	Vanuatu					
	Venezuela					
	West Bank and Gaza					

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

Table A. Economy Groupings *(continued)*

Euro Area	Emerging Market and Middle-Income Asia	Emerging Market and Middle-Income Europe	Emerging Market and Middle-Income Latin America	Emerging Market and Middle-Income Middle East, North Africa, and Pakistan	Emerging Market and Middle-Income Africa
Austria	Brunei Darussalam	Albania	Antigua and Barbuda	Algeria	Angola
Belgium	China	Azerbaijan	Argentina	Bahrain	South Africa
Croatia	Fiji	Belarus	Aruba	Egypt	
Cyprus	India	Bosnia and Herzegovina	Bahamas, The	Iran	
Estonia	Indonesia	Bulgaria	Barbados	Iraq	
Finland	Malaysia	Hungary	Belize	Jordan	
France	Maldives	Kazakhstan	Bolivia	Kuwait	
Germany	Marshall Islands	Kosovo	Brazil	Lebanon	
Greece	Micronesia	Montenegro	Chile	Libya	
Ireland	Mongolia	North Macedonia	Colombia	Morocco	
Italy	Nauru	Poland	Costa Rica	Oman	
Latvia	Palau	Romania	Dominica	Pakistan	
Lithuania	Philippines	Russia	Dominican Republic	Qatar	
Luxembourg	Samoa	Serbia	Ecuador	Saudi Arabia	
Malta	Sri Lanka	Türkiye	El Salvador	Tunisia	
Netherlands	Thailand	Ukraine	Grenada	United Arab Emirates	
Portugal	Tonga		Guatemala		
Slovak Republic	Tuvalu		Guyana		
Slovenia	Vanuatu		Jamaica		
Spain			Mexico		
			Panama		
			Paraguay		
			Peru		
			St. Kitts and Nevis		
			St. Lucia		
			St. Vincent and the Grenadines		
			Suriname		
			Trinidad and Tobago		
			Uruguay		
			Venezuela		

Table A. Economy Groupings *(continued)*

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	Afghanistan	Chad	Algeria
Bhutan	Honduras	Burkina Faso	Djibouti	Congo, Rep of.	Angola
Cambodia	Nicaragua	Burundi	Kyrgyz Republic	Nigeria	Azerbaijan
Kiribati		Cameroon	Mauritania	Timor-Leste	Bahrain
Lao P.D.R.		Central African Republic	Moldova	Yemen	Brunei Darussalam
Myanmar		Chad	Somalia		Chad
Nepal		Comoros	Sudan		Canada
Papua New Guinea		Congo, Dem. Rep. of the	Tajikistan		Congo, Republic of
Solomon Islands		Congo, Rep. of	Uzbekistan		Ecuador
Timor-Leste		Côte d'Ivoire	Yemen		Equatorial Guinea
Vietnam		Eritrea			Gabon
		Ethiopia			Iran
		Gambia, The			Iraq
		Ghana			Kazakhstan
		Guinea			Kuwait
		Guinea-Bissau			Libya
		Kenya			Nigeria
		Lesotho			Norway
		Liberia			Oman
		Madagascar			Qatar
		Malawi			Russian Federation
		Mali			Saudi Arabia
		Mozambique			Timor-Leste
		Niger			Trinidad and Tobago
		Nigeria			Turkmenistan
		Rwanda			United Arab Emirates
		São Tomé and Príncipe			Venezuela
		Senegal			Yemen
		Sierra Leone			
		South Sudan			
		Tanzania			
		Togo			
		Uganda			
		Zambia			
		Zimbabwe			

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

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

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

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

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

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

	Overall Fiscal Balance[1]			Cyclically Adjusted Balance			Gross Debt		
	Coverage		Accounting Practice	Coverage		Accounting Practice	Coverage		Valuation of Debt[2]
	Aggregate	Subsectors		Aggregate	Subsectors		Aggregate	Subsectors	
Algeria	CG	CG	C	. . .	. . .	. . .	CG	CG	Face
Angola[3]	GG	CG,LG	Mixed	. . .	. . .	. . .	GG	CG,LG	Nominal
Argentina	GG	CG,SG,SS	C	CG	CG	C	CG	CG	Nominal
Belarus[4]	GG	CG,LG,SS	C	. . .	. . .	. . .	GG	CG,LG,SS	Nominal
Brazil[5]	NFPS	CG,SG,LG,SS,NFPC	C	NFPS	CG,SG,LG,SS,NFPC	C	NFPS	CG,SG,LG,SS,NFPC	Nominal
Bulgaria	GG	CG,LG,SS	C	GG	CG,LG,SS	C	GG	CG,LG,SS	Nominal
Chile	GG	CG,LG	A	CG	CG	A	GG	CG,LG	Face
China	GG	CG,LG,SS	C	GG	CG,LG,SS	C	GG	CG,LG,SS	Face
Colombia[6]	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	Mixed	NFPS	CG,SG,LG,SS,NFPC	Mixed	NFPS	CG,SG,LG,SS,NFPC	Nominal
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	C	. . .	. . .	. . .	GG	CG,LG	Nominal
Kuwait	GG	CG,SS	Mixed	. . .	. . .	. . .	GG	CG,SS	Nominal
Lebanon	CG	CG	Mixed	CG	CG	Mixed	CG	CG	Nominal
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	NFPS	CG,SG,LG,SS,NFPC	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[7]	GG	CG,SG,SS	C	GG	CG,SG,SS	C	GG	CG,SG,SS	Nominal
Sri Lanka	CG	CG	C	. . .	. . .	. . .	CG	CG	Nominal
Thailand[8]	PS	CG,BCG,LG,SS	A	PS	CG,BCG,LG,SS	A	PS	CG,BCG,LG,SS	Nominal
Türkiye	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	GG	CG,BCG,SG,SS	Mixed	. . .	. . .	. . .	GG	CG,BCG,SG,SS	Nominal
Uruguay	NFPS	CG,LG,SS,NMPC,NFPC	A	. . .	. . .	. . .	NFPS	CG,LG,SS,NMPC,NFPC	Face
Venezuela[9]	GG	BCG,NFPC	C	GG	BCG,NFPC	C	GG	BCG,NFPC	Nominal

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

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

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

[3] Gross debt includes the domestic and external debt of the central government; the external debt of the state-owned oil company, Sonangol, and the state-owned airline, TAAG; public guarantees; and reported external liabilities of other state entities, including external arrears.

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

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

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

[7] Coverage for South Africa is consolidated government, which serves as a good proxy for the general government. It includes the national and provincial governments and certain public entities, while local governments are only partly covered. The subnational government debt is estimated to be limited given the available data from the South African Reserve Bank.

[8] Data for Thailand do not include the debt of specialized financial institutions (SFIs/NMPC) without a government guarantee.

[9] The fiscal accounts include the budgetary central government, social security, FOGADE (an insurance deposit institution), and a sample of public enterprises, including Petróleos de Venezuela, S.A. (PDVSA). 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	
Afghanistan	CG	CG	C	. . .	. . .	. . .	CG	CG	Nominal
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	. . .	. . .	. . .	CG	CG	Face
Congo, Democratic Republic of the	CG	CG,LG	A	. . .	. . .	. . .	GG	CG,LG,NFPC	Nominal
Congo, Republic of	CG	CG	A	. . .	. . .	. . .	CG	CG	Nominal
Côte d'Ivoire	CG	CG,SS	Mixed	. . .	. . .	. . .	CG	CG,NFPC	Nominal
Ethiopia	GG	CG,SG,LG	C	. . .	. . .	. . .	NFPS	CG,SG,LG,NFPC	Nominal
Ghana	CG	CG	CB	. . .	. . .	. . .	CG	CG	Face
Guinea	CG	CG	Mixed	. . .	. . .	. . .	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	Nominal
Madagascar	CG	CG,LG	CB	. . .	. . .	. . .	NFPS	CG,LG,NFPC	Nominal
Malawi	CG	CG	C	. . .	. . .	. . .	CG	CG	...
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	. . .	. . .	. . .	CG	CG	Nominal
Senegal	CG	CG	C	...	...	...	PS	CG,LG,SS,NFPC	Nominal
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
Uganda	CG	CG	C	. . .	. . .	. . .	CG	CG	Nominal
Uzbekistan[6]	GG	CG,SG,LG,SS	C	. . .	. . .	. . .	GG	CG,SG,LG,SS	Nominal
Vietnam	GG	CG,SG,LG	C	GG	CG,SG,LG	C	GG	CG,SG,LG	Nominal
Yemen	GG	CG,LG	C	. . .	. . .	. . .	GG	CG,LG	Nominal
Zambia	CG	CG	C	. . .	. . .	. . .	CG	CG	Nominal
Zimbabwe	CG	CG	C	. . .	. . .	. . .	CG	CG	Current market

Note: Coverage: CG = central government; GG = general government; LG = local governments; NFPC = nonfinancial public corporations; NFPS = nonfinancial public sector; SG = state governments; SS = social security funds. Accounting 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" refers to debt securities that are valued at their nominal values, that is, the nominal value of a debt instrument at any moment in time is the amount that the debtor owes to the creditor. "Face" refers to the undiscounted amount of principal to be repaid at (or before) maturity. The use of face value as a proxy for nominal value in measuring the gross debt position can result in an inconsistent approach across all instruments and is not recommended, unless nominal and market values are not available. "Current market" refers to debt securities that are valued at market prices; insurance, pension, and standardized guarantee schemes are valued according to principles that are equivalent to market valuation; and all other debt instruments are valued at nominal prices, which are considered to be the best generally available proxies of their market prices.

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

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

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

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

Table A1. Advanced Economies: General Government Overall Balance, 2014–28

(Percent of GDP)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Average	–3.1	–2.6	–2.7	–2.4	–2.4	–3.0	–10.2	–7.5	–4.3	–4.4	–4.2	–4.1	–3.9	–3.8	–3.9
Euro Area	–2.5	–1.9	–1.5	–0.9	–0.4	–0.6	–7.1	–5.4	–3.8	–3.7	–2.8	–2.3	–2.1	–2.0	–1.9
G7	–3.6	–3.0	–3.3	–3.3	–3.3	–3.8	–11.6	–9.1	–5.4	–5.6	–5.3	–5.2	–5.0	–4.8	–5.0
G20 Advanced	–3.4	–2.9	–3.1	–3.0	–3.0	–3.6	–11.2	–8.7	–5.1	–5.3	–5.1	–4.9	–4.7	–4.6	–4.7
Andorra	2.1	2.0	4.4	3.3	2.7	2.3	–3.0	–2.3	1.2	1.4	2.5	2.7	3.0	3.3	3.5
Australia	–2.9	–2.8	–2.4	–1.7	–1.3	–4.4	–8.7	–6.3	–3.3	–3.1	–2.8	–2.5	–2.2	–2.1	–1.9
Austria	–2.7	–1.0	–1.5	–0.8	0.2	0.6	–8.0	–5.9	–3.3	–2.7	–1.5	–1.1	–1.1	–1.2	–1.2
Belgium	–3.1	–2.4	–2.4	–0.7	–0.9	–1.9	–9.0	–5.6	–4.3	–5.2	–5.5	–5.5	–5.6	–5.7	–5.7
Canada	0.2	–0.1	–0.5	–0.1	0.4	0.0	–10.9	–4.4	–0.7	–0.4	–0.4	–0.3	–0.2	–0.1	0.0
Croatia	–5.2	–3.5	–1.0	0.6	–0.1	0.2	–7.3	–2.6	–0.9	–2.3	–1.7	–1.3	–1.1	–1.1	–1.1
Cyprus[1]	–0.2	0.2	0.2	2.0	–3.6	1.3	–5.8	–1.7	2.3	1.9	1.7	1.5	1.3	1.0	1.0
Czech Republic	–2.1	–0.6	0.7	1.5	0.9	0.3	–5.8	–5.1	–3.6	–4.2	–2.8	–2.5	–2.5	–2.5	–2.5
Denmark	1.1	–1.3	–0.1	1.8	0.8	4.1	0.2	3.6	2.5	1.4	0.5	0.0	–0.1	–0.1	–0.2
Estonia	0.7	0.1	–0.4	–0.7	–0.6	0.1	–5.5	–2.3	–1.2	–4.8	–3.5	–2.8	–2.1	–1.6	–1.4
Finland	–3.0	–2.4	–1.7	–0.7	–0.9	–0.9	–5.5	–2.7	–1.9	–2.5	–2.4	–3.0	–2.9	–2.7	–2.7
France	–3.9	–3.6	–3.6	–3.0	–2.3	–3.1	–9.0	–6.5	–4.9	–5.3	–4.8	–4.5	–4.1	–3.9	–4.0
Germany	0.6	1.0	1.2	1.3	1.9	1.5	–4.3	–3.7	–2.6	–3.7	–1.9	–0.9	–0.7	–0.5	–0.5
Greece	–4.2	–3.0	0.3	0.9	0.8	0.2	–10.7	–8.0	–4.0	–2.4	–1.3	–1.1	–0.9	–0.8	–0.7
Hong Kong SAR	3.6	0.6	4.4	5.5	2.3	–0.6	–9.2	0.0	–7.1	–3.9	–1.0	0.2	0.6	0.6	0.6
Iceland	0.3	–0.4	12.5	1.0	0.9	–1.5	–9.0	–8.4	–4.3	–2.8	–1.8	–0.1	0.6	0.8	0.3
Ireland[1]	–3.6	–2.0	–0.8	–0.3	0.1	0.5	–5.0	–1.7	1.2	1.3	1.2	1.0	1.1	1.1	1.1
Israel	–2.3	–1.2	–1.7	–1.2	–3.6	–3.9	–10.8	–3.7	0.1	–1.2	–1.4	–2.5	–2.8	–2.8	–2.7
Italy	–3.0	–2.6	–2.4	–2.4	–2.2	–1.5	–9.7	–9.0	–8.0	–3.7	–3.3	–2.3	–1.8	–1.3	–0.7
Japan	–5.6	–3.7	–3.6	–3.1	–2.5	–3.0	–9.1	–6.2	–7.8	–6.4	–4.0	–2.9	–3.1	–3.4	–3.7
Korea	0.6	0.5	1.6	2.2	2.6	0.4	–2.2	0.0	–0.9	0.0	–0.2	–0.1	–0.1	–0.1	–0.1
Latvia	–1.7	–1.5	–0.4	–0.8	–0.7	–0.4	–3.7	–5.4	–3.6	–4.7	–2.0	–3.1	–1.3	–0.5	–0.4
Lithuania	–0.7	–0.2	0.3	0.5	0.6	0.3	–7.2	–1.0	–0.8	–4.5	–2.8	–2.0	–1.5	–1.1	–1.0
Luxembourg	1.3	1.3	1.9	1.4	3.0	2.2	–3.4	0.8	–0.2	–3.0	–1.8	–1.0	–0.5	–0.5	–0.5
Malta	–1.7	–1.0	1.1	3.3	2.1	0.6	–9.3	–7.5	–5.3	–4.8	–3.7	–2.6	–2.1	–2.2	–2.1
The Netherlands	–2.3	–1.9	0.1	1.4	1.5	1.8	–3.7	–2.6	–1.0	–1.9	–1.5	–1.5	–1.5	–1.7	–1.8
New Zealand	–0.3	0.4	1.0	1.4	1.3	–2.5	–4.4	–3.4	–4.2	–3.8	–3.1	–1.5	0.0	0.3	0.0
Norway	8.6	6.0	4.0	5.0	7.8	6.5	–2.6	9.4	22.4	25.3	23.7	21.7	20.3	18.9	17.5
Portugal	–7.3	–4.4	–1.9	–3.0	–0.3	0.1	–5.8	–2.8	–1.9	–1.2	–1.2	–1.1	–1.1	–1.0	–0.9
Singapore	4.6	2.9	3.3	5.2	3.7	3.8	–6.8	1.2	0.4	3.1	2.1	2.4	2.7	2.8	2.9
Slovak Republic	–3.1	–2.7	–2.6	–1.0	–1.0	–1.2	–5.4	–5.5	–3.5	–5.1	–4.1	–4.4	–4.0	–3.9	–3.8
Slovenia	–5.5	–2.8	–1.9	–0.1	0.7	0.6	–7.7	–4.7	–3.3	–4.0	–2.5	–2.1	–1.5	–1.4	–1.4
Spain[1]	–6.1	–5.3	–4.3	–3.1	–2.6	–3.1	–10.1	–6.9	–4.5	–4.5	–3.5	–3.8	–4.0	–4.0	–4.0
Sweden	–1.5	0.0	1.0	1.4	0.8	0.6	–2.8	–0.1	0.7	0.0	–0.3	0.0	0.3	0.3	0.3
Switzerland	–0.2	0.5	0.2	1.1	1.3	1.3	–3.0	–0.5	0.2	0.4	0.2	0.1	0.1	0.1	0.1
United Kingdom	–5.5	–4.5	–3.3	–2.4	–2.2	–2.2	–13.0	–8.3	–6.3	–5.8	–4.4	–4.2	–3.9	–3.9	–3.7
United States[2]	–4.0	–3.5	–4.4	–4.8	–5.3	–5.7	–14.0	–11.6	–5.5	–6.3	–6.8	–7.1	–6.9	–6.6	–6.8

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

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

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

[2] For cross-economy comparison, the expenditures 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 therefore differ from data published by the US Bureau of Economic Analysis.

Table A2. Advanced Economies: General Government Primary Balance, 2014–28

(Percent of GDP)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Average	–1.5	–1.1	–1.1	–1.0	–0.9	–1.5	–9.0	–6.2	–2.8	–2.8	–2.4	–2.3	–2.1	–1.9	–1.9
Euro Area	–0.2	0.1	0.4	0.8	1.2	0.8	–5.7	–4.0	–2.3	–2.1	–1.2	–0.6	–0.3	–0.1	0.0
G7	–1.8	–1.3	–1.6	–1.6	–1.6	–2.1	–10.1	–7.4	–3.5	–3.6	–3.2	–3.0	–2.7	–2.5	–2.5
G20 Advanced	–1.7	–1.3	–1.5	–1.4	–1.4	–2.0	–9.7	–7.0	–3.4	–3.4	–3.0	–2.8	–2.6	–2.3	–2.3
Andorra	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Australia	–2.1	–1.9	–1.5	–0.8	–0.4	–3.6	–7.8	–5.3	–2.3	–1.8	–1.3	–1.0	–0.6	–0.4	–0.1
Austria	–0.7	0.9	0.1	0.6	1.4	1.6	–7.1	–5.2	–2.7	–1.8	–0.5	0.1	0.1	0.0	0.0
Belgium	–0.2	0.2	0.0	1.4	1.0	–0.2	–7.3	–4.1	–3.0	–3.7	–3.5	–3.3	–3.2	–3.1	–3.0
Canada	0.5	0.6	0.1	0.1	0.4	0.1	–10.5	–5.0	–1.3	–0.6	–0.5	–0.5	–0.4	–0.4	–0.4
Croatia	–2.3	–0.4	1.8	3.0	2.0	2.2	–5.6	–1.2	0.5	–0.5	0.3	0.5	0.5	0.4	0.3
Cyprus[1]	2.8	3.1	2.7	4.3	–1.3	3.4	–3.8	0.0	3.7	3.2	3.0	2.8	2.6	2.3	2.2
Czech Republic	–1.0	0.3	1.5	2.1	1.5	0.8	–5.2	–4.5	–2.9	–3.3	–1.7	–1.4	–1.4	–1.3	–1.3
Denmark	1.6	–0.6	0.4	1.7	0.4	3.9	–0.1	3.2	2.1	1.1	0.3	–0.1	–0.1	–0.2	–0.3
Estonia	0.7	0.1	–0.5	–0.8	–0.6	0.1	–5.5	–2.3	–1.1	–4.5	–3.2	–2.4	–1.6	–1.2	–1.0
Finland	–2.8	–2.3	–1.4	–0.4	–0.7	–0.8	–5.4	–2.8	–2.0	–2.1	–1.8	–2.4	–2.5	–2.5	–2.6
France	–1.8	–1.8	–1.9	–1.3	–0.7	–1.7	–7.8	–5.2	–3.0	–3.7	–3.0	–2.5	–2.0	–1.5	–1.4
Germany	1.8	2.0	2.1	2.2	2.7	2.1	–3.9	–3.3	–2.1	–2.9	–1.0	0.1	0.3	0.5	0.5
Greece	–0.2	0.6	3.5	4.1	4.2	3.2	–7.7	–5.5	–1.5	0.4	1.4	1.6	1.8	2.0	2.0
Hong Kong SAR	3.6	0.6	3.6	4.7	1.0	–2.2	–11.1	–2.7	–10.2	–5.8	–2.4	–1.3	–0.6	–0.5	–0.5
Iceland	3.8	3.2	15.5	3.9	3.1	0.5	–6.8	–6.3	–1.9	0.9	1.3	2.3	2.9	2.9	2.4
Ireland[1]	–0.3	0.3	1.5	1.7	1.7	1.7	–4.0	–0.9	1.9	2.0	1.9	1.6	1.7	1.7	1.4
Israel	–0.2	0.6	0.2	0.7	–1.4	–2.0	–9.0	–1.0	2.5	0.9	0.7	–0.6	–0.9	–0.9	–0.9
Italy	1.4	1.4	1.3	1.2	1.3	1.7	–6.4	–5.6	–3.8	0.4	0.8	1.8	2.2	2.7	3.2
Japan	–4.5	–2.6	–2.5	–2.2	–1.7	–2.4	–8.4	–5.6	–7.5	–6.2	–3.8	–2.7	–2.9	–3.1	–3.2
Korea	0.2	0.2	1.4	1.8	2.1	–0.1	–2.7	–0.4	–1.2	–0.2	–0.3	–0.2	–0.1	–0.1	0.0
Latvia	–0.2	0.3	0.8	0.3	0.2	0.5	–2.8	–4.7	–3.1	–4.2	–1.3	–2.1	–0.5	0.2	0.3
Lithuania	1.0	1.3	1.6	1.6	1.5	1.1	–6.6	–0.7	–0.9	–4.2	–2.4	–1.3	–0.8	–0.4	–0.3
Luxembourg	1.1	1.1	1.6	1.1	2.8	2.0	–3.7	0.5	–0.5	–3.2	–2.2	–1.5	–1.1	–1.2	–1.3
Malta	0.9	1.2	3.2	5.1	3.6	1.9	–8.0	–6.4	–4.2	–3.7	–2.4	–1.4	–0.9	–0.9	–0.9
The Netherlands	–0.9	–0.7	1.2	2.3	2.4	2.5	–3.0	–2.1	–0.8	–2.1	–1.7	–1.5	–1.2	–1.3	–1.3
New Zealand	0.3	1.0	1.6	2.0	1.9	–1.9	–3.7	–2.7	–3.3	–2.6	–1.3	0.3	1.7	2.0	1.7
Norway	6.3	3.4	1.5	2.6	5.7	4.5	–4.6	8.2	20.7	23.6	22.0	20.0	18.6	17.2	15.9
Portugal	–3.0	–0.1	1.9	0.7	2.9	2.9	–3.1	–0.5	0.0	1.1	0.9	0.9	1.0	1.2	1.3
Singapore	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Slovak Republic	–1.4	–1.2	–1.2	0.2	0.1	–0.2	–4.4	–4.6	–2.8	–4.1	–2.9	–3.1	–2.7	–2.7	–2.6
Slovenia	–2.7	0.0	0.7	2.1	2.5	2.1	–6.3	–3.5	–2.3	–3.2	–1.6	–1.3	–0.5	–0.4	–0.3
Spain[1]	–3.1	–2.7	–1.9	–0.9	–0.4	–1.0	–8.1	–4.9	–2.5	–2.4	–1.3	–1.4	–1.5	–1.5	–1.5
Sweden	–1.4	0.2	1.1	1.5	0.9	0.7	–2.7	0.0	1.1	0.4	0.0	0.4	0.6	0.6	0.6
Switzerland	0.0	0.8	0.4	1.3	1.4	1.4	–3.0	–0.4	0.3	0.5	0.3	0.2	0.1	0.1	0.1
United Kingdom	–3.7	–3.1	–1.8	–0.6	–0.5	–0.9	–12.0	–6.0	–2.7	–3.3	–2.5	–2.2	–2.0	–2.0	–1.9
United States[2]	–2.1	–1.7	–2.4	–2.8	–3.1	–3.5	–11.9	–9.3	–3.4	–3.8	–4.1	–4.3	–3.9	–3.6	–3.6

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

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

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

[2] For cross-economy comparison, the expenditures 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 therefore differ from data published by the US Bureau of Economic Analysis.

Table A3. Advanced Economies: General Government Cyclically Adjusted Balance, 2014–28

(Percent of potential GDP)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Average	–2.2	–1.9	–2.2	–2.3	–2.5	–3.2	–7.8	–6.9	–4.9	–4.8	–4.3	–4.2	–4.1	–4.0	–4.1
Euro Area	–0.9	–0.6	–0.5	–0.6	–0.4	–0.8	–4.4	–4.2	–3.9	–3.5	–2.6	–2.2	–2.1	–2.0	–2.0
G7	–2.5	–2.2	–2.7	–3.0	–3.2	–3.9	–8.9	–8.2	–5.7	–5.6	–5.1	–5.0	–4.9	–4.8	–4.9
G20 Advanced	–2.4	–2.1	–2.5	–2.7	–2.9	–3.7	–8.6	–7.8	–5.4	–5.4	–4.9	–4.8	–4.6	–4.5	–4.7
Andorra	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Australia[1]	–2.7	–2.5	–2.2	–1.5	–1.1	–4.0	–7.9	–6.1	–3.5	–3.3	–2.9	–2.5	–2.2	–2.1	–1.8
Austria	–2.2	–0.5	–1.2	–0.9	–0.8	–0.6	–4.9	–4.8	–3.7	–2.5	–1.0	–0.8	–0.9	–1.2	–1.2
Belgium	–2.6	–2.3	–2.3	–0.8	–1.2	–2.8	–6.4	–5.4	–4.8	–5.3	–5.6	–5.5	–5.6	–5.7	–5.7
Canada	–0.2	0.0	–0.1	–0.3	0.1	–0.2	–9.2	–3.7	–1.0	–0.5	–0.2	–0.3	–0.2	–0.1	0.0
Croatia	–5.1	–3.1	–1.1	0.6	0.1	–0.1	–5.6	–3.5	–2.1	–2.8	–1.9	–1.3	–1.1	–1.0	–1.1
Cyprus	2.3	2.3	1.3	1.8	2.6	0.7	–3.7	–1.1	1.3	1.3	1.2	1.1	1.0	0.8	0.7
Czech Republic	–0.6	–0.4	0.7	0.8	0.1	–0.8	–5.5	–5.4	–3.8	–3.7	–2.4	–2.3	–2.3	–2.4	–2.5
Denmark	2.5	–0.5	–0.4	0.8	–0.4	3.2	2.0	3.2	0.8	1.0	0.4	0.0	–0.2	–0.2	–0.2
Estonia	1.2	0.8	0.1	–1.1	–1.1	–0.3	–4.9	–3.0	–0.6	–3.5	–3.0	–2.5	–1.9	–1.5	–1.4
Finland	–0.6	0.1	–0.3	–0.9	–1.0	–1.3	–3.3	–2.1	–1.9	–2.2	–2.2	–2.7	–2.7	–2.6	–2.6
France	–2.5	–2.1	–2.0	–2.0	–1.8	–3.1	–5.9	–5.3	–4.4	–4.6	–4.1	–4.0	–3.9	–3.9	–4.1
Germany	0.8	1.2	1.1	0.8	1.5	1.3	–2.9	–3.1	–2.8	–3.2	–1.4	–0.5	–0.6	–0.5	–0.5
Greece	4.1	4.5	7.0	6.6	5.2	3.5	–2.4	–4.2	–3.3	–2.8	–1.6	–1.4	–1.1	–0.9	–0.7
Hong Kong SAR	3.6	0.7	4.7	5.5	2.3	0.3	–5.5	1.0	–5.2	–2.9	–0.2	0.7	0.9	0.7	0.6
Iceland	1.2	0.2	12.0	0.1	–1.0	–3.4	–5.9	–6.9	–4.8	–3.1	–1.9	–0.2	0.6	0.8	0.3
Ireland[2]	–3.1	–1.4	–1.4	–0.8	–0.1	0.4	–4.4	–2.1	0.9	1.2	1.2	1.0	1.1	1.1	1.1
Israel	–2.5	–0.8	–1.6	–1.3	–3.8	–4.2	–9.5	–3.5	–0.7	–1.8	–1.7	–2.7	–2.9	–2.8	–2.7
Italy	–0.7	–0.5	–0.9	–1.5	–1.5	–1.0	–6.1	–6.8	–8.1	–3.8	–3.3	–2.8	–2.1	–1.6	–1.0
Japan	–6.0	–4.5	–4.5	–3.7	–3.0	–3.3	–8.1	–6.2	–7.8	–6.4	–4.1	–2.9	–3.1	–3.4	–3.7
Korea	0.7	0.7	1.8	2.3	2.6	0.5	–1.5	0.1	–0.9	0.2	–0.1	0.0	–0.1	–0.1	–0.1
Latvia	–1.1	–1.1	–0.3	–1.2	–1.5	–1.2	–2.9	–5.0	–3.2	–3.8	–1.6	–2.8	–1.2	–0.5	–0.4
Lithuania	–0.4	0.1	0.6	0.5	0.5	0.1	–6.8	–1.8	–1.5	–4.5	–3.1	–2.1	–1.5	–1.1	–1.0
Luxembourg	1.4	1.5	1.1	1.0	3.0	2.1	–2.6	0.4	–0.4	–2.9	–1.6	–1.0	–0.5	–0.5	–0.5
Malta	–1.3	–2.1	0.7	3.1	1.5	0.3	–5.7	–6.5	–5.6	–5.0	–3.8	–2.6	–2.1	–2.2	–2.2
The Netherlands	–0.6	–0.7	0.9	1.4	0.9	1.1	–1.2	–2.0	–2.1	–2.9	–2.2	–2.1	–1.9	–1.8	–1.8
New Zealand	0.4	0.7	1.0	1.1	0.9	–2.2	–4.3	–4.4	–5.3	–4.5	–3.1	–1.5	0.0	0.3	0.0
Norway[2]	–5.6	–6.6	–7.6	–7.7	–7.0	–7.2	–8.7	–12.3	–12.9	–12.1	–10.2	–10.1	–10.0	–9.9	–9.9
Portugal	–2.7	–1.1	0.2	–2.3	–0.5	–0.7	–2.7	–1.2	–2.9	–1.7	–1.3	–1.3	–1.1	–1.0	–0.9
Singapore	1.0	–0.7	0.7	1.8	0.7	1.7	–7.9	–1.1	–1.3	0.7	–0.4	–0.1	0.2	0.3	0.5
Slovak Republic	–2.3	–3.3	–3.1	–1.5	–1.6	–1.7	–3.9	–4.9	–3.2	–4.7	–3.9	–4.4	–4.0	–3.9	–3.8
Slovenia	–4.4	–1.9	–1.8	0.0	0.6	0.2	–6.3	–5.5	–4.6	–4.6	–2.6	–2.2	–1.5	–1.4	–1.4
Spain[2]	–1.2	–2.1	–2.5	–2.4	–2.2	–3.1	–4.8	–4.1	–4.2	–4.2	–3.4	–3.8	–4.0	–4.0	–4.0
Sweden[2]	–0.9	–0.7	0.7	0.9	0.3	–0.2	–1.7	–0.3	0.1	0.4	0.3	0.2	0.3	0.3	0.3
Switzerland[2]	–0.2	0.6	0.2	1.2	1.1	1.2	–2.3	–0.4	0.1	0.4	0.2	0.1	0.1	0.1	0.1
United Kingdom[2]	–2.9	–2.5	–1.6	–1.3	–1.4	–1.6	–10.7	–7.7	–7.2	–5.7	–3.8	–3.8	–3.8	–3.9	–3.8
United States[2,3]	–2.7	–2.5	–3.6	–4.3	–5.1	–6.0	–10.7	–10.7	–5.9	–6.6	–6.7	–6.9	–6.7	–6.5	–6.7

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

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

[1] Data are based on the fiscal year-based potential GDP.

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

[3] For cross-economy comparison, the expenditures 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 therefore differ from data published by the US Bureau of Economic Analysis.

Table A4. Advanced Economies: General Government Cyclically Adjusted Primary Balance, 2014–28

(Percent of potential GDP)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Average	–0.5	–0.4	–0.7	–0.8	–1.0	–1.8	–6.6	–5.5	–3.4	–3.2	–2.6	–2.4	–2.2	–2.1	–2.1
Euro Area	1.3	1.4	1.3	1.2	1.3	0.7	–3.1	–2.9	–2.4	–1.9	–0.9	–0.5	–0.3	–0.2	–0.1
G7	–0.7	–0.5	–1.0	–1.3	–1.5	–2.2	–7.4	–6.5	–3.8	–3.7	–3.0	–2.8	–2.6	–2.4	–2.5
G20 Advanced	–0.7	–0.5	–0.9	–1.2	–1.3	–2.1	–7.2	–6.2	–3.7	–3.5	–2.8	–2.6	–2.5	–2.3	–2.3
Andorra	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Australia[1]	–1.8	–1.6	–1.3	–0.7	–0.2	–3.2	–7.1	–5.2	–2.4	–2.0	–1.4	–1.0	–0.6	–0.4	–0.1
Austria	–0.2	1.4	0.4	0.5	0.4	0.4	–4.0	–4.0	–3.1	–1.6	–0.1	0.4	0.2	0.0	0.0
Belgium	0.2	0.2	0.1	1.3	0.6	–1.0	–4.8	–3.9	–3.5	–3.8	–3.6	–3.3	–3.3	–3.1	–3.0
Canada	0.1	0.6	0.5	–0.1	0.2	–0.1	–8.8	–4.4	–1.6	–0.7	–0.4	–0.5	–0.4	–0.4	–0.4
Croatia	–2.1	0.0	1.8	3.1	2.2	1.9	–4.0	–2.1	–0.6	–1.0	0.1	0.4	0.5	0.4	0.3
Cyprus	4.3	4.3	3.1	3.5	4.3	2.3	–2.1	0.2	2.4	2.4	2.2	2.1	1.9	1.7	1.7
Czech Republic	0.4	0.5	1.5	1.5	0.7	–0.3	–4.9	–4.8	–3.1	–2.7	–1.3	–1.1	–1.2	–1.2	–1.3
Denmark	3.0	0.2	0.1	0.7	–0.7	2.9	1.7	2.8	0.3	0.7	0.2	–0.1	–0.2	–0.2	–0.3
Estonia	1.2	0.8	0.0	–1.1	–1.1	–0.4	–4.9	–3.0	–0.6	–3.3	–2.6	–2.1	–1.4	–1.1	–1.0
Finland	–0.5	0.3	–0.1	–0.6	–0.8	–1.1	–3.2	–2.2	–2.0	–1.9	–1.6	–2.1	–2.3	–2.3	–2.5
France	–0.5	–0.3	–0.3	–0.4	–0.2	–1.7	–4.7	–4.0	–2.6	–3.0	–2.3	–2.1	–1.8	–1.5	–1.4
Germany	2.0	2.2	2.0	1.7	2.3	1.9	–2.5	–2.6	–2.3	–2.5	–0.6	0.5	0.3	0.5	0.5
Greece	7.4	7.5	9.7	9.3	8.3	6.3	0.1	–1.9	–0.6	0.3	1.5	1.8	2.2	2.6	2.7
Hong Kong SAR	3.6	0.7	3.9	4.7	0.9	–1.3	–7.3	–1.7	–8.2	–4.8	–1.6	–0.8	–0.3	–0.4	–0.5
Iceland	4.6	3.7	14.9	3.2	1.3	–1.3	–3.8	–4.9	–2.4	0.6	1.2	2.3	2.9	2.9	2.4
Ireland[2]	0.2	1.0	0.8	1.2	1.4	1.6	–3.4	–1.3	1.7	1.9	1.9	1.6	1.7	1.7	1.4
Israel	–0.4	0.9	0.3	0.7	–1.7	–2.4	–7.7	–0.9	1.7	0.4	0.3	–0.8	–1.0	–1.0	–0.9
Italy	3.5	3.2	2.8	2.0	1.9	2.2	–3.1	–3.5	–3.9	0.3	0.9	1.4	1.9	2.4	3.0
Japan	–4.9	–3.4	–3.4	–2.7	–2.2	–2.6	–7.5	–5.6	–7.4	–6.2	–3.9	–2.8	–2.9	–3.1	–3.2
Korea	0.3	0.4	1.5	2.0	2.2	0.0	–2.0	–0.3	–1.1	0.0	–0.2	–0.1	–0.1	–0.1	0.0
Latvia	0.4	0.6	0.9	–0.1	–0.5	–0.3	–2.0	–4.3	–2.7	–3.3	–0.8	–1.9	–0.4	0.2	0.3
Lithuania	1.2	1.6	1.9	1.6	1.4	0.9	–6.2	–1.6	–1.6	–4.2	–2.6	–1.4	–0.9	–0.4	–0.3
Luxembourg	1.1	1.2	0.8	0.8	2.8	1.8	–2.8	0.1	–0.7	–3.1	–2.0	–1.4	–1.1	–1.2	–1.3
Malta	1.3	0.2	2.9	4.9	3.0	1.6	–4.5	–5.4	–4.5	–3.9	–2.5	–1.4	–0.9	–0.9	–0.9
The Netherlands	0.7	0.4	2.0	2.4	1.8	1.9	–0.5	–1.4	–1.9	–3.1	–2.3	–2.0	–1.6	–1.4	–1.3
New Zealand	1.0	1.3	1.6	1.8	1.5	–1.6	–3.6	–3.6	–4.4	–3.2	–1.4	0.3	1.7	2.1	1.8
Norway[2]	–8.2	–9.5	–10.4	–10.4	–9.4	–9.5	–14.0	–10.8	–8.6	–8.8	–8.7	–8.6	–8.7	–8.7	–8.6
Portugal	1.4	2.9	3.9	1.3	2.7	2.2	–0.1	1.0	–0.9	0.7	0.8	0.8	1.0	1.2	1.3
Singapore	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Slovak Republic	–0.7	–1.8	–1.6	–0.3	–0.5	–0.6	–3.0	–4.0	–2.4	–3.7	–2.7	–3.0	–2.7	–2.7	–2.6
Slovenia	–1.6	0.8	0.8	2.1	2.4	1.7	–5.0	–4.3	–3.7	–3.8	–1.8	–1.3	–0.5	–0.4	–0.3
Spain[2]	1.6	0.4	–0.2	–0.2	0.0	–1.0	–2.9	–2.2	–2.2	–2.1	–1.1	–1.4	–1.5	–1.5	–1.5
Sweden[2]	–0.8	–0.5	0.8	1.0	0.4	–0.1	–1.6	–0.3	0.5	0.8	0.6	0.6	0.7	0.6	0.6
Switzerland[2]	0.0	0.8	0.4	1.3	1.2	1.3	–2.3	–0.2	0.2	0.5	0.3	0.2	0.1	0.1	0.1
United Kingdom[2]	–1.2	–1.1	–0.1	0.5	0.2	–0.3	–9.7	–5.5	–3.7	–3.3	–2.0	–1.8	–1.8	–2.0	–1.9
United States[2,3]	–0.8	–0.7	–1.6	–2.3	–2.9	–3.7	–8.6	–8.3	–3.8	–4.1	–4.0	–4.1	–3.7	–3.4	–3.5

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

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

[1] Data are based on the fiscal year–based potential GDP.

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

[3] For cross-economy comparison, expenditures 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 therefore differ from data published by the US Bureau of Economic Analysis.

Table A5. Advanced Economies: General Government Revenue, 2014–28

(Percent of GDP)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Average	36.5	36.1	36.0	35.9	36.0	35.7	36.1	37.0	37.4	36.9	36.6	36.4	36.4	36.4	36.3
Euro Area	46.8	46.4	46.2	46.1	46.4	46.2	46.3	47.2	47.1	47.1	46.5	46.3	46.1	46.0	46.0
G7	36.5	36.3	36.0	35.8	35.8	35.6	36.1	36.9	37.4	36.8	36.4	36.2	36.3	36.3	36.2
G20 Advanced	35.7	35.6	35.4	35.2	35.3	35.1	35.6	36.4	37.0	36.3	36.0	35.9	35.9	36.0	35.8
Andorra	33.8	35.0	38.5	38.0	38.5	38.1	40.5	36.8	37.1	37.6	38.1	38.2	38.3	38.4	38.5
Australia	33.9	34.6	35.0	35.2	35.7	34.6	35.9	35.9	35.1	36.0	36.6	36.9	37.1	37.2	37.2
Austria	49.6	50.0	48.5	48.5	48.9	49.2	48.7	50.0	49.1	49.7	49.4	49.6	49.6	49.6	49.6
Belgium	52.5	51.3	50.8	51.3	51.4	49.9	49.9	49.9	49.3	50.8	51.2	51.4	51.3	51.3	51.5
Canada	38.5	40.0	40.3	40.3	41.0	40.6	41.8	41.5	40.8	40.7	40.6	40.6	40.7	40.8	40.9
Croatia	43.4	44.0	45.4	45.3	45.4	46.3	46.7	46.0	44.7	45.2	44.7	44.5	44.6	44.0	43.9
Cyprus	40.1	39.5	37.5	38.3	39.0	39.4	38.8	41.4	42.1	41.0	40.9	40.6	40.0	39.8	39.7
Czech Republic	40.5	41.3	40.5	40.5	41.5	41.3	41.5	41.4	41.2	42.0	40.8	40.2	40.2	40.2	40.3
Denmark	56.4	53.2	52.4	52.3	51.3	53.8	53.8	54.4	51.7	50.8	50.2	50.0	50.3	50.3	50.3
Estonia	38.5	39.7	39.0	38.5	38.7	39.5	39.4	39.0	39.0	38.4	38.9	39.0	39.3	39.3	39.5
Finland	54.3	54.1	53.9	53.0	52.5	52.4	51.6	53.0	52.2	52.1	51.7	51.5	51.3	51.3	51.4
France	53.3	53.2	53.0	53.5	53.4	52.3	52.5	52.5	53.6	52.7	51.9	51.6	51.5	51.5	51.5
Germany	44.9	45.1	45.5	45.5	46.3	46.5	46.1	47.5	47.1	47.0	46.9	47.0	47.1	47.1	47.1
Greece	46.5	48.2	50.2	49.4	49.3	48.0	49.0	49.5	51.5	47.9	45.7	45.2	44.7	43.6	43.0
Hong Kong SAR	20.8	18.6	22.6	22.9	20.7	20.4	20.7	23.7	20.9	21.1	22.8	23.6	23.7	23.7	23.7
Iceland	46.1	43.1	59.0	45.4	44.8	42.1	42.2	41.4	41.8	42.0	41.6	41.8	41.6	41.0	40.5
Ireland	34.0	27.0	27.3	25.9	25.5	24.7	22.3	23.2	23.3	22.3	22.0	22.0	22.0	22.0	21.8
Israel	36.0	36.3	36.0	37.1	35.5	34.6	34.0	36.6	37.0	35.2	35.1	34.2	34.2	34.2	34.3
Italy	47.9	47.8	46.7	46.3	46.2	47.0	47.3	48.3	48.8	50.0	48.6	48.4	48.2	48.0	47.8
Japan	32.8	33.6	33.6	33.6	34.3	34.2	35.5	36.6	36.2	35.7	35.4	35.4	35.4	35.4	35.4
Korea	20.4	20.3	21.1	21.8	22.9	22.9	22.9	25.8	27.0	25.3	24.9	25.0	25.0	25.0	25.0
Latvia	36.1	35.9	35.7	35.7	37.3	37.2	37.4	37.4	35.6	36.8	37.9	36.4	36.6	36.5	36.3
Lithuania	33.4	34.2	33.6	32.9	33.7	34.0	34.7	36.3	35.8	35.4	35.2	35.0	34.9	35.0	34.9
Luxembourg	41.9	41.7	41.9	42.6	45.3	45.4	43.3	43.7	43.1	43.3	44.3	44.5	44.8	45.2	45.5
Malta	38.2	37.2	37.5	37.7	37.9	36.3	36.4	36.1	35.6	35.6	34.8	34.8	34.8	34.8	34.8
The Netherlands	43.0	42.1	43.0	43.0	43.0	43.1	43.3	43.2	43.5	43.1	42.7	42.5	42.5	42.3	42.2
New Zealand	37.3	37.6	37.4	37.0	37.4	36.3	37.8	38.5	39.0	39.0	40.2	41.0	41.2	41.2	40.4
Norway	53.8	54.2	54.4	54.2	55.5	56.7	54.2	56.9	60.9	65.7	64.9	63.8	63.6	63.4	63.2
Portugal	44.4	43.8	42.9	42.4	42.9	42.6	43.4	44.6	43.7	43.6	43.6	43.6	43.6	43.5	43.7
Singapore	17.2	17.3	18.6	18.9	17.6	17.8	17.5	17.4	15.9	17.2	17.1	17.6	18.0	18.2	18.2
Slovak Republic	40.2	42.9	40.0	38.5	38.7	39.3	39.4	40.9	40.7	42.7	39.1	38.4	38.4	38.0	38.0
Slovenia	45.3	45.9	44.2	44.0	44.2	43.8	43.4	44.6	43.1	42.7	42.2	42.1	42.2	42.1	42.2
Spain	39.2	38.7	38.2	38.2	39.2	39.2	41.8	43.7	43.4	44.2	43.5	42.7	41.4	41.4	41.4
Sweden	48.1	48.4	49.8	49.6	49.6	48.7	48.3	48.3	47.5	46.9	47.8	48.0	48.0	48.1	48.1
Switzerland	31.9	33.0	32.7	33.6	33.0	33.3	34.1	34.7	33.8	33.3	33.0	32.8	32.8	32.8	32.8
United Kingdom	35.7	35.7	36.2	36.6	36.6	36.3	36.9	38.0	38.9	39.2	39.2	38.9	37.3	35.9	34.7
United States	31.4	31.7	31.2	30.6	30.2	30.2	30.8	31.4	33.0	31.9	31.6	31.3	31.7	31.9	32.0

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

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

Table A6. Advanced Economies: General Government Expenditure, 2014–28

(Percent of GDP)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Average	39.6	38.7	38.6	38.3	38.4	38.7	46.4	44.5	41.7	41.3	40.7	40.4	40.3	40.2	40.2
Euro Area	49.3	48.3	47.7	47.1	46.8	46.9	53.4	52.5	51.0	50.8	49.3	48.6	48.2	48.0	47.9
G7	40.1	39.3	39.3	39.1	39.2	39.4	47.8	46.0	42.8	42.3	41.7	41.4	41.3	41.1	41.2
G20 Advanced	39.2	38.5	38.5	38.3	38.3	38.7	46.8	45.1	42.1	41.6	41.1	40.8	40.7	40.5	40.5
Andorra	31.7	33.0	34.1	34.7	35.9	35.8	43.4	39.2	36.0	36.2	35.7	35.5	35.3	35.2	35.0
Australia	36.9	37.4	37.4	36.9	37.0	39.1	44.6	42.2	38.4	39.0	39.4	39.3	39.3	39.3	39.0
Austria	52.3	51.0	50.1	49.3	48.8	48.6	56.7	56.0	52.4	52.4	50.9	50.6	50.6	50.8	50.8
Belgium	55.6	53.7	53.1	52.0	52.3	51.9	58.9	55.5	53.7	56.0	56.7	56.9	56.9	57.0	57.2
Canada	38.4	40.0	40.8	40.5	40.7	40.6	52.7	45.9	41.5	41.1	41.0	40.9	40.9	40.9	40.9
Croatia	48.6	47.5	46.4	44.7	45.5	46.1	54.0	48.5	45.7	47.5	46.4	45.8	45.6	45.1	45.0
Cyprus	40.3	39.3	37.3	36.4	42.6	38.1	44.6	43.1	39.9	39.1	39.3	39.1	38.7	38.8	38.8
Czech Republic	42.6	41.9	39.8	39.0	40.6	41.1	47.2	46.5	44.8	46.2	43.6	42.7	42.7	42.7	42.8
Denmark	55.2	54.5	52.5	50.5	50.5	49.7	53.5	50.8	49.2	49.4	49.8	50.0	50.4	50.5	50.5
Estonia	37.8	39.5	39.4	39.2	39.3	39.4	44.8	41.3	40.2	43.2	42.4	41.8	41.4	40.9	40.9
Finland	57.3	56.5	55.6	53.6	53.4	53.3	57.1	55.7	54.0	54.6	54.2	54.5	54.2	54.1	54.1
France	57.2	56.8	56.7	56.5	55.6	55.4	61.5	59.1	58.5	58.1	56.7	56.0	55.6	55.4	55.5
Germany	44.3	44.1	44.4	44.2	44.3	45.0	50.4	51.3	49.7	50.7	48.8	47.9	47.8	47.6	47.6
Greece	50.7	51.2	49.9	48.5	48.5	47.7	59.7	57.4	55.5	50.3	47.0	46.2	45.5	44.4	43.7
Hong Kong SAR	17.3	18.0	18.3	17.4	18.4	21.0	29.9	23.7	28.1	25.0	23.8	23.4	23.1	23.1	23.1
Iceland	45.8	43.5	46.4	44.4	43.8	43.6	51.2	49.8	46.1	44.8	43.4	41.9	41.0	40.3	40.3
Ireland	37.6	29.1	28.1	26.2	25.3	24.3	27.3	24.8	22.1	21.0	20.8	20.9	20.9	20.9	20.7
Israel	38.3	37.5	37.7	38.3	39.1	38.5	44.7	40.2	36.9	36.4	36.5	36.8	37.0	37.0	37.0
Italy	50.9	50.3	49.1	48.8	48.4	48.5	57.0	57.3	56.8	53.7	51.9	50.8	50.0	49.2	48.5
Japan	38.4	37.3	37.2	36.7	36.7	37.3	44.6	42.8	44.0	42.1	39.4	38.3	38.5	38.8	39.1
Korea	19.8	19.7	19.5	19.6	20.4	22.6	25.1	25.8	27.9	25.4	25.1	25.1	25.1	25.1	25.1
Latvia	37.8	37.4	36.1	36.5	38.1	37.6	41.1	42.9	39.2	41.5	39.9	39.5	37.9	37.0	36.7
Lithuania	34.0	34.4	33.3	32.4	33.2	33.8	42.0	37.3	36.6	39.8	38.0	37.0	36.4	36.1	36.0
Luxembourg	40.6	40.4	40.0	41.3	42.3	43.1	46.7	42.9	43.3	46.3	46.1	45.5	45.4	45.6	46.0
Malta	39.9	38.2	36.4	34.5	35.8	35.7	45.7	43.6	40.9	40.4	38.6	37.4	36.9	37.0	36.9
The Netherlands	45.3	44.0	42.9	41.7	41.5	41.3	47.0	45.8	44.6	45.0	44.2	44.0	44.0	44.0	44.0
New Zealand	37.7	37.3	36.5	35.6	36.1	38.8	42.1	41.9	43.2	42.8	43.3	42.5	41.2	40.9	40.4
Norway	45.2	48.2	50.4	49.2	47.7	50.2	56.7	47.6	38.5	40.4	41.1	42.1	43.3	44.5	45.7
Portugal	51.7	48.2	44.8	45.4	43.2	42.5	49.2	47.4	45.7	44.9	44.9	44.7	44.7	44.5	44.6
Singapore	12.6	14.4	15.3	13.6	13.9	14.0	24.3	16.2	15.4	14.1	15.0	15.2	15.3	15.4	15.3
Slovak Republic	43.3	45.6	42.5	39.5	39.7	40.5	44.8	46.3	44.3	47.8	43.1	42.8	42.4	42.0	41.9
Slovenia	50.8	48.7	46.2	44.1	43.5	43.2	51.2	49.3	46.3	46.6	44.6	44.2	43.6	43.5	43.6
Spain	45.3	44.0	42.5	41.3	41.8	42.3	51.9	50.6	47.8	48.7	47.0	46.5	45.4	45.4	45.4
Sweden	49.7	48.4	48.8	48.2	48.8	48.1	51.0	48.4	46.8	46.8	48.0	48.0	47.8	47.8	47.8
Switzerland	32.2	32.5	32.4	32.5	31.7	32.0	37.1	35.2	33.6	33.0	32.8	32.7	32.8	32.8	32.8
United Kingdom	41.2	40.3	39.5	39.0	38.7	38.5	49.9	46.3	45.1	45.0	43.6	43.1	41.2	39.8	38.4
United States[1]	35.4	35.2	35.6	35.4	35.6	36.0	44.8	43.0	38.5	38.2	38.4	38.4	38.5	38.6	38.8

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

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

[1] For cross-economy comparison, expenditures 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 therefore differ from data published by the US Bureau of Economic Analysis.

Table A7. Advanced Economies: General Government Gross Debt, 2014–28

(Percent of GDP)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Average[1]	103.7	103.3	105.7	103.4	102.9	104.0	122.9	117.4	112.5	112.4	113.6	115.0	115.9	116.7	117.8
Euro Area	92.8	90.9	90.1	87.6	85.6	83.5	96.6	94.9	90.9	89.8	89.0	87.9	86.9	86.2	85.4
G7	117.4	116.4	119.5	117.5	117.2	118.3	140.4	134.1	128.4	128.4	130.3	132.2	133.5	134.7	136.2
G20 Advanced	111.3	110.9	113.8	111.7	111.6	113.0	134.1	128.1	123.1	123.5	125.4	127.2	128.4	129.5	130.9
Andorra	42.0	40.9	39.8	37.8	36.3	35.4	46.3	48.5	38.8	37.4	35.6	34.3	33.1	31.9	30.9
Australia[2]	34.0	37.8	40.6	41.2	41.8	46.7	57.1	57.6	55.7	59.4	62.4	62.9	62.8	62.6	62.2
Austria	83.8	84.4	82.5	78.6	74.1	70.6	82.9	82.3	77.8	74.9	72.6	71.4	70.1	68.7	67.9
Belgium	107.0	105.2	105.0	102.0	99.9	97.6	112.0	109.2	105.3	106.0	108.3	111.1	114.0	116.9	119.5
Canada[2]	85.5	92.0	92.4	90.9	90.8	90.2	118.9	115.1	106.6	105.1	102.2	99.2	96.2	93.6	91.1
Croatia	82.4	82.1	79.4	77.5	74.5	71.9	86.8	78.6	67.5	65.2	64.2	63.3	62.2	61.4	60.1
Cyprus	108.8	106.8	102.6	92.6	98.1	90.4	113.5	101.1	86.5	79.6	71.9	67.8	62.6	59.4	56.0
Czech Republic	41.9	39.7	36.6	34.2	32.1	30.0	37.7	42.0	42.3	43.8	43.3	43.2	43.9	44.9	45.7
Denmark	44.3	39.8	37.2	35.9	34.0	33.7	42.2	36.6	29.7	30.4	30.3	30.3	30.7	31.1	31.5
Estonia	10.6	10.1	10.0	9.1	8.2	8.5	18.5	17.6	17.2	21.0	23.1	24.1	24.6	24.7	24.4
Finland	64.5	68.3	68.0	66.0	64.9	64.9	74.8	72.6	74.8	74.5	75.9	77.8	79.5	80.9	82.1
France	94.8	95.4	96.1	98.1	97.8	97.4	114.7	112.6	111.1	111.4	112.4	112.8	113.3	114.2	115.0
Germany	75.3	71.9	69.0	64.6	61.3	58.9	68.0	68.6	66.5	67.2	66.5	64.4	62.3	60.9	59.6
Greece	181.8	179.1	183.7	183.2	190.7	185.5	212.4	200.7	177.4	166.0	160.5	155.8	151.6	147.5	143.6
Hong Kong SAR[2]	0.1	0.1	0.1	0.1	0.1	0.3	1.0	1.9	4.3	6.1	7.1	7.8	8.8	9.8	10.6
Iceland	115.3	97.3	82.5	71.7	63.2	66.6	77.8	75.6	68.7	64.7	61.5	57.4	52.9	48.9	44.2
Ireland	104.3	76.7	74.3	67.6	63.0	57.0	58.4	55.4	45.2	39.9	36.1	33.2	30.7	27.7	25.2
Israel	64.9	63.1	61.4	59.7	59.9	58.8	70.7	68.0	60.9	57.6	55.3	54.5	54.1	53.7	53.5
Italy	135.4	135.3	134.8	134.2	134.4	134.1	154.9	149.8	144.7	140.3	140.0	138.5	136.9	134.8	131.9
Japan	233.3	228.3	232.4	231.3	232.4	236.4	258.7	255.4	261.3	258.2	256.3	257.6	259.2	261.5	264.0
Korea	39.7	40.8	41.2	40.1	40.0	42.1	48.7	51.3	54.3	55.3	55.9	56.6	57.2	57.8	58.2
Latvia	41.6	37.1	40.4	39.0	37.1	36.7	42.1	44.7	41.6	42.0	41.0	41.2	39.9	37.8	37.3
Lithuania	40.5	42.7	39.9	39.3	33.7	35.8	46.3	44.0	39.6	40.2	39.1	38.0	36.8	35.8	35.0
Luxembourg	21.9	21.1	19.6	21.8	20.9	22.4	24.5	24.5	24.3	27.4	29.2	29.7	29.7	29.5	29.3
Malta	62.1	56.2	54.7	47.8	43.7	40.3	52.9	55.1	55.8	56.9	57.1	56.6	56.1	55.9	55.5
The Netherlands	67.9	64.6	61.9	57.0	52.4	48.5	54.7	52.4	48.5	48.2	47.3	47.0	46.5	46.2	46.3
New Zealand	34.2	34.2	33.4	31.1	28.1	31.8	43.3	50.1	52.8	49.9	45.5	41.1	38.8	36.5	34.9
Norway	29.7	34.3	37.9	38.3	39.4	40.6	46.1	42.7	39.6	38.8	38.5	38.0	37.5	37.0	37.0
Portugal	132.9	131.2	131.5	126.1	121.5	116.6	134.9	125.4	116.0	112.4	108.6	105.2	102.2	99.3	96.5
Singapore	97.7	102.2	106.5	107.8	109.4	127.8	149.0	147.7	134.2	134.5	134.9	135.4	135.9	136.4	136.8
Slovak Republic	53.5	51.7	52.3	51.5	49.4	48.0	58.9	62.2	58.8	57.4	57.4	58.2	59.6	60.9	62.0
Slovenia	80.3	82.6	78.5	74.2	70.3	65.4	79.6	74.5	70.2	67.7	65.9	64.1	62.3	60.6	59.0
Spain	105.1	103.3	102.7	101.8	100.4	98.2	120.4	118.4	112.0	110.5	108.3	107.9	108.3	108.7	109.3
Sweden	44.9	43.7	42.3	40.7	39.2	35.2	39.5	36.3	31.7	32.3	32.9	32.5	31.9	31.0	30.0
Switzerland	42.1	42.2	40.9	41.8	39.8	39.6	43.3	41.5	39.1	37.5	36.1	35.0	33.8	32.8	31.7
United Kingdom	86.1	86.7	86.6	85.6	85.2	84.5	105.6	108.1	102.6	106.3	109.7	112.8	112.7	113.0	113.1
United States[2]	104.5	105.1	107.2	106.2	107.4	108.7	133.5	126.4	121.7	122.2	125.8	129.1	131.8	134.0	136.2

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

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

[1] The average does not include the debt incurred by the European Union, and used to finance the grants portion of the NextGenerationEU (NGEU) package. This totaled €58 billion (0.4 percent of European Union GDP) as of December 31, 2021, and €158 billion (1 percent of European Union GDP) as of February 16, 2023. Debt incurred by the EU and used to on-lend to member states is included within member state debt data and regional aggregates.

[2] For cross-economy comparison, 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, 2014–28

(Percent of GDP)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Average[1]	74.9	74.9	76.5	74.1	73.9	74.7	86.8	84.6	81.6	82.5	84.3	85.7	86.7	87.6	88.7
Euro Area	76.3	75.1	74.6	72.4	70.6	69.0	79.0	77.8	74.8	74.5	74.3	73.7	73.2	72.8	72.4
G7	86.4	85.8	87.7	85.4	85.5	86.2	99.9	98.0	94.2	95.3	97.9	99.8	101.1	102.4	104.0
G20 Advanced	80.9	80.7	82.6	80.1	80.3	81.4	94.6	92.7	89.5	90.8	93.3	95.1	96.4	97.7	99.1
Andorra	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Australia[2]	19.1	22.1	23.4	23.3	24.1	27.9	34.5	33.3	32.4	35.9	38.2	39.1	39.4	39.5	39.4
Austria	59.1	58.3	56.9	55.9	50.7	48.0	59.3	60.1	57.7	56.4	54.7	54.2	53.4	52.7	52.4
Belgium[3]	93.4	92.0	91.2	88.3	86.4	84.8	97.5	94.5	91.9	93.2	96.0	99.2	102.5	105.7	108.6
Canada[2]	21.7	18.5	18.0	12.5	11.6	8.5	15.7	15.4	13.9	14.1	13.9	13.7	13.1	12.5	12.0
Croatia	67.6	68.8	67.4	65.5	62.5	58.9	69.7	63.4	54.5	52.6	51.8	51.1	50.2	49.5	48.5
Cyprus	90.3	90.6	85.3	76.8	51.1	45.9	56.3	53.7	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Czech Republic	29.4	28.1	25.0	21.5	19.6	18.1	23.6	26.4	28.1	29.7	29.0	28.8	29.4	30.2	30.6
Denmark	18.1	16.2	17.5	15.8	13.4	12.3	14.7	10.0	6.5	5.0	4.4	4.3	4.2	4.2	4.3
Estonia	–3.8	–2.0	–1.9	–1.8	–1.8	–2.2	3.0	4.5	5.9	10.5	13.4	15.2	16.4	16.9	17.3
Finland[4]	17.2	18.4	21.2	21.8	24.5	27.0	33.3	34.3	34.1	34.5	35.7	37.6	39.4	41.0	42.4
France	85.5	86.3	89.2	89.4	89.2	88.9	101.7	100.6	99.0	99.4	100.4	100.8	101.3	102.2	103.0
Germany	54.9	52.2	49.3	45.0	42.2	40.1	45.4	45.6	45.1	46.7	46.8	45.6	44.3	43.5	42.7
Greece	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Hong Kong SAR[2]	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Iceland[5]	88.2	78.1	67.7	60.3	50.7	54.4	61.1	60.4	57.1	53.8	51.2	47.7	43.6	39.3	35.9
Ireland[6]	85.8	65.7	65.4	58.8	54.2	48.8	49.8	45.1	36.5	32.0	28.8	26.4	24.2	21.6	19.4
Israel	62.3	60.6	59.0	57.1	57.6	57.5	67.6	65.1	58.4	55.2	53.1	52.4	52.1	51.9	51.7
Italy	121.4	122.2	121.6	121.3	121.8	121.7	141.4	137.3	133.0	129.3	129.4	128.2	126.9	125.1	122.6
Japan	144.9	144.5	149.5	148.1	151.1	151.7	162.3	156.9	162.7	161.0	159.3	159.2	159.4	160.2	161.3
Korea	7.5	9.5	9.7	9.6	9.6	11.7	18.3	20.9	23.9	24.8	25.4	26.1	26.8	27.3	27.8
Latvia	30.3	31.4	31.2	30.5	28.8	28.2	32.5	34.2	32.8	34.0	33.5	34.1	33.2	31.5	31.3
Lithuania	32.5	35.4	32.9	32.9	27.7	30.3	40.9	39.2	35.5	36.5	35.7	34.8	33.8	32.9	32.3
Luxembourg	–10.9	–12.2	–11.6	–11.3	–11.8	–14.1	–10.5	–10.9	–8.5	–3.8	–0.7	1.3	2.6	3.6	4.5
Malta	52.7	47.8	41.8	35.4	32.9	29.2	42.4	44.8	49.3	50.8	51.4	51.2	51.0	51.1	50.9
The Netherlands	55.1	53.3	51.5	46.6	42.9	39.8	44.8	42.9	39.7	39.5	38.8	38.5	38.1	37.9	37.9
New Zealand	7.9	7.3	6.6	5.6	4.7	6.9	10.4	14.1	19.7	23.2	24.1	25.2	25.7	23.5	22.2
Norway	–74.1	–85.1	–83.7	–78.6	–70.9	–74.2	–79.0	–85.3	–57.3	–68.4	–81.4	–93.9	–106.7	–118.8	–130.4
Portugal	120.6	121.0	119.4	116.0	113.4	109.9	123.0	118.1	109.6	106.2	102.7	99.6	96.8	94.1	91.4
Singapore	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Slovak Republic	49.5	47.3	46.9	45.8	43.4	43.1	48.9	50.5	49.0	49.9	51.0	52.8	54.4	56.0	57.3
Slovenia	63.8	63.6	62.7	60.2	53.4	49.9	57.2	56.4	53.2	52.3	51.9	51.4	50.9	50.4	50.0
Spain	86.2	86.0	87.1	86.2	84.9	83.7	103.0	102.3	97.4	96.6	95.2	95.3	96.1	96.9	97.9
Sweden	11.2	11.1	8.9	6.2	6.1	4.6	8.1	7.1	4.8	7.1	8.6	9.4	9.7	9.8	9.6
Switzerland	20.8	21.0	21.6	20.8	18.7	17.3	20.5	21.0	18.7	17.0	15.6	14.5	13.3	12.4	11.2
United Kingdom	77.9	78.2	77.6	76.2	75.4	74.6	94.5	96.7	91.9	95.1	98.2	101.0	100.9	101.2	101.2
United States[2]	81.1	80.9	81.8	80.4	81.1	83.1	98.3	98.3	94.2	95.5	99.8	103.1	105.7	108.0	110.5

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

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

[1] The average does not include the debt incurred by the European Union, and used to finance the grants portion of the NextGenerationEU (NGEU) package. This totaled €58 billion (0.4 percent of European Union GDP) as of December 31, 2021, and €158 billion (1 percent of European Union GDP) as of February 16, 2023. Debt incurred by the EU and used to on-lend to member states is included within member state debt data and regional aggregates.

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

[3] 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.

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

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

[6] "Net debt" for Ireland is defined as gross general debt minus debt instrument assets, namely, currency and deposits, debt securities, and loans. Net debt was previously defined as general government debt less currency and deposits.

Table A9. Emerging Market and Middle-Income Economies: General Government Overall Balance, 2014–28

(Percent of GDP)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Average	–2.4	–4.2	–4.5	–3.8	–3.5	–4.6	–8.9	–5.2	–5.3	–5.9	–5.4	–5.1	–4.9	–4.8	–4.7
Asia	–1.7	–3.1	–3.7	–3.7	–4.2	–5.8	–9.7	–6.5	–7.4	–6.8	–6.3	–6.2	–6.0	–5.9	–5.9
Europe	–1.5	–2.7	–2.8	–1.8	0.3	–0.6	–5.5	–1.9	–2.8	–5.8	–4.0	–3.5	–2.9	–2.7	–2.4
Latin America	–4.8	–6.3	–5.8	–5.1	–5.0	–4.1	–8.8	–4.5	–3.9	–5.2	–4.4	–3.7	–3.2	–3.0	–2.7
MENA	–1.7	–7.9	–8.9	–5.1	–1.7	–2.5	–8.5	–2.1	2.6	–1.0	–1.7	–2.0	–1.9	–1.9	–2.1
G20 Emerging	–2.5	–4.3	–4.6	–4.0	–4.1	–5.2	–9.4	–5.5	–6.2	–6.6	–5.9	–5.7	–5.4	–5.3	–5.2
Algeria	–8.0	–15.7	–13.4	–8.6	–6.8	–9.6	–11.9	–7.2	2.2	–7.9	–7.8	–8.0	–8.0	–8.1	–8.1
Angola	–5.7	–2.9	–4.5	–6.6	2.3	0.8	–1.9	3.8	1.6	–0.2	–1.9	–2.5	–3.0	–3.3	–3.5
Argentina	–4.3	–6.0	–6.7	–6.7	–5.4	–4.4	–8.6	–4.3	–3.9	–3.8	–3.6	–2.0	–1.7	–1.3	–1.3
Belarus	0.1	–3.0	–1.7	–0.3	1.8	0.9	–2.9	–1.7	–4.9	–1.8	–0.5	0.5	0.6	0.7	0.6
Brazil	–6.0	–10.2	–9.0	–7.8	–7.0	–5.8	–13.3	–4.3	–4.6	–8.8	–8.2	–6.6	–5.5	–4.9	–4.4
Bulgaria	–3.7	–2.8	1.5	0.8	0.1	–1.0	–2.9	–2.8	–0.8	–3.3	–3.0	–3.0	–2.3	–2.2	–2.2
Chile	–1.5	–2.1	–2.7	–2.6	–1.5	–2.7	–7.1	–7.5	1.3	–1.8	–1.2	–0.7	–0.3	0.0	0.2
China[1]	–0.7	–2.5	–3.4	–3.4	–4.3	–6.1	–9.7	–6.0	–7.5	–6.9	–6.4	–6.3	–6.2	–6.1	–6.0
Colombia	–1.7	–3.5	–2.3	–2.5	–4.7	–3.5	–7.0	–7.2	–6.7	–4.0	–2.1	–2.4	–2.5	–2.4	–2.1
Dominican Republic	–2.8	0.0	–3.1	–3.1	–2.2	–2.2	–7.9	–2.9	–3.3	–3.0	–2.8	–2.6	–2.5	–2.5	–2.5
Ecuador[2]	–8.4	–7.2	–10.1	–5.8	–2.8	–3.5	–7.1	–1.6	0.1	. . .	. . .	. . .	. . .	. . .	. . .
Egypt	–10.7	–10.4	–11.8	–9.9	–9.0	–7.6	–7.5	–7.0	–5.8	–7.6	–9.2	–8.5	–6.9	–5.7	–5.0
Hungary	–2.8	–2.0	–1.8	–2.5	–2.1	–2.0	–7.5	–7.1	–6.1	–3.9	–2.5	–2.9	–2.2	–2.1	–1.1
India	–7.1	–7.2	–7.1	–6.2	–6.4	–7.7	–12.9	–9.6	–9.6	–8.9	–8.3	–7.9	–7.7	–7.7	–7.6
Indonesia	–2.1	–2.6	–2.5	–2.5	–1.8	–2.2	–6.1	–4.5	–2.3	–2.6	–2.5	–2.4	–2.3	–2.2	–2.1
Iran	–1.0	–1.5	–1.8	–1.6	–1.6	–4.5	–5.8	–4.2	–4.0	–5.8	–6.2	–6.4	–6.7	–7.0	–7.4
Kazakhstan	2.5	–6.3	–4.5	–4.3	2.6	–0.6	–7.0	–5.0	0.1	–1.8	–1.0	–0.8	–1.2	–1.2	–1.5
Kuwait	21.5	4.5	1.0	2.0	6.7	2.5	–11.4	2.3	11.6	7.0	4.2	2.8	0.4	–2.0	–3.2
Lebanon	–6.2	–7.5	–8.9	–8.7	–11.3	–10.4	–3.5	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Malaysia[3]	–2.6	–2.5	–2.6	–2.4	–2.6	–2.0	–4.9	–5.8	–5.3	–4.8	–4.6	–4.5	–4.4	–4.5	–4.5
Mexico	–4.5	–4.0	–2.8	–1.1	–2.2	–2.3	–4.4	–3.9	–4.4	–4.1	–2.7	–2.7	–2.7	–2.7	–2.7
Morocco	–4.8	–4.5	–4.4	–3.2	–3.4	–3.6	–7.1	–5.9	–5.1	–4.9	–4.4	–3.8	–3.3	–3.1	–3.1
Oman	–1.6	–13.5	–19.6	–10.5	–6.7	–4.8	–16.1	–3.2	6.3	0.3	0.9	0.5	0.3	0.3	0.4
Pakistan	–4.3	–4.7	–3.9	–5.2	–5.7	–7.8	–7.0	–6.0	–7.8	–6.8	–8.3	–7.1	–6.2	–5.8	–5.4
Peru	–0.2	–2.1	–2.2	–2.9	–2.0	–1.4	–9.0	–2.5	–1.3	–2.0	–1.9	–1.3	–0.5	–0.3	–0.3
Philippines	0.8	0.5	–0.8	–0.8	–1.5	–1.5	–5.5	–6.3	–5.2	–4.2	–3.7	–3.2	–2.9	–2.5	–2.2
Poland	–3.7	–2.6	–2.4	–1.5	–0.2	–0.7	–6.9	–1.8	–3.1	–4.5	–3.8	–4.0	–4.2	–3.9	–3.5
Qatar	15.4	21.7	–4.9	–2.6	5.9	4.8	1.3	4.4	14.2	14.7	11.1	10.1	10.2	12.0	13.2
Romania	–2.0	–1.3	–2.5	–2.9	–2.7	–4.6	–9.6	–6.7	–5.8	–5.7	–5.2	–4.9	–4.5	–4.4	–4.4
Russia	–1.1	–3.4	–3.7	–1.5	2.9	1.9	–4.0	0.8	–2.2	–6.2	–2.8	–1.8	–0.8	–0.3	0.2
Saudi Arabia	–3.5	–15.5	–13.7	–8.9	–5.5	–4.2	–10.7	–2.3	2.5	–1.1	–1.2	–0.8	–0.3	–0.1	–0.3
South Africa	–3.9	–4.4	–3.7	–4.0	–3.7	–4.7	–9.6	–5.6	–4.5	–5.9	–6.1	–6.7	–6.3	–6.3	–6.5
Sri Lanka	–6.0	–6.6	–5.0	–5.1	–5.0	–7.5	–12.1	–11.6	–10.4	. . .	. . .	. . .	. . .	. . .	. . .
Thailand	–0.8	0.1	0.6	–0.4	0.1	–0.8	–4.7	–7.0	–5.5	–3.1	–3.1	–3.2	–3.3	–3.4	–3.4
Türkiye	–1.4	–1.3	–2.3	–2.2	–3.8	–4.8	–5.1	–4.0	–1.6	–6.5	–5.7	–5.6	–5.6	–5.6	–5.6
Ukraine	–4.5	–1.2	–2.5	–2.4	–2.1	–2.1	–5.9	–3.9	–16.7	–20.3	. . .	. . .	. . .	. . .	. . .
United Arab Emirates	1.9	–6.6	–3.1	–0.2	3.8	2.6	–2.5	4.0	9.0	4.3	3.7	2.9	2.4	2.2	2.0
Uruguay[4]	–2.6	–1.9	–2.7	–2.5	–1.9	–2.8	–4.7	–2.7	–2.5	–2.2	–2.5	–2.4	–2.2	–2.1	–1.9
Venezuela	–9.8	–8.1	–8.5	–13.3	–30.3	–10.0	–5.0	–4.6	–6.0	. . .	. . .	. . .	. . .	. . .	. . .

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

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

[1] China's deficit and public debt numbers presented in this table cover a narrower perimeter of the general government than IMF staff's estimates in China Article IV reports (see IMF 2023 for a reconciliation of the two estimates).

[2] The data for Ecuador reflect net lending/borrowing of the nonfinancial public sector. The authorities are undertaking revisions of the historical fiscal data with technical support from the IMF.

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

[4] Data are for the nonfinancial public sector, which includes central government, local government, social security funds, nonfinancial public corporations, and Banco de Seguros del Estado. The coverage of fiscal data was changed from the consolidated public sector to the nonfinancial public sector with the October 2019 submission. With this narrower coverage, the central bank balances are not included in the 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 2018–22 are affected by these transfers, which amounted to 1.2 percent of GDP in 2018, 1.1 percent of GDP in 2019, 0.6 percent of GDP in 2020, and 0.3 percent of GDP in 2021 and are projected to be 0.1 percent of GDP in 2022 and 0 thereafter. See IMF Country Report No. 19/64 for further details. The disclaimer about the public pension system applies only to the revenues and net lending/borrowing series.

Table A10. Emerging Market and Middle-Income Economies: General Government Primary Balance, 2014–28
(Percent of GDP)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Average	–0.8	–2.5	–2.8	–2.1	–1.8	–2.7	–7.1	–3.4	–3.4	–3.7	–3.0	–2.8	–2.5	–2.3	–2.2
Asia	–0.5	–1.9	–2.4	–2.2	–2.8	–4.3	–8.0	–4.9	–5.8	–5.0	–4.4	–4.1	–3.8	–3.5	–3.4
Europe	–0.4	–1.5	–1.7	–0.8	1.4	0.4	–4.5	–0.9	–1.9	–4.4	–2.4	–1.8	–1.2	–1.1	–0.8
Latin America	–1.5	–2.1	–2.0	–1.3	–1.3	–0.5	–5.5	–1.0	0.0	–0.9	0.1	0.4	0.8	1.0	1.2
MENA	–1.2	–7.5	–8.6	–4.8	–0.8	–1.3	–7.6	–0.9	3.5	0.5	0.0	–0.3	–0.3	–0.3	–0.4
G20 Emerging	–0.8	–2.5	–2.9	–2.2	–2.3	–3.4	–7.6	–3.8	–4.3	–4.4	–3.6	–3.3	–2.9	–2.7	–2.6
Algeria	–7.8	–15.4	–13.1	–7.7	–6.3	–9.0	–11.0	–6.5	3.1	–6.5	–6.2	–6.4	–6.1	–5.9	–5.7
Angola	–4.7	–1.1	–1.7	–3.0	7.0	6.4	5.0	9.0	6.0	4.0	3.2	2.7	2.3	2.0	1.9
Argentina	–3.5	–4.4	–4.8	–4.2	–2.2	–0.4	–6.2	–2.5	–1.8	–1.4	–0.4	0.6	1.4	2.0	2.0
Belarus	1.1	–1.3	0.3	1.6	3.8	2.6	–1.2	–0.2	–3.2	–0.2	1.1	2.1	2.1	2.0	1.9
Brazil	–0.6	–1.9	–2.5	–1.7	–1.5	–0.8	–9.2	0.7	1.3	–2.0	–1.0	–0.5	0.2	0.8	1.4
Bulgaria	–3.4	–2.4	1.8	1.2	0.3	–0.8	–2.8	–2.8	–0.8	–3.2	–2.5	–2.0	–1.4	–1.4	–1.3
Chile	–1.4	–1.9	–2.4	–2.3	–1.1	–2.4	–6.6	–6.9	0.9	–1.5	–0.9	–0.3	0.1	0.4	0.6
China	–0.1	–2.0	–2.7	–2.6	–3.5	–5.2	–8.8	–5.1	–6.6	–5.8	–5.2	–4.9	–4.6	–4.3	–4.1
Colombia	–0.2	–1.7	–0.4	–0.5	–2.5	–1.0	–4.4	–4.4	–2.5	0.3	1.9	1.1	0.8	0.6	0.6
Dominican Republic	–0.4	2.3	–0.6	–0.5	0.4	0.6	–4.7	0.2	–0.5	0.2	0.5	0.8	0.9	0.9	0.9
Ecuador[1]	–7.5	–5.9	–8.6	–3.7	–0.3	–0.8	–4.3	–0.3	1.6	. . .	. . .	. . .	. . .	. . .	. . .
Egypt	–4.0	–3.9	–4.1	–2.4	–0.4	1.3	1.2	1.1	0.4	1.6	2.2	2.2	2.3	2.4	2.5
Hungary	1.0	1.3	1.2	0.1	0.2	0.1	–5.3	–5.0	–3.7	–0.8	0.6	0.3	0.7	0.6	1.0
India	–2.6	–2.7	–2.5	–1.5	–1.7	–3.0	–7.3	–4.5	–4.4	–3.6	–2.9	–2.5	–2.2	–2.1	–2.0
Indonesia	–0.9	–1.2	–1.0	–0.9	–0.1	–0.4	–4.1	–2.5	–0.4	–0.5	–0.3	–0.1	–0.1	0.0	0.0
Iran	–1.0	–1.4	–1.3	–1.0	–0.6	–3.5	–4.6	–3.1	–3.1	–3.2	–3.1	–3.0	–2.9	–2.7	–2.6
Kazakhstan	2.0	–5.9	–4.3	–5.2	1.8	–0.8	–7.7	–4.4	0.8	–0.7	0.2	0.4	0.2	0.1	–0.2
Kuwait[2]	12.7	–7.5	–14.0	–9.6	–4.1	–8.4	–28.1	–11.6	0.6	–5.8	–8.7	–10.1	–12.4	–14.8	–16.1
Lebanon	2.5	1.4	0.4	0.8	–1.4	–0.3	–0.5	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Malaysia	–0.9	–0.9	–0.8	–0.6	–0.8	0.0	–3.1	–3.7	–3.2	–2.5	–2.0	–1.9	–1.7	–1.6	–1.6
Mexico	–1.7	–1.2	0.4	2.6	1.6	1.4	–0.5	0.0	–0.1	0.2	1.7	1.8	1.8	1.7	1.6
Morocco	–2.2	–2.0	–2.0	–0.9	–1.2	–1.4	–4.6	–3.8	–3.0	–2.6	–2.1	–1.5	–1.0	–0.8	–0.9
Oman	–1.9	–14.1	–20.0	–11.1	–5.2	–4.6	–13.3	–1.0	8.2	2.5	3.2	2.7	2.3	2.1	1.9
Pakistan	–0.3	–0.4	–0.1	–1.4	–1.8	–3.0	–1.5	–1.1	–3.0	–0.5	–0.4	–0.4	–0.4	–0.4	–0.4
Peru	0.7	–1.2	–1.3	–1.9	–0.9	–0.2	–6.9	–1.2	0.0	–0.5	–0.5	0.0	0.5	0.6	0.6
Philippines	3.0	2.4	0.9	0.9	0.2	0.1	–3.7	–4.5	–3.4	–2.2	–1.7	–1.2	–1.0	–0.7	–0.5
Poland	–1.7	–0.8	–0.7	0.1	1.2	0.6	–5.6	–0.7	–1.7	–2.7	–2.0	–2.0	–2.1	–1.7	–1.3
Qatar	16.6	23.1	–3.4	–1.2	7.3	6.6	3.6	6.1	15.6	16.2	12.4	11.3	11.4	13.1	14.2
Romania	–0.5	–0.1	–1.3	–1.8	–1.4	–3.4	–8.3	–5.3	–3.8	–3.7	–3.3	–3.2	–2.8	–2.8	–2.8
Russia	–0.7	–3.1	–3.2	–1.0	3.4	2.2	–3.7	1.1	–2.0	–5.9	–2.4	–1.4	–0.4	–0.1	0.5
Saudi Arabia	–4.2	–17.5	–16.5	–11.3	–6.0	–4.2	–12.5	–2.0	2.8	–0.6	–0.7	–0.3	0.2	0.4	0.1
South Africa	–1.2	–1.4	–0.6	–0.8	–0.4	–1.1	–5.5	–1.3	0.1	–0.8	–0.6	–0.7	0.3	0.7	0.9
Sri Lanka	–1.9	–2.1	–0.2	0.0	0.6	–1.9	–5.9	–5.7	–3.8	. . .	. . .	. . .	. . .	. . .	. . .
Thailand	–0.1	0.7	1.0	0.1	0.6	–0.3	–4.2	–6.2	–4.4	–1.6	–1.5	–1.5	–1.5	–1.5	–1.6
Türkiye	0.5	0.6	–1.0	–0.9	–2.3	–2.9	–3.2	–2.3	–0.4	–4.4	–2.8	–2.2	–2.0	–2.0	–2.0
Ukraine	–1.2	3.0	1.6	1.4	1.2	1.0	–3.0	–1.1	–13.4	–15.7	. . .	. . .	. . .	. . .	. . .
United Arab Emirates	2.2	–6.3	–2.9	0.0	4.0	2.9	–2.2	4.3	9.4	5.0	4.2	3.4	3.0	2.7	2.5
Uruguay[3]	–0.5	0.2	–0.3	–0.2	0.5	–0.5	–2.1	–0.7	–0.7	–0.9	–1.1	–0.8	–0.5	–0.3	–0.1
Venezuela	–7.5	–6.8	–7.7	–13.1	–30.3	–10.0	–4.9	–4.6	–5.8	. . .	. . .	. . .	. . .	. . .	. . .

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

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

[1] The data for Ecuador reflect primary balance of the nonfinancial public sector. The authorities are undertaking revisions of the historical fiscal data with technical support from the IMF.

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

[3] Data are for the nonfinancial public sector, which includes central government, local government, social security funds, nonfinancial public corporations, and Banco de Seguros del Estado. The coverage of fiscal data was changed from the consolidated public sector to the nonfinancial public sector with the October 2019 submission. With this narrower coverage, the central bank balances are not included in the 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 2018–22 are affected by these transfers, which amounted to 1.2 percent of GDP in 2018, 1.1 percent of GDP in 2019, 0.6 percent of GDP in 2020, and 0.3 percent of GDP in 2021 and are projected to be 0.1 percent of GDP in 2022 and 0 thereafter. See IMF Country Report No. 19/64 for further details. The disclaimer about the public pension system applies only to the revenues and net lending/borrowing series.

Table A11. Emerging Market and Middle-Income Economies: General Government Cyclically Adjusted Balance, 2014–28

(Percent of potential GDP)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Average	–2.7	–3.7	–3.9	–3.6	–3.7	–4.6	–7.4	–5.2	–5.8	–6.2	–5.6	–5.4	–5.2	–5.1	–5.0
Asia	–1.7	–2.8	–3.6	–3.5	–4.2	–5.5	–8.1	–5.9	–6.7	–6.4	–6.1	–6.1	–6.0	–5.9	–5.9
Europe	–1.2	–2.2	–2.3	–1.7	–0.2	–0.9	–4.7	–2.1	–3.2	–5.9	–4.0	–3.5	–2.9	–2.6	–2.3
Latin America	–5.3	–6.4	–5.3	–4.8	–4.2	–3.5	–6.8	–4.4	–4.3	–5.3	–4.5	–3.7	–3.3	–3.0	–2.8
MENA	–9.6	–10.7	–10.3	–8.2	–7.4	–7.8	–8.0	–7.2	–4.2	–6.8	–7.3	–6.6	–5.7	–4.9	–4.4
G20 Emerging	–2.5	–3.8	–4.1	–3.8	–3.9	–4.9	–7.9	–5.2	–6.0	–6.5	–5.9	–5.7	–5.6	–5.5	–5.4
Algeria	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Angola	–7.5	–0.5	–2.4	–4.5	3.1	1.5	0.4	3.4	0.8	–0.3	–1.7	–2.0	–2.2	–2.6	–3.0
Argentina	–3.4	–6.2	–6.0	–7.2	–5.0	–3.4	–5.0	–3.2	–3.9	–3.5	–3.5	–2.0	–1.7	–1.3	–1.3
Belarus	–0.8	–2.3	0.0	0.4	1.6	0.4	–3.3	–3.2	–4.8	–1.9	–0.7	0.3	0.5	0.8	0.7
Brazil	–7.8	–10.3	–7.5	–6.6	–6.2	–5.2	–11.8	–4.2	–5.0	–9.0	–8.3	–6.6	–5.5	–4.9	–4.4
Bulgaria	–3.1	–2.7	1.4	0.7	0.1	–1.3	–2.3	–3.2	–1.2	–3.2	–3.1	–2.9	–2.2	–2.2	–2.2
Chile[1]	–0.5	0.5	–1.0	–2.0	–1.5	–1.7	–1.6	–12.1	–1.1	–1.6	–0.9	–0.4	–0.1	0.1	0.0
China	–0.7	–2.2	–3.1	–3.2	–4.1	–5.8	–8.4	–5.6	–6.6	–6.4	–6.1	–6.2	–6.2	–6.0	–6.0
Colombia	–2.4	–3.9	–2.6	–2.3	–4.2	–2.5	–4.9	–7.5	–8.3	–4.6	–2.1	–2.9	–3.2	–3.2	–2.9
Dominican Republic	–4.3	–4.2	–3.8	–3.7	–3.3	–3.2	–7.6	–3.4	–3.7	–4.0	–3.9	–3.6	–3.5	–3.3	–3.2
Ecuador[2]	–9.2	–8.8	–10.5	–5.3	–3.3	–3.4	–5.0	–1.2	–0.6	. . .	. . .	. . .	. . .	. . .	. . .
Egypt	–11.0	–10.8	–11.4	–10.1	–9.0	–7.3	–6.6	–7.1	–6.0	–7.7	–9.2	–8.5	–6.8	–5.6	–4.9
Hungary	–1.7	–1.5	–1.2	–2.6	–3.0	–3.4	–6.9	–7.1	–6.1	–3.6	–2.4	–2.8	–2.1	–2.1	–1.1
India	–6.6	–7.0	–7.4	–6.2	–6.8	–7.6	–9.1	–8.8	–9.6	–8.9	–8.3	–8.0	–7.8	–7.7	–7.6
Indonesia	–2.3	–2.7	–2.5	–2.4	–1.8	–2.1	–5.3	–3.9	–2.1	–2.5	–2.5	–2.4	–2.3	–2.2	–2.1
Iran	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Kazakhstan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Kuwait	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Lebanon	–13.5	–11.6	–11.5	–13.8	–12.7	–18.4	–12.1	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Malaysia	–2.6	–2.6	–2.7	–2.6	–3.6	–1.6	–3.9	–4.9	–5.5	–5.1	–4.8	–4.8	–4.6	–4.6	–4.5
Mexico	–4.5	–4.2	–4.1	–2.6	–2.4	–2.1	–3.3	–3.4	–4.3	–4.0	–2.6	–2.6	–2.6	–2.6	–2.7
Morocco	–6.1	–4.8	–4.9	–4.3	–3.9	–3.8	–5.5	–5.9	–5.0	–4.9	–4.4	–3.8	–3.3	–3.1	–3.1
Oman	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Pakistan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Peru	–0.1	–1.5	–1.8	–2.1	–1.6	–0.6	–6.0	–3.7	–1.8	–2.2	–2.3	–1.8	–1.3	–1.2	–1.1
Philippines	0.6	0.5	–0.9	–0.8	–1.5	–1.5	–3.3	–5.4	–5.4	–4.3	–3.7	–3.2	–2.9	–2.5	–2.3
Poland	–2.9	–2.2	–1.7	–1.7	–1.5	–2.3	–5.3	–2.1	–4.2	–4.0	–3.1	–3.6	–4.1	–3.8	–3.5
Qatar	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Romania	–1.1	–0.4	–1.4	–3.1	–3.8	–5.7	–8.1	–6.8	–6.2	–5.6	–5.1	–4.8	–4.5	–4.4	–4.4
Russia	–0.1	–3.1	–3.2	–1.0	2.9	2.0	–4.4	0.5	–2.0	–5.9	–2.6	–1.7	–0.7	–0.3	0.3
Saudi Arabia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
South Africa	–4.0	–4.2	–3.6	–3.8	–3.7	–4.4	–5.7	–5.0	–5.5	–6.4	–6.4	–6.2	–6.3	–6.3	–6.5
Sri Lanka	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Thailand	–0.7	0.4	0.8	–0.4	–0.1	–1.0	–3.8	–5.8	–5.2	–2.9	–2.5	–3.1	–3.3	–3.4	–2.7
Türkiye	–1.6	–1.6	–2.1	–2.9	–4.2	–4.0	–3.6	–4.4	–2.3	–7.2	–6.4	–6.1	–5.9	–5.7	–5.6
Ukraine	–3.2	1.5	–0.9	–1.4	–2.2	–1.7	–4.4	–3.3	. . .	. . .	. . .	. . .	. . .	. . .	. . .
United Arab Emirates	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Uruguay[3]	–3.4	–1.9	–2.6	–2.6	–1.9	–2.5	–3.2	–1.8	–2.2	–2.0	–2.4	–2.3	–2.2	–2.1	–1.9
Venezuela	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .

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

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

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

[2] The data for Ecuador reflect cyclically adjusted balance of the nonfinancial public sector. The authorities are undertaking revisions of the historical fiscal data with technical support from the IMF.

[3] Data are for the nonfinancial public sector, which includes central government, local government, social security funds, nonfinancial public corporations, and Banco de Seguros del Estado. The coverage of fiscal data was changed from the consolidated public sector to the nonfinancial public sector with the October 2019 submission. With this narrower coverage, the central bank balances are not included in the 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 2018–22 are affected by these transfers, which amounted to 1.2 percent of GDP in 2018, 1.1 percent of GDP in 2019, 0.6 percent of GDP in 2020, and 0.3 percent of GDP in 2021 and are projected to be 0.1 percent of GDP in 2022 and 0 thereafter. See IMF Country Report No. 19/64 for further details. The disclaimer about the public pension system applies only to the revenues and net lending/borrowing series.

Table A12. Emerging Market and Middle-Income Economies: General Government Cyclically Adjusted Primary Balance, 2014–28

(Percent of potential GDP)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Average	–0.8	–1.7	–2.0	–1.6	–1.8	–2.7	–5.5	–3.3	–3.8	–3.9	–3.2	–2.9	–2.7	–2.4	–2.3
Asia	–0.5	–1.7	–2.2	–2.0	–2.8	–4.1	–6.5	–4.4	–5.1	–4.6	–4.2	–4.0	–3.8	–3.5	–3.4
Europe	0.1	–1.0	–1.1	–0.5	0.9	0.2	–3.7	–1.0	–2.3	–4.6	–2.5	–1.8	–1.2	–0.9	–0.6
Latin America	–1.9	–2.1	–1.6	–0.9	–0.5	0.2	–3.6	–1.0	–0.2	–0.9	0.2	0.5	0.9	1.1	1.3
MENA	–5.2	–6.2	–5.1	–3.5	–2.2	–2.3	–2.6	–2.1	0.1	–1.1	–0.8	–0.3	0.1	0.4	0.8
G20 Emerging	–0.7	–1.9	–2.2	–1.8	–2.0	–3.1	–6.0	–3.4	–4.1	–4.3	–3.6	–3.3	–3.0	–2.8	–2.6
Algeria	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Angola	–6.4	1.1	0.1	–1.3	7.5	6.8	6.4	8.7	5.4	3.9	3.3	3.0	2.8	2.5	2.3
Argentina	–2.7	–4.6	–4.1	–4.7	–1.8	0.5	–2.7	–1.4	–1.8	–1.1	–0.3	0.6	1.4	2.0	2.0
Belarus	0.2	–0.7	1.9	2.3	3.6	2.1	–1.6	–1.6	–3.1	–0.3	0.9	1.9	2.0	2.1	2.0
Brazil	–2.1	–1.9	–1.3	–0.7	–0.9	–0.3	–7.9	0.8	0.9	–2.1	–1.1	–0.5	0.2	0.8	1.4
Bulgaria	–2.8	–2.3	1.7	1.0	0.3	–1.2	–2.2	–3.1	–1.2	–3.1	–2.5	–2.0	–1.4	–1.3	–1.3
Chile[1]	–0.4	0.7	–0.7	–1.7	–1.2	–1.4	–1.1	–11.5	–1.5	–1.3	–0.6	0.0	0.3	0.5	0.4
China	–0.2	–1.7	–2.5	–2.5	–3.3	–4.9	–7.5	–4.7	–5.7	–5.3	–4.9	–4.8	–4.6	–4.3	–4.1
Colombia	–0.8	–2.1	–0.6	–0.3	–2.0	0.1	–2.4	–4.4	–3.5	0.4	2.5	1.4	1.0	0.8	0.8
Dominican Republic	–2.0	–1.9	–1.3	–1.2	–0.7	–0.5	–4.6	–0.3	–0.8	–0.8	–0.6	–0.2	–0.1	0.1	0.2
Ecuador[2]	–8.2	–7.4	–9.0	–3.2	–0.9	–0.7	–2.4	0.1	1.0	. . .	. . .	. . .	. . .	. . .	. . .
Egypt	–4.3	–4.4	–3.7	–2.6	–0.5	1.5	2.0	0.9	0.2	1.5	2.2	2.3	2.3	2.5	2.6
Hungary	1.9	1.8	1.7	0.0	–0.7	–1.1	–4.7	–5.0	–3.8	–0.5	0.8	0.4	0.8	0.7	1.0
India	–2.2	–2.5	–2.8	–1.4	–2.0	–2.9	–3.9	–3.7	–4.4	–3.6	–2.9	–2.5	–2.3	–2.1	–2.0
Indonesia	–1.1	–1.3	–1.0	–0.8	0.0	–0.4	–3.3	–2.0	–0.2	–0.5	–0.3	–0.1	–0.1	0.0	0.0
Iran	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Kazakhstan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Kuwait	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Lebanon	–4.9	–2.8	–2.1	–4.0	–2.1	–7.4	–9.4	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Malaysia	–0.8	–1.0	–0.9	–0.8	–1.7	0.4	–2.2	–2.9	–3.4	–2.7	–2.3	–2.1	–1.9	–1.7	–1.6
Mexico	–1.7	–1.4	–0.9	1.1	1.4	1.6	0.4	0.4	0.0	0.3	1.8	1.9	1.8	1.7	1.6
Morocco	–3.5	–2.3	–2.5	–1.9	–1.6	–1.7	–3.0	–3.8	–3.1	–2.6	–2.1	–1.5	–1.0	–0.8	–0.9
Oman	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Pakistan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Peru	0.8	–0.6	–0.9	–1.1	–0.5	0.5	–4.0	–2.4	–0.5	–0.8	–1.0	–0.6	–0.2	–0.3	–0.2
Philippines	2.8	2.5	0.9	0.8	0.1	0.1	–1.7	–3.7	–3.5	–2.3	–1.8	–1.2	–1.0	–0.7	–0.5
Poland	–0.9	–0.5	0.0	–0.1	0.0	–0.9	–4.1	–1.0	–2.7	–2.2	–1.4	–1.6	–2.0	–1.7	–1.3
Qatar	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Romania	0.4	0.8	–0.2	–2.0	–2.4	–4.5	–6.9	–5.3	–4.1	–3.7	–3.2	–3.1	–2.8	–2.8	–2.8
Russia	0.3	–2.8	–2.8	–0.5	3.4	2.3	–4.1	0.8	–1.7	–5.5	–2.2	–1.3	–0.3	0.0	0.5
Saudi Arabia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
South Africa	–1.2	–1.2	–0.5	–0.6	–0.3	–0.9	–2.0	–0.9	–1.0	–1.3	–0.9	–0.2	0.3	0.7	0.9
Sri Lanka	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Thailand	0.0	0.9	1.2	0.1	0.4	–0.4	–3.3	–5.1	–4.0	–1.4	–0.9	–1.4	–1.4	–1.5	–0.9
Türkiye	0.4	0.3	–0.8	–1.6	–2.6	–2.2	–1.8	–2.7	–1.1	–5.0	–3.4	–2.7	–2.3	–2.1	–2.0
Ukraine	0.0	5.4	3.0	2.3	1.1	1.3	–1.6	–0.5	. . .	. . .	. . .	. . .	. . .	. . .	. . .
United Arab Emirates	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Uruguay[3]	–1.2	0.2	–0.2	–0.2	0.5	–0.2	–0.7	0.2	–0.4	–0.7	–1.0	–0.7	–0.5	–0.3	–0.1
Venezuela	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .

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

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

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

[2] The data for Ecuador reflect cyclically adjusted primary balance of the nonfinancial public sector. The authorities are undertaking revisions of the historical fiscal data with technical support from the IMF.

[3] Data are for the nonfinancial public sector, which includes central government, local government, social security funds, nonfinancial public corporations, and Banco de Seguros del Estado. The coverage of fiscal data was changed from the consolidated public sector to the nonfinancial public sector with the October 2019 submission. With this narrower coverage, the central bank balances are not included in the 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 2018–22 are affected by these transfers, which amounted to 1.2 percent of GDP in 2018, 1.1 percent of GDP in 2019, 0.6 percent of GDP in 2020, and 0.3 percent of GDP in 2021 and are projected to be 0.1 percent of GDP in 2022 and 0 thereafter. See IMF Country Report No. 19/64 for further details. The disclaimer about the public pension system applies only to the revenues and net lending/borrowing series.

Table A13. Emerging Market and Middle-Income Economies: General Government Revenue, 2014–28

(Percent of GDP)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Average	28.3	27.4	27.1	27.4	27.9	27.4	25.6	26.5	26.5	26.0	26.0	26.0	26.1	26.1	26.1
Asia	25.6	26.3	26.1	26.2	26.3	25.4	23.6	24.6	23.8	23.7	23.9	24.1	24.3	24.4	24.5
Europe	34.3	33.3	33.6	33.6	35.0	35.1	34.3	34.3	34.1	32.7	33.1	33.1	33.2	33.2	33.2
Latin America	28.9	28.1	28.9	28.8	28.6	29.0	27.3	28.8	30.3	28.6	28.6	28.6	28.6	28.7	28.8
MENA	32.5	26.3	23.9	25.5	29.7	29.5	26.9	27.9	30.2	29.4	28.7	28.2	27.8	27.4	26.9
G20 Emerging	28.3	27.8	27.9	28.1	28.2	27.6	25.6	26.6	26.2	25.6	25.8	25.9	26.1	26.2	26.2
Algeria	33.3	30.5	28.6	32.6	33.5	32.2	30.5	29.8	33.4	30.1	28.4	27.7	26.8	26.5	26.4
Angola	30.7	24.1	17.5	17.5	22.9	21.2	21.3	23.3	23.4	21.5	20.6	19.8	19.2	18.6	18.2
Argentina	34.6	35.4	34.9	34.4	33.5	33.3	33.5	33.5	33.4	32.3	33.9	34.9	35.6	35.8	35.9
Belarus	38.9	38.8	39.0	38.7	39.6	38.3	35.2	35.4	32.0	33.5	34.2	35.2	35.3	35.3	35.2
Brazil	33.7	32.9	35.4	34.9	35.4	36.6	33.7	36.9	38.7	35.8	35.5	35.4	35.3	35.3	35.2
Bulgaria	33.4	34.5	34.2	32.8	34.4	34.9	34.9	35.8	37.4	36.8	35.2	34.4	34.9	34.6	34.3
Chile	22.4	22.9	22.7	22.9	24.1	23.7	22.0	26.0	27.9	24.8	25.4	25.4	25.3	25.6	25.5
China	28.2	29.0	28.9	29.2	29.0	28.1	25.7	26.6	25.5	25.6	25.9	26.0	26.2	26.4	26.5
Colombia	29.5	27.8	27.7	26.8	30.0	29.4	26.6	27.2	27.6	31.4	32.1	31.0	30.6	30.7	30.7
Dominican Republic	14.2	16.6	13.9	14.0	14.2	14.4	14.2	15.6	15.5	14.9	15.0	15.0	15.0	15.0	15.0
Ecuador[1]	34.8	33.0	30.0	32.2	35.6	33.7	29.4	34.2	36.1	. . .	. . .	. . .	. . .	. . .	. . .
Egypt	23.2	20.9	19.2	20.7	19.7	19.3	18.2	18.6	18.9	18.7	19.8	20.1	20.4	20.7	20.9
Hungary	47.3	48.4	45.0	44.3	44.0	44.0	43.5	41.3	43.9	43.6	44.4	43.5	43.5	43.0	42.6
India	19.1	19.9	20.1	20.0	20.0	19.2	18.2	19.7	19.2	19.1	19.4	19.6	19.7	19.9	20.0
Indonesia	16.5	14.9	14.3	14.1	14.9	14.2	12.5	13.6	15.2	14.4	14.6	14.7	14.8	14.9	15.0
Iran	13.1	14.8	15.3	15.5	13.6	9.7	7.2	8.1	8.3	8.1	8.2	8.4	8.5	8.6	8.8
Kazakhstan	23.7	16.6	17.0	19.8	21.4	19.7	17.5	17.1	21.8	20.0	19.7	19.6	19.3	19.3	19.1
Kuwait	65.8	58.9	55.0	54.0	58.6	55.5	55.1	54.6	52.2	57.7	54.7	53.3	51.3	49.4	48.5
Lebanon	22.6	19.2	19.4	21.9	21.0	20.8	16.0	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Malaysia	23.3	22.2	20.3	19.6	20.2	21.6	20.2	18.6	19.0	16.8	15.9	15.5	15.5	15.5	15.6
Mexico	23.4	23.5	24.6	24.6	23.5	23.6	24.2	23.7	25.8	23.9	23.9	23.9	24.0	24.1	24.2
Morocco	25.9	23.9	24.1	24.6	24.2	23.8	27.0	25.1	25.9	26.9	26.7	26.5	26.5	26.6	26.5
Oman	39.8	31.1	25.0	29.0	31.6	33.9	29.6	33.0	35.4	32.4	31.8	31.0	30.2	29.3	28.4
Pakistan	13.5	12.9	13.8	14.0	13.4	11.3	13.3	12.4	12.1	12.2	12.5	12.5	12.5	12.5	12.5
Peru	22.3	20.2	18.7	18.2	19.3	19.8	17.8	21.0	21.8	21.5	21.5	21.5	21.4	21.4	21.4
Philippines	18.1	18.5	18.3	18.7	19.4	20.2	20.4	21.0	21.6	21.4	21.5	21.9	22.4	22.9	23.3
Poland	39.2	39.1	38.9	39.9	41.2	41.1	41.3	42.3	41.0	41.8	42.1	42.0	41.8	41.4	41.6
Qatar	47.7	60.2	35.2	32.1	34.8	37.3	36.0	33.7	39.6	41.8	37.7	36.1	35.7	36.1	36.2
Romania	31.8	32.8	29.3	28.2	29.0	28.8	28.6	30.5	31.0	30.6	30.6	30.8	31.2	30.9	30.9
Russia	33.9	31.9	32.9	33.4	35.5	35.7	35.2	35.6	34.3	31.2	32.3	32.3	32.5	32.6	32.7
Saudi Arabia	36.2	24.4	20.8	23.2	28.5	29.5	28.4	29.6	30.6	28.5	28.7	28.8	29.1	29.0	28.2
South Africa	25.4	25.8	26.2	25.8	26.5	26.8	25.0	27.1	27.7	27.5	27.2	27.2	27.3	27.3	27.3
Sri Lanka	11.2	12.6	13.2	12.8	12.6	11.9	8.7	8.3	8.5	. . .	. . .	. . .	. . .	. . .	. . .
Thailand	21.4	22.3	21.9	21.1	21.4	21.0	20.6	20.2	20.1	20.4	20.5	20.5	20.5	20.5	20.5
Türkiye	31.6	31.9	32.5	31.2	30.8	31.0	28.9	27.2	26.4	27.6	27.9	28.0	28.0	28.0	28.3
Ukraine	40.3	41.9	38.3	39.3	39.8	39.4	39.7	36.3	53.2	47.3	. . .	. . .	. . .	. . .	. . .
United Arab Emirates	34.2	20.7	29.7	28.0	30.5	31.0	28.7	30.4	35.4	33.0	32.0	31.2	30.7	30.3	30.1
Uruguay[2]	26.6	26.6	27.1	27.5	28.8	28.3	28.1	28.2	26.9	26.7	26.6	26.7	26.7	26.7	26.8
Venezuela	21.8	14.9	11.2	8.5	6.4	8.7	4.3	5.9	6.0	. . .	. . .	. . .	. . .	. . .	. . .

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

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

[1] The data for Ecuador reflect revenue of the nonfinancial public sector. The authorities are undertaking revisions of the historical fiscal data with technical support from the IMF.

[2] Data are for the nonfinancial public sector, which includes central government, local government, social security funds, nonfinancial public corporations, and Banco de Seguros del Estado. The coverage of fiscal data was changed from the consolidated public sector to the nonfinancial public sector with the October 2019 submission. With this narrower coverage, the central bank balances are not included in the 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 2018–22 are affected by these transfers, which amounted to 1.2 percent of GDP in 2018, 1.1 percent of GDP in 2019, 0.6 percent of GDP in 2020, and 0.3 percent of GDP in 2021 and are projected to be 0.1 percent of GDP in 2022 and 0 thereafter. See IMF Country Report No. 19/64 for further details. The disclaimer about the public pension system applies only to the revenues and net lending/borrowing series.

Table A14. Emerging Market and Middle-Income Economies: General Government Expenditure, 2014–28
(Percent of GDP)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Average	30.7	31.5	31.6	31.2	31.4	32.0	34.4	31.8	31.8	31.8	31.4	31.2	31.0	30.9	30.9
Asia	27.3	29.4	29.8	29.9	30.5	31.2	33.3	31.1	31.2	30.5	30.3	30.3	30.3	30.4	30.4
Europe	35.8	35.9	36.5	35.4	34.7	35.6	39.7	36.2	36.9	38.5	37.1	36.6	36.2	35.9	35.6
Latin America	33.7	34.5	34.7	33.9	33.6	33.0	36.1	33.3	34.2	33.8	33.1	32.3	31.9	31.7	31.5
MENA	34.2	34.2	32.8	30.6	31.4	32.1	35.4	30.0	27.6	30.4	30.4	30.2	29.7	29.4	29.0
G20 Emerging	30.8	32.1	32.5	32.1	32.2	32.8	35.0	32.1	32.5	32.2	31.8	31.6	31.5	31.5	31.4
Algeria	41.3	46.2	42.0	41.1	40.3	41.8	42.4	37.0	31.2	38.0	36.2	35.7	34.8	34.6	34.5
Angola	36.5	27.1	22.0	24.1	20.6	20.4	23.3	19.5	21.8	21.7	22.6	22.3	22.1	21.9	21.7
Argentina	38.9	41.4	41.5	41.1	38.9	37.7	42.1	37.8	37.2	36.1	37.5	36.9	37.3	37.2	37.2
Belarus	38.8	41.8	40.7	39.0	37.8	37.4	38.0	37.1	36.8	35.3	34.7	34.6	34.7	34.6	34.6
Brazil	39.7	43.1	44.3	42.7	42.3	42.4	47.0	41.2	43.3	44.6	43.7	42.0	40.8	40.2	39.6
Bulgaria	37.1	37.3	32.7	32.0	34.3	35.9	37.8	38.6	38.2	40.0	38.3	37.4	37.2	36.8	36.5
Chile	23.9	25.0	25.4	25.5	25.6	26.5	29.1	33.5	26.6	26.6	26.6	26.1	25.7	25.6	25.2
China	28.9	31.6	32.3	32.6	33.3	34.2	35.4	32.7	33.1	32.5	32.3	32.4	32.4	32.5	32.5
Colombia	31.3	31.3	30.0	29.3	34.7	32.9	33.6	34.4	34.2	35.4	34.1	33.4	33.1	33.1	32.8
Dominican Republic	17.0	16.7	17.0	17.1	16.4	16.6	22.1	18.5	18.8	17.9	17.8	17.5	17.5	17.4	17.4
Ecuador[1]	43.3	40.2	40.1	38.0	38.4	37.1	36.5	35.8	36.0	. . .	. . .	. . .	. . .	. . .	. . .
Egypt	33.9	31.3	31.0	30.6	28.6	26.9	25.7	25.5	24.7	26.3	29.0	28.6	27.3	26.4	25.9
Hungary	50.0	50.4	46.8	46.7	46.2	46.1	51.1	48.4	50.0	47.5	46.9	46.4	45.7	45.1	43.7
India	26.2	27.1	27.2	26.2	26.3	26.8	31.1	29.3	28.8	28.0	27.7	27.5	27.5	27.6	27.6
Indonesia	18.6	17.5	16.8	16.6	16.7	16.3	18.6	18.2	17.5	17.0	17.1	17.1	17.1	17.1	17.1
Iran	14.2	16.3	17.0	17.1	15.3	14.1	13.0	12.2	12.3	13.9	14.4	14.8	15.2	15.6	16.1
Kazakhstan	21.3	22.9	21.5	24.1	18.8	20.2	24.5	22.1	21.7	21.8	20.6	20.4	20.5	20.6	20.6
Kuwait	44.3	54.4	54.0	52.0	51.8	53.0	66.5	52.3	40.7	50.7	50.5	50.5	50.9	51.4	51.7
Lebanon	28.8	26.7	28.3	30.6	32.3	31.2	19.6	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Malaysia	26.0	24.7	22.9	22.0	22.8	23.6	25.1	24.4	24.3	21.6	20.4	20.1	19.9	20.0	20.0
Mexico	28.0	27.5	27.4	25.7	25.7	26.0	28.6	27.6	30.2	28.0	26.6	26.5	26.6	26.8	26.9
Morocco	30.7	28.4	28.6	27.8	27.7	27.4	34.1	31.0	31.0	31.8	31.1	30.3	29.8	29.7	29.5
Oman	41.4	44.5	44.6	39.4	38.3	38.8	45.7	36.2	29.0	32.1	30.8	30.5	29.9	29.0	28.0
Pakistan	17.9	17.6	17.7	19.1	19.1	19.1	20.3	18.5	19.9	19.1	20.8	19.6	18.8	18.3	17.9
Peru	22.6	22.3	20.9	21.1	21.3	21.1	26.9	23.5	23.1	23.5	23.4	22.7	21.9	21.7	21.7
Philippines	17.3	18.0	19.1	19.5	20.9	21.7	25.9	27.3	26.8	25.6	25.2	25.1	25.3	25.3	25.5
Poland	42.9	41.7	41.3	41.4	41.4	41.9	48.2	44.1	44.1	46.3	45.9	46.0	46.0	45.3	45.1
Qatar	32.3	38.6	40.1	34.7	28.9	32.5	34.7	29.3	25.4	27.1	26.7	26.0	25.5	24.1	23.0
Romania	33.8	34.2	31.8	31.0	31.7	33.3	38.2	37.2	36.8	36.3	35.8	35.7	35.6	35.3	35.2
Russia	34.9	35.3	36.6	34.8	32.6	33.8	39.2	34.8	36.6	37.4	35.1	34.1	33.3	32.9	32.5
Saudi Arabia	39.7	39.9	34.5	32.1	34.0	33.7	39.1	31.9	28.1	29.6	29.9	29.7	29.3	29.1	28.5
South Africa	29.3	30.2	29.9	29.9	30.2	31.5	34.6	32.7	32.2	33.4	33.4	34.0	33.6	33.6	33.7
Sri Lanka	17.2	19.3	18.2	17.9	17.5	19.5	20.7	19.9	18.9	. . .	. . .	. . .	. . .	. . .	. . .
Thailand	22.2	22.2	21.3	21.5	21.4	21.8	25.3	27.3	25.6	23.6	23.7	23.8	23.8	23.9	23.9
Türkiye	33.1	33.2	34.8	33.4	34.6	35.7	34.0	31.2	28.0	34.1	33.6	33.6	33.6	33.6	33.9
Ukraine	44.8	43.0	40.8	41.6	41.9	41.5	45.6	40.3	69.9	67.6	. . .	. . .	. . .	. . .	. . .
United Arab Emirates	32.2	27.2	32.8	28.1	26.7	28.4	31.1	26.4	26.4	28.6	28.4	28.3	28.2	28.2	28.1
Uruguay[2]	29.2	28.5	29.8	30.1	30.7	31.1	32.8	30.9	29.5	28.9	29.1	29.0	29.0	28.8	28.6
Venezuela	31.6	22.9	19.7	21.8	36.7	18.7	9.3	10.5	12.0	. . .	. . .	. . .	. . .	. . .	. . .

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

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

[1] The data for Ecuador reflect expenditure of the nonfinancial public sector. The authorities are undertaking revisions of the historical fiscal data with technical support from the IMF.

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

Table A15. Emerging Market and Middle-Income Economies: General Government Gross Debt, 2014–28

(Percent of GDP)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Average[1]	40.6	44.4	50.0	52.1	53.5	56.0	66.0	65.3	65.7	68.8	71.4	74.0	76.4	78.7	80.8
Asia	43.4	45.0	51.8	55.1	56.5	59.8	70.2	71.5	75.1	79.1	82.6	86.2	89.4	92.5	95.4
Europe	28.2	30.3	31.2	29.4	29.0	28.5	37.0	34.7	32.7	36.9	37.9	38.6	39.0	39.2	39.2
Latin America	51.6	57.6	61.3	63.6	67.4	68.3	77.3	71.9	69.7	68.6	69.3	70.1	70.3	70.3	70.1
MENA	23.6	33.9	42.0	42.3	40.3	43.9	55.4	52.1	43.0	42.5	41.2	41.6	42.0	42.3	42.5
G20 Emerging	40.9	43.9	50.0	53.0	54.6	57.6	67.4	67.0	68.5	72.6	75.9	79.2	82.2	85.0	87.6
Algeria	7.7	8.7	20.4	27.2	38.4	46.0	52.0	62.8	52.4	52.2	55.4	58.9	62.3	66.4	70.2
Angola	39.8	57.1	75.7	69.3	93.0	113.6	138.9	86.9	67.0	63.3	59.2	56.7	54.4	51.5	49.5
Argentina	44.7	52.6	53.1	57.0	85.2	88.8	102.8	80.9	84.5	76.3	73.6	73.3	70.7	67.9	65.4
Belarus	38.8	53.0	53.5	53.2	47.5	41.0	47.5	41.2	39.8	41.4	40.3	38.7	37.0	35.2	33.1
Brazil[2]	62.3	72.6	78.3	83.6	85.6	87.9	96.8	90.7	85.9	88.4	91.5	93.7	95.2	96.0	96.2
Bulgaria	26.3	25.4	27.0	22.9	20.1	18.3	23.2	22.8	21.8	21.1	22.9	24.7	25.8	26.8	27.7
Chile	15.0	17.4	21.1	23.7	25.8	28.3	32.4	36.3	38.0	36.6	38.5	39.4	39.9	39.3	38.5
China[3]	40.0	41.5	50.7	55.0	56.7	60.4	70.1	71.8	77.1	82.4	87.2	92.0	96.5	100.8	104.9
Colombia	43.3	50.4	49.8	49.4	53.6	52.4	65.7	64.0	63.6	62.0	61.1	60.9	60.1	59.2	58.3
Dominican Republic	44.9	44.7	46.6	48.9	50.5	53.6	71.5	63.2	58.9	58.3	58.0	57.3	56.5	55.7	54.8
Ecuador[4]	28.0	35.2	44.6	47.0	49.1	51.4	60.9	62.3	57.3	. . .	. . .	. . .	. . .	. . .	. . .
Egypt	80.9	83.8	91.6	97.8	87.9	80.1	86.2	89.9	88.5	92.9	87.0	85.4	83.4	80.8	78.0
Hungary	76.5	75.8	74.9	72.1	69.1	65.3	79.3	76.8	76.4	73.2	70.0	68.2	66.1	64.1	61.3
India	67.1	69.0	68.9	69.7	70.4	75.0	88.5	84.7	83.1	83.2	83.7	83.8	83.8	83.7	83.6
Indonesia	24.7	27.0	28.0	29.4	30.4	30.6	39.7	41.1	39.9	39.1	38.8	38.5	38.1	37.8	37.3
Iran	12.6	37.0	47.9	45.0	42.9	46.7	48.3	42.4	34.0	32.0	32.7	34.3	35.8	37.2	38.1
Kazakhstan	14.5	21.9	19.7	19.9	20.3	19.9	26.4	25.1	23.5	25.9	27.0	29.0	31.4	33.1	34.8
Kuwait	3.4	4.7	9.9	20.5	15.1	11.6	11.7	8.7	2.9	3.0	3.0	6.1	9.7	11.2	15.2
Lebanon	138.4	140.8	146.4	150.0	155.1	172.3	150.6	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Malaysia	55.4	57.0	55.8	54.4	55.6	57.1	67.7	69.3	66.3	67.0	67.1	67.5	68.0	69.0	70.0
Mexico	48.9	52.8	56.7	54.0	53.6	53.3	60.1	58.7	56.0	55.6	55.8	56.3	56.9	57.5	57.9
Morocco	58.6	58.4	60.1	60.3	60.5	60.3	72.2	68.9	68.8	68.3	68.4	68.2	67.7	66.9	66.2
Oman	4.0	13.9	29.3	40.1	44.7	52.5	69.7	61.3	40.1	42.8	40.6	39.8	38.9	38.4	36.8
Pakistan	57.1	57.0	60.8	60.9	64.8	77.5	79.6	73.6	75.8	73.6	68.9	67.8	67.6	67.1	66.1
Peru	20.6	24.0	24.3	25.2	26.0	26.9	35.0	36.4	33.4	33.0	33.3	33.2	32.8	32.3	31.9
Philippines	40.2	39.6	37.3	38.1	37.1	37.0	51.6	57.0	57.5	56.7	56.8	56.3	55.4	54.1	52.6
Poland	51.4	51.3	54.5	50.8	48.7	45.7	57.2	53.8	49.6	50.7	51.7	52.4	53.6	54.1	54.5
Qatar	24.9	35.5	46.7	51.6	52.2	62.1	72.6	58.4	45.3	45.5	42.9	40.4	37.9	35.9	33.9
Romania	40.5	39.4	39.5	37.1	36.2	36.6	49.4	51.1	48.7	48.3	49.3	50.3	51.4	52.8	54.3
Russia	15.1	15.3	14.8	14.3	13.6	13.7	19.2	16.5	19.6	24.9	25.3	25.3	24.3	23.2	21.5
Saudi Arabia	1.5	5.7	12.7	16.5	17.6	21.6	31.0	28.8	22.6	23.6	23.1	22.3	21.5	20.7	19.9
South Africa	43.3	45.2	47.1	48.6	51.7	56.2	69.0	69.0	71.0	72.3	74.0	77.1	80.0	82.4	84.9
Sri Lanka	69.6	76.3	75.0	72.3	83.6	82.6	95.7	102.2	117.7	. . .	. . .	. . .	. . .	. . .	. . .
Thailand	43.3	42.6	41.7	41.8	41.9	41.1	49.4	58.4	60.5	61.0	61.6	59.9	59.0	58.1	57.3
Türkiye	28.4	27.3	27.9	27.9	30.1	32.6	39.7	41.8	31.2	35.0	36.7	37.7	38.8	40.4	42.3
Ukraine	70.3	79.3	79.5	71.6	60.4	50.5	60.5	48.8	81.7	98.3	. . .	. . .	. . .	. . .	. . .
United Arab Emirates	13.8	16.1	19.3	21.9	21.3	26.8	41.1	35.9	30.0	30.5	29.4	28.3	27.2	26.2	25.2
Uruguay[5]	51.3	58.0	56.6	56.5	58.6	60.6	68.2	65.6	61.0	62.3	62.7	63.1	63.4	63.7	63.8
Venezuela	84.9	129.8	138.4	133.6	174.6	205.1	327.7	250.6	157.8	. . .	. . .	. . .	. . .	. . .	. . .

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

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

[1] The average does not include the debt incurred by the European Union, and used to finance the grants portion of the NextGenerationEU (NGEU) package. This totaled €58 billion (0.4 percent of European Union GDP) as of December 31, 2021, and €158 billion (1 percent of European Union GDP) as of February 16, 2023. Debt incurred by the EU and used to on-lend to member states is included within member state debt data and regional aggregates.

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

[3] China's deficit and public debt numbers presented in this table cover a narrower perimeter of the general government than IMF staff's estimates in China Article IV reports (see IMF 2023 for a reconciliation of the two estimates).

[4] 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.

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

Table A16. Emerging Market and Middle-Income Economies: General Government Net Debt, 2014–28
(Percent of GDP)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Average[1]	24.3	28.6	34.3	35.6	36.5	38.1	45.6	45.2	42.6	43.2	44.0	44.8	45.6	46.0	46.2
Asia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Europe	29.1	28.2	30.3	28.9	29.2	28.9	36.0	36.4	30.8	32.1	33.2	33.6	34.6	35.0	35.2
Latin America	31.7	34.9	40.3	42.5	42.9	44.2	51.3	48.8	49.3	50.6	52.3	53.8	54.8	55.6	56.1
MENA	–3.0	12.6	26.9	27.6	28.7	33.2	43.3	45.5	37.2	36.1	35.4	36.2	36.5	36.5	36.5
G20 Emerging	23.0	25.9	31.8	34.7	35.6	37.2	44.1	43.5	41.0	43.2	45.0	46.2	47.2	47.8	48.3
Algeria	–21.8	–7.6	13.3	21.6	25.7	30.5	43.8	51.7	42.5	48.3	52.5	56.1	59.7	63.2	66.5
Angola	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Argentina	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Belarus	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Brazil	32.6	35.6	46.1	51.4	52.8	54.7	61.4	55.8	57.1	61.2	65.3	68.4	70.6	72.1	73.2
Bulgaria	13.1	15.4	11.3	10.3	9.0	8.4	13.3	13.0	11.2	13.2	15.4	17.5	18.8	20.1	21.2
Chile	–4.4	–3.5	0.9	4.4	5.7	8.0	13.3	20.1	19.6	20.2	20.9	21.2	21.2	20.8	20.1
China[2]	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Colombia	32.9	42.1	38.6	38.6	43.1	43.1	54.7	54.1	54.9	53.5	51.7	50.5	50.0	49.7	49.4
Dominican Republic	37.6	37.2	38.5	40.3	41.4	43.4	57.5	49.5	45.8	45.6	45.5	45.0	44.4	43.6	42.7
Ecuador	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Egypt	73.2	75.3	81.6	86.6	80.7	74.6	80.6	85.2	83.9	88.3	82.4	80.7	78.7	76.1	73.4
Hungary	70.3	70.5	67.9	65.2	62.1	58.4	72.3	69.9	69.4	66.2	63.0	61.3	59.1	57.2	54.4
India	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Indonesia	20.4	22.0	23.5	25.3	26.7	27.0	36.1	37.9	37.1	36.5	36.4	36.3	36.1	35.8	35.5
Iran	–3.4	21.6	36.4	32.9	31.5	36.9	40.3	36.1	28.5	26.8	27.3	28.8	30.1	31.5	32.4
Kazakhstan	–19.1	–30.8	–23.8	–15.8	–15.8	–13.9	–8.6	–3.3	–1.2	–0.7	–0.4	–0.2	0.2	0.8	1.6
Kuwait	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Lebanon	130.0	134.4	140.7	144.4	150.8	167.1	147.9	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Malaysia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Mexico	42.6	46.5	48.7	45.7	44.9	44.5	51.6	50.8	49.7	49.3	49.5	50.0	50.6	51.2	51.6
Morocco	58.1	57.8	59.6	59.9	60.2	60.0	71.6	68.4	68.4	67.9	68.0	67.8	67.3	66.5	65.8
Oman	–39.3	–37.0	–24.2	–10.4	6.4	11.2	28.5	24.9	11.2	10.5	9.2	8.5	7.8	7.6	6.5
Pakistan	52.2	52.5	55.1	55.9	59.9	70.2	72.9	66.0	69.5	68.7	65.0	64.5	64.6	64.4	63.7
Peru	2.7	5.3	6.9	8.7	10.2	11.1	21.0	19.8	19.6	20.1	20.9	21.1	20.6	19.9	19.3
Philippines	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Poland	45.4	46.4	47.9	44.4	41.5	38.4	45.1	40.8	36.6	37.7	38.7	39.5	40.6	41.2	41.6
Qatar	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Romania	28.4	28.3	26.8	25.9	26.2	28.6	40.0	42.0	40.1	40.0	41.2	42.3	43.5	45.0	46.6
Russia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Saudi Arabia	–46.4	–35.1	–16.6	–7.4	–0.1	4.7	15.2	17.0	10.8	12.3	13.3	13.7	13.5	13.1	12.9
South Africa	38.1	41.0	42.1	43.8	46.7	50.7	62.2	63.2	66.3	69.8	72.4	75.9	78.8	81.4	83.9
Sri Lanka	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Thailand	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Türkiye	23.7	22.8	23.3	22.1	24.0	25.4	30.1	33.7	24.3	27.5	29.6	30.1	31.7	32.0	32.4
Ukraine	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
United Arab Emirates	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Uruguay[3]	40.9	44.6	44.5	44.8	47.2	50.7	57.4	55.2	50.7	52.1	52.6	53.0	53.5	53.8	53.9
Venezuela	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .

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

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

[1] The average does not include the debt incurred by the European Union, and used to finance the grants portion of the NextGenerationEU (NGEU) package. This totaled €58 billion (0.4 percent of European Union GDP) as of December 31, 2021, and €158 billion (1 percent of European Union GDP) as of February 16, 2023. Debt incurred by the EU and used to on-lend to member states is included within member state debt data and regional aggregates.

[2] China's deficit and public debt numbers presented in this table cover a narrower perimeter of the general government than IMF staff's estimates in China Article IV reports (see IMF 2023 for a reconciliation of the two estimates).

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

Table A17. Low-Income Developing Countries: General Government Overall Balance, 2014–28

(Percent of GDP)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Average	–3.1	–3.8	–3.7	–3.7	–3.3	–3.5	–5.0	–4.7	–4.2	–4.2	–4.0	–3.8	–3.7	–3.7	–3.6
Oil Producers	–2.9	–4.6	–5.3	–5.4	–4.1	–4.5	–5.3	–5.7	–5.0	–4.8	–4.9	–5.1	–5.3	–5.6	–5.7
Asia	–3.5	–3.8	–3.2	–3.1	–2.8	–3.0	–4.3	–4.3	–3.5	–4.5	–4.2	–4.0	–3.7	–3.6	–3.5
Latin America	–2.7	–1.2	–0.7	–0.6	–1.0	–0.6	–3.4	–2.5	–0.8	–1.9	–1.6	–1.3	–1.2	–1.2	–1.2
Sub-Saharan Africa	–3.3	–4.1	–4.5	–4.5	–3.9	–4.0	–5.7	–5.5	–5.2	–4.3	–4.1	–4.0	–3.9	–4.0	–4.0
Others	–1.7	–3.1	–2.5	–2.3	–1.9	–3.0	–3.6	–2.2	–2.6	–2.9	–2.6	–2.5	–2.5	–2.6	–2.6
Afghanistan	–1.7	–1.4	0.1	–0.7	1.6	–1.1	–2.2	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Bangladesh	–2.6	–3.3	–3.2	–4.2	–4.1	–5.4	–4.8	–3.6	–3.8	–5.6	–5.1	–5.0	–5.0	–5.0	–5.0
Benin	–1.7	–5.6	–4.3	–4.2	–3.0	–0.5	–4.7	–5.7	–5.6	–4.3	–2.9	–2.9	–2.9	–2.9	–2.9
Burkina Faso	–1.7	–2.1	–3.1	–6.9	–4.4	–3.4	–5.1	–7.4	–10.4	–7.8	–6.7	–5.5	–4.2	–3.0	–3.0
Cambodia	–1.6	–0.6	–0.3	–0.8	0.7	3.0	–3.4	–7.1	–4.1	–5.0	–3.5	–3.1	–2.9	–2.8	–3.2
Cameroon	–4.1	–4.2	–5.9	–4.7	–2.4	–3.2	–3.2	–3.0	–1.8	–0.8	–0.6	–0.3	–0.7	–1.1	–1.1
Chad	–4.2	–4.4	–1.9	–0.2	1.9	–0.2	2.1	–1.6	5.1	7.0	4.5	4.3	6.0	4.7	5.1
Congo, Democratic Republic of the	0.0	–0.4	–0.5	1.3	0.0	–2.0	–1.4	–0.9	–1.6	–1.5	–2.5	–3.1	–3.0	–3.4	–3.8
Congo, Republic of	–10.7	–17.8	–15.6	–5.9	5.6	4.7	–1.2	1.8	6.6	4.8	5.1	3.5	3.3	4.3	5.8
Côte d'Ivoire	–1.6	–2.0	–3.0	–3.3	–2.9	–2.2	–5.4	–4.8	–6.7	–5.1	–4.0	–3.0	–3.0	–3.0	–3.0
Ethiopia	–2.6	–1.9	–2.3	–3.2	–3.0	–2.5	–2.8	–2.8	–4.2	–3.5	–3.0	–3.0	–3.0	–3.0	–3.0
Ghana	–7.8	–4.0	–6.7	–4.0	–6.8	–7.5	–17.4	–12.1	–9.9	–7.3	–8.4	–7.3	–5.9	–5.3	–5.4
Guinea	–3.2	–6.6	–0.1	–2.1	–1.1	–0.3	–3.1	–1.7	–0.7	–2.3	–2.4	–2.4	–2.5	–2.6	–2.2
Haiti	–3.6	–1.5	0.0	0.2	–1.0	–2.1	–2.4	–2.6	–2.2	–1.8	–1.8	–1.8	–2.1	–2.2	–2.5
Honduras	–2.9	–0.8	–0.4	–0.4	0.2	0.1	–4.7	–3.1	0.7	. . .	. . .	. . .	. . .	. . .	. . .
Kenya	–5.8	–6.7	–7.5	–7.4	–6.9	–7.4	–8.1	–7.1	–6.0	–5.2	–4.4	–3.9	–3.9	–4.0	–3.9
Kyrgyz Republic	–3.1	–2.5	–5.8	–3.7	–0.6	–0.1	–3.3	–0.8	–1.3	–3.8	–4.2	–4.2	–4.3	–4.5	–4.5
Lao P.D.R.	–3.1	–5.6	–4.9	–5.5	–4.7	–3.3	–5.6	–1.3	–1.6	–3.4	–3.4	–3.3	–3.5	–2.9	–2.9
Madagascar	–2.0	–2.9	–1.1	–2.1	–1.3	–1.4	–4.0	–2.8	–6.8	–3.0	–3.3	–4.3	–3.9	–4.6	–4.8
Malawi	–3.1	–4.2	–4.9	–5.2	–4.3	–4.5	–8.2	–8.6	–10.4	–7.8	–8.0	–7.2	–5.9	–5.0	–4.0
Mali	–2.9	–1.8	–3.9	–2.9	–4.7	–1.7	–5.4	–4.8	–4.8	–4.8	–4.3	–3.6	–3.0	–3.0	–3.0
Moldova	–1.6	–1.9	–1.5	–0.7	–0.9	–1.5	–5.3	–2.6	–3.3	–6.0	–4.6	–3.8	–3.4	–3.1	–2.7
Mozambique	–9.9	–6.7	–5.1	–2.0	–5.6	0.1	–5.4	–3.6	–5.2	–4.8	–3.1	–2.1	–1.2	–0.5	0.5
Myanmar	–1.3	–2.8	–3.9	–2.9	–3.4	–3.9	–5.6	–11.0	–5.2	–4.8	–5.0	–5.0	–4.5	–4.0	–3.8
Nepal	1.3	0.6	1.2	–2.7	–5.8	–5.0	–5.4	–4.0	–3.3	–4.5	–4.1	–3.5	–2.7	–2.4	–2.5
Nicaragua	–1.2	–1.5	–1.8	–1.8	–3.0	–0.3	–2.2	–1.2	–2.0	–1.1	–0.7	–0.2	0.1	0.1	–0.1
Niger	–6.1	–6.7	–4.5	–4.1	–3.0	–3.6	–4.8	–5.9	–6.9	–5.3	–4.1	–3.0	–3.0	–3.0	–3.0
Nigeria	–2.4	–3.8	–4.6	–5.4	–4.3	–4.7	–5.6	–6.0	–5.5	–5.3	–5.4	–5.6	–5.8	–6.0	–6.1
Papua New Guinea	–6.3	–4.5	–4.7	–2.5	–2.6	–4.4	–8.9	–6.8	–5.4	–4.3	–3.9	–2.3	–1.2	0.0	0.2
Rwanda	–3.9	–2.7	–2.3	–2.5	–2.6	–5.1	–9.5	–7.0	–6.5	–5.4	–6.1	–4.2	–3.4	–3.0	–2.9
Senegal	–3.9	–3.7	–3.3	–3.0	–3.7	–3.9	–6.4	–6.3	–6.1	–4.9	–4.0	–3.0	–3.0	–3.0	–3.0
Sudan	–4.7	–3.9	–3.9	–6.1	–7.9	–10.8	–5.9	–0.3	–2.1	–2.4	–2.6	–2.6	–2.7	–2.7	–2.7
Tajikistan	0.8	–2.0	–9.0	–5.7	–2.7	–2.1	–4.3	–0.7	–1.4	–2.5	–2.5	–2.5	–2.5	–2.5	–2.5
Tanzania	–2.9	–3.2	–2.1	–1.2	–1.9	–2.0	–2.5	–3.4	–3.3	–2.9	–2.6	–2.5	–2.5	–2.5	–2.5
Uganda	–2.7	–2.5	–2.6	–3.6	–3.0	–4.8	–7.5	–7.5	–5.8	–4.1	–3.3	–3.2	–2.0	–2.8	0.5
Uzbekistan	1.9	–0.3	0.7	1.1	2.0	–0.3	–3.3	–4.6	–3.9	–2.9	–2.9	–2.8	–2.8	–2.9	–2.9
Vietnam	–5.0	–5.0	–3.2	–2.0	–1.0	–0.4	–2.9	–3.4	–2.5	–3.3	–3.1	–2.9	–2.5	–2.3	–2.0
Yemen	–4.1	–8.7	–8.5	–4.9	–7.8	–5.9	–4.9	–1.0	–1.8	–2.2	–0.2	0.0	–0.8	–1.8	–2.0
Zambia	–5.4	–8.9	–5.7	–7.5	–8.3	–9.4	–13.8	–8.1	–7.9	–6.3	–6.7	–5.5	–5.9	–3.7	–2.9
Zimbabwe	–1.1	–1.8	–6.6	–10.6	–5.4	–0.9	0.8	–2.2	–2.1	–3.0	–2.2	–2.2	–2.2	–2.2	–2.2

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

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

Table A18. Low-Income Developing Countries: General Government Primary Balance, 2014–28

(Percent of GDP)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Average	–1.9	–2.5	–2.3	–2.2	–1.7	–1.9	–3.2	–2.8	–2.3	–2.4	–2.0	–1.9	–1.8	–1.7	–1.6
Oil Producers	–1.6	–3.1	–3.7	–4.1	–2.5	–2.9	–3.3	–3.3	–2.3	–2.6	–2.6	–2.6	–2.6	–2.7	–2.6
Asia	–2.0	–2.3	–1.7	–1.7	–1.3	–1.6	–2.7	–2.7	–2.0	–3.0	–2.6	–2.5	–2.3	–2.1	–1.9
Latin America	–2.4	–0.7	–0.2	–0.1	–0.4	0.1	–2.6	–1.7	–0.1	–1.3	–1.1	–0.6	–0.5	–0.4	–0.5
Sub-Saharan Africa	–2.2	–2.8	–2.9	–2.8	–2.0	–2.0	–3.6	–3.1	–2.6	–1.9	–1.6	–1.5	–1.4	–1.5	–1.4
Others	–0.4	–1.8	–1.6	–2.1	–1.7	–2.8	–3.2	–2.0	–2.4	–2.5	–2.2	–2.0	–2.0	–2.1	–2.2
Afghanistan	–1.7	–1.3	0.2	–0.6	1.7	–1.0	–2.2	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Bangladesh	–0.9	–1.6	–1.6	–2.6	–2.5	–3.7	–3.0	–1.6	–2.1	–3.8	–3.3	–3.3	–3.3	–3.3	–3.2
Benin	–1.4	–5.0	–3.4	–2.8	–1.4	1.1	–2.7	–3.5	–3.7	–2.7	–1.1	–1.2	–1.2	–1.3	–1.3
Burkina Faso	–1.1	–1.5	–2.2	–6.0	–3.3	–2.1	–3.8	–5.7	–8.5	–5.9	–4.9	–3.4	–2.0	–0.7	–0.6
Cambodia	–1.3	–0.3	0.1	–0.5	1.0	3.3	–3.0	–6.7	–3.8	–4.7	–3.1	–2.8	–2.5	–2.3	–2.7
Cameroon	–3.7	–3.9	–5.2	–3.9	–1.5	–2.2	–2.3	–2.0	–0.9	0.3	0.5	0.8	0.3	0.0	0.0
Chad	–3.6	–2.7	0.1	1.3	3.0	0.8	3.0	–0.4	6.6	8.3	5.5	5.5	6.7	5.3	5.6
Congo, Democratic Republic of the	0.3	–0.1	–0.2	1.6	0.4	–1.8	–1.2	–0.6	–1.2	–1.2	–2.1	–2.6	–2.5	–2.8	–2.9
Congo, Republic of	–10.6	–17.2	–13.6	–4.3	7.5	7.8	0.1	4.1	9.2	7.5	7.8	6.3	6.2	7.1	8.3
Côte d'Ivoire	–0.7	–0.9	–1.7	–2.0	–1.6	–0.8	–3.6	–2.9	–4.5	–2.5	–1.5	–0.7	–0.8	–0.9	–1.0
Ethiopia	–2.2	–1.5	–1.8	–2.8	–2.5	–2.0	–2.4	–2.2	–3.5	–2.9	–2.3	–2.2	–2.1	–1.7	–1.7
Ghana	–3.3	0.9	–1.5	1.2	–1.4	–2.0	–11.2	–4.8	–2.8	0.1	0.6	1.0	1.0	1.0	1.0
Guinea	–2.2	–5.7	0.9	–1.2	–0.3	0.2	–2.4	–1.2	0.1	–1.6	–1.6	–1.5	–1.6	–1.7	–1.3
Haiti	–3.4	–1.4	0.2	0.3	–0.8	–1.8	–2.1	–2.3	–1.9	–1.6	–1.6	–1.6	–1.9	–2.0	–2.3
Honduras	–2.6	0.0	0.2	0.2	0.8	0.8	–3.8	–2.1	1.3	. . .	. . .	. . .	. . .	. . .	. . .
Kenya	–3.4	–4.2	–4.6	–4.2	–3.4	–3.8	–4.2	–3.1	–1.7	–0.6	0.4	0.6	0.6	0.7	0.8
Kyrgyz Republic	–2.3	–1.7	–4.9	–2.9	0.4	0.8	–2.3	0.0	–0.2	–2.8	–3.0	–2.6	–2.3	–2.2	–2.0
Lao P.D.R.	–2.4	–4.8	–4.0	–4.7	–3.5	–2.0	–4.1	–0.3	0.0	0.3	0.3	0.2	0.2	0.1	0.1
Madagascar	–1.5	–2.2	–0.4	–1.4	–0.6	–0.7	–3.2	–2.2	–6.1	–2.0	–2.4	–3.3	–3.1	–3.9	–4.0
Malawi	0.0	–1.9	–1.8	–2.4	–1.6	–1.5	–5.0	–4.6	–5.6	–1.0	–0.7	0.0	1.0	1.4	1.8
Mali	–2.3	–1.2	–3.3	–2.0	–3.9	–0.7	–4.2	–3.5	–3.3	–3.2	–2.7	–2.0	–1.4	–1.4	–1.4
Moldova	–1.1	–1.2	–0.4	0.5	0.0	–0.7	–4.5	–1.8	–2.3	–4.2	–3.5	–2.7	–2.3	–2.0	–1.5
Mozambique	–8.9	–5.5	–2.7	1.0	–1.2	3.3	–2.3	–0.9	–2.1	–1.6	0.0	0.8	1.5	2.0	2.6
Myanmar	–0.1	–1.6	–2.6	–1.5	–1.6	–2.4	–4.0	–8.9	–2.5	–2.2	–2.3	–2.4	–1.8	–1.3	–1.1
Nepal	1.8	0.9	1.5	–2.4	–5.4	–4.5	–4.7	–3.3	–2.4	–3.3	–2.8	–2.3	–1.6	–1.3	–1.4
Nicaragua	–0.9	–1.1	–1.2	–0.9	–1.9	0.9	–1.0	0.0	–0.8	0.0	0.3	0.7	1.1	1.1	0.9
Niger	–5.8	–6.3	–3.8	–3.4	–2.1	–2.6	–3.8	–4.8	–5.6	–4.0	–2.9	–1.7	–1.8	–1.8	–1.8
Nigeria	–1.5	–2.7	–3.4	–4.1	–2.6	–3.0	–3.5	–3.6	–2.7	–3.0	–3.0	–3.0	–3.0	–2.9	–2.8
Papua New Guinea	–4.6	–2.8	–2.8	–0.4	–0.2	–1.9	–6.2	–4.4	–3.3	–2.2	–1.2	0.3	1.4	2.6	2.0
Rwanda	–3.1	–1.8	–1.3	–1.5	–1.4	–3.8	–7.9	–5.2	–4.4	–3.2	–4.1	–2.4	–1.8	–1.5	–1.6
Senegal	–2.6	–2.1	–1.6	–1.1	–1.7	–1.9	–4.4	–4.3	–3.9	–2.7	–1.8	–0.7	–0.7	–0.6	–0.6
Sudan	–3.9	–3.2	–3.5	–5.6	–7.7	–10.6	–5.9	–0.2	–2.0	–2.0	–2.0	–2.0	–2.0	–1.6	–2.2
Tajikistan	1.4	–1.5	–8.3	–5.2	–1.6	–1.2	–3.4	0.2	–0.6	–1.8	–1.8	–1.9	–1.9	–2.2	–2.4
Tanzania	–1.6	–1.7	–0.6	0.4	–0.2	–0.3	–0.9	–1.8	–1.7	–1.1	–0.6	–0.5	–0.5	–0.5	–0.5
Uganda	–1.5	–1.1	–0.6	–1.5	–1.2	–2.7	–5.2	–4.6	–2.6	–0.9	–0.4	–0.7	0.3	–1.8	1.3
Uzbekistan	1.8	–0.4	0.6	0.9	1.6	–0.5	–3.4	–4.8	–4.1	–3.1	–2.9	–2.7	–2.7	–2.7	–2.8
Vietnam	–3.7	–3.4	–1.6	–0.4	0.5	1.0	–1.5	–2.2	–1.3	–2.3	–2.0	–1.8	–1.4	–1.2	–0.8
Yemen	1.5	–2.6	–3.2	–4.7	–7.8	–5.7	–2.8	0.3	–0.6	–1.0	0.8	0.8	–0.1	–1.3	–1.5
Zambia	–3.2	–6.0	–2.2	–3.5	–3.5	–2.5	–7.8	–2.0	–1.6	0.2	0.6	1.3	1.1	2.0	2.2
Zimbabwe	–0.4	–0.9	–6.0	–9.7	–4.4	–0.5	0.9	–1.7	–2.0	–2.8	–2.1	–2.1	–2.1	–2.1	–2.1

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

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

Table A19. Low-Income Developing Countries: General Government Revenue, 2014–28

(Percent of GDP)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Average	15.7	14.2	13.7	14.2	14.8	14.5	13.8	14.3	14.7	14.9	15.0	15.2	15.3	15.2	15.2
Oil Producers	12.8	8.2	6.1	7.2	9.2	8.6	7.4	8.1	9.8	9.9	9.4	9.1	8.8	8.5	8.3
Asia	15.8	15.5	15.0	14.9	15.3	14.9	14.3	14.4	14.1	14.5	14.8	15.1	15.4	15.5	15.6
Latin America	19.9	20.6	21.8	21.4	20.9	21.2	19.7	20.5	20.4	19.9	20.4	20.8	21.0	21.1	21.2
Sub-Saharan Africa	14.3	12.3	11.7	12.8	13.3	13.1	12.3	13.1	13.7	13.9	13.9	13.8	13.7	13.6	13.4
Others	21.4	18.1	17.2	17.2	20.7	20.3	19.2	20.5	22.4	21.5	22.3	23.0	23.3	23.5	23.7
Afghanistan	23.7	24.6	28.2	27.1	30.6	26.9	25.7	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Bangladesh	9.1	8.2	8.4	8.1	8.9	8.1	8.5	9.4	8.7	8.8	9.3	9.7	10.3	10.2	10.2
Benin	12.6	12.6	11.1	13.6	13.6	14.1	14.4	14.1	13.9	14.4	15.1	15.6	15.9	16.3	16.8
Burkina Faso	19.2	18.3	18.6	19.2	19.8	19.9	19.1	20.3	21.0	20.6	20.6	20.5	20.5	20.7	21.3
Cambodia	20.1	19.6	20.8	21.6	23.7	26.8	23.9	21.6	22.1	22.0	23.0	23.4	23.5	23.5	23.6
Cameroon	16.0	15.8	14.3	14.5	15.5	15.4	13.4	14.0	16.1	15.5	15.3	15.2	15.2	15.4	15.4
Chad	17.8	14.0	12.4	14.6	15.3	14.2	21.1	16.8	21.7	24.7	21.2	21.0	21.6	19.9	19.8
Congo, Democratic Republic of the	17.3	15.9	13.5	11.3	10.9	10.7	9.0	13.8	17.2	16.8	16.5	16.5	16.9	16.8	15.9
Congo, Republic of	37.8	23.5	26.0	22.4	24.9	26.5	21.9	24.9	31.3	29.9	29.3	28.3	27.9	28.3	28.1
Côte d'Ivoire	13.6	14.5	14.6	14.8	14.7	14.7	14.6	15.5	14.7	15.8	16.2	16.6	17.2	17.2	17.2
Ethiopia	14.9	15.4	15.6	14.7	13.1	12.8	11.7	11.0	8.5	8.9	9.4	9.7	10.0	10.2	10.4
Ghana	13.2	14.6	13.1	13.6	14.1	15.0	14.1	15.3	15.6	17.2	17.9	18.4	18.7	18.7	18.7
Guinea	17.0	15.2	16.0	15.3	14.9	14.7	13.9	13.6	13.1	13.2	13.8	14.5	14.9	15.3	15.2
Haiti	11.0	11.3	10.7	9.9	10.1	8.0	7.5	8.2	8.0	8.8	8.9	9.3	9.6	9.7	9.8
Honduras	24.7	25.2	27.0	26.5	26.4	25.8	23.4	25.3	25.1	. . .	. . .	. . .	. . .	. . .	. . .
Kenya	17.7	17.1	17.9	17.8	17.5	17.0	16.7	16.7	17.4	17.6	17.9	17.9	18.0	18.1	18.4
Kyrgyz Republic	35.4	35.6	33.1	33.3	32.5	32.5	30.8	33.2	38.5	34.5	34.6	34.5	34.4	34.3	34.3
Lao P.D.R.	21.9	20.2	16.0	16.3	16.2	15.4	13.0	15.0	14.9	15.1	15.1	15.1	15.1	15.0	15.0
Madagascar	10.6	10.2	12.4	12.8	13.0	13.9	12.4	11.2	13.6	14.6	15.3	15.3	15.1	14.8	14.4
Malawi	15.2	15.4	14.8	15.8	15.0	14.8	14.5	15.1	14.0	16.5	17.5	16.7	16.9	16.6	17.0
Mali	17.1	19.1	18.3	20.1	15.6	21.5	20.5	21.6	19.9	20.7	21.0	21.9	22.2	22.4	22.6
Moldova	31.8	30.0	28.6	30.3	30.7	30.5	31.4	32.0	33.5	32.6	31.4	31.8	32.1	32.0	32.1
Mozambique	30.4	26.0	23.9	27.1	25.8	29.9	27.5	27.9	29.2	28.6	27.8	28.0	28.6	27.4	26.2
Myanmar	22.5	21.4	19.6	17.9	17.6	16.3	16.0	13.1	13.2	13.9	14.2	14.5	14.8	15.0	15.3
Nepal	17.9	18.2	20.1	20.9	22.2	22.4	22.2	23.7	23.5	21.6	22.9	23.6	24.8	25.5	25.4
Nicaragua	23.3	23.8	24.9	25.5	24.6	27.6	26.9	29.3	27.0	26.3	26.4	26.4	26.6	26.4	26.4
Niger	17.5	17.5	14.9	15.4	18.2	18.0	17.5	18.4	15.0	17.8	19.4	19.8	19.9	20.1	20.2
Nigeria	10.9	7.3	5.1	6.6	8.5	7.8	6.5	7.3	8.8	8.9	8.5	8.2	7.9	7.7	7.6
Papua New Guinea	20.8	18.3	16.1	15.9	17.7	16.3	14.7	15.0	15.8	17.1	16.6	17.0	17.1	17.3	17.5
Rwanda	23.6	23.9	22.9	22.6	23.8	23.1	23.9	24.6	25.2	23.2	23.7	23.7	24.0	24.2	24.0
Senegal	19.2	19.3	20.7	19.5	18.9	20.3	20.2	19.4	20.7	21.3	22.3	23.4	23.5	23.8	24.4
Sudan	8.8	8.5	6.1	6.7	8.9	7.8	4.8	9.5	10.1	10.1	10.4	10.5	10.7	10.6	10.7
Tajikistan	28.4	29.9	29.7	28.1	28.2	26.8	24.8	27.0	27.5	28.2	26.2	26.6	26.8	27.0	27.2
Tanzania	14.4	14.0	14.8	15.4	14.7	14.7	14.3	14.4	15.0	15.3	15.6	15.9	16.1	16.0	16.0
Uganda	10.8	12.6	12.4	12.7	13.2	13.5	13.9	14.1	14.9	15.3	15.8	16.8	18.2	19.0	20.2
Uzbekistan	26.8	24.3	24.0	23.5	26.8	26.8	25.5	25.9	29.4	27.0	27.6	28.3	28.7	29.0	29.4
Vietnam	17.7	19.2	19.1	19.6	19.5	19.4	18.4	18.4	18.3	18.2	18.4	18.6	18.9	19.2	19.5
Yemen	23.6	10.7	7.6	3.5	6.4	7.3	6.8	8.3	10.9	8.3	10.6	12.9	12.7	11.8	11.7
Zambia	18.9	18.8	18.2	17.5	19.4	20.4	20.3	22.3	20.8	22.0	22.1	22.3	22.3	22.6	22.8
Zimbabwe	19.3	18.7	17.0	18.1	14.9	10.8	13.3	15.4	16.0	15.6	15.6	15.6	15.6	15.6	15.6

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

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

Table A20. Low-Income Developing Countries: General Government Expenditure, 2014–28
(Percent of GDP)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Average	18.8	18.0	17.5	17.8	18.0	18.0	18.7	19.0	18.9	19.1	19.0	19.0	19.0	18.9	18.8
Oil Producers	15.7	12.7	11.4	12.5	13.3	13.1	12.7	13.8	14.8	14.7	14.3	14.3	14.1	14.1	14.0
Asia	19.2	19.3	18.2	18.0	18.1	17.9	18.6	18.7	17.6	19.0	19.0	19.1	19.2	19.1	19.0
Latin America	22.7	21.8	22.4	22.0	21.9	21.8	23.1	23.1	21.2	21.8	21.9	22.0	22.2	22.2	22.4
Sub-Saharan Africa	17.6	16.4	16.2	17.2	17.2	17.1	18.0	18.6	18.9	18.3	18.0	17.8	17.7	17.6	17.4
Others	23.0	21.2	19.7	19.5	22.6	23.3	22.8	22.8	25.1	24.4	24.9	25.4	25.8	26.1	26.3
Afghanistan	25.4	25.9	28.0	27.7	28.9	28.0	27.9	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Bangladesh	11.7	11.5	11.6	12.2	13.0	13.6	13.3	13.0	12.6	14.5	14.4	14.8	15.3	15.2	15.2
Benin	14.2	18.2	15.4	17.8	16.6	14.6	19.1	19.9	19.5	18.7	18.0	18.5	18.8	19.2	19.7
Burkina Faso	20.9	20.4	21.7	26.1	24.2	23.2	24.3	27.8	31.3	28.4	27.3	26.1	24.8	23.7	24.3
Cambodia	21.7	20.3	21.1	22.4	23.0	23.8	27.3	28.6	26.2	27.0	26.4	26.6	26.4	26.3	26.8
Cameroon	20.1	20.1	20.2	19.2	18.0	18.7	16.6	16.9	18.0	16.2	16.0	15.5	15.9	16.4	16.4
Chad	22.0	18.3	14.4	14.9	13.3	14.3	19.0	18.4	16.6	17.7	16.7	16.8	15.6	15.2	14.7
Congo, Democratic Republic of the	17.3	16.3	13.9	10.0	10.9	12.7	10.4	14.6	18.8	18.3	19.0	19.5	19.9	20.3	19.7
Congo, Republic of	48.6	41.3	41.5	28.4	19.2	21.8	23.1	23.1	24.7	25.1	24.2	24.8	24.7	24.0	22.3
Côte d'Ivoire	15.2	16.5	17.6	18.1	17.6	16.9	20.0	20.3	21.4	20.9	20.1	19.6	20.2	20.2	20.2
Ethiopia	17.5	17.3	17.9	18.0	16.1	15.4	14.5	13.8	12.7	12.4	12.4	12.7	13.0	13.2	13.4
Ghana	21.0	18.6	19.9	17.6	20.9	22.5	31.5	27.4	25.6	24.5	26.4	25.8	24.6	24.0	24.1
Guinea	20.2	21.7	16.1	17.3	16.0	15.0	17.0	15.3	13.8	15.6	16.2	16.9	17.4	17.9	17.5
Haiti	14.6	12.7	10.6	9.8	11.1	10.1	9.9	10.8	10.2	10.6	10.7	11.1	11.7	12.0	12.4
Honduras	27.6	26.0	27.4	26.9	26.2	25.7	28.0	28.4	24.4	. . .	. . .	. . .	. . .	. . .	. . .
Kenya	23.4	23.8	25.3	25.2	24.5	24.4	24.8	23.9	23.5	22.8	22.3	21.9	21.9	22.2	22.3
Kyrgyz Republic	38.5	38.1	38.9	37.0	33.1	32.6	34.1	33.9	39.9	38.3	38.8	38.7	38.7	38.8	38.8
Lao P.D.R.	25.0	25.8	20.9	21.8	20.9	18.8	18.6	16.3	16.5	18.4	18.5	18.5	18.6	18.0	17.9
Madagascar	12.6	13.0	13.5	14.9	14.4	15.4	16.4	14.0	20.3	17.6	18.6	19.5	19.0	19.4	19.2
Malawi	18.3	19.5	19.7	21.0	19.4	19.3	22.7	23.7	24.4	24.3	25.5	23.9	22.9	21.6	21.0
Mali	20.0	20.9	22.3	22.9	20.3	23.1	25.9	26.4	24.7	25.5	25.3	25.5	25.2	25.4	25.6
Moldova	33.4	31.9	30.1	31.0	31.5	32.0	36.7	34.6	36.8	38.6	36.0	35.6	35.5	35.1	34.8
Mozambique	40.3	32.7	29.0	29.1	31.3	29.8	32.9	31.5	34.4	33.4	31.0	30.0	29.8	27.8	25.7
Myanmar	23.8	24.2	23.4	20.8	21.0	20.3	21.6	24.1	18.4	18.6	19.2	19.5	19.3	19.1	19.1
Nepal	16.6	17.7	19.0	23.6	28.0	27.3	27.6	27.7	26.8	26.1	26.9	27.1	27.5	28.0	27.9
Nicaragua	24.6	25.3	26.8	27.3	27.6	27.8	29.1	30.6	29.0	27.3	27.1	26.7	26.5	26.4	26.5
Niger	23.6	24.2	19.4	19.5	21.2	21.6	22.4	24.3	21.9	23.1	23.5	22.8	22.9	23.1	23.3
Nigeria	13.4	11.0	9.8	12.0	12.8	12.5	12.1	13.3	14.3	14.2	13.9	13.8	13.7	13.7	13.7
Papua New Guinea	27.1	22.8	20.9	18.4	20.3	20.7	23.5	21.8	21.2	21.4	20.5	19.3	18.2	17.3	17.3
Rwanda	27.5	26.6	25.1	25.1	26.4	28.2	33.4	31.6	31.7	28.6	29.8	27.9	27.4	27.1	26.8
Senegal	23.1	22.9	24.0	22.5	22.6	24.2	26.6	25.7	26.9	26.2	26.3	26.4	26.5	26.7	27.4
Sudan	13.5	12.4	10.0	12.8	16.8	18.7	10.7	9.8	12.2	12.6	12.9	13.1	13.3	13.3	13.4
Tajikistan	27.5	31.9	38.7	33.8	30.9	28.8	29.2	27.6	28.9	30.7	28.7	29.1	29.3	29.5	29.7
Tanzania	17.3	17.2	16.9	16.6	16.6	16.7	16.8	17.8	18.3	18.2	18.2	18.4	18.5	18.5	18.5
Uganda	13.6	15.1	15.0	16.3	16.2	18.3	21.4	21.6	20.7	19.4	19.1	20.1	20.2	21.8	19.7
Uzbekistan	24.9	24.6	23.3	22.4	24.8	27.1	28.7	30.5	33.4	29.9	30.5	31.1	31.5	31.9	32.3
Vietnam	22.8	24.2	22.2	21.5	20.5	19.8	21.3	21.9	20.7	21.5	21.4	21.5	21.4	21.5	21.4
Yemen	27.8	19.4	16.1	8.4	14.3	13.2	11.7	9.3	12.7	10.5	10.8	12.9	13.4	13.6	13.7
Zambia	24.3	27.6	23.9	25.0	27.7	29.8	34.1	30.4	28.7	28.3	28.9	27.8	28.2	26.3	25.6
Zimbabwe	20.4	20.5	23.7	28.7	20.3	11.7	12.5	17.5	18.1	18.5	17.8	17.8	17.8	17.8	17.8

Source: IMF staff estimates and projections. Projections are based on staff assessments of current policies (see "Fiscal Policy Assumptions" in text).
Note: For country-specific details, see "Data and Conventions" in text and Table D.

Table A21. Low-Income Developing Countries: General Government Gross Debt, 2014–28

(Percent of GDP)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Average	31.1	35.3	38.7	41.3	41.7	42.8	48.4	48.4	48.2	48.3	46.8	45.8	44.9	44.2	43.2
Oil Producers	20.7	24.6	29.0	31.3	32.4	33.9	39.0	40.2	40.9	41.2	40.8	41.2	41.8	42.3	42.9
Asia	36.0	36.7	37.2	36.9	36.9	37.0	39.2	41.0	41.5	42.3	42.0	41.8	41.5	41.0	40.3
Latin America	28.8	30.8	32.0	32.8	34.8	37.6	42.7	41.5	41.5	38.9	39.6	39.6	40.2	39.3	40.5
Sub-Saharan Africa	27.3	32.8	37.1	40.2	41.6	43.1	49.6	50.8	51.5	50.7	48.6	47.3	46.3	45.3	44.2
Others	38.6	44.0	51.3	65.7	67.7	70.8	90.6	74.9	63.2	64.4	62.2	58.1	54.6	54.5	52.1
Afghanistan	8.7	9.2	8.4	8.0	7.4	6.1	7.4	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Bangladesh	28.7	28.2	27.7	28.3	29.6	32.0	34.5	35.6	39.1	42.1	42.4	42.8	43.1	43.3	43.6
Benin	22.3	30.9	35.9	39.6	41.1	41.2	46.1	50.3	52.4	52.8	51.6	50.4	49.5	48.7	47.4
Burkina Faso	24.9	31.1	33.5	33.2	38.2	42.0	44.9	48.2	54.3	58.0	60.2	61.3	61.3	60.1	58.9
Cambodia	31.9	31.2	29.1	30.0	28.4	28.2	34.4	35.9	36.5	37.5	38.8	39.7	40.4	41.2	41.6
Cameroon	20.7	31.6	32.1	36.5	38.3	41.6	44.9	46.8	46.4	42.8	40.4	38.5	37.5	37.2	36.8
Chad	38.2	42.5	50.0	48.7	48.4	52.3	54.1	55.9	50.4	43.7	40.1	36.4	33.0	31.0	28.8
Congo, Democratic Republic of the	15.7	16.0	18.8	18.5	14.8	14.8	16.7	16.3	14.6	11.0	9.0	7.2	5.8	4.6	3.6
Congo, Republic of	42.3	74.2	90.5	94.4	77.0	84.0	112.1	107.9	99.6	96.5	89.2	85.9	81.7	76.7	70.2
Côte d'Ivoire	26.7	29.2	31.1	32.6	35.3	37.5	46.3	50.9	56.8	63.3	60.6	57.3	55.1	53.7	51.6
Ethiopia	44.2	50.7	53.1	55.2	58.4	55.8	53.9	53.8	46.4	37.6	33.3	30.9	29.8	29.1	28.5
Ghana	50.1	53.9	55.9	57.0	62.0	58.3	72.3	79.6	88.8	98.7	92.8	91.6	90.4	88.6	86.8
Guinea	35.2	44.4	43.0	41.9	39.3	38.6	47.5	40.6	33.4	30.0	30.1	30.3	28.8	28.6	28.4
Haiti	20.8	21.7	21.6	18.9	21.5	25.4	22.0	25.6	25.0	20.3	19.9	19.9	20.4	21.2	22.8
Honduras	35.0	38.3	39.4	41.3	42.4	42.9	52.7	50.3	50.0	. . .	. . .	. . .	. . .	. . .	. . .
Kenya	41.3	45.8	50.4	53.9	56.4	59.1	67.8	67.0	67.9	66.6	65.4	64.1	62.7	61.1	59.5
Kyrgyz Republic	53.6	67.1	59.1	58.8	54.8	51.6	67.6	59.5	53.5	53.0	52.9	53.7	54.5	55.6	57.1
Lao P.D.R.	53.5	53.1	54.5	57.2	60.6	69.1	76.0	92.4	128.5	123.0	119.9	115.8	112.2	108.1	104.1
Madagascar	37.8	44.1	40.3	40.1	42.9	41.0	51.2	52.3	57.0	53.1	52.0	52.2	53.1	54.6	56.0
Malawi	33.5	35.5	37.1	40.3	43.9	45.3	54.8	61.6	70.1	72.2	69.4	66.6	63.5	60.4	56.6
Mali	26.9	30.7	36.0	36.0	37.5	40.7	46.9	50.7	53.2	54.1	54.9	55.4	55.5	56.0	56.7
Moldova	35.0	42.4	39.2	34.9	31.8	28.8	36.6	33.1	33.5	34.5	36.7	36.9	36.9	36.9	34.9
Mozambique	64.3	87.4	126.2	104.1	106.7	99.0	120.0	107.2	76.1	102.8	103.1	101.4	97.8	82.9	67.6
Myanmar	35.2	36.4	38.3	38.5	40.4	38.8	39.3	65.5	63.9	61.3	63.3	65.4	67.3	66.5	65.2
Nepal	27.6	25.7	25.0	25.0	31.1	34.0	43.3	44.0	43.8	47.8	48.8	49.8	50.2	50.0	49.9
Nicaragua	28.7	28.9	30.9	33.8	37.4	41.4	47.7	47.6	46.0	44.5	45.0	45.4	46.5	46.8	46.1
Niger	22.1	29.9	32.8	36.5	39.5	40.5	45.0	51.3	51.1	52.5	49.4	48.1	47.2	46.7	46.3
Nigeria[1]	17.5	20.3	23.4	25.3	27.7	29.2	34.5	36.5	38.0	38.8	39.0	40.3	41.5	42.3	43.1
Papua New Guinea	26.9	29.9	33.7	32.5	36.7	40.2	48.7	52.1	49.2	48.0	47.6	46.7	43.5	40.5	39.3
Rwanda	28.3	32.4	36.6	41.3	44.9	49.8	65.6	66.6	64.4	67.1	71.1	70.7	68.9	67.0	62.9
Senegal[2]	42.4	44.5	47.5	61.1	61.5	63.6	69.2	73.2	75.0	73.1	69.9	69.3	69.0	69.0	65.0
Sudan	84.4	93.2	109.9	149.5	186.7	200.3	275.0	187.9	127.6	151.1	166.4	163.2	160.4	173.2	157.7
Tajikistan	27.9	35.0	42.2	46.3	46.6	43.5	49.8	42.5	34.6	32.3	31.3	31.2	31.1	31.0	28.9
Tanzania	36.1	39.2	39.8	40.7	40.5	39.1	39.8	42.1	41.6	40.1	38.5	37.2	36.1	35.0	34.0
Uganda	24.8	28.5	31.0	33.6	34.9	37.6	46.3	50.6	50.8	50.2	49.2	47.7	45.4	41.0	36.7
Uzbekistan	6.1	6.7	8.2	19.3	19.6	28.5	37.1	35.4	34.3	33.9	32.9	31.5	30.2	28.8	27.1
Vietnam	43.6	46.1	47.5	46.3	43.5	40.8	41.3	39.3	37.1	36.3	35.4	34.6	33.8	32.9	31.3
Yemen	48.9	57.1	75.3	84.0	89.5	94.6	98.5	85.1	73.5	68.7	57.1	44.2	36.3	33.1	30.6
Zambia	33.9	61.9	58.0	63.4	75.2	94.4	140.2	110.8	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Zimbabwe	42.3	48.0	49.9	74.1	51.0	82.3	84.4	59.8	92.8	102.3	100.0	90.9	83.5	83.6	72.7

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

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

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

[2] From 2017 onward, Senegal data include the whole of the public sector, whereas before 2017, only central government debt stock was taken into account.

Table A22. Low-Income Developing Countries: General Government Net Debt, 2014–28

(Percent of GDP)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Average	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Oil Producers	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Asia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Latin America	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Sub-Saharan Africa	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Others	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Afghanistan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Bangladesh	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Benin	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Burkina Faso	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Cambodia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Cameroon	19.1	27.6	30.5	33.3	35.9	39.5	43.0	45.4	45.0	41.0	38.7	36.8	35.8	35.5	35.3
Chad	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Congo, Democratic Republic of the	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Congo, Republic of	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Côte d'Ivoire	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Ethiopia	39.6	45.8	49.2	51.3	54.7	51.8	50.3	50.5	43.9	35.8	32.0	29.9	28.9	28.4	27.9
Ghana	45.3	49.8	50.9	51.9	60.7	54.6	68.2	74.8	83.9	93.9	88.0	86.8	85.6	83.7	82.0
Guinea	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Haiti	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Honduras	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Kenya	34.8	39.7	47.5	48.1	50.8	54.1	63.0	63.8	65.0	65.4	64.9	63.8	60.7	59.3	57.9
Kyrgyz Republic	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Lao P.D.R.	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Madagascar	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Malawi	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Mali	19.7	23.1	30.0	31.1	34.1	34.6	40.4	43.7	49.2	48.8	48.4	48.4	48.6	49.0	49.7
Moldova	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Mozambique	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Myanmar	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Nepal	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Nicaragua	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Niger	17.2	25.9	29.5	32.3	36.6	36.7	41.0	45.1	45.9	47.8	45.8	45.2	44.9	44.8	44.8
Nigeria[1]	13.8	15.9	19.0	20.9	23.5	25.5	34.1	36.4	37.7	38.6	38.9	40.1	41.3	42.2	43.0
Papua New Guinea	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Rwanda	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Senegal	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Sudan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Tajikistan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Tanzania	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Uganda	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Uzbekistan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Vietnam	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Yemen	48.0	56.2	73.6	81.9	86.0	91.1	94.4	82.4	71.5	66.9	55.7	43.1	35.4	32.3	29.9
Zambia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Zimbabwe	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .

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

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

[1] Debt includes overdrafts from the Central Bank of Nigeria and liabilities of the Asset Management Corporation of Nigeria. The overdrafts and government deposits at the Central Bank of Nigeria almost cancel each other out, and the Asset Management Corporation of Nigeria debt is roughly halved.

Table A23. Advanced Economies: Structural Fiscal Indicators

(Percent of GDP, except when indicated otherwise)

	Pension Spending Change, 2022–30[1,8]	Net Present Value of Pension Spending Change, 2022–50[2,8]	Health Care Spending Change, 2022–30[3a,3b]	Net Present Value of Health Care Spending Change, 2022–50[2]	Gross Financing Need, 2023[4]	Average Term to Maturity, 2023 (years)[5]	Debt to Average Maturity, 2023	Projected Interest Rate–Growth Differential, 2023–28 (percent)	Pre-Pandemic Overall Balance, 2012–19	Projected Overall Balance, 2023–28	Nonresident Holding of General Government Debt, 2022 (percent of total)[6]
Average	0.6	17.3	2.3	94.9	24.0	7.3	16.6	–1.4	–3.2	–4.0	28.0
G7	0.6	16.2	2.6	106.2	28.4	7.0	19.0	–1.3	–3.9	–5.1	26.4
G20 Advanced	0.6	16.7	2.6	103.5	26.8	7.1	18.2	–1.3	–3.7	–4.9	26.5
Andorra	2.2	84.2	. . .	. . .	–1.3	7.5	5.0	. . .	2.3	2.7	. . .
Australia	–0.1	–3.4	1.4	55.8	5.5	7.0	8.4	–0.3	–2.7	–2.4	27.4
Austria	1.1	24.7	1.2	53.4	10.0	11.6	6.4	–2.3	–1.2	–1.4	53.6
Belgium	1.3	41.1	1.5	68.5	14.1	9.8	10.8	–1.2	–2.3	–5.5	47.5
Canada	0.7	15.7	1.1	45.1	12.4	5.8	18.2	–0.4	–0.5	–0.2	19.0
Cyprus	0.7	18.5	. . .	. . .	8.1	8.1	9.9	–3.5	–1.4	1.4	74.3
Czech Republic	0.4	28.3	0.6	25.4	9.2	2.9	15.4	–2.8	–0.6	–2.8	. . .
Denmark	–0.5	–18.8	1.3	47.2	0.6	8.8	3.4	0.4	0.2	0.2	22.4
Estonia	–0.5	–19.1	0.5	23.9	. . .	6.0	3.5	–5.3	–0.1	–2.7	74.5
Finland	0.4	–2.6	1.1	39.2	11.0	7.5	10.0	–1.4	–1.8	–2.7	40.6
France	0.5	2.4	1.2	49.4	16.0	8.3	13.4	–1.7	–3.6	–4.4	43.4
Germany	0.9	26.7	0.7	38.8	11.6	6.4	10.5	–2.2	0.9	–1.4	36.5
Hong Kong SAR	1.2	47.9	. . .	. . .	. . .	. . .	. . .	–0.9	2.5	–0.5	. . .
Iceland	1.2	46.4	1.2	55.0	7.3	4.5	4.9	0.6	1.1	–0.5	13.3
Ireland	0.9	35.2	0.4	21.2	0.0	11.2	3.6	–4.4	–2.6	1.1	53.0
Israel	0.2	12.2	0.3	14.3	. . .	7.8	7.3	–2.4	–2.8	–2.3	17.5
Italy	1.5	33.5	0.5	27.2	23.0	7.0	20.0	–0.6	–2.5	–2.2	24.1
Japan	–0.6	8.0	1.1	39.8	48.8	8.0	32.2	–2.1	–4.7	–3.9	12.3
Korea	1.1	50.6	1.8	78.6	4.0	9.7	5.7	–2.5	1.3	–0.1	. . .
Latvia	–0.2	–9.9	0.7	29.5	. . .	8.3	5.1	–4.5	–0.7	–2.0	. . .
Lithuania	0.6	17.5	1.0	46.6	7.1	9.4	4.3	–4.0	–0.6	–2.2	51.2
Luxembourg	1.6	62.3	0.7	35.2	. . .	7.0	3.9	–3.2	1.6	–1.2	42.5
Malta	–0.5	–4.7	. . .	. . .	11.7	8.3	6.9	–3.6	–0.2	–2.9	13.5
The Netherlands	1.0	34.3	1.6	62.7	6.4	8.5	5.7	–2.6	–0.8	–1.7	33.4
New Zealand	1.1	35.5	1.3	54.6	8.5	7.3	6.8	–0.1	–0.3	–1.4	28.0
Norway	1.0	25.1	1.4	55.9	. . .	4.4	8.7	–0.1	7.8	21.2	55.5
Portugal	1.2	20.8	1.0	43.5	7.6	6.7	16.7	–2.0	–3.5	–1.1	42.9
Singapore[7]	0.8	30.5	. . .	. . .	8.4	3.3	41.3	. . .	4.6	2.7	. . .
Slovak Republic	1.1	49.5	0.4	18.9	8.9	8.6	6.7	–3.7	–2.3	–4.2	40.5
Slovenia	0.8	59.6	0.7	35.3	6.2	9.9	6.8	–4.1	–3.4	–2.1	47.0
Spain	–0.2	4.6	1.2	51.9	13.6	8.0	13.9	–1.7	–5.4	–4.0	38.6
Sweden	–0.3	–10.7	0.5	21.7	4.1	5.9	5.5	–2.5	0.0	0.1	16.1
Switzerland	0.4	13.4	2.0	84.6	2.2	11.2	3.4	–2.1	0.5	0.2	7.9
United Kingdom	0.2	11.1	1.6	64.6	10.9	14.5	7.4	–1.5	–4.2	–4.3	22.6
United States	0.7	16.7	3.8	150.3	32.9	6.1	20.1	–1.2	–5.1	–6.8	26.5

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 on the basis of data availability.

[1] Pension projections rely on authorities' estimates when these are available. When authorities' estimates are not available, IMF staff projections use the method described in Clements, Eich, and Gupta, *Equitable and Sustainable Pensions: Challenges and Experience* (IMF 2014). These pension spending projections may be different from the previous edition of the *Fiscal Monitor* because of new baseline pension numbers, new authorities' projections, or updated demographic data from the UN World Population Prospects.

[2] For net present value calculations, a discount rate of 1 percent a year in excess of GDP growth is used for each economy.

[3a] IMF staff projections for health care spending are driven by demographics 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 (0.6 percent).

[3b] These health expenditure projections have been updated to include new available underlying health and economic data, as well as technical adjustments to the excess cost growth calculation and the age-expenditure profiles. The projections exclude health expenditure growth during the COVID-19 pandemic in the underlying trend expenditure growth estimate.

[4] "Gross financing need" is defined as the projected overall deficit and maturing government debt in 2023. For most economies, data on maturing debt refer to central government securities. Data are from Bloomberg Finance L.P. and IMF staff projections.

[5] For most economies, the average-term-to-maturity data refer to central government securities; the source is Bloomberg Finance L.P.

[6] Nonresident holding of general government debt data are for the first quarter of 2023 or latest available from the Joint External Debt Hub, Quarterly External Debt Statistics, which include marketable and nonmarketable debt. For some economies, tradable instruments in the Joint External Debt Hub are reported at market value. External debt in US dollars is converted to local currency, then taken as a percentage of the 2022 gross general government debt.

[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.

[8] In the case of all EU members, including Slovakia, pension spending projections reflect the estimates published in the latest available Aging Report. Reforms and changes in methodology or assumptions between Aging Report vintages are not incorporated into the *Fiscal Monitor* annexes.

Table A24. Emerging Market and Middle-Income Economies: Structural Fiscal Indicators

(Percent of GDP, except when indicated otherwise)

	Pension Spending Change, 2022–30[1]	Net Present Value of Pension Spending Change, 2022–50[2]	Health Care Spending Change, 2022–30[3a,3b]	Net Present Value of Health Care Spending Change, 2022–50[2]	Gross Financing Need, 2023[4]	Average Term to Maturity, 2023 (years)[5]	Debt to Average Maturity, 2023	Projected Interest Rate–Growth Differential, 2023–28 (percent)	Pre-Pandemic Overall Balance, 2012–19	Projected Overall Balance, 2023–28	Nonresident Holding of General Government Debt, 2022 (percent of total)[6]
Average	1.4	73.1	0.6	29.2	12.6	7.5	10.0	–3.0	–3.2	–5.2	12.0
G20 Emerging	1.5	76.1	0.6	29.4	12.4	7.7	9.9	–2.8	–3.4	–5.7	8.3
Algeria	3.0	142.2	0.6	29.4	. . .	7.6	6.8	–3.4	–8.4	–8.0	1.0
Angola	0.1	2.3	0.1	5.9	. . .	5.9	10.8	–2.1	–1.6	–2.4	. . .
Argentina	0.7	46.2	1.0	46.5	15.7	8.7	8.8	. . .	–5.0	. . .	28.6
Belarus	2.7	96.6	0.7	32.0	. . .	. . .	. . .	–3.2	–0.3	0.0	64.7
Brazil[7]	0.2	30.4	0.9	41.1	20.8	5.2	16.9	2.9	–6.4	–6.4	9.7
Bulgaria	0.0	5.4	0.9	41.5	. . .	7.4	2.8	–1.5	–0.9	–2.7	41.9
Chile	1.0	44.1	1.2	55.5	3.8	10.0	3.7	–2.7	–1.6	–0.6	32.7
China	1.8	95.0	0.7	31.1	. . .	7.3	11.3	–3.7	–2.7	–6.3	3.3
Colombia	2.0	91.4	1.7	79.9	5.5	10.6	5.8	0.1	–2.4	–2.6	32.2
Croatia	0.4	1.1	1.1	48.2	9.1	5.7	11.5	–2.7	–2.5	–1.4	36.3
Dominican Republic	0.1	2.5	0.6	27.3	5.2	9.2	6.3	–2.7	–2.9	–2.6	55.0
Ecuador	0.7	35.4	0.9	41.6	. . .	12.4	4.4	. . .	–6.1	. . .	70.3
Egypt	1.1	56.7	0.2	9.0	35.2	3.2	29.0	–3.6	–10.1	–7.1	. . .
Hungary	–0.1	21.7	1.0	42.7	13.9	6.5	11.3	–2.6	–2.3	–2.5	26.2
India	0.7	33.3	0.2	8.9	13.1	9.8	8.5	–3.2	–7.0	–8.0	4.4
Indonesia	0.1	6.7	0.3	14.9	4.4	8.8	4.5	–1.8	–2.2	–2.3	34.6
Iran	1.2	86.5	0.5	23.2	. . .	. . .	. . .	–12.9	–1.7	–6.6	. . .
Kazakhstan	1.2	33.0	0.3	14.2	. . .	6.3	4.1	–2.1	–0.1	–1.3	24.4
Kuwait	8.5	629.0	1.3	60.7	10.5	1.7	1.8	6.6	13.1	1.6	. . .
Lebanon	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	–8.8	. . .	. . .
Malaysia	1.4	66.3	0.4	16.7	. . .	8.6	7.8	–2.3	–2.7	–4.5	21.2
Mexico	0.8	44.7	0.6	28.1	12.5	8.5	6.6	2.8	–3.0	–2.9	23.6
Morocco	1.3	54.6	0.4	19.3	13.7	6.4	10.6	–2.2	–4.4	–3.7	21.8
Oman	0.2	16.4	0.6	33.1	8.6	7.4	5.8	5.5	–6.2	0.5	. . .
Pakistan	0.2	6.3	0.1	5.3	26.8	2.7	26.8	–5.8	–5.8	–6.6	29.5
Peru	. . .	. . .	0.7	33.4	3.8	14.2	2.3	–1.7	–1.0	–1.0	49.4
Philippines	0.2	7.3	0.3	13.1	11.9	6.2	9.1	–5.1	–0.4	–3.1	24.4
Poland	–0.1	–5.5	0.8	33.8	7.3	4.5	11.3	–3.6	–2.4	–4.0	24.8
Qatar	0.3	24.3	0.5	23.8	8.6	9.2	4.9	0.2	9.0	11.9	8.6
Romania	2.3	74.1	. . .	. . .	12.2	7.3	6.6	–4.3	–2.6	–4.8	36.7
Russia	2.2	72.4	1.0	46.1	7.1	6.8	3.6	–0.4	–0.7	–2.0	. . .
Saudi Arabia	2.8	161.2	0.8	36.2	11.6	10.2	2.3	2.2	–4.2	–0.6	34.2
South Africa	0.2	11.7	0.7	34.7	14.9	11.8	6.1	2.5	–4.1	–6.3	24.9
Sri Lanka	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	–5.7	. . .	27.6
Thailand	3.3	113.7	0.6	26.3	10.3	7.7	7.9	–1.4	–0.2	–3.3	8.8
Türkiye[8]	0.7	46.9	. . .	. . .	. . .	5.5	. . .	. . .	. . .	. . .	. . .
Ukraine	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	–3.0	. . .	. . .
United Arab Emirates	0.4	42.8	0.5	25.4	. . .	4.4	6.9	–1.8	1.9	2.9	. . .
Uruguay[9]	0.6	40.5	1.2	55.3	5.5	12.9	4.8	–3.6	–2.3	–2.2	43.5
Venezuela	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	–12.5	–5.1	. . .

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 on the basis of data availability.

[1] Pension projections rely on authorities' estimates when these are available. When authorities' estimates are not available, IMF staff projections use the method described in Clements, Eich, and Gupta, *Equitable and Sustainable Pensions: Challenges and Experience* (IMF 2014). These pension spending projections may be different from the previous edition of the *Fiscal Monitor* because of new baseline pension numbers, new authorities' projections, or updated demographic data from the UN World Population Prospects.

[2] For net present value calculations, a discount rate of 1 percent a year in excess of GDP growth is used for each economy.

[3a] IMF staff projections for health care spending are driven by demographics 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 be the income group historical average (1.2 percent).

[3b] These health expenditure projections have been updated to include new available underlying health and economic data, as well as technical adjustments to the excess cost growth calculation and the age-expenditure profiles. The projections exclude health expenditure growth during the COVID-19 pandemic in the underlying trend expenditure growth estimate.

[4] "Gross financing need" is defined as the projected overall balance and maturing government debt in 2023. Data are from IMF staff projections.

[5] Average-term-to-maturity data refer to government securities; the source is Bloomberg Finance L.P.

[6] Nonresident holding of general government debt data are the first quarter of 2023 or latest available from the Joint External Debt Hub, Quarterly External Debt Statistics, which include marketable and nonmarketable debt. For some countries, tradable instruments in the Joint External Debt Hub are reported at market value. External debt in US dollars is converted to local currency, then taken as a percentage of 2022 gross general government debt.

[7] 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.

[8] The average-term-to-maturity data for Türkiye is in accordance with the published data for central government debt securities as of July 2022.

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

Table A25. Low-Income Developing Countries: Structural Fiscal Indicators

(Percent of GDP, except when indicated otherwise)

	Pension Spending Change, 2022–30[1]	Net Present Value of Pension Spending Change, 2022–50[2]	Health Care Spending Change, 2022–30[3a,3b]	Net Present Value of Health Care Spending Change, 2022–50[2]	Average Term to Maturity, 2023 (years)[4]	Debt to Average Maturity, 2023	Projected Interest Rate–Growth Differential, 2023–28 (percent)	Pre-Pandemic Overall Balance, 2012–19	Projected Overall Balance, 2023–28	Nonresident Holding of General Government Debt, 2022 (percent of total)[5]
Average	0.5	19.8	0.2	8.1	7.5	9.7	–7.7	–3.3	–3.9	45.7
Afghanistan	0.1	6.6	0.1	6.6	. . .	. . .	. . .	–0.4	. . .	. . .
Bangladesh	0.2	12.5	0.1	3.0	5.2	8.0	–6.6	–3.5	–5.1	31.4
Benin	0.0	1.2	0.1	4.5	8.1	6.5	–4.3	–2.6	–3.1	. . .
Burkina Faso	0.0	2.2	0.4	16.4	3.3	17.3	–3.4	–3.5	–5.1	43.6
Cambodia	0.4	14.1	0.3	12.3	. . .	. . .	–7.2	–0.9	–3.4	90.8
Cameroon	0.0	3.2	0.1	3.3	4.9	8.8	–4.5	–3.7	–0.8	64.4
Chad	0.0	0.7	0.1	4.7	. . .	. . .	–2.7	–1.3	5.3	. . .
Congo, Democratic Republic of the	. . .	. . .	0.1	3.3	. . .	. . .	–3.4	0.2	–2.9	. . .
Congo, Republic of	0.2	8.9	0.2	10.6	. . .	. . .	–2.1	–4.4	4.5	. . .
Côte d'Ivoire	0.1	6.8	0.1	6.2	. . .	. . .	–3.8	–2.4	–3.5	. . .
Ethiopia	0.0	1.8	0.1	5.8	. . .	. . .	–18.2	–2.3	–3.1	. . .
Ghana	0.2	8.1	0.3	13.3	7.0	14.0	–8.1	–6.8	–6.6	. . .
Guinea	0.0	0.0	0.1	5.3	. . .	. . .	–8.8	0.8	–2.4	. . .
Haiti	. . .	. . .	0.1	2.6	. . .	. . .	–13.5	–1.8	–2.0	. . .
Honduras	. . .	. . .	. . .	. . .	. . .	. . .	. . .	–1.7	. . .	. . .
Kenya	0.2	12.8	0.3	13.5	8.6	7.7	–2.5	–6.5	–4.2	45.2
Kyrgyz Republic	4.0	114.3	0.3	13.5	. . .	. . .	–6.4	–3.2	–4.3	70.4
Lao P.D.R.	0.1	6.9	0.2	6.9	. . .	. . .	–5.7	–4.2	–3.3	. . .
Madagascar	0.2	10.8	0.2	7.9	. . .	. . .	–9.2	–2.1	–4.0	43.0
Malawi	–0.1	0.4	0.2	11.2	2.7	26.7	–3.4	–3.9	–6.3	43.0
Mali	–0.1	–0.6	0.2	7.6	3.2	17.1	–4.1	–2.7	–3.6	. . .
Moldova	3.0	67.1	0.7	31.7	. . .	. . .	–6.5	–1.4	–3.9	56.0
Mozambique	0.0	4.3	0.3	14.2	3.1	32.7	–10.7	–4.4	–1.9	. . .
Myanmar	0.2	9.6	. . .	. . .	. . .	. . .	–6.7	–2.8	–4.5	. . .
Nepal	0.1	9.7	0.2	10.3	. . .	. . .	–7.7	–1.3	–3.3	. . .
Nicaragua	0.6	38.3	0.7	33.9	1.3	35.1	–5.6	–1.3	–0.3	83.1
Niger	0.0	0.6	0.3	11.6	. . .	. . .	–6.1	–3.8	–3.6	. . .
Nigeria	0.0	0.8	0.1	3.0	9.0	4.3	–5.7	–3.5	–5.7	. . .
Papua New Guinea	0.1	4.5	0.2	10.5	. . .	. . .	–0.3	–4.1	–1.9	40.9
Rwanda	0.0	1.3	0.4	17.4	6.7	10.1	–9.1	–2.8	–4.2	73.0
Senegal	0.0	. . .	0.2	10.7	9.1	8.0	–5.3	–3.7	–3.5	. . .
Sudan	0.0	1.2	0.2	7.0	. . .	. . .	–22.4	–6.3	–2.6	. . .
Tajikistan	0.4	13.4	0.3	12.5	. . .	. . .	–8.1	–2.6	–2.5	87.7
Tanzania	0.0	3.8	0.2	8.4	9.5	4.2	–5.3	–2.6	–2.6	. . .
Uganda	0.1	3.7	0.1	3.8	. . .	. . .	–6.7	–3.1	–2.5	54.5
Uzbekistan	2.3	82.9	0.4	17.1	. . .	. . .	–11.7	1.6	–2.9	63.0
Vietnam	1.5	64.2	0.3	14.6	9.7	3.7	–7.9	–3.5	–2.7	. . .
Yemen	0.1	8.8	0.1	2.7	. . .	. . .	–14.7	–6.7	–1.2	. . .
Zambia	0.2	10.1	0.3	13.7	3.9	24.3	–3.7	–6.8	–5.2	. . .
Zimbabwe	–0.3	–1.8	0.1	4.4	3.7	27.8	–48.4	–3.5	–2.3	. . .

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 on the basis of data availability.

[1] Pension projections rely on authorities' estimates when these are available. When authorities' estimates are not available, IMF staff projections use the method described in Clements, Eich, and Gupta, *Equitable and Sustainable Pensions: Challenges and Experience* (IMF 2014). These pension spending projections may be different from the previous edition of the *Fiscal Monitor* because of new baseline pension numbers, new authorities' projections, or updated demographic data from the UN World Population Prospects.

[2] For net present value calculations, a discount rate of 1 percent a year in excess of GDP growth is used for each economy.

[3a] IMF staff projections for health care spending are driven by demographics 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 be the income group historical average (1.2 percent).

[3b] These health expenditure projections have been updated to include new available underlying health and economic data, as well as technical adjustments to the excess cost growth calculation and the age-expenditure profiles. The projections exclude health expenditure growth during the COVID-19 pandemic in the underlying trend expenditure growth estimate.

[4] The 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 for the first quarter of 2023 or latest available from the Joint External Debt Hub, Quarterly External Debt Statistics, which include marketable and nonmarketable debt. For some countries, tradable instruments in the Joint External Debt Hub are reported at market value. External debt in US dollars is converted to local currency, then taken as a percentage of 2022 gross general government debt.

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IMF EXECUTIVE BOARD DISCUSSION OF THE OUTLOOK, MARCH 2023

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 March 30, 2023.*

Executive Directors broadly agreed with staff's assessment of the global economic outlook, risks, and policy priorities. They considered that the persistence of high inflation in many countries and recent financial sector stresses increase the challenges to global economic prospects and leave policymakers with a narrow path to restore price stability, while avoiding a recession and maintaining broad financial stability. In addition, Directors generally concurred that many of the forces that shaped the world economy in 2022—including Russia's war in Ukraine and geopolitical tensions, high debt levels constraining fiscal responses, and tighter global financial conditions—appear likely to continue into this year. In this context, they expressed concern that the medium-term growth projections for the global economy remain the lowest in decades.

Directors agreed that risks to the outlook have increased and are tilted to the downside. They noted that core inflation could turn out more persistent than anticipated, which would call for even tighter monetary policies. They also emphasized that recent stresses in the banking sector could amplify with contagion effects, pockets of sovereign debt distress could become more widespread as a result of wider exchange rate movements and higher borrowing costs, and the war in Ukraine and geopolitical conflicts could intensify and lead to more food and energy price spikes as well as further geoeconomic fragmentation.

Directors reiterated their strong call for multilateral cooperation to help defuse geopolitical tensions and respond to the challenges of an interconnected world. They emphasized the criticality of multilateral actions to safeguard the functioning of global financial markets, manage debt distress, foster global trade and reinforce the multilateral trading system, ensure food and energy security, advance with the green and digital transitions, and improve resilience to future pandemics. Most Directors also agreed that fragmentation into geopolitical blocs could generate large output losses, including through effects on foreign direct investment, and especially affecting emerging market and developing economies; a few Directors emphasized the need to build resilience and diversification in supply chains. Noting that many countries are contending with tighter financial conditions, high debt levels, and pressures to protect the most vulnerable segments from high inflation, Directors stressed the need for multilateral institutions to stand ready to provide timely support to safeguard essential spending and ensure that any crises remain contained. They also stressed the importance of improving debt transparency and of better mechanisms to produce orderly debt restructurings—including a more effective Common Framework—in cases where insolvency issues prevail. In this context, Directors encouraged the newly established Global Sovereign Debt Roundtable to become an effective venue for solving coordination impediments in debt restructuring operations.

Directors agreed that policy responses—monetary, fiscal, and financial—differ across countries, reflecting their own circumstances and exposures. For most economies, they generally considered that policy tightening is necessary to durably reduce inflation, while standing ready to take appropriate actions to mitigate financial sector risks as needed. Directors also emphasized that structural reforms remain essential to improve productivity, expand economic capacity, and ease supply-side constraints. They acknowledged that many emerging market and developing economies face tougher policy choices, as rising costs of market financing, higher food and fuel prices, and the need to support the recovery and vulnerable populations can pull in different directions, necessitating a difficult balancing act.

Directors agreed that central banks should maintain a sufficiently tight, data-dependent monetary

policy stance to durably reduce inflation and avoid a de-anchoring of inflation expectations. At the same time, they called on policymakers to stand ready to take strong actions to restore financial stability and reinvigorate confidence as developments demand. With respect to the future path of monetary policy, Directors stressed that clear communication about policy reaction functions and objectives and the need to further normalize policy would help avoid unwarranted market volatility.

Directors stressed that fiscal and monetary policies need to be closely aligned to help deliver price and financial stability. They emphasized that tighter fiscal policy is needed to help contain inflationary pressures, making it possible for central banks to increase interest rates by less than otherwise, help contain governments' borrowing costs, and ease potential tradeoffs between price and financial stability. At the same time, Directors agreed that fiscal restraint should be accompanied by temporary and carefully targeted measures to protect the most vulnerable segments. Given the heightened uncertainty, they generally concurred that fiscal policy should remain flexible to respond if risks materialized. To tackle the elevated debt vulnerabilities and rebuild fiscal buffers to cope with future crises, Directors called for credible medium-term fiscal frameworks, while also cautioning against relying on high inflation for public debt reduction. In low-income developing countries, they stressed the need for further efforts to increase tax capacity, given the importance of addressing heightened debt vulnerabilities, protecting the poorest, and advancing the Sustainable Development Goals.

Directors commended the decisive responses by policymakers to stem recent financial instability. They noted that the recent stress in the banking sector has highlighted failures in internal risk-management practices with respect to interest rate and liquidity risks in some banks, as well as supervisory lapses. Against this backdrop, Directors stressed the importance of closely monitoring financial sector developments, including in nonbank financial intermediaries (NBFIs); improving banking regulation, supervision, and resolution frameworks; and a swift and appropriate use of available policies, including macroprudential policies, if further vulnerabilities materialize, while mitigating moral hazard. Directors noted that NBFIs play an important role in financial markets and are increasingly interconnected with banks and other financial institutions. In this context, many Directors considered that the provision of central bank liquidity to NBFIs could lead to unintended consequences. In the event that liquidity provision to NBFIs should be needed to address systemic risks threatening the health of the financial system, Directors emphasized that appropriate guardrails, including robust regulation and supervision, should be in place and that progress in closing regulatory data gaps in this sector remains vital.

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