

Introduction

Inflation has fallen, financing conditions have improved, and risks of major disruptions in the global economy have so far been averted. However, the distribution of debts, deficits, and public finance risks and vulnerabilities has changed little. While monetary policy remained restrictive in more than 85 percent of the world's economies in 2023, only half of them tightened fiscal policy, down from about 70 percent in 2022 (Figure 1.1, panel 1). Revenue windfalls from inflation surprises dwindled (Figure 1.1, panel 2),¹ and spending remained high as a result of legacies of fiscal measures to address the pandemic crisis and the introduction of new fiscal support measures in many economies. As a consequence, momentum toward fiscal policy normalization that would bring fiscal balances back to prepandemic levels faltered. Decisive fiscal consolidation efforts are needed to safeguard sustainable public finances and rebuild fiscal buffers in a context of elevated public debt, slowing medium-term growth prospects, and still-high interest rates. Fiscal adjustment will also support the “last mile” of disinflation, especially in overheated economies.

After sharp declines in 2021–22, global public debt edged up again in 2023 and remained above prepandemic levels by 9 percentage points of GDP (Gaspar, Poplawski-Ribeiro, and Yoo 2023). The share of low-income countries and emerging markets in or at high risk of debt distress remained elevated.² Revenues in advanced economies (excluding the *United States*) and emerging market economies (excluding *China*) exceeded prepandemic projections by about 1.4 percentage points of GDP, as past inflation provided a boost through bracket creep effects

(Figure 1.2, panel 1).³ However, primary spending remained more than 3 percentage points of GDP above prepandemic projections in advanced economies excluding the *United States* and over 2 percentage points of GDP in emerging market economies excluding *China*. Increased social spending was the main driver of higher spending in emerging market and developing economies.⁴ In advanced economies, higher spending reflected a slow unwinding of pandemic crisis subsidies and transfers (Figure 1.2, panel 2), alongside new industrial policy measures, subsidies, and tax incentives (*Japan*, *United States*). Higher nominal interest rates pushed up net interest outlays in most economies.

Risks to public finances remain high. Fiscal tightening is projected for 2024, but it is subject to considerable uncertainty. Long-term government bond yields in the *United States* remain elevated and sensitive to inflation developments and monetary policy decisions. This could lead to volatile financing conditions in other economies (Figure 1.3). In addition, weaker-than-expected economic activity in *China* could weigh on global growth and trade, creating fiscal challenges, especially for countries with close economic relationships with *China* through trade and investment channels.

The most acute risk to public finances arises from the record number of elections being held in 2024, which has led to it being dubbed the “Great Election Year.” Election years are often associated with fiscal slippage, and this risk is further amplified by the current context of increased demand for social spending. Finally, an intensification of geopolitical factors and natural disasters could add pressures to extend fiscal support.

Over the medium term, global public debt is projected to remain on an upward trend, driven by the world's two largest economies, *China* and the *United States*,

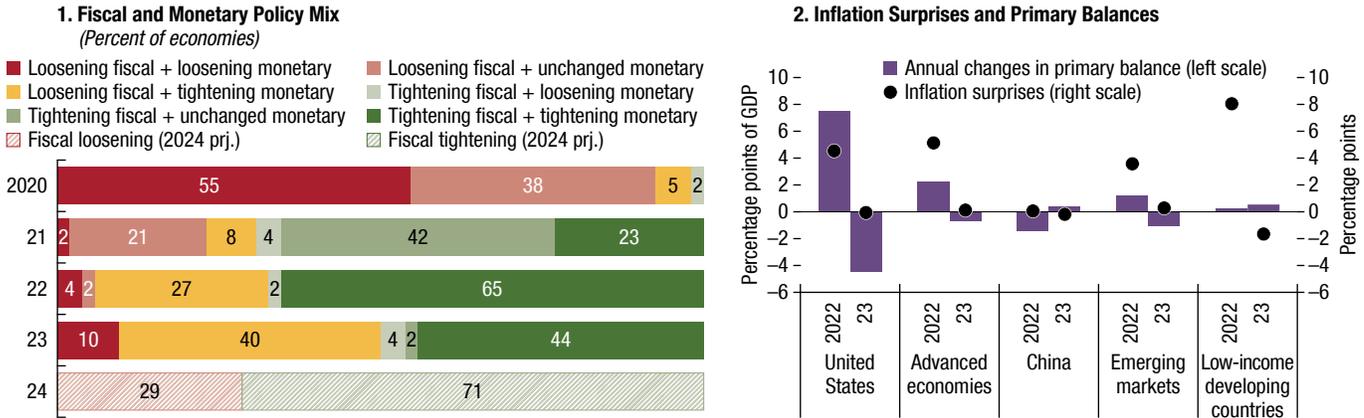
¹Inflation surprises refer to the component of actual inflation that was not expected by forecasters, who are proxied here by IMF forecasts. For public finances, it is critical to distinguish between the expected and unexpected components of high inflation, for the reasons discussed in Chapter 2 of the April 2023 *Fiscal Monitor*.

²Since 2020, *Argentina*, *Belize*, *Ecuador*, *Ethiopia*, *Ghana*, *Lebanon*, *Russia*, *Sri Lanka*, *Suriname*, *Ukraine*, and *Zambia* have defaulted.

³Bracket creep effects refer to situations in which inflation pushes taxpayers into higher income tax brackets or subjects them to higher tax rates over time, even though their real incomes have not increased (Beer, Griffiths, and Klemm 2023).

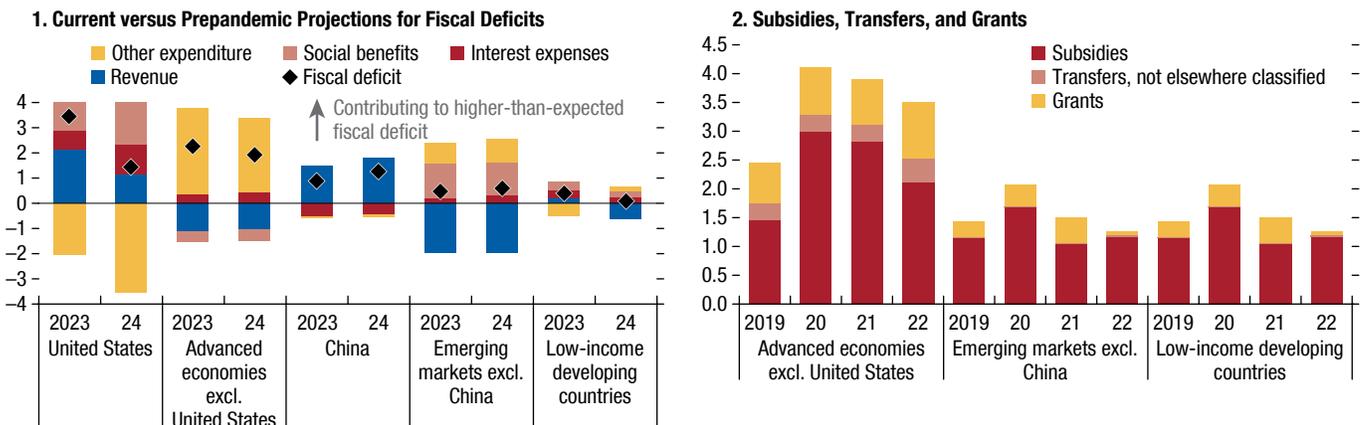
⁴Online Annex 1.1 further reports comparisons of current fiscal estimations for 2023 and projections for 2024 with respect to prepandemic projections, stratifying countries by initial levels of public debt and tax effort.

Figure 1.1. Inflation Surprises and the Fiscal and Monetary Policy Mix



Sources: Bank for International Settlements 2023; IMF, World Economic Outlook (WEO) database; and IMF staff calculations.
 Note: In panel 1, fiscal policy is tightening (loosening) if the annual change in the cyclically adjusted primary balance is positive (negative or zero). Monetary policy is tightening (loosening) if the annual change in the central bank policy rate is positive (negative or zero). The sample comprises 34 advanced economies and 20 emerging market economies. Panel 2 defines inflation surprises as differences between inflation forecasts from the April WEO of the following year and the October WEO of the previous year. The sample comprises 40 advanced economies, 89 emerging market economies, and 57 low-income developing countries. prj. = projected.

Figure 1.2. Postpandemic Fiscal Policy Legacies (Percentage points of GDP)



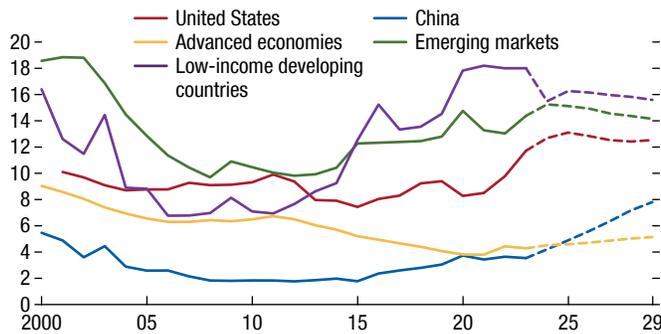
Sources: IMF, Government Finance Statistics database; IMF, World Economic Outlook (WEO) database; and IMF staff calculations.
 Note: In panel 1, for *China*, social benefit spending is not separately reported in the WEO. Current projections refer to the April 2024 WEO; prepandemic projections are from the October 2019 WEO. In panel 2, “Transfers” refers to fiscal allocations that are not classified as part of any other category, excluding current transfers to households that are already classified as social benefits. excl. = excluding.

where under current policies, public debt is projected to continue increasing beyond historical highs. In many other economies, gradual fiscal consolidation is projected to stabilize public-debt-to-GDP ratios, albeit at levels higher than those before the pandemic. Cuts in primary spending (by about 2 percentage points of GDP between 2024 and 2029, on average, if *China* and the *United States* are excluded from consideration) are expected to lead the adjustment. Revenues are projected to decline (by 0.8 percentage point of GDP) and interest expenses to rise (by about 0.2 percentage point of GDP). Despite

the planned adjustments, public gross financing needs are expected to remain elevated in many countries, indicating that fiscal policy will remain highly sensitive to financing conditions. Moreover, pressures to address long-standing challenges arising from climate and demographic transitions loom large, even as new mandates from industrial policies and defense spending are rising.

In emerging market and developing economies, achieving the UN Sustainable Development Goals will add to public expenses, notably in the context of elevated food insecurity and global poverty. Although

Figure 1.3. Interest Payments
(Percent of revenues)



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

artificial intelligence could boost productivity and help improve revenue capacity in the coming years, its net fiscal impact is uncertain, as managing adverse effects on labor markets and levels of inequality will require fiscal support (Brollo and others 2024).

Many countries need larger fiscal adjustments than those currently envisaged to safeguard fiscal sustainability and rebuild buffers while protecting their most vulnerable populations. Delaying the consolidation could increase vulnerabilities and limit fiscal space to deal with future crises, potentially leading to a more painful fiscal adjustment and adverse financial consequences. Fiscal restraint in the near term could also support the disinflation process as inflation continues its final descent to target (April 2024 *World Economic Outlook*). Governments should immediately phase out legacies of pandemic-era fiscal policy, including measures to offset high energy prices, and pursue further reforms to curb rising spending. It is also imperative that spending increases be paired with corresponding rises in revenue over time. Accomplishing this will require enhancing the design of tax systems and bolstering institutional capacity. Given declining medium-term growth prospects, fiscal policy should encourage innovation, including in green sectors, and facilitate the adoption of technology to support higher productivity growth (Chapter 2). Careful design and targeting of fiscal incentives across firms and along the innovation life cycle are crucial to minimize fiscal costs and avoid misallocation.

Recent Fiscal Developments and Outlook

Following improvements in 2021–22, global fiscal deficits increased by 1.6 percentage points to 5.5 percent of GDP on average in 2023 (Table 1.1), and global public debt inched up by

about 2 percentage points to 93.2 percent of GDP (Table 1.2). With expenditures remaining virtually unchanged compared with 2022, a fall in revenues was the main driver of the uptick in fiscal deficits, as windfall revenues from inflation waned. Oil producers and commodity exporters reported much lower fiscal surpluses (0.5 percent of GDP) than in 2022, with a significant decline in revenues (about 3 percentage points of GDP, on average) as global commodity prices declined from their levels in 2022.

Fiscal tightening is projected to resume in 2024, albeit gradually, bringing the global deficit down to 4.9 percent of GDP. Moreover, fiscal consolidation over the medium term is expected to remain modest, with the overall deficit projected to stabilize at 4.3 percent of GDP by 2029, about 0.7 percentage point higher than in 2019. In many economies, the projected adjustment will help stabilize debt over the medium term. Nevertheless, global debt is projected to increase to close to 100 percent of GDP by 2029. The increase will be led by some large economies (for example, *China*, *Italy*, the *United Kingdom*, and the *United States*), which critically need to take policy action to address fundamental imbalances between spending and revenues.

The Two Largest Economies: Driving Global Trends

China and the *United States* critically shape global fiscal developments and outlooks. In both economies, public debt is projected under current policies to nearly double by 2053 (Figure 1.4). How these two economies manage their fiscal policies could therefore have profound effects on the global economy and pose significant risks for baseline fiscal projections in other economies.

United States

In 2023, the *United States* experienced remarkably large fiscal slippages, with the general government fiscal deficit rising to 8.8 percent of GDP from 4.1 percent of GDP in 2022, despite strong growth. Income tax revenues fell sharply, by 3.1 percentage points of GDP, owing to lower capital gains taxes in 2023 and delayed tax payment deadlines. Spending, in turn, increased by 1.3 percentage point of GDP.⁵

⁵Primary spending rose by 0.9 percentage point of GDP, with that rise reflecting, among others, the increase in mandatory spending (0.3 percentage point on Social Security and other health care programs), the new income-driven student debt repayment program (0.3 percentage point), increases in Federal Deposit Insurance Corporation outlays (0.2 percentage point), and a decline in income security program outlays (0.6 percentage point).

Table 1.1. General Government Fiscal Balance, 2019–29: Overall Balance
(Percent of GDP, unless noted otherwise)

	2019	2020	2021	2022	2023	Projections					
						2024	2025	2026	2027	2028	2029
World	-3.6	-9.5	-6.3	-3.9	-5.5	-4.9	-4.7	-4.5	-4.4	-4.4	-4.3
Advanced Economies	-3.0	-10.2	-7.2	-3.1	-5.6	-4.4	-4.2	-3.9	-3.8	-3.8	-3.6
Advanced Economies excl. US	-1.1	-7.6	-4.4	-2.4	-3.0	-2.7	-2.0	-1.8	-1.7	-1.7	-1.7
Canada	0.0	-10.9	-2.9	0.1	-0.6	-1.1	-0.9	-0.7	-0.7	-0.6	-0.4
Euro Area	-0.6	-7.0	-5.2	-3.7	-3.5	-2.9	-2.6	-2.5	-2.4	-2.3	-2.3
France	-3.1	-9.0	-6.5	-4.8	-5.5	-4.9	-4.9	-4.4	-4.3	-4.1	-3.9
Germany	1.5	-4.3	-3.6	-2.5	-2.1	-1.5	-1.3	-0.9	-0.7	-0.5	-0.5
Italy	-1.5	-9.4	-8.7	-8.6	-7.2	-4.6	-3.2	-3.0	-2.9	-3.0	-3.0
Spain ¹	-3.1	-10.1	-6.7	-4.7	-3.6	-3.1	-3.0	-3.2	-3.3	-3.0	-3.0
Japan	-3.0	-9.1	-6.1	-4.4	-5.8	-6.5	-3.2	-2.9	-3.1	-3.4	-3.8
United Kingdom	-2.5	-13.1	-7.9	-4.7	-6.0	-4.6	-3.7	-3.7	-3.6	-3.5	-3.4
United States ²	-5.8	-13.9	-11.1	-4.1	-8.8	-6.5	-7.1	-6.6	-6.2	-6.4	-6.0
Other Advanced Economies	-0.1	-4.8	-1.1	0.8	-0.1	0.0	0.2	0.4	0.5	0.6	0.5
Emerging Market and Developing Economies	-4.4	-8.5	-5.0	-4.9	-5.4	-5.5	-5.3	-5.2	-5.1	-5.1	-5.0
Emerging Market and Middle-Income Economies	-4.4	-8.7	-5.0	-4.9	-5.5	-5.6	-5.4	-5.3	-5.2	-5.2	-5.2
Emerging Markets excl. China	-3.2	-7.8	-4.0	-2.8	-4.2	-4.3	-3.7	-3.4	-3.3	-3.2	-3.1
Excluding MENA Oil Producers	-4.6	-8.8	-5.3	-5.7	-6.0	-6.1	-5.8	-5.7	-5.6	-5.6	-5.5
Asia	-5.7	-9.6	-6.3	-7.2	-6.7	-6.9	-7.0	-7.1	-7.0	-6.9	-6.9
China ³	-6.1	-9.7	-6.0	-7.5	-7.1	-7.4	-7.6	-7.8	-7.8	-7.8	-7.9
India	-7.7	-12.9	-8.6	-9.2	-8.6	-7.8	-7.6	-7.3	-7.0	-6.8	-6.6
Vietnam	-0.4	-2.9	-1.4	0.3	-1.6	-2.4	-2.4	-2.5	-2.5	-2.5	-2.5
Europe	-0.6	-5.4	-1.7	-2.4	-4.3	-4.0	-3.1	-2.6	-2.4	-2.4	-2.2
Russia	1.9	-4.0	0.8	-1.4	-2.3	-1.9	-1.2	-0.5	-0.2	-0.2	0.2
Latin America	-3.8	-8.3	-3.8	-3.3	-5.1	-4.7	-3.4	-3.1	-2.8	-2.6	-2.5
Brazil	-5.0	-11.9	-2.5	-3.1	-7.9	-6.3	-5.5	-5.2	-5.0	-4.6	-4.4
Mexico	-2.3	-4.3	-3.8	-4.3	-4.3	-5.9	-3.0	-2.7	-2.7	-2.7	-2.7
MENA	-2.3	-8.3	-1.9	3.8	0.6	-1.5	-1.1	-1.1	-1.3	-1.3	-1.3
Saudi Arabia	-4.2	-10.7	-2.2	2.5	-2.0	-2.8	-1.6	-2.0	-2.5	-2.5	-2.5
South Africa	-4.7	-9.6	-5.5	-4.3	-6.0	-6.1	-6.3	-5.6	-5.4	-5.6	-5.8
Low-Income Developing Countries	-4.0	-5.3	-4.6	-4.5	-4.0	-3.6	-3.4	-3.3	-3.2	-3.2	-3.2
Kenya	-7.4	-8.1	-7.2	-6.1	-5.3	-4.0	-3.2	-3.0	-3.1	-3.2	-3.5
Nigeria	-4.7	-5.6	-5.5	-5.4	-4.2	-4.6	-4.2	-3.6	-3.9	-4.3	-4.2
Oil Producers	0.0	-7.4	-0.6	3.0	0.4	-0.2	0.0	0.1	0.0	-0.1	-0.1
Memorandum											
World Output (percent)	2.8	-2.7	6.5	3.5	3.2	3.2	3.2	3.2	3.1	3.1	3.1

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. For many economies, 2023 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. excl. = excluding; MENA = Middle East and North Africa.

¹Including financial sector support.

²For 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 the IMF staff estimates in *China* Article IV reports (see IMF 2024 for a reconciliation of the two estimates).

The overall fiscal deficit is projected to persist at more than 6 percent of GDP over the medium term.

Financing costs have increased substantially in recent years. Nominal yields on 10-year US Treasury bonds surged from below 1 percent in 2020 to 5 percent in October 2023, the highest level in 16 years, before receding to about 4 percent more recently (Figure 1.5) amid a rapid pickup in inflation and inflation

expectations. The ensuing monetary tightening cycle since 2022 has lifted markets' expectations regarding the paths of short-term interest rates and nominal yields of long-term bonds (see Chapter 1 of the October 2023 and the April 2024 *Global Financial Stability Reports*).

By adding to inflationary pressures, fiscal policy may also have affected nominal interest rates (see Chapter 2

Table 1.2. General Government Debt, 2019–29
(Percent of GDP)

	2019	2020	2021	2022	2023	Projections					
						2024	2025	2026	2027	2028	2029
Gross Debt											
World¹	84.2	99.4	94.7	91.3	93.2	93.8	95.1	96.3	97.1	98.1	98.8
Advanced Economies	103.9	122.4	116.2	111.2	111.0	111.2	112.4	113.4	114.0	114.7	115.1
Advanced Economies excl. US	100.9	115.6	110.0	104.2	102.0	101.3	100.9	100.7	100.3	100.2	99.7
Canada ²	90.2	118.2	113.5	107.4	107.1	104.7	102.1	100.2	98.6	97.1	95.4
Euro Area	84.1	97.2	94.7	90.8	88.6	88.7	88.3	88.2	87.9	87.9	87.7
France	97.4	114.7	113.0	111.8	110.6	111.6	112.8	113.4	114.1	114.6	115.2
Germany	59.6	68.8	69.0	66.1	64.3	63.7	62.3	61.0	59.8	58.7	57.7
Italy	134.2	154.9	147.1	140.5	137.3	139.2	140.4	142.6	143.1	144.7	144.9
Spain	98.2	120.3	116.8	111.6	107.5	106.3	104.9	105.0	105.1	104.6	104.2
Japan	236.4	258.3	253.9	257.2	252.4	254.6	252.6	251.3	251.0	251.0	251.7
United Kingdom	85.7	105.8	105.2	100.4	101.1	104.3	106.4	107.3	108.3	109.2	110.1
United States ²	108.1	132.0	125.0	120.0	122.1	123.3	126.6	128.9	130.7	132.6	133.9
Emerging Market and Developing Economies	55.0	64.6	63.9	64.0	68.0	69.4	71.3	73.3	75.0	76.7	78.1
Emerging Market and Middle-Income Economies	55.7	65.5	64.7	64.8	68.9	70.3	72.5	74.6	76.5	78.4	80.1
Emerging Markets excl. China	52.1	61.5	58.4	55.0	57.7	56.7	57.0	57.3	57.5	57.6	57.6
Excluding MENA Oil Producers	57.3	67.0	66.5	67.4	71.7	73.2	75.5	77.7	79.6	81.5	83.3
Asia	59.5	69.7	70.9	74.2	79.0	82.4	85.4	88.2	90.9	93.4	95.7
China ³	60.4	70.1	71.8	77.1	83.6	88.6	93.0	97.5	101.8	106.0	110.1
India	75.0	88.4	83.5	81.7	82.7	82.5	81.8	80.9	79.9	78.8	77.5
Vietnam	40.8	41.1	39.0	34.6	34.0	33.5	32.9	32.6	32.4	32.4	33.0
Europe	28.5	37.0	34.4	31.9	33.9	36.2	37.7	39.1	40.1	41.0	41.8
Russia	13.7	19.2	16.4	18.5	19.7	20.8	21.9	22.8	23.3	23.7	24.0
Latin America	67.6	76.6	70.8	68.3	74.1	68.5	68.4	68.2	67.9	67.6	67.2
Brazil ⁴	87.1	96.0	88.9	83.9	84.7	86.7	89.3	90.9	92.4	93.4	93.9
Mexico	51.9	58.5	56.9	54.2	53.1	55.6	55.4	55.4	55.6	55.8	56.1
MENA Region	43.4	54.6	51.5	43.5	43.1	42.3	41.4	42.0	42.6	43.4	44.0
Saudi Arabia	21.6	31.0	28.6	23.9	26.2	27.5	27.6	28.4	29.5	30.7	31.5
South Africa	56.1	68.9	68.8	71.1	73.9	75.4	77.9	80.0	81.9	83.8	85.7
Low-Income Developing Countries	42.9	49.4	49.2	50.5	53.2	51.8	50.0	49.0	47.3	46.3	45.2
Kenya	59.1	68.0	68.2	68.4	73.3	73.0	70.3	67.5	65.4	63.4	61.7
Nigeria	29.2	34.5	35.7	39.4	46.3	46.6	46.8	46.6	46.5	47.0	46.8
Oil Producers	45.5	59.8	55.1	48.8	50.8	50.1	50.1	50.3	50.4	50.7	50.8
Net Debt⁵											
World¹	68.3	79.7	77.3	73.8	74.7	75.3	76.4	77.1	77.6	78.3	78.7
Advanced Economies	74.9	86.7	84.0	80.9	81.9	82.5	83.8	84.7	85.4	86.2	86.8
Canada ²	8.7	16.1	14.3	15.6	12.8	13.3	13.4	13.3	13.1	13.1	12.9
Euro Area	69.1	79.0	77.6	75.5	74.5	74.9	74.9	75.1	75.1	75.4	75.4
France	88.9	101.2	100.4	101.2	102.4	103.4	104.6	105.2	105.8	106.4	106.9
Germany	40.3	45.7	46.8	47.1	46.4	46.4	45.7	45.0	44.3	43.6	43.0
Italy	121.7	141.5	134.8	129.1	126.6	128.9	130.3	132.8	133.5	135.4	135.8
Spain	83.7	103.1	101.2	97.4	93.3	92.4	91.4	91.5	91.8	91.8	91.8
Japan	151.7	162.0	156.4	150.3	155.9	157.7	155.7	154.1	153.3	152.9	152.9
United Kingdom	75.8	93.1	91.7	90.5	92.5	92.9	94.7	95.5	96.4	97.2	98.0
United States ²	83.2	98.0	97.8	94.7	96.3	97.6	100.7	102.9	104.6	106.5	108.0

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. For many economies, 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. excl. = excluding; MENA = Middle East and North Africa.

¹Gross and net debt averages do not include the debt incurred by the *European Union* and used to finance the grants portion of the NextGenerationEU package. This debt 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 *European Union* and used to onlend to member states is included within member state debt data and regional aggregates.

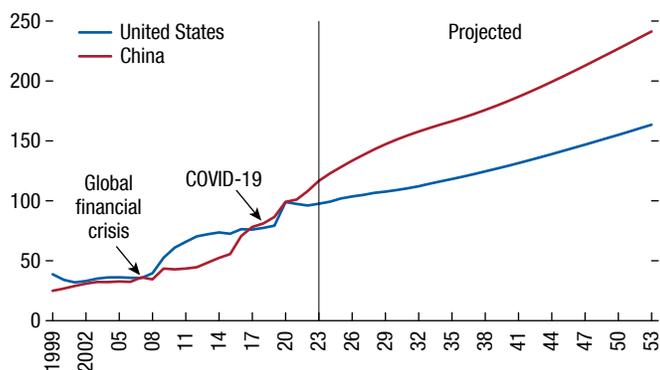
²For cross-economy comparability, gross and net debt levels reported by national statistical agencies for economies that have adopted the 2008 System of National Accounts (*Australia, Canada, Hong Kong SAR, United States*) are adjusted to exclude unfunded pension liabilities of government employees' 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 the IMF staff estimates in *China* Article IV reports (see IMF 2024 for a reconciliation of the two estimates).

⁴Gross debt refers to the nonfinancial public sector, excluding Eletrobras and Petrobras, and includes sovereign debt held on the balance sheet of the central bank.

⁵Net debt refers to gross debt minus financial assets in the form of debt instruments.

Figure 1.4. Evolution of Public Debt in the Two Giants: The United States and China
(Percent of GDP)



Sources: IMF 2024; US Congressional Budget Office 2024; and IMF staff calculations.

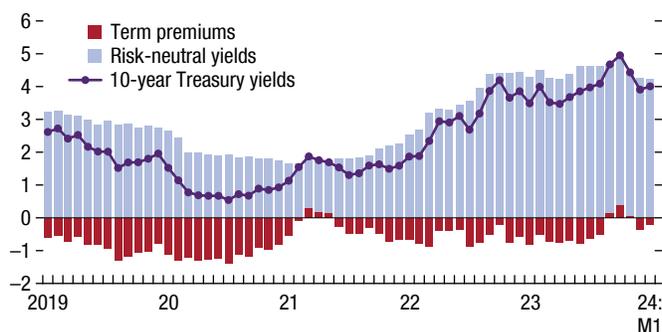
Note: For the *United States*, the figure shows federal debt held by the public under unchanged policies. For *China*, it shows augmented debt, which expands the perimeter of government to include the activity of local government financing vehicles (LGFVs), government guided funds, and special construction funds (see Table 4 and Appendix III in IMF 2024). This is different from debt numbers shown in Table 1.2 which excludes about one-third of local government financing vehicles debts that are categorized as government guaranteed debt or “possible to be recognized debt” as well as debt tied to special construction and government guided funds. The projection for the *United States* assumes unchanged policies over the forecast horizon. The projection for *China* reflects the IMF staff’s baseline scenario.

of the April 2023 *Fiscal Monitor*; see also Bianchi and Melosi 2022). Decomposing the drivers of core inflation empirically to parse the effects of fiscal shocks in the *United States* reveals that contributions from fiscal policy in cumulative terms remained statistically significant in 2023, at about 0.5 percentage point (Figure 1.6).

The rise in nominal term premiums also contributed to the surge in nominal Treasury yields in mid-2023.⁶ This rise reflects several factors, including the perceived risk of sustained inflation and uncertainty about the future path of monetary policy (US Congressional Budget Office 2023). Further, the Treasury’s plans to issue more debt, coinciding with quantitative tightening, likely contributed to heightened volatility in bond markets and a rise in term premiums (see Chapter 1 of the October 2023 and April 2024 *Global Financial Stability Reports*). Empirical evidence suggests that all else being equal, a 1 percentage point increase

⁶Nominal term premiums are the additional nominal returns to the short-term nominal interest rate paid to bondholders for the extra risk associated with holding long-term bonds. The estimation of nominal term premiums uses the methodology based on Adrian, Crump, and Moench (2013).

Figure 1.5. Nominal Yields and Term Premiums for 10-Year US Treasuries
(Percent)

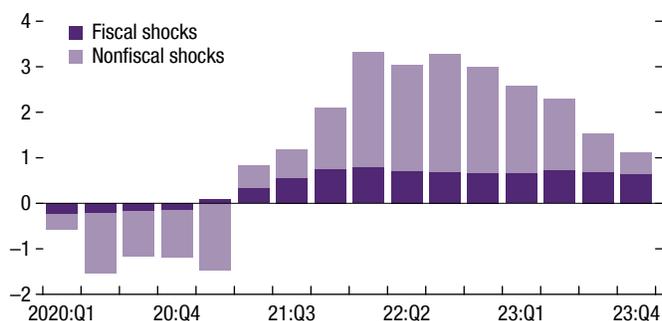


Source: Federal Reserve Bank of New York.
Note: The decomposition into monthly risk-neutral yields and term premiums is based on Adrian, Crump, and Moench (2013).

in the US primary deficit is associated with a rise in term premiums of about 11 basis points in the quarters that follow (Figure 1.7; Online Annex 1.2).

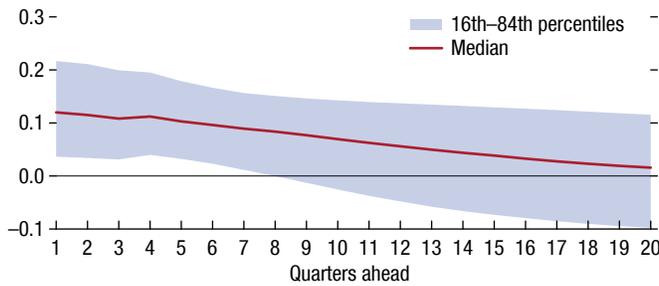
Large and sudden increases in nominal Treasury yields typically lead to surges in government bond yields and exchange rate turbulence in emerging market and developing economies. An empirical analysis to quantify the spillovers of US long-term nominal interest rates to nominal rates in other economies suggests that a 1 percentage point spike in US rates is associated with a rise in long-term nominal interest rates that peaks at 90 basis points in other advanced economies, with a persistent impact over

Figure 1.6. Decomposition of Changes in US Core Inflation
(Percentage points)



Sources: IMF, World Economic Outlook database; and IMF staff calculations.
Note: The model is estimated using a vector autoregression model including real GDP growth, year-over-year core inflation, the short-term interest rate, and the primary fiscal balance in percent of GDP. The fiscal shock is identified via sign restrictions only on the contemporaneous effects (that is, fiscal tightening raises the primary balance and lowers GDP growth or inflation). Nonfiscal factors represent the sum of aggregate demand shocks, aggregate supply shocks, and other factors. See Nguyen, Takizawa, and Vassileva (2023) for more details.

Figure 1.7. Effect of Spikes in the US Primary Deficit on Nominal Term Premiums of Treasuries
(Percent)



Sources: Adrian, Crump, and Moench 2013; Federal Reserve Bank of St. Louis; and IMF staff calculations.
Note: The impulse response shows the impact of a temporary spike in the US primary deficit of 1 percentage point of GDP on US nominal term premiums. It is based on a Bayesian vector autoregression model using shock identification via sign restrictions. See Online Annex 1.2 for more details.

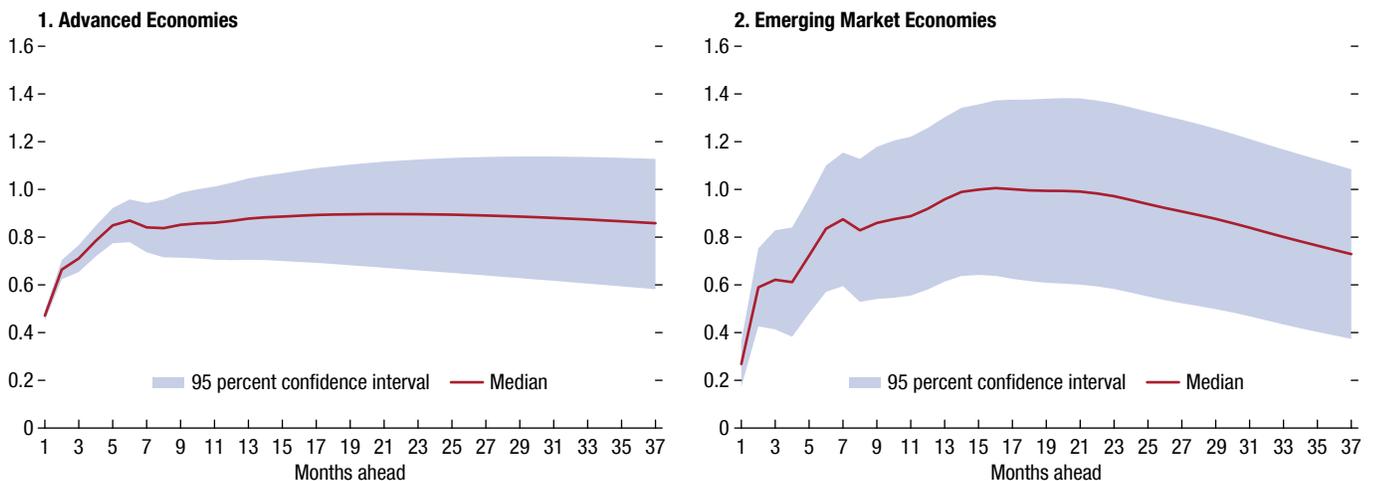
many months (Figure 1.8, panel 1; Online Annex 1.2). For emerging market economies, the same spike in US rates is associated with a peak increase in long-term interest rates of about 100 basis points (Figure 1.8, panel 2). Moreover, it is possible that uncertainty about US fiscal policy and long-term rates could adversely affect financial conditions elsewhere. Box 1.1 uses a novel news-based uncertainty measure to analyze how US fiscal policy uncertainty affects bond spreads in other economies.

In sum, the previous analysis points to risks from loose fiscal policy in the *United States* along several

dimensions. Loose US fiscal policy could make the last mile of disinflation harder to achieve while exacerbating the debt burden. Further, global interest rate spillovers could contribute to tighter financial conditions, increasing risks elsewhere.

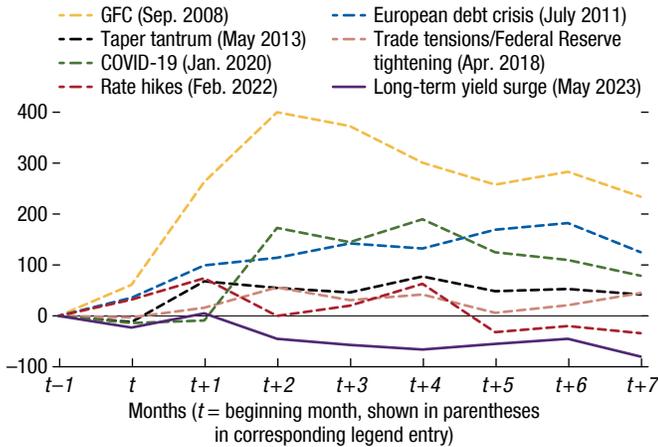
What implications have these developments had on emerging market and developing economies? In 2022–23, sovereign spreads in emerging market and developing economies had a relatively muted response compared with other bond market episodes, albeit with cross-country differences (Figure 1.9). In many emerging market and developing economies, especially those with relatively low risks associated with their levels of debt, sovereign spreads remained stable or even declined (Figure 1.10). Improved policy frameworks and relatively strong fiscal performances and outlooks likely contributed to favorable financing conditions, as countries that investors perceive as adopting sound fiscal policies tend to issue bonds at lower spreads (Laubach 2009; Cimadomo, Claeys, and Poplawski-Ribeiro 2016). Indeed, economies where primary deficits were expected to improve over the medium term experienced more favorable changes in spreads in 2023 (Figure 1.11). Fiscal structural reforms in recent decades to deepen local currency bond markets (for example, *Uruguay*) increased shares of domestic institutional investors, further helping insulate domestic financing conditions from external shocks (October 2023 *Global Financial Stability Report*).

Figure 1.8. Impact of Spillovers of US Long-Term Nominal Interest Rates on Advanced and Emerging Market Economies
(Percentage points)



Sources: Organisation for Economic Co-operation and Development database; and IMF staff calculations.
Note: The impulse response shows, for each country group, the impact on a panel of economies of a temporary spike in the US long-term nominal interest rate of 1 percentage point, based on a panel vector autoregression estimation. See Online Annex 1.2 for more details.

Figure 1.9. Median Changes in Emerging Market Bond Index Spreads, Selected Episodes
(Basis points)

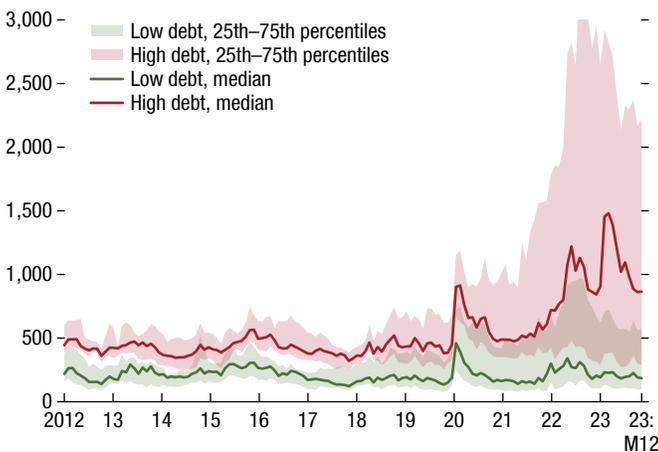


Sources: JPMorgan, Emerging Market Bond Index; and IMF staff calculations. Note: Each line in the figure tracks the changes in the median Emerging Market Bond Index from the value in the beginning month of an episode, shown in parentheses in the corresponding legend entry, over subsequent months. GFC = global financial crisis.

China

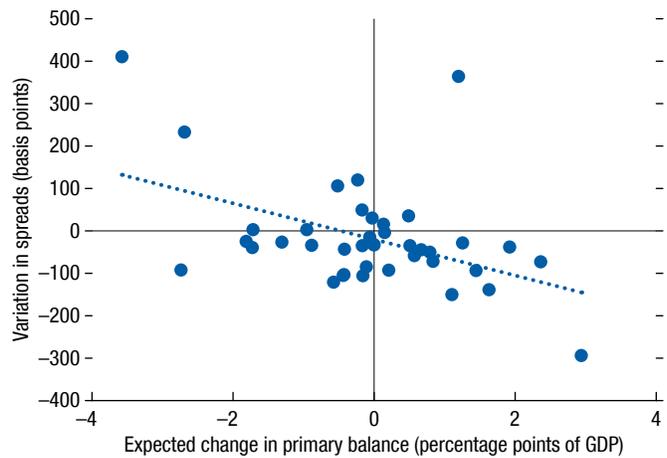
The overall fiscal deficit in *China* remained above 7 percent of GDP in 2023, as a modest increase in revenues offset spending increases. The fiscal deficit is projected to stay elevated and even to gradually rise to about 8 percent of GDP by 2029 as pension spending

Figure 1.10. Monthly Sovereign Spreads in Emerging Market and Developing Economies
(Basis points)



Sources: Haver Analytics; and IMF staff calculations. Note: “Low debt” (“High debt”) refers to countries with public debt levels in the bottom (top) third in the sample. The lines in the panel show the median of the distribution of the spreads, whereas shaded areas correspond to the interquartile range.

Figure 1.11. Changes in Sovereign Spreads and the Fiscal Outlook



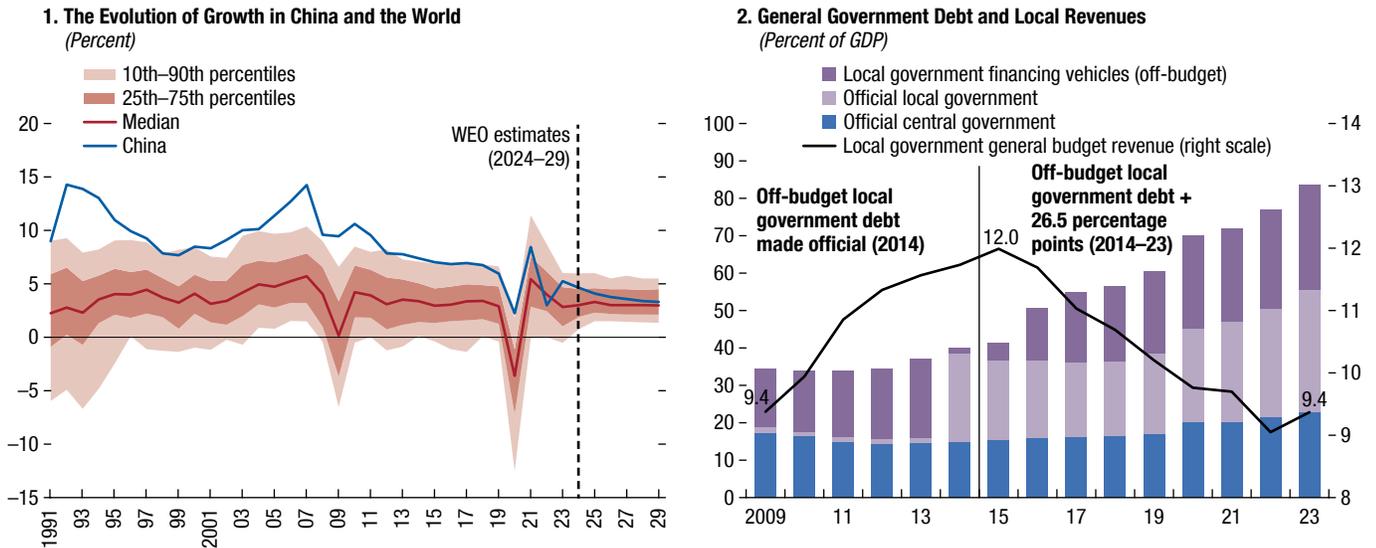
Sources: Haver Analytics; IMF, World Economic Outlook database; and IMF staff calculations. Note: The vertical axis captures the variation in spreads for 40 emerging market economies in 2023. The horizontal axis captures the expected change in the primary balance in percentage points of GDP between 2023 and 2028. The dotted line reports a linear regression of the chart data points.

and interest expenses gradually rise over the medium term. Despite very favorable interest-growth differentials, persistently large primary deficits are projected to continue raising public debt in the country.

China’s growth is expected to decline amid headwinds from a declining labor force and slowing productivity over the medium term (Figure 1.12, panel 1). Further, the ongoing property sector downturn is exerting a significant drag on growth, weighing on financial market and consumer sentiment, and putting strains on local government finances. Land sale revenues and debt financing through local government financing vehicles have been important sources of resources for local governments. Slowing land revenues, adding to pandemic-related fiscal costs, further widened local government primary deficits, which exceeded 10 percent of provincial GDP before central government transfers in many provinces in 2021. As a result of an increase in the amount of debt financed through local government financing vehicles by 16 percentage points of GDP since 2008, funding costs have soared in some fiscally weaker provinces, with increasing concerns about the sustainability of these vehicles (Figure 1.12, panel 2).⁷

⁷*China’s* public debt numbers cover a narrower perimeter of the general government than IMF staff estimates in *China* Article IV reports (see IMF 2024 for a reconciliation of the two estimates).

Figure 1.12. The Evolution of Growth and Fiscal Imbalances in China



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

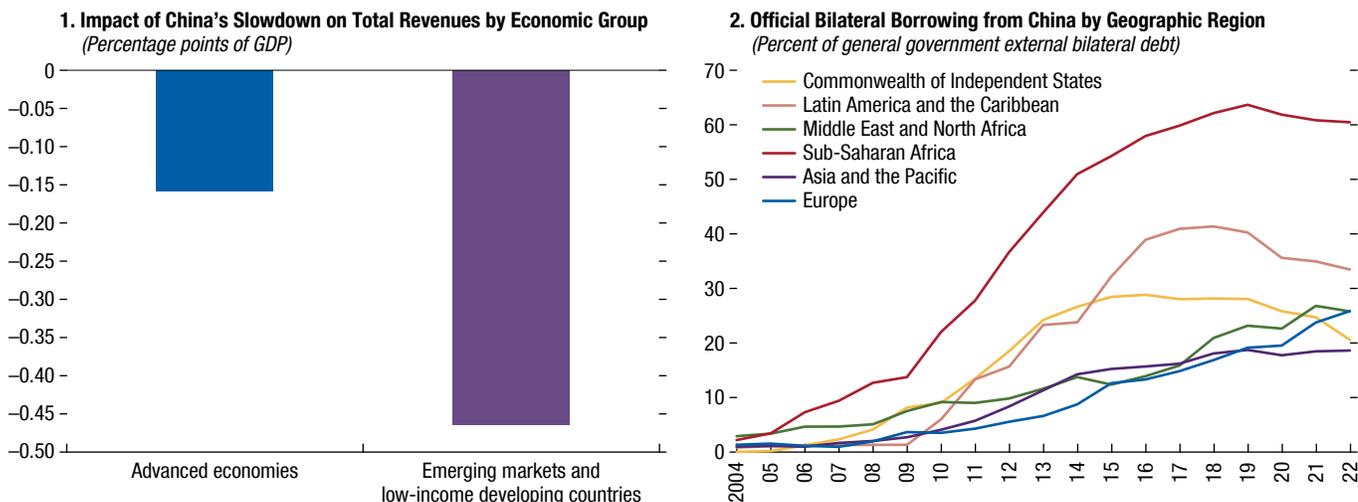
Note: In panel 2, official central government debt includes Ministry of Finance debt only, excluding bonds issued for bank recapitalization and asset management companies. Official local government debt includes local government bonds and explicit debt. Local government financing vehicle (LGFV) debt shows about two-thirds of total interest-bearing debt of LGFVs with listed bonds, which is categorized as the government’s explicit debt according to *China’s* National Audit Office report. The sum of the three components of the bars shown in the figure corresponds to the WEO definition of debt, which covers a narrower perimeter of the general government than the IMF staff’s estimate of “augmented debt” in the Article IV report for *China* (see Table 4 in IMF 2024 for details). The narrower perimeter excludes the remaining third of LGFV debt, which is categorized as government guaranteed debt or “possible to be recognized debt,” as well as debt tied to special construction and government-guided funds.

Economic and fiscal developments in *China* can have significant spillovers to economies in the rest of the world (see Box 1.2 in the April 2024 *World Economic Outlook*)—including on their public finances. A larger-than-expected slowdown of growth in *China*, potentially exacerbated by unintended fiscal tightening given significant fiscal imbalances in local governments, could generate negative spillovers to the rest of the world through lower levels of international trade, external financing, and investments.

In 2022, *China* imported more than 12 percent of global exports and more than 60 percent of commodities such as aluminum, iron ore, copper, and soybeans. Revenues from international trade and transactions represented 15 percent of total tax revenues in emerging market and developing economies on average in 2022. A slowdown in *China* and its accompanying weaker imports would thus have a direct impact on fiscal revenues in its main trading partners, especially commodity exporters (Roberts and others 2016; Wolf, Wang, and Tang 2023) and many low-income developing countries that rely heavily on trade revenues (October 2023 *Regional Economic Outlook: Sub-Saharan Africa*). A quantitative analysis based on the IMF’s Group of Twenty Model

(see Box 1.2 in the October 2023 *World Economic Outlook*), and an estimate of elasticities of revenue to growth, indicate that a slowdown in *China* could have a nontrivial impact on total revenue (Figure 1.13, panel 1). A decline of 1 percentage point in GDP growth in *China* over 2023–28 could result in an average drop in total revenues of about 0.5 percentage point of GDP in emerging market economies and low-income countries over the same period but have a more muted effect in advanced economies (less than 0.2 percentage point of GDP).

A slowdown in *China*, especially together with financial stress, could also lower levels of external financing and investment in recipient countries. *China* is a significant source of bilateral funding for governments in many emerging market and developing economies, especially those in *sub-Saharan Africa* and *Latin America and the Caribbean* (Figure 1.13, panel 2). Chinese commercial banks hold an increasing share of the debt stock in *sub-Saharan African* economies (Chen, Fornino, and Rawlings 2024). *China’s* outward direct investment, with an outstanding stock of about \$2.8 trillion in 2022, has also been an important source of financing for large investment projects and other initiatives in several economies, with economic

Figure 1.13. Fiscal Impact of China's Slowdown in the Rest of the World

Sources: IMF, World Economic Outlook database; World Bank, International Debt Statistics; and IMF staff calculations.

Note: The bars in panel 1 show the estimated average response of annual primary balances to GDP growth in *China* that is 1 percentage point lower in 2023–28. The growth spillover effects have been estimated, based on the IMF's Group of Twenty Model, as the percent deviation of GDP from the steady-state growth path in the absence of the shock to the Chinese economy (see Box 1.1 of the October 2023 *World Economic Outlook*; see also Chen, Fornino, and Rawlings 2024). The final impact on revenue is calculated by applying elasticities of revenues to growth, estimated with pooled mean group heterogeneous panel regressions, for 30 advanced economies, 29 emerging market economies, and 49 low-income developing countries. The period sample is from 1970 to 2019.

and fiscal implications different than those of bilateral lending (see Chapter 4 of the April 2024 *World Economic Outlook*).

Advanced Economies (excluding the United States): Slow Policy Normalization

Primary deficits in advanced economies increased by 0.6 percentage point to 2.1 percent of GDP on average in 2023 (Figure 1.14, panel 1). First, bracket creep effects waned as the inflation surprise dissipated. Second, governments did not fully phase out subsidies and transfers to mitigate the impact of energy price shocks despite a marked decline in energy prices in 2023. Some governments also extended certain pandemic-related support measures, such as the Superbonus program in *Italy*. Third, several economies (*Italy*, *Japan*) announced new fiscal stimulus plans, including costly changes to tax policy, social security contribution cuts, and new spending initiatives, often based on optimistic financing assumptions.

Most advanced economies are projected to resume fiscal consolidation in 2024, with primary deficits expected to decline to 1.7 percent of GDP, on average. Improvement hinges crucially on phasing out energy and other pandemic-era support measures. A gradual adjustment is projected over the medium term, with

the average primary deficit expected to approach 0.3 percent of GDP by 2029.

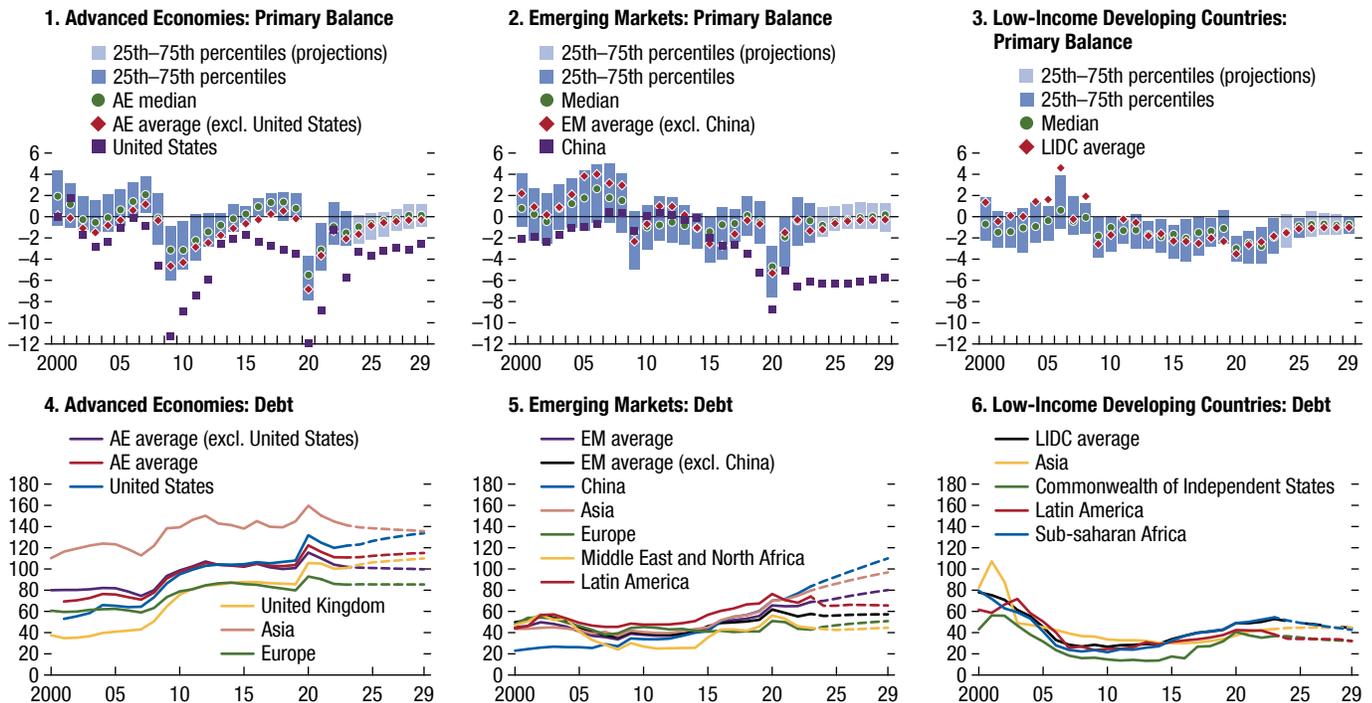
Public debt in advanced economies fell by slightly more than 2 percentage points to about 102 percent of GDP, on average, in 2023. It is projected to decline modestly over the medium term to 100 percent of GDP by 2029 (Table 1.2; Figure 1.14, panel 4). In some cases, recent policy changes, such as a significant cut to the National Insurance Contribution in the *United Kingdom*, although part-funded by well-conceived revenue raising measures, could worsen the debt trajectory in the medium term. Population aging and labor market mismatches are further expected to exert pressure on fiscal positions. For example, in *Belgium* and *Finland*, public debt is projected to increase by about 10 and 7 percentage points of GDP in five years, respectively.

Emerging Markets (excluding China): Higher Deficits in Some Large Economies

Primary deficits increased by 1 percentage point to 1.3 percent of GDP on average in emerging market economies in 2023 (Figure 1.14, panel 2).⁸

⁸Compared with projections in the April 2023 *Fiscal Monitor*, however, primary deficits have been revised downward in most economies, based on higher-than-expected economic growth.

Figure 1.14. Primary Balances and Debt Levels in Advanced Economies, Emerging Markets, and Low-Income Developing Countries
(Percent of GDP)



Source: IMF, World Economic Outlook database.

Note: Panels 4, 5, 6 report statistics on general government debt. In those panels, beyond the income group averages, data for select economies or regional averages are further displayed. See Online Annex 1.2 for more details. AE = advanced economy; EM = emerging market; excl. = excluding; LIDC = low-income developing country.

In most commodity-exporting countries, revenues dropped significantly—by 1.1 percentage points of GDP on average—as global commodity prices eased. Spending remained high, likely reflecting the impact of high inflation in 2022–23. This included effects through indexation, which pushed up wage bills and social benefits (Balasundharam, Kayastha, and Poplawski-Ribeiro 2023), as well as the extension of pandemic-related support measures (for example, subsidies to provide free food grains in *India* and the Social Relief of Distress grant in *South Africa*). In some large emerging market economies, deficits widened substantially in the context of delivering on election pledges, through hikes in public wages, social support, and pensions, as well as in response to major natural disasters. Interest expenses also grew markedly in 2023, by 0.4 percentage point of GDP, on average.

Primary deficits in emerging market economies are projected to narrow to 1.2 percent of GDP in 2024, on average, and to continue trending down to reach 0.3 percent of GDP by 2029. Cuts in primary

spending are expected to drive the improvement. Revenues are projected to remain stable. Several economies with relatively high deficit levels are projected to undergo stronger fiscal consolidation over the medium term (for example, *Pakistan*). Some economies are implementing fiscal reforms to strengthen fiscal frameworks and boost potential growth. *Brazil*, for example, has introduced new fiscal rules and passed a reform to its value-added tax to streamline and improve the efficiency of its tax regime.

Average public debt in emerging market economies increased by 3 percentage points to about 58 percent of GDP in 2023 (Figure 1.14, panel 5) and is projected to remain largely unchanged over the medium term. In some large economies in this group, however, public debt is projected to rise rapidly. In *South Africa*, for example, the debt-to-GDP ratio is expected to increase by 12 percentage points, reflecting persistently weak growth and relatively high interest rates, almost reaching 86 percent of GDP by 2029.

External sovereign bond issuance in emerging market economies has increased substantially, with total issuance reaching more than \$68 billion in the first month of the year (for example, *Brazil, Chile, Hungary, Indonesia, Mexico, Poland, Romania, and Saudi Arabia*), more than 10 percent higher than during the same period in 2023. The ability to reenter international financial markets can give governments breathing room to finance priority spending, including investment for sustainable development. However, it can also add to debt vulnerabilities. Making use of enhanced borrowing possibilities while limiting the associated risks constitutes a difficult balancing act.

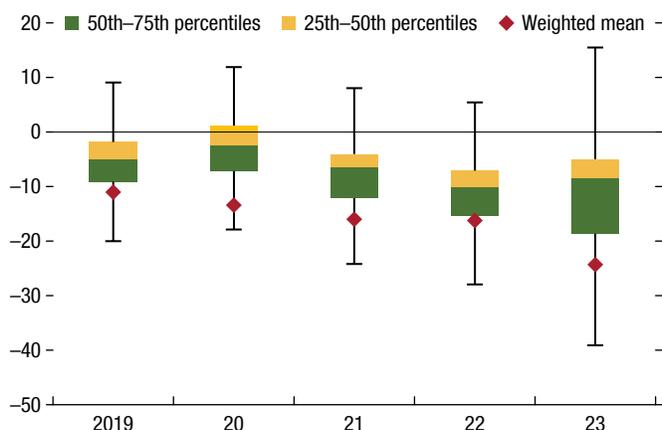
Low-Income Developing Countries: In Search of Fiscal Space

Many low-income developing countries continued to experience significant shocks in 2023, including regional conflicts and military coups. Nevertheless, primary deficits continued declining to 1.8 percent of GDP during the year (Figure 1.14, panel 3), likely limited by financing constraints (April 2023 *Regional Economic Outlook: Sub-Saharan Africa*). Elevated interest rates and a strong US dollar made servicing dollar-denominated debt more expensive. Aid flows, as well as financing from *China*, have also been declining for several years. Revenue-to-GDP ratios have stagnated, following their recovery in 2021–22. Primary spending has declined marginally, aided by continued withdrawal of pandemic-era and inflation-related support. Fiscal balances have improved only in *sub-Saharan Africa* (by 1.2 percentage points of GDP), with both lower spending and higher revenues.

Overall, primary deficits are projected to decline further in low-income developing countries in 2024 to 1.5 percent of GDP, on average, gradually falling to 1 percent by 2029, about 1.3 percentage point of GDP below their level in 2019. Revenues are expected to improve in many economies in this group, given, among other measures, new tax measures and reduced exemptions to the value-added tax (*Bangladesh*). Expenditures are expected to rise modestly.

Large shares of loans on concessional terms, high inflation, and resulting favorable interest-growth differentials (Figure 1.15) have helped contain average public-debt-to-GDP ratios in low-income developing

Figure 1.15. Real Interest-Growth Differential in Low-Income Developing Countries
(Percentage points)

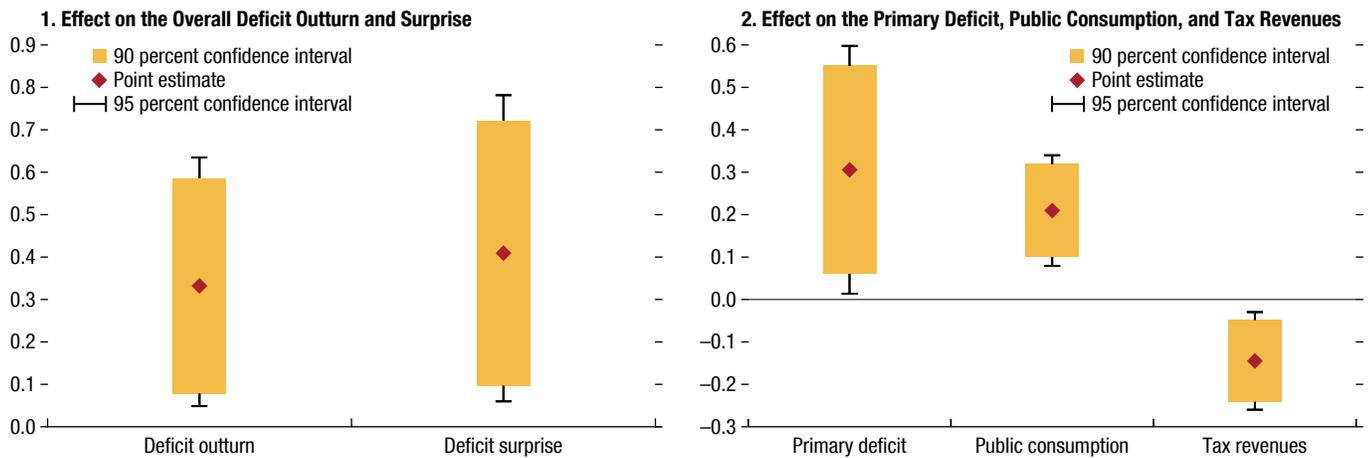


Sources: IMF, World Economic Outlook database; and IMF staff calculations.
Note: Country data are weighted by a country's nominal GDP in US dollars for the low-income developing country average. Real effective interest rates are calculated by dividing interest expenses by the debt stock in the previous year and subtracting consumer price index inflation rates.

countries, at around 50 percent of GDP since 2020, on average. An exception was an uptick to 53 percent of GDP in 2023, largely driven by exchange rate depreciation in *Nigeria* (Figure 1.14, panel 6). However, countries are carrying heavy debt-service burdens, amounting to 13 percent of total spending and almost 25 percent of tax revenues, on average, in 2023 (about double the level 15 years ago). In *Nigeria*, the debt-service burden amounts to around 56 percent of tax revenues.

Such high debt-servicing costs prevent low-income developing countries from spending more on essential services and critical investment to improve economic resilience and reduce poverty. Economies in this country group are also borrowing increasingly on commercial terms, amplifying their exposure to interest rate and foreign exchange risks. Accordingly, risks associated with debt refinancing are high, as repayments of substantial amounts of external debt—about \$60 billion—are coming due in 2024–25, three times the average in the 2010s (Holland and Pazarbasioglu 2024). Several low-income developing countries returned to international markets after a hiatus in early 2024 (*Benin, Côte d'Ivoire, Kenya*), allowing them to refinance maturing debt. However, at present, governments should carefully consider the trade-offs between current financing and future fiscal

Figure 1.16. Effects of Election Years on Fiscal Deficits and Subcomponents
(Percent of GDP)



Sources: IMF, Fiscal Rules Dataset; IMF, World Economic Outlook (WEO) database; National Elections across Democracy and Autocracy data set; World Bank, World Development Indicators; and IMF staff calculations.

Note: The sample consists of 173 economies spanning the period from 1990 to 2020. The panel estimates use the generalized method of moments estimator. Deficit outturns are realized deficit values recorded in the WEO database, while deficit surprises are the difference between deficit outturns and their WEO expectation one year ahead. See Online Annex 1.3 for more details.

sustainability associated with issuing public debt at high costs (April 2024 *Regional Economic Outlook: Sub-Saharan Africa*).

The Great Election Year and Fiscal Politics

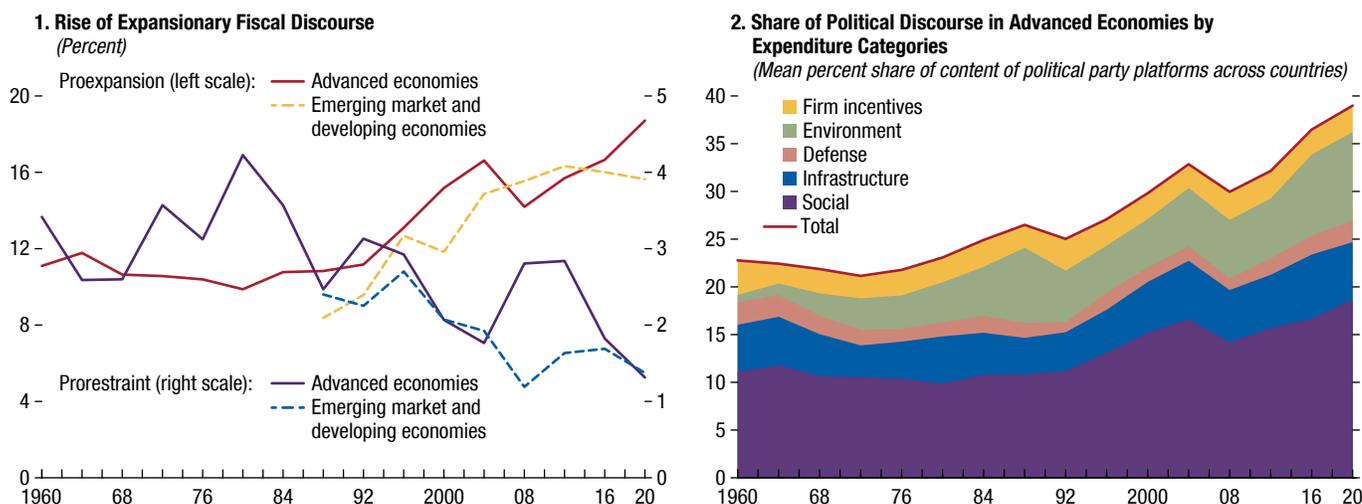
The record number of elections being held across the world in 2024 represents a salient risk with regard to fiscal consolidation prospects for the year. The 88 economies or economic areas that have already had or are expected to hold nationwide elections (parliamentary or presidential) include *Bangladesh, Brazil, the European Union, India, Indonesia, Mexico, Pakistan, Russia, the United Kingdom, and the United States*.⁹ Those economies represent more than half the world population (or 4.2 billion people) and 55 percent of global GDP.¹⁰

⁹Elections taking place in 2024 will add to the already significant elections that took place in 2022–23 in *Argentina, Brazil, Chile, Egypt, The Netherlands, Nigeria, Poland, Slovak Republic, and Türkiye*.

¹⁰The number of countries holding elections in 2024 is 60 when only economies or economic blocs with democratic regimes are taken into account, as assessed by Marshall and Gurr (2020). Democratic economies or economic blocs that are holding elections in 2024 make up 70 percent (3.2 billion) of the population in all democratic countries.

Empirical evidence shows that fiscal policy tends to be looser, and slippages larger, during election years, reflecting a “political budget cycle.”¹¹ Estimates show that deficit outturns in election years are higher than deficit outturns in other years by 0.3 percentage point of GDP on average (left bar of Figure 1.16, panel 1). The higher outturns are led by both higher spending and lower revenues by about 0.2 and 0.1 percentage point of GDP on average, respectively (Figure 1.16, panel 2; Shi and Svensson 2006). The analysis further shows that realized deficits are higher than their year-ahead projections by 0.4 percentage point of GDP (right bar of Figure 1.16, panel 1), indicating a considerable risk of slippages to the modest fiscal tightening projected for most economies in 2024. Such fiscal slippages could potentially add to inflationary pressures, especially in overheated economies. While higher deficits during election years are frequently followed by fiscal adjustments in postelection years, the adjustments are often partial (de Haan, Ohnsorge, and Yu 2023), and the increased fiscal volatility around elections could have potential adverse effects on long-term growth (Ebeke and Ölçer 2017; Fatás and Mihov 2013).

¹¹For a review of how political economy considerations affect fiscal policy, see Gaspar, Gupta, and Mulas-Granados (2017).

Figure 1.17. Political Parties' Discourse and Fiscal Policy

Sources: Cao, Dabla-Norris, and Di Gregorio (forthcoming); Manifesto Project Database; and IMF staff calculations.

Note: Manifesto Project data capture both spending intentions and value judgments. For each year in the figure, the year associated with the data refers to the first of four years the data cover. In panel 1, platform data are first averaged at the country-election level, then by country-year, and finally by four-year period. The vertical axes shows the mean outcomes across all country-years in each four-year period. In panel 2, the top red line sums the shares of all categories below it. The vertical axis reports the mean share of platform statements by policy realm in which a party potentially advocates for more government spending or support. "Social" includes support for the welfare state (for example, health, child, and elder care; pensions; and social housing) and education.

What makes this year different is not only the confluence of elections, but the fact that they will happen amid higher demand for public spending. New analysis of electoral platforms finds that support for higher spending has increased across a large swathe of countries since the 1990s (Figure 1.17, panel 1; Cao, Dabla-Norris, and Di Gregorio, forthcoming). Increased platform space in favor of social spending, including hard-to-reverse entitlements, has driven this trend (Figure 1.17, panel 2).¹² The bias toward higher spending is shared across the political spectrum, indicating substantial challenges in gathering support for consolidation in the years ahead, and particularly in a key election year like 2024.

Fiscal Policy Sustainability and Structural Spending Pressures

A series of shocks in recent years have weakened public finances, even as new spending pressures are mounting. A fundamental requirement for fiscal sustainability is that a government's revenues should

¹²Moreover, recent surveys such as Bianchi, Dabla-Norris, and Khalid (2024) show that households may not fully grasp the risks associated with public debt levels, which may further reduce the pressure on politicians to adopt fiscal consolidation as their political platform.

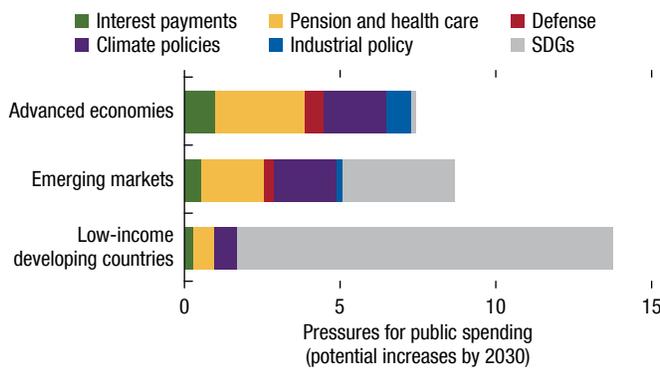
credibly match its total spending over time. If that requirement is violated, fiscal policy can become a source of instability. In many economies, however, public finances are on a precarious footing in their ability to address future shocks and structural challenges.

Mounting Spending Pressures

Addressing long-standing structural challenges requires a sizable amount of fiscal resources (Online Annex 1.4). Economies face pressing demands related to aging and climate, especially advanced economies where spending on industrial policies has also increased in recent years (Chapter 2).¹³ Emerging markets and low-income developing countries require considerable investment to close development gaps and achieve the UN Sustainable Development Goals. Taken together, these spending pressures will amount to additional annual expenditure by 2030 of about 7 percent of GDP in advanced economies, 9 percent of GDP in emerging markets, and 14 percent of GDP in low-income developing countries

¹³Chapter 2 discusses the precise conditions under which industrial policies are beneficial for innovation, namely when (1) externalities can be correctly identified and precisely measured, (2) domestic knowledge spillovers from innovation in targeted sectors are strong, (3) government capacity is sufficiently strong to prevent misallocation, and (4) policies do not discriminate against foreign firms.

Figure 1.18. Potential Annual Increases in Spending through 2030
(Percent of GDP)



Source: IMF staff calculations.

Note: Online Annex 1.4 provides details on the construction of this figure. For advanced and emerging market economies, climate policies include spending on both mitigation and adaptation. For low-income and developing countries, climate policies include spending only on adaptation. SDGs = UN Sustainable Development Goals.

(Figure 1.18). These spending amounts are very large and not fully incorporated in medium-term fiscal and financing plans, leading to considerable additional pressures. Financing this spending by issuing debt could undermine fiscal sustainability and financial stability, given already-elevated debt levels. Additional revenue mobilization is the way to reconcile spending demands with fiscal prudence.

Need for Fiscal Adjustment

Higher debt levels and interest-growth differentials require lower primary deficits to stabilize public-debt-to-GDP ratios.¹⁴ In 2023, the primary deficit required to stabilize debt levels decreased by close to 2 percentage points of GDP on average in advanced and emerging market economies.¹⁵

¹⁴The debt dynamics could look precarious even if interest-growth differentials turn negative again, as high and rising public debt levels could cause private capital to crowd out and lower long-term output (Cao, Gaspar, and Peralta-Alva 2024).

¹⁵The *debt-stabilizing primary balance* calculates the level of primary balance (p_t^*) that would stabilize a specific initial value of debt (d_{t-1})—in this case, the ratio of debt to GDP—in the previous year given the values of the nominal effective interest rate (r_t) and growth rate (g_t) in the contemporaneous year: $p_t^* = ((r_t - g_t)/(1 + g_t)) \times d_{t-1}$. To calculate the debt-stabilizing primary deficit, those primary balances are simply multiplied by -1 . As in Mauro and Zhou (2021), the effective interest rate is calculated here as the ratio of interest expenditure to debt stock plus the product of the share of debt in foreign currency and the depreciation rate of the local currency against the US dollar.

Primary deficits were above debt-stabilizing levels in more economies in 2023 than in 2022 (32 percent of advanced economies in 2023 compared with 11 percent in 2022, and 41 percent of emerging market economies in 2023 compared with 20 percent in 2022), indicating increased need for adjustment (Figure 1.19, panel 1).

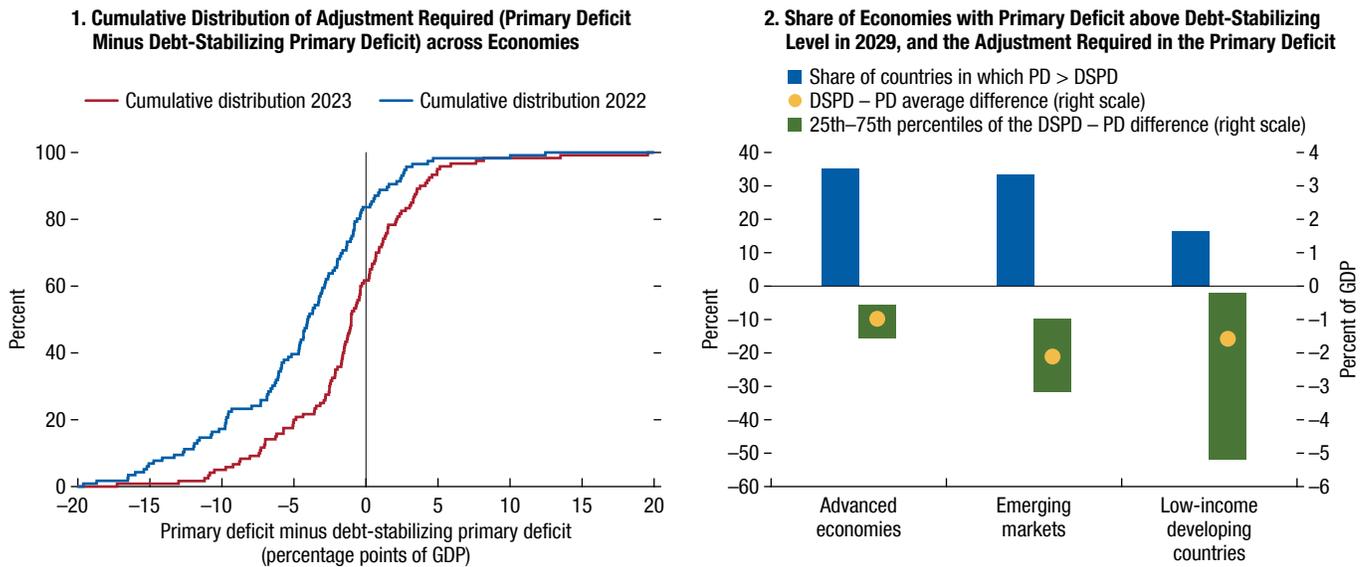
Risks to public finances are expected to remain elevated over the medium term. In about a third of advanced and emerging market economies and in almost a quarter of low-income developing countries, projected primary deficits will remain above debt-stabilizing levels in 2029 under current projections (Figure 1.19, panel 2). The average adjustment (or reduction) in primary deficits required to stabilize debt levels in these economies amounts to 1 percentage point of GDP in advanced economies, 2.1 percentage points of GDP in emerging markets, and 1.6 percentage points of GDP in low-income developing countries (Figure 1.19, panel 2). This represents about 13 percent of total revenues in low-income developing countries and around 5 percent of total revenues in other economies.

Statistical analysis of a country's historical track record with regard to adjustment can help gauge the likelihood it will attain the primary deficit needed to stabilize its debt. Figure 1.20 summarizes the distribution of statistical forecasts for the primary deficit for an example country, *Italy*, over the next two years. The figure presents a fan chart of the projected primary deficit obtained from the estimates for the country during that period.¹⁶ It shows that the likelihood that *Italy* will achieve the primary deficit needed to stabilize its debt level (estimated at more than 0.5 percent of GDP for 2024) is less than 50 percent, indicating the need for further fiscal efforts in the coming two years.

Public gross financing needs will remain at levels higher than those before the pandemic over the medium term based on high existing debt burdens and persistent fiscal deficits (Figure 1.21). *China* and the *United States* have large gross financing needs of more than 25 percent of GDP in the near term. Average financing needs are expected to remain at about 20 percent of GDP in advanced economies, excluding the *United States*, and more than 10 percent

¹⁶The analysis uses probabilistic scenarios based on an autoregressive integrated moving-average econometric model; see Online Annex 1.5 for more details.

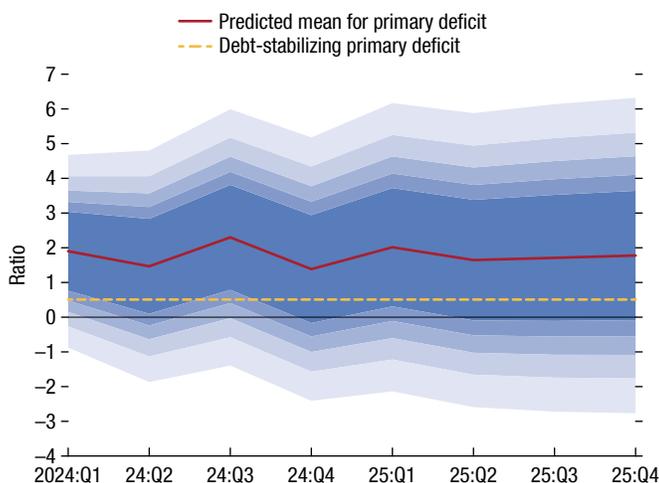
Figure 1.19. Adjustment in Primary Deficits Required to Stabilize Public Debt
(Percent of economies, unless specified otherwise)



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

Note: See footnote 15 in the chapter text for the formula used to calculate the debt-stabilizing primary deficit (DSPD). The sample includes 37 advanced economies and 83 emerging market economies, excluding a few with outlier values (below -20 and above 20 percent of GDP). In panel 1, the cumulative histogram shows the share of economies from the lowest to the highest level of the difference between the primary deficit (PD) and the DSPD, that is, PD - DSPD, in percentage points of GDP in each year. In panel 2, values in the bars indicate the share of economies with PD > DSPD in 2029. DSPD - PD difference reported for countries with PD > DSPD only. The dots in panel 2 correspond to weighted averages for each economic group.

Figure 1.20. Primary Deficit Fan Chart and the Likelihood of Reaching the Debt-Stabilizing Primary Deficit for Italy
(Percent of GDP)



Sources: Haver Analytics; and IMF staff calculations.

Note: The analysis uses an autoregressive integrated moving-average econometric model with the following probabilities in the shaded areas, from darkest to lightest: 50, 60, 70, 80, and 90 percent. For example, the likelihood of Italy's deficit being smaller or equal to zero in 2025:Q4 in this figure is about 40 percent. Period sample ranges from the first quarter of 1999 to the fourth quarter of 2023. See Online Annex 1.5 for more details.

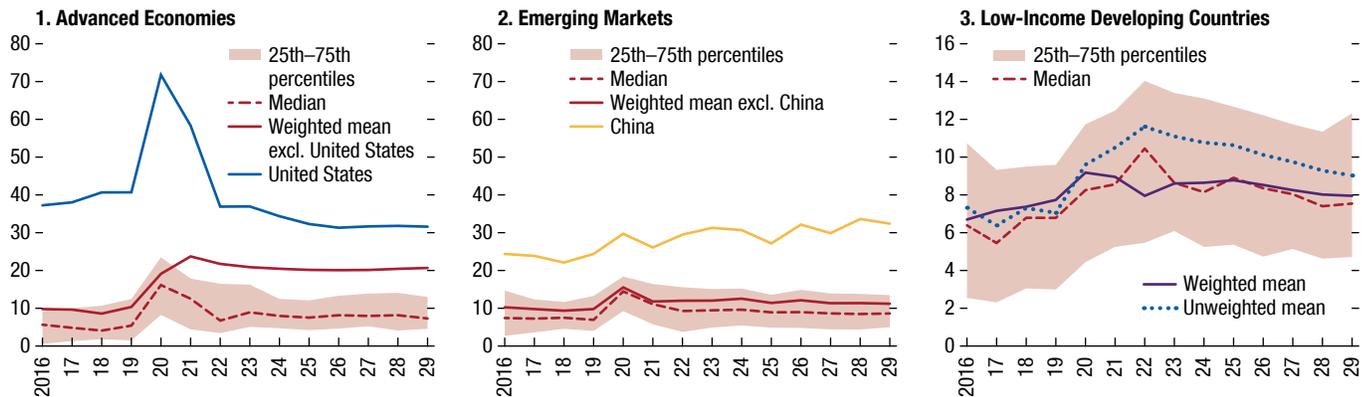
of GDP in emerging market economies, excluding *China*—substantially above prepandemic levels in both country groups. Debt risks have already materialized in many emerging market and developing economies as the number of countries in debt distress in that group almost quadrupled in seven years: from 5 in 2016 to 19 in 2023. Furthermore, at least 11 countries in that group have defaulted on at least a part of their external debt service since 2020.

Policy Conclusions

Momentum toward fiscal policy normalization faltered in 2023. Revenue windfalls from inflation surprises waned in line with easing inflationary pressures. Concurrently, spending remained high as a result of legacies of crisis-era fiscal measures to address the COVID-19 pandemic and the introduction of new fiscal support measures in many countries.

Although gradual fiscal tightening is projected to resume in 2024, the risks of fiscal slippages are particularly acute during this “Great Election Year” when numerous elections will be held in countries across the world. Deficits and debt levels are projected

Figure 1.21. Public Gross Financing Needs
(Percent of GDP)



Source: IMF staff calculations.

Note: Data have been retrieved from debt sustainability analyses for 26 advanced economies, 60 emerging market economies, and 58 low-income developing countries. The weighted average uses as weights the size of each economy in current dollar values in 2023. In panel 2, *China's* public gross financing needs are calculated based on the augmented debt definition which expands the perimeter of government to include the activity of local government financing vehicles, government guided funds, and special construction funds (see Table 4 and Appendix III in IMF 2024). excl. = excluding.

to remain above pre-pandemic levels in the near term. Spending pressures on budgets are mounting, and interest-growth differentials have increased. Moreover, the pace of disinflation as it travels its last mile is uncertain. Financing conditions remain challenging amid spillovers from high and volatile long-term interest rates in the *United States*. Uncertainties surrounding growth and finance in *China* are also clouding the global public finance outlook.

With major central banks expected to pivot to a less restrictive stance this year (April 2024 *World Economic Outlook*) and economies better able to absorb the economic effects of fiscal tightening, a renewed push toward consolidation is warranted.

Governments should calibrate the pace of consolidation to country-specific circumstances, striking a balance between fiscal risks and the strength of private demand to avoid disruptive adjustments. Fiscal consolidation can reduce public debt more effectively when designed adequately and undertaken while the economy is growing (see Chapter 3 of the April 2023 *World Economic Outlook*). Front-loaded consolidation would be particularly desirable for economies with high debt risks that lack credible medium-term frameworks. More generally, fiscal policy should not be the first line of defense, given elevated risks to public finances. Governments should shift gears from acting as an insurer of first resort to focusing on their core objectives of addressing

structural challenges, reducing poverty, and promoting sustainable growth by boosting innovation and productivity (Chapter 2).

How could a more decisive fiscal consolidation be achieved? For starters, legacies from crisis-era discretionary measures should be immediately phased out. Governments should also scale back regressive and inefficient fuel and energy subsidies and redirect resources toward targeted social protection programs that support their most vulnerable populations. Many advanced economies with aging populations should focus on containing spending pressures on health and pensions through entitlement reforms and other measures. Emerging market and developing economies should renew efforts to rationalize large government wage bills, reform social safety nets to increase targeting and reduce fragmentation, and further support the efficiency of social spending through well-implemented digitization (Amaglobeli and others 2023).

Governments should further ensure that revenues are commensurate with spending. The minimum corporate tax under Pillar Two of the Organisation for Economic Co-operation and Development's Inclusive Framework on Base Erosion and Profit Shifting could boost global corporate tax revenues by more than 6 percent by diminishing profit shifting and tax competition. Revamping domestic profit taxation by targeting excessive profits rather than the opportunity

cost of investment could further bolster revenues and improve efficiency (Hebous, Prihardini, and Vernon 2022). Emerging market and developing economies should mobilize additional revenue by broadening tax bases, which tends to be more growth-friendly than raising tax rates (Dabla-Norris and Lima 2023). This could be done, for example, by reducing ineffective tax expenditures. Also key to achieving tangible outcomes is to strengthen institutions by, among other actions, establishing robust tax policy units and harnessing digital technologies to enhance revenue administrations (Box 1.2; Benitez and others 2023).

Credible medium-term fiscal frameworks and modern public financial management systems would provide sound foundations for sustainable public finances. Frameworks should be risk-based and built on realistic financing assumptions, guiding the speed and ambition of fiscal consolidation efforts according to the level of fiscal risks (Caselli and others 2022). Credibility could be enhanced further by backing medium-term plans with strengthened forecasting capacity and by better integrating such plans into annual budgets alongside clear contingency plans for how governments will respond to unexpected growth and interest rate movements and other country-specific developments. Strong fiscal oversight by independent fiscal institutions endowed with sufficient resources to

effectively assess fiscal plans and communicate them to the public in a timely manner would help reinforce adjustment plans. Many economies are already revamping fiscal rules, as the *European Union* is doing to better align those rules with current challenges in its member states (Box 1.3).

Improving fiscal and debt transparency is also key to reducing debt vulnerabilities (IMF 2023a). Governments should provide more granular and timely information on debt, including the composition of creditors and instruments, exposure to risks (associated with interest rates, exchange rates, and refinancing), and the terms of individual debt contracts. Such transparency would allow for adequate assessment of fiscal risks, invite closer scrutiny, and potentially reduce reliance on nontraditional debt instruments. For countries in severe debt distress, debt restructuring could play a role in restoring the sustainability of public finances. Continued international cooperation, including through the Group of Twenty Common Framework and the Global Sovereign Debt Roundtable, is crucial to facilitate an efficient debt restructuring process. The Common Framework has begun to deliver on its potential, with encouraging progress in such countries as *Ghana*, which recently reached an agreement with official creditors on the treatment of debt.

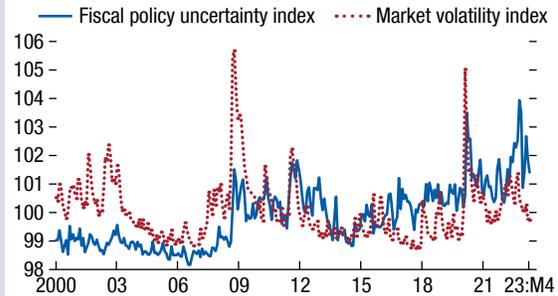
Box 1.1. US Fiscal Policy Uncertainty and Bond Spreads

This box presents an index of fiscal policy uncertainty for the United States and analyzes the impact of this uncertainty on the bond spreads of other economies.

Uncertainty surrounding future fiscal measures, or “fiscal policy uncertainty,” can have significant adverse economic and financial market effects. A novel monthly fiscal uncertainty index constructed by Hong, Nguyen, and Ke (2024) uses terms related to fiscal policy uncertainty as topic keywords to measure these effects. The index draws on news articles related to tax, government expenditure, public debt, and budget announcements. For example, the index shows a surge in fiscal policy uncertainty in the *United States* related to debt ceiling and government shutdown episodes (Figure 1.1.1).

An empirical analysis using the uncertainty index suggests that increased fiscal policy uncertainty in the *United States* is associated with higher borrowing costs in other advanced and emerging market economies (Figure 1.1.2). A rise in the US fiscal policy uncertainty index score of one standard deviation of its distribution, which corresponds to the increase in

Figure 1.1.1. Fiscal Uncertainty in the United States (Index)

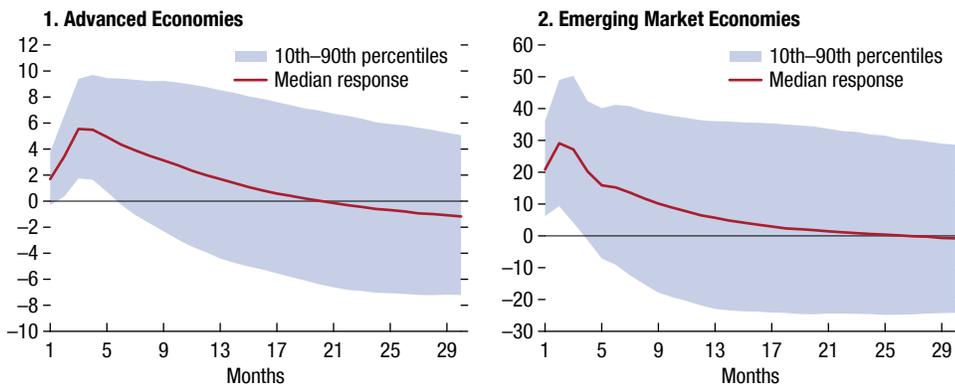


Source: Hong, Nguyen, and Ke 2024.

Note: Series are standardized with z mean equal to 100 and a standard deviation equal to 1. Hong, Nguyen, and Ke (2024) describe the methodology used to construct the fiscal uncertainty index.

fiscal uncertainty observed during the country’s debt ceiling deliberations in 2021, is associated with a peak increase in median sovereign spreads of 5 basis points in other advanced economies and 40 basis points in emerging market economies.

Figure 1.1.2. Response of Sovereign Spreads to Uncertainty Regarding US Fiscal Policy (Basis points)



Source: Hong, Nguyen, and Ke 2024.

Note: Shaded areas correspond to the 95 percent confidence interval. The analysis is based on a vector autoregression model comprised of the US fiscal policy uncertainty index in Hong, Nguyen, and Ke (2024); a global economic policy uncertainty index in Baker, Bloom, and Davis (2016); US stock prices and policy rates; and sovereign spreads in advanced and emerging market economies, using Cholesky decomposition, with the US fiscal policy uncertainty indicator as the most exogenous variable. See Hong, Nguyen, and Ke (2024) for the empirical methodology and more details.

Box 1.2. Building Tax Capacity in Low-Income and Emerging Market Economies

This box explores which reforms low-income countries and emerging market economies could pursue to enhance tax capacity and revenue mobilization.

Enhancing tax capacity—the policies and institutions as well as the technical capabilities to collect tax revenue—is crucial for the functioning of government. Progress in mobilizing tax revenue has stalled since the 2008 global financial crisis. Benitez and others (2023) show that the average tax-to-GDP ratio in emerging market and developing economies has increased by 3.5 to 5 percentage points since the early 1990s, with taxes on consumption primarily driving the increase. Some countries increased their tax revenue by more than 5 percentage points of GDP (for example, *Albania, Argentina, Armenia, Brazil, and Georgia*). However, nearly all this progress occurred before 2008, suggesting that recent shocks have posed significant challenges to mobilizing tax revenue and made sustained progress elusive. Economies grappling with fragility have encountered acute institutional hurdles to developing their tax systems. Resource-rich economies have generally substituted resource revenues for tax revenues.

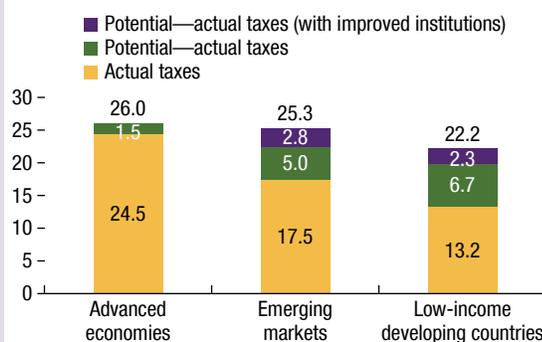
Research shows that emerging market and developing economies have untapped tax revenue potential of up to 9 percent of GDP (Figure 1.2.1). This potential varies with income levels, with low-income developing countries having a slightly greater potential than emerging market economies. The empirical results importantly suggest a statistically significant and strong correlation between strengthening institutions and mobilizing revenues.

Countries can tap this potential by building medium-term reform plans that focus on a few tax instruments and by enhancing institutional capacity. A narrow focus on tax system reform is unlikely to yield substantial revenues.¹ Strengthening institutional capacity can be addressed by such steps as:

- Improving the design of core domestic taxes, including value-added, excise, and personal and

¹For examples of such a narrow focus, see IMF (2023b).

Figure 1.2.1. Actual and Potential Taxes, 2020
(Percent of GDP)



Source: Benitez and others 2023.

Note: Potential taxes are defined as in Benitez and others (2023), excluding social security contributions.

corporate income taxes. Low-income developing countries, for instance, could double revenue from value-added taxes without increasing tax rates by curbing preferential treatments and improving compliance.

- Broadening tax bases by rationalizing tax expenditures, taxing capital income more neutrally, and implementing effective property taxes to fund local governments.
- Using excise taxes—particularly fuel excises and other forms of carbon pricing—to mitigate health- and climate-related costs while balancing equity and efficiency considerations.
- Improving institutions that govern the tax system and manage tax reform by putting in place adequate staffing to analyze and monitor the impact of tax policies, upgrading the professionalization of officials working on tax design and implementation, better using digital technologies, and ensuring transparency and certainty regarding how policy and administration are translated into legislation.
- Prioritizing and coordinating reforms across government agencies to reflect broader institutional and policy contexts, which would enhance tax design and acceptance by citizens.

Box 1.3. Reform of the European Union Economic Governance Framework

This box discusses the reformed economic governance framework for the European Union.

In February 2024, the Council of the European Union and European Parliament reached agreement on a new economic governance framework for *European Union* members (European Commission 2024). Recognizing fiscal challenges faced by each member state (Figure 1.3.1), country-specific medium-term adjustment paths are derived on the basis of a common framework. Adjustment is specified in terms of net primary expenditure, excluding, for example, interest expenditure, cyclically unemployment expenditure, and expenditure on EU programs.

While the baseline adjustment period is four years, countries committing to reforms that enhance economic resilience and growth, or strengthen fiscal sustainability, can extend it to seven years, thereby avoiding sharp annual fiscal adjustment.

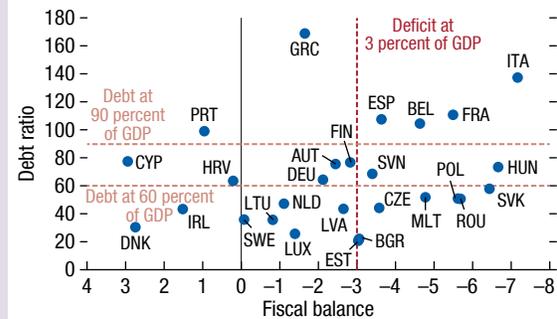
Restoring and securing fiscal sustainability is specified in two dimensions. Public debt should be plausibly placed on a downward path, or if already low, maintained at prudent levels. This criterion is assessed through a debt-sustainability analysis according to a common European Commission methodology. The framework requires an adjustment large enough to put debt on a continuously declining path for 10 years following the end of the adjustment. Fiscal deficits, if high, should be brought below 3 percent of GDP by the end of the adjustment period and maintained below this level for the 10 years following the adjustment period.

The framework also includes two minimum adjustment safeguards: a debt sustainability safeguard and a deficit resilience safeguard. Over the adjustment period, the debt-to-GDP ratio should fall on average by no less than 1 percentage point of GDP annually if debt is above 90 percent of GDP and by 0.5 percentage point of GDP annually if debt is between 60 and 90 percent of GDP. The structural primary balance should improve by 0.4 (0.25) percentage point of potential GDP annually or more for countries with a four-year (seven-year) adjustment period until the general government structural balance is above -1.5 percent of potential GDP.

Member states that do not comply with fiscal requirements under the framework—either by having

Figure 1.3.1. Fiscal Balance and Government Debt, 2023

(Percent of GDP)



Source: IMF, World Economic Outlook database.

Note: Data labels in the figure use International Organization for Standardization (ISO) country codes.

a deficit exceeding 3 percent of GDP or by not implementing the agreed net expenditure path—can be placed in an Excessive Deficit Procedure. While in an Excessive Deficit Procedure, the country is required to make a minimum annual adjustment of 0.5 percent of GDP to return to compliance with the framework.¹ If subject to the Excessive Deficit Procedure, a member state is excluded from the annual debt-reduction requirement under the debt sustainability safeguard.

The framework represents a clear improvement. Relying on multiyear nominal expenditure paths facilitates compliance monitoring. Governments are required to formulate realistic medium-term plans and encouraged to enact growth- and sustainability-enhancing reforms. Nonetheless, the adjustment paths still require political support for their implementation. The new framework also requires governments to ensure strong medium-term budgetary frameworks and independent national fiscal councils with sufficient independence and resources to carry out fiscal oversight on plans and realism of forecasts (Arnold and others 2022).

¹Although the minimum adjustment is generally defined in terms of the structural balance, as a transition measure during 2025–27, it can be adjusted to consider higher interest expenses.

References

- Adrian, Tobias, Richard K. Crump, and Emanuel Moench. 2013. "Pricing the Term Structure with Linear Regressions." *Journal of Financial Economics* 110 (1): 110–38.
- Amaglobeli, David, Ruud de Mooij, Andualem Mengistu, Mariano Moszoro, Manabu Nose, Soheib Nunhuck, Sailendra Pattanayak, and others. 2023. "Transforming Public Finance through GovTech." IMF Staff Discussion Note 23/04, International Monetary Fund, Washington, DC.
- Arnold, Nathaniel G, Ravi Balakrishnan, Bergljot B Barkbu, Hamid R Davoodi, Andresa Lagerborg, Waikie R Lam, Paulo A Medas, and others. 2022. "Reforming the EU Fiscal Framework: Strengthening the Fiscal Rules and Institutions." IMF Departmental Paper 2022/014, International Monetary Fund, Washington, DC.
- Baker, Scott R., Nicholas Bloom, and Steven J. Davis. 2016. "Measuring Economic Policy Uncertainty." *The Quarterly Journal of Economics* 131 (4): 1593–636.
- Balasundharam, Vybhavi, Arika Kayastha, and Marcos Poplawski-Ribeiro. 2023. "Inflation Indexation in Public Finances: A Global Dataset on Current Practices." IMF Working Paper 23/264, International Monetary Fund, Washington, DC.
- Beer, Sebastian, Mark Griffiths, and Alexander Klemm. 2023. "Tax Distortions from Inflation: What Are They? How to Deal with Them?" IMF Working Paper 23/18, International Monetary Fund, Washington, DC.
- Benitez, Juan Carlos, Mario Mansour, Miguel Pecho, and Charles Vellutini. 2023. "Building Tax Capacity in Developing Countries." IMF Staff Discussion Note 23/006, International Monetary Fund, Washington, DC.
- Bianchi, Francesco, Era Dabla-Norris, and Salma Khalid. 2024. "Public Perceptions on Sovereign Debt: Evidence from 16 Economies." Unpublished, International Monetary Fund, Washington, DC.
- Bianchi, Francesco, and Leonardo Melosi. 2022. "Inflation as a Fiscal Limit." Working Paper 2022–37, Federal Reserve Bank of Chicago.
- Brollo, Fernanda, Era Dabla-Norris, Ruud de Mooij, Daniel Garcia-Macia, Li Liu, and Anh Nguyen. 2024. "Ensuring a Fair Distribution of Gains and Opportunities from Gen-AI: Role of Fiscal Policies." Unpublished, International Monetary Fund, Washington, DC.
- Cao, Yongquan, Era Dabla-Norris, and Enrico Di Gregorio. Forthcoming. "Fiscal Discourse and Fiscal Policy." International Monetary Fund, Washington, DC.
- Cao, Yongquan, Vitor Gaspar, and Adrian Peralta-Alva. 2024. "Costly Increases in Public Debt When $r < g$." IMF Working Paper 24/10, International Monetary Fund, Washington, DC.
- Caselli, Francesca, Hamid Davoodi, Carlos Goncalves, Gee Hee Hong, Andresa Lagerborg, Paulo Medas, Anh Dinh Minh Nguyen, and others. 2022. "The Return to Fiscal Rules." IMF Staff Discussion Note 22/002, International Monetary Fund, Washington, DC.
- Chen, Wenjie, Michele Fornino, and Henry Rawlings. 2024. "Navigating the Evolving Landscape of China and Africa's Economic Engagements." Unpublished, International Monetary Fund, Washington, DC.
- Cimadomo, Jacopo, Peter Claeys, and Marcos Poplawski-Ribeiro. 2016. "How Do Experts Forecast Sovereign Spreads?" *European Economic Review* 87: 216–35.
- Dabla-Norris, Era, and Frederico Lima. 2023. "Macroeconomic Effects of Tax Rate and Base Changes: Evidence from Fiscal Consolidations." *European Economic Review* 153: 104399.
- De Haan, Jakob, Franziska Ohnsorge, and Shu Yu. 2023. "Election-Induced Fiscal Policy Cycles in Emerging Market and Developing Economies." CEPR Discussion Paper 18708, Centre for Economic Policy Research, London.
- Ebeke, Christian H., and Dilan Ölçer. 2017. "Fiscal Policy over the Election Cycle in Low-Income Countries." In *Fiscal Politics*, edited by Vitor Gaspar, Sanjeev Gupta, and Carlos Mulas-Granados. Washington, DC: International Monetary Fund.
- European Commission. 2024. "Commission welcomes political agreement on a new economic governance framework fit for the future." Press Release. February 2024.
- Fatás, Antonio, and Ilian Mihov. 2013. "Policy Volatility, Institutions, and Economic Growth." *The Review of Economics and Statistics* 95 (2): 362–76.
- Gaspar, Vitor, Sanjeev Gupta, and Carlos Mulas-Granados, eds. 2017. *Fiscal Politics*. Washington, DC: International Monetary Fund.
- Gaspar, Vitor, Marcos Poplawski-Ribeiro, and Jiae Yoo. 2023. "Global Debt Is Returning to Its Rising Trend." *IMF Blog*, September 13.
- Hebous, Shafik, Dinar Prihardini, and Nate Vernon. 2022. "Excess Profit Taxes: Historical Perspective and Contemporary Relevance." IMF Working Paper 22/187, International Monetary Fund, Washington, DC.
- Holland, Allison, and Ceyla Pazarbasioglu. 2024. "How to Ease Rising External Debt-Service Pressures in Low-Income Countries." *IMF Blog*, January 24.
- Hong, Gee Hee, Anh D. M. Nguyen, and Barry Ke. 2024. "The Economic Impact of Fiscal Policy Uncertainty: Evidence from a Novel Cross-Country Database." Unpublished, International Monetary Fund, Washington, DC.
- International Monetary Fund (IMF). 2023a. "Making Public Debt Public—Ongoing Initiatives and Reform Options." IMF Policy Paper 23/034, International Monetary Fund, Washington, DC.
- International Monetary Fund (IMF). 2023b. "International Corporate Tax Reform." IMF Policy Paper 23/001, International Monetary Fund, Washington, DC.

- International Monetary Fund (IMF). 2024. “2023 Article IV Consultation—Press Release; Staff Report; and Statement by the Executive Director for the People’s Republic of China.” IMF Country Report 24/38, International Monetary Fund, Washington, DC.
- Laubach, Thomas. 2009. “New Evidence on the Interest Rate Effects of Budget Deficits and Debt.” *Journal of the European Economic Association* 7 (4): 858–85.
- Marshall, Monty G., and Ted R. Gurr. 2020. “Polity5: Political Regime Characteristics and Transitions, 1800–2018: Dataset Users’ Manual.” Center for Systemic Peace, Vienna, VA.
- Mauro, Paolo, and Jing Zhou. 2021. “ $r - g < 0$: Can We Sleep More Soundly?” *IMF Economic Review* 69: 197–229.
- Nguyen, Anh Dinh Minh, Hajime Takizawa, and Iglia Vassileva. 2023. “Inflation Dynamics in Bulgaria: The Role of Policies.” IMF Working Paper 23/212, International Monetary Fund, Washington, DC.
- Roberts, Ivan, Trent Saunders, Gareth Spence, and Natasha Cassidy. 2016. “China’s Evolving Demand for Commodities.” In *RBA Annual Conference Volume*, edited by John Simon, 107–58. Sydney: Reserve Bank of Australia.
- Shi, Min, and Jakob Svensson. 2006. “Political Budget Cycles: Do They Differ across Countries and Why?” *Journal of Public Economics* 90 (8–9): 1367–89.
- US Congressional Budget Office. 2023. “The Economic Outlook.” In *The Budget and Economic Outlook: 2023 to 2033*. Washington, DC: US Congressional Budget Office.
- Wolf, Alex, Julia Wang, and Yuxuan Tang. 2023. “Investment Strategy: Will China’s Recovery Drive Commodity Prices Higher?” J.P. Morgan Private Bank, Baltimore, MD. <https://privatebank.jpmorgan.com/apac/en/insights/markets-and-investing/will-china-s-recovery-drive-commodity-prices-higher>.