INTERNATIONAL MONETARY FUND

WORLD ECONOMIC OUTLOOK

UPDATE

Gloomy and More Uncertain

2022
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WORLD ECONOMIC OUTLOOK UPDATE: *GLOOMY AND MORE UNCERTAIN*

- *A tentative recovery in 2021 has been followed by increasingly gloomy developments in 2022 as risks began to materialize. Global output contracted in the second quarter of this year, owing to downturns in China and Russia, while US consumer spending undershot expectations. Several shocks have hit a world economy already weakened by the pandemic: higher-than-expected inflation worldwide––especially in the United States and major European economies––triggering tighter financial conditions; a worse-than-anticipated slowdown in China, reflecting COVID-19 outbreaks and lockdowns; and further negative spillovers from the war in Ukraine.*

- *The baseline forecast is for growth to slow from 6.1 percent last year to 3.2 percent in 2022, 0.4 percentage point lower than in the April 2022* World Economic Outlook*. Lower growth earlier this year, reduced household purchasing power, and tighter monetary policy drove a downward revision of 1.4 percentage points in the United States. In China, further lockdowns and the deepening real estate crisis have led growth to be revised down by 1.1 percentage points, with major global spillovers. And in Europe, significant downgrades reflect spillovers from the war in Ukraine and tighter monetary policy. Global inflation has been revised up due to food and energy prices as well as lingering supply-demand imbalances, and it is anticipated to reach 6.6 percent in advanced economies and 9.5 percent in emerging market and developing economies this year—upward revisions of 0.9 and 0.8 percentage point, respectively. In 2023, disinflationary monetary policy is expected to bite, with global output growing by just 2.9 percent.*

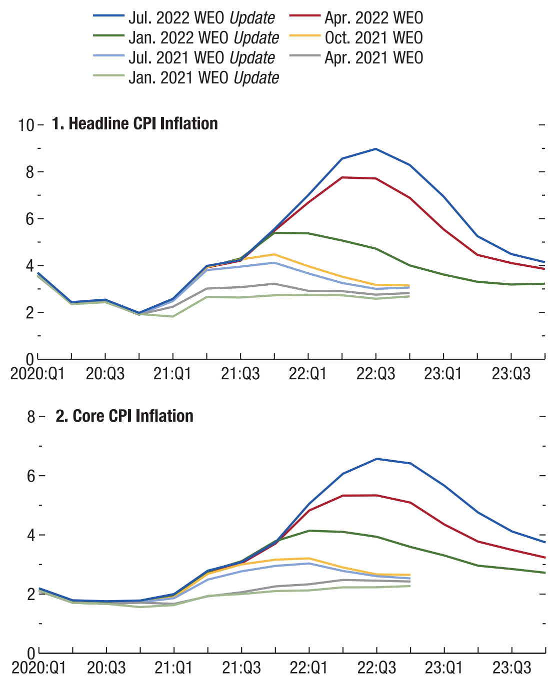
- *The risks to the outlook are overwhelmingly tilted to the downside. The war in Ukraine could lead to a sudden stop of European gas imports from Russia; inflation could be harder to bring down than anticipated either if labor markets are tighter than expected or inflation expectations unanchor; tighter global financial conditions could induce debt distress in emerging market and developing economies; renewed COVID-19 outbreaks and lockdowns as well as a further escalation of the property sector crisis might further suppress Chinese growth; and geopolitical fragmentation could impede global trade and cooperation. A plausible alternative scenario in which risks materialize, inflation rises further, and global growth declines to about 2.6 percent and 2.0 percent in 2022 and 2023, respectively, would put growth in the bottom 10 percent of outcomes since 1970.*

- *With increasing prices continuing to squeeze living standards worldwide, taming inflation should be the first priority for policymakers. Tighter monetary policy will inevitably have real economic costs, but delay will only exacerbate them. Targeted fiscal support can help cushion the impact on the most vulnerable, but with government budgets stretched by the pandemic and the need for a disinflationary overall macroeconomic policy stance, such policies will need to be offset by increased taxes or lower government spending. Tighter monetary conditions will also affect financial stability, requiring judicious use of macroprudential tools and making reforms to debt resolution frameworks all the more necessary. Policies to address specific impacts on energy and food prices should focus on those most affected without distorting prices. And as the pandemic continues, vaccination rates must rise to guard against future variants. Finally, mitigating climate change continues to require urgent multilateral action to limit emissions and raise investments to hasten the green transition.*

The Forces Shaping the Outlook

Global slowdown intensifies as downside risks materialize. A tentative recovery in 2021 has been followed by increasingly gloomy developments in 2022. Performance was slightly better than expected in the first quarter, but world real GDP is estimated to have shrunk in the second quarter—the first contraction since 2020—owing to economic downturns in China and Russia. Downside risks discussed in the April 2022 *World Economic Outlook* are materializing, with higher inflation worldwide, especially in the United States and major European economies, triggering a sharp tightening in global financial conditions; a sharper-than-anticipated slowdown in China, reflecting COVID-19 outbreaks and lockdowns; and further negative cross-border effects from the war in Ukraine.

Figure 1. Global Inflation Forecasts: Serial Upside Surprises
(Percent)



Source: IMF staff calculations.
Note: Global inflation is a weighted average of individual countries' numbers using GDP valued at purchasing power parity as weights. WEO = *World Economic Outlook*.

Global inflation again surprises on the upside, prompting more central bank tightening. Since 2021, consumer prices have consistently risen faster than widely expected, including in the *World Economic Outlook* (Figure 1). In the United States, the consumer price index rose by 9.1 percent in June, compared with a year earlier, and it also rose by 9.1 percent in the United Kingdom in May—the highest inflation rates in these two countries in 40 years. In the euro area, inflation in June reached 8.6 percent, its highest level since the inception of the monetary union. Equally concerning, in emerging market and developing economies, second-quarter inflation is estimated to have been 9.8 percent. Higher food and energy prices, supply constraints in many sectors, and a rebalancing of demand back toward services have in most economies driven up headline inflation. But underlying inflation has also increased, as reflected in different gauges of core inflation, reflecting the pass-through of cost pressures by way of supply chains and tight labor markets, especially in advanced economies.[1] Wage growth has on average not kept up with inflation across both advanced and emerging market and developing economies, eroding household purchasing power. Although long-term inflation expectations have been stable in most major economies, they have started to rise according to some measures, including in the United States (Figure 2). In response to incoming data, central banks of major advanced economies are withdrawing monetary support more assertively and raising policy interest rates faster than expected in the April 2022 *World Economic Outlook*. Central banks in several emerging market and developing economies have raised interest rates more aggressively than during past advanced economy tightening cycles. The associated rise in longer-term borrowing costs, including mortgage

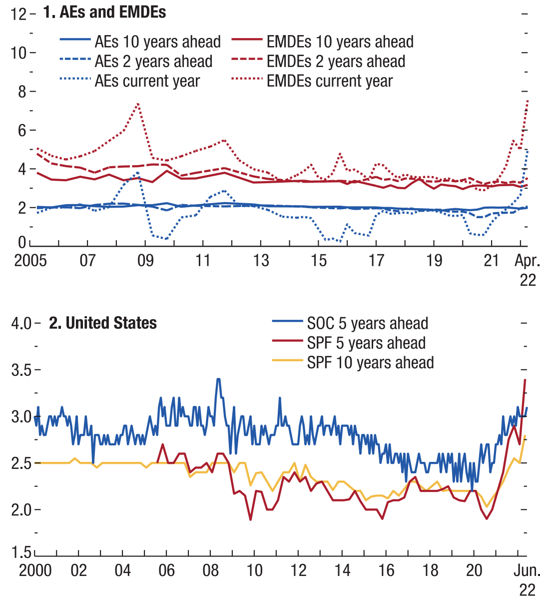
[1] Romain Duval, Yi Ji, Longji Li, Myrto Oikonomou, Carlo Pizzinelli, Ippei Shibata, Alessandra Sozzi, and Marina M. Tavares, "Labor Market Tightness in Advanced Economies," IMF Staff Discussion Note 2022/001, International Monetary Fund, Washington, DC.

rates, and tighter global financial conditions (see box) have led to precipitous declines in equity prices, weighing on growth. At the same time, public COVID-19 support packages have been wound down.

China's economic slowdown has added to global supply chain disruptions. COVID-19 outbreaks and mobility restrictions as part of the authorities' zero-COVID strategy have disrupted economic activity widely and severely (Figure 3). Shanghai, a major global supply chain hub, entered a strict lockdown in April 2022, forcing citywide economic activity to halt for about eight weeks. In the second quarter, real GDP contracted significantly by 2.6 percent on a sequential basis, driven by lower consumption—the sharpest decline since the first quarter of 2020, at the onset of the pandemic, when it declined by 10.3 percent. Since then, more contagious variants have driven a worrisome surge in COVID-19 cases. The worsening crisis in China's property sector is also dragging down sales and real estate investment. The slowdown in China has global consequences: lockdowns added to global supply chain disruptions and the decline in domestic spending are reducing demand for goods and services from China's trade partners.

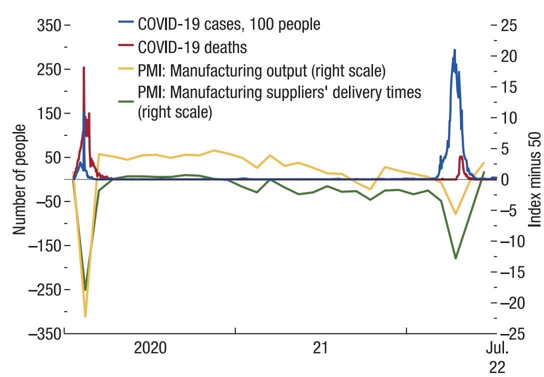
The war in Ukraine continues, causing widespread hardship. The war's humanitarian cost is rising, with 9 million people having fled Ukraine since the Russian invasion started and continuing loss of life and destruction of physical capital. Since April 2022, major advanced economies have placed additional financial sanctions on Russia, and the European Union agreed on embargoes on imports of coal starting in August 2022 and on Russian seaborne oil starting in 2023. The European Union announced that it will block insuring and financing maritime transport of Russian oil to third countries by the end of 2022. At the same time, the Organization of the Petroleum Exporting Countries has agreed to bring forward increases in oil supply that were planned for September, and the Group of Seven plans to study the possibility of introducing a price ceiling on Russian exports of crude oil. These offsetting developments mean that the increase in international crude oil prices compared with last year is overall only slightly lower than predicted

Figure 2. Longer-Term Inflation Expectations
(Percent)



Sources: Consensus Economics; Federal Reserve Bank of Philadelphia; University of Michigan; and IMF staff calculations.
Note: Panel 1 shows median consensus forecasts for respective groups of economies. Consensus Economics forecasts are current year consumer price index inflation forecasts and 2-year-ahead inflation forecasts; for 10-year expectations, they are averages over the 6- to 10-year-ahead horizon. The SOC 5-year-ahead expectations are the average inflation expectations over the following 5 to 10 years. The SPF longer-term forecasts are for the annual averages of inflation over the following 5 and 10 years, respectively. AEs = advanced economies; EMDEs = emerging market and developing economies; SOC = surveys of consumers; SPF = survey of professional forecasters.

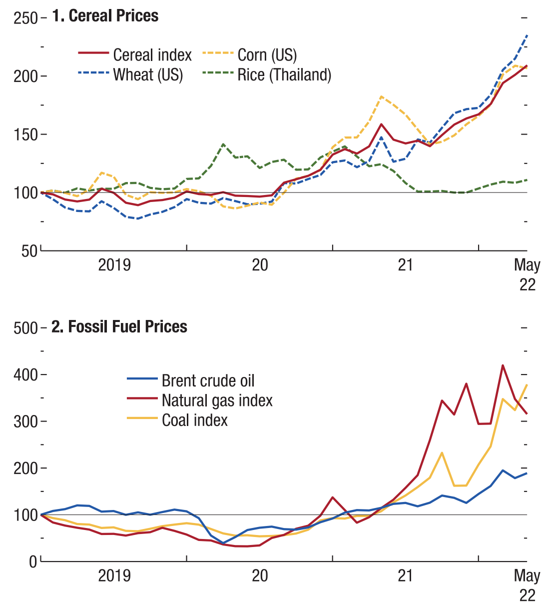
Figure 3. China: COVID-19 Outbreaks and Supply Chain Disruptions



Sources: National Bureau of Statistics of China; National Health Commission of China; and IMF staff calculations.
Note: PMI = purchasing managers' index.

in the April 2022 *World Economic Outlook*. More recently, the flow of Russian pipeline gas to Europe has declined sharply to about 40 percent of the level a year ago, contributing to a steep increase in natural gas prices in June. Russia's economy is estimated to have contracted during the second quarter by less than previously projected, with crude oil and non-energy exports holding up better than expected. In addition, domestic demand is also showing some resilience thanks to containment of the effect of the sanctions on the domestic financial sector and a lower-than-anticipated weakening of the labor market. Relatedly, the war's effects on major European economies have been more negative than expected, owing to higher energy prices as well as weaker consumer confidence and slower momentum in manufacturing resulting from persistent supply chain disruptions and rising input costs.

Figure 4. Higher Food and Energy Prices
(Index, January 2019 = 100)



Sources: IMF, Primary Commodity Price System; and IMF staff calculations.
Note: Cereal index comprises barley, maize (corn), oats, rice, sorghum, and wheat; natural gas index comprises European, Japanese, and US natural gas price indices; coal index comprises Australian and South African coal.

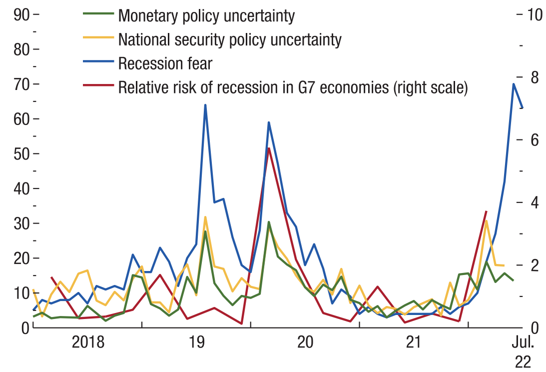
The food crisis worsens. Global food prices have stabilized in recent months but remain much higher than in 2021 (see Figure 4). The principal driver of global food price inflation—particularly prices of cereal, such as wheat––has been the war in Ukraine; export restrictions in several countries have compounded global food price increases, although a few of these restrictions have recently lapsed. Low-income countries, where food represents a larger share of consumption, are feeling the impact of this inflation most keenly. Countries with diets tilted toward commodities with the largest price gains (especially wheat and corn), those more dependent on food imports, and those with a large pass-through from global to local staple food prices are most distressed. Low-income countries whose people were already experiencing acute malnutrition and excess mortality before the war, especially in sub-Saharan Africa, have suffered a particularly severe impact.

Downturn ahead, Downside Risks Dominate

The developments outlined in the preceding section make the current outlook extraordinarily uncertain. The baseline projections described in the following discussion are predicated on several assumptions, including, among others, no further unexpected reductions in flows of natural gas from Russia to the rest of Europe; that long-term inflation expectations remain stable; and no worsening of disorderly adjustments in global financial markets as a result of disinflationary monetary policy tightening. However, there is a significant risk that some or all of these baseline assumptions will fail to hold true. Relatedly, measures of economic uncertainty and concerns regarding an oncoming recession have increased in recent months. Estimates of the probability of recession have also increased. For example, based on information embodied in asset prices, the probability of a recession starting in Group of Seven economies is estimated to be nearly 15 percent

(Figure 5)—four times its usual level—and nearer one in four in Germany.[2] For the United States, some indicators, such as the Federal Reserve Bank of Atlanta's GDPNow forecasting model, suggest that a technical recession (defined as two consecutive quarters of negative growth) may already have started. Overall, in consideration of rising risks and uncertainties, this *World Economic Outlook Update* places unusually strong emphasis on an alternative scenario that illustrates the impact of several downside risks that could plausibly materialize in the near term as a complement to the baseline. Should additional shocks hit the global economy, economic outcomes would be even worse.

Figure 5. Rising Uncertainties and Risks
(Index; ratio on right scale)



Sources: Scott R. Baker, Nicholas Bloom, and Steven J. Davis, "Measuring Economic Policy Uncertainty." *Quarterly Journal of Economics*, 2016, 131 (4): 1593–636; John C. Bluedorn, Jörg Decressin, and Marco E. Terrones, "Do Asset Price Drops Foreshadow Recessions?" *International Journal of Forecasting,* 2016, 32 (2): 518–526; Google Trends; and IMF staff calculations.
Note: Monetary policy uncertainty is rescaled by 1/10 and is based on Baker, Bloom, and Davis (2016); national security policy uncertainty is rescaled by 1/10; recession fear is based on the volume of Google searches for the word "recession" worldwide with numbers representing search interest relative to the highest point since 2008; relative probability of recession in G7 economies indicates ratio of current probability to normal-times probability of a new recession and is based on Bluedorn, Decressin, and Terrones (2016). G7 = Group of Seven.

2.1 Baseline Scenario

Global growth: In the baseline scenario, global growth is 3.2 percent in 2022 and moderates to 2.9 percent in 2023, lower than projected in the April 2022 *World Economic Outlook* by 0.4 and 0.7 percentage point, respectively (Table 1). In a number of cases, a better-than-expected growth outcome in the first quarter of 2022 offsets the subsequent slowdown, resulting in a relatively modest net negative revision for average annual growth in 2022. Downgrades for China and the United States, as well as for India, are driving the downward revisions to global growth during 2022–23, which reflect the materialization of downside risks highlighted in the April 2022 *World Economic Outlook:* a sharper slowdown in China due to extended lockdowns, tightening global financial conditions associated with expectations of steeper interest rate hikes by major central banks to ease inflation pressure, and spillovers from the war in Ukraine. With growth near 3 percent in 2022–23, a decline in global GDP or in global GDP per capita—sometimes associated with global recession—is not currently part of the baseline scenario. However, projections for growth on a fourth-quarter-over-fourth-quarter basis point to a significant weakening of activity in the second half of 2022 (Table 1). While the revisions are mostly negative for advanced economies, differing exposures to the underlying developments mean that those for emerging market and developing economies are more mixed:

[2] Recession probability indicates the estimated likelihood that a recession will start in the following quarter given the behavior of asset prices and equity market volatility. For details on the methodology, see John Bluedorn, Jörg Decressin, and Marco Terrones, "Do Asset Price Drops Foreshadow Recessions?" *International Journal of Forecasting*, 2016, 32 (2): 518–26.

- As noted, growth revisions for major advanced economies in 2022–23 are generally negative. Baseline growth in the United States is revised down by 1.4 percentage points and 1.3 percentage points in 2022 and 2023, respectively, reflecting weaker-than-expected growth in the first two quarters of 2022, with significantly less momentum in private consumption, in part reflecting the erosion of household purchasing power and the expected impact of a steeper tightening in monetary policy. Growth in the euro area is also revised down: by 0.2 percentage point in 2022, when improved prospects for tourism and industrial activity in Italy are more than offset by significant downgrades in France, Germany, and Spain; and by 1.1 percentage point in 2023. This reflects spillovers from the war in Ukraine as well as the assumption of tighter financial conditions, with the European Central Bank ending net asset purchases and raising rates in July 2022 for the first time since 2011. In a number of European economies, NextGenerationEU funds are supporting economic activity.
- For emerging market and developing economies, the negative revisions to growth in 2022–23 reflect mainly the sharp slowdown of China's economy and the moderation in India's economic growth. The revision in emerging and developing Asia is correspondingly large, at 0.8 percentage point in the baseline for 2022. This revision includes a 1.1 percentage point downgrade to growth in China, to 3.3 percent (the lowest growth in more than four decades, excluding the initial COVID-19 crisis in 2020), owing primarily to the aforementioned COVID-19 outbreaks and lockdowns. Likewise, the outlook for India has been revised down by 0.8 percentage point, to 7.4 percent. For India, the revision reflects mainly less favorable external conditions and more rapid policy tightening. Elsewhere, growth revisions in the baseline have been mostly on the upside. Real GDP for emerging and developing Europe is expected to shrink by 1.5 percentage points less in 2022 than predicted in the April 2022 *World Economic Outlook* but grow by 0.4 percentage point less in 2023, on the back of stronger-than-expected Russian export growth in 2022 and the recently announced additional sanctions on Russia in 2023. Latin America and the Caribbean has also seen an upward revision of 0.5 percentage point in 2022 as a result of a more robust recovery in the large economies (Brazil, Mexico, Colombia, Chile).. The outlooks for countries in the Middle East and Central Asia and sub-Saharan Africa remain on average unchanged or positive, reflecting the effects of elevated fossil fuel and metal prices for some commodity-exporting countries.

Inflation: The baseline projection for global inflation is also more pessimistic, having been revised up to 8.3 percent in 2022 on a fourth-quarter-over-fourth-quarter basis, from 6.9 percent in the April 2022 *World Economic Outlook*. The upside inflation revision in 2022 is larger for advanced economies, where it is expected to reach 6.3 percent from 4.8 percent projected in the April 2022 *World Economic Outlook* on a fourth-quarter-over-fourth-quarter basis, driven by significant increases in headline inflation among such major economies as the United Kingdom (a 2.7 percentage point upward revision to 10.5 percent) and the euro area (a 2.9 percentage point upward revision to 7.3 percent). Forecasts for 2023 are relatively unchanged––up by only 0.2 percentage point on a fourth-quarter-over-fourth-quarter basis––reflecting confidence that inflation will decline as central banks tighten policies and energy price base effects turn negative. For emerging market and developing economies, inflation in 2022 is expected to reach 10.0 percent on a fourth-quarter-over-fourth-quarter basis. Revisions for those economies display greater variation across countries, with relatively modest increases in emerging and developing Asia (partly because of a slowdown of activity in China and limited increases in prices of staple foods) but larger revisions for Latin America and the Caribbean (up by 3.0 percentage points) and for emerging and developing Europe (up by 2.9 percentage points).

Table 1. Overview of the *World Economic Outlook* Projections
(Percent change, unless noted otherwise)

	Year over Year						Q4 over Q4 2/		
			Projections		Difference from April 2022 WEO Projections 1/			Projections	
	2020	2021	2022	2023	2022	2023	2021	2022	2023
World Output	–3.1	6.1	3.2	2.9	–0.4	–0.7	4.4	1.7	3.2
Advanced Economies	–4.5	5.2	2.5	1.4	–0.8	–1.0	4.7	1.3	1.5
United States	–3.4	5.7	2.3	1.0	–1.4	–1.3	5.5	1.0	0.6
Euro Area	–6.3	5.4	2.6	1.2	–0.2	–1.1	4.7	0.7	2.1
Germany	–4.6	2.9	1.2	0.8	–0.9	–1.9	1.8	0.5	1.5
France	–7.9	6.8	2.3	1.0	–0.6	–0.4	4.9	0.4	1.1
Italy	–9.0	6.6	3.0	0.7	0.7	–1.0	6.4	0.6	1.6
Spain	–10.8	5.1	4.0	2.0	–0.8	–1.3	5.5	1.3	2.3
Japan	–4.5	1.7	1.7	1.7	–0.7	–0.6	0.4	2.4	0.6
United Kingdom	–9.3	7.4	3.2	0.5	–0.5	–0.7	6.6	0.1	1.3
Canada	–5.2	4.5	3.4	1.8	–0.5	–1.0	3.2	2.5	1.7
Other Advanced Economies 3/	–1.8	5.1	2.9	2.7	–0.2	–0.3	4.6	2.0	2.8
Emerging Market and Developing Economies	–2.0	6.8	3.6	3.9	–0.2	–0.5	4.2	2.1	4.7
Emerging and Developing Asia	–0.8	7.3	4.6	5.0	–0.8	–0.6	3.8	4.0	4.7
China	2.2	8.1	3.3	4.6	–1.1	–0.5	3.5	4.1	3.2
India 4/	–6.6	8.7	7.4	6.1	–0.8	–0.8	3.9	4.1	7.2
ASEAN-5 5/	–3.4	3.4	5.3	5.1	0.0	–0.8	4.7	3.4	6.1
Emerging and Developing Europe	–1.8	6.7	–1.4	0.9	1.5	–0.4	6.1	–7.0	7.7
Russia	–2.7	4.7	–6.0	–3.5	2.5	–1.2	4.8	–13.9	4.8
Latin America and the Caribbean	–6.9	6.9	3.0	2.0	0.5	–0.5	3.9	1.8	2.1
Brazil	–3.9	4.6	1.7	1.1	0.9	–0.3	1.6	1.5	1.5
Mexico	–8.1	4.8	2.4	1.2	0.4	–1.3	1.2	2.9	1.0
Middle East and Central Asia	–2.9	5.8	4.8	3.5	0.2	–0.2	. . .	. . .	. . .
Saudi Arabia	–4.1	3.2	7.6	3.7	0.0	0.1	6.7	6.9	3.7
Sub-Saharan Africa	–1.6	4.6	3.8	4.0	0.0	0.0	. . .	. . .	. . .
Nigeria	–1.8	3.6	3.4	3.2	0.0	0.1	2.4	2.1	2.3
South Africa	–6.3	4.9	2.3	1.4	0.4	0.0	1.8	2.2	1.7
Memorandum									
World Growth Based on Market Exchange Rates	–3.4	5.8	2.9	2.4	–0.6	–0.7	4.4	1.6	2.5
European Union	–5.8	5.4	2.8	1.6	–0.1	–0.9	4.9	0.9	2.8
Middle East and North Africa	–3.4	5.8	4.9	3.4	–0.1	–0.2	. . .	. . .	. . .
Emerging Market and Middle-Income Economies	–2.2	7.0	3.5	3.8	–0.3	–0.5	4.3	2.0	4.7
Low-Income Developing Countries	0.1	4.5	5.0	5.2	0.4	–0.2	. . .	. . .	. . .
World Trade Volume (goods and services) 6/	–7.9	10.1	4.1	3.2	–0.9	–1.2	. . .	. . .	. . .
Advanced Economies	–8.8	9.1	5.3	3.2	–0.3	–1.4	. . .	. . .	. . .
Emerging Market and Developing Economies	–6.2	11.7	2.2	3.3	–1.8	–0.9	. . .	. . .	. . .
Commodity Prices (US dollars)									
Oil 7/	–32.7	67.3	50.4	–12.3	–4.3	1.0	79.2	28.6	–13.4
Nonfuel (average based on world commodity import weights)	6.7	26.1	10.1	–3.5	–1.3	–1.0	16.4	5.7	–0.6
World Consumer Prices 8/	3.2	4.7	8.3	5.7	0.9	0.9	5.6	8.3	4.1
Advanced Economies 9/	0.7	3.1	6.6	3.3	0.9	0.8	4.9	6.3	2.3
Emerging Market and Developing Economies 8/	5.2	5.9	9.5	7.3	0.8	0.8	6.1	10.0	5.7

Note: Real effective exchange rates are assumed to remain constant at the levels prevailing during May 30, 2022–June 27, 2022. Economies are listed on the basis of economic size. The aggregated quarterly data are seasonally adjusted. WEO = World Economic Outlook.
1/ Difference based on rounded figures for the current and April 2022 WEO forecasts. Countries whose forecasts have been updated relative to April 2022 WEO forecasts account for approximately 90 percent of world GDP measured at purchasing-power-parity weights.
2/ For World Output (Emerging Market and Developing Economies), the quarterly estimates and projections account for approximately 90 percent (80 percent) of annual world (emerging market and developing economies') output at purchasing-power-parity weights.
3/ Excludes the Group of Seven (Canada, France, Germany, Italy, Japan, United Kingdom, United States) and euro area countries.
4/ For India, data and forecasts are presented on a fiscal year basis and GDP from 2011 onward is based on GDP at market prices with fiscal year 2011/12 as a base year.
5/ Indonesia, Malaysia, Philippines, Thailand, Vietnam.
6/ Simple average of growth rates for export and import volumes (goods and services).
7/ Simple average of prices of UK Brent, Dubai Fateh, and West Texas Intermediate crude oil. The average price of oil in US dollars a barrel was $69.07 in 2021; the assumed price, based on futures markets (as of June 29, 2022), is $103.88 in 2022 and $91.07 in 2023.
8/ Excludes Venezuela.
9/ The inflation rate for the euro area is 7.3% in 2022 and 3.9% in 2023, that for Japan is 1.9% in 2022 and 1.3% in 2023, and that for the United States is 7.7% in 2022 and 3.0% in 2023, respectively.

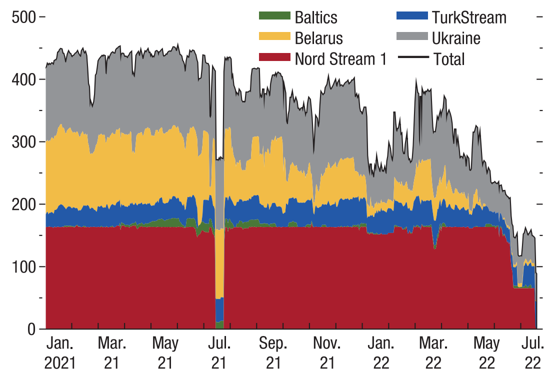
Global trade: Global trade growth in 2022 and 2023 will likely slow by more than previously expected, reflecting the decline in global demand and supply chain problems. The dollar's appreciation in 2022—by about 5 percent in nominal effective terms as of June compared with December 2021––is also likely to have slowed world trade growth, considering the dollar's dominant role in trade invoicing as well as negative financial balance sheet effects on demand and imports in countries with dollar-denominated liabilities.

2.2 Downside Risks

The balance of risks is squarely to the downside, driven by a wide range of factors that could adversely affect global economic performance. The following are of particular concern.

The war in Ukraine further raises energy prices. Since April 2022, the amount of Russian pipeline gas supplied to Europe has fallen sharply, to about 40 percent of last year's level (Figure 6), which is reflected in downward revisions to the latest forecasts compared with April. The latest baseline forecasts also incorporate the expectation that the volume will decline further to low levels by mid-2024, in line with major European economies' energy independence goals. Yet there is much uncertainty around the levels of gas supplies during 2022 and 2023. A complete cessation of exports of Russian gas to European economies in 2022 would significantly increase inflation worldwide through higher energy prices. In Europe, it could force energy rationing, affecting major industrial sectors, and sharply reduce growth in the euro area in 2022 and 2023, with negative cross-border spillovers.

Figure 6. Declining Flow of Russian Pipeline Gas to the EU
(Million cubic meters per day)



Sources: European Network of Transmission System Operators for Gas; Gas Transmission System Operator of Ukraine; and IMF staff calculations.
Note: Latest data available are for July 12, 2022. Recent data are provisional. EU = European Union.

Inflation remains stubbornly high. Inflation is generally expected to return to near pre-pandemic levels by the end of 2024. However, several factors could cause it to maintain momentum and raise longer-term expectations. Further supply-related shocks to food and energy prices from the war in Ukraine could sharply increase headline inflation and pass through to core inflation, triggering a further tightening in monetary policy. Such shocks could, if sufficiently severe, cause a combination of recession accompanied by high and rising inflation ("stagflation"), although this is not part of the baseline scenario. Labor market tightness is historically high in several economies, and workers could increasingly demand compensation for past increases in the cost of living. Firms may have some ability to absorb higher labor costs by reducing profit margins, particularly where price increases preceded wage inflation or in industries or places where firms have monopsony power. But if they cannot, this could cause even higher inflation and risk triggering a wage-price spiral. Policymakers could also underestimate the degree of labor market tightness and its impact on inflation or tighten policies insufficiently, thereby failing to prevent unanchoring of long-term inflation expectations. Similarly, prices may have become more sensitive to changes in demand as more of the economy's productive resources are employed—that is, the relevant part of the supply curve is inelastic. In that case, a rapid increase in inflation may be followed by an equally sudden decline if policy tightens too much.

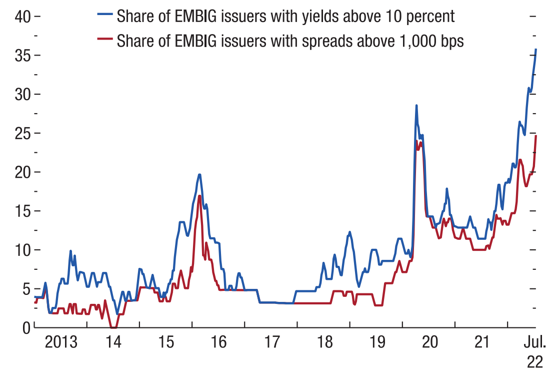
Disinflation is more costly than expected. Major central banks have responded to high inflation by raising interest rates. But the exact amount of policy tightening required to lower inflation without inducing a recession is difficult to ascertain. A number of factors have affected the economic cost of past episodes of disinflation, including the initial level of inflation and inflation expectations, wage and price rigidities, how much prices and wages respond to a fall in demand, and the stance of fiscal policy. If the evolution of these factors surprises policymakers, or if they misjudge the appropriate policy stance––including the level of neutral interest rates––the coming disinflation adjustment could be more disruptive than currently expected. Past disinflation episodes associated with monetary policy tightening, such as those experienced by advanced economies in the early 1980s, were often costly, with high unemployment the price of taming inflation. This time, lower starting inflation, lower and better-anchored inflation expectations, and the greater flexibility of labor and product markets in advanced economies suggest that costs may be lower. However, higher sovereign and corporate leverage may amplify the effects of policy tightening and influence the willingness of central banks to act decisively on inflation, with potentially higher medium-term output costs if inflation expectations rise significantly, prompting sharper interest rate hikes. The risk of recession is particularly prominent in 2023, when in several economies growth is expected to bottom out, household savings accumulated during the pandemic will have declined, and even small shocks could cause economies to stall. For example, according to the latest forecasts, the United States will have real GDP growth of only 0.6 percent in the fourth quarter of 2023 on a year-over-year basis, which will make it increasingly challenging to avoid a recession (Table 1). In a number of advanced economies, rising interest rates, together with low growth, will worsen debt dynamics and increase sovereign and corporate spreads, especially in high-debt countries. Indeed, tighter financial conditions are already contributing to a divergence in borrowing rates and concerns regarding the risk of "financial fragmentation" in the euro area, potentially impairing the transmission of monetary policy.

Tighter financial conditions trigger debt distress in emerging market and developing economies. As advanced economy central banks raise interest rates to fight inflation, financial conditions worldwide will continue to tighten. The resulting increase in borrowing costs will, without correspondingly tighter domestic monetary policies, put pressure on international reserves and cause depreciation versus the dollar, inducing balance sheet valuation losses among economies with dollar-denominated net liabilities. Such challenges will come at a time when government financial positions in many countries are already stretched, implying less room for fiscal policy support, with 60 percent of low-income countries in or at high risk of government debt distress (debt restructuring or accumulation of arrears)––up from about one-fifth a decade ago.[3] Widespread capital flight from emerging market and developing economies could amplify this risk. Emerging market bond spreads have already been rising (Figure 7). Rising borrowing costs combined with high inflation and slowing growth have prompted comparisons to the 1970s and early 1980s. In the 1970s, surpluses from oil exporters—which had gained from higher energy prices—boosted funding for emerging market economy debt markets. Central banks tightened policies in the early 1980s to fight high inflation, which led to disorderly external adjustment and debt defaults in some cases, notably in Latin America. Could

[3] Guillaume Chabert, Martin Cerisola, and Dalia Hakura, "Restructuring Debt of Poorer Nations Requires More Efficient Coordination," *IMFBlog,* April 7, 2022.

similar shocks today lead to similar imbalances? Although the source of the energy price shock is much the same in the two cases, there are several important differences. First, the real oil price rise is smaller in the current case, and global production is now less dependent on oil than previously. Second, policy tightening began earlier in this episode, including in some emerging market and developing economies, where policy frameworks are also generally more robust than before. And third, there has been less time for recycled petrodollars to drive imbalances in emerging market and developing economies this time. Despite these positive changes, however, increased exposure to other large bilateral creditors and the recent pandemic have brought new vulnerabilities, driving up public debt and eroding future potential growth in many countries.

Figure 7. Emerging Market Debt: Rising Vulnerabilities
(Percent, three-week average)



Sources: Bloomberg Finance L.P.; J.P. Morgan Emerging Market Bond Index; and IMF staff calculations.
Note: bps = basis points; EMBIG = Emerging Market Bond Index Global.

China's slowdown persists. The baseline foresees a recovery from the lockdowns in the second half of 2022, with overall GDP growth at 3.3 percent in 2022 and 4.6 percent in 2023. Upside risks to growth include announcements of material fiscal support and a recalibration of the authorities' zero-COVID strategy to reduce growth trade-offs, building on their successful campaign to ramp up the rollout of booster shots. Downside risks include larger-scale outbreaks of more contagious virus variants that trigger further widespread lockdowns under the zero-COVID strategy. In addition, delayed price and balance sheet adjustments in the property sector could cause a sudden, wider crisis or a protracted adjustment with broader macro-financial spillovers. A sustained slowdown in China would have strong global spillovers, whose nature will depend on the balance of both supply and demand factors. For example, further tightening of supply bottlenecks could cause higher consumer goods prices worldwide, but lower demand might ease commodity pressures and intermediate goods inflation.

Rising food and energy prices cause widespread hardship, famine, and unrest. Because energy and food are essential goods with few substitutes, higher prices are particularly painful for households. When the price of other items, such as electronics, furniture, or entertainment, increases, families can simply reduce or even eliminate spending on them. For food, heating, and transportation––often essential to earn a living––this is much harder. As a result, the current situation poses a threat not only to economic, but also to social, stability. Unrest has been rising since the end of the acute phase of the pandemic, consistent with IMF research that suggests that unrest is lower in during pandemics[4] and

[4] Philip Barrett and Sophia Chen, "Social Repercussions of Pandemics," IMF Working Paper 21/21, International Monetary Fund, Washington, DC.

that higher food and energy prices are robust predictors of unrest.[5] Although unrest will not necessarily ensue, the link between prices and social stability means that further barriers to trade, or a poor harvest due to extreme heat and fertilizer shortages, risk causing further hardship, famine, or unrest. These risks could be allayed by easing logistic hurdles brought about by the invasion of Ukraine, including the Black Sea blockade.

The world economy fragments further. A serious risk to the medium-term outlook is that the war in Ukraine will contribute to fragmentation of the world economy into geopolitical blocs with distinct technology standards, cross-border payment systems, and reserve currencies. So far, there is limited evidence of reshoring, and global trade has been more resilient than expected since the start of the pandemic. Fragmentation may also diminish the effectiveness of multilateral cooperation to address climate change, with the further risk that the current food crisis could become the norm.

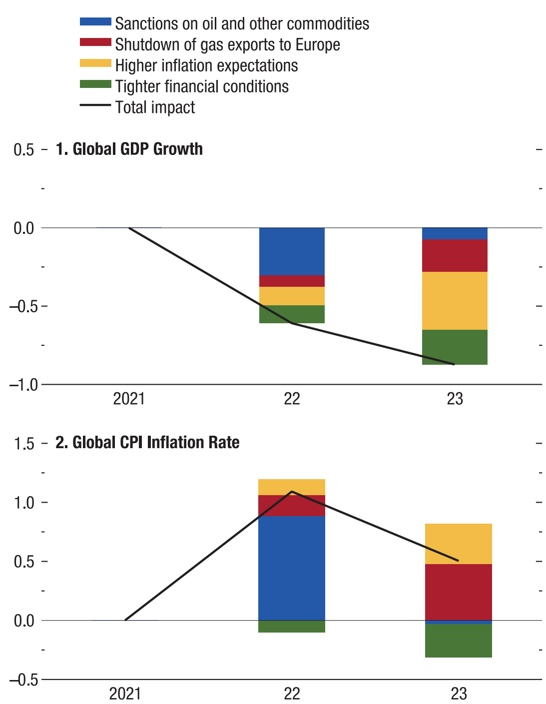
2.3 Quantitative Impact: Global Alternative Scenario

Reduced fossil fuel exports, higher inflation expectations, and tighter financial conditions: Beyond understanding the potential sources of risk, a key concern for policymakers is to gauge their likely impact on the global economy. This section addresses this issue by using the IMF's Group of Twenty (G20) Model to analyze the economic effects if four particularly pertinent and plausible downside risks should materialize:

- Increasingly tight sanctions in response to the Russian invasion of Ukraine cause Russian oil exports to drop by a further 30 percent relative to the baseline, starting in the second half of 2022.
- Russian gas exports to Europe decline to zero by the end of 2022, either because European countries prohibit imports or because Russia curtails supply.
- Inflation expectations remain more persistently elevated.
- Financial conditions tighten, as a result both of policymakers' responses to higher inflation and of investors' concerns, pushing up sovereign and corporate risk and term premiums.

Lower output, higher inflation worldwide: Figure 8 shows the overall impact of these shocks on the global

Figure 8. Global Alternative Scenario
(Percentage point deviation from baseline)



Sources: IMF, Group of 20 Model simulation; and IMF staff calculations.
Note: CPI = consumer price index.

[5] Chris Redl and Sandie Hlatshwayo, "Forecasting Social Unrest: A Machine Learning Approach, IMF Working Paper 21/263, International Monetary Fund, Washington, DC.

economy. Global growth would fall by about 0.6 percentage point and 0.9 percentage point in 2022 and 2023, respectively, compared with the baseline projection, to about 2.6 percent and 2.0 percent in 2022 and 2023, respectively. Such low annual growth has occurred only rarely in the past (on only five occasions since 1970 has global growth been lower than 2 percent). The direct impact of fossil fuel restrictions would account for about two-fifths of the total decline in GDP compared with the baseline (1.5 percent by 2023), with increased inflation expectations and tighter financial conditions responsible for roughly another third and quarter each, respectively. International commodity markets would also react sharply, with the reduction in the global oil supply pushing prices up by about 30 percent. For gas, Russia's larger share of global supply and less flexible distribution networks would make the response more dramatic, with prices spiking by almost 200 percent. The impact on consumer price inflation would depend on the relative strength of the different shocks at different horizons. In the short term, the direct effect of higher prices and inflation expectations would raise inflation by about 1 percentage point. Subsequently, lower demand and tighter financial conditions would dominate, mitigating the inflationary impact in 2023 and beyond.

Brunt of the impact in Europe: In this scenario, the shock would have a widespread impact, as higher global commodity prices and tighter monetary and financial conditions would affect almost all countries, albeit to different extents. Europe would be particularly affected in this scenario, with 2023 growth in the European Union 1.3 percentage points lower than in the baseline, implying near-zero regional growth.[6]

Policy Priorities

Restoring price stability while protecting the vulnerable: At this juncture, the main policy priority is to bring inflation under control, as price stability is a precondition for durable growth in economic well-being and financial stability. The appropriate mix of monetary, fiscal, and structural policies for reducing inflation differs across economies depending on the sources and extent of price pressures:

- Economies in which underlying inflation and inflation expectations have risen persistently and significantly above target levels need to take decisive action to tighten monetary policy, with central banks shrinking their balance sheets and raising real interest rates. In the near term, such policies reduce inflation at the cost of lower real activity, higher unemployment, and lower wages. The same people who suffered most directly in recent years––those with low wages, precarious employment status, and limited savings or access to credit—are likely to feel the impact of any slowdown the most. Concerns about protecting the most vulnerable and lessening the economic cost, as well as limiting the impact on asset prices,

[6] There is considerable uncertainty around the GDP impact of a Russian natural gas shutoff for Europe. It could be especially large in a number of European countries in central and eastern Europe, where imports of Russian gas account for a significant share of energy consumption and where infrastructure constraints would prevent sufficient non-Russian (mainly liquefied natural gas) imports in the near term. Policies that substantially delay or prevent the pass-through from gas prices to household retail prices would concentrate the demand adjustment on industry, amplifying the output impact. Flanagan, M., Kammer A., Pescatori A., and Stuermer, M., 2022. [How a Russian Natural Gas Cutoff Could Weigh on Europe's Economies].

may seem a valid motive to tighten monetary policy more slowly. However, an approach of this type would likely be counterproductive, as there is little evidence that such gradualism limits the costs of disinflation. Restoring low and stable inflation before expectations unanchor would create an environment conducive to investment and growth and avert the need for a more abrupt and disruptive adjustment later.

- During disinflation, fiscal policy has a special role to play, cushioning the most vulnerable from the impact of the requisite cooling in economic activity through targeted and temporary fiscal transfers. Where possible, this cushioning should happen via automatic stabilizers (see the April 2020 *World Economic Outlook* and *Fiscal Monitor*). And to complement monetary policy in the tightening of the overall macroeconomic policy stance, any fiscal policy changes should be budget neutral (at a minimum) in cyclically adjusted terms and set within a credible medium-term fiscal framework consistent with debt sustainability. While public sector pay restraint can ease inflation pressure, policies that seek primarily to directly limit prices and wages in the private sector should generally be avoided, having often proved costly and ineffective in the past.
- Structural reforms can also play a role in tackling inflation by expanding aggregate supply, although they are unlikely to affect inflation quickly. Policies to increase labor supply, including higher earned income tax credits, more funding for childcare, enhanced access to COVID-19 vaccinations and treatment, and reform of immigration pathways would boost productivity and real incomes and contribute to lowering inflation. In emerging market and developing economies, improvements in the business environment, green investments, and digitalization can also boost aggregate supply.

Preparing for tighter credit and financial instability: Tighter monetary conditions will affect global capital markets and require policy responses on several fronts. As interest rates rise, financial institutions gain from higher net income but suffer losses as loan origination declines and default rates rise. The balance between these factors will determine financial sector health and the appropriate use of macroprudential tools. Even in the best case, firms are more likely to fail as activity slows, making efficient and effective bankruptcy proceedings and resolution frameworks particularly valuable. In economies with bank exposures to sectors with rising vulnerabilities, tightening macroprudential tools may be warranted. Likewise, higher interest rates and lower tax revenues will push some sovereign borrowers into debt distress. Yet mechanisms to resolve debt distress are slow and unpredictable, hampered by difficulties in obtaining coordinated agreements from diverse creditors over their competing claims. Improvements to the implementation of the G20 Common Framework are urgently needed to ensure speedy, smooth, and efficient restructurings. The pressure that tighter financial conditions will put on countries' fiscal and external positions will likely increase the role of support from multilateral institutions in coming years. Where external shocks cannot be absorbed by flexible exchange rates alone, policymakers should be ready to act; for example, through foreign exchange interventions or capital flow management measures in a crisis scenario. Where debt levels are high, governments should preemptively reduce reliance on foreign currency borrowing. Prompt and reliable access to reserve currency liquidity—including through IMF precautionary and disbursing arrangements—gives countries breathing room to implement adjustment policies in an orderly manner. Such international cooperation is a critical safety net not just for individual countries but also, by stopping crises from spreading, for the global economy. In the euro area, addressing the risk of financial fragmentation through a well-designed European Central Bank antifragmentation instrument is warranted. Such an instrument would complement the existing conditional Outright Monetary Transactions instrument and the European Stability Mechanism's lending program and further facilitate the task of setting policy interest rates based on euro-area-wide macroeconomic conditions. However, such a tool should not distort markets so much that prices fail to reflect fundamental risks.

Tackling the food and energy crises: Beyond generalized inflation, specific challenges in food and energy markets will require distinct policy responses. Ending the invasion of Ukraine and the Black Sea blockade would increase the supply of commodities to global markets. In addition, governments should not hoard food and energy but instead look to unwind barriers to trade, such as food export bans, which are applied with the intention of preventing domestic shortages but which in fact drive world prices higher. To help address food security concerns, World Trade Organization (WTO) members acted to exempt World Food Program purchases from export restrictions at the 12th WTO Ministerial Conference in June 2022. Broadly, governments should allow prices to move freely: high prices are an important signal of a scarce resource and encourage its conservation and production. Controls to keep food and fuel prices low for everyone, regardless of their ability to pay, can encourage overconsumption of expensive products at public expense and—by squeezing retailers' margins—counterproductively lower supply. Price controls alone have not durably reduced the cost of living in the past (US price controls in 1971 are one example). Instead, offsetting the impact on living standards via targeted cash transfers to those with low incomes or at particular risk of harm from food or energy shortages (such as children and older people) can be very effective. Countries lacking safety nets strong enough to support the most vulnerable can expand their most efficient existing programs by increasing benefit levels and coverage as needed. Countries with existing energy or food subsidies should gradually pass international prices through to consumers while committing to eliminating subsidies in coming years. Where food security is a concern and all other options have been exhausted, governments can consider other temporary steps, such as price subsidies or direct distribution of staple foods when necessary.[7] Temporary support to energy-dependent firms in the form of subsidized or partially guaranteed loans that involve risk sharing with private banks can also prevent the failure of firms, preserving supply chains and averting cascading economic damage.

Warding off pandemic risks while limiting economic disruptions: Although in much of the world the acute impact of the COVID-19 pandemic is fading, there is still an opportunity to minimize the cost of living with the virus. About 130 countries did not reach the IMF pandemic proposal's mid-2022 vaccination target of 70 percent, and similar inequality persists in access to tests and treatments. Universal vaccination remains the best shield against persistent health-related absenteeism and

[7] See David Amaglobeli, Emine Hanedar, Gee Hee Hong, and Céline Thévenot, "Fiscal Policy for Mitigating the Social Impact of High Energy and Food Prices," IMF Note 2022/001, International Monetary Fund, Washington, DC.

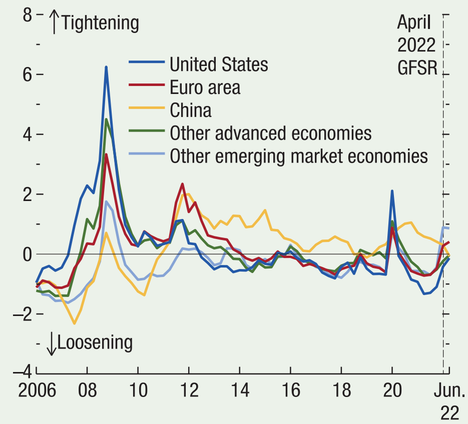
further variants and should be backed by broad public health campaigns to encourage vaccine uptake. Governments should also intensify efforts to resolve vaccine supply and distribution bottlenecks and ensure equitable access to treatment. Public support for better systematic responses to future epidemics and research into new vaccine technologies, including for a more widely effective pan-coronavirus vaccine, remains essential.

Facilitating transition to a low-carbon economy: Mitigating climate change continues to require urgent multilateral action. Yet the war in Ukraine and soaring energy prices have put pressure on governments to turn to fossil fuels such as coal as a stopgap measure. Policymakers and regulators should make sure that any such measures are temporary and cover only energy shortfalls—and do not increase emissions overall—and facilitate investment in renewables that will reduce emissions. Credible and comprehensive climate policies to increase green energy supply should be accelerated urgently. The energy crisis also illustrates how a policy of clean, green energy independence can be compatible with countries' national security objectives. Fiscal policy should smooth the transition for households and firms that bear the brunt of the transition costs. The recently introduced IMF Resilience and Sustainability Trust can also help countries build resilience to longer-term structural challenges, including climate change and pandemic preparedness.

Global financial conditions have tightened sharply since the April 2022 *Global Financial Stability Report*. They are now near the March 2020 peak of tightness in emerging markets, but have retraced only to long-term average levels in advanced economies (Figure 1.1).

Higher interest rates and lower corporate valuations have driven the moves in advanced economies. Heightened uncertainty about the economic outlook has generated high market volatility, and liquidity has been exceptionally poor in both fixed-income and equity markets. In most emerging markets, financial conditions tightened sharply this spring and are now quite restrictive relative to historical norms. Weaker currencies and wider dollar funding spreads have pushed up the cost of external borrowing, while monetary policy tightening has continued as a means of tackling inflation. Crypto assets have experienced a dramatic sell-off that has led to large losses in crypto investment vehicles and caused the failure of algorithmic stablecoins and crypto hedge funds, but spillovers to the broader financial system have been limited so far.

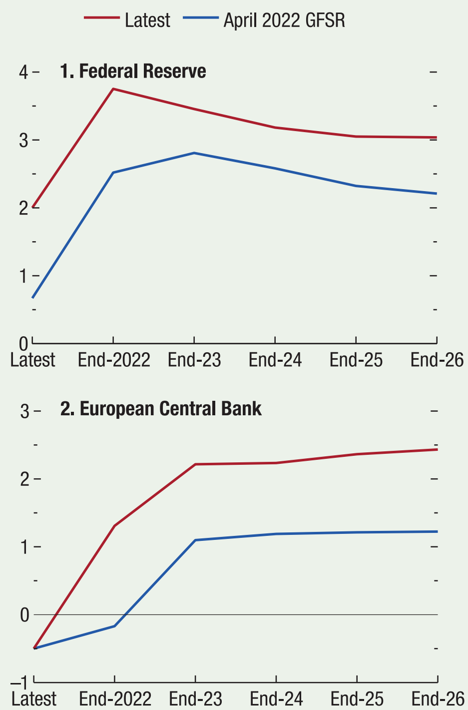
Figure 1.1. Financial Conditions in Selected Regions
(Standard deviations from the mean)



Sources: Bloomberg Finance L.P.; and IMF staff calculations.
Note: GFSR = *Global Financial Stability Report*.

Sovereign bond yields in advanced economies have risen sharply following aggressive central bank actions and communications in an effort to tame persistent inflation pressure and prevent an unmooring of inflation expectations. Central banks have raised policy rates aggressively, in some cases resorting to large hikes not seen in decades. As a result, the market-implied expected path of policy rates has shifted higher across countries since the April *Global Financial Stability Report*. Recently, global rates have retraced some of their ealier increases, largely as a result of recession fears (Figure 1.2).

Figure 1.2. Policy Rate Expectations: Advanced Economies
(Percent)

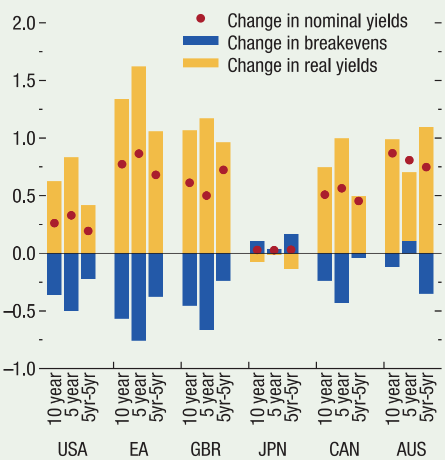


Sources: Bloomberg Finance L.P.; and IMF staff calculations.
Note: GFSR = *Global Financial Stability Report*.

Rising real rates have been the key driver of higher bond yields across maturities in advanced economies, and lower market-based measures of inflation expectations have partially offset real rates during this period. While longer-term inflation expectations (at the five-year, five-year-forward horizon) have remained relatively steady at elevated levels, expectations at the five-year horizon have largely reverted to levels preceding

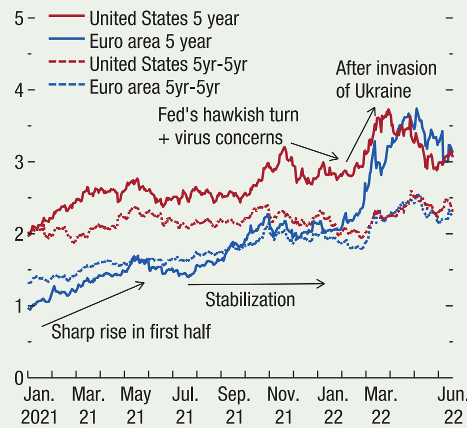
Russia's invasion of Ukraine, reflecting, in part, investors' growing concerns about slowing aggregate demand over the near to medium term. Given these concerns, market-implied expectations of policy rates are currently signaling rate cuts in 2023 and 2024 in some advanced economies (Figures 1.3 and 1.4).

Figure 1.3. Change in Bond Yields: Most Recent GFSR to End of June
(Percent)



Sources: Bloomberg Finance L.P.; and IMF staff calculations.
Note: 5yr-5yr denotes five-year, five-year forward. Data labels use International Organization for Standardization (ISO) country codes. EA = euro area; GFSR = *Global Financial Stability Report*.

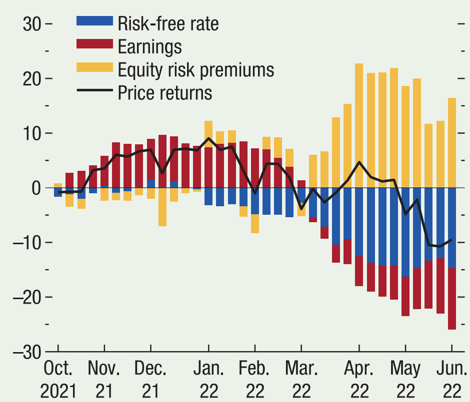
Figure 1.4. Inflation Breakevens
(Percent)



Sources: Bloomberg Finance L.P.; and IMF staff calculations.
Note: 5yr-5yr = five-year, five-year forward; Fed = Federal Reserve.

Investor risk appetite has deteriorated significantly since the April *Global Financial Stability Report*. Against a backdrop of stretched valuations in a number of sectors and countries, equity prices have fallen sharply (Figure 1.5). Rising interest rates have been an important factor behind the precipitous drop in US equity prices (based on a model decomposition; see the October 2020 *Global Financial Stability Report*). Large firms have reported a contraction in profit margins on higher costs, while downward revisions to analyst earnings forecasts appear to be gaining momentum on concerns about the economic outlook. Advanced economy corporate bond spreads have widened to two-year highs, and corporate bond yields—which reflect the cost of new funding—have surged to the highest levels since the global financial crisis. Global high-yield defaults are seen as having bottomed out at historically low levels, and new debt issuance has slowed dramatically.

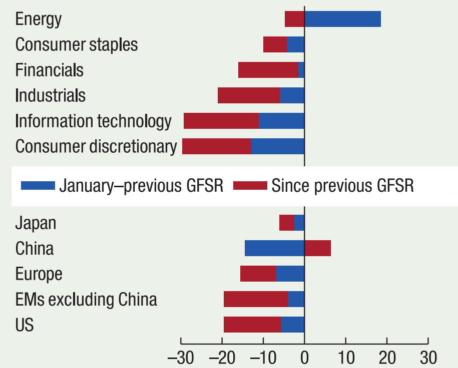
Figure 1.5. US Equity Return Decomposition
(Percent)



Sources: Bloomberg Finance L.P.; and IMF staff calculations.
Note: Price returns are cumulative returns of Standard & Poor's 500 index since October 2021.

Sectors with estimated high valuations, such as consumer discretionary and information technology, have incurred steep equity price drops since the most recent *Global Financial Stability Report* (Figure 1.6). Cyclicals (such as financials) and sectors sensitive to energy and other input costs (such as industrials) have also seen substantial declines. Across regions, equity markets in the United States have performed poorly, partly because of their sectoral composition, after having led the recovery from the pandemic. Equity prices have fallen sharply also in emerging markets (except China) and in Europe. Risk-off sentiment and worries about rising interest rates in advanced economies have negatively affected emerging markets. Chinese equities have been little affected in the second quarter of 2022., but investors have remained cautious given lockdowns and growth concerns. European markets' proximity to the war in Ukraine and exposure to Russia have affected them. In Japan, a weaker yen and accommodative monetary policy have supported stocks.

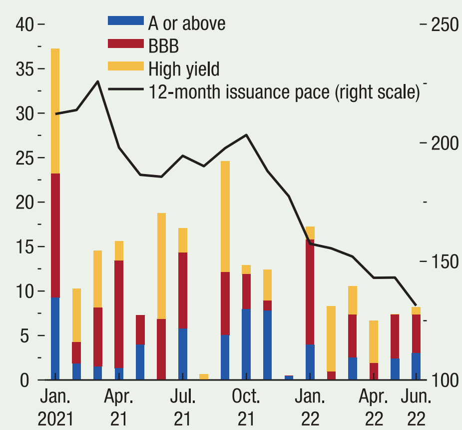
Figure 1.6. Global Equity Returns in 2022 by Sector and Region
(Percent)



Sources: Bloomberg Finance L.P.; and IMF staff calculations.
Note: EMs = emerging markets; GFSR = *Global Financial Stability Report.*

As advanced economies have raised interest rates and conditions have tightened globally, debt vulnerabilities and financing risks are on the rise for emerging market issuers, with the tightening of financial conditions most notable among lower-rated issuers (Figure 1.7). Spreads of below-investment-grade issuers have risen by 104 basis points since April, and about one-third of emerging market borrowers now have bonds trading with yields in excess of 10 percent, a post-global-financial-crisis high. Worsening conditions have also affected hard-currency issuance, which is running at its slowest pace since 2015 and down more than 40 percent from 2021. Despite the slowdown, higher-rated issuers have continued to access capital markets in recent months, albeit at significant premiums and at shorter maturities. By contrast, many weaker issuers have been effectively shut out of the market. Portfolio flows to local currency bonds and equities have remained under notable pressure as well, albeit with considerable country heterogeneity. So far, investors appear to continue to differentiate across emerging markets based on the outlook for inflation and monetary policy as well as exposure to commodity markets.

Figure 1.7. Emerging Market Sovereign Issuance
(Billion US dollars)



Sources: Bond Radar; and IMF staff calculations.

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This box was prepared by the Monetary and Capital Market Department's Global Markets Analysis Division. It provides an update on market developments since the April 2022 *Global Financial Stability Report*, whose data cutoff was April 7.

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